3.0 ENVIRONMENTAL SETTING, POTENTIAL IMPACTS, AND MITIGATION

3.1 Geology, Soils and Topography

3.1.1 Existing Conditions

Geology

The Orchard Ridge property lies within the Triassic Lowlands of the New England physiographic province. The Triassic Lowland lies entirely within Rockland County in New York, but the underlying rock formations extend south into New Jersey. The Triassic Lowlands are comprised of sedimentary sandstones, siltstones and conglomerates which are bordered on the east by the Palisades Sill along the Hudson River, and by a fault line and the Hudson Highlands metamorphic rocks to the west. The site is underlain by the Brunswick formation, which extends through the central portion of Rockland County and eastward towards the Hudson River. The Brunswick Formation is part of the Newark Group and is characterized by sandstone, mudstone and arkose.

Ridgelines in the majority of this physiographic province trend from the southwest corner of the county to the northeast corner. The basic patterns of hills and valleys reflect the structure and variation of the composition of the underlying rock. In general, the hills and drainage patterns of the landforms trend southwest to northeast. The local drainage patterns and orientation of local streams and lakes reflect this underlying pattern. Local topography is shown in Figure 3.1-1 Local Topography.

Soil Types

The soils on the Orchard Ridge property have been identified using the soil classifications of the USDA Soil Conservation Service (SCS). Descriptions of soils are taken from the *Soil Survey of Rockland County* (SCS, October 1990). The property is underlain by three (3) soil types: Wethersfield gravelly silt loam, Watchaug fine sandy loam, and a small area of Adrian Muck. The distribution of the soil types on the property is shown the soils map illustrated in Figure 3.1-2. The characteristics of each soil type are described below.

Wethersfield gravelly silt loam (WeB)

This soil unit is very deep and well drained. It can be located on ridge tops, sides of slopes and at the foot of slopes. Slopes for this soil range from 3 to 8 percent (WeB). Permeability is moderate in the surface layer and subsoil and slow or very slow in the substratum. Available water capacity is moderate and the depth to water table is 1.5 to 2.5 feet below the ground surface in February to April. The erosion hazard is slight in soil type WeB and the surface runoff is medium. Depth to bedrock is generally more then 60 inches below the ground surface. According to the Natural Resource Conservation Service (NRCS) this soil type is not considered a hydric soil.

This soil unit is the predominant soil type on site and is found throughout much of the central portion of the property as well within the northern and southern portions of the Property, as shown in Figure 3.1-2, Soils Map.

Watchaug fine sandy loam (Wc)

This soil unit is very deep and moderately well drained. Slopes range from 0 to 3 percent. Permeability is moderate in the surface layer and subsoil and moderate or moderately rapid in the substratum. Available water capacity is moderate and the depth to water table is 1.5 to 2.5 feet below the ground surface in November to April. The erosion hazard is slight while the surface runoff is slow. Depth to bedrock is generally more than 60 inches below the ground surface. According to the NRCS this soil type is not considered a hydric soil.

This soil unit is mapped in the northern portion of the property as shown in Figure 3.1-2, Soils Map.

Adrian muck (Aa)

This soil is very deep, nearly level, and very poorly drained. Slopes range from 0 to 2 percent. Permeability is moderately slow to moderately rapid in the subsurface layers and rapid in the substratum. Available water capacity is very high. Depth to the water table is 1 foot above the surface to 1 foot below the surface (November to May). The depth to bedrock is more than 60 inches.

This soil unit is mapped in a small area at the southwest portion of the property, adjacent to the railroad as shown in Figure 3.1-2, Soils Map.

Soil characteristics for individual soils mapped on the site are provided in Table 3.1-1, below. The degree and kind of soil limitations that may affect typical building site development are also described in Table 3.1-1. This information has been compiled from data in the SCS *Soil Survey of Rockland County*. No site specific soil survey was conducted on the site. Development limitations are considered *slight* where soil properties are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties are less favorable for the indicated use and special planning, design or maintenance may be needed to overcome or minimize the limitations; and *severe* if soil properties require special design and will necessitate increased costs to construct and possibly increased maintenance.

Table 3.1-1
Soil Characteristics and Limitations

Soil Series	Hydrologic Group[1]	Permeability (in./hr.)	Erosion Factor	Potential Limitations for:			
			K[2]	Local Roads, and Streets	Buildings w/o basements	Buildings with basements	Lawns and Landscaping
Watchaug (Wc)	A/D	0.6-2.0 (0-21 in) 0.6-6.0 (21-62 in)	0.24-0.37	Severe: frost action.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.
Wethersfield (WeB)	B	0.6-2.0 (0-22 in) <0.2 (22-60 in)	0.24-0.32	Moderate: wetness and frost action.	Moderate: wetness.	Moderate: wetness.	Moderate: small stones.
Adrian Muck (Aa)	C	0.2-6.0 (0-26 in) 6.0-20 (26-60 in)	---	Severe: subsides, ponding, and frost action.	Severe: subsides, ponding, and low strength.	Severe: subsides, ponding.	Severe: ponding, and excess humus.

[1] Hydrologic groups are used to estimate runoff from precipitation; they range from high infiltration (A) to low infiltration (D).
[2] Erosion Factor K indicates susceptibility to sheet and rill erosion (expressed in tons/acre/year). K values range from 0.05 to 0.69.
Source: Soil Survey of Rockland County, New York, USDA SCS

As noted in Table 3.1-1, the SCS identifies these soils as possessing potential limitations for development of roads, buildings and lawns or landscaping, where such limitations may require planning consideration prior to development. These constraints do not assume the land cannot be developed, nor are they a rating of construction potential. The ratings reflect the difficulty and relative costs of corrective measures that may be necessary (e.g. erosion controls, footing drains or other drainage improvements) for development. The limiting characteristics of these soils may be overcome by careful project planning, design and management.

Watchaug and Weathersfield soils are rated with moderate limitations for the construction of buildings due to wetness. The construction of local roads and streets in Watchug soils and Weathersfield soils are listed as having severe limitations due to frost action and moderate limitations due to wetness and frost action, respectively. These limitations can be addressed through adequate roadway base material and proper roadway drainage. (see discussion below).

Adrian muck soils are rated with severe limitations for the development of roads, streets and buildings, due to subsidence, ponding, frost action (roads) and low strength (buildings). As indicated above, a small area of Adrian muck soils are mapped in the southwest corner of the site, adjacent to the railroad tracks. Portions of a driveway and a parking garage are proposed in the area mapped as having Adrian muck soils. Further site specific information will be obtained in this area to confirm whether the soils are present and to determine actual soil and drainage conditions in that portion of the site.

