III.A

Geology and Soils

1. Existing Conditions

Slopes and Topography

The Project Site is located in an area of topography that is consistent with the surrounding land area including a mixture of suburban development as well as mountainous and forested regions. Under existing conditions, the Project Site contains a high point elevation of approximately 432.7' located along the peak of the hill on the Montebello portion of the Project Site, and a low point elevation of approximately 297.0' located within the bottom of the stream bed of the existing stream at the northern property line of the Project Site. The existing Novartis Pharmaceutical facility is located in a flat low-lying area of the property with steep forested hills surrounding the west, south, and east side of the facility. The site contains large areas of steep slopes ranging from 20 percent to over 50 percent slope. Of the entire Project Site, approximately 30.48 acres consists of steep slopes ranging from 20-50% slopes and approximately 3.72 acres consist of slopes exceeding 50%. The areas of steep slopes are generally located along the property boundaries of the Project Site. Figure III.A-1 displays the existing steeps slopes located within the Project Site.

Figure III.A-1: EXISTING STEEP SLOPES EXHIBIT

SLOPES TABLE				
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	COLOR	2D AREA
1	20.00%	50.00%		1,327,894.91 SF (30.48 AC.)
2	50.00%	Vertical		161,919.80 SF (3.72 AC.)

GRAPHIC SCALE

−150 0 75 150 300 600

(IN FEET)
1 INCH = 150 FT.

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TITLE: EXISTING STEEP SLOPES EXHIBIT

PROJECT: **IV2 ROCKLAND LOGISTICS, LLC**
PROPOSED INDUSTRIAL PARK AT 25 OLD MILL ROAD
SECTION 55.22 BLOCK 1, LOT 1; SECTION 55.37, BLOCK 1, LOT 31
OLD MILL ROAD AND HEMION ROAD (CR 9.3)
VILLAGE OF SUFFERN, ROCKLAND COUNTY, NEW YORK

JOB No:	3709-99-004
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File: P:\DEPC PROJECTS\3709 Brookfield Properties\99-004 Suffern NY\Dwg\Exhibits (Misc)\2023-03-09 Steep Slopes Exhibit\037099900455SO.dwg, ----> EX & PROP SLOPES EXHIBIT

Drainage for the site tends to flow inwards towards the center of the property. Drainage flows into the existing pond or wetlands pockets located along the southern and western property boundaries. Drainage ultimately becomes tributary to the existing stream flowing from the southern and western portion of the site through the northwest corner of the property,

Bedrock Geology

The Project Site is located in a region of the Piedmont Physiographic Province of New York known as the Newark Basin. The Newark Basin contains rocks of the Newark Super Group which is a stratigraphic series of Triassic to Jurassic age sedimentary rocks containing intrusive sills and dikes as well as extrusive volcanics. The formations mapped within the area of the Project Site include the Hammer Formation which reportedly consists of conglomerate; and the Ladentown diabase and basaltic lava which reportedly consists of basalt.

The surficial deposits at the Project Site reportedly include outwash sand and gravel (Og) consisting of coarse to fine stratified sand. Overlying materials also include manmade fill material.

Soils on the Project Site

A variety of soil types are found on the Project Site. The soils differ primarily based on their slope (nearly level to 25 percent), drainage class (excessively drained to very poorly drained), and parent material. These conditions are common in the area and do not represent any unusual condition. Based on a review of the United States Department of Agriculture – Natural Resources Conservation Services (USDA-NRCS) soil survey, the location and scope of these soil types were mapped and are shown on **Figure III.A-2**. Soil types found on the Project Site and their primary characteristics are noted in **Table III.A-1** and discussed in further detail below. The soil report for the Project Site is included in **Appendix F**. No special geological features were identified on or adjacent to the Project Site.

Table III.A-1 Project Site Soils

Soil Type	Slope (%)	Drainage Class	Percent of Project Site Area (%)
Udorthents, Smoothed (Us)	0 - 8	Somewhat excessively drained	36.6
Wethersfield gravelly silt loam, 3 to 8 percent slopes (WeB)	3 - 8	Well drained	21.6
Urban Land (Ux)	n/a	n/a	13.6
Holyoke-Rock outcrop complex, hilly (HoD)	10 - 30	Well drained	9.5
Wethersfield gravelly silt loam, 15 to 25 percent slopes (WeD)	15 - 25	Well drained	8.5
Wethersfield gravelly silt loam, 8 to 15 percent slopes (WeC)	8 - 15	Well drained	6.8
Alden silt loam (Ad)	0 - 3	Very poorly drained	1.6
Pits, gravel (Pt)	n/a	n/a	0.9
Water (W)	n/a	n/a	0.8
Watchaug fine sandy loam (Wc)	0 - 3	Moderately well drained	0.1

Source: USDA-NRCS

Udorthents, Smoothed (Us)

This soil series is mapped underlying the central/southern portions of the Project Site. The typical soil profile (as detailed in the survey) consists of channery loam to a depth of 20 inches; underlain by very gravelly loam to a depth of 70 inches below the natural ground surface. The depth to the water table is reported to be about 36 to 72 inches below the natural ground surface (limit of report).

