Town of Killingly Inland Wetland Application

Killingly High School

Solar Facility

226 Putnam Pike
Killingly, Connecticut

Prepared for **Town of Killingly Board of Education**
79 Westfield Avenue
PO Box 210
Killingly, Connecticut 06239

Solar Developer **Greenskies Clean Energy, LLC**
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June 2021

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Permit Application Narrative

This document is submitted in accordance with the Connecticut Inland Wetlands and Watercourses Act ("IWWA"; Section 22a-36 through 22a-45) of the Connecticut General Statutes and in accordance with the Town of Killingly Inland Wetlands & Watercourses Commission ("IWWC") Regulations.

Introduction

The Applicant, Greenskies Clean Energy, LLC ("Applicant") in cooperation with the Town of Killingly Board of Education respectfully seeks approval from the Town of Killingly Inland Wetlands and Watercourses Commission for a proposed 1.068 MW DC solar photovoltaic ("PV") arrays (the "Facility" or "Project") to be installed on the Town of Killingly Board of Education property located at 226 Putnam Pike, Killingly, Connecticut (Assessors Map/Block/Lot 079-002-000; the "Subject Property" or "Site"). The Facility will be sited in southwestern portion of the ±141.59-acre parcel within an existing wooded area to the south of the High School and northeast of the existing cleared field and material storage area. Access to the Project area will be provided via an existing gravel road that accesses the cleared field and material storage area, off the paved access road that serves the high school.

The Project includes the installation of 1,050 360W modules, 1,536 450W modules, and associated fencing, access road, utilities, and stormwater management features, within approximately 6.44± acres of the Site. Of the 6.44± acres of disturbance, 4.67± acres will require clearing and grubbing for the installation of the fenced solar facility and associated stormwater management and erosion and sediment control features. The remaining 1.77± acres are anticipated to require tree cutting only for shading purposes; no grubbing or stump removal would occur within this zone.

The proposed solar panels will be installed on a post driven ground mounted racking system, with minimal changes to the existing grades. As a result, the post-development site drainage conditions will mimic the pre-developed site conditions. Areas of clearing and grubbing and any existing ground cover that is disturbed during construction will be reseeded with a low growth native seed mix. In order to account for the change in ground cover and time of concentration, a grass-lined stormwater management basin is proposed at the northwestern end of the fenced Facility.

The proposed Facility will not result in a direct impact to nearby wetland resources and the fenced limits of the Facility would be located outside of the inner 100 feet of the 200-foot Upland Review Area regulated by the IWWC. Activities proposed within the inner 100 feet of the 200-foot Upland Review Area are associated with stormwater management features (e.g., forebay, basin, and level spreaders). Although the limit of disturbance ("LOD") associated with

the two level spreaders will encroach slightly into the IWWC's 25-foot no disturbance buffer, the actual level spreaders will not encroach into this non-disturbance zone.

The applicant certifies that:

1. No portion of the property on which the regulated activity is proposed is located within 500 feet of the boundary of an adjoining municipality;

2. No traffic attributable to the completed project on the site will use streets within an adjoining municipality to enter or exit the site;

3. No sewer or water drainage from the project site will flow through and impact the sewage and drainage system within an adjoining municipality;

4. Water run-off from the improved site will not impact streets or other municipal or private property within an adjoining municipality.

5. The Subject Property is not located within a public water supply watershed or aquifer protection area.

Completed *Killingly Inland Wetlands & Watercourses Commission Application* and *Connecticut Department of Energy and Environmental Protection Reporting Form* are provided in Attachment A.

Location Description

The ±141.59-acre Town-owned property is located at 226 Putnam Pike (State Route 12), Connecticut and is identified by the Killingly Tax Assessor as Parcel # 079-002-000. The property is developed with the Killingly High School campus consisting of high school buildings, paved access roads and parking, landscaping, stormwater management areas, and athletic fields. The remainder of the Site is primarily undeveloped wooded land with cleared field, used by the school, in the southeast portion of the Subject Property. The parcel is zoned Rural Development by the Town of Killingly. Access to the Site is from a paved road off of Putnam Pike/Route 12.

A Project Location Map and Existing Conditions Map along with representative photographs of the Facility area and nearby wetlands are provided in the Figures and Photodocumentation Attachment.

Site Vicinity Characteristics

The subject property is located along the east side of Putnam Pike (Route 12) within a primarily residential and rural district in the Dayville area in the northwestern section of the Town of Killingly. A list of abutting properties within 100 feet of the Subject Property and an accompanying portion of the tax map depicting these properties is provided in Attachment B.

The following is a summary of properties, and their observed uses, which abut the Site and located in the vicinity.

North – undeveloped woods.

East – undeveloped woods.

South – undeveloped woods.

West – residential properties along Route 12.

Mapped Soil Types

Digitally available updated soil survey information was reviewed from the Natural Resources Conservation Service ("NRCS"). Soil classifications present on the Subject Property were field verified and are as follows:

Wetland Soils:

Ridgebury, Leicester, and Whitman soils (Map Symbol – 3)

Upland soils:

Canton and Charlton fine sandy loams (62)
Paxton and Montauk fine sandy loams (86)
Woodbridge fine sandy loam (47)

These soil types were generally confirmed during a wetland investigation conducted by APT's Professional Soil Scientist Dean Gustafson.

Rare Species Habitat

A review of Connecticut Department of Energy and Environmental Protection ("DEEP") Natural Diversity Data Base ("NDDB") map revealed no records indicating extant populations of State Listed Endangered, Threatened, or Special Concern species on or in the vicinity of the subject property. The nearest NDDB buffer area is located ±0.7 mile to the west. Therefore, the Project would not result in an adverse effect to rare species. Please refer to the NDDB Map provided in the Figures and Photodocumentation attachment.

Flood Hazard Areas

United States Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Maps ("FIRM") were reviewed for the Subject Property. A FIRM is the official map of a community on which FEMA has delineated both the special hazard areas and risk premium zones applicable to the community. The Subject Property is depicted on FIRM PANEL #09013600008B, dated January 3, 1985. Based on review of the FIRM panel, the Subject

Property and adjacent areas are located within an unshaded Zone X, areas of minimal flooding (outside of the 100-year and 500-year flood zones).

Please refer to the FEMA Map provided in the Figures and Photodocumentation attachment.

Wetland Description and Evaluation

Two forested wetland areas were identified on the Subject Property in proximity to the proposed Facility, as described in further detail below.

Wetland Resource Area Delineation

Dean Gustafson, a Connecticut registered Professional Soil Scientist with APT, conducted field investigations on March 31, 2021, to perform a wetland delineation on the Subject Property in proximity to the proposed solar Facility. The delineated wetland boundaries were identified in accordance with the Connecticut Inland Wetlands and Watercourses Act ("IWWA") regulations. The results of this wetland investigation are summarized in the discussion below. This investigation identified two wetland areas that are generally consistent with wetland information provided on site plans reviewed for the Town of Killingly High School project. Additional details of APT's investigation are contained in the March 31, 2021, Wetland Inspection Report, provided in Attachment C.

Federal and State Wetlands

The Connecticut IWWA defines wetlands as areas of poorly drained, very poorly drained, floodplain, and alluvial soils, as delineated by a soil scientist. Watercourses are defined as bogs, swamps, or marshes, as well as lakes, ponds, rivers, streams, etc., whether natural or man-made, permanent, or intermittent. Intermittent watercourse determinations are based on the presence of a defined permanent channel and bank, and two of the following characteristics: (1) evidence of scour or deposits of recent alluvium or detritus; (2) the presence of standing or flowing water for a duration longer than a particular storm incident; and (3) the presence of hydrophytic vegetation.

Wetland 1 consists of a headwater hillside seep wetland within a very stony forested area located just south of the high school. Red maple dominates the wetland overstory with winterberry and highbush blueberry in the understory. This seasonally saturated wetland drains to the west through overland flow and a very seasonal discontinuous intermittent watercourse channel. These flows are interrupted by a rip rap armored cut slope that conveys flows into a 24-inch reinforced corrugated pipe under the high school access road. This existing crossing and the proximity of the high school to the north have impacted this wetland system.

Wetland 2 consists of a small headwater hillside seep wetland within a stony forested area located just north of an open field and material storage yard with associated gravel access road. This seasonally saturated wetland drains to the west through overland flow. These flows are interrupted by a rip rap armored cut slope that conveys flows into a catch basin

and the high school access road. This existing crossing and proximity of a gravel road to a material storage area have impacted this wetland system.

No depressional areas that could potentially support breeding by vernal pool indicator species exists within either Wetland 1 or 2.

Please refer to Wetland Inspection Map provided in the March 31, 2021, Wetland Inspection Report (Attachment C) and the separately attached Project Site Plans for the locations of the identified wetland resource areas.