The SCS *Soil Survey for Rockland County* identifies potential limitations for development of roads, buildings and lawns or landscaping, where such limitations may require planning consideration prior to development. The presence of these constraints does not mean the land is undevelopable. The ratings reflect the difficulty and relative costs of corrective measures that may be necessary (e.g. erosion controls, footing drains or other drainage improvements) for development. The limiting characteristics of these soils require thoughtful project planning, design and management. Design recommendations to respond to these conditions have been addressed and are provided in Section 3.1.3, Mitigation Measures.

Topography

The property has very gently sloping topography, sloping from Route 303, towards the west and the railroad tracks at the western property boundary. Topography in the vicinity of the property is flat to gently sloping with steeper slopes to the northwest of the property as shown on Figure 3.1-1 Local Topography. The property is located on a broad, north-south trending ridge.

On-site slopes are shown on Figures 3.1-3 Existing Slopes Map. The great majority of the site, or approximately 28.6 acres has gradual slopes of less than 10 percent, sloping gently down-slope from Route 303 towards the railroad tracks and the west. Only limited areas of the site (0.27 acres) have slopes that exceed 15 percent.

The highest elevations on the Orchard Ridge site are found along the eastern property boundary and Route 303 at an approximate elevation of 236 feet. The lowest elevations on the site are located near the railroad tracks at the western edge of the site with an approximate elevation of 165 feet.

The project site does not contain any prominent or unique geologic features. No bedrock has been observed on the property.

Table 3.1-2
Existing Slopes

Slope Category	***Approximate Acres Existing***
0% to 10%	28.57
10% to 15%	0.81
15% to 30%	0.24
>30%	0.03
TOTAL	29.65

Source - Atzl, Scatassa & Zigler P.C., 2010

3.1.2 Potential Impacts

Geology

The absence of bedrock outcrops on the site or in the vicinity of the site indicates that rock removal would not be required for project construction. If bedrock is encountered during construction, mechanical means (i.e. ripping, chipping) would be employed in lieu of blasting. Site conditions would mandate which method of rock removal would be required for specific areas on the property.

Although not anticipated, any required blasting would be carried out in accordance with Town of Clarkstown regulations and procedures developed for this project and a blasting contract developed with the Blasting Contractor. The procedures described below are based on State blasting law and Chapter 220 Quarrying and Blasting of the Town of Clarkstown Code. pertaining to the transportation of the blasting material and the noise regulations, respectively. The contractor's Blasting Plan would be based on site specific blasting requirements, and would be submitted to the Town for approval in advance of any site work activity.

Slopes

Soil erosion during construction is related in part to the amount of disturbance to steep slopes which would be susceptible to erosion. As described previously, only 0.27 acres or approximately one percent of the entire site consists of slopes greater than 15 percent. Impacts to steep slopes would be minimal for the Orchard Ridge development because of the relatively shallow slopes on the site and the limited areas of steep slopes to be disturbed. Less than 0.2 acres of land with slopes greater than 15 percent would be disturbed as a result of the project. The limited areas of steep slope proposed to be disturbed by the project are shown in Figures 3.1-4 and 3.1-4A for the Hemlock Drive Access Plan and the Meola Road Access Alternative Steep Slopes Disturbance Maps.

Table 3.1-3 provides an estimate of the amount of disturbance by slope range for the proposed plan. There is no difference between the disturbance in the Hemlock Drive Access Plan as compared to the Meola Road Access Alternative.

Table 3.1-3
Slope Disturbance Analysis

Slope Category	***Approximate Acres Disturbed***	
	Hemlock Drive Access Plan	**Meola Road Access Alternative**
0% to 10%	18.13 acres	18.13 acres
10% to 15%	0.66 acres	0.66 acres
15% to 30%	0.16 acres	0.16 acres
>30 %	0 acres	0 acres
TOTAL DISTURBANCE	18.95 acres	18.95 acres

Source - Atzl, Scatassa & Zigler P.C., 2011

Soil Impacts

Suitability of Soils Based on Rockland County Soil Survey

The SCS *Soil Survey of Rockland County* identifies these soils as possessing potential limitations for development of roads, buildings and excavations due to their characteristics. Such limitations require planning consideration prior to development. The presence of these constraints does not mean the land cannot be developed, nor are they a rating of construction potential. The ratings reflect the difficulty and relative costs of corrective measures that may be necessary (e.g. erosion controls, footing drains or other drainage improvements) for development. The limiting characteristics of these soils may be overcome by careful project planning, design and management.

Adrian muck soils have a prolonged period of wetness and water commonly at or above the surface are the major limitations. Local roads and streets are limited by the frost action, as well as the prolonged periods of water at or near the surface. Adrian muck soils are mapped in a small area in the southwest corner of the site, adjacent to the railroad tracks. According to the grading plan, Adrian muck soils are primarily not being disturbed except for small areas for driveway and garage construction. Proper road base and roadway drainage construction will be required in these soils.

Watchaug fine sandy loam (Wc) soils have limitations associated with dwellings due to wetness. Utilizing subsurface drains around footings and foundations and sealing basements will reduce the potential impacts related to wetness. Grading and landscaping will divert runoff from around the residences further reducing potential wetness. Limitations for the internal roads and streets are mostly related to frost action. The installation of proper road subgrade and proper roadway drainage would reduce the potential for frost action.

Wethersfield gravelly sit loam (WeC/WeB/WeD) soils have limitations associated with dwellings and road construction due to wetness, frost action and slope. Utilizing subsurface drains around footings and foundations and sealing basements will reduce the potential impacts related to wetness for residences. The installation of proper road subgrade and roadway drainage would reduce the potential for wetness and frost action. Appropriate grading and slope stabilization will address limitations related to slope for both residences and roadways.

Grading Plan

The grading and recontouring of soils will be required for project construction. Areas of proposed grading and soil disturbance for the site are shown in Figures 3.1-5 and 3.15A, Grading Plan and in the detailed Grading Plans provided with the Site Plan drawings. The total area of grading or site disturbance is estimated to be 18.95 acres of the site for both the Hemlock Drive Access Plan and the Meola Road Access Alternative.

Soil Erosion during Construction

The potential for soil erosion will be greatest during the site work and grading phase, when existing vegetation is removed and soils are exposed. These construction-related impacts would be temporary and would be mitigated by a Soil Erosion and Sediment Control Plan (see mitigation section below). As final grades are achieved, disturbed areas will be stabilized, seeded and landscaped. As shown in Figure 3.1-5 Grading Plan the majority of grading will

occur in areas with shallow slopes of less than 10 percent, reducing the potential for soil erosion on the property.

