



ENVIRONMENTAL ASSESSMENT

PROPOSED

HARTFORD LANDFILL

SOLAR PROJECT

180 LIEBERT ROAD

HARTFORD, CONNECTICUT

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1 Introduction

All-Points Technology Corporation, P.C. (“APT”) prepared this Environmental Assessment report (“EA”) on behalf of CTEC Solar, LLC (the “Petitioner”) for the proposed installation and utility interconnection of a solar-based electric generating facility (the “Project” or “Facility”) having an output of approximately 3.38 megawatts¹ located in the City of Hartford, Connecticut (“City”). This EA has been completed to support the Petitioner’s submission to the Connecticut Siting Council (“Council”) of a petition for declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the construction, maintenance, and operation of the electric generating facility.

The results of this assessment demonstrate that the proposed development will comply with the Connecticut Department of Energy and Environmental Protection’s (“DEEP”) air and water quality standards and will not have an undue adverse effect on the existing environment and ecology. The City is identified as a “distressed municipality” and therefore qualifies as an “environmental justice community”². The proposed Project is not defined as an “affecting facility”³ under Connecticut General Statutes § 22a-20a. Therefore, the Project is not subject to the requirements of that section.

The Project will be located at 180 Liebert Road, in Hartford, Connecticut (“Property”) atop the former, closed City landfill (“Landfill”). The Property, an irregularly shaped parcel of approximately 124.4 acres, is largely devoid of any structures. The central portion of the Property is covered with a synthetic turf capping material while locations to the west and north use a natural grass turf capping system. An existing solar facility, not associated with the Petitioner, occupies the southern portion of the top of the Landfill; the southern extent of the Property contains several structures operated by the City’s Public Works Department and DEEP. The Property is owned by the City Public Works and is zoned Open Space (OS).

¹ The output referenced is Alternating Current (AC).

² “Environmental justice community” means (A) a United States census block group, as determined in accordance with the most recent United States census, for which thirty per cent or more of the population consists of low income persons who are not institutionalized and have an income below two hundred per cent of the federal poverty level, or (B) a distressed municipality, as defined in subsection (b) of Connecticut General Statutes § 32-9p.

³ “Affecting facility” is defined, in part, as any electric generating facility with a capacity of more than ten megawatts.

Figure 1, *Location Map*, depicts the location of the Property and surrounding area.