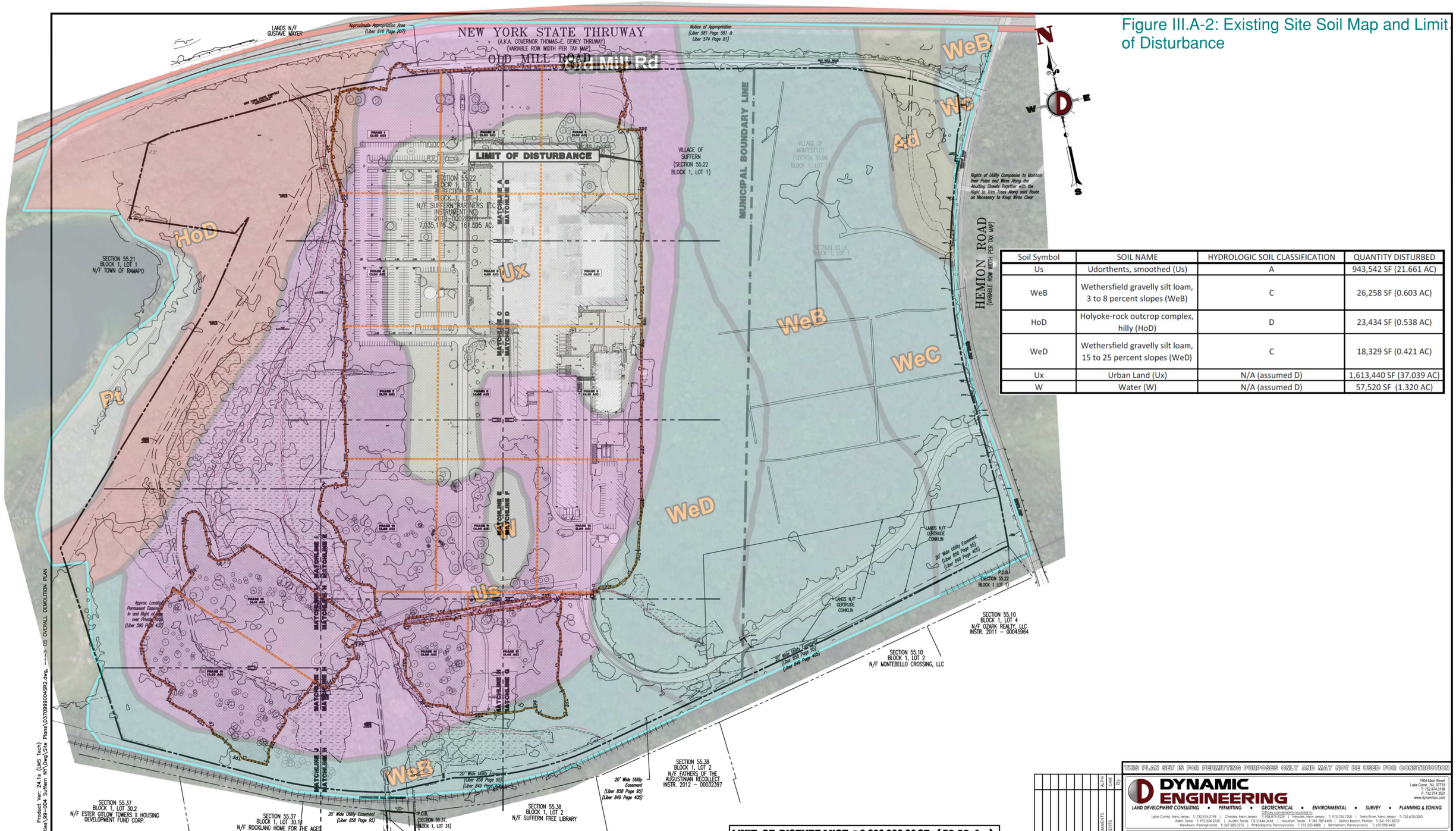
Urban Land (Ux)

This soil series is mapped underlying the northern/central portions of the Project Site. The subsurface profile is not detailed in the survey.

Wethersfield gravelly silt loam, 3 to 8 percent slopes (WeB)

This soil series is mapped underlying the southern and eastern portion of the Project Site. The typical soil profile is generally similar to WeD, detailed below.