Cut and Fill

Hemlock Drive Access Plan

A preliminary estimate of the project earthwork has been completed by the project engineer. To implement the Hemlock Drive Access Plan the grading would involve approximately 30,500 cubic yards (cy) of earth cut and 70,000 cy of earth fill. This results in approximately 39,500 cubic yards of material which will need to be imported onto the site to provide level areas for buildings, parking and driveways. Preliminary cut and fill analysis shows those areas on site where the cut or fill will exceed a depth of two feet (see Figure 3.1-6 Cut and Fill Map - Hemlock Drive Access Plan). Grading in those areas where the earth movement is less than two feet is considered to be a minor disturbance.

Meola Road Access Alternative

To implement the Meola Road Access Alternative, the grading would involve approximately 30,500 cubic yards (cy) of earth cut, similar to the Hemlock Drive Access Plan, but would involve approximately 69,500 cy of earth fill, a reduction of 500 cubic yards. This reduction in fill occurs due to not having to construct a new access onto NYS Route 303. (see Figure 3.1-6A Cut and Fill Map - Meola Road Access Alternative).

While the preliminary estimates indicate that there is a need to import material at the site, measures to reduce the amount of cut and fill include a careful analysis of site grading to avoid, to the extent possible, the need for excavation or filling. Since grading is both time consuming and costly, cut and fill has been minimized. The Applicant will continue to refine the grading plan in an effort to achieve an earthwork balance for the project as far as practical.

Based upon the description of soils provided in the Soil Survey, the majority of on-site soils would be suitable for on-site reuse. Specific uses of on-site soils such as under foundations or roadways would require either crushed rock or soil with suitable compaction properties. Other on-site soils would be suitable for berms, slopes, and areas of lawn and landscaping. Those soils with excessive moisture or poor permeability would not be used where proper soil drainage is necessary.

3.1.3 Mitigation Measures

Geology Impacts

Given the absence of observed rock outcrops and bedrock on-site, the project engineer anticipates that blasting would not be required for the proposed development. In the event that bedrock is encountered during construction and grading, any required rock removal would be accomplished through mechanical means (i.e. ripping, chipping), and blasting would only be utilized if no other means were successful.

In the event that blasting is necessary, it would be carried out in accordance with a final Blasting Plan prepared by the blasting contractor. This plan would meet all New York State and Town of Clarkstown requirements for blasting (Chapter 220 Quarrying and Blasting of the Town of Clarkstown Code). New York State regulations require insurance and licensing for the

contractor. Proof of valid liability and damage insurance is a prerequisite for obtaining a blasting permit.

The Town of Clarkstown Code has specific requirements for the hours of operation and for the degree of blasting that occurs in the Town, to minimize impacts to residents and property. According to the Code (Chapter 220), no blasting shall be permitted in the Town except between the hours of 7:00 am and 7:00 p.m., excluding Sundays and holidays when no blasting is permitted. The Code also contains specific standards for peak particle velocity and overpressure produced by any blast. Record keeping and reporting of blast monitoring data is also required by the Code. The Orchard Ridge project will adhere to all Town of Clarkstown blasting requirements, in the event that blasting is necessary for project construction.

Soil Erosion and Sediment Control Plan

The proposed development will require coverage under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-0-10-001) as it proposes to disturb more than one (1) acre of land. Erosion and sedimentation will be controlled during the construction period by temporary devices in accordance with the Erosion Control Plan developed specifically for this project site. The Erosion Control Plan is provided as Drawings Sheet No. 6 and No. 7 of the plan set.

The erosion control plans for both the Hemlock Drive Access Plan and the Meola Road Access Alternative has been prepared by Atzl, Scatassa & Zigler, P.C. and address erosion control and slope stabilization during all construction phases of the project. These plans were developed in accordance with the Erosion and Sediment Control Guidelines in the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-0-10-001). Construction will include limitations on the area of disturbance and devices to be used to help control soil erosion such as silt fencing, storm inlet protection and a stabilized construction entrance. A Construction Phasing Plan is provided as Figures 2-4 and Figure 2-4A and as full size Drawing No. 8 of each of the plan sets. The Preliminary Phasing Plan involves 5 phases, with each phase limited to less than five acres of disturbance at any one time, consistent with the General Permit requirements. If any phase is anticipated to disturb more than 5 acres at a time a NYSDEC waiver will be secured. Under these circumstances the site would be subject to increased inspections (two inspections a week by a qualified inspector) as stipulated in the NYSDEC General Permit requirements. At the discretion of the Planning Board, specific erosion control plans for each of the six phases will be supplied before site plan approval as well as the phasing of each of the erosion control devices.

Erosion controls include silt fencing to surround all grading activities as well as the installation of curb inlet sediment traps for the proposed stormwater drains along the access roads. The location of proposed silt fencing and stormwater inlet sediment traps are shown in Drawings No. 6 and 7 Preliminary Erosion Control Plan (east and west). The location of construction fencing, providing the limits of grading and disturbance is shown in the Erosion Control Plan. Silt fence is proposed along the entire western property boundary and between proposed disturbance and the 100 foot NYS Freshwater wetland adjacent area, in the northern portion of the development area.

Each of the access plans, the Hemlock Drive Access plan and the Meola Road Access Alternative, propose one (1) stabilized construction entrance which would be stabilized and used for the duration of construction. The stabilized entrance will prevent soil from being carried onto the adjacent and nearby roads. Details and specifications for the construction entrances are shown in Drawing No. 6 Preliminary Erosion Control Plan (west) of each of the plan sets. The Hemlock Drive Access plan stabilized construction entrance would be provided on NYS Route 303, south of Meola Road (see Drawing No. 7 Preliminary Erosion Control Plan (east). The Meola Road Access Alternative plan stabilized construction entrance is proposed at the end of Meola Road, in the northern portion of the property, providing access to NYS Route 303.

Best Management Practices (BMPs)

The following best management practices are followed in the development of the erosion control plans for both the Hemlock Drive Access Plan and the Meola Road Access Alternative:

- divert clean surface water before it reaches the construction area;
- control erosion at its source with temporary and permanent soil protection measures;
- capture sediment-laden runoff from areas of disturbance and filter the runoff prior to discharge; and,
- decelerate and distribute storm water runoff through natural vegetative buffers or structural means before discharge to off-site areas.

These objectives will be achieved by utilizing a collective approach to managing runoff, i.e. Best Management Practices (BMPs), which are also listed and described in the SWPPP in Appendix C.

