3.1 Soils and Topography

3.1.1 Existing Setting

Geology

The BT Holdings project site is located within the Valley and Ridge Province, a geological area underlain by marine black and gray shale, siltstone and sandstone and minor carbonates and metamorphic rocks. The bedrock in this area is folded and faulted into a series of northeast-trending belts. Area topography is controlled by the outcropping of resistive bedrock zones that are oriented in a northeast/southwest direction due to tectonic compression from the southeast. The project site as shown on a USGS map is provided in Figure 3.1-1, Local Topography.

The Surficial Geologic Map of New York State, edited by Cadwell, shows the project area to be covered by glacial till deposits. The bedrock in the area has been mapped as the Normanskill Formation with the Trenton Group and is made up of shale, argilite, and siltstone.

No rock outcrops were observed on the property by TMA geologists during the several site visits conducted. Therefore, there are no prominent or unique bedrock features or large rock outcrops on the site.

Topography

The project site is characterized as a local area of topography that has level or gently sloping features and broad hilltops. The on-site topography is reflective of this with gently sloping to level areas within the southern portion of the property and a large, broad hilltop in the northern portion of the Site. Local topography is shown in the US Geological Survey map for the site (see Figure 3.1-1 Local Topography).

On-site topography and slopes are shown in Figure 3.1-2, Existing Slopes. Elevations vary approximately 138 feet across the site. The highest elevation is located on the broad hilltop, within the northwestern corner of the site at and elevation of 600 feet above sea level. The lowest elevation is along the southern boundary at 462 feet above sea level.

Slopes on the site have been mapped by the project engineer and are shown in Figure 3.1-2. Approximately 43.4 acres of the site contains nearly level to moderately sloping terrain, with slopes less than or equal to 12 percent. Approximately 24.9 acres contain sloped to rolling terrain with random steep slope areas greater than 12 percent.

Table 3.1-1
Existing Slope Analysis

Slope Category	Approximate Acres
0% to 10%	35.0 acres
10% to 15%	19.1 acres
>15%	14.3 acres
Total Site Acreage	68.4

Source: Langan Engineering, August 2008

Soils

The soils on the project site were identified using the soil classifications of the U.S. Department of Agriculture Soil Conservation Service (USDA SCS) Soil Survey of Orange County. The property is underlain primarily by one soil type: Mardin soils (MdB, MdC, MdD, and MNE), whether slightly sloping or steep this soil type is predominately located within the eastern, northern and western portions of the site. Four (4) other soils occur less prominently on the site. These are: Erie soils (ErB), Madalin soils (Ma), Alden soil (Ab), and Otisville and Hoosic soils (OVE).

The distribution of soil types is shown on Figure 3.1-3, Soils Map. The characteristics of each of the soil series identified on this property are described below generally in the order of their prevalence.

Mardin gravelly silt loam (MdB, MdC, and MdD) and Mardin soils steep (MNE)

Mardin gravelly silt loam soils are deep, moderately drained soils formed in glacial till deposits from sandstone, shale and slate. This soil is not considered a hydric soil according to the USDA Natural Resources Conservation Service (NRCS). The Mardin soil slopes range from 3 to 8 percent (MdB), 8 to 15 percent (MdC) 15 to 25 percent (MdD) and 25 to 35 percent (MNE). The water table is typically perched above a fragipan early in the spring and in other wet periods. Permeability is moderate in the surface layer and upper part of the soil and is slow or very slow in the fragipan and substratum. Available water capacity is moderate to low and the runoff is slow to rapid depending on the steepness of the soil type. The depth to bedrock is more than 60 inches below the ground surface.

Mardin gravelly silt loam soils are mapped on the gradual to steeper slopes in the northern, northeastern, and western portions of the property over approximately 43.0 acres, as shown on Figure 3.1-3, Soils Map.

Erie gravelly silt loam (ErB)

This soil series consists of the deep, somewhat poorly drained soil. Erie soils slopes range from 3 to 8 percent. The water table is typically perched above the fragipan in the spring and other wet periods. Permeability is moderate in the surface layer and upper part of the soil and is slow or very slow in the fragipan and substratum. Available water capacity is moderate to low while the runoff is medium. This soil is not considered a hydric soil according to the NRCS. The depth to bedrock is greater than 60 inches below the ground surface.