Figure III.A-2: Existing Site Soil Map and Limit of Disturbance



Soil Symbol	SOIL NAME	HYDROLOGIC SOIL CLASSIFICATION	QUANTITY DISTURBED
Us	Udorthents, smoothed (Us)	A	943,542 SF (21.661 AC)
WeB	Wethersfield gravelly silt loam, 3 to 8 percent slopes (WeB)	C	26,258 SF (0.603 AC)
HoD	Holyoke-rock outcrop complex, hilly (HoD)	D	23,434 SF (0.538 AC)
WeD	Wethersfield gravelly silt loam, 15 to 25 percent slopes (WeD)	C	18,329 SF (0.421 AC)
Ux	Urban Land (Ux)	N/A (assumed D)	1,613,440 SF (37.039 AC)
W	Water (W)	N/A (assumed D)	57,520 SF (1.320 AC)

LIMIT OF DISTURBANCE = 2,608,936.80 SF. (59.89 Ac.)

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TITLE: OVERALL DEMOLITION PLAN

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Holyoke-Rock outcrop complex, hilly (HoD)

This soil series is mapped underlying the northwestern portion of the Project Site. The typical soil profile (as detailed in the survey) consists of slightly decomposed plant material to a depth of two inches; silt loam to a depth of 18 inches; underlain by unweathered bedrock to a depth of 28 inches below the ground surface. The depth to the water table is reported to be more than 80 inches below the natural ground surface (limit of report).

Wethersfield gravelly silt loam, 15 to 25 percent slopes (WeD)

This soil series is mapped underlying the central portion of the Project Site. The typical soil profile (as detailed in the survey) consists of gravelly silt loam to a depth of 13 inches; gravelly loam to a depth of 22 inches; underlain by gravelly fine sandy loam to a depth of 60 inches below the natural ground surface. The depth to the water table is reported to be about 18 to 30 inches below the natural ground surface.

Alden silt loam (Ad)

This soil series is mapped underlying the northeast portions of the Project Site. The typical soil profile (as detailed in the survey) consists of silt loam to a depth of 33 inches; underlain by loam to a depth of 60 inches below the natural ground surface.

Wethersfield gravelly silt loam, 8 to 15 percent slopes (WeC)

This soil series is mapped underlying the eastern portion of the Project Site. The typical soil profile is generally similar to WeD, as detailed above.

Pits, gravel (Pt)

This soil series is mapped underlying a relatively small area within the western portion of the Project Site. The typical soil profile (as detailed in the survey) consists of very gravelly sand to a depth of six inches; underlain by very gravelly coarse sand to a depth of 60 inches below the natural ground surface. The depth to the water table is not reported in the survey.

Water (W)

Water is mapped underlying a relatively small area within the central/southeastern portion of the Project Site (within the area of the existing wet pond).

Watchaug fine sandy loam (Wc)

This soil series is mapped underlying a relatively small area at the northeastern portion of the Project Site. The typical soil profile (as detailed in the survey) consists of moderately decomposed plant material to a depth of two inches; fine sandy loam to a depth of seven inches, and gravelly fine sandy loam to a depth of 64 inches below the natural ground surface. The depth to the water table is reported to be about 18 to 30 inches below the natural ground surface.

Soil Suitability

The following tables describe potential development limitations of the soil types on the Project Site, with the exception of Urban Land, which is already developed, and Water. Rating categories, where assigned, are as follows: slight indicates that the soil limitations are minor and easily overcome, moderate indicates that the soil is not favorable and that special planning, design, or maintenance is usually required to overcome or minimize particular soil limitations, and severe indicates that that circumstances are unfavorable or difficult to overcome such that special design, significant increases in construction costs, and possibly increased maintenance are required. The symbol "--" indicates that the information was not listed in the soil survey.

Table III.A-2 Soil Depth to Bedrock and Erosion Potential

Soil Type	Depth to Bedrock (in inches)	Erosion Potential
Udorthents, Smoothed (Us)	>80	slight
Wethersfield gravelly silt loam, 3 to 8 percent slopes (WeB)	--	moderate
Holyoke-Rock outcrop complex, hilly (HoD)	10-20	slight
Wethersfield gravelly silt loam, 15 to 25 percent slopes (WeD)	--	severe
Wethersfield gravelly silt loam, 8 to 15 percent slopes (WeC)	--	moderate
Alden silt loam (Ad)	>80	slight
Pits, gravel (Pt)	--	slight
Watchaug fine sandy loam (Wc)	>80	slight