Divert clean runoff - Diversion of runoff from off-site or stabilized areas will be accomplished through surface swales and erosion control barriers in order to keep clean water clean.

Time grading and construction to minimize soil exposure - To the extent practical, the development will be phased to limit the area of disturbed soil at any particular time. One phase of construction, for example, will be temporarily stabilized until the preceding phase is substantially complete.

Retain existing vegetation wherever feasible - Silt fencing will be used to physically define the limits of work. Wooded and wetland areas not to be developed (regraded), will be retained in the existing condition until the developed areas are completed and stabilized. Buffers of existing vegetation also will be provided along the perimeter of the site and near existing wetland areas.

Stabilize disturbed areas as soon as possible - In areas where work will not occur for periods longer than 15 days unless construction will begin within 30 days, soil will be stabilized by seeding or mulching. Following completion of grading operations, level areas will be seeded and mulched. Sloped areas, such as fill slopes may be seeded or stabilized depending upon weather conditions at the time of carrying out the work.

Trap sediment on-site and prior to reaching critical areas such as wetlands - Silt fences, ponds, sediment traps (in areas where no ponds are proposed), and catch basin filters will be used to either impound sediment-carrying runoff and or to filter the runoff as it flows through an area. Silt fencing will be used wherever land disturbance occurs within 100 feet of the on-site NYSDEC wetlands. A stabilized construction entrance will be installed at the both construction entrances to prevent construction vehicles from tracking soil onto public roads. All temporary erosion control devices will be installed prior to the commencement of construction. The permanent storm water management systems will be installed in conjunction with the residential construction.

Establish a thorough maintenance and repair program - Erosion control measures will be inspected frequently, particularly prior to and following storms, and repaired as needed to ensure that they function properly. In addition to inspections by Town of Clarkstown, Department of Environmental Control officials, the applicant will be responsible for monitoring and maintaining the soil erosion and sediment controls at all times.

Assign responsibility for the maintenance program - The responsibility for the monitoring and maintenance of the Erosion Control Plan will be detailed in the Storm Water Pollution Prevention Plan and construction drawings.

With these controls in place, it is anticipated that there will be no significant impacts that result from site disturbances to soils and topography.

N
W E
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Figure 3.1-1: Local Topography

Orchard Ridge

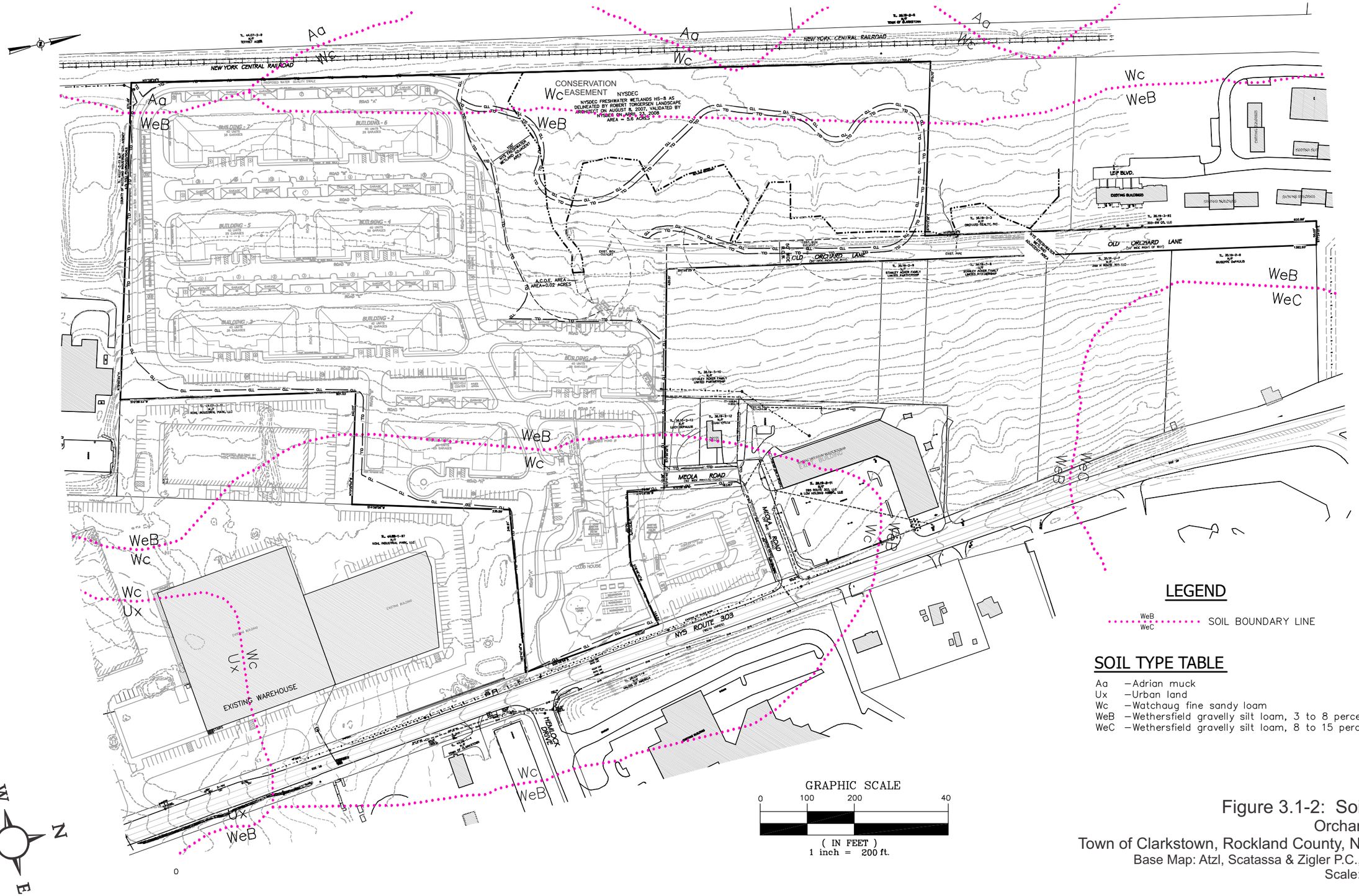
Town of Clarkstown, Rockland County, New York

Base Map: USGS 7.5-minute Topographic Map, Haverstraw Quad

Scale: 1" = 2,000'