Erie soils are mapped in the western-central portion of the property over approximately 15.8 acres, as shown in Figure 3.1-3, Soil Map.

Madalin silt loam (Ma)

The soil series consists of deep, poorly to very poorly drained soils formed in glacial lake deposits of silt and clay. This soil type is considered nearly level and does not have a slope percentage category. The water table is at or near the surface for periods during the year and areas can be ponded during the spring. Permeability is moderately slow in the surface layer, slow in the subsoil and slow or very slow in the substratum. The available water capacity is high while the runoff is very slow. This soil is considered a hydric soil according to the NRCS. Depth to bedrock is greater than 60 inches below the ground surface.

Madalin soils are mapped on the southern portion of the property over approximately 5.5 acres, as shown on Figure 3.1-3, Soils Map.

Alden silt loam (Ab)

The Alden silt loam soils are deep, very poorly drained and nearly level having only a 0 to 3 percent slope category. This soil is formed in glacial till deposits from shale, sandstone, and some limestone. The water table can be found at or near the surface for periods of time and can be ponded for brief periods in the spring. Permeability is moderately slow in the subsoil and substratum. The available water capacity is high while the runoff is very slow. Depth to bedrock is greater than 60 inches below the ground surface. This soil is considered a hydric soil according to the NRCS.

Alden soils are mapped within a small area along the western boundary of the property over approximately 2.5 acres, as show on Figure 3.1-3, Soils Map.

Otisville and Hoosic soil, steep (OVE)

This soil complex includes excessively drained Otisville soils and somewhat excessively drained Hoosic soils. Some areas of the soil area can be a mixture of the soils or can be entirely Otisville soils or Hoosic soils. These soils are formed in glacial outwash deposits having high content of sand and gravel. The water table for both soil types can be found more than 5 feet below the ground surface. Permeability is rapid in Otisville soils and moderately rapid in the Hoosic soils. Available water capacity is very low in Otisville soils and low in Hossic soils, while the runoff is rapid in both soil types. Depth to bedrock is more than 60 inches below the ground surface in both soil types. This soil is not considered a hydric soil according to the NRCS.

This soil complex is mapped within the central portion of the property over approximately 1.6 acres, as show in Figure 3.1-3, Soils Map.

The above on-site soils will be used as fill material, per the cut and fill analysis discussed below in Section 3.1.2. As stated in the SCS Soil Survey of Orange County the soils above have a rating of poor to fair to be reused as road fill, sand, gravel, and topsoil. These soils can be reused onsite as fill, however, are not recommended for structural fill under roads or for the foundations of buildings. Crushed rock will be brought in to add in the strength of the road base and building foundations.

As noted in Table 3.1-2, the SCS 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. 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. The limiting characteristics of these soils may be overcome by careful project planning, design and management.

Table 3.1-2
Soil Characteristics and Limitations

Soil Series	Hydrologic Group[1]	Permeability (in./hr) at depth (in.)	Erosion Factor	Potential Limitations for:		
			K[2]	Roads, Parking Lots	Buildings w/out basements	Shallow excavations
Mardin gravelly silt loam (MdB, MdC, MdD, & MNE)	C	0.6-2.0 @ 0-20” <0.2 @ 20-60”	0.24 (0-8") 0.28 (8-60")	------MdB------ Moderate: frost action ------MdC------ Moderate: frost action, slope --MdD & MNE-- Severe: slope	------MdB------ Moderate: frost action, wetness ------MdC------ Moderate: frost action, slope, wetness --MdD & MNE-- Severe: slope	--MdB & MdC-- Severe: wetness --MdD & MNE-- Severe: slopes, wetness
Erie gravelly silt loam (ErB)	C	0.6-2.0 @ 0-18” <0.2 @ 18-70”	0.24 (0-9") 0.28 (9-70")	Severe: frost action	Severe: frost action, wetness	Severe: wetness
Madalin silt loam (Ma)	D	0.2-0.6 @ 0-10” 0.06-0.2 @ 10-38" <0.2 @ 38-60"	0.49 (0-10") 0.28 (10-60")	Severe: wetness, low strength	Severe: wetness	Severe: wetness
Otisville & Hoosic soils, steep (OVE)	A	6.0-20.0 @ 0-28” >6.0 @ 28-60"	0.17 (0-60")	Severe: slope	Severe: slope	Severe: slope, cutbanks cave, small stones
Alden silt loam (Ab)	D	0.6-2.0 @ 0-9” 0.2-0.6 @ 9-60”	0.43 (0-36") 0.37 (36-60")	Severe: wetness, frost action	Severe: frost action, wetness	Severe: wetness