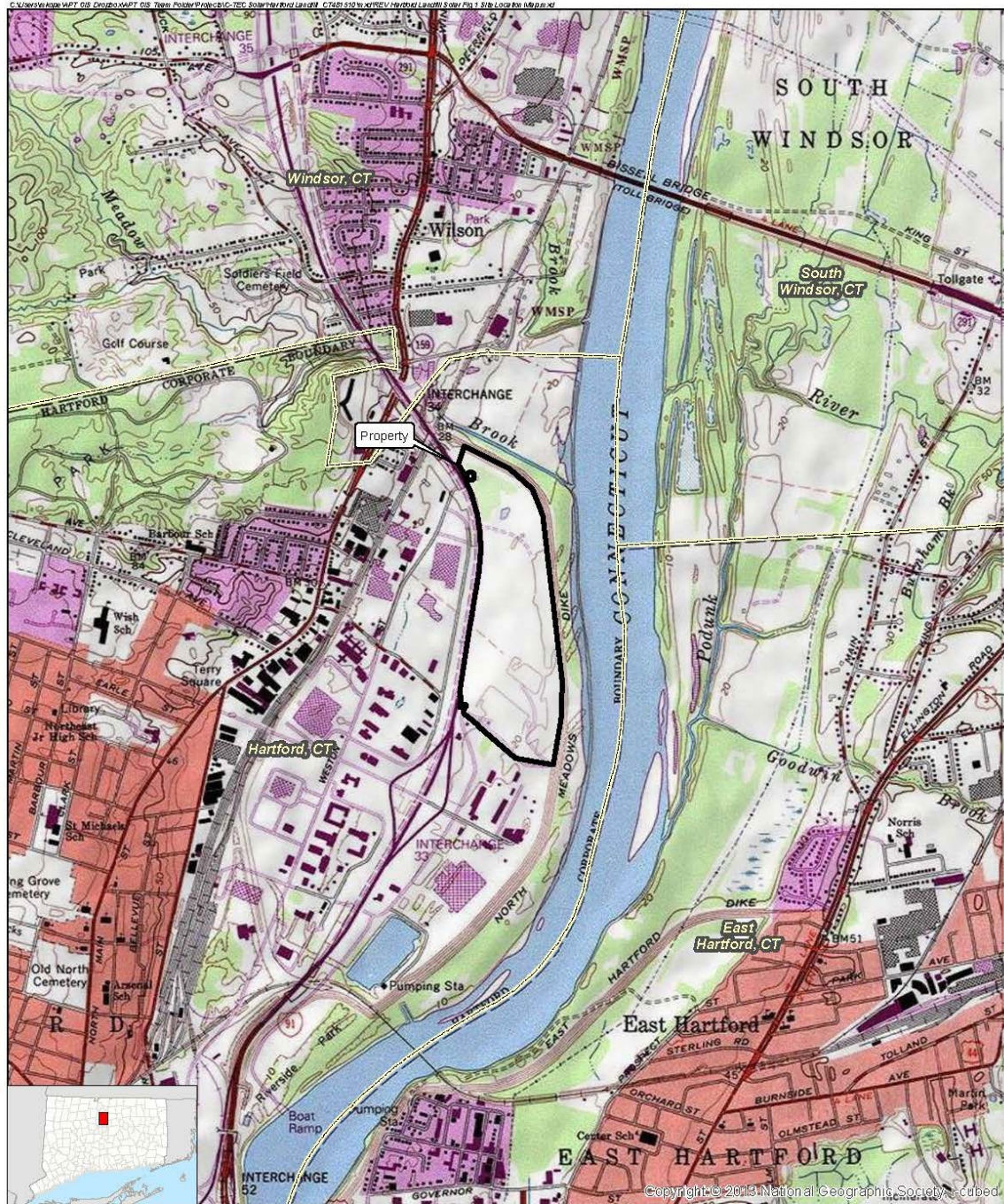


Figure 1
Location Map
Proposed Solar Facility
Hartford Landfill
180 Liebert Road
Hartford, Connecticut

Legend
 Property
 Municipal Boundary

Map Note:
 Base Map Source: USGS 7.5 Minute Topographic
 Quadrangle Map, Hartford North, CT (1992)
 Map Scale: 1:24,000
 Map Date: November 2023



2 Proposed Project

2.1 Project Setting

The Property is located between Interstate 91 to the west and the North Meadows dike and Connecticut River to the east, north of Jennings Road. The Facility will be located within the central portion of the Property, on the synthetic turf capping north of the existing solar facility. Access will be via existing service drives within the Landfill. The interconnect route will extend from the end of Liebert Road at the southwest portion of the Property in an easterly direction, then northeast to the access drive, which it will then follow to the Facility. The Project in its entirety will occupy approximately 13.75 acres of the Property ("Site").

The Property's existing topography, which is typical of a capped landfill, is relatively flat on top with steep slopes falling away in all directions. Ground elevations range from approximately 135 feet above mean sea level ("AMSL") on top of the Landfill to 13 feet AMSL at the base along the western property boundary.

Figure 2, *Existing Conditions*, depicts the Site and current conditions on the Property.

The surrounding land use is characterized primarily by a mix of commercial and industrial development associated with the I-91 corridor to the west and south of the Property. The Connecticut River and the associated dike system and service drive are located to the east; undeveloped wooded land and open fields are located to the north.

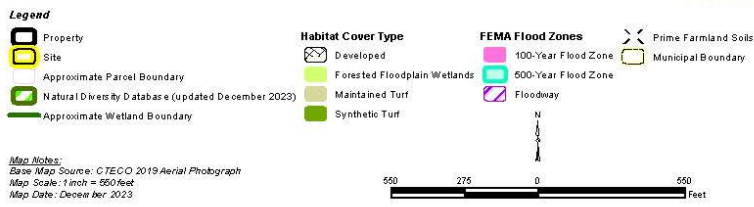


Figure 2
Existing Conditions Map
Proposed Solar Facility
Hartford Landfill
180 Liebert Road
Hartford, Connecticut



2.2 Project Development and Operation

Upon its completion, the solar electric energy generating facility (“Facility”) will consist of a total of 7,956 photovoltaic modules (“panels”); 24 inverters; two (2) pad mounted switchgears; two (2) 1,000 kVA transformers on concrete pads, and one (1) service interconnection line. A ballast-mounted racking system will be used to mount the panel arrays while ensuring the integrity of the Landfill’s capping system.

The proposed electrical interconnection will require the installation of four (4) new utility poles. Once within the Landfill proper, the interconnection will transition from overhead and extend along the ground surface to the Facility via cable trays. No clearing is required and ground disturbance, which will be limited to the installation of the utility poles, is anticipated to be minimal. Construction activities within the Site will include the installation of ballast mount racking systems, cable trays, and equipment pads. No grading or resurfacing is required for this Project.

Proposed development drawings are provided in Appendix A, *Project Plans*. Details on equipment planned for installation at the Site is provided in Appendix B, *Product Information Sheets*.

The leading edge of the panels will be approximately thirty-six (36) inches above the existing ground surface, which will provide adequate room for any accumulating snow to “sheet” off. Any production degradation due to snow build-up has already been modeled into the annual system output and performance calculations. The Petitioner does not envision requiring any “snow removal” operations; rather, the snow will be allowed to melt or slide off.

The Facility is unstaffed; after construction is complete and the Facility is operable, traffic at the Site will be minimal. It is anticipated that the Facility will require routine inspection/maintenance of the electrical equipment one (1) time per year. Annual maintenance will typically involve two (2) technicians for a day. Repairs will be made on an as-needed basis.

2.2.1 Access

The Facility will utilize the existing Landfill access road originating off of Liebert Road to the south for construction access and maintenance vehicles to access the Facility. No regrading or resurfacing of the existing access road is proposed.