File 10024 08/30/10
JS:\10024

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418



LEGEND

WeB / WeC — SOIL BOUNDARY LINE

SOIL TYPE TABLE

Aa	–Adrian muck
Ux	–Urban land
Wc	–Watchaug fine sandy loam
WeB	–Wethersfield gravelly silt loam, 3 to 8 percent slopes
WeC	–Wethersfield gravelly silt loam, 8 to 15 percent slopes

Figure 3.1-2: Soils Map
Orchard Ridge
Town of Clarkstown, Rockland County, New York
Base Map: Atzl, Scatassa & Zigler P.C., 03/09/10
Scale: 1" = 200'

File 10024 09/20/10
JS/10024

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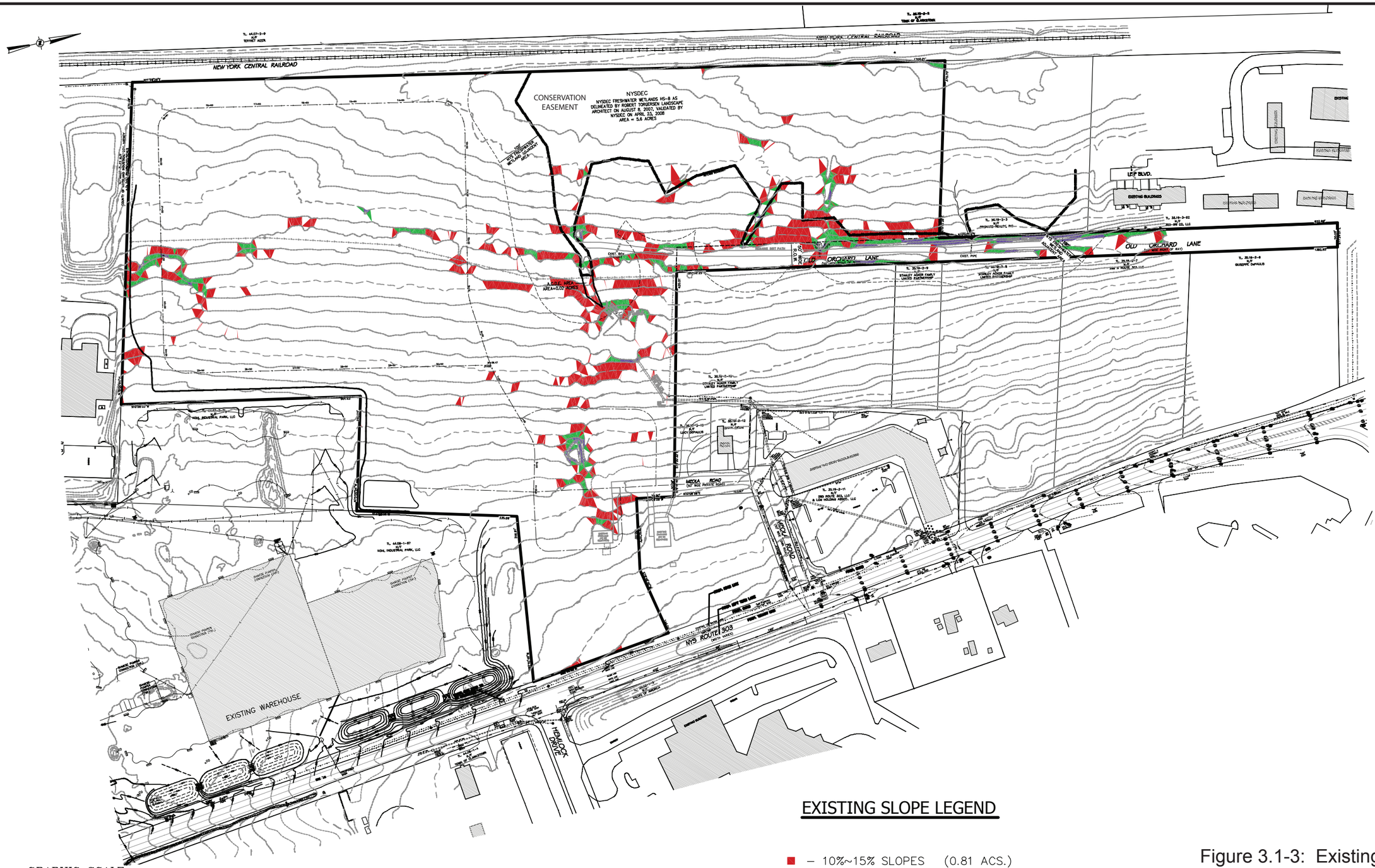

EXISTING SLOPE LEGEND

- 10%~15% SLOPES (0.81 ACS.)
- 15%~30% SLOPES (0.24 ACS.)
- 30%~50% SLOPES (0.03 ACS.)

GRAPHIC SCALE

0 100 200 400

(IN FEET)
1 inch = 200 ft.

Figure 3.1-3: Existing Slope Map
Hemlock Drive Access Plan
Orchard Ridge
Town of Clarkstown, Rockland County, New York
Source: Atzl, Scatazza & Zigler P.C., 03/09/10
Scale: 1" = 200'