[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 Ulster County, New York, USDA SCS.

Mardin soils, the majority of the soils on the property, are rated with moderate to severe limitations for the construction of local roads, buildings without basements, and shallow excavations associated with utilities. These limitations are due primarily to wetness and slopes. Erie soils are rated with severe limitations for the construction of roads, buildings without basements, and for shallow excavations. Such limitations are due to the wetness of the soil. Madalin soil are rated with severe limitations for the construction of roads, buildings without basements, and for shallow excavations. Such limitations are due to the wetness of the soils. The Otisville and Hoosic soil complex presents severe limitations to construction of roads, buildings without basements, and shallow excavations. These limitations are due to the slope of the soil complex and the cave in possibilities of the soil type because of the sandy make of the soil. Alden soils present with severe limitations for the construction of roads, buildings with basements, and shallow excavations. These limitations are due to the wetness of the soil. These restriction, for the above mentioned soils, do not preclude development on these soils, but may require a greater degree of engineering and construction costs.

Geotechnical Investigation

A Preliminary Geotechnical Investigation was completed for the project site by Langan Engineers and Environmental Services (August 20, 2009). The Geotechnical Investigation report is provided in Appendix M. The investigation included a review of available geologic maps and USDS information as well as a field investigation. A total of 20 test pits were excavated across the site to characterize soils and subsurface conditions that can be anticipated during proposed grading for construction. The test pits were completed in areas of proposed material cuts and fills, and were excavated to depths of up to 15 feet. The investigation provides preliminary information to assist in the design and engineering of the BT Holdings / Chester Development. Further soils investigation and testing will be conducted at the time of Site Plan submission.

The soils observed in the test pits generally consisted of approximately 8 inches of loose topsoil overlying stiff/dense predominately granular soils. The granular soils consist of varying proportions of silt, clay, sand, gravel and cobbles. A very dense, predominately granular soil layer (till or fragipan) was encountered in the majority of test pits to depths of at least 15 feet. This till or fragipan layer was typically more compact, and contains higher proportions of cobbles and course gravel, than the more shallow soils. A uniform water table was not encountered during the testing, although locally a perched water was observed in four of the test pits (TP-9, TP-16, TP-19 and TP-20). The test pit logs are provided in Appendix M.

Bedrock was not encountered in any of the test pits to a depth of 15 feet. Langan indicated that, based upon their preliminary findings, if shale or siltstone bedrock was encountered in deeper cuts, conventional excavators would be capable of excavating rock, and that blasting is not anticipated to be necessary.

The Langan Preliminary Geotechnical Investigation indicates no major impediments for the proposed site layout and grading. The report concluded that the site soils appear to be generally suitable for supporting the proposed buildings and related infrastructure. Prior to final design, additional investigation is needed to address specific design issues. Further analysis will be conducted to develop recommendations for specific building foundations, embankments, retaining walls, pavements and stormwater basins.

3.1.2 Potential Impacts

Geology Impacts

Due to the gentle topography of the property and the fact that there were no areas of identifiable of rock outcrop or rock near the surface of the site, blasting and extensive rock removal are not anticipated. However, in areas of cuts of 20 feet or more bedrock may be encountered. If this does occur mechanical means of removing rock will be used such as ripping, chipping, and hammering. Blasting will be avoided to the extent practicable and, if needed, it will be conducted in compliance with any Village of Chester and State codes restricting or mandating the storage, transportation or use of blasting and blasting material on the site.