Wetland Evaluation

There are many methods of evaluating wetlands, all incorporating different parameters to assess these resources. This study uses methodology recommended by the Corps, *The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach* issued by the Corps, dated September 1999. This evaluation provides a qualitative approach in which wetland functions can be considered Principal, Secondary, or unlikely to be provided at a significant level. Functions and values can be Principal if they are an important physical component of a wetland ecosystem (function only), and/or are considered of special value to society, from a local, regional, and/or national perspective. The Corps recommends that wetland values and functions be determined through "best professional judgment" based on a qualitative description of the physical attributes of wetlands and the functions and values exhibited.

These functions and values can be grouped into four basic categories as follows:

Biological Functions

Fish and Shellfish Habitat — This function considers the effectiveness of seasonal or permanent waterbodies associated with the wetland in question for fish and shellfish habitat.

Wildlife Habitat — This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered. Species lists of observed and potential animals should be included in the wetland assessment report.

Production Export (Nutrient) — This function relates to the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Hydrologic Functions

Floodflow Alteration (Storage & Desynchronization) — This function considers the effectiveness of the wetland in reducing flood damage by attenuation of floodwaters for prolonged periods following precipitation events.

Groundwater Recharge/Discharge — This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. Recharge should relate to the potential for the wetland to contribute water to an aquifer. Discharge should relate to

the potential for the wetland to serve as an area where groundwater can be discharged to the surface.

Water Quality Functions

Sediment/Toxicant/Pathogen Retention — This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens.

Nutrient Removal/Retention/Transformation — This function relates to the effectiveness of the wetland to prevent adverse effects of excess nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

Sediment/Shoreline Stabilization — This function relates to the effectiveness of a wetland to stabilize streambanks and shorelines against erosion.

Societal Values

Recreation (Consumptive and Non-Consumptive) — This value considers the effectiveness of the wetland and associated watercourses to provide recreational opportunities such as canoeing, boating, fishing, hunting, and other active or passive recreational activities. Consumptive activities consume or diminish the plants, animals, or other resources that are intrinsic to the wetland, whereas non-consumptive activities do not.

Educational/Scientific Value — This value considers the effectiveness of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage — This value relates to the effectiveness of the wetland or its associated waterbodies to produce certain special values. Special values may include such things as archaeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geologic features.

Visual Quality/Aesthetics — This value relates to the visual and aesthetic qualities of the wetland.

Threatened or Endangered Species Habitat — This value relates to the effectiveness of the wetland or associated waterbodies to support threatened or endangered species.

The degree to which a wetland provides each of these functions is determined by one or more of the following factors: landscape position, substrate, hydrology, vegetation, history of disturbance, and size. Each wetland may provide one or more of the listed functions at Principal levels.

The determining factors that affect the level of function provided by a wetland can often be broken into two categories. The effectiveness of a wetland to provide a specified function is generally dependent on factors within the wetland whereas the opportunity to provide a function is often influenced by the wetland's position in the landscape and adjacent land uses. For example, a depressed wetland with a restricted outlet may be considered highly effective in trapping sediment due to the long residence time of runoff water passing through the system. If this wetland is located in gently sloping woodland, however, there is no significant source of sediment in the runoff therefore the wetland is considered to have a small opportunity of providing this function.

Table 1 provides a summary of functions and values supported by wetlands located within and proximate to the proposed Facility. A summary description of the wetlands, including associated Principal and Secondary functions and values, is provided below.

Table 1
Wetland Functions and Values Summary

Wetland I.D. Number	Groundwater Recharge/ Discharge	Floodflow Alteration	Fish & Shellfish Habitat	Sediment/Toxicant/ Pathogen Retention	Nutrient Removal/Retention/ Transformation	Production Export	Sediment/Shoreline Stabilization	Wildlife Habitat	Recreation	Educational/Scientific Value	Uniqueness/Heritage	Visual Quality/Aesthetics	Endangered Species Habitat
1	P	S	-	S	S	S	-	S	-	S	-	-	-
2	P	S	-	S	S	S	-	S	-	S	-	-	-
P = Principal Function/Value													
S = Secondary Function/Value													
- = Not a Significant Function/Value													

Wetlands 1 and 2, both being headwater hillside seep systems with similar vegetative cover and morphology, are grouped together for this discussion. Since both wetlands have been directly altered by the existing high school development and development occurs within the 200-foot upland review area, their ecological integrity has been slightly compromised. This compromise has had an effect on typical wetland functions and values, so the noteworthy wetland functions are primarily related to groundwater recharge/discharge and water quality including sediment/toxicant/pathogen retention and nutrient removal/retention/transformation and wildlife habitat as a secondary level.

Groundwater Recharge/Discharge – The proposed activities in the upland review area will have little impact on the groundwater recharge capacity of the wetland areas. Installation of driven piles for the solar array foundations and associated grading work will not significantly alter the existing grades or change drainage patterns so both wetlands will still promote groundwater recharge following installation of the Facility. Additionally, the proposed stormwater basin will maintain existing hydrology of both wetlands and will also facilitate groundwater recharge, albeit in a capacity limited by the relatively low infiltration capacity of the underlying native dense glacial till soils.

Sediment/Toxicant/Pathogen Retention – These wetlands are generally dominated by moderately dense woody and herbaceous vegetation that makes it effective at providing this function. It is limited by its lack of retention of surface flows within the wetlands and opportunity due to limited sources for sediments, toxics and pathogens discharging into

these wetland areas. The proposed Facility will not impact existing wetland vegetation and therefore this function will be maintained.

Nutrient Removal/Retention/Transformation - These wetlands are dominated by moderately dense woody and herbaceous vegetation that makes it relatively effective at providing this function. It is limited by its lack of retention of surface flows within the wetland and opportunity due to limited sources for sediments, toxics and pathogens discharging into these wetland areas. The proposed Facility will not impact existing wetland vegetation and therefore this function will be maintained.

Wildlife Habitat – Both wetlands support wildlife habitat function to species that prefer typical red maple forested wetland habitat and that are tolerant of edge forest habitat associated with the high school development and high level of human activity. However, this function is limited due to the relatively small size of the impacted wetlands that are separated from larger forested wetland habitat to the north by the high school access road. The proposed Facility will convert the existing terrestrial forested area adjacent to both wetlands with maintained meadow habitat and a transitional scrub-shrub-meadow ecotone outside of the fenced Facility. The wildlife function currently supported by both wetlands in a secondary capacity will not be significantly altered by the proposed Facility.

Floodflow Alteration – These wetlands provide some limited capacity to attenuate floodwaters but is limited by the shallow nature of the wetlands that minimizes the volume of floodwaters that can be retained. The proposed Facility will not alter existing grades or drainage pathways and therefore would have no impact on this function.

Education/Scientific Value – Although these typical forested wetlands are not considered a unique type of wetland habitat and provides little visual aesthetics values, education value is supported due to the presence of the high school on the Subject Property and ability to provide public access. With the need to maintain a security fence around the solar arrays, there would be some impact to this value although access to areas surrounding the Facility would not be restricted and an existing trail would be relocated around the Facility.

Proposed Regulated Activities and Impact Analysis

The following section summarizes development activities classified as “regulated activities” as defined by the Town of Killingly Inland Wetlands & Watercourses Commission regulations. All proposed upland review area activities are shown in detail on the separately attached Project Site Plans. The Grading and Drainage Plan (Sheet No. GD-1) is provided in Attachment D for reference. As previously discussed, the proposed Facility development will not result in any direct (temporary or permanent) wetland impacts.

Wetland Impacts

The fundamental concept of the wetland impact analysis is based on the precept that wetland impacts should first be avoided where possible. Secondly, if practicable alternatives

do not exist to avoid wetland impacts, then impacts should be minimized. Thirdly, unavoidable wetland impacts should be mitigated where warranted.

An analysis of alternative layouts for the solar Facility combined with various mitigation measures has been incorporated into the Project to avoid any direct impacts to wetland resource areas. Through thoughtful design analysis, the proposed Project has been successful in avoiding any direct impacts to wetlands with the Project limited to work within the IWWC's 200-foot upland review area.

The Applicant has considered alternative layouts working closely with the Town of Killingly Board of Education and designs and determined that encroachment into the 200-foot upland review area is unavoidable due to the solar Facility's renewable energy generation output requirements (which dictate the minimum size of the solar facility) that will benefit the Town of Killingly and the location and extent of surrounding wetlands. Provided below is a description of the proposed regulated activities.

200 Foot Upland Review Area Activities

The proposed solar Facility will cover approximately ±2.8 acres of the 200-foot upland review area. The fenced limits of the Facility will not encroach into the inner 100 feet of the 200-foot upland review area. Activities proposed within the inner 100 feet of the 200-foot Upland Review Area are associated with stormwater management features (e.g., forebay, basin, and level spreaders). Although the limit of disturbance ("LOD") associated with the two level spreaders will encroach slightly into the IWWC's 25-foot no disturbance buffer, the actual level spreaders will not encroach into this non-disturbance zone.