2.2.2 Public Health and Safety

The Project will meet applicable local, state, national and industry health and safety standards and requirements related to electric power generation. The Facility will not consume any raw materials, will not produce any by-products and will be unstaffed during normal operating conditions. The Facility will utilize the Landfill's existing gated chain-link security fence to limit access to authorized personnel only. All City emergency response personnel will be provided access to the Facility via the existing Landfill's main entrance gate. The Facility will be monitored from off-site and will have the ability to remotely de-energize in the case of an emergency.

2.2.3 Land Use Plans

The Project is consistent with state and federal policies and will support the state's energy goals by developing a renewable energy resource while not having a substantial adverse environmental effect. Although local land use requirements do not apply to this Project, it has been designed to meet the intent of the City's land use regulations, to the extent feasible. The proposed Facility is consistent with the existing uses of the Landfill and the surrounding area.

Additionally, the Project conforms to the City of Hartford's 2011 Plan of Conservation and Development ("POCD"), Chapter 9, which established significant and aggressive goals for the City's use of renewable energy. "The City should strive to increase annually the percentage of its energy needs supplied by clean and renewable energy sources, with an ultimate target of achieving 100% attainment from clean energy sources by the year 2030". POCD, Chapter 9, page 5.

The Project will benefit the local community by improving electrical service for existing and future development through the availability of enhanced local generating capacity that does not rely solely on the congested regional electrical transmission network.

3 Environmental Conditions

This section provides an overview of the current environmental conditions at the Site and an evaluation of the Project's potential impacts on the environment. The results of this assessment demonstrate that the Project will comply with the DEEP air and water quality standards and will not have an undue adverse effect on the existing environment and ecology.

Please refer to Figure 3, *Proposed Conditions* for a depiction of the Project and its compatibility with the Site resources discussed herein.

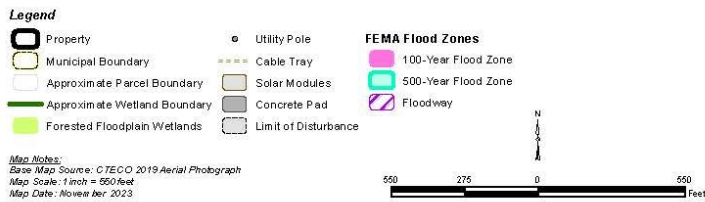


Figure 3
Proposed Conditions Map

Proposed Solar Facility
 Hartford Landfill
 180 Liebert Road
 Hartford, Connecticut



3.1 Air Quality

The Site is currently developed as a capped landfill. Due to the nature of a solar energy generating facility, no air emissions will be generated during operations and, therefore, the operation of the Project will have no adverse effects on air quality and no permit is required.

Temporary, potential, construction-related mobile source emissions will include those associated with construction vehicles and equipment. Any potential air quality impacts related to construction activities can be considered de minimis. Such emissions will, nonetheless, be mitigated using available measures, including, inter alia, limiting idling times of equipment; proper maintenance of all vehicles and equipment; and, watering/spraying to minimize dust and particulate releases. In addition, all on-site and off-road equipment will meet the latest standards for diesel emissions, as prescribed by the United States Environmental Protection Agency.

3.2 Water Resources

3.2.1 Wetlands and Watercourses

APT Registered Soil Scientists conducted a review of previously filed documents, publicly available data and client provided resources associated with the Project location that identified one (1) wetland within the northern limits of the Property. An extensive boundary survey, wetland delineation and documentation have been completed as a part of various approvals attained through the Connecticut Department of Environmental Energy and Protection (“DEEP”) for the landfill closure. APT reviewed the provided wetland delineation and determined it was substantially correct. The location of these resources is depicted on Figure 2, *Existing Conditions*.

3.2.2 Wetland Impacts

No direct impacts to wetlands or watercourses are proposed in association with developing the Facility. The nearest construction activity to wetland resources, consisting of ballast mounts, solar modules, and cable tray installations, would occur within approximately 350 feet to Forested Floodplain Wetlands associated with the Connecticut River. All of these appurtenances will be installed above grade and do not require surface disturbances.

To further promote protection of wetlands and watercourses during construction, safeguards have been developed to avoid unintentional impacts to these resources, including the installation and maintenance of E&S controls in accordance with the *Connecticut Guidelines for Soil Erosion and*

Sediment Control, dated September 30, 2023, effective March 30, 2024. By implementing these management techniques throughout the duration of construction, potential adverse impacts to wetland resources will be mitigated.

As such, the Project will not have a likely adverse impact to wetland resources.

3.2.3 Floodplain Areas

APT reviewed the United States Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Map ("FIRM") for the 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 area including the Property is mapped on FIRM PANEL #09003C 0367 G, dated September 16, 2011. Based upon the reviewed FIRM Map, the Property is located in an area designated as Area with Reduced Flood Hazard Risk due to Levee - Zone X, indicating that the area is protected from the 1-percent-annual-chance or greater flood hazard by a levee system. The referenced levee system is the North Meadows dike, which extends along the entire length of the Property's eastern boundary.