Topographic Impacts

Impacts to slopes are directly related to the potential for soil erosion during construction. The majority of grading for the BT Holdings project will occur in areas with slopes of less than 15 percent. Impacts to slopes of 15 percent or greater are mostly limited to the western portion of

the site for the construction of the proposed apartment sites. Slope disturbance by acreage and slope category is provided in Table 3.1-3.

Table 3.1-3
Disturbance of Slopes

Slope Category	*Acres*
0% to 10%	28.42 acres
10% to 15%	16.97 acres
>15%	11.22 acres
Total Site Acreage	56.61

Source: Langan Engineering, December 2008

Exposing soils on steep slopes during construction increases the potential for erosion in the short term. This potential impact will be mitigated by adherence to the soil erosion and sedimentation control practices described below. Following construction, soil erosion from the property is expected to be minimal since developed areas will be stabilized with lawn and landscaping, and stormwater management features will be fully functional.

Soils Impacts

Grading and Erosion Potential

Grading and recontouring of soils is required for the construction of roads, townhomes, apartment buildings and the stormwater detention basins. Generalized grading for the project is shown on Drawing No. 21.01 of the site plans accompanying the DEIS and as Figure 2-10, Grading and Drainage Plan. The total area of grading or site disturbance is estimated to be approximately 56.6 acres of the site. Therefore, approximately 11.8 acres of the site will remain undisturbed in woodland, wetland, field, brush and meadow areas.

The proposed development is shown to occur over most soil types present on the property. As described above, each of these soils has the potential for construction limitations due to slope and wetness with only one soil type, the Otisville and Hoosic soil complex, having a limitation associated with soil cave ins for shallow excavations. As stated above engineering methods can be used to over come such limitations. Such engineering methods would include erosion and sediment control plans and curtain drains, which would include steps to help with erosion associated with slope and wetness characteristics.

The potential for soil erosion resulting from grading is temporary in nature, as all areas are ultimately stabilized by impervious cover or landscaping. Soils that will be covered with impervious surfaces (totaling 24.65 acres) are considered to be permanently disturbed. All of the disturbed area that does not become impervious will be graded, seeded and landscaped, including the stormwater management basins. Mitigation measures to limit impacts due to erosion during construction are described below.

Based on the characteristics of the on-site soil types and topography, the potential for soil erosion during site construction would be moderate to high. The potential impact of soil disturbance on the site can be directly related to project slopes, since all site soils have a similar K-Factor range relative to erosion potential. As shown in Table 3.1-3 above, nearly 80.2

percent, or 45.39 acres, of the soils to be disturbed for project construction will occur on slopes of less than 15 percent.

The Soil Erosion and Sediment Control Plan is included herein as Figure 2-13. This Erosion and Sediment control plan is a general plan based upon conceptual project design. It is not intended to be a comprehensive plan. A comprehensive Soil Erosion and Sediment Control Plan will be submitted when at the time of site plan application. A preliminary written erosion control plan has been prepared for the project (refer to Preliminary Stormwater Management Plan (Appendix D) and are described in detail in Section 3.2 of the DEIS. Erosion control and slope protection will be undertaken in accordance with the Erosion and Sediment Control Guidelines in the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-0-08-001), and the NYSDEC Stormwater Management Design Manual (April 2008). Mitigation measures are presented below. It is anticipated that with the proper design and implementation of these measures, along with consistent and frequent inspections, this will minimize potential soil erosion impacts.

Cut and Fill Projections

Total earthwork is estimated to involve approximately 330,000 cubic yards (cy) of soil cut and 365,000 cy of fill needed. While the preliminary estimates indicate that there would be a need to bring and additional 35,000 cy of imported fill onto the property all efforts will be made to balance the earthwork, before the final design of the project is completed, so that no import or export of material is needed.

