STONEFIELD

ECOLOGICAL IMPACT STATEMENT

PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT BLOCK 801, LOT 20 84-90 East Main Street BOROUGH OF MENDHAM MORRIS COUNTY, NEW JERSEY

> PREPARED FOR: V-FEE MENDHAM APARTMENTS, LLC

PREPARED BY: STONEFIELD ENGINEERING & DESIGN, LLC 92 PARK AVENUE RUTHERFORD, NEW JERSEY

> REPORT DATE: OCTOBER 20, 2022

IN D.

CHUCK D. OLIVO, PE, PP, PTOE NJ PE LICENSE #46719

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I.0 PROJECT DESCRIPTION

V-FEE Mendham Apartments, LLC is proposing to redevelop Block 801, Lot 20 (herein referred to "project site") to redevelop the rear portion of the site to accommodate a multi-family residential building consisting of 75 units total with associated improvements. Additional improvements throughout the entire lot include tenant premium parking, automotive sales and services, recreational facilities, lighting fixtures, landscaping, stormwater infrastructure and other improvements as depicted on the accompanying site plan drawings. The subject property is located within the Borough of Mendham and is bounded by woods, wetland areas and a stream to the north, various commercial uses to the east, East Main Street (County Route 510) to the south, and residential dwellings to the west. The project site is located in the EB zone & EB-AH overlay zone where multi-family residential buildings (75 units maximum) are permitted.

The total project area is 577,865 SF (13.27 acres), the impervious surface is proposed to reduce by 24,883 SF (0.57 acres), and the total area of disturbance is approximately 5.0 acres. Refer to the **Appendix** for project maps of the subject site.

This Ecological Impact Statement has been prepared to analyze the potential ecological impacts of the proposed project and discuss the measures proposed to conform to the ecological requirements set forth by the Borough of Mendham, Morris County Soil Conservation District, and New Jersey Department of Environmental Protection (NJDEP).

2.0 EXISTING CONDITIONS

Under existing conditions, the northern portion of the project site is occupied by the Mendham Health & Racquet Club. Access to the site is provided via three full-movement driveways along East Main Street and a parking lot that opens directly to the rear portion of the site. The lower portion of the project site consists of a shopping center with various uses including a grocery store, drug store, laundromat, bank, and various restaurants.

2.1 AIR QUALITY

Air quality is expected to be good given the absence of surrounding industrial uses and the large number of trees along the northerly and westerly property lines.

2.2 WATER QUALITY

Surface water quality is expected to be low to moderate due to the large amount of impervious coverage and overland drainage to the point of interest. There are no existing water quality measures.

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2.3 WETLANDS

The NJDEP issued a Freshwater Wetlands Letter of Interpretation: Line Verification on 10/01/2020 verifying that there is a 150 FT wetlands transition area associated with the flagged wetlands area at the rear of the site. Please see the **Appendix** for more detail.

2.4 FLOOD HAZARD AREAS & FLOODPLAINS

There is an unnamed stream northwest of the property that has not been studied by NJDEP on FEMA. Princeton Hydro has prepared a Flood Hazard Area Study dated May 2021 for the site and provided analysis on the flood zone and flood hazard area (FHA) surrounding the stream. Below is a summary of the primary findings from the report:

- The stream drains approximately 75 acres.
- The associated floodway does not encroach the property.
- The associated FHA encroaches the northwest corner of the property and is approximately 90 FT from any existing development.

In addition, there is a 150 FT riparian zone associated with the stream from the surveyed top of bank. A portion of the existing site in the northwest is within the riparian zone.

2.5 WATER SUPPLY

The developments in lower portion of the project site are serviced by a lateral that ultimately connects to an existing water main in East Main Street.

Water service is available for the upper portion of the project site. The existing water demand for the upper portion of the site has been estimated below using Table 1 "Average Daily Water Demand" found in N.J.A.C 7.10-12.6.

Clubhouse (Tennis Club) = 25 GPD / non-resident member * ±50 members = 1,250 GPD

2.6 HYDROLOGY, GEOLOGY, SOILS & TOPOGRAPHY

Per the National Resource Conservation Service (NRCS) data, the soil underlying the project site consists of:

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Soil Unit Code	Soil Description	Approximate Project Coverage	Hydrologic Soil Group
CapfB	Califon variant loam, 3 to 8 percent slopes	51.3%	С
CoaBc	Cokesbury loam, 0 to 8 percent slopes, extremely stony	48.6%	D
GkaoB	Gladstone, gravelly loam, 3 to 8 percent slopes	0.1%	В

TABLE I: NRCS PROJECT SOILS

The hydrologic soil group classifications above have been utilized in the landcover data for the stormwater analysis performed on the project. For further information please refer to the NRCS Soil Survey located in the **Appendix** of this report.

Existing topography maintains generally between 1-4% slopes within the asphalt parking areas. The site has a high point (elevation 554) by East Main Street and slopes to the rear portion of the site at its low point (elevation 537).

In existing conditions, stormwater runoff from the site drains north through the parking lot and is collected by various inlets throughout the site. The runoff that is collected goes through the onsite conveyance system and is ultimately released through one (I) discharge point to the stream/wetlands area to the north of the development.

Based on the NRCS Soil Survey, soils are anticipated to have slow infiltration rates with high runoff potential when the site is generally wet.

2.7 SEWERAGE SYSTEMS

Per NJDEP Geoweb Mapping, the site is located within a sewer service area. Sanitary sewer service for the developments in the lower portion of the project site are serviced by laterals that run along the property perimeter to the rear of the site.

Sanitary sewer service is available for the upper portion of the project site. The existing building is served by a sanitary lateral connected to the existing manhole and 12" main running along the easterly property line. The existing sewer demand for this upper portion of the site has been estimated below using daily usage values found in N.J.A.C 7.14-23.3.

Racquet clubs = 80 GPD / per court per hour * 3 courts per hour = 240 GPD

Clubhouse (Tennis Club) = 35 GPD / non-resident member * ±50 members = 1,750 GPD

<u> Total = 1,990 GPD</u>

2.8 VEGETATION

On site vegetation is generally grass with evergreen trees and shrubs located within scattered landscape islands. Several deciduous trees are located along the northerly and westerly property lines.

2.9 WILDLIFE & AQUATIC ORGANISMS

As the project site is located within a business district and the site is generally developed/impervious, presence of wildlife and aquatic biota is limited.

2.10 NOISE LEVELS

There is minimal noise generated from the subject site. The largest contributor to decibel levels is from the traffic associated with East Main Street.

2.11 HISTORIC & ARCHAEOLOGICAL FEATURES

Per the NJDEP GeoWeb mapping, no mapped historic or archaeological features are located on or within the vicinity of the site.

2.12 SOLID WASTE DISPOSAL

Solid waste is collected in trash bins in the parking lot and is disposed through a private trash collection company at designated pickup hours during the week.

2.13 TRAFFIC

The site is located along East Main Street. Existing access is provided via full movement driveways along East Main Street. Please refer to the Traffic Assessment Report prepared by our office for detailed information.

2.14 DRAINAGE AREAS

Under existing conditions, the site is comprised of one (1) point of interest.

• Existing Drainage to Stream (Drainage Area E-I): This drainage area has been determined to be the northwesterly discharge point that leads to the stream/wetlands area.

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Drainage Area	Description	Area Extents (SF)	Impervious Area (SF)	Time of Concentration (Min)
E-I	Existing Drainage to Stream	577,865	452,785	8.9

TABLE 2: EXISTING DRAINAGE AREA

3.0 PROPOSED CONDITIONS

Under the proposed development plan, the northern portion of the project site will include a multi-family residential building consisting of 75 units, tenant premium parking, automotive sales & service, and recreational facilities. The developments in the lower portion of the project site will remain the same in the proposed plan. Additional improvements include parking, lighting fixtures, landscaping, stormwater infrastructure and other improvements as depicted on the accompanying site plan drawings.

3.1 AIR QUALITY

There will be no negative impact to air quality from the development. Air quality on-site will likely be enhanced by the addition of trees.

3.2 WATER QUALITY

Water quality across the site will be improved through the installation of permeable pavers to provide the required TSS removal and through the decrease of impervious surfaces. Please refer to the Stormwater Management Report prepared by our office for more detail.

3.3 WETLANDS

The NJDEP issued a Freshwater Wetlands Letter of Interpretation: Line Verification on 10/01/2020 verifying that there is a 150 FT wetlands transition area associated with the flagged wetlands area at the rear of the site. A portion of the wetland transition area will be disturbed and will be permitted through the NJDEP. Impervious surfaces are being reduced/maintained and stormwater drainage patterns are being maintained, therefore there will be no impacts to wetlands onsite.

3.4 FLOOD HAZARD AREAS & FLOODPLAINS

As noted above, Princeton Hydro has prepared a Flood Hazard Area Study for the site providing analysis on flood zone and flood hazard areas (FHA) surrounding the stream. There is a riparian zone associated with the stream. A

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portion of the proposed development is within the buffer and will be permitted through the NJDEP. Given reduction of impervious and maintained drainage patterns, there will be no anticipated impacts to the watershed.

3.5 WATER SUPPLY

As noted above, the developments in the lower portion of the project site are serviced by a lateral that ultimately connects to an existing water main in East Main Street. There will be no changes to water supply in this portion of the site.

The project proposes to replace the existing water service lateral. The proposed water demand has been estimated below using Table I "Average Daily Water Demand" found in N.J.A.C 7.10-12.6.