The Site is not located within a 100- and 500-year flood zone and as such, no special considerations or precautions relative to flooding are required for the Project.

3.3 Water Quality

Once operative, the Facility will be unstaffed, and no potable water uses or sanitary discharges are planned. No liquid fuels are associated with the operation of the Facility. Stormwater generated by the proposed development will be properly handled by existing Landfill stormwater management features.

3.3.1 Groundwater

Groundwater underlying the majority of the Property, including the entire Site, is classified by DEEP as "GC". Designated uses in GC-classified areas are assimilation of discharges that are authorized by the Commissioner pursuant to Section 22a-430 of the Connecticut General Statutes. Groundwater underlying the extreme northern portion of the Property is classified as "GB", where designated uses are industrial process water and cooling waters and baseflow for hydraulically-connected water bodies. This classification is presumed not suitable for human consumption without treatment. Based upon reviewed DEEP mapping, the Property is not located within a

mapped (preliminary or final) DEEP Aquifer Protection Area ("APA"). The nearest APA is more than 4.5 miles to the east in Manchester.

The Project will have no adverse environmental effect on ground water quality.

3.3.2 Surface Water

Based upon DEEP mapping, the Property is located in Major Drainage Basin 4 (Connecticut River), Regional Drainage Basin 40 (Connecticut River), and Sub-regional Drainage Basin 4000 (Connecticut River). The majority of the Property and Site is located in Local Drainage Basin 4000-26 (Unnamed Brook at Mouth above Connecticut River). The southeastern portion of the Property and the extreme eastern portion of the Site appear to be located in Local Drainage Basin 4000-00 (Connecticut River above Raspberry Brook).

The nearest named surface waterbody is the Connecticut River. The Connecticut River is located downgradient and approximately 300 feet east of the Property and 530 feet east of the closest portion of the Site. In the vicinity of the Property, the Connecticut River is classified as a Class SB surface waterbody by the DEEP, with designated uses that include habitat for marine fish and other aquatic life and wildlife; commercial shellfish harvesting; recreation; industrial water supply; and navigation.

The Project will be sufficiently setback from water resources proximate to the Site and will have no adverse environmental effect on surface water quality. During construction, E&S controls will be installed and maintained in accordance with the *Connecticut Guidelines for Soil Erosion and Sediment Control*, dated September 30, 2023, effective March 30, 2024. Once operative, stormwater will be managed in accordance with the *Connecticut Stormwater Quality Manual*, dated September 30, 2023, effective March 30, 2024.

3.3.3 Stormwater Management

The Project will utilize the existing stormwater management features approved and installed in connection with closure of the Landfill and in accordance with the 2004 Connecticut Stormwater Quality Manual. Throughout the design of this Project, DEEP's *Appendix I, Stormwater Management at Solar Array Construction Projects*, was taken into consideration where applicable.

The solar array will be located within the synthetic turf portion of the Landfill cap, and will not involve any changes to the overall and underlying makeup of the Landfill cap and current

stormwater management systems. The Project is not expected to generate any additional runoff. Therefore, Project development will not result in an adverse impact to water quality associated with nearby surface water bodies. See Appendix C, *Stormwater Management Memorandum*.

3.4 Habitat and Wildlife

Four (4) distinct habitat types (vegetative communities) are located within the Property; three (3) of them are found within the Site. These habitats were assessed using remote sensing and publicly available datasets in addition to reviewing previous documentation associated with former and on-going activities at the Property.

The habitats occupying the Property are:

- Developed
- Forested Floodplain Wetlands
- Maintained Turf
- Synthetic Turf

The habitats occupying the Site are as follows.

- Developed
- Maintained Turf
- Synthetic Turf

3.4.1 Habitat Types

Developed

Developed habitat is located along the southern and eastern Property boundaries and through the central portion of the landfill area. It primarily consists of paved parking areas and access roads utilized for access to the Landfill, parking and general operations. Outbuildings and equipment storage areas are also located within these developed areas. With the exception of the Facility's proposed utility interconnection to electrical distribution lines, no impact to Developed areas is proposed.

Forested Floodplain Wetlands

The Property is bound by the Connecticut River to the east and Meadow Brook to the north. Historically, prior to construction of the United States Army Corps of Engineers flood control dike, the entire Site was located within the Connecticut River floodplain. Construction of the dike allowed for the construction and utilization of the Hartford landfill. Currently, the northern portion of the Property is occupied by forested floodplain wetlands. Interstate 91 abuts the Property to the west and disturbance associated with the landfill abuts the Property to the north/east. Forested Floodplain Wetlands are characterized by heavy disturbance with minimal bordering upland vegetation.

No work is proposed within or in proximity to this habitat, with the Project's limit of disturbance generally maintaining an approximately 532-foot buffer. Any potential secondary effects to this habitat will be mitigated as the Project will not involve any ground disturbance activities that might otherwise compromise the integrity of the capped landfill. An existing vegetated buffer of established grasses also separates this habitat from the Project, further mitigating potential secondary impacts to the Forested Floodplain Wetlands.