Source: USDA-NRCS

Table III.A-3 Soil Seasonal High-Water Table and Hydrologic Soil Group

Soil Type	Depth to Water Table (in inches)	Hydrologic Soil Group
Udorthents, Smoothed (Us)	36-72	A (high infiltration rate)
Wethersfield gravelly silt loam, 3 to 8 percent slopes (WeB)	18-30	C (slow infiltration rate)
Holyoke-Rock outcrop complex, hilly (HoD)	>80	D (very slow infiltration rate)
Wethersfield gravelly silt loam, 15 to 25 percent slopes (WeD)	18-30	C (slow infiltration rate)
Wethersfield gravelly silt loam, 8 to 15 percent slopes (WeC)	18-30	C (slow infiltration rate)
Alden silt loam (Ad)	--	D (very slow infiltration rate)
Pits, gravel (Pt)	--	--
Watchaug fine sandy loam (Wc)	18-30	C (slow infiltration rate)

Source: USDA-NRCS

Table III.A-4 Potential Building and Road Construction Considerations

Soil Type	Small Commercial Buildings	Local Roads and Streets	Lawns and Landscaping
Udorthents, Smoothed (Us)	Somewhat limited	Somewhat limited: frost action	Somewhat limited
Wethersfield gravelly silt loam, 3 to 8 percent slopes (WeB)	Somewhat limited: slope and depth to saturated zone	Somewhat limited: frost action and depth to saturated zone	Very limited: low exchange capacity
Holyoke-Rock outcrop complex, hilly (HoD)	Very limited: slope	Very limited: slope and frost action	Very limited: slope and depth to bedrock
Wethersfield gravelly silt loam, 15 to 25 percent slopes (WeD)	Very limited: slope and depth to saturated zone	Very limited: slope and frost action	Very limited: slope and low exchange capacity
Wethersfield gravelly silt loam, 8 to 15 percent slopes (WeC)	Very limited: slope and depth to saturated zone	Somewhat limited: slope and frost action	Very limited: low exchange capacity
Alden silt loam (Ad)	Very limited: ponding and depth to saturated zone	Very limited: ponding and depth to saturated zone	Very limited: ponding and depth to saturated zone
Pits, gravel (Pt)	Not limited	Not limited	--
Watchaug fine sandy loam (Wc)	Somewhat limited: depth to saturated one	Very limited: frost action	Somewhat limited

Source: USDA-NRCS

A preliminary Geotechnical Investigation was prepared by Dynamic Earth, LLC (Dynamic) for the Proposed Project, dated September 1, 2020, and is included in **Appendix G**. Dynamic also undertook a soil investigation in the stormwater basin area of the Proposed Project, dated January 7, 2022, included in **Appendix H**. The following is a summary of the preliminary conclusions and recommendations:

- The subsurface conditions encountered at the Project Site included existing fill material and very loose/relatively loose natural glacial deposits at various depths throughout the soil profile, which are not suitable for direct foundation support without the risk of excessive settlement.
- Conventional removal of unsuitable soils and placement of structural fill material (i.e. overexcavation and replacement) is technically feasible to support the proposed structures; however, the removal relatively deeper unsuitable materials would likely require shored/sloped excavations and excavations extending below the groundwater level.

- Ground improvement with installation of aggregate piers would be advantageous to minimize overexcavation and replacement of unsuitable soils. Aggregate piers are a ground improvement technique that includes installation of vertical stone columns that are compacted in lifts using a rammer head that is typically mounted to a specialty drill rig or excavator. This ground improvement technique is designed to densify the on-site soils and allow for subsequent construction of a conventional shallow foundation system.
- Following ground improvement and/or overexcavation and replacement, proposed structures may be supported on a conventional shallow foundation and a ground supported floor slab bearing within approved subgrade soils.
- Alternatively, depending on final design loads, installation of a deep foundation system may be considered to support relatively heavily loaded structures.
- Bedrock was not encountered within the soil borings performed as part of the geotechnical investigation to depths ranging between approximately 22 feet and 50 feet below the ground surface. Apparent weathered rock was encountered at a single test pit location within the southwestern corner of the site at a depth of approximately 10.3 feet below the ground surface.
- Soil stockpile locations for the excavation and replacement of soils are identified on the Erosion and Stormwater Pollution Prevention Plans (sheets 84-94) of the Preliminary and Final Major Site Plans prepared by Dynamic Engineering Consultants, P.C., dated 12/17/2021, last revised 09/01/2022.