Upland review areas serve a number of important functions that support wetlands and watercourses including water quality protection (erosion control and sediment, nutrient, biological and toxics removal), hydrologic event modification and wildlife habitat. As discussed throughout this document, it is not feasible to avoid work within the 200-foot upland review area while satisfying the minimum requirements of the proposed Facility's renewable energy generation program goals. Appropriate erosion controls will be diligently maintained throughout construction to avoid temporary impacts to nearby wetlands; refer to the subsequent Mitigation Measures section.

Impact Analysis

Since the proposed Facility avoids any direct impact to wetlands and only results in ±2.8 acres of activity within the 200-foot upland review area of which the fenced facility does not encroach into the inner 100-foot, the project minimizes any secondary wetland impacts. As discussed in the following section, a Wetland Protection Program will be implemented during construction to further avoid and prevent any wetland impacts. As a result, the proposed Facility will not adversely affect the Principal and Secondary functions and values that are currently supported by the nearby wetlands (Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant/Pathogen Retention, Nutrient Removal/Retention/Transformation, Wildlife Habitat, Educational Value). Therefore, the proposed Project would not result in a likely adverse impact to wetland resources.

Stormwater Management Summary

The Project has been designed in compliance with DEEP's guidance and recommendations contained in the *2004 Connecticut Stormwater Quality Manual* ("SQM"). A primary goal of the SQM is to provide a comprehensive framework for the long-term protection of natural resources in and around the Site from degradation as a result of stormwater discharges. Another goal of the SQM is to ensure that long-term post-development stormwater quality is protected and that there will be no erosion caused by the development. Details of this analysis are provided in APT's Stormwater Management Report separately attached with a summary provided below.

Of the 6.44± acres of disturbance, 4.67± acres will require clearing and grubbing for the installation of the fenced solar facility and associated stormwater management and erosion and sediment control features. The remaining 1.77± acres are anticipated to require tree cutting only for shading purposes. The proposed solar panels will be installed on a post driven ground mounted racking system, with minimal changes to the existing grades. As a result, the post-development site conditions will mimic the pre-developed site conditions. Areas of clearing and grubbing and any existing ground cover that is disturbed during construction will be reseeded with a low growth native seed mix.

To manage the increase in post-development runoff due to the change in cover type associated with converting woods to meadow within the proposed limit of disturbance, one (1) grass-lined stormwater management basin with a forebay is proposed to the north of the project area. The basin is designed with two (2) low flow culverts that are intended to direct clean runoff to maintain existing hydrologic conditions to the two delineated wetlands to the north and west. Additionally, a swale along the northern fence line and an earthen berm along the northwestern fence line are proposed to direct water to the basin. A forebay has been designed to provide the water quality volume ("WQV"). Additional flow and volume control out of the basin is provided via rip-rap lined overflow weirs and plunge pool level spreaders at the end of each low flow culvert directing flows to both Wetlands 1 and 2 to ensure no adverse impact to wetland hydrology occurs to either wetland area.

As a result, this development will have no functional impact to the existing runoff patterns and there will be no negative stormwater impacts associated with the proposed Facility development to both surrounding wetland and upland areas.

Mitigation Measures

A suite of mitigation measures is proposed to prevent short- and long-term impacts to wetland resource areas and compensate for unavoidable activities within wetlands and the upland review area associated with the Project. Details of the proposed mitigation measures are provided in the following section.

Wetland Protection Program

As a result of the proposed development's location in the vicinity of wetlands, a wetland protection program will be implemented to ensure the civil contractor is sensitive to the proximity of wetland resource areas and controls are maintained to avoid degradation of wetlands during construction activities.

A wetland scientist from APT experienced in compliance monitoring of construction activities, including numerous other solar projects, will serve as the Environmental Monitor for this project to ensure that the following program is implemented properly. The wetland protection program consists of several components: use of appropriate erosion control measures to control and contain erosion while avoiding/minimizing wildlife entanglement; periodic inspection and maintenance of isolation structures and erosion control measures; education of all contractors and sub-contractors prior to initiation of work on the site; wetland protective measures; wetland restoration measures, and reporting.

Erosion and Sedimentation Controls

An Erosion & Sediment Control Plan has been designed in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*. A variety of erosion and sedimentation controls will be employed to minimize erosion and transport of sediment to wetland resource areas during the earthwork and construction phases of the Project. These controls were developed to avoid temporary impacts to wetland resource areas and represent an important element of the Project to avoid and minimize wetland impacts. Details of the erosion and sedimentation controls are provided on the separately bound Project Site Plans. A summary of the erosion and sedimentation control plan is provided below.

The Erosion & Sediment Control Plan calls for the use of the latest erosion and sediment control measures in order to minimize and control disturbance during construction and provide a stable site under finished conditions. These measures may include, but are not limited to the following, depending on site conditions experienced during construction:

- Stabilized construction entrance
- Temporary sediment traps
- Compost filter socks/silt fence
- Seeding/mulching of exposed soils

The BMPs identified in this plan and discussed below include, but are not limited to, providing measures to minimize exposed soil areas through sequencing and temporary stabilization, placement of sediment and erosion controls suitable for the type of work and environment and appropriate Site restoration and rehabilitation techniques as soon as practicable.

The following general measures will be employed to minimize impacts to the jurisdictional resource areas:

- The Contractor will be required to maintain a reserve supply of erosion control BMPs on-site for use as required;
- Protective measures will be inspected daily by the Contractor and after significant precipitation events and repaired, as necessary;
- Erosion control measures shall remain in place until soils are clearly stabilized by robust, growing vegetation; and,
- Erosion controls shall be removed and properly disposed following plant colonization of disturbed soils.

In addition, a Project Environmental Monitor will be established to ensure that all erosion and sedimentation controls are initially installed to protect proximate wetlands, to perform environmental awareness training at the commencement of the Project, and to ensure all aspect of the Wetland Protection Program are implemented and adhered to.

Other

The security fencing that will surround the two arrays will be raised four (4) to six (6) inches off the ground to allow for small wildlife (herpetofauna, mammals, etc.) to continue to migrate through the Facility. This accommodation will prevent any possible impact the Facility may have on wildlife migratory pathways between to two wetland areas.

Summary

The Applicant and Town of Killingly Board of Education are proposing to construct a 1.068 MW DC solar PV arrays on its Killingly High School property at 226 Putnam Pike.

Since the proposed Facility avoids any direct impact to wetlands and only results in ±2.8 acres of activity within the 200-foot upland review area of which the fenced facility does not encroach into the inner 100-foot, the project minimizes any secondary wetland impacts. As discussed in the following section, a Wetland Protection Program will be implemented during construction to further avoid and prevent any wetland impacts. As a result, the proposed Facility will not adversely affect the Principal and Secondary functions and values that are currently supported by the nearby wetlands (Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant/Pathogen Retention, Nutrient Removal/Retention/Transformation, Wildlife Habitat, Educational Value). Therefore, the proposed Project would not result in a likely adverse impact to wetland resources.

The Applicant respectfully requests that the Town of Killingly Inland Wetlands & Watercourses Commission find these measures adequately protective of the interests contained in the IWWA and the IWWC regulations and issue a wetland permit approving the Project.

Figures & Photodocumentation

- Project Location Map
- Existing Conditions Map
- NDDB Map
- FEMA Map
- Photodocumentation

C:\Users\mkope\Dropbox (APT GIS)\APT GIS Team Folder\Projects\Greenskies\Killingly HS - Ground Site\mxd\Killingly HS Fig1 Site Location.mxd

Legend

- Site
- Municipal Boundary

Site Location Map

Proposed Solar Facility
Killingly High School
226 Putnam Pike
Dayville, Connecticut

Greenskies

ALL-POINTS TECHNOLOGY CORPORATION

N

2,000 1,000 0 2,000 Feet

Map Notes:
Base Map Source: USGS 7.5 Minute Topographic Quadrangle Maps, Danielson, CT (1970), East Killingly, CT (1974), Putnam, CT (1970), and Thompson, CT (1974)
Map Scale: 1 inch = 2,000 feet
Map Date: May 2021