Maintained Turf

Maintained Turf habitat encompasses the north-central and western half of the capped landfill area. This habitat consists of a regularly mowed/maintained grass field associated with the capped landfill. Routine maintenance of this field suppresses other herbaceous and shrub species. This habitat is dominated by cool season grasses and typical forbs.

State-listed grassland bird species savannah sparrow, grasshopper sparrow, bobolink, and eastern meadowlark are known to use the landfill for breeding habitat, particularly in the Maintained Turf just west of the Project. The Project has been designed to avoid impacts within this area. To avoid long term disturbance to the grassland habitat and State-listed birds, a 50-foot buffer has been provided between the Project and Maintained Turf habitat.

The proposed overhead electrical interconnection on new utility poles would be located along the southern sloped portion of the Maintained Turf habitat, with limited resulting impacts. That area supports limited breeding habitat for the State-listed grassland bird species, as the breeding

habitat is focused at the top of the landfill west of the existing and proposed solar projects. The Project will not impact this critical area of the Maintained Turf habitat.

Synthetic Turf

Synthetic Turf (ClosureTurf™) occupies the southeastern half of the Property and was specifically installed as a landfill cap. The system includes engineered turf infilled with a one-half inch layer of sand, placed on a 50-mil synthetic geomembrane liner covering 6 inches of cap base material (controlled fill) placed directly on existing waste or intermediate cover material. Nearly all of the Facility will occupy this area. Due to the lack of ground disturbance and man-made nature of this material, no adverse impacts are anticipated with the proposed activity.

Table 1, Habitat Areas provides the total acreages of each habitat type located on the Site.

Table 1: Habitat Areas		
Habitat Type	Total Area On-Site (±ac.)	Area Impacted by Project (±ac.)
Developed	11.76	<0.10
Forested Floodplain Wetlands	14.95	0.00
Maintained Turf	68.95	1.63
Synthetic Turf	28.76	12.11

3.4.2 Wildlife

Development of the Project will occur within portions of three (3) habitats that do not support any significant wildlife habitat functions. Maintained Turf habitat experiences annual/bi-annual mowing events in order to suppress non-compliant vegetation under restrictions associated with the capped Landfill. This suppression of vegetation diminishes the potential for significant habitat utilization due to lack of food sources, habitat structure, and routine disturbances. Although this area is known to support breeding of Stated-listed grassland bird species, there will be no ground disturbance or placement of panels within these open grasslands; the solar array will be located solely within the Synthetic Turf habitat. As a result, significant adverse impacts to wildlife are not anticipated. Generalist wildlife species, common throughout Connecticut, have the potential for utilizing these habitat complexes. Generalist species are more tolerant of human disturbance and habitat fragmentation and are not anticipated to be significantly adversely affected by the Project.

Short-term wildlife impacts to Maintained Turf habitat due to nearby construction-related noise may temporarily displace wildlife that are more sensitive to these types of disturbances. To avoid

disturbance from construction, the Project would restrict construction activities to the non-breeding season for the State-listed grassland bird species, between September 1st and April 30th. In addition, a 50-foot buffer between the facility and adjacent grassland habitat has been incorporated into the proposed solar facility design to avoid "edge effect" disturbances to any breeding activity by State-listed grassland bird species. Therefore, the Project is not anticipated to result in a significant impact to wildlife.

Post-construction, operation of the Facility will not result in a likely adverse effect to wildlife using these habitats since the Facility is unoccupied and would not generate any significant noise or traffic.

3.4.3 Core Forest Determination

The DEEP's *Forestland Habitat Impact Mapping*, does not depict an area mapped as core forest on the Property. Further, there is no tree clearing necessary or required to develop the Facility. Therefore, the Project will not affect core forest resources.

In accordance with Connecticut General Statutes §16-50k(a) and based on the size of the proposed Facility (>2.0 MW), the Petitioner sent correspondence to DEEP Forestry on November 27, 2023 documenting that the Project will not materially affect core forest. In response, the DEEP Bureau of Natural Resources provided a letter to the Council confirming that the Project "will not materially affect the status of [the Property] as core forest." See Appendix D, *DEEP Forestry and DOAG Correspondence*.

3.5 Rare Species

APT reviewed publicly available information to determine the potential presence of state/federally listed species and critical habitat on or proximate to the Site. A discussion is provided in the following sections.

3.5.1 Natural Diversity Data Base

The DEEP Natural Diversity Data Base ("NDDB") program performs hundreds of environmental reviews each year to determine the impact of proposed development projects on state-listed species and to help landowners conserve the state's biodiversity. In furtherance of this endeavor,

the DEEP also developed maps to serve as a pre-screening tool to help determine if there is the potential for project-related impact to state-listed species.

The NDDB maps represent approximate locations of (i) endangered, threatened and special concern species and, (ii) significant natural communities in Connecticut. The locations of species and natural communities depicted on the maps are based on data collected over the years by DEEP staff, scientists, conservation groups, and landowners. In some cases, an occurrence represents a location derived from literature, museum records and/or specimens. These data are compiled and maintained in the NDDB. The general locations of species and communities are symbolized as shaded (or cross-hatched) polygons on the maps. Exact locations have been masked to protect sensitive species from collection and disturbance and to protect landowners' rights whenever species occur on private property.