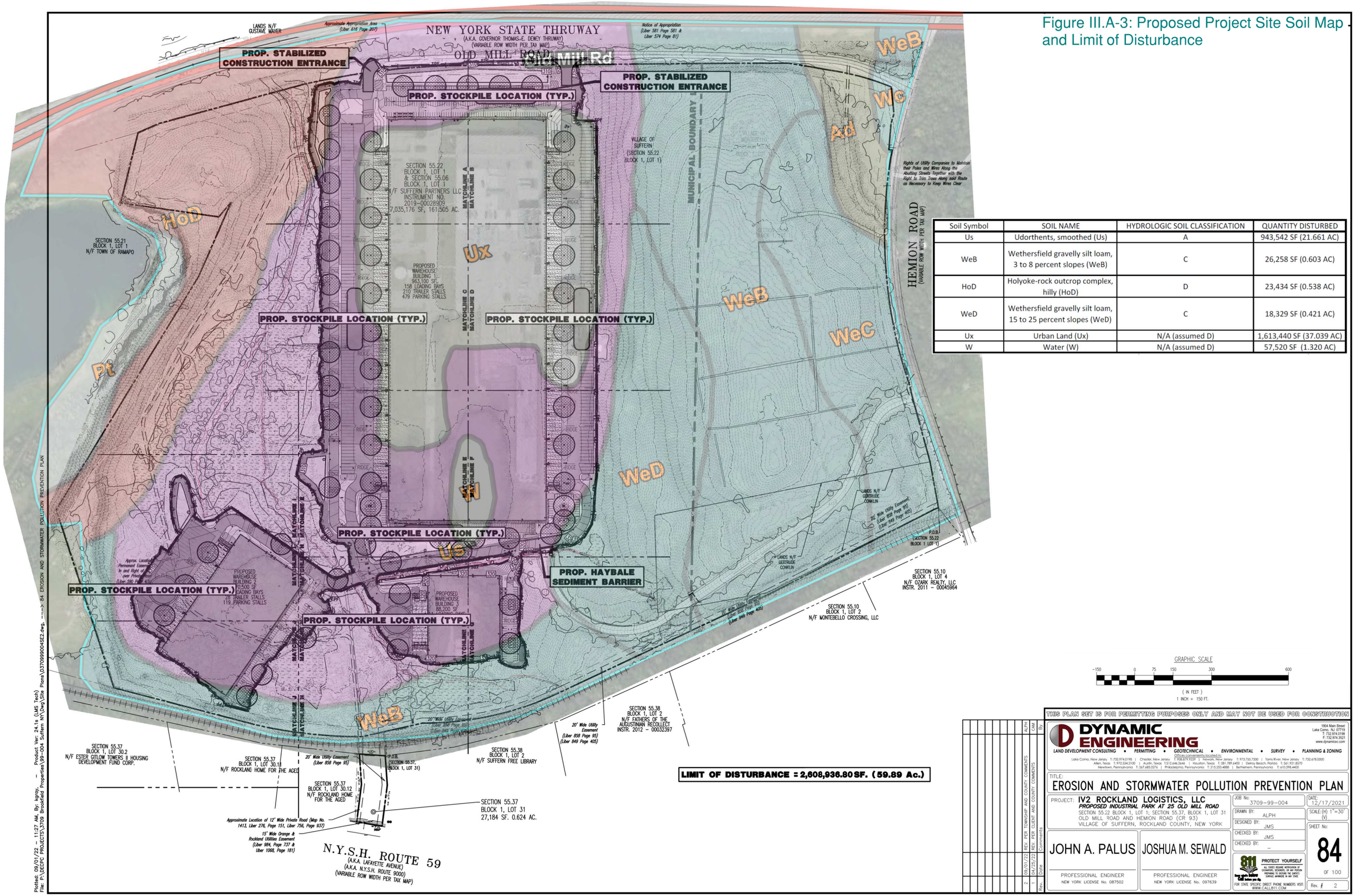
2. Potential Impacts

Implementation of the Proposed Action would result in the disturbance of soils for foundation excavation, utility installation, grading, paving, and landscaping. The Proposed Action would involve disturbance of approximately 60.97 acres of soil. See **Figure III.A-3** which shows the proposed limit of disturbance and site soils. The proposed grading would primarily impact Udorthents (Us), Urban Land (Ux), and Wethersfield gravelly silt loam (WeD) soils. **Table III.A-5** quantifies the amount of disturbance to each hydrologic soil type. Detailed discussions on the potential impacts within the portions of the Project Site categorized as Water are included in **Chapter III.C, Wetlands, Waterbodies and Watercourses.**

Table III.A-5 Quantity of Hydrologic Soil Disturbed

Soil Type	Hydrologic Soil Classification	Quantity Disturbed
Udorthents, smoothed (Us)	A	943,542 SF (21.661 ac)
Wethersfield gravelly silt loam, 3 to 8 percent slopes (WeB)	C	26,258 SF (0.603 ac)
Holyoke-rock outcrop complex, hilly (HoD)	D	23,434 SF (0.538 ac)
Wethersfield gravelly silt loam, 15 to 25 percent slopes (WeD)	C	18,329 SF (0.421 ac)
Urban Land (Ux)	N/A (assumed D)	1,613,440 SF (37.039 ac)

Figure III.A-3: Proposed Project Site Soil Map and Limit of Disturbance



LIMIT OF DISTURBANCE = 2,608,936.80 SF. (59.89 Ac.)