Multi-Family Dwelling = 75 GPD / per apartment * 75 apartments = 5,625 GPD

<u>Total = 5,625 GPD</u>

3.6 HYDROLOGY, GEOLOGY, SOILS & TOPOGRAPHY

Under proposed conditions, the stormwater runoff will be conveyed via a combination of existing catch basins/underground pipes, proposed catch basins/underground pipes, permeable pavers, and roof leaders, and is designed to meet existing drainage patterns.

All soils and geology are expected to remain unchanged. Topography will be modified to facilitate ADA compliant access paths, parking areas, and ramps. The site will also be regraded to improve overall surface drainage capacity.

Proposed topography maintains slopes generally consistent with existing conditions. The development proposes to decrease impervious surfaces which will reduce volumes in post-construction, thereby increasing the total infiltration for the site.

3.7 SEWERAGE SYSTEMS

There will be no changes to the sewerage systems in the lower portion of the project site. The project proposes to replace the existing sewer lateral in the northern portion of the project site. The proposed sewer demand has been calculated below using daily usage values found in N.J.A.C 7.14A-23.3.

Multi-Family Dwelling = 150 GPD / per 1 bedroom unit * 38 units = 5,700 GPD

Multi-Family Dwelling = 225 GPD / per 2 bedroom unit * 34 units = 7,650 GPD

Multi-Family Dwelling = 300 GPD / per 3 bedroom unit * 3 units = 900 GPD

<u>Total = 14,250 GPD</u>

3.8 VEGETATION

Vegetation onsite will be greatly improved through various landscaping features to enhance the interior aesthetic and improve upon perimeter buffering. The proposed landscaping plan incorporates a total of 137 native trees and over 1,000 shrubs. The proposed development includes 24,883 SF of new vegetated area, increasing the open space on-site by 4.4% from existing conditions. Please refer to the Landscaping Plan in the **Appendix** for more details.

3.9 WILDLIFE & AQUATIC ORGANISMS

As noted above, the project site is located within a business district and the site is generally developed/impervious, and as such, the presence of wildlife and aquatic biota is limited.

3.10 NOISE LEVELS

The proposed development is not anticipated to have any impact on the noise level of the surrounding area. The largest contributor to decibel levels will still be from nearby traffic on East Main Street.

3.11 HISTORIC & ARCHAEOLOGICAL FEATURES

Per the NJDEP GeoWeb mapping, no mapped historic or archaeological features are located on or within the vicinity of the site.

3.12 SOLID WASTE DISPOSAL

Trash will be stored within a dedicated interior trash room and will be privately disposed from the site on scheduled trash pick-up days.

3.13 TRAFFIC

The site is located along East Main Street. Proposed access is provided via proposed full movement driveways along East Main Street. Traffic levels are anticipated to be similar to existing conditions. Please refer to the Traffic Assessment Report prepared by our office for detailed information.

3.14 DRAINAGE AREAS

Under proposed conditions, the site is comprised of one (1) point of interest.

••• 7 • **Proposed Drainage to Stream (Drainage Area P-I):** This drainage area has been determined to be the northwesterly discharge point that leads to the stream/wetlands area.

Drainage Area	Description	Area Extents (SF)	Impervious Area (SF)	Time of Concentration (Min)
P-I	Proposed Drainage to Stream	577,865	427,902	8.9

TABLE 3: PROPOSED DRAINAGE AREAS

Detailed information regarding each drainage area can be found in the Stormwater Management Report.

4.0 DRAINAGE DESIGN

4.1 New Jersey Stormwater Design Parameters

The project is proposing to disturb 218,408 SF (5.0 acres) of land. Per the applicable stormwater standards, the project is classified as a Major Development and is subject to stormwater quantity, quality, and recharge regulations. Additionally, the project will decrease impervious areas by 24,883 SF (0.57 acres)

Design Parameters	Design Intent for Compliance
Stormwater Quantity	Demonstrate through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction runoff hydrographs for the two-, ten- and one-hundred- year storm events do not exceed, at any point in time, the preconstruction runoff hydrographs for the same storm event
Groundwater Recharge	Demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures maintain 100% of the average annual preconstruction groundwater recharge volume for the site.
Stormwater Quality	Stormwater management measures shall only be required for water quality control if an additional 1/4 acre of impervious surface is being proposed on a development site. As the development does not increase impervious surfaces on site by more than 1/4 acre, stormwater water quality measures do not apply. Water quality is expected to be improved due to increased lawn cover and proposed inlets sumps with hoods.

TABLE 4: PROJECT STORMWATER DESIGN INTENT SUMMARY TABLE

4.2 STORMWATER QUANTITY CONTROL

Runoff is controlled through the addition of permeable pavers, roof leaders, and inlets in conjunction with the existing conveyance system. To analyze runoff quantities between the existing and proposed drainage areas, one (1) point of interest was selected. The following tables summarize the results for the 5-year, 25-year and 50-year storm events for each project point of interest:

Storm Event	Pre-Development Peak Discharge	Post-Development Peak Discharge	Pre-Development Volume	Pre-Development Volume
5-Year	46.59 CFS	46.01 CFS	182,549 CF	179,325 CF
25-Year	68.62 CFS	68.62 CFS 68.09 CFS 27		267,472 CF
50-Year	79.68 CFS	79.18 CFS	315,684 CF	312,048 CF

TABLE 5: PEAK DISCHARGE & VOLUME TO POI-I

As shown in the tables above, peak stormwater discharge rates are reduced such that at no point in time does the proposed hydrograph exceed the existing hydrograph. Project hydrographs and more detailed data can be found in the Stormwater Management Report.

4.3 **GROUNDWATER RECHARGE**

As indicated in the Township Ordinances and NJAC 7:8-5.4, the project site shall demonstrate that the site and its stormwater management measures maintain 100 percent of the average annual pre-construction recharge volume for the site. As noted above, the proposed development will increase the amount of pervious surfaces throughout the site. This will subsequentially reduce volumes in post-construction conditions, thereby increasing the total infiltration for the site. Please refer to the Stormwater Management Report for more detailed information

4.4 STORMWATER QUALITY CONTROL

As the development increases impervious surfaces on site by more than ¹/₄ acre, stormwater water quality measures apply per NJAC 7:8. The overall site will require 12.37% TSS removal. Pervious pavers are proposed to provide 80% TSS removal for a portion of the proposed development, thereby proposing 12.52% TSS removal for the overall site. In addition, water quality is expected to be improved through the overall decrease in impervious surface by 24,883 SF (0.57 AC). Please refer to the Stormwater Management Report for more detailed information.

4.5 Soil Erosion & Sediment Control

A Soil Erosion & Sediment Control Plan has been prepared in accordance with the latest edition of the Standards for Soil Erosion and Sediment Control in New Jersey. Proposed temporary measures during construction include silt fencing, hay bales, a stabilized construction entrance, inlet filters, trench filters, tree protection fence, and cover for soil stabilization. Permanent post-construction measures include conduit outlet projection, native vegetation, and rip-rap lining. No land disturbance will occur until a permit has been obtained from the Morris County Soil Conservation District.

5.0 ENVIRONMENTAL IMPACT ASSESSMENT

The table below provides a summary of the environmental impact from post-development conditions. No major impacts to sensitive environmental features are anticipated.

Environmental Category	Impact	Description
Air Quality	None	No impact to air quality is anticipated.
Water Quality	Positive	Permeable pavers, roof leaders, new inlets, and pipes are proposed. Impervious area is decreased and water is treated for TSS removal.
Wetlands	None	There are mapped wetlands at the rear of the site. Permitting will be obtained and any necessary mitigation will be provided.
Flood Hazard Areas & Floodplains	None	There are mapped floodplains at the rear of the site. Permitting will be obtained and any necessary mitigation will be provided.
Water Supply	Negative	Increase in water demand to public system
Hydrology, Geology, Soils & Topography	Positive	Overall impervious area will be decreased and proposed drainage patterns match existing.
Sewerage Systems	Negative	Increase in sanitary demand to public system
Vegetation	Positive	Increased landscaping & decreased impervious surface.
Wildlife & Aquatic Organisms	None	No impact to wildlife & aquatic biota is anticipated.
Noise Levels	None	No impact to noise is anticipated.
Historic & Archaeological Features	None	No features on or near the site.
Solid Waste Disposal	None	Solid waste will be disposed through private hauling.
Traffic	None	Driveways will operate at acceptable LOS. Maximum increase in trip generation will not exceed 28 new trips.
Drainage Areas	Positive	New permeable pavers, inlets, pipes, and roof leaders are proposed. Overall impervious area will be decreased thereby providing reductions in quantity and volume.

6.0 RECOMMENDATIONS TO MINIMIZE ENVIRONMENTAL IMPACTS

6.1 GRADING & DRAINAGE

The Grading & Drainage design complies with Municipal, County, and State regulations and is outlined in the Stormwater Management Report and Grading & Drainage Plan. The site has been graded to match the existing topography and drainage patterns. Stormwater runoff will be conveyed via a combination of existing catch basins/underground pipes, proposed catch basins/underground pipes, permeable pavers, and roof leaders. In addition, impervious coverage on-site is reduced by 24,883 SF (0.57 acres).

6.2 VEGETATION & NATURAL ENVIRONMENT

The proposed landscaping aesthetically enhances the site, provides shade, and an improved buffer to adjacent properties. The landscaping plan incorporates a total of 137 native trees and over 1,000 shrubs. The remainder of the site will be planted with shrub and grass areas and will provide an overall increase of vegetated area under proposed conditions from 125,080 SF (21.65%) of vegetated open space to 149,963 SF (25.95%) of vegetated open space. Please refer to Landscaping Plan in the **Appendix** for more detail.