APT reviewed the most recent DEEP NDDB mapping (June 2023), which revealed that an NDDB polygon is located within a portion of the Property. Prior consultation determined the Property may be classified as an Audubon Important Bird Area for grassland-dependent species. State-listed species known to potentially utilize this area include in particular savannah sparrow, grasshopper sparrow, bobolink, and eastern meadowlark. A 50-foot buffer between the Facility and adjacent grassland habitat (Maintained Turf) has been incorporated into the Project design, which is intended to avoid "edge effect" disturbances to any breeding activity by State-listed grassland bird species. In addition, the Project would restrict construction activities to the non-breeding season for these grassland bird species, between September 1st and April 30th.

APT reviewed the most recent DEEP NDDB mapping (December 2023), which revealed that the Property is encompassed within an NDDB polygon. The previous (June 2023) update had depicted an NDDB polygon extending onto the Property in the northern portion and just east of the Project. As a result, a request for NDDB review was submitted on November 13, 2023 through the eNDDB system; APT included the 50-foot buffer from grassland habitat known to be used by State-listed grassland bird species along with a seasonal restriction for construction to be limited to the grassland bird's non-breeding season. NDDB responded with a Determination Letter on November 28, 2023 (NDDB Determination No. 202308708; see Appendix E, *USFWS/NDDB Compliance Statement*). The letter identified four State-listed grassland bird species: grasshopper sparrow (Endangered), eastern meadowlark (Threatened), savannah sparrow (Special Concern), and bobolink (Special Concern). DEEP concurred with the 50-foot buffer to suitable habitat

(Maintained Turf) and the seasonal restriction limiting construction to the non-breeding season for these grassland bird species (September 1st – April 30th). Therefore, with these protection measures, the Project would not result in an adverse impact to grassland bird species.

3.5.2 USFWS Consultation

Federal consultation was completed in accordance with Section 7 of the Endangered Species Act through the U.S. Fish and Wildlife Service’s (“USFWS”) Information, Planning, and Conservation System (“IPaC”). Based on the results of the IPaC review, the federally-listed⁴ Endangered species northern long-eared bat (“NLEB”; *Myotis septentrionalis*) habitat range includes the Property. The NLEB’s range encompasses the entire State of Connecticut and suitable NLEB roost habitat includes trees (live, dying, dead, or snag) with a diameter at breast height (“DBH”) of three (3) inches or greater.

APT reviewed the DEEP’s publicly available *Northern long-eared bat areas of concern in Connecticut to assist with Federal Endangered Species Act Compliance* map (February 1, 2016) to determine the locations of any known maternity roost trees or hibernaculum in the state. This map reveals that there are currently no known NLEB maternity roost trees in Connecticut. The nearest NLEB habitat resource to the Site is located in East Granby, approximately 10.9 miles to the northwest.

Effective March 31, 2023 the NLEB is classified as Endangered under the ESA. The reclassification eliminates use of the previous 4(d) rule for the NLEB, which is applicable only to Threatened species. An NLEB Interim Consultation Framework has been developed by USFWS to facilitate transition from the 4(d) rule to typical Endangered species consultation procedures for activities that are reasonably certain to occur before April 1, 2024 (date on which the NLEB Interim Consultation Framework expires). APT reviewed the new NLEB Determination Key for this Project and determined the Project will not likely result in an adverse effect or incidental take of NLEB and does not require a permit from USFWS. A USFWS letter dated October 25, 2023 confirmed the “No Effect” determination.

A full review of the *Endangered Species Act (ESA) Compliance Determination* and USFWS’s Response Letter is provided in Appendix E, *USFWS and NDDB Compliance Statement*.

⁴ Listing under the federal Endangered Species Act

3.6 Soils and Geology

Surficial materials on the Property that have not been disturbed by the Landfill are comprised of deposits of alluvium overlying fines while soils are identified as Limerick and Lim soils, Winooski silt loam, smoothed udorthents and flood control udorthents. Limerick and Lim soils are poorly-drained soils derived from coarse-silty alluvium parent material. Winooski silt loam is a moderately well-drained soil derived from coarse-silty alluvium parent material. Smoothed udorthents are moderately well-drained soils derived from drift parent material. Flood control udorthents are moderately well-drained soils derived from drift parent material.

Bedrock beneath the Site is identified as Portland Arkose which is described as a reddish-brown to maroon micaceous arkose and siltstone and red to black fissile silty shale which grades eastward into coarse conglomerate (fanglomerate).

3.6.1 Prime Farmland Soils

In accordance with the Code of Federal Regulations, CFR Title 7, part 657, farmland soils include land that is defined as prime, unique, or farmlands of statewide or local importance based on soil type. They represent the most suitable land for producing food, feed, fiber, forage, and oilseed crops.