3.1.3 Mitigation Measures

Soil Erosion and Sediment Control Plan

Erosion and sedimentation will be controlled during the construction period by temporary devices described in the Preliminary SWPPP. The methods of controlling soil erosion have been reviewed and proposed by the project engineer, Langan Engineering and Environmental Services. The erosion control plan will be developed in accordance with the Erosion and Sediment Control Guidelines in the NYSDEC SPDES General Permit for Stormwater Discharges for Construction Activities (Permit No. GP-0-08-001), and the NYSDEC Stormwater Management Design Manual (April 2008).

The principle objectives of an erosion and sediment control plan are as follows:

- 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.

Several key measures that are proposed to improve the quality of stormwater discharged from the site and reduce the impact on downstream waters or other off-site areas incorporate methods to improve soil stabilization, runoff control, sediment control, and fugitive dust control including:

1. Soil covers/temporary seeding
2. Silt fences
3. Sediment Basins
4. Curb inlet protections
5. A stabilized construction entrance
6. Check dams
7. Dust control measures

- Soil Covers/Temporary Seeding. Any exposed soils that are exposed and left bare and are not under active construction will be temporarily stabilized within seven days. Mulching or hydroseeding will be applied to ground with low slopes that have been stripped of natural vegetation. Riprapping, matting or sodding will be applied to soils for permanent stabilization if conditions warrant;
- Silt Fences. Silt fence will be installed at the toe of slopes below areas to be graded as per the site plans. Silt fence allows water to pass through the fabric while trapping most of the sediment in the runoff;
- Sediment Basins. Six temporary sediment basins have been conceptually designed to intercept sediment laden runoff in order to trap and retain the sediment to reduce the total suspended sediment leaving the site. After adequate settling time the runoff will be discharged via a de-watering device consisting of filter-wrapped perforated pipe connected to the outlet control structure;
- Curb Inlet Protections. All proposed drain inlets will be provided with drain inlet protection during construction. Stone, hay bales, fabric or excavated depressions will be established around inlets to filter sediments from the runoff;
- Stabilized Construction Entrance. The construction entrance will be provided with a lined stone pad of appropriate dimensions to reduce the transport of soil to adjacent roadways;
- Check Dams. Temporary check dams may be proposed at locations across the site as needed and will limit erosion by temporarily reducing discharge velocities and capturing sediments within the over-excavated pond storage areas;
- Dust Control Measures. Dust during construction activities will be controlled through a combination of temporary stabilization measures, including the use of vegetative covers or spray-on tackifiers for disturbed areas not subject to traffic, mulching (including gravel mulch) and seeding, compaction of disturbed soil, water sprinkling, wind screens erected at right angles to prevailing wind currents and the use of stone covers (crushed stone or coarse gravel) on construction roads. Dust generation will also be limited through phasing of the project that will limit the overall area of exposed soils in each phase. All on-site vehicle speeds will be limited to 15 MPH on unpaved construction roads through the use of traffic controls. When wind gusts exceed 25 MPH all hauling operations would be stopped until high wind conditions subside.

Long Term Operation, Maintenance, and Inspection

Stormwater basins must be properly operated and maintained if they are to function as intended over a long period of time. Typical maintenance tasks include routine inspections for structural conditions, debris removal, mowing, structural repairs as well as control of nuisance plant and animal species. Plans can be based on and developed by reference to recent standard regulatory documents, including the 2008 NYSDEC Stormwater Management Design Manual (April, 2008) and the US EPA National Management Measures to Control Nonpoint Source Pollution from Urban Areas (November 2005).

Each of the three detention ponds should be inspected monthly for the first six months of operation after construction and on an annual basis thereafter. The structures should also be inspected following any major storm rainfall event. Inspection priorities should include checking the embankments for subsidence, erosion, cracking, tree growth, and the presence of burrowing animals. Other items to be inspected include the condition of the emergency spillways and drains; sediment accumulations; clogging of outlets; erosion control measures in the contributory drainage's channel and at the outlet.

Establishment of trees and woody shrubs would be prevented on embankments, emergency spillways and buffer areas through periodic mowing (a minimum of six times per year). Debris and litter should be removed from the surface of the pond, surrounding buffer areas, and riser and outlet areas in conjunction with the mowing operations. Accumulated debris and litter should also be removed following any major storm event.