File 10024 11/07/11
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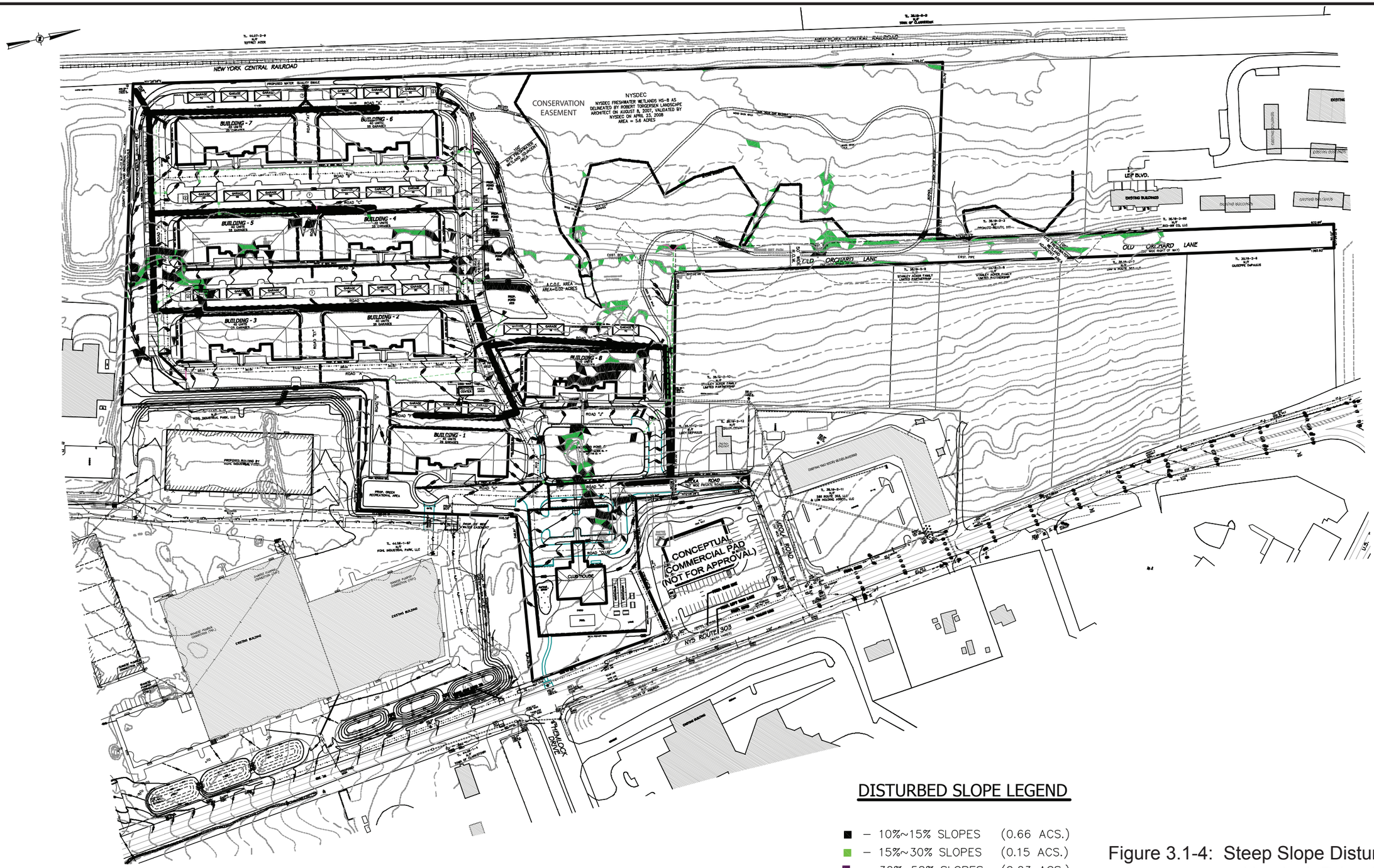

DISTURBED SLOPE LEGEND

- ■ – 10%~15% SLOPES (0.66 ACS.)
- ■ – 15%~30% SLOPES (0.15 ACS.)
- ■ – 30%~50% SLOPES (0.03 ACS.)

GRAPHIC SCALE
0 100 200 400
(IN FEET)
1 inch = 200 ft.

Figure 3.1-4: Steep Slope Disturbance Map
Hemlock Drive Access Plan
Orchard Ridge
Town of Clarkstown, Rockland County, New York
Source: Atzl, Scatazza & Zigler P.C., 03/09/10
Scale: 1" = 200'

File 10024 11/07/11
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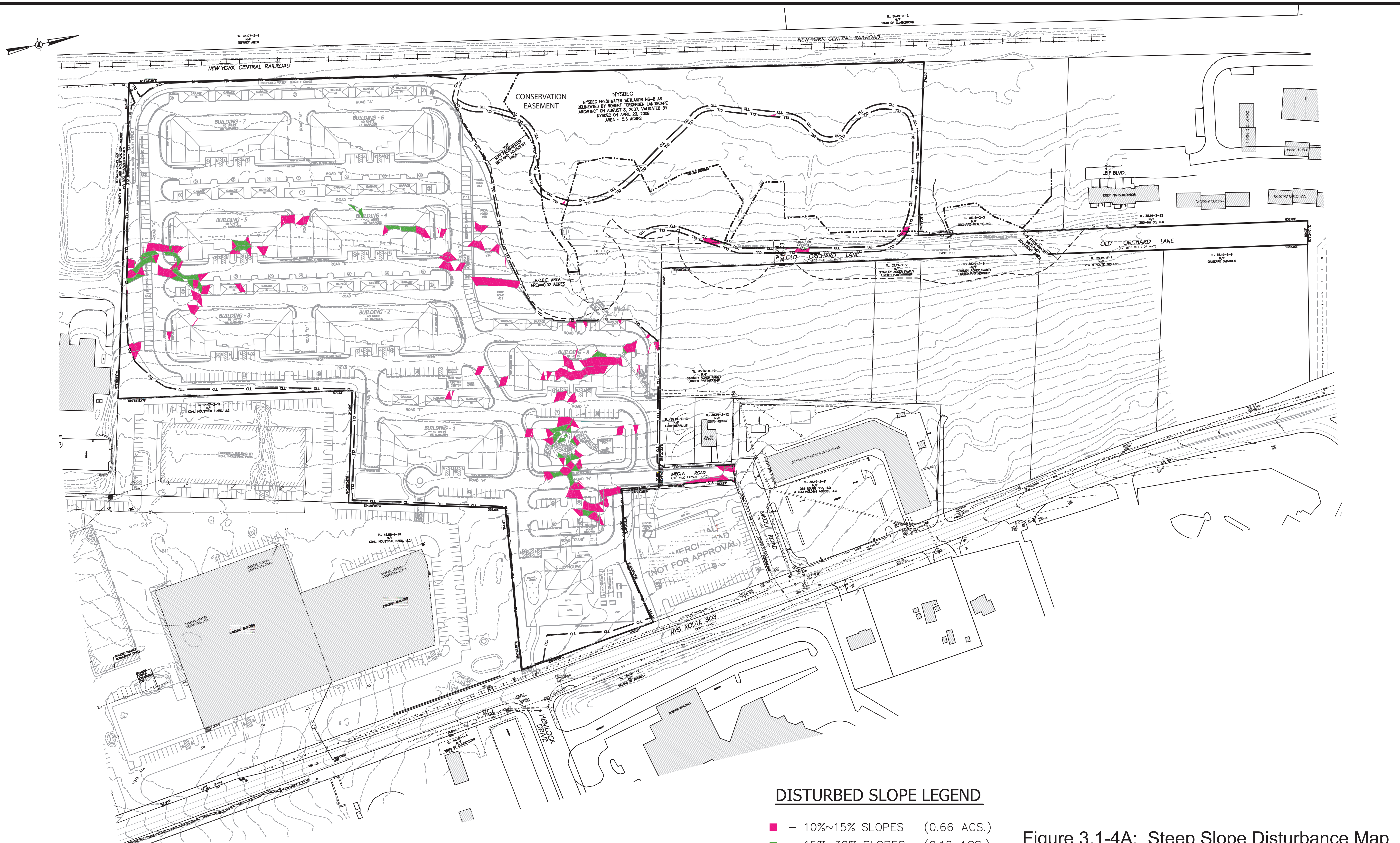


DISTURBED SLOPE LEGEND

- 10%~15% SLOPES (0.66 ACS.)
- 15%~30% SLOPES (0.16 ACS.)
- 30%~50% SLOPES (0.00 ACS.)