According to the Connecticut Environmental Conditions Online Resource Guide,⁵ Prime Farmland Soils are located in the northern extent of the Property, well beyond the limits of the Site (See Figure 2, *Existing Conditions Map*). Therefore, the Project will not have any effect on Prime Farmland Soils.

In accordance with Connecticut General Statutes §16-50k(a), the Petitioner sent correspondence to the Connecticut Department of Agriculture (“DOA”) in November 2023 documenting that the Project will not materially affect prime farmland soils. By letter dated January 10, 2024, the DOA concurred that the Project “will not materially affect the status of project land as prime farmland.” See Appendix D, *DEEP Forestry and DOAG Correspondence*.

⁵ Connecticut Environmental Conditions Online (CTECO) Resource Guide – www.cteco.uconn.edu.

3.7 Historic and Archaeological Resources

Heritage Consultants LLC (“Heritage Consultants”) of Newington, Connecticut, completed an Archeological Desktop Assessment (“ADA”), which included a review of relevant historic and archaeological information, to determine whether the Site holds potential cultural resource significance. Their review of historic maps and aerial images of the Site and the examination of files maintained by the Connecticut State Historic Preservation Office (“SHPO”) revealed that no properties or historic standing structures listed on or eligible for listing on the National Register of Historic Places (“NRHP”) are located on or proximate to the Site.

In terms of archaeological potential, the Site’s existing soils have been severely impacted by activities associated with the former Landfill and as a result, it was determined that the Site does not retain the potential to contain intact archaeological deposits in the subsoil. Therefore, no additional archaeological examination of this area is recommended prior to construction of the proposed solar facility.

Heritage Consultants, on behalf of APT, submitted a Project Notification Form, Site historic/cultural information, as well as copies of the ADA, for agency review and comment in November, 2020. The SHPO responded on November 30, 2020, finding that “no historic properties will be affected by the proposed project.” See Appendix F, *SHPO Correspondence and Cultural Resources Reconnaissance Survey Report*.

3.8 Scenic and Recreational Areas

No state or local designated scenic roads or scenic areas are located near the Site and therefore none will be physically or visually impacted by development of the Project. Additionally, there are no CT Blue Blaze Hiking Trails located proximate to the Site.

The nearest existing recreational area to the Project is Keney Park and Golf Course, the nearest point of which is located approximately 0.67 mile northwest of the Site. No impacts are anticipated to this resource.

The Connecticut River north of Hartford is used for boating and fishing. A trail system currently extends north from Riverside Park, which is approximately 1.0 mile south of the Site, and plans to extend the trail system north to Windsor are in preliminary implementation stages. The Project

will have no direct impact on use of the river or the trail system, and visual impact will be minimal, as further discussed in Section 3.8 below.

See Figure 4, *Surrounding Features Map*, for this and other resources located within one mile of the Site.

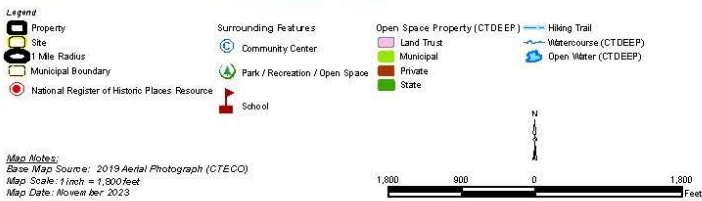
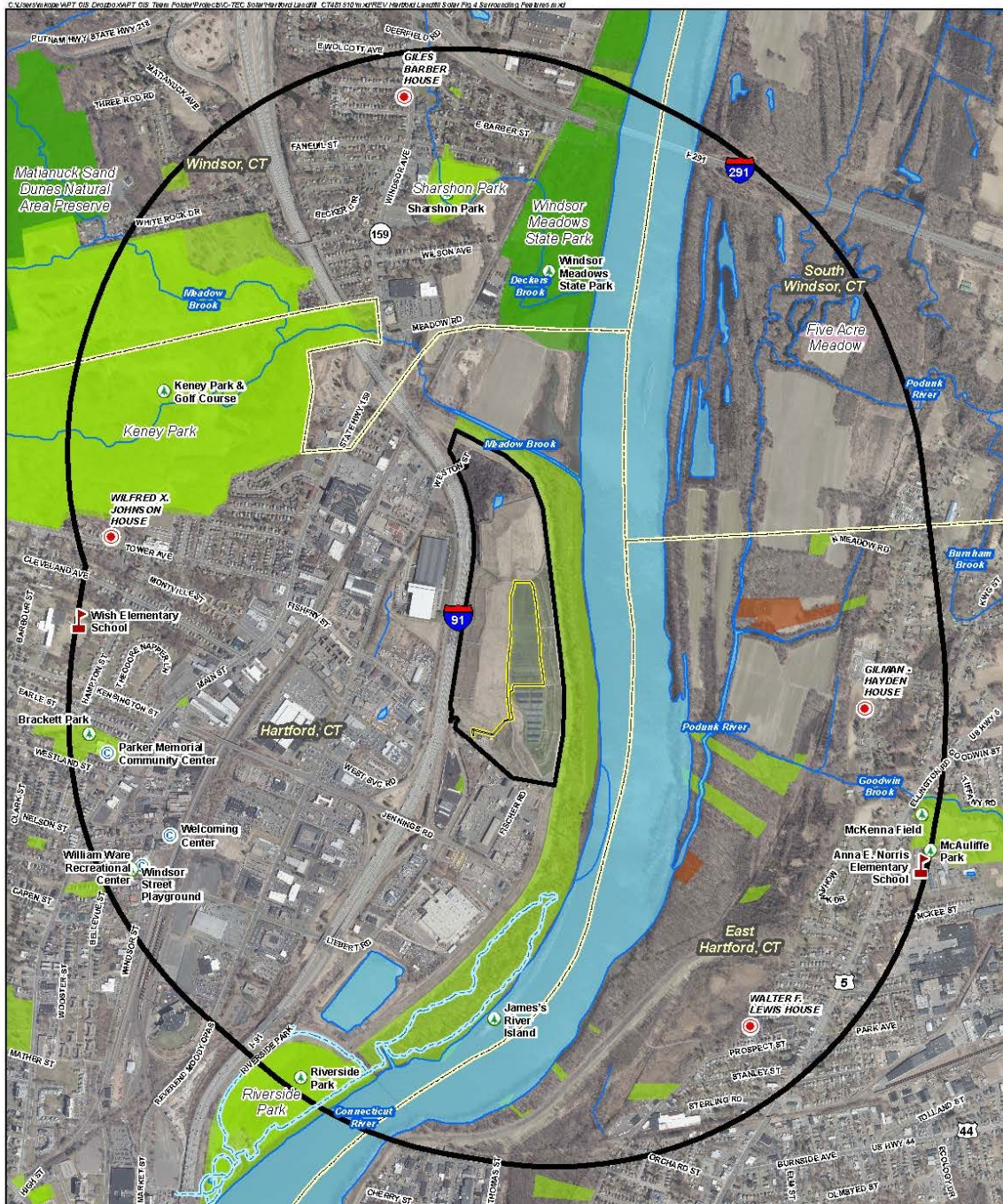