Eroding soils in the drainage area that are contributing to the wet ponds should be stabilized immediately with vegetation or other erosion control practices. Soils may slump in buffer areas outside the edges of the wet ponds, from the wet pond embankments or emergency spillways. When soils are exposed by erosion or slumping, corrective measures such as regrading and revegetation may be necessary. Similarly, the riprap protecting the channel downstream of the outlet channel may have to be repositioned and stabilized as necessary.

Significant quantities of sediment can accumulate in an extended detention facility. Sediment buildup should be properly removed from the forebay areas prior to accumulations reaching twenty-five percent of the design depth in order to preserve the available stormwater management capacity of the pond. While more frequent clean-out may be needed in the forebays and around outlet control structures, a typical clean-out cycle for the lower stages of an extended detention facility should range from 5 to 10 years.

Construction Phasing

The project engineer has produced an overall phasing plan, shown as Drawing No. 23.10 included in the plan set attached to this document. It states that there will be five phases to the proposed development to help with the control of erosion and site clearing. The phases are as follows:

- Phase A: Consists of 11.06 acres with a total earthwork of 66,900 cy of cut and 92,600 cy fill. The development the construction entrance and of the main road "A" network that extends from the northern portion of the property to the southern portion of the property. The stormwater basin located in the northwest corner of the property will be developed as well as six (6) of the townhome buildings. The area for later development of the

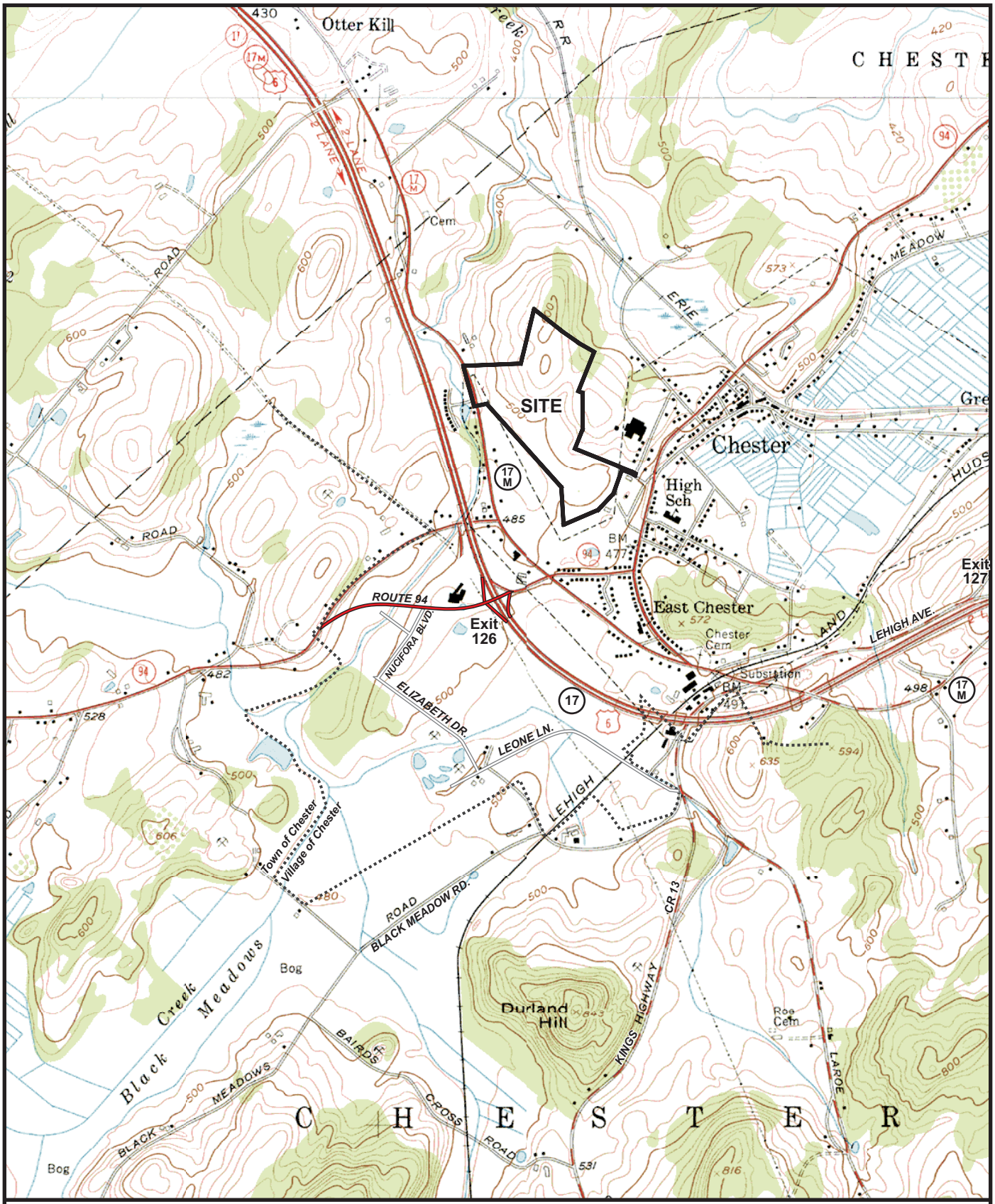
clubhouse and central recreation facilities is also cleared and will initially serve as a temporary soil stockpile location.