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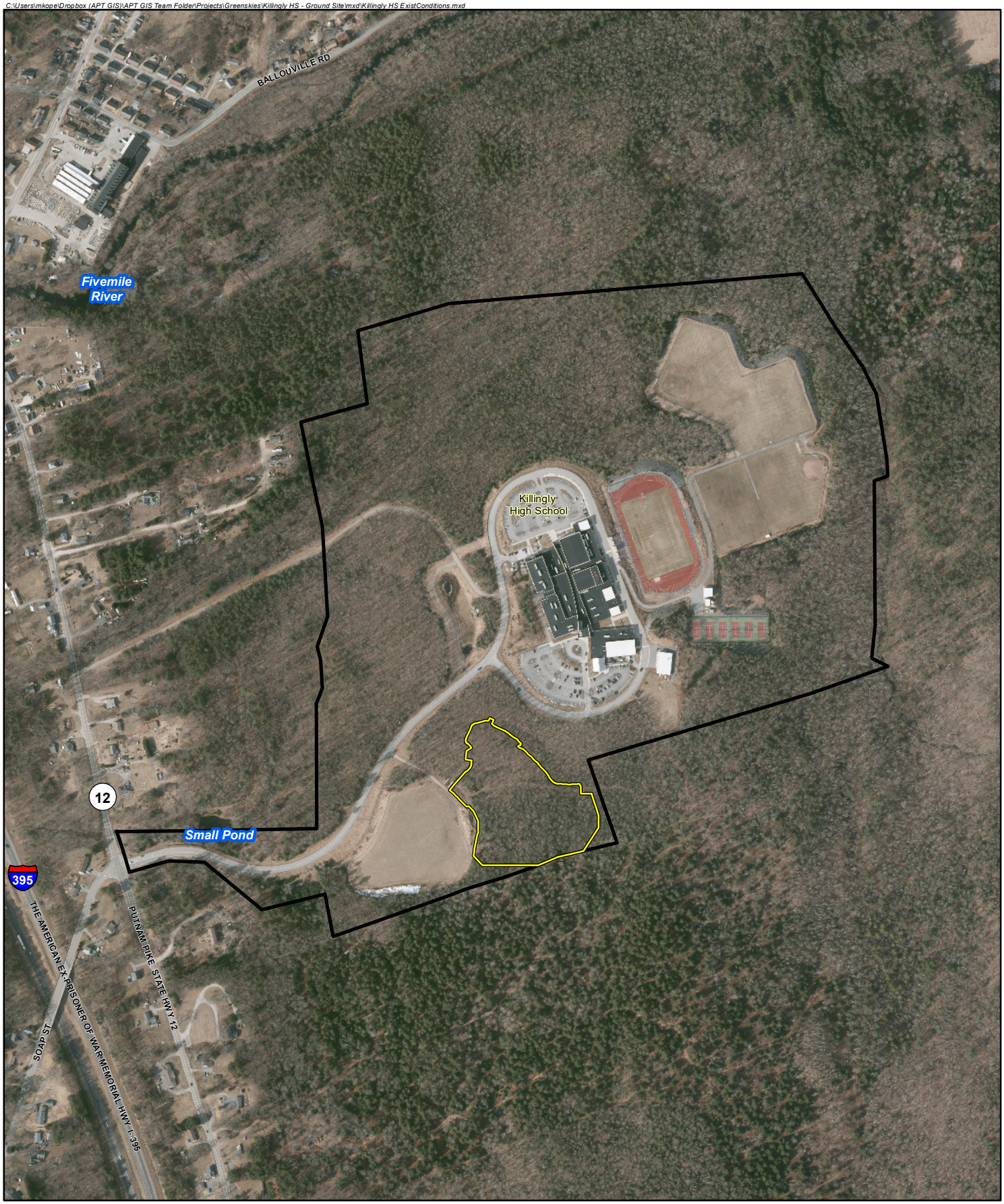

Legend

- Site
- Project Area

Existing Conditions Map

Proposed Solar Facility
Killingly High School
226 Putnam Pike
Dayville, Connecticut

Greenskies

ALL-POINTS TECHNOLOGY CORPORATION

N

600 300 0 600 Feet

Map Notes:
Base Map Source: 2019 Aerial Photograph (CTECO)
Map Scale: 1 inch = 600 feet
Map Date: May 2021

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Legend

- Site
- Natural Diversity Database (updated Dec 2020)
- Municipal Boundary

Map Notes:
Base Map Source: USGS 7.5 Minute Topographic Quadrangle Maps, Danielson, CT (1970), East Killingly, CT (1974), Putnam, CT (1970), and Thompson, CT (1974)
Map Scale: 1:24,000
Map Date: May 2021

N
W E
S

1,000 500 0 1,000
Feet

Natural Diversity Database Map

Proposed Solar Facility
Killingly High School
226 Putnam Pike
Dayville, Connecticut

Greenskies

ALL-POINTS TECHNOLOGY CORPORATION

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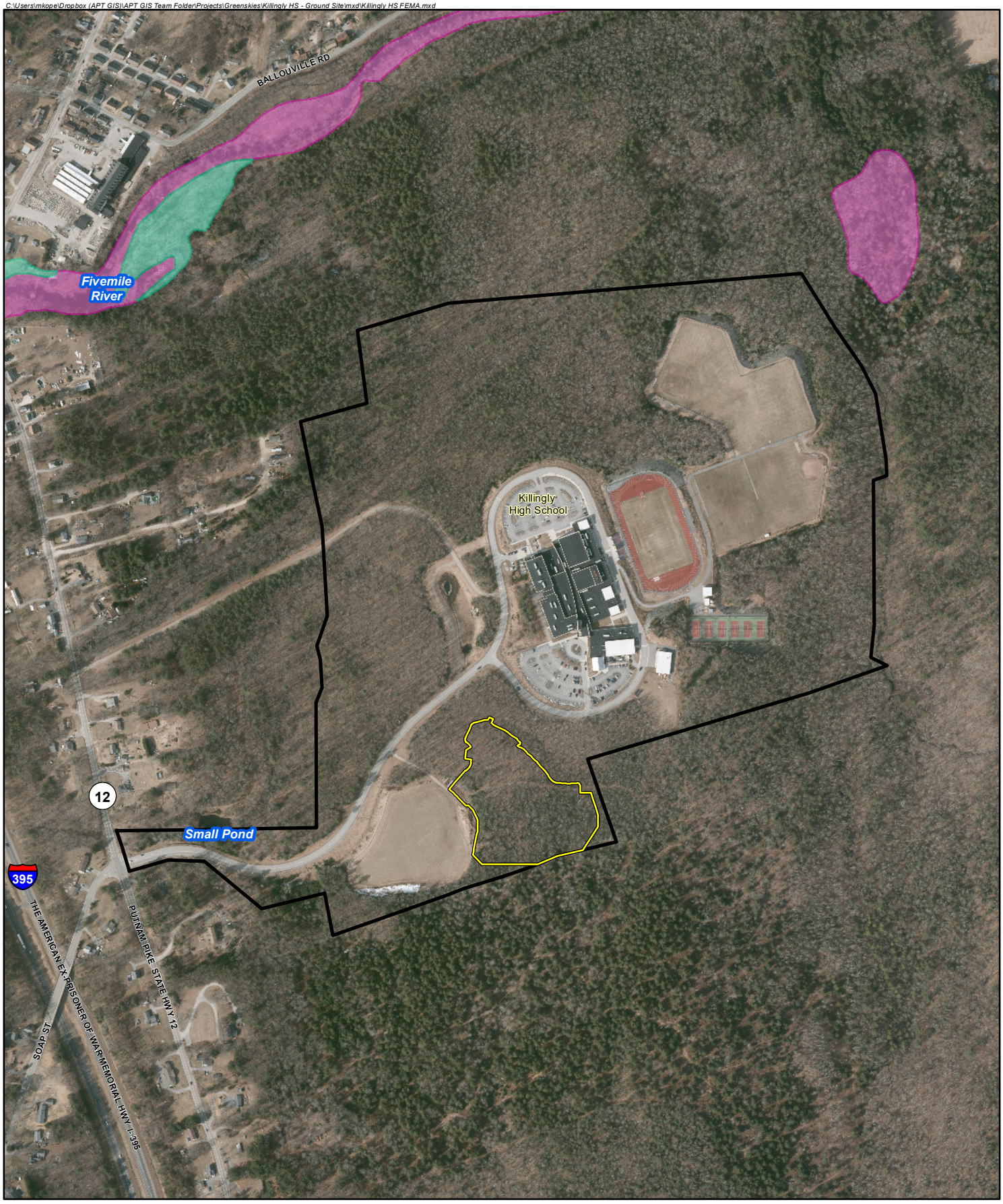


Legend

- Site
- Project Area

FEMA Flood Zones

- 100-Year Flood Zone
- 500-Year Flood Zone

N

600 300 0 600 Feet

FEMA Flood Zone Map

Proposed Solar Facility
Killingly High School
226 Putnam Pike
Dayville, Connecticut

Greenskies

ALL-POINTS TECHNOLOGY CORPORATION

Map Notes:
Base Map Source: 2019 Aerial Photograph (CTECO)
FEMA Flood Zones digitized from FEMA FIRM 090136 008 B
Map Scale: 1 inch = 600 feet
Map Date: May 2021

Photo 1: View of Wetland 1 crossing from high school access road looking west.

Photo 2: View of Wetland 1 from WF 1-01 looking northwest;
Killingly High School in background.

Photo 3: View of Wetland 1 from WF 1-19 looking east.

Photo 4: View of Wetland 2 crossing from high school access road looking northeast; note rip rap armored cut slope and catch basin.

Photo 5: View of Wetland 2 from WF 2-01 looking west.

Photo 6: View of typical upland review area looking north in central portion of project area.