Soil Symbol	SOIL NAME	HYDROLOGIC SOIL CLASSIFICATION	QUANTITY DISTURBED
Us	Udorthents, smoothed (Us)	A	943,542 SF (21.661 AC)
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Ux	Urban Land (Ux)	N/A (assumed D)	1,613,440 SF (37.039 AC)
W	Water (W)	N/A (assumed D)	57,520 SF (1.320 AC)

GRAPHIC SCALE
-150 0 75 150 300 600
(IN FEET)
1 INCH = 150 FT.

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TITLE: EROSION AND STORMWATER POLLUTION PREVENTION PLAN

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SECTION 55.22 BLOCK 1, LOT 1; SECTION 55.37, BLOCK 1, LOT 31
OLD MILL ROAD AND HEMION ROAD (CR 93)
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A preliminary cut and fill analysis has been performed for the Proposed Action and shows an estimated 300,000 cubic yards of fill material to be imported to the Project Site. There are no special geological features on the Project Site, therefore, no impacts to special geological features are anticipated.

It is anticipated that any groundwater which may be encountered during construction will be routed to another portion of the site, and not brought off-site or diverted to any nearby waterbodies. Groundwater can be encountered while trenching for proposed utilities or potentially during overexcavation for the proposed building foundation, if necessary, however it is anticipated that the water will dissipate or infiltrate through the underlying soils without creating washout or soil erosion.

Slopes and Topography

In order to preserve the natural existing features of the Project Site. Impacts to the topography will be limited to the proposed limit of disturbance. The Proposed Project will implement grading and drainage design to preserve existing topography and drainage patterns through the grading and the proposed stormwater conveyance system described in section **III.D Stormwater Management**. Under proposed conditions the high and low points of the Project Site will remain undisturbed. Similarly, to the existing Novartis Facility, the developed portion of the Proposed Project will be located in the center of the Project Site in a flat low-lying area. However, unlike the Novartis Facility, the proposed buildings and site improvements will be raised several feet higher than in existing conditions in order to keep the site out of a flood hazard area posed by the existing streams on site. Due to the increase in elevation of the development, retaining walls are proposed to limit the amount of disturbance when tying back to existing grade on the site. At no point will proposed grading throughout the Proposed Project exceed a slope of 3:1 as it is the maximum permitted slope for retaining soil stability. Areas where proposed grading would require exceeding a slope of 3:1 will require a retaining wall. Due to the size of the Proposed Project, it will result in the disturbance of steep slopes on the Project site which will also result in the need for retaining walls. Figure III.A-4 displays the steeps slopes on the Project Site under proposed conditions. As shown in the figure, the Project site will contain 30.12 acres of steep slopes ranging from 20 – 50% slope and approximately 3.69 acres of steep slopes exceeding 50% slope.

Figure III.A-4: PROPOSED STEEP SLOPES EXHIBIT

SLOPES TABLE

NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	COLOR	2D AREA
1	20.00%	50.00%		1,311,959.45 SF (30.12 AC.)
2	50.00%	Vertical		160,854.37 SF (3.69 AC.)

GRAPHIC SCALE

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File: P:\DEPC PROJECTS\3709 Brookfield Properties\99-004 Suffern, NY\Dwg\Exhibits (Misc)\2023-03-09 Steep Slopes Exhibit\D3709999004SS0.dwg, ----> EX & PROP SLOPES EXHIBIT

As mentioned above, under proposed conditions the Proposed Project will retain existing drainage patterns on the Project Site. As described in further detail in section III.D Stormwater Management., stormwater will drain from the higher elevated eastern portion of the site and drain towards the Proposed Project located in the center of the Project Site. Runoff will be collected, treated, and either infiltrated or detained by the proposed stormwater conveyance system. Stormwater will then be discharged to the existing wetlands located in the south and western portion of the Project Site where it will ultimately be tributary to the existing stream located on site.

Blasting and Rock Crushing

Based upon soils testing performed to date, no blasting will be required for construction of the Proposed Project. If rock is encountered during site excavation, the Applicant will use alternate methods of rock removal, which may include chipping or ripping.