GRAPHIC SCALE

0 100 200 400

(IN FEET)
1 inch = 200 ft.

Figure 3.1-4A: Steep Slope Disturbance Map
Meola Road Access Alternative
Orchard Ridge
Town of Clarkstown, Rockland County, New York
Source: Atzl, Scatassa & Zigler P.C., 10/07/11
Scale: 1" = 200'

File 10024 11/07/11
JS/10024

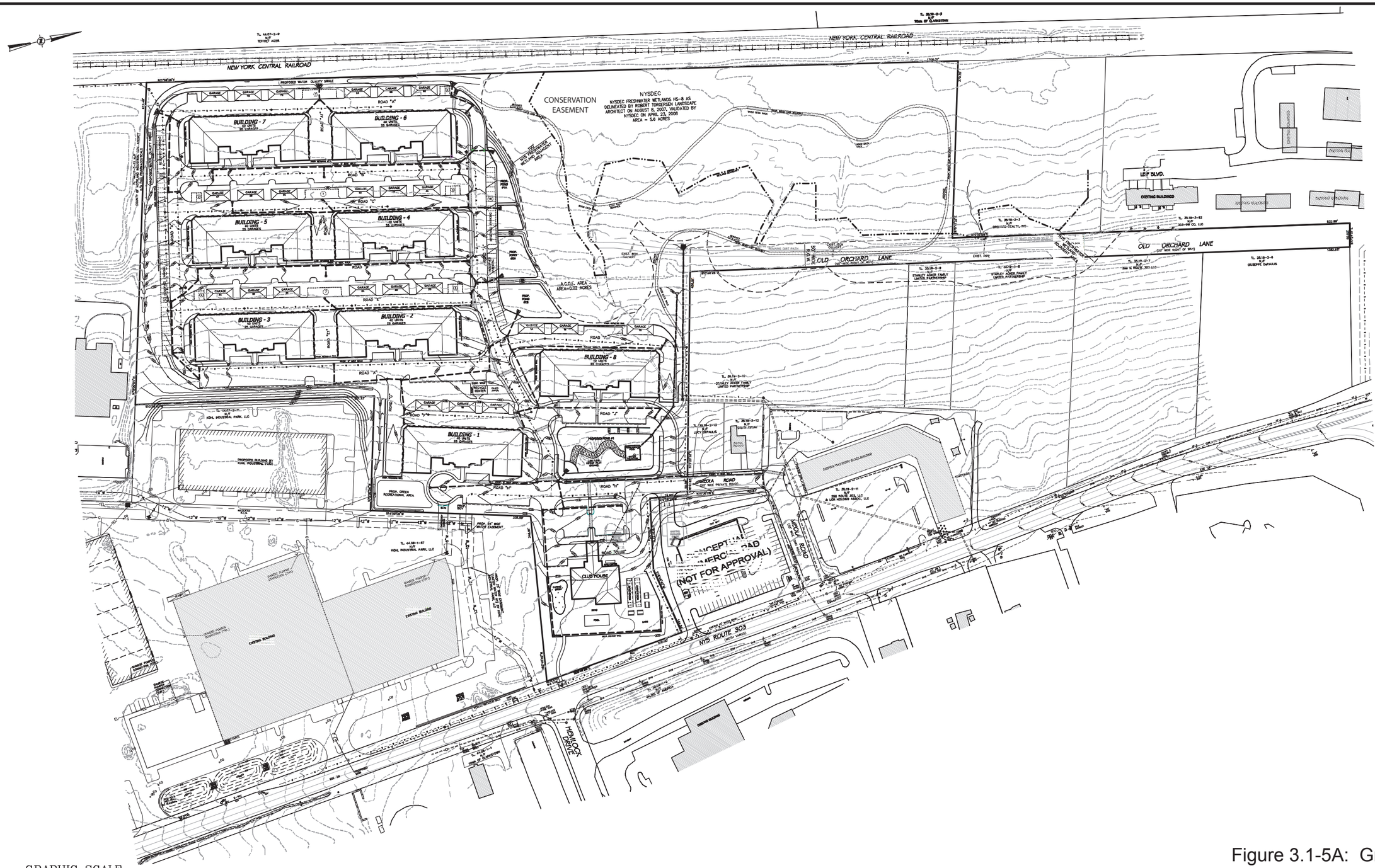
GRAPHIC SCALE

0 100 200 400

(IN FEET)
1 inch = 200 ft.

Figure 3.1-5: Grading Plan
Hemlock Drive Access Plan
Orchard Ridge
Town of Clarkstown, Rockland County, New York
Source: Atzl, Scatazza & Zigler P.C., 03/09/10
Scale: 1" = 200'

File 10024 11/07/11
JS/10024



GRAPHIC SCALE

0 100 200 400

(IN FEET)
1 inch = 200 ft.

File 10024 11/07/11
JS/10024

Figure 3.1-5A: Grading Plan
Meola Road Access Alternative
Orchard Ridge
Town of Clarkstown, Rockland County, New York
Source: Atzl, Scatassa & Zigler P.C., 10/07/11
Scale: 1" = 200'

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Iout=160.1

NEW YORK CENTRAL RAILROAD

CONSERVATION EASEMENT

NYSDEC FRESHWATER WETLANDS HS-8 AS DELINEATED BY ROBERT TORDERICH LANDSCAPE ARCHITECT ON AUGUST 8, 2007, VALIDATED BY NYSDEC ON APRIL 23, 2008 AREA = 5.6 ACRES

BUILDING - 1 20 UNITS 20 GARAGES

BUILDING - 2 20 UNITS 20 GARAGES

BUILDING - 3 20 UNITS 20 GARAGES

BUILDING - 4 40 UNITS 20 GARAGES

BUILDING - 5 20 UNITS 20 GARAGES

BUILDING - 6 40 UNITS 20 GARAGES

BUILDING - 7 20 UNITS 20 GARAGES

BUILDING - 8 20 UNITS 20 GARAGES

CLUB HOUSE

ROAD "A"

ROAD "B"

ROAD "C"

ROAD "D"

ROAD "E"

ROAD "F"

ROAD "G"

PROPOSED ROAD #1

PROP. GREEN RECREATIONAL AREA

A.C.O.E. AREA AREA=0.02 ACRES

OLD ORCHARD LANE (50' WIDE RIGHT OF WAY)

LEIF BLVD.