Attachment A

Killingly Inland Wetlands & Watercourses Commission Application & CTDEEP State Report Form

Property within 500' of adjoining Town boundary? ____
If so, which town(s)? _____
Date the notice was sent by KIWWC to town clerk of adjoining municipality(ies)_____
Receipt date of copy of Applicants notice to adjoining municipality_____

Application # :_____

Date Submitted:_____

Date of Receipt by Comm.:_____

Fee:_____

Staff Initials:_____

KILLINGLY INLAND WETLANDS & WATERCOURSES COMMISSION APPLICATION

A $100.00 base fee (or, for a proposed subdivision, $100.00 per lot, whichever is greater) **plus** $60.00 state fee must accompany each application **(Total fee: $160.00)**. THIS FEE IS NON-REFUNDABLE. Checks or money orders should be made payable to the Town of Killingly. **Public hearing fee: $225.00** required in addition to the above fees if a public hearing is required by the commission(s) and not already included.

TO BE COMPLETED BY THE APPLICANT – PLEASE PRINT

Applicant's Name: Greenskies Clean Energy, LLC; Attn: Carson Mislick

Day Phone #: (860) 398-5271 (o) Evening Phone #: email: cmislick@greenskies.com

Mailing Address: 127 Washington Avenue, West Building, Garden Level, Middletown, CT 06457

Owner of Record: Town of Killingly Board of Education; Attn: Robert Angeli, Superintendent

Mailing Address: 79 Westfield Avenue, P.O. Box 210, Killingly, CT 06239 Phone # : (860) 779-6600

email: rangeli@killinglyschools.org

Applicant's interest in the land if the applicant is not the property owner: access agreement through Power Purchase Agreement

Authorization of property owner: Robert A. Angeli

LOCATION OF PROPERTY:

House # and Street: 226 Putnam Pike (Killingly High School)

Tax Map Number: Parcel # 079-002-000 Block: _____ Lot:_____

Zoning District: Rural Development Lot Size: 141.59 acres Lot Frontage: N/A

Easements and/or deed restrictions: N/A

PURPOSE:

Provide the purpose and description of the proposed activity, including a list of all proposed regulated activities:

A 1.068 MW DC solar photovoltaic electrical generating facility is proposed on the Killingly High School property in a forested area located on the south side of the access drive, south of the High School building. Project will not directly impact wetlands or watercourses but portions of the solar facility and associated stormwater management area will be located in the upland review area.

Refer to permit application narrative for additional discussion.

ON-SITE WETLANDS AND WATERCOURSES:

Windham County wetland soil types and areas of each type: 3 - 1.7 acres; 47 - 1 acre; 62- 5.3 acres; 86 - 1.5 acres soil types located within and immediately adjacent to project area

Watercourse(s) – type (pond, stream, marsh, bog, drainage ditch, etc.), manmade or natural, and area of each:

2.8 acres of wooded swamp wetlands (Wetlands 1 & 2) located in proximity to proposed project area; each wetland has been impacted by the Killingly High School development, including the crossing of these features with access drive.

ALTERNATIVES:

List alternatives considered by the applicant and state why the proposal to alter wetlands as set forth in the application is necessary and was chosen:

Earlier alternative layouts were considered that resulted in reduced wetland buffers and increased activity in the upland review area. The preferred alternative maximizes buffers to wetlands located both to the north and south of the solar facility.

Refer to permit application narrative for additional discussion.

MATERIALS:

Provide the volume (cubic yard) and nature of materials to be deposited and/or extracted:

Project will require a cut volume of 1,681 cu. yds. and a fill volume of 1,335 cu. yds., resulting in a net volume of 346 cu. yds. of cut. Excess materials will either be placed and stabilized on site (outside of wetlands, watercourses or the upland review area) or hauled off site.

MITIGATIVE MEASURES:

List measures to be taken to minimize or avoid any adverse impact on the regulated area:

Extensive sedimentation and erosion controls will be installed and maintained throughout construction to avoid any incidental impacts to nearby wetlands during construction and will remain in place until site is fully and permanently stabilized.

Refer to permit application narrative for additional discussion.

BIOLOGICAL EVALUATION:

Describe the ecological communities and functions of the wetlands or watercourses involved with the application and the effects of the proposed regulated activities on these communities and wetland functions:

Refer to permit application narrative for discussion of wetland functions and values and effects of proposed regulated activities on wetland functions and values.

SITE PLAN*:

Scale 1"=40' showing existing and proposed conditions in relation to wetlands and water courses to include, but not be limited to:

Contours ✓

Buildings N/A

Wells N/A

Driveways ✓

Septic Systems N/A

Drainage Systems (Including Culverts, Footing and Curtain Drains) ✓

Erosion and Sedimentation controls ✓

Wetlands ✓

Watercourses ✓

Areas of Excavation and /or Material Deposit ✓

****Refer to Section 6.0 – Application Information Requirements and Section 7.0 – Application Evaluation Criteria of the Killingly Inland Wetlands & Watercourses Commission Regulations for information the Commission may require. Professionally prepared plans (Licensed Land Surveyor/Professional Engineer registered in the State of Connecticut, Soil Scientist) may be required for significant activities.***

ADDITIONAL INFORMATION:

List additional information submitted by the applicant:

Refer to permit application narrative for additional discussion.

Additional attachments: Project Site Plans and Stormwater Management Report

The applicant understands that this application is to be considered complete only when all information and documents required by the Commission have been submitted. The undersigned warrants the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge and belief. Permission is granted to the Town of Killingly, Killingly Inland Wetlands & Watercourses Commission, and its agent (s) to walk the land, at reasonable times, and perform those tests necessary to properly review the application, both before and after a final decision has been issued.

Applicant's Signature: Carson Mislivec Date: 6-1-2021

Owner of Record: Robert Allyn L. Date: 5-28-2021

Connecticut Department of ENERGY & ENVIRONMENTAL PROTECTION

GIS CODE #: ___ ___ ___ ___ ___ ___ ___ ___ ___
For DEEP Use Only

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

Statewide Inland Wetlands & Watercourses Activity Reporting Form

Please complete and mail this form in accordance with the instructions.
If completing by hand - please print and use the pdf version.
Incomplete or incomprehensible forms will be mailed back to the municipal inland wetlands agency.

PART I: Must Be Completed By The Inland Wetlands Agency

1. DATE ACTION WAS TAKEN: year: **Click Here for Year** month: **Click Here for Month**
2. CHOOSE ACTION TAKEN (see instructions for code): **Click Here to Choose a Code**
3. WAS A PUBLIC HEARING HELD (check one)? yes ☐ no ☐
4. NAME OF AGENCY OFFICIAL VERIFYING AND COMPLETING THIS FORM:

   (type name) _____ (signature) _____

PART II: To Be Completed By The Inland Wetlands Agency Or The Applicant

5. TOWN IN WHICH THE ACTIVITY IS OCCURRING (type name): **Killingly**
   does this project cross municipal boundaries (check one)? yes ☐ no ☒
   if yes, list the other town(s) in which the activity is occurring (type name(s)): _____, _____
6. LOCATION (click on hyperlinks for information): USGS quad map name: **Danielson & E.Killingly** or quad number: **43 & 44**
   subregional drainage basin number: **3400**
7. NAME OF APPLICANT, VIOLATOR OR PETITIONER (type name): **Greenskies Clean Energy, LLC & Town of Killingly Board of Education**
8. NAME & ADDRESS OF ACTIVITY / PROJECT SITE (type information): **226 Putnam Pike, Killingly, CT**
   briefly describe the action/project/activity (check and type information): temporary ☐ permanent ☒ description: _____
   1.068 MW DC photovolatic solar facility
9. ACTIVITY *PURPOSE* CODE (see instructions for code): **D**
10. ACTIVITY *TYPE* CODE(S) (see instructions for codes): **1, 2, 12, 14**
11. WETLAND / WATERCOURSE AREA ALTERED (see instructions for explanation, type acres or linear feet as indicated):
    wetlands: **0.00** acres open water body: **0.00** acres stream: **0.00** linear feet
12. UPLAND AREA ALTERED (type acres as indicated): **2.80** acres
13. AREA OF WETLANDS / WATERCOURSES RESTORED, ENHANCED OR CREATED (type acres as indicated): **0.00** acres