6.3 **CONSTRUCTION SCHEDULE**

Please note that various methods will be utilized during construction to help minimize the environmental impact. Th proposed sequence of construction for the development is anticipated to be as follows:

- 1. Install silt fence, tree protection fence, inlet protection filter, construction entrance, and any other applicable soil and sediment control measures (3 days).
- 2. Rough grading and excavation (4 weeks).
- 3. Building construction and site improvements (6 months).
- 4. Streetscape improvements (4 weeks).
- 5. Remove silt fence and soil erosion measures (I day).

7.0 STATEMENT OF ALTERNATIVES

Under a "no action" alternative the site would remain as is with the Health & Racquet Club in the northern portion and the shopping center with associated parking and site features in the lower portion. The proposed apartments, tenant premium parking, and automotive sales and service are permitted uses. The proposed apartments are located within the permitted setbacks, meet NJDEP requirements, and other requirements of the municipality. This combined with an enhanced stormwater management system, increased landscaping, an updated safer driveway configuration, and improvements to the entire site is aimed to provide improved conditions for the township. Additionally, the proposed development greatly increases the aesthetics of the site with an architectural design that is highlights the townships history, and an extensive landscaping design inclusive of native, low-maintenance trees. The proposed development offers increased economic activity, safety, and aesthetic appeal when compared to the "no action" alternative.

Aside from the "no action" alternative, the development could propose another use that is permitted within the East Business Zone (EB)/East Business Affordable Housing (EB-AH) Overlay such as an automotive gasoline station, a retail store, or an office.

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7.0 LICENSES, PERMITS, AND APPROVALS REQUIRED

- Borough of Mendham
 - Preliminary & Final Site Plan Approval
 - Local Sanitary Permitting
 - Building Permits
- Morris County
 - Preliminary & Final Site Plan Approval
- Morris County Soil Conservation District
 - Soil Erosion & Sediment Control Plan Certification
- New Jersey Department of Environmental Protection
 - NJPDES General Permit for Construction Activities (5G3)
 - Freshwater Wetland Permitting
 - o Flood Hazard Area Permitting
 - Treatment Works Approval
 - Water Main (BWSE) Permit
 - New Jersey American Water
 - Local Water Permitting

8.0 DOCUMENTATION

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The following documents were utilized in the drafting of this statement:

- NJDEP N.J.A.C. 7:8
- The Township of Mendham Zoning Code, Last Amended 11/10/2021
- The Township of Mendham Ordinance #09-2020
- NJDEP GeoWeb Mapping
- FEMA Mapping
- USGS Mapping
- Google Earth
- NRCS Soil Survey

APPENDIX PROJECT FIGURES

INVENTORY

AERIAL **M**AP

TAX / ZONING MAP

USGS QUADRANGLE MAP

FEMA FLOOD INSURANCE MAP

NJDEP GEOWEB WETLANDS LOCATION MAP

NRCS COUNTY SOIL SURVEY

LANDSCAPING PLAN

NJDEP FRESHWATER WETLANDS LETTER OF INTERPRETATION









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NJDEP GEOWEB WETLANDS LOCATION MAP



New Jersey Department of Environmental Protection

NJDEP | NJDEP, Bureau of Energy and Sustainability Edition 20190327 | New Jersey Office of Information Technology (NJOIT), Office of Geographic Information Systems | NJDEP. USEIA | NJ Department of Environmental Protection, Division of Information



USDA Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey





								
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI				
CapfB	Califon variant loam, 3 to 8 percent slopes	С	7.3	56.2%				
СоаВс	Cokesbury loam, 0 to 8 percent slopes, extremely stony	D	5.6	43.2%				
GkaoB	Gladstone gravelly loam, 3 to 8 percent slopes	В	0.1	0.6%				
Totals for Area of Inter	rest	12.9	100.0%					

Hydrologic Soil Group

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition Component Percent Cutoff: None Specified Tie-break Rule: Higher





PLANT SCH	EDUL	.E				
TREES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
\bigcirc	MAL	MALUS IOENSIS	PRAIRIE CRABAPPLE	8' HT	B&B	NATIVE
+	PRU	PRUNUS SEROTINA	BLACK CHERRY	2-3" CAL	B&B	NATIVE
×	QUE	QUERCUS BICOLOR	SWAMP WHITE OAK	2-3" CAL	B&B	NATIVE
+	TIL	TILIA CORDATA `GREENSPIRE`	GREENSPIRE LITTLELEAF LINDEN	2-3" CAL	B&B	NATIVE
+	VIT	VITEX AGNUS-CASTUS	CHASTE TREE	2-3" CAL	B&B	NATIVE
EVERGREEN TREES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
\ + { }	ILE JER	ILEX OPACA 'JERSEY QUEEN'	AMERICAN HOLLY	6' HT	B&B	NATIVE
\odot	THU	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	6' HT	B&B	NATIVE
SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	DETAIL
+	COR	CORNUS SERICEA	RED TWIG DOGWOOD	3 GAL.	POT	NATIVE
(+)	HYN	HYDRANGEA MACROPHYLLA `NIKKO BLUE`	NIKKO BLUE HYDRANGEA	3 GAL.	РОТ	NATIVE
\odot	HYQ	HYDRANGEA QUERCIFOLIA	OAKLEAF HYDRANGEA	3 GAL.	POT	NATIVE
\checkmark	ITE	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	3 GAL.	POT	NATIVE
ŝ	IVY	PARTHENOCISSUS TRICUSPIDATA	BOSTON IVY	5 GAL.	POT	NATIVE
÷	RHD	RHODODENDRON X `DORA AMATEIS`	DORA AMATEIS RHODODENDRON	3 GAL.	POT	NATIVE
(+)	VIB	VIBURNUM DENTATUM 'ARROWWOOD'	ARROWWOOD VIBURNUM	5 GAL.	POT	NATIVE
EVERGREEN SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	DETAIL
\odot	INK	ILEX GLABRA	INKBERRY HOLLY	24" HT	POT	NATIVE
(\cdot)	KAL	KALMIA LATIFOLIA	MOUNTAIN LAUREL	5 GAL	POT	NATIVE
0	RHO	RHODODENDRON MAXIMUM	ROSE BAY	7 GAL	POT	NATIVE
SHRUB AREAS	CODE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
	ASC	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED	I GAL	36" o.c.	NATIVE
	HEM	HEMEROCALLIS FULVA 'BITSEY'	DWARF YELLOW DAYLILY	I GAL	18" o.c.	NATIVE
	IRI	IRIS VERSICOLOR	BLUE FLAG	I GAL	24" o.c.	NATIVE
	PAN	PANICUM VIRGATUM	SWITCH GRASS	5 GAL	48" o.c.	NATIVE

LANDSCAPING AND BUFFER REQUIREMENTS							
CODE SECTION REQUIRED PROPOSED							
	SCREENING REQUIREMENTS						
§ 215-68	MIN 30' WIDE BUFFER	COMPLIES					





IRRIGATION NOTE:

IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA. PRIOR TO CONSTRUCTION, DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO VERIFY MAXIMUM ON SITE DYNAMIC WATER PRESSURE AVAILABLE MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, CONTROLLERS, AND SLEEVES WITHIN HARDSCAPE AREAS.

LANDSCAPING NOTES

- I. THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AND LANDSCAPED AREAS TO MATCH EXISTING CONDITIONS UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED LAWN AREAS WITH A MINIMUM 4 INCH LAYER OF TOPSOIL AND SEED.
- 3. THE CONTRACTOR SHALL RESTORE MULCH AREAS WITH A MINIMUM 3 INCH LAYER OF MULCH .
- 4. THE MAXIMUM SLOPE ALLOWABLE IN LANDSCAPE RESTORATION AREAS SHALL BE 3 FEET HORIZONTAL TO I FOOT VERTICAL (3:1 SLOPE) UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. 5. THE CONTRACTOR IS REQUIRED TO LOCATE ALL SPRINKLER HEADS
- IN AREA OF LANDSCAPING DISTURBANCE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL RELOCATE SPRINKLER HEADS AND LINES IN ACCORDANCE WITH OWNER'S DIRECTION WITHIN AREAS OF DISTURBANCE.
- 6. THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF CURB ELEVATIONS EXCEPT UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING AREAS.

120 GRAPHIC SCALE IN FEET I" = 60'

NO	T APPROVE	D FOR CONST	I 10/20/2022 PK FOR MUNICIPAL SUBMISSION	ISSUE DATE BY DESCRIPTION	
NOT ADBLOADED LOU CONSTRUCTION STOD DAD LOU CONSTRUCTION Stod begin Stod begin Burble Figure Rutherford, NJ • New York, NY • Boston, MA Princeton, NJ • Tampa, FL • Detroit, MI Rutherford, NJ • Tampa, FL • Detroit, MI Ruw.stonefieldeng.com Headquarters: 92 Park Avenue, Rutherford, NJ 07070 Phone 201.340.4468 • Fax 201.340.4472					
PRELIMINARY AND FINAL SITE PLAN	V-FEE MENDHAM APARTMENTS, LLC	PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT	BLOCK 801, LOT 20 04 00 EAST MAIN STREET	BOROUGH OF MENDHAM MORRIS COUNTY, NEW JERSEY	
	MATTHE NEW JERS LICENSED P	W J. SECKLER, SEY LICENSE No. 487 ROFESSIONAL ENGIN	, P.E. 31 EER	LD	
SCALE TITLE: OV DRAW	" ERALL "ING:	60' PROJECT ID: LANDSC PLAN	RUT-	1NG	





IRRIGATION NOTE:

SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA. PRIOR TO CONSTRUCTION, DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO VERIFY MAXIMUM ON SITE DYNAMIC WATER PRESSURE AVAILABLE MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, CONTROLLERS, AND SLEEVES WITHIN HARDSCAPE AREAS.