EXISTING BUILDINGS

CONCEPTUAL COMMERCIAL PAD (NOT FOR APPROVAL)

NYS ROUTE 303 (WIDTH VARIES)

HEMLOCK DRIVE

TL 44.06-1-5 N/F KOHL INDUSTRIAL PARK, LLC

PROPOSED BUILDING BY KOHL INDUSTRIAL PARK

EXISTING BUILDING

TL 35.19-2-3 ORCHARD HEALTH, INC.

TL 35.19-2-2 N/F 303-309 OLD, LLC

TL 35.19-2-1 N/F STANLEY ACKER FAMILY LIMITED PARTNERSHIP

TL 35.19-2-12 N/F LUCY DEFALCO

TL 35.19-2-11 N/F 305 ROUTE 303, LLC & LDN HOLDING ASSOC, LLC

TL 35.19-2-6 N/F GIUSEPPE DIPAULIS

TL 35.19-2-7 N/F 299 W ROUTE 303, LLC

TL 35.19-2-8 N/F STANLEY ACKER FAMILY LIMITED PARTNERSHIP

TL 35.19-2-10 N/F STANLEY ACKER FAMILY LIMITED PARTNERSHIP

TL 35.19-2-9 N/F TOWN OF CLARKSTOWN

TL 44.20-2-9 N/F TUFFET ACER

TL 35.19-6-2 N/F TOWN OF CLARKSTOWN

GRAPHIC SCALE

0 100 200 400

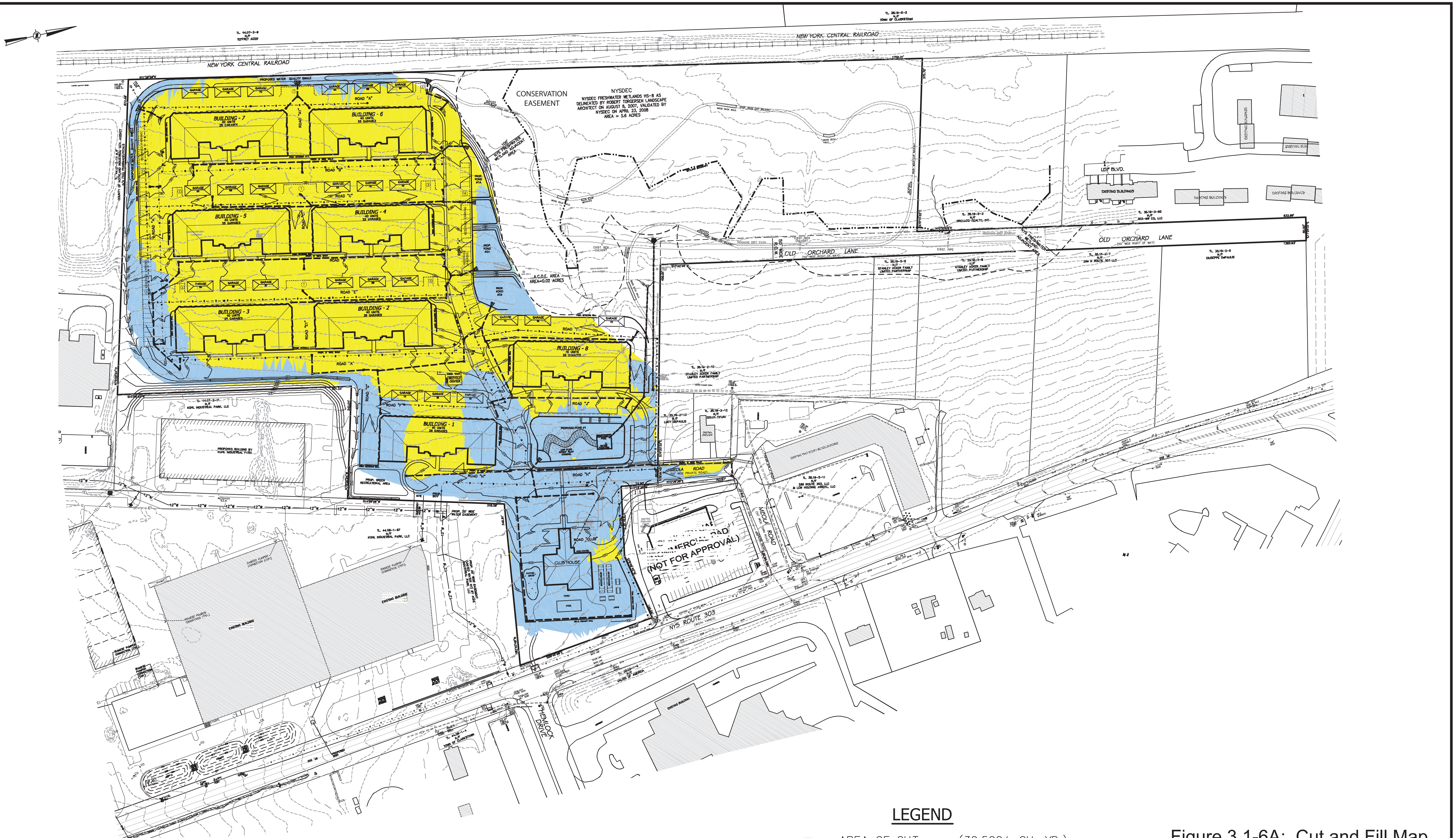
(IN FEET)

LEGEND

- AREA OF CUT (30,500± CU. YD.)
- AREA OF FILL (70,000± CU. YD.)

Figure 3.1-6: Cut and Fill Map
Hemlock Drive Access Plan
Orchard Ridge
Town of Clarkstown, Rockland County, New York
Source: Atzl, Scatassa & Zigler P.C., 10/07/11
Scale: 1" = 200'

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418



LEGEND

– AREA OF CUT	(30,500± CU. YD.)
– AREA OF FILL	(69,500± CU. YD.)

GRAPHIC SCALE

0 100 200 400

(IN FEET)
1 inch = 200 ft.

Figure 3.1-6A: Cut and Fill Map
Meola Road Access Alternative
Orchard Ridge
Town of Clarkstown, Rockland County, New York
Source: Atzl, Scatassa & Zigler P.C., 10/07/11
Scale: 1" = 200'

File 10024 11/07/11
JS/10024

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