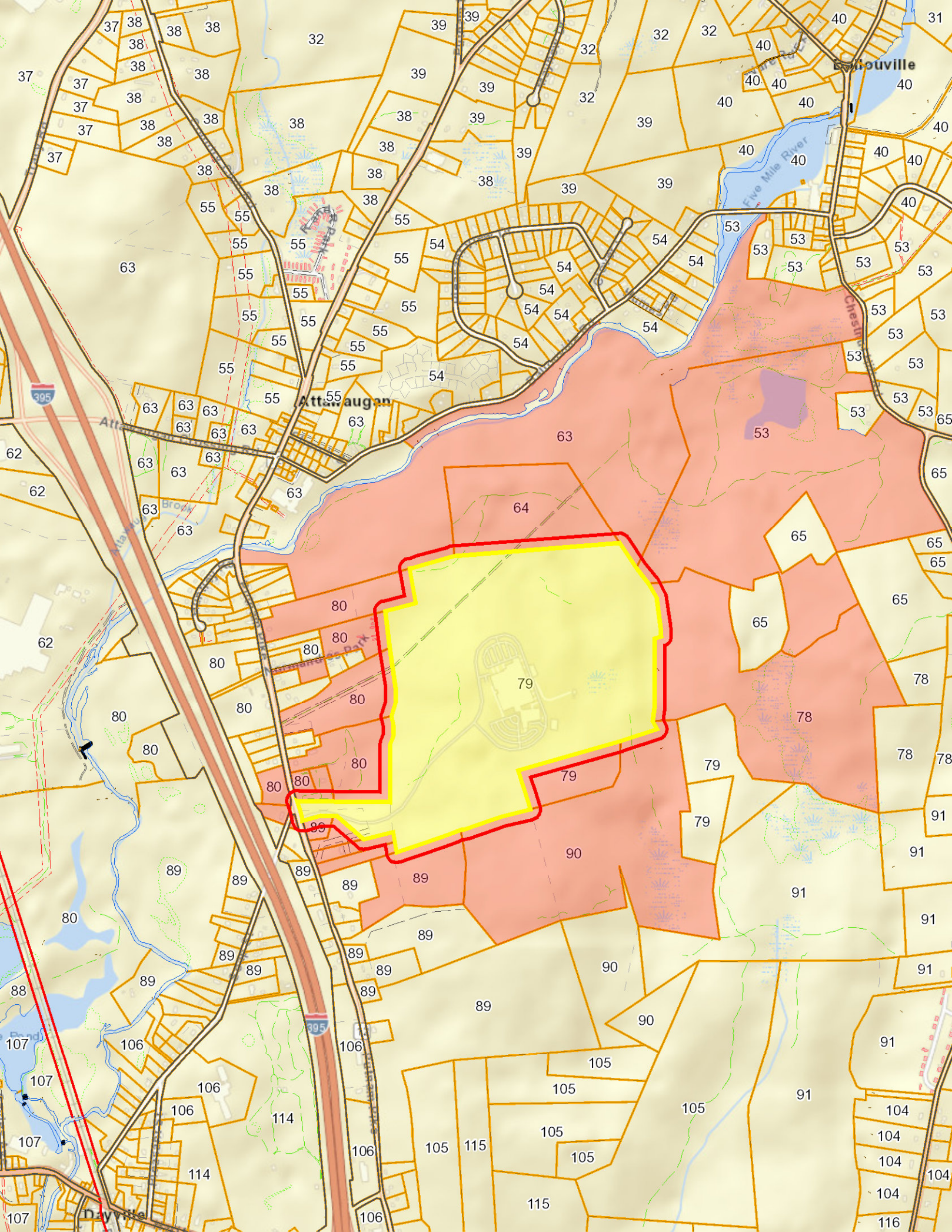
PART III: To Be Completed By The DEEP

DATE RECEIVED: DATE RETURNED TO DEEP:

FORM COMPLETED: YES NO FORM CORRECTED / COMPLETED: YES NO

Attachment B

Abutting Property Owners


Attawaugan
Five Mile River
Dayville
395

100 foot Abutters List Report

Killingly, CT
May 27, 2021

Subject Property:

Parcel Number:	079-002-000	Mailing Address:	KILLINGLY TOWN OF-034
CAMA Number:	079-002-000-000		79 WESTFIELD AVE
Property Address:	226 PUTNAM PIKE		KILLINGLY, CT 06239

Abutters:

Parcel Number:	053-022-001	Mailing Address:	MAVOR EDITH R
CAMA Number:	053-022-001-000		25 HENLEY WAY
Property Address:	609 CHESTNUT HILL		W HARTFORD, CT 06117
Parcel Number:	063-080-000	Mailing Address:	EQUITY TRUST CO
CAMA Number:	063-080-000-000		1 EQUITY WAY
Property Address:	334 PUTNAM PIKE		WESTLAKE, OH 44145
Parcel Number:	064-001-000	Mailing Address:	PULCINELLA ANTHONY J & JOSEPHINE A TR
CAMA Number:	064-001-000-000		70 SEAVIEW AVE
Property Address:	340 PUTNAM PIKE		BRANFORD, CT 06405
Parcel Number:	078-003-000	Mailing Address:	PULCINELLA JOSEPHINE A
CAMA Number:	078-003-000-000		70 SEAVIEW AVE
Property Address:	309 BREAKNECK HILL		BRANFORD, CT 06405
Parcel Number:	079-003-000	Mailing Address:	TILLINGHAST ANDREW E & ELAINE S LU
CAMA Number:	079-003-000-000		
Property Address:	236 PUTNAM PIKE		16 COMMNWAY DR
			BROOKLYN, CT 06234
Parcel Number:	080-003-000	Mailing Address:	PONTARELLI VINCENT R &
CAMA Number:	080-003-000-000		169 SOAP ST
Property Address:	169 SOAP ST		KILLINGLY, CT 06241
Parcel Number:	080-004-000	Mailing Address:	DUDEK JILL S
CAMA Number:	080-004-000-000		235 PUTNAM PIKE
Property Address:	235 PUTNAM PIKE		KILLINGLY, CT 06241
Parcel Number:	080-021-000	Mailing Address:	ANDREWS JON C & EVE M
CAMA Number:	080-021-000-000		PO BOX 577
Property Address:	304 PUTNAM PIKE		KILLINGLY, CT 06241
Parcel Number:	080-025-000	Mailing Address:	HEAP DAVID SCOTT
CAMA Number:	080-025-000-000		67D COMMERCE AVE
Property Address:	286 PUTNAM PIKE		KILLINGLY, CT 06239
Parcel Number:	080-025-000	Mailing Address:	ORTUNO STACEY & DEPARASIS DAVID B
CAMA Number:	080-025-000-001		9 RAYMOND ROAD
Property Address:	1 NORMANDIES PK		KILLINGLY, CT 06241

100 foot Abutters List Report

Killingly, CT
May 27, 2021

Parcel Number:	080-025-000	Mailing Address:	DEMARS RICHARD J & MARCH JOSEPH D
CAMA Number:	080-025-000-002		
Property Address:	2 NORMANDIES PK		2 NORMANDIES PK KILLINGLY, CT 06241
Parcel Number:	080-025-000	Mailing Address:	YATER SHANE
CAMA Number:	080-025-000-004		4 NORMANDIES PK
Property Address:	4 NORMANDIES PK		KILLINGLY, CT 06241
Parcel Number:	080-025-000	Mailing Address:	FREDRICKSON KEITH & CARLA
CAMA Number:	080-025-000-005		52 ACADEMY ST APT D
Property Address:	5 NORMANDIES PK		KILLINGLY, CT 06239
Parcel Number:	080-025-000	Mailing Address:	DEMBOWSKI JOHN
CAMA Number:	080-025-000-006		6 NORMANDIES PK
Property Address:	6 NORMANDIES PK		KILLINGLY, CT 06241
Parcel Number:	080-025-000	Mailing Address:	WELLS DARRELL
CAMA Number:	080-025-000-007		PO BOX 253
Property Address:	7 NORMANDIES PK		KILLINGLY, CT 06241
Parcel Number:	080-030-000	Mailing Address:	PULCINELLA FAM REVOC LIVING TRUST
CAMA Number:	080-030-000-000		
Property Address:	268 PUTNAM PIKE		70 SEAVIEW AVE BRANFORD, CT 06405
Parcel Number:	080-033-000	Mailing Address:	RUSCONI SCOTT R
CAMA Number:	080-033-000-000		248 PUTNAM PIKE
Property Address:	248 PUTNAM PIKE		KILLINGLY, CT 06241
Parcel Number:	080-034-000	Mailing Address:	PROSEUS TIMOTHY P
CAMA Number:	080-034-000-000		242 PUTNAM PIKE
Property Address:	242 PUTNAM PIKE		KILLINGLY, CT 06241
Parcel Number:	080-034-001	Mailing Address:	LEROY GUILLAUME & JAMES CRAIG
CAMA Number:	080-034-001-000		PO BOX 34
Property Address:	232 PUTNAM PIKE		SOUTH WOODSTOCK, CT 06267
Parcel Number:	089-012-000	Mailing Address:	PENDELTON DARLENE F
CAMA Number:	089-012-000-000		220 PUTNAM PIKE
Property Address:	220 PUTNAM PIKE		KILLINGLY, CT 06241
Parcel Number:	089-013-001	Mailing Address:	DEMERS KENNETH D
CAMA Number:	089-013-001-000		135 JENKES HILL RD
Property Address:	502 INDIAN SPRINGS PW		LINCOLN, RI 02685
Parcel Number:	089-013-003	Mailing Address:	DEMERS KENNETH D
CAMA Number:	089-013-003-000		135 JENKES HILL RD
Property Address:	206 PUTNAM PIKE		LINCOLN, RI 02865