- Phase B: Consists of 6.17 acres with a total earthwork of 57,300 cy of cut and 11,000 cy of fill. This phase shows the development of the two apartment buildings located in the northern portion of the property.
- Phase C: Consists of 14.10 acres with a total earthwork of 164,700 cy of cut and 21,600 cy of fill. Road "B" and a portion of Road “C” will be constructed as well as the development of sixteen (16) of the townhome buildings located in the northern portion of the property. The community recreation facilities will be constructed prior to the initiation of Phase D.
- Phase D: Consists of 13.08 acres with a total earthwork of 14,600 cy of cut and 173,800 cy of fill. The stormwater basin located on the western boundary of the property will be constructed as well as eighteen (18) of the townhome buildings.
- Phase E: Consists of 11.77 acres with a total earthwork of 26,500 cy of cut and 66,700 cy of fill. The stormwater basin located in the northeast corner of the property will be constructed as well as fifteen (15) of the townhome buildings and Road "C".

Landscaping

The site’s developed lands will be used for residences, recreational areas, roads, driveways and parking areas, lawns and landscaping, and stormwater management improvements. The undeveloped open spaces will provide natural buffer lands and preserve site wetlands and portions of the present wooded areas. The Conceptual Landscape and Lighting Plan (see Figure 2-11) for the project provides plans to revegetate and reclaim any areas cleared by construction within the area of disturbance around buildings or other structures.

Landscaped and lawn areas would take up nearly half of the site (approximately 32 acres of the 68-acre site) and undisturbed areas will cover an additional approximately 12 acres. Approximately 44 acres of the developed site would be open or vegetated.



N
W E
S

Figure 3.1-1: Local Topography Map
BT Holdings - Chester Development
Village of Chester, Town of Chester, Orange County, New York
Base Map: USGS Topographic Map, Warwick Quad
Scale: 1" = 2,000'