Soil Erosion

As described in the in the project conditions, the site contains several areas of steep slopes. As disturbance occurs over the course of the project through clearing the site for demolition and grading, specific measures would be taken by the contractor to minimize soil erosion. Required steps and best management practices are provided within the Erosion and Stormwater Pollution Prevention Plans (**Appendix C**) as well as the Stormwater Management & Pollution Prevention Plan (**Appendix I**). Steps include but are not limited to: installation of silt fencing & haybales, soil stabilization, soil dampening, installing wind barriers, and construction oversight by an inspector to ensure that proper practices are being adhered.

Soil Limitations

The on-site soils would not be a limiting factor with respect to construction activities or stormwater management. The soil investigation in the stormwater basin area of the Proposed Project conducted by Dynamic shows that soils in the areas of the proposed infiltration features have a high infiltration rate and low runoff potential.

As described above, Dynamic's geotechnical report (**Appendix G**) made recommendations pertaining to the future installation of building foundations within the Project Site. The Proposed Project would be undertaken in a manner that is consistent with these recommendations. Where overexcavation and replacement of relatively deep unsuitable materials is proposed to accommodate the required foundation support, groundwater may be encountered. As such, there may be a need for groundwater control during construction of the Proposed Project. Where overexcavation is required, it will not result in an increase of the proposed limit of disturbance noted on the site plans for the Project Site. Discharge within groundwater during excavation will be in compliance with the GP-0-15-003 (MS4) permit.

It is noted that the Proposed Action would disturb more than one acre of soil and, thus, would require coverage under GP-0-20-001. As such, and in accordance with the requirements of the New York State Department of Environmental Conservation (NYSDEC) and Chapter 233, Stormwater Management, of the Village of Suffern Code, a Stormwater Pollution Prevention Plan (SWPPP) has been developed for the Proposed Project. As a primary component of the SWPPP, erosion and sediment control procedures are detailed, including their design, and locations (subject to adjustment for field conditions). See **Chapter III.D, Stormwater Management**, for a detailed

discussion of the proposed erosion and sediment control measures anticipated as part of the Proposed Project. The proposed erosion and sediment control measures would be maintained throughout the duration of construction and would be repaired or replaced, as needed, to ensure proper working condition. With the aforementioned control measures employed in accordance with a SWPPP, the Proposed Action would not be expected to result in significant adverse impacts to soils.

Retaining Walls and Sound Barriers

Given the significant grading required for construction of the Proposed Project, a number of retaining walls are proposed. As shown in the project Grading Plan (**Appendix C**), the Proposed Project would include the construction of a retaining wall along the eastern edge of the proposed site improvements, to the east of Building 1, that would range in height from approximately one foot to thirteen feet from the ground level to the top of the wall. A series of retaining walls would also be constructed along the southern roadways connecting Building 1 to Buildings 2 and 3, ranging in height from approximately one to twelve feet depending on the site grading. Finally, a retaining wall would be constructed along the north side of Building 2 ranging in height from one foot to 14 feet and along the south side of the Building 2 parking area to a maximum height of eight feet.

As detailed in **Chapter III.G, Noise**, the Proposed Project would include the installation of two sound barriers to be constructed to the south of Buildings 2 and 3. These sound barriers would require engineered footings which would cause some soil disturbance in those locations, however, the location of the sound walls in relation to the disturbance from the overall grading will not result in an increase of the proposed limit of disturbance.

3. Mitigation Measures

No significant adverse environmental impacts to geology and soils are anticipated as a result of the Proposed Action. However, the Proposed Action has incorporated numerous measures aimed at minimizing the potential impacts, including the following.

Erosion and Sediment Control During Construction

A SWPPP has been developed and would be implemented in accordance with the requirements of the NYSDEC and the Village of Suffern Code. As stated in the Small municipal separate stormwater sewer systems (MS4) permit, three (3) minimum control measures (MCMs) require traditional land use control MS4s (Village of Suffern) in order to be implemented successfully. The traditional land use control comes in the form of local laws and ordinances. These laws and ordinances are a part of the Village's stormwater management plan (SWMP). Under the SWMP, the Village of Suffern is required to enforce their SWMP while reviewing the SWPPP and during and post – construction through the use of a qualified inspector to ensure that the implementation of MCMs are in compliance with the Village's SWMP.

As part of the SWPPP, a detailed erosion and sediment control plan, identifying the specific erosion and sediment control measures to be implemented, has been developed. All erosion and sedimentation controls would be installed, monitored, repaired, and replaced in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, and would be the responsibility of a trained construction contractor on-site. The proposed erosion and sediment controls to be implemented as part of the Proposed Project are listed below. See the SWPPP in

Appendix I and the Erosion and Stormwater Pollution Prevention Plan drawings in **Appendix C** for additional details regarding erosion and sediment control and short-term maintenance and inspection requirements during construction.