100 foot Abutters List Report

Killingly, CT
May 27, 2021

Parcel Number:	089-013-004	Mailing Address:	DEMERS KENNETH D
CAMA Number:	089-013-004-000		135 JENKES HILL RD
Property Address:	503 INDIAN SPRINGS PW		LINCOLN, RI 02865
Parcel Number:	089-017-000	Mailing Address:	BROSE HARLAN F & AUDREY L TRS
CAMA Number:	089-017-000-000		PO BOX 135
Property Address:	190 PUTNAM PIKE		EAST HARTLAND, CT 06207
Parcel Number:	089-028-000	Mailing Address:	CONN STATE OF
CAMA Number:	089-028-000-000		2800 BERLIN TPKE
Property Address:	225 PUTNAM PIKE		NEWINGTON, CT 06131
Parcel Number:	090-001-000	Mailing Address:	BROSE HARLAN F & AUDREY L TRS
CAMA Number:	090-001-000-000		PO BOX 135
Property Address:	200 PUTNAM PIKE		EAST HARTLAND, CT 06027

Attachment D

Wetland Inspection Report

WETLAND INSPECTION

April 16, 2021 **APT Project No.: CT599140**

Prepared For: Greenskies Clean Energy, LLC
127 Washington Avenue, West Building, Garden Level
North Haven, CT 06473

Site Name: Killingly High School

Site Address: 226 Putnam Pike, Killingly, Connecticut

Date of Investigation: 3/31/2021

Field Conditions: **Weather:** cloudy**,** low 60's
Soil Moisture: dry to moist

Wetland/Watercourse Delineation Methodology[1]:
☒Connecticut Inland Wetlands and Watercourses
☐Connecticut Tidal Wetlands

Municipal Upland Review Area: **Wetlands:** 200 feet **Watercourses:** 200 feet

The wetlands inspection was performed by[2]:

Dean Gustafson, Professional Soil Scientist

Enclosures: Wetland Delineation Field Forms & Wetland Inspection Map

This report is provided as a brief summary of findings from APT's wetland investigation of the referenced Study Area that consists of proposed development activities and areas generally within 200 feet.[3] If applicable, APT is available to provide a more comprehensive wetland impact analysis upon receipt of site plans depicting the proposed development activities and surveyed location of identified wetland and watercourse resources.

---

1 *Wetlands and watercourses were delineated in accordance with applicable local, state and federal statutes, regulations and guidance.*

2 All established wetlands boundary lines are subject to change until officially adopted by local, state, or federal regulatory agencies.

3 *APT has relied upon the accuracy of information provided by Greenskies Clean Energy, LLC regarding the location and limits of the Study Area for the purposes of identifying wetlands and watercourses.*

Attachments

- Wetland Delineation Field Forms
- Wetland Inspection Map

Wetland Delineation Field Form

Wetland I.D.:	Wetland 1	
Flag #'s:	WF 1-01 to 1-24	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated/seepage ☒	Seasonally Saturated/perched ☐
Comments: Wetland 1 is a very stony headwater hillside seep system that drains to the west onto a rip rap armored cut slope and into a 24-inch RCP under the high school access road.		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☒	Wet Meadow ☐
Comments: This wetland system has been impacted by the high school access road crossing and development in the northern 200-foot upland review area.		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☒	Tidal ☐
Watercourse Name: Unnamed		
Comments: A very seasonal discontinuous intermittent watercourse channel flows within the interior of this wetland.		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: No depressional areas that could potentially support breeding by vernal pool indicator species exists within this wetland.	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐

DOMINANT PLANTS:

Red Maple (Acer rubrum)	Black Gum (Nyssa sylvatica)
Witchhazel (Hamamelis virginiana)	Highbush Blueberry (Vaccinium corymbosum)
Winterberry (Ilex verticillata)	Red Oak (Quercus rubra)

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

All-Points Technology Corp., P.C. ("APT") understands that Greenskies Clean Energy, LLC is working with the Town of Killingly to install a photovoltaic ("PV") solar energy generating facility ("Facility") within an upland forested area near the Killingly High School at 226 Putnam Pike in Killingly, CT. To access the proposed Facility, the existing paved access road that currently services the high school will be used. An existing gravel road that accesses an open field and material storage area will connect the paved road to the proposed Facility. Two forested wetlands were identified in proximity to the proposed Facility, located to the west and north.

Wetland 1 consists of a headwater hillside seep wetland within a very stony forested area located just south of the high school. This seasonally saturated wetland drains to the west through overland flow and a very seasonal discontinuous intermittent watercourse channel. These flows are interrupted by a rip rap armored cut slope that conveys flows into a 24-inch reinforced corrugated pipe under the high school access road. This existing crossing and the proximity of the high school to the north have impacted this wetland system.

The Town of Killingly Inland Wetlands & Watercourses Commission ("IWWC") regulates activities in wetlands and watercourses and uplands within 200 feet of these resources ("Upland Review Area"). The proposed Facility would be located within the 200-foot Upland Review Area to Wetland 1 and therefore would be regulated by the IWWC and require a permit.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 2	
Flag #'s:	WF 2-01/2-16 (closed loop)	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated/seepage ☒	Seasonally Saturated/perched ☐
Comments: Wetland 2 is a stony headwater hillside seep system that drains to the west onto a rip rap armored cut slope and catch basin the high school access road.		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☒	Wet Meadow ☐
Comments: This wetland system has been impacted by the high school access road crossing and development of an open field and material storage area in the southern 200-foot upland review area.		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☐	Tidal ☐
Watercourse Name: None		
Comments: No defined channel exists; wetland sheet flows via microtopographic depressions.		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: No depressional areas that could potentially support breeding by vernal pool indicator species exists within this wetland.	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐

DOMINANT PLANTS:

Red Maple (Acer rubrum)	Black Gum (Nyssa sylvatica)
Witchhazel (Hamamelis virginiana)	Highbush Blueberry (Vaccinium corymbosum)
Winterberry (Ilex verticillata)	Red Oak (Quercus rubra)

* denotes Connecticut Invasive Species Council invasive plant species

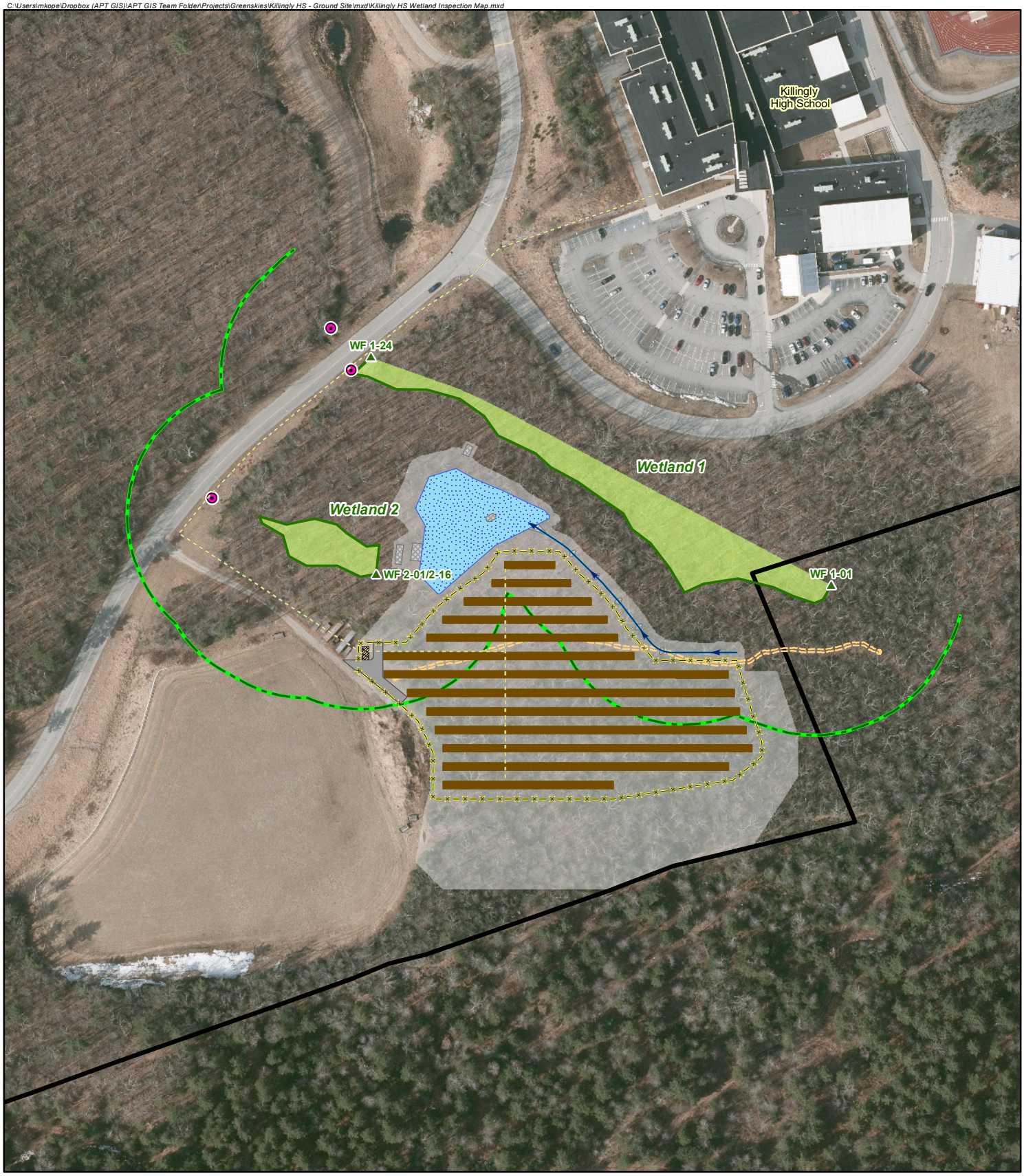
GENERAL COMMENTS:

All-Points Technology Corp., P.C. ("APT") understands that Greenskies Clean Energy, LLC is working with the Town of Killingly to install a photovoltaic ("PV") solar energy generating facility ("Facility") within an upland forested area near the Killingly High School at 226 Putnam Pike in Killingly, CT. To access the proposed Facility, the existing paved access road that currently services the high school will be used. An existing gravel road that accesses an open field and material storage area will connect the paved road to the proposed Facility. Two forested wetlands were identified in proximity to the proposed Facility, located to the west and north.

Wetland 2 consists of a small headwater hillside seep wetland within a stony forested area located just north of an open field and material storage yard with associated gravel access road. This seasonally saturated wetland drains to the west through overland flow. These flows are interrupted by a rip rap armored cut slope that conveys flows into a catch basin and the high school access road. This existing crossing and proximity of a gravel road to a material storage area have impacted this wetland system.

The Town of Killingly Inland Wetlands & Watercourses Commission ("IWWC") regulates activities in wetlands and watercourses and uplands within 200 feet of these resources ("Upland Review Area"). The proposed Facility would be located within the 200-foot Upland Review Area to Wetland 2 and therefore would be regulated by the IWWC and require a permit.

C:\Users\mkope\Dropbox (APT GIS)\APT GIS Team Folder\Projects\Greenskies\Killingly HS - Ground Site\mxd\Killingly HS Wetland Inspection Map.mxd



Legend

- Site
- Existing Culvert
- Wetland Flag
- 200' Upland Review Area
- Delineated Wetland Boundary
- Approximate Wetland Area
- Existing Trail
- Stormwater Swale
- Interconnection Path (UD)
- Perimeter Fence
- Solar Modules
- Conc. Equip. Pad
- Gravel Access Road
- Stormwater Basin
- Rip Rap
- Limit of Disturbance

Wetland Inspection Map

Proposed Solar Facility
Killingly High School
226 Putnam Pike
Killingly, Connecticut

N

200 100 0 200 Feet

Greenskies

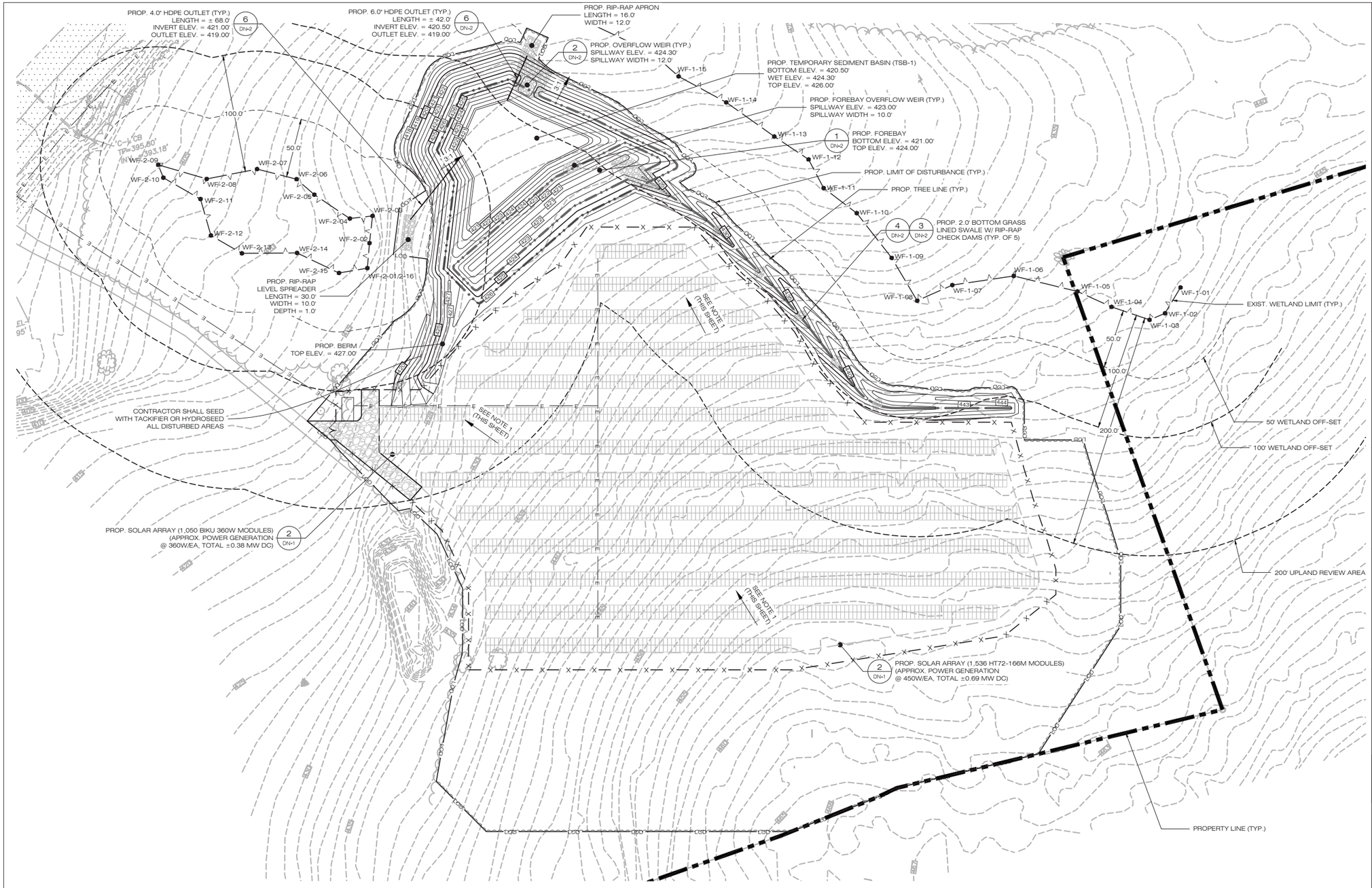
ALL-POINTS TECHNOLOGY CORPORATION

Map Notes:
Base Map Source: 2019 Aerial Photograph (CTECO)
Map Scale: 1 inch = 200 feet
Map Date: May 2021

Attachment D

Grading and Drainage Plan

Sheet No. GD-1



NOTES:
1. GRADE/SHAPE AREA TO MAINTAIN EXIST. DRAINAGE PATTERNS.
2. CONTRACTOR SHALL CLEAN OUT SEDIMENT BASIN AND FOREBAY TO CONVERT TO PERMANENT STORMWATER MANAGEMENT BASIN AND FOREBAY UPON THE SITE OR DRAINAGE AREA BEING DEEMED STABILIZED PER THE SWPCP.

1 GD-1 **FINAL GRADING & DRAINAGE PLAN**
SCALE : 1" = 40'-0"

40 0 20 40 80
(IN FEET) 1 inch = 40 ft.

Greenskies
a Clean Focus company
127 WASHINGTON AVENUE
WEST BUILDING, GARDEN LEVEL
NORTH HAVEN, CT 06473

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHAUL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

PERMIT SET

NO	DATE	REVISION
0	06/01/21	FOR REVIEW: KAM
1		
2		
3		
4		
5		
6		

DESIGN PROFESSIONAL OF RECORD

PROF: KEVIN A. MCCAFFERY P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHAUL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: TOWN OF KILLINGLY BOARD OF EDUCATION
ADDRESS: 79 WESTFIELD AVE KILLINGLY, CT 06239

KILLINGLY HS SOLAR

SITE ADDRESS: 226 PUTNAM PIKE KILLINGLY, CT 06241

APT FILING NUMBER: CT599140

DRAWN BY: JT
DATE: 06/01/21
CHECKED BY: KAM

SHEET TITLE:
FINAL GRADING & DRAINAGE PLAN

SHEET NUMBER:
GD-1

STATE OF CONNECTICUT KEVIN A. MCCAFFERY 25071 LICENSED PROFESSIONAL ENGINEER