File 05009 2/17/09
JS:\05009\

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

LEGEND

- 0.00 - 10.0%
- 10.01 - 15.00%
- 15.01 - 100.00%

EXISTING SLOPE COVERAGE

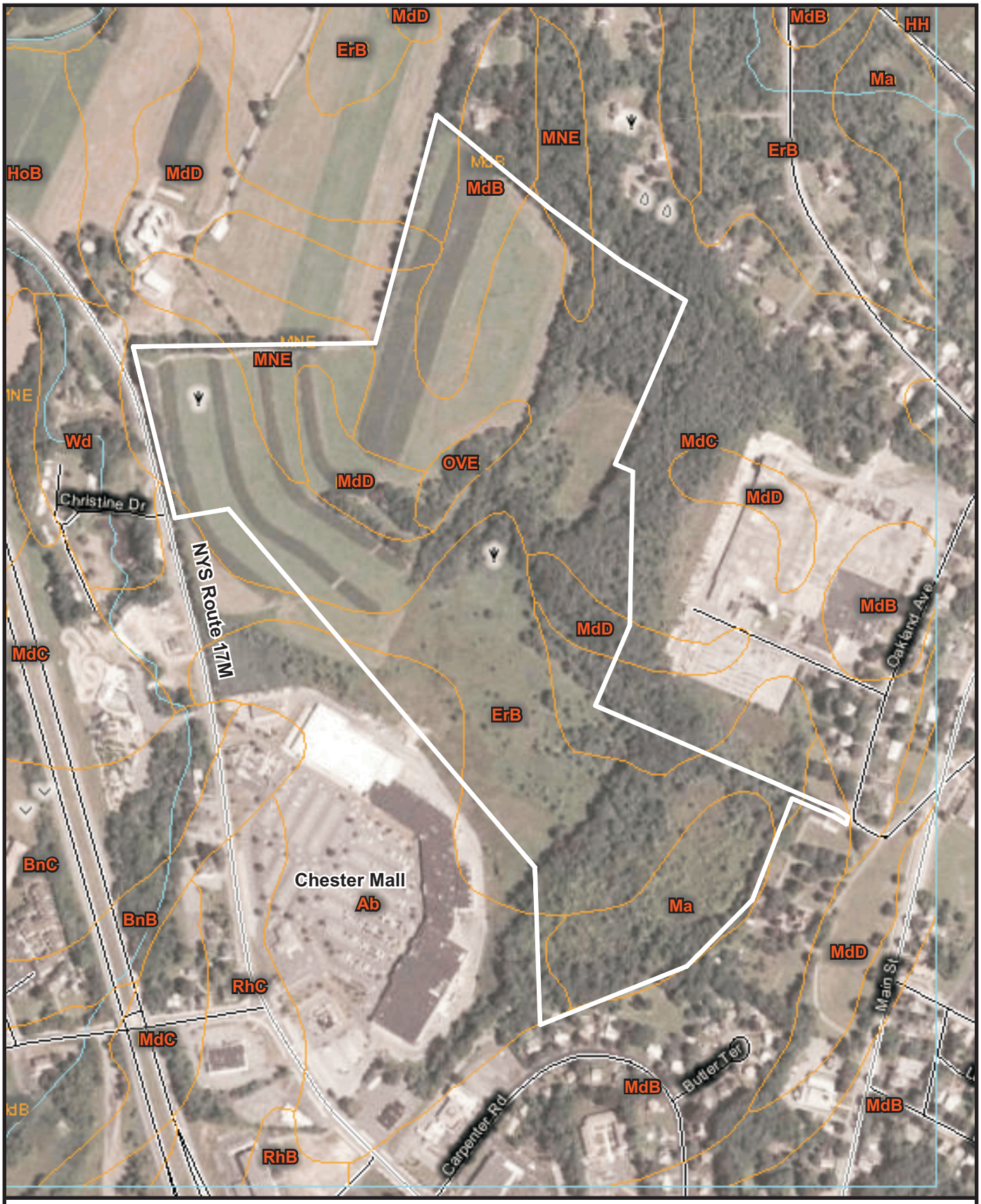
SLOPE	EXISTING AREA	EXISTING PERCENTAGE
0.00-10.00%	35.0 AC	51.2%
10.01-15.00%	19.1 AC	27.9%
15.01-100.00%	14.3 AC	20.9%
TOTAL	68.4 AC	100%

300 0 150 300
SCALE IN FEET

Figure 3.1-2: Existing Slopes
BT Holdings - Chester Development
Village of Chester, Town of Chester, Orange County, New York
Source: Langan Engineering & Environmental Services, 08/14/08
Scale: As Shown

File 05009 4/26/09
JS/05009

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



N
W E
S

Figure 3.1-3: Soils Map
BT Holdings - Chester
Village of Chester, Town of Chester, Orange County, New York
Source: U.S. Dept of Agriculture, Natural Resources Conservation Service Web Soil Survey
Scale: 1" = 475'

File 05009 01/22/09
JS:\05009

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