6							3
PLANT SCH	EDUL	E					
TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
\bigcirc	MAL	20	MALUS IOENSIS	PRAIRIE CRABAPPLE	8' HT	B&B	NATIVE
+	PRU	42	PRUNUS SEROTINA	BLACK CHERRY	2-3" CAL	B&B	NATIVE
×	QUE	2	QUERCUS BICOLOR	SWAMP WHITE OAK	2-3" CAL	B&B	NATIVE
+	TIL	20	TILIA CORDATA `GREENSPIRE`	GREENSPIRE LITTLELEAF LINDEN	2-3" CAL	B&B	NATIVE
+	VIT	3	VITEX AGNUS-CASTUS	CHASTE TREE	2-3" CAL	B&B	NATIVE
EVERGREEN TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
	ILE JER	26	ILEX OPACA `JERSEY QUEEN`	AMERICAN HOLLY	6' HT	B&B	NATIVE
\odot	THU	30	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	6' HT	B&B	NATIVE
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	DETAIL
(+)	COR	40	CORNUS SERICEA	RED TWIG DOGWOOD	3 GAL.	POT	NATIVE
(Ŧ)	HYN	45	HYDRANGEA MACROPHYLLA `NIKKO BLUE`	NIKKO BLUE HYDRANGEA	3 GAL.	POT	NATIVE
Ċ.	HYQ	31	HYDRANGEA QUERCIFOLIA	OAKLEAF HYDRANGEA	3 GAL.	POT	NATIVE
	ITE	48	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	3 GAL.	POT	NATIVE
~	IVY	6	PARTHENOCISSUS TRICUSPIDATA	BOSTON IVY	5 GAL.	POT	NATIVE
Ð	RHD	298	RHODODENDRON X `DORA AMATEIS`	DORA AMATEIS RHODODENDRON	3 GAL.	POT	NATIVE
+	VIB	49	VIBURNUM DENTATUM 'ARROWWOOD'	ARROWWOOD VIBURNUM	5 GAL.	POT	NATIVE
EVERGREEN SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	DETAIL
Ο	INK	397	ILEX GLABRA	INKBERRY HOLLY	24" HT	POT	NATIVE
Ð	KAL	83	KALMIA LATIFOLIA	MOUNTAIN LAUREL	5 GAL	РОТ	NATIVE
6	RHO	42	RHODODENDRON MAXIMUM	ROSE BAY	7 GAL	POT	NATIVE
SHRUB AREAS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
	ASC	118	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED	I GAL	36" o.c.	NATIVE
	HEM	1,226	HEMEROCALLIS FULVA 'BITSEY'	DWARF YELLOW DAYLILY	I GAL	18" o.c.	NATIVE
	IRI	232	IRIS VERSICOLOR	BLUE FLAG	I GAL	24" o.c.	NATIVE
	PAN	192	PANICUM VIRGATUM	SWITCH GRASS	5 GAL	48" o.c.	NATIVE



IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION



LANDSCAPING NOTES

- I. THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AND LANDSCAPED AREAS TO MATCH EXISTING CONDITIONS UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
- 2. THE CONTRACTOR SHALL RESTORE ALL DISTURBED LAWN AREAS WITH A MINIMUM 4 INCH LAYER OF TOPSOIL AND SEED.
- 3. THE CONTRACTOR SHALL RESTORE MULCH AREAS WITH A MINIMUM 3 INCH LAYER OF MULCH .
 THE MAXIMUM SLOPE ALLOWABLE IN LANDSCAPE RESTORATION
- AREAS SHALL BE 3 FEET HORIZONTAL TO I FOOT VERTICAL (3:1 SLOPE) UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. 5. THE CONTRACTOR IS REQUIRED TO LOCATE ALL SPRINKLER HEADS IN AREA OF LANDSCAPING DISTURBANCE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL RELOCATE SPRINKLER HEADS AND LINES IN ACCORDANCE WITH OWNER'S DIRECTION
- WITHIN AREAS OF DISTURBANCE. 6. THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF CURB ELEVATIONS EXCEPT UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING AREAS.

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE LANDSCAPE PLAN AND WITHIN THE PLANT LIST, THE PLAN SHALL DICTATE.

GRAPHIC SCALE IN FEET I" = 30'

						I 10/20/2022 PK FOR MUNICIPAL SUBMISSION	SUE DATE BY DESCRIPTION
NO	T APPRO	VED	FOR C	CON:	STR	UCI	<u>∽</u> ION
	STONEFIELD		Rutherford, NJ • New York, NY • Boston, MA	rinceton, NJ * Tampa, rz * Deu Olt, r'n www.stonefieldeng.com		Handenberger 03 Back Among Buckbuck All 07070	Phone 201.340.4468 · Fax 201.340.4472
PRELIMINARY AND FINAL SITE PLAN	V-FEE MENDHAM APARTMENTS, LLC		PROPOSED MULTI-FAMILY	RESIDENTIAL DEVELOPMENT		BLOCK 801, LOT 20 84.00 EAST MAIN STBEET	BOROUGH OF MENDHAM MORRIS COUNTY, NEW JERSEY
	MATTHEW J. SECKLER, P.E. NEW JERSEY LICENSE No. 48731 LICENSED PROFESSIONAL ENGINEER						
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		" = 30'	PROJ	ECT	ID: F	RUT-2	200218
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IRRIGATION NOTE:

SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA. PRIOR TO CONSTRUCTION, DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO VERIFY MAXIMUM ON SITE DYNAMIC WATER PRESSURE AVAILABLE MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, CONTROLLERS, AND SLEEVES WITHIN HARDSCAPE AREAS.

PLANT SCH	EDUL	E					
TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
\bigcirc	MAL	20	MALUS IOENSIS	PRAIRIE CRABAPPLE	8' HT	B&B	NATIVE
+	PRU	42	PRUNUS SEROTINA	BLACK CHERRY	2-3" CAL	B&B	NATIVE
×	QUE	2	QUERCUS BICOLOR	SWAMP WHITE OAK	2-3" CAL	B&B	NATIVE
+	TIL	20	TILIA CORDATA `GREENSPIRE`	GREENSPIRE LITTLELEAF LINDEN	2-3" CAL	B&B	NATIVE
+	VIT	3	VITEX AGNUS-CASTUS	CHASTE TREE	2-3" CAL	B&B	NATIVE
EVERGREEN TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
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\odot	THU	30	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	6' HT	B&B	NATIVE
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	DETAIL
(+)	COR	40	CORNUS SERICEA	RED TWIG DOGWOOD	3 GAL.	POT	NATIVE
(†)	HYN	45	HYDRANGEA MACROPHYLLA `NIKKO BLUE`	NIKKO BLUE HYDRANGEA	3 GAL.	POT	NATIVE
\odot	HYQ	31	HYDRANGEA QUERCIFOLIA	OAKLEAF HYDRANGEA	3 GAL.	РОТ	NATIVE
	ITE	48	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	3 GAL.	POT	NATIVE
~	IVY	6	PARTHENOCISSUS TRICUSPIDATA	BOSTON IVY	5 GAL.	POT	NATIVE
Ð	RHD	286	RHODODENDRON X 'DORA AMATEIS'	dora amateis rhododendron	3 GAL.	POT	NATIVE
(+)	VIB	49	VIBURNUM DENTATUM 'ARROWWOOD'	ARROWWOOD VIBURNUM	5 GAL.	POT	NATIVE
EVERGREEN SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	DETAIL
0	INK	397	ILEX GLABRA	INKBERRY HOLLY	24" HT	РОТ	NATIVE
Ð	KAL	83	KALMIA LATIFOLIA	MOUNTAIN LAUREL	5 GAL	POT	NATIVE
0	RHO	42	RHODODENDRON MAXIMUM	ROSE BAY	7 GAL	POT	NATIVE
SHRUB AREAS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
	ASC	118	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED	I GAL	36" o.c.	NATIVE
	HEM	1,226	HEMEROCALLIS FULVA 'BITSEY'	DWARF YELLOW DAYLILY	I GAL	18" o.c.	NATIVE
	IRI	232	IRIS VERSICOLOR	BLUE FLAG	I GAL	24" o.c.	NATIVE
	PAN	192	PANICUM VIRGATUM	SWITCH GRASS	5 GAL	48" o.c.	NATIVE



IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION



LANDSCAPING NOTES

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- WITHIN AREAS OF DISTURBANCE. 6. THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF CURB ELEVATIONS EXCEPT UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING AREAS.

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE LANDSCAPE PLAN AND WITHIN THE PLANT LIST, THE PLAN SHALL DICTATE.