- Stabilized Construction Access
- Temporary Stockpiles
- Silt Fencing
- Haybales
- Catch Basin Inlet Protection
- Geotextile Filter Bags
- Concrete Truck Washout
- Dust Control
- Sprinkling
- Windbreakers
- Winter Stabilization
- Protection of Exposed Soil

Practices that would be implemented to protect water quality during the clearing and grading stage of construction would include erecting a construction fence demarcating the limit of disturbance; stabilizing the construction entrance established along the access road to the Project Site; delineating a vehicle and equipment staging area with flags, tape and/or spray paint; installing field office trailers for the construction engineers and managers, portable toilets, and dumpsters for trash, as necessary; delineating material stockpile areas with silt fencing; haybales; paved surface inlet protection; and spill kits. In addition, the required clean suitable soil/fill material needed for the regrading of the Project Site would be placed immediately, spread, and compacted in layers one foot or less in thickness. During building construction, concrete truck washout would remain at the Project Site near the stabilized construction entrance. All disturbed areas would be permanently stabilized post construction with vegetation of hard surfaces to prevent potential for erosion following construction.

All erosion and sediment control measures would be inspected in accordance with State Pollutant Discharge Elimination System (SPDES) Permit requirements. Inspections would be conducted daily by a trained contractor to determine when measures need maintenance or repair. In addition, periodic inspections and maintenance of the stabilized construction access point would be provided after each rainfall event and on an as needed basis at the discretion trained contractor so as to prevent tracking of sediment onto public rights-of-way or into the Project Site as a result of truck operations.

See **Chapter IIID, Stormwater Management**, for additional details regarding erosion and sediment control practices.

Corrective Measures to Overcome Soil Limitations

As detailed above, the Proposed Project would be undertaken in a manner that is consistent with the recommendations set forth in Dynamic's geotechnical report (**Appendix G**) pertaining to the future installation of building foundations within the Project Site. Where overexcavation and replacement of relatively deep unsuitable materials is proposed to accommodate the required foundation support,

groundwater may be encountered, at which point the Applicant would undertake groundwater control measures.

Blasting and Rock Crushing

Based upon soils testing performed to date, no blasting will be required for construction of the Proposed Project. If rock is encountered during site excavation, the Applicant will use alternate methods of rock removal, which may include chipping or ripping.

Construction Phasing Plan

See **Chapter III.N, Construction**, for details on the proposed construction phasing. Figure III.A-5 displays the Overall Phasing Plan for the Proposed Project. Construction will occur in four stages. Based on the scope of the proposed development, it is not feasible to limit disturbance to five acres. A waiver will be requested from the Stormwater Management Officer of the Village of Suffern for disturbance exceeding five acres. As detailed in the project SWPPP and discussed above, construction activities would be phased to limit areas of disturbance to the maximum extent practicable and soil management practices would be implemented to minimize the potential for increased pollution of stormwater runoff.

Each stage will involve clearing and regrading of the site, the installation of stormwater conveyance, and construction of site improvements. Stage one involves establishing the circulation path around Building 1 and the construction of the stormwater infrastructure immediately around Building 1. Stage two solely involves the construction of Building 1. This includes the pouring of the foundations, establishing the loading docks and installing the building frame. Stage three involves the complete construction of Building 2 and its immediate area. This includes extending the roadway from Phase 1 to Both side of Building 2, installing the stormwater infrastructure, constructing the parking lot and loading area, and the complete construction of Building 2. Phase 4, similar to Phase 3 involves the complete construction of Building 3. This includes two separate roadway extensions to loading area and parking area of Building 3. The installation of stormwater infrastructure and the build out of Building 3.

Figure III.A-5: Overall Phasing Plan

PHASING LEGEND

- PROPOSED PHASE 1
- PROPOSED PHASE 2
- PROPOSED PHASE 3
- PROPOSED PHASE 4

GRAPHIC SCALE

−150 0 75 150 300 600

(IN FEET)

1 INCH = 150 FT.

THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

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TITLE: OVERALL PHASING PLAN

PROJECT: **IV2 ROCKLAND LOGISTICS, LLC**
PROPOSED INDUSTRIAL PARK AT 25 OLD MILL ROAD
SECTION 55.22 BLOCK 1, LOT 1; SECTION 55.37, BLOCK 1, LOT 31
OLD MILL ROAD AND HEMION ROAD (CR 93)
VILLAGE OF SUFFERN, ROCKLAND COUNTY, NEW YORK

JOB No:	3709-99-004
DRAWN BY:	CAM
DESIGNED BY:	JMS
CHECKED BY:	JMS
CHECKED BY:	–
DATE:	08/01/2022
SCALE: (H) 1"=150' (V)	
SHEET No:	1 OF 1
Rev. #	0

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