GRAPHIC SCALE IN FEET I" = 30'





GENERAL LANDSCAPING NOTES:

- I. THE LANDSCAPE CONTRACTOR SHALL FURNISH ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH THESE I. ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2004) OR LATEST SPECIFICATIONS, APPROVED OR FINAL DRAWINGS, AND INSTRUCTIONS PROVIDED BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIALS, OR OWNER/OWNER'S REPRESENTATIVE. ALL WORK COMPLETED AND MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH THE INTENTION OF THE SPECIFICATIONS, DRAWINGS, AND INSTRUCTIONS AND EXECUTED WITH THE STANDARD LEVEL OF CARE FOR THE LANDSCAPE INDUSTRY.
- WORK MUST BE CARRIED OUT ONLY DURING WEATHER CONDITIONS FAVORABLE TO LANDSCAPE CONSTRUCTION AND TO THE HEALTH AND WELFARE OF PLANTS. THE SUITABILITY OF SUCH WEATHER CONDITIONS SHALL BE DETERMINED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL. 3. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR, BEFORE ORDERING OR PURCHASING MATERIALS, TO PROVIDE SAMPLES OF THOSE MATERIALS TO THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL FOR APPROVAL,
- IF SO REQUESTED 4. IF SAMPLES ARE REQUESTED, THE LANDSCAPE CONTRACTOR IS TO SUBMIT CERTIFICATION TAGS FROM TREES, SHRUBS AND SEED VERIFYING TYPE AND PURITY.
- 5. UNLESS OTHERWISE AUTHORIZED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL, THE LANDSCAPE CONTRACTOR SHALL PROVIDE NOTICE AT LEAST FORTY-EIGHT HOURS (48 HRS.) IN ADVANCE OF THE ANTICIPATED DELIVERY DATE OF ANY PLANT MATERIALS TO THE PROJECT SITE. A LEGIBLE COPY OF THE INVOICE, SHOWING VARIETIES AND SIZES OF MATERIALS INCLUDED FOR EACH SHIPMENT SHALL BE FURNISHED TO THE PROJECT LANDSCAPE
- DESIGNER. OR GOVERNING MUNICIPAL OFFICIAL. 6. THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL RESERVES THE RIGHT TO INSPECT AND REJECT PLANTS AT ANY TIME AND AT ANY PLACE.

PROTECTION OF EXISTING VEGETATION NOTES

- BEFORE COMMENCING WORK, ALL EXISTING VEGETATION WHICH COULD BE IMPACTED AS A RESULT OF THE PROPOSED CONSTRUCTION ACTIVITIES MUST BE PROTECTED FROM DAMAGE BY THE INSTALLATION OF TREE PROTECTION FENCING. FENCING SHALL BE LOCATED AT THE DRIP-LINE OR LIMIT OF DISTURBANCE AS DEPICTED WITHIN THE APPROVED OR FINAL PLAN SET, ESTABLISHING THE TREE PROTECTION ZONE. FENCE INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE PROTECTION FENCE DETAIL." NO WORK MAY BEGIN UNTIL THIS REQUIREMENT IS FULFILLED. THE FENCING SHALL BE INSPECTED REGULARLY BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION
- IN ORDER TO AVOID DAMAGE TO ROOTS, BARK OR LOWER BRANCHES, NO VEHICLE, EQUIPMENT, DEBRIS, OR OTHER MATERIALS SHALL BE DRIVEN, PARKED OR PLACED WITHIN THE TREE PROTECTION ZONE. ALL ON-SITE CONTRACTORS SHALL USE ANY AND ALL PRECAUTIONARY MEASURES WHEN PERFORMING WORK AROUND TREES, WALKS, PAVEMENTS, UTILITIES, AND ANY OTHER FEATURES FITHER EXISTING OR PREVIOUSLY INSTALLED UNDER THIS CONTRACT 3. IN RARE INSTANCES WHERE EXCAVATING, FILL, OR GRADING IS REQUIRED WITHIN THE DRIP-LINE OF TREES TO REMAIN, THE
- WORK SHALL BE PERFORMED AS FOLLOWS: • TRENCHING: WHEN TRENCHING OCCURS AROUND TREES TO REMAIN, THE TREE ROOTS SHALL NOT BE CUT. BUT THE TRENCH SHALL BE TUNNELED UNDER OR AROUND THE ROOTS BY CAREFUL HAND DIGGING AND WITHOUT INJURY TO
- THE ROOTS. NO ROOTS, LIMBS, OR WOODS ARE TO HAVE ANY PAINT OR MATERIAL APPLIED TO ANY SURFACE. • RAISING GRADES: WHEN THE GRADE AT AN EXISTING TREE IS BELOW THE NEW FINISHED GRADE. AND FILL NOT EXCEEDING 6 INCHES (6") IS REQUIRED, CLEAN, WASHED GRAVEL FROM ONE TO TWO INCHES (1" - 2") IN SIZE SHALL BE PLACED DIRECTLY AROUND THE TREE TRUNK. THE GRAVEL SHALL EXTEND OUT FROM THE TRUNK ON ALL SIDES A MINIMUM OF 18 INCHES (18") AND FINISH APPROXIMATELY TWO INCHES (2") ABOVE THE FINISH GRADE AT TREE. INSTALL GRAVEL BEFORE ANY EARTH FILL IS PLACED. NEW EARTH FILL SHALL NOT BE LEFT IN CONTACT WITH THE TRUNK OF ANY TREE REOUIRING FILL. WHERE FILL EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID TREE WELL SHALL BE CONSTRUCTED.
- LOWERING GRADES: EXISTING TREES LOCATED IN AREAS WHERE THE NEW FINISHED GRADE IS TO BE LOWERED, SHALL HAVE RE-GRADING WORK DONE BY HAND TO THE INDICATED ELEVATION. NO GREATER THAN SIX INCHES (6"). ROOTS SHALL BE CUT CLEANLY THREE INCHES (3") BELOW FINISHED GRADE UNDER THE DIRECTION OF A LICENSED ARBORIST WHERE CUT EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID RETAINING WALL SHALL BE CONSTRUCTED. IF APPLICABLE, THE RETAINING WALL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE RETAINING WALL DETAIL."

SOIL PREPARATION AND MULCH NOTES:

- I. LANDSCAPE CONTRACTOR SHALL OBTAIN A SOIL TEST OF THE IN-SITU TOPSOIL BY A CERTIFIED SOIL LABORATORY PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL ALLOW FOR A TWO WEEK TURNAROUND TIME FROM SUBMITTAL OF SAMPLE TO NOTIFICATION OF RESULTS
- . BASED ON SOIL TEST RESULTS, ADJUST THE RATES OF LIME AND FERTILIZER THAT SHALL BE MIXED INTO THE TOP SIX INCHES (6") OF TOPSOIL. THE LIME AND FERTILIZER RATES PROVIDED WITHIN THE "SEED SPECIFICATION" OR "SOD SPECIFICATION" IS APPROXIMATE AND FOR BIDDING PURPOSES ONLY. IF ADDITIONAL AMENDMENTS ARE NECESSARY, ADJUST THE TOPSOIL AS FOLLOWS • MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY
- VOLUME) OR GYPSUM. • MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
- TOPSOIL SHALL BE FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMING CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL OBTAINED FROM A WELL-DRAINED ARABLE SITE, FREE FROM ALL CLAY, LUMPS, COARSE SANDS, STONES, PLANTS, ROOTS, STICKS, AND OTHER FOREIGN MATERIAL GREATER THAN ONE INCH (1"). 4. TOPSOIL SHALL HAVE A PH RANGE OF 5.0-7.0 AND SHALL NOT CONTAIN LESS THAN 6% ORGANIC MATTER BY WEIGH
- 5. OBTAIN TOPSOIL ONLY FROM LOCAL SOURCES OR FROM AREAS HAVING SIMILAR SOIL CHARACTERISTICS TO THAT FOUND AT THE PROIECT SITE. 5. CONTRACTOR SHALL PROVIDE A SIX INCH (6") DEEP LAYER OF TOPSOIL IN ALL PLANTING AREAS. TOPSOIL SHALL BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS. THE SPREADING OF
- TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN SOIL CONDITIONS. UNLESS OTHERWISE NOTED IN THE CONTRACT. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBED AREA OF THE SITE.
- LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE SUB-GRADE ELEVATION MEETS THE FINISHED GRADE ELEVATION (LESS REOUIRED TOPSOIL), IN ACCORDANCE WITH THE APPROVED OR FINAL GRADING PLAN. 9. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THE APPROVED OR FINAL CONSTRUCTION SET UNLESS OTHERWISE DIRECTED BY THE
- PROIECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SURFACE AND SUBSURFACE PLANT BED DRAINAGE PRIOR TO THE INSTALLATION OF PLANTINGS. IF POOR DRAINAGE CONDITIONS EXIST, CORRECTIVE ACTION SHALL BE TAKEN PRIOR TO INSTALLATION. ALL PLANTING AND LAWN AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW A FREE FLOW OF SURFACE
- II. DOUBLE SHREDDED HARDWOOD MULCH OR APPROVED EQUAL SHALL BE USED AS A THREE INCH (3") TOP DRESSING IN ALL SHRUB PLANTING BEDS AND AROUND ALL TREES PLANTED BY LANDSCAPE CONTRACTOR, GROUND COVER, PERENNIAL, AND ANNUAL PLANTING BEDS SHALL BE MULCHED WITH A TWO INCH (2") TOP DRESSING. SINGLE TREES OR SHRUBS SHALL BE MULCHED TO AVOID CONTACT WITH TRUNK OR PLANT STEM. MULCH SHALL BE OF SUFFICIENT CHARACTER AS NOT TO BE EASILY DISPLACED BY WIND OR WATER RUNOFF
- 2. WHENEVER POSSIBLE, THE SOIL PREPARATION AREA SHALL BE CONNECTED FROM PLANTING TO PLANTING. 13. Soll shall be loosened with a backhoe or other large coarse-tiling equipment unless the soll is frozen or EXCESSIVELY WET. TILING THAT PRODUCES LARGE, COARSE CHUNKS OF SOIL IS PREFERABLE TO TILING THAT RESULTS IN FINE GRAINS UNIFORM IN TEXTURE. AFTER THE AREA IS LOOSENED IT SHALL NOT BE DRIVEN OVER BY ANY VEHICLE.
- 14. APPLY PRE-EMERGENT WEED CONTROL TO ALL PLANT BEDS PRIOR TO MULCHING. ENSURE COMPATIBILITY BETWEEN PRODUCT AND PLANT MATERIAL 15. ALL PLANTING SOIL SHALL BE AMENDED WITH THE FOLLOWING:

MYCRO® TREE SAVER - A DRY GRANULAR MYCORRHIZAL FUNGI INOCULANT THAT IS MIXED IN THE BACKFILL WHEN PLANTING TREES AND SHRUBS. IT CONTAINS SPORES OF BOTH ECTOMYCORRHIZAL AND VA MYCORRHIZAL FUNGI (VAM), BENEFICIAL RHIZOSPHERE BACTERIA, TERRA-SORB SUPERABSORBENT HYDROGEL TO REDUCE WATER LEACHING, AND SELECTED ORGANIC MICROBIAL NUTRIENT

- DIRECTIONS FOR USE: USE 3-OZ PER EACH FOOT DIAMETER OF THE ROOT BALL, OR 3-OZ PER INCH CALIPER. MIX INTO THE BACKFILL WHEN TRANSPLANTING TREES AND SHRUBS. MIX PRODUCT IN A RING-SHAPED VOLUME OF SOIL AROUND THE UPPER PORTION OF THE ROOT BALL. EXTENDING FROM THE SOIL SURFACE TO A DEPTH OF ABOUT 8 INCHES, AND EXTENDING OUT FROM THE ROOT BALL ABOUT 8 INCHES INTO THE BACKFILL, APPLY WATER TO SOIL SATURATION • MYCOR® TREE SAVER® IS EFFECTIVE FOR ALL TREE AND SHRUB SPECIES EXCEPT RHODODENDRONS, AZALEAS, AND
- MOUNTAIN LAUREL, WHICH REQUIRE ERICOID MYCORRHIZAE. SOIL PH: THE FUNGI IN THIS PRODUCT WERE CHOSEN BASED ON THEIR ABILITY TO SURVIVE AND COLONIZE PLANT ROOTS
- IN A PH RANGE OF 3 TO 9. FUNGICIDES: THE USE OF CERTAIN FUNGICIDES CAN HAVE A DETRIMENTAL EFFECT ON THE INOCULATION PROGRAM. SOIL APPLICATION OF ANY FUNGICIDE IS NOT RECOMMENDED FOR TWO WEEKS AFTER APPLICATION.
- OTHER PESTICIDES: HERBICIDES AND INSECTICIDES DO NOT NORMALLY INTERFERE WITH MYCORRHIZAL FUNGAL DEVELOPMENT, BUT MAY INHIBIT THE GROWTH OF SOME TREE AND SHRUB SPECIES IF NOT USED PROPERLY.
- HEALTHY START MACRO TABS 12-8-8
- FERTILIZER TABLETS ARE PLACED IN THE UPPER 4 INCHES OF BACKFILL SOIL WHEN PLANTING TREES AND SHRUBS. • TABLETS ARE FORMULATED FOR LONG-TERM RELEASE BY SLOW BIODEGRADATION, AND LAST UP TO 2 YEARS AFTER PLANTING. TABLETS CONTAIN 12-8-8 NPK FERTILIZER, AS WELL AS A MINIMUM OF SEVEN PERCENT (7%) HUMIC ACID BY WEIGHT, MICROBIAL NUTRIENTS DERIVED FROM SEA KELP, PROTEIN BYPRODUCTS, AND YUCCA SCHIDIGERA, AND A COMPLEMENT OF BENEFICIAL RHIZOSPHERE BACTERIA. THE STANDARD 21 GRAM TABLET IS SPECIFIED HERE. DIRECTIONS FOR USE: FOR PLANTING BALLED & BURLAPPED (B&B) TREES AND SHRUBS, MEASURE THE THICKNESS OF THE TRUNK, AND USE ABOUT I TABLET (21-G) PER HALF-INCH. PLACE THE TABLETS DIRECTLY NEXT TO THE ROOT BALL, EVENLY DISTRIBUTED AROUND ITS PERIMETER, AT A DEPTH OF ABOUT 4 INCHES.

IRRIGATION DURING ESTABLISHMENT						
SIZE AT PLANTING	IRRIGATION FOR VITALITY	IRRIGATION FOR SURVIVAL				
< 2" CALIPER	DAILY FOR TWO WEEKS, EVERY OTHER DAY FOR TWO MONTHS, WEEKLY UNTIL ESTABLISHED	TWO TO THREE TIMES WEEKLY FOR TWO TO THREE MONTHS				
2"-4 CALIPER	DAILY FOR ONE MONTH, EVERY OTHER DAY FOR THREE MONTHS, WEEKLY UNTIL ESTABLISHED	TWO TO THREE TIMES WEEKLY FOR THREE TO FOUR MONTHS				
4 >" CALIPER	DAILY FOR SIX WEEKS, EVERY OTHER DAY FOR FIVE MONTHS, WEEKLY UNTIL ESTABLISHED	TWICE WEEKLY FOR FOUR TO FIVE MONTHS				

I. AT EACH IRRIGATION, APPLY TWO TO THREE GALLONS PER INCH TRUNK CALIPER TO THE ROOT BALL SURFACE. APPLY IT IN A MANNER SO ALL WATER SOAKS THE ENTIRE ROOT BALL. DO NOT WATER IF ROOT BALL IS WET/SATURATED ON THE IRRIGATION DAY

2. WHEN IRRIGATING FOR VITALITY, DELETE DAILY IRRIGATION WHEN PLANTING IN WINTER OR WHEN PLANTING IN COOL CLIMATES. ESTABLISHMENT TAKES THREE TO FOUR MONTHS PER INCH TRUNK CALIPER. NEVER APPLY IRRIGATION IF THE SOIL IS SATURATED.

3. WHEN IRRIGATION FOR SURVIVAL, TREES TAKE MUCH LONGER TO ESTABLISH THAN REGULARLY IRRIGATED TREES. IRRIGATION MAY BE REQUIRED IN THE NORMAL HOT, DRY PORTIONS OF THE FOLLOWING YEAR.

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ESTABLISHMENT.

ACE

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- DETAILS

- ACTIVITIES HAVE BEEN COMPLETED

- IF APPLICABLE, TREE WELL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE WELL DETAIL."

PLANT QUALITY AND HANDLING NOTES

REVISION AS PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION. 2. IN ALL CASES, BOTANICAL NAMES LISTED WITHIN THE APPROVED OR FINAL PLANT LIST SHALL TAKE PRECEDENCE OVER COMMON NAMES

3. ALL PLANTS SHALL BE OF SELECTED SPECIMEN QUALITY, EXCEPTIONALLY HEAVY, TIGHTLY KNIT, SO TRAINED OR FAVORED IN THEIR DEVELOPMENT AND APPEARANCE AS TO BE SUPERIOR IN FORM, NUMBER OF BRANCHES, COMPACTNESS AND SYMMETRY. ALL PLANTS SHALL HAVE A NORMAL HABIT OR SOUND, HEALTHY, VIGOROUS PLANTS WITH WELL DEVELOPED ROOT SYSTEM. PLANTS SHALL BE FREE OF DISEASE, INSECT PESTS, EGGS OR LARVAE 4. PLANTS SHALL NOT BE PRUNED BEFORE DELIVERY. TREES WITH ABRASION OF THE BARK, SUNSCALDS, DISFIGURING KNOTS OR

FRESH CUTS OF LIMBS OVER ONE AND ONE-FOURTH INCHES (1-1/4") WHICH HAVE NOT COMPLETELY CALLOUSED SHALL BE REIECTED 5. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH AND BE LEGIBLY

TAGGED WITH THE PROPER NAME AND SIZE. 6. THE ROOT SYSTEM OF EACH PLANT SHALL BE WELL PROVIDED WITH FIBROUS ROOTS. ALL PARTS SHALL BE SOUND, HEALTHY, VIGOROUS WELL-BRANCHED AND DENSELY FOLIATED WHEN IN LEAF

7. ALL PLANTS DESIGNATED BALL AND BURLAP (B&B) MUST BE MOVED WITH THE ROOT SYSTEM AS SOLID UNITS WITH BALLS OF EARTH FIRMLY WRAPPED WITH BURLAP. THE DIAMETER AND DEPTH OF THE BALLS OF EARTH MUST BE SUFFICIENT TO encompass the fibrous root feeding systems necessary for the healthy development of the plant. No plant SHALL BE ACCEPTED WHEN THE BALL OF EARTH SURROUNDING ITS ROOTS HAS BEEN BADLY CRACKED OR BROKEN PREPARATORY TO OR DURING THE PROCESS OF PLANTING. THE BALLS SHALL REMAIN INTACT DURING ALL OPERATIONS. ALL PLANTS THAT CANNOT BE PLANTED AT ONCE MUST BE HEELED-IN BY SETTING IN THE GROUND AND COVERING THE BALLS WITH SOIL OR MULCH AND THEN WATERING. HEMP BURLAP AND TWINE IS PREFERABLE TO TREATED. IF TREATED BURLAP IS USED, ALL TWINE IS TO BE CUT FROM AROUND THE TRUNK AND ALL BURLAP IS TO BE REMOVED.

8. PLANTS TRANSPORTED TO THE PROJECT IN OPEN VEHICLES SHALL BE COVERED WITH TARPS OR OTHER SUITABLE COVERS SECURELY FASTENED TO THE BODY OF THE VEHICLE TO PREVENT INIURY TO THE PLANTS. CLOSED VEHICLES SHALL BE ADEQUATELY VENTILATED TO PREVENT OVERHEATING OF THE PLANTS. EVIDENCE OF INADEQUATE PROTECTION FOLLOWING DIGGING, CARELESSNESS WHILE IN TRANSIT, OR IMPROPER HANDLING OR STORAGE SHALL BE CAUSE FOR REJECTION OF PLANT MATERIAL. ALL PLANTS SHALL BE KEPT MOIST, FRESH, AND PROTECTED. SUCH PROTECTION SHALL ENCOMPASS THE ENTIRE PERIOD DURING WHICH THE PLANTS ARE IN TRANSIT, BEING HANDLED, OR ARE IN TEMPORARY STORAGE. 9. ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE CORRESPONDING LANDSCAPE PLAN AND PLANTING

10. LANDSCAPE CONTRACTOR SHALL MAKE BEST EFFORT TO INSTALL PLANTINGS ON THE SAME DAY AS DELIVERY. IF PLANTS ARE NOT PLANTED IMMEDIATELY ON SITE, PROPER CARE SHALL BE TAKEN TO PLACE THE PLANTINGS IN PARTIAL SHADE WHEN POSSIBLE. THE ROOT BALL SHALL BE KEPT MOIST AT ALL TIME AND COVERED WITH MOISTENED MULCH OR AGED WOODCHIPS. PROPER IRRIGATION SHALL BE SUPPLIED SO AS TO NOT ALLOW THE ROOT BALL TO DRY OUT. PLANTINGS HALL BE UNTIED AND PROPER SPACING SHALL BE ALLOTTED FOR AIR CIRCULATION AND TO PREVENT DISEASE, WILTING, AND LEAF LOSS, PLANTS THAT REMAIN UNPLANTED FOR A PERIOD OF TIME GREATER THAN THREE (3) DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH AND WATERED AS REQUIRED TO PRESERVE ROOT MOISTURE. II. NO PLANT MATERIAL SHALL BE PLANTED IN MUDDY OR FROZEN SOIL.

12. PLANTS WITH INJURED ROOTS OR BRANCHES SHALL BE PRUNED PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY DISEASED OR INJURED PLANTS SHALL BE REMOVED. 13. IF ROCK OR OTHER UNDERGROUND OBSTRUCTION IS ENCOUNTERED, THE LANDSCAPE DESIGNER RESERVES THE RIGHT TO

RELOCATE OR ENLARGE PLANTING PITS OR DELETE PLANT MATERIAL FROM THE CONTRACT. 14. IF PLANTS ARE PROPOSED WITHIN SIGHT TRIANGLES, TREES SHALL BE LIMBED AND MAINTAINED TO A HEIGHT OF EIGHT FEET (8') ABOVE GRADE, AND SHRUBS, GROUND COVER, PERENNIALS, AND ANNUALS SHALL BE MAINTAINED TO A HEIGHT NOT TO EXCEED TWO FEET (2') ABOVE GRADE UNLESS OTHERWISE NOTED OR SPECIFIED BY THE GOVERNING MUNICIPALITY OR AGENCY

15. INSTALLATION SHALL OCCUR DURING THE FOLLOWING SEASONS: PLANTS (MARCH 15 - DECEMBER 15)

LAWNS (MARCH 15 - JUNE 15 OR SEPTEMBER 1 - DECEMBER 1)

16. THE FOLLOWING TREES ARE SUSCEPTIBLE TO TRANSPLANT SHOCK AND SHALL NOT BE PLANTED DURING THE FALL SEASON (STARTING SEPTEMBER 15) ABIES CONCOLOR

S CONCOLOR	CORINOS VARIETIES	
R BUERGERIANUM	CRATAEGUS VARIETIES	PINUS NIGRA
R FREEMANII	CUPRESSOCYPARIS LEYLANDII	PLATANUS VARIETIES
R RUBRUM	FAGUS VARIETIES	POPULUS VARIETIES
R SACCHARINUM	HALESIA VARIETIES	PRUNUS VARIETIES
JLA VARIETIES	ILEX X FOSTERII	PYRUS VARIETIES
PINUS VARIETIES	ILEX NELLIE STEVENS	QUERCUS VARIETIES (NOT Q. PALUSTRIS)
RUS DEODARA	ILEX OPACA	SALIX WEEPING VARIETIES
TIS VARIETIES	JUNIPERUS VIRGINIANA	SORBUS VARIETIES
CIDIPHYLLUM VARIETIES	KOELREUTERIA PANICULATA	TAXODIUM VARIETIES
CIS CANADENSIS	LIQUIDAMBAR VARIETIES	TAXUX B REPANDENS
RNUS VARIETIES	LIRIODENDRON VARIETIES	TILIA TOMENTOSA VARIETIES
TAEGUS VARIETIES	MALUS IN LEAF	ULMUS PARVIFOLIA VARIETIES
	NYSSA SYLVATICA	ZELKOVA VARIETIES

17. IF A PROPOSED PLANT IS UNATTAINABLE OR ON THE FALL DIGGING HAZARD LIST, AN EQUIVALENT SPECIES OF THE SAME SIZE MAY BE REOUESTED FOR SUBSTITUTION OF THE ORIGINAL PLANT. ALL SUBSTITUTIONS SHALL BE APPROVED BY THE PROJECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL PRIOR TO ORDERING AND INSTALLATION.

18. DURING THE COURSE OF CONSTRUCTION/PLANT INSTALLATION, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY and promptly removed at the end of each work day. All debris, materials, and tools shall be properly STORED, STOCKPILED OR DISPOSED OF AND ALL PAVED AREAS SHALL BE CLEANED.

19. THE LANDSCAPE CONTRACTOR SHALL DISPOSE OF ALL RUBBISH AND EXCESS SOIL AT HIS EXPENSE TO AN OFF-SITE LOCATION AS APPROVED BY THE LOCAL MUNICIPALITY.

20. A 90-DAY MAINTENANCE PERIOD SHALL BEGIN IMMEDIATELY AFTER ALL PLANTS HAVE BEEN SATISFACTORILY INSTALLED. 21. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR) THER MEANS, REPAIRING AND RESHAPING WATER RINGS OR SAUCERS, MAINTAINING STAKES AND GUYS IF ORIGINALI REQUIRED, WATERING WHEN NEEDED OR DIRECTED, WEEDING, PRUNING, SPRAYING, FERTILIZING, MOWING THE LAWN, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.

2. MOW ALL GRASS AREAS AT REGULAR INTERVALS TO KEEP THE GRASS HEIGHT FROM EXCEEDING THREE INCHES (3"). MOWING SHALL BE PERFORMED ONLY WHEN GRASS IS DRY. MOWER BLADE SHALL BE SET TO REMOVE NO MORE THAN ONE THIRD (1/3) OF THE GRASS LENGTH. WHEN THE AMOUNT OF GRASS IS HEAVY, IT SHALL BE REMOVED TO PREVENT DESTRUCTION OF THE UNDERLYING TURF. MOW GRASS AREAS IN SUCH A MANNER AS TO PREVENT CLIPPINGS FROM BLOWING ON PAVED AREAS, AND SIDEWALKS. CLEANUP AFTER MOWING SHALL INCLUDE SWEEPING OR BLOWING OF PAVED AREAS AND SIDEWALKS TO CLEAR THEM FROM MOWING DEBRIS

23. GRASSED AREAS DAMAGED DURING THE PROCESS OF THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL RESTORE THE DISTURBED AREAS TO A CONDITION SATISFACTORY TO THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE. THIS MAY INCLUDE FILLING TO GRADE, FERTILIZING, SEEDING, AND MULCHING

24. SHOULD THE OWNER REQUIRE MAINTENANCE BEYOND THE STANDARD 90-DAY MAINTENANCE PERIOD, A SEPARATE CONTRACT SHALL BE ESTABLISHED.

25. LANDSCAPE CONTRACTOR SHALL WATER NEW PLANTINGS FROM TIME OF INSTALL AND THROUGHOUT REQUIRED 90-DAY MAINTENANCE PERIOD UNTIL PLANTS ARE ESTABLISHED. IF ON-SITE WATER IS NOT AVAILABLE AT THE PROJECT LOCATION, THE LANDSCAPE CONTRACTOR SHALL FURNISH IT BY MEANS OR A WATERING TRUCK OR OTHER ACCEPTABLE MANNER. 26. THE QUANTITY OF WATER APPLIED AT ONE TIME SHALL BE SUFFICIENT TO PENETRATE THE SOIL TO A MINIMUM OF EIGHT INCHES (8") IN SHRUB BEDS AND SIX INCHES (6") IN TURF AREAS AT A RATE WHICH WILL PREVENT SATURATION OF THE SOIL. 27. IF AN AUTOMATIC IRRIGATION SYSTEM HAS BEEN INSTALLED, IT CAN BE USED FOR WATERING PLANT MATERIAL. HOWEVER, FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY OF PLANT HEALTH AND

PLANT MATERIAL GUARANTEE NOTES

THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF TWO YEAR (2 YR.) FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE

.. THE LANDSCAPE CONTRACTOR SHALL REMOVE AND REPLACE DYING, DEAD, OR DEFECTIVE PLANT MATERIAL AT HIS EXPENSE. THE LANDSCAPE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS COMPANY'S OPERATIONS. 3. ALL REPLACEMENT PLANTS SHALL BE OF THE SAME SPECIES AND SIZE AS SPECIFIED ON THE APPROVED OR FINAL PLANT LIST. REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.

4. THE CONTRACTOR SHALL INSTRUCT THE OWNER AS TO THE PROPER CARE AND MAINTENANCE OF ALL PLANTINGS.

LAWN (SEED OR SOD) NOTES:

. SEED MIXTURE SHALL BE FRESH, CLEAN, NEW CROP SEED. SOD SHALL BE STRONGLY ROOTED, UNIFORM IN THICKNESS, AND FREE OF WEEDS, DISEASE, AND PESTS. . SEED OR SOD SHALL BE PURCHASED FROM A RECOGNIZED DISTRIBUTOR AND SHALL BE COMPOSED OF THE MIX OR BLEND

WITHIN THE PROVIDED "SEED SPECIFICATION" OR "SOD SPECIFICATION.'

3. REFERENCE LANDSCAPE PLAN FOR AREAS TO BE SEEDED OR LAID WITH SOD. 4. SEEDING SHALL NOT BE PERFORMED IN WINDY WEATHER. IF THE SEASON OF THE PROJECT COMPLETION PROHIBITS PERMANENT STABILIZATION, TEMPORARY STABILIZATION SHALL BE PROVIDED IN ACCORDANCE WITH THE "TEMPORARY

SEEDING SPECIFICATION." 5. PROTECT NEW LAWN AREAS AGAINST TRESPASSING WHILE THE SEED IS GERMINATING. FURNISH AND INSTALL FENCES, SIGNS, BARRIERS OR ANY OTHER NECESSARY TEMPORARY PROTECTIVE DEVICES. DAMAGE RESULTING FROM TRESPASS, EROSION, WASHOUT, SETTLEMENT OR OTHER CAUSES SHALL BE REPAIRED BY THE LANDSCAPE CONTRACTOR AT HIS EXPENSE. REMOVE ALL FENCES, SIGNS, BARRIERS OR OTHER TEMPORARY PROTECTIVE DEVICES ONCE LAWN HAS BEEN ESTABLISHED.

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PRELIMINARY AND FINAL SITE PLAN	V-FEE MENDHAM APARTMENTS, LLC	`	PROPOSED MULTI-FAMILY	RESIDENTIAL DEVELOPMENT		BLOCK 801, LOT 20 84.00 EAST MAIN STREET	BOROUGH OF MENDHAM MORRIS COUNTY, NEW JERSEY
	MATTHEW J. SECKLER, P.E. NEW JERSEY LICENSE No. 48731 LICENSED PROFESSIONAL ENGINEER						
	SCALE: AS SHOWN PROJECT ID: RUT-200218 TITLE:						

C-20



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PHILIP D. MURPHY Governor

SHEILA Y. OLIVER Lt. Governor

Division of Land Resource Protection Mail Code 501-02A P.O. Box 420 Trenton, New Jersey 08625-0420 www.nj.gov/dep/landuse

CATHERINE R. McCABE Commissioner

October 1, 2020

Mr. Thomas Maoli R.O.I. Management, LLC 130 Route 10 Whippany, New Jersey 07981

> RE: Freshwater Wetlands Letter of Interpretation: Line Verification File No.: 1418-20-0001.1 Activity Number: FWW200001 Applicant: R.O.I. Management, LLC Project Name: Mendham Village Shopping Center Block: 801 Lot: 20 Mendham Borough, Morris County

Dear Mr. Maoli:

This letter is in response to your request for a Freshwater Wetlands Letter of Interpretation Line Verification to have Division of Land Resource Protection (Division) staff verify the boundary of the freshwater wetlands and/or State open waters on the referenced property.

In accordance with agreements between the State of New Jersey Department of Environmental Protection (NJDEP), the U.S. Army Corps of Engineers (USACOE) Philadelphia and New York Districts, and the U.S. Environmental Protection Agency (USEPA), the NJDEP is the lead agency for establishing the extent of State and Federally regulated wetlands and waters. The USEPA and/or USACOE retain the right to reevaluate and modify the jurisdictional determination at any time should the information prove to be incomplete or inaccurate.

Based upon the information submitted, and upon a site inspection conducted by Division staff on August 21, 2020, the Division has determined that the wetlands and waters boundary line(s) as shown on the plan map entitled: "BOUNDARY AND TOPOGRAPHIC SURVEY; PREPARED FOR MENDHAM VILLAGE SHOPPING CENTER TAX MAP BLOCK 801 LOT 20; 90 EAST MAIN STREET BOROUGH OF MENDHAM COUNTY OF MORRIS, NJ", consisting of one (1) sheet, dated February 21, 2020, unrevised, and prepared by Philip A. McEntee Jr., is accurate as shown.

The freshwater wetlands and waters boundary line, as determined in this letter, must be shown on any future site development plans. The line should be labeled with the above file number and the following note:

"Freshwater Wetlands/Waters Boundary Line as verified by NJDEP".

Wetlands Resource Value Classification ("RVC")

In addition, the Division has determined that the resource value and the standard transition area or buffer required adjacent to the delineated wetlands are as follows:

Exceptional: Flags WA-1 through WB-26. [150 foot wetland transition area]

RVC may affect requirements for wetland and/or transition area permitting. This classification may affect the requirements for an Individual Wetlands Permit (see N.J.A.C. 7:7A-9 and 10), the types of General Permits available for the property (see N.J.A.C. 7:7A-5 and 7) and any modification available through a transition area waiver (see N.J.A.C. 7:7A-8). Please refer to the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et seq.) and implementing rules for additional information.

Wetlands resource value classification is based on the best information available to the Division. The classification is subject to reevaluation at any time if additional or updated information is made available, including, but not limited to, information supplied by the applicant.

Under N.J.S.A. 13:9B-7a(2), if the Division has classified a wetland as exceptional resource value, based on a finding that the wetland is documented habitat for threatened and endangered species that remains suitable for use for breeding, resting or feeding by such species, an applicant may request a change in this classification. Such requests for a classification change must demonstrate that the habitat is no longer suitable for the documented species because there has been a change in the suitability of this habitat. Requests for resource value classification changes and associated documentation should be submitted to the Division at the address at the top of this letter.

General Information

Pursuant to the Freshwater Wetlands Protection Act Rules, you are entitled to rely upon this jurisdictional determination for a period of five years from the date of this letter unless it is determined that the letter is based on inaccurate or incomplete information. Should additional information be disclosed or discovered, the Division reserves the right to void the original letter of interpretation and issue a revised letter of interpretation.

Regulated activities proposed within a wetland, wetland transition area or water area, as defined by N.J.A.C. 7:7A-2.2 and 2.3 of the Freshwater Wetlands Protection Act rules, require a permit from this office unless specifically exempted at N.J.A.C. 7:7A-2.4. The approved plan and supporting jurisdictional limit information are now part of the Division's public records.

Please be advised that any surface water features on the site or adjacent to the site may possess flood hazard areas and/or riparian zones and development within these areas may be subject to the Flood Hazard Area Control Act rules at N.J.A.C. 7:13. The Division can verify the extent of flood hazard areas and/or riparian zones through a flood hazard area verification under the application procedures set forth at N.J.A.C. 7:13-5.1.

This letter in no way legalizes any fill which may have been placed, or other regulated activities which may have occurred on-site. This determination of jurisdiction extent or presence does not make a finding that wetlands or water areas are "isolated" or part of a surface water tributary system unless specifically called out in this letter as such. Furthermore, obtaining this determination does not affect your responsibility to obtain any local, State, or Federal permits which may be required.

Recording

Within 90 calendar days of the date of this letter, the applicant shall submit the following information to the clerk of each county in which the site is located, and shall send proof to the Division that this information is recorded on the deed of each lot referenced in the letter of interpretation:

- 1. The Department file number for the letter of interpretation;
- 2. The approval and expiration date of the letter of interpretation;
- 3. A metes and bounds description of the wetland boundary approved under the letter of interpretation;
- 4. The width and location of any transition area approved under the letter of interpretation; and
- 5. The following statement: "The State of New Jersey has determined that all or a portion of this lot lies in a freshwater wetland and/or transition area. Certain activities in wetlands and transition areas are regulated by the New Jersey Department of Environmental Protection and some activities may be prohibited on this site or may first require a freshwater wetland permit. Contact the Division of Land Resource Protection at (609) 777-0454 or http://www.nj.gov/dep/landuse for more information prior to any construction onsite."

Failure to have this information recorded in the deed of each lot and/or to submit proof of recording to the Division constitutes a violation of the Freshwater Wetlands Protection Act rules and may result in suspension or termination of the letter of interpretation and/or subject the applicant to enforcement action pursuant to N.J.A.C. 7:7A-22.

Appeal Process

In accordance with N.J.A.C. 7:7A-21, any person who is aggrieved by this decision may request a hearing within 30 days of the date the decision is published in the DEP Bulletin by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, Mail Code 401-04L, P.O. Box 402, 401 East State Street, 7th Floor, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist found at www.nj.gov/dep/landuse/forms.html. Hearing requests received after 30 days of publication notice may be denied. The DEP Bulletin is available on the Department's website at www.nj.gov/dep/bulletin. In addition to your hearing request, you may file a request with the Office of Dispute Resolution to engage in alternative dispute resolution. Please see the website www.nj.gov/dep/odr for more information on this process.

Please contact Robert Helsel of our staff by e-mail at robert.helsel@dep.nj.gov or by phone at (609) 777-0454 should you have any questions regarding this letter. Be sure to indicate the Department's file number in all communication.

Sincerely,

Cathryn Schaffer, Environmental Specialist 3 Division of Land Resource Protection

c: Mendham Borough Municipal Clerk Agent: Karin Tekel, EcoSciences Inc.