Figure 4
Surrounding Features Map

Proposed Solar Facility
Hartford Landfill
180 Liebert Road
Hartford, Connecticut



3.9 Visibility

The capped Landfill is a prominent feature along the Interstate 91 corridor in the northeastern section of Hartford and areas along the Connecticut River northeast and southeast of the Landfill. In general, visibility of the proposed Project will be minimal due to its relatively small incremental height and lack of any clearing of trees and other vegetation.

Currently, a trail system associated with Riverside Park extends along the riverfront south of the Site. The Petitioner understands that plans provide for extension of the trail system north to the Windsor Meadows State Park and an adjacent property under development as recreational and open space by Riverfront Recapture. It is anticipated that the North Meadows dike and existing tree growth along the anticipated route will minimize visibility of the Project from the trail system. Visibility, primarily seasonal, is anticipated from portions of the Windsor Meadows State Park and adjacent Riverfront Recapture resource.

See Appendix G, *Viewshed Maps and Photo-Simulations*.

3.10 Noise

With the exception of the existing structures associated with the Landfill located at the southern extent of the Site, the majority of the Site is undeveloped. Daily operations of the City's Public Works Department produce the only noise from the Property currently. Noise from Interstate 91 and activities on surrounding properties is experienced within the Property and in the surrounding area generally.

The nearest residential areas are more than one-half mile to the west along Main Street in the vicinity of Tower Avenue, Montville Street, and Cleveland Avenue. With the intervening traffic and industrial and commercial noise sources, no effect on noise in those areas from the Project should be anticipated.

During construction of the Facility, noise from construction equipment may increase sound levels immediately surrounding the Site. Construction noise is exempted under the City's Municipal Code, Chapter 23, Section 23.3 (f) Exemptions.

3.11 Lighting

No exterior lighting is planned for the Project. There will be some small, non-intrusive lighting fixtures within the equipment to aid in maintenance. In light of existing ambient lighting within the area of the Property, any incremental effect of Project lighting will be minimal.

3.12 FAA Determination

APT submitted relevant Project information to the Federal Aviation Administration (“FAA”) for an aeronautical study to evaluate potential hazards to air navigation. The FAA provided a Determination of No Hazard to Air Navigation on November 27, 2023. See Appendix H, *FAA Determination*.

4 Conclusion

As demonstrated in this Environmental Assessment, the Project will comply with the DEEP air and water quality standards. Further, it will not have an undue adverse effect on the existing environment and ecology; nor will it affect the scenic, historic and recreational resources in the vicinity of the Project. Once operative, the Facility will be unstaffed and generate minimal traffic.

The Project's solar array will be located on the top of the Landfill, ballast-mounted on the synthetic turf habitat. No changes to the Landfill cap are proposed, and no changes to the existing stormwater management system are required.

No wetlands or watercourses will be directly or indirectly impacted by the Project. The nearest wetland to the construction activities is approximately 532 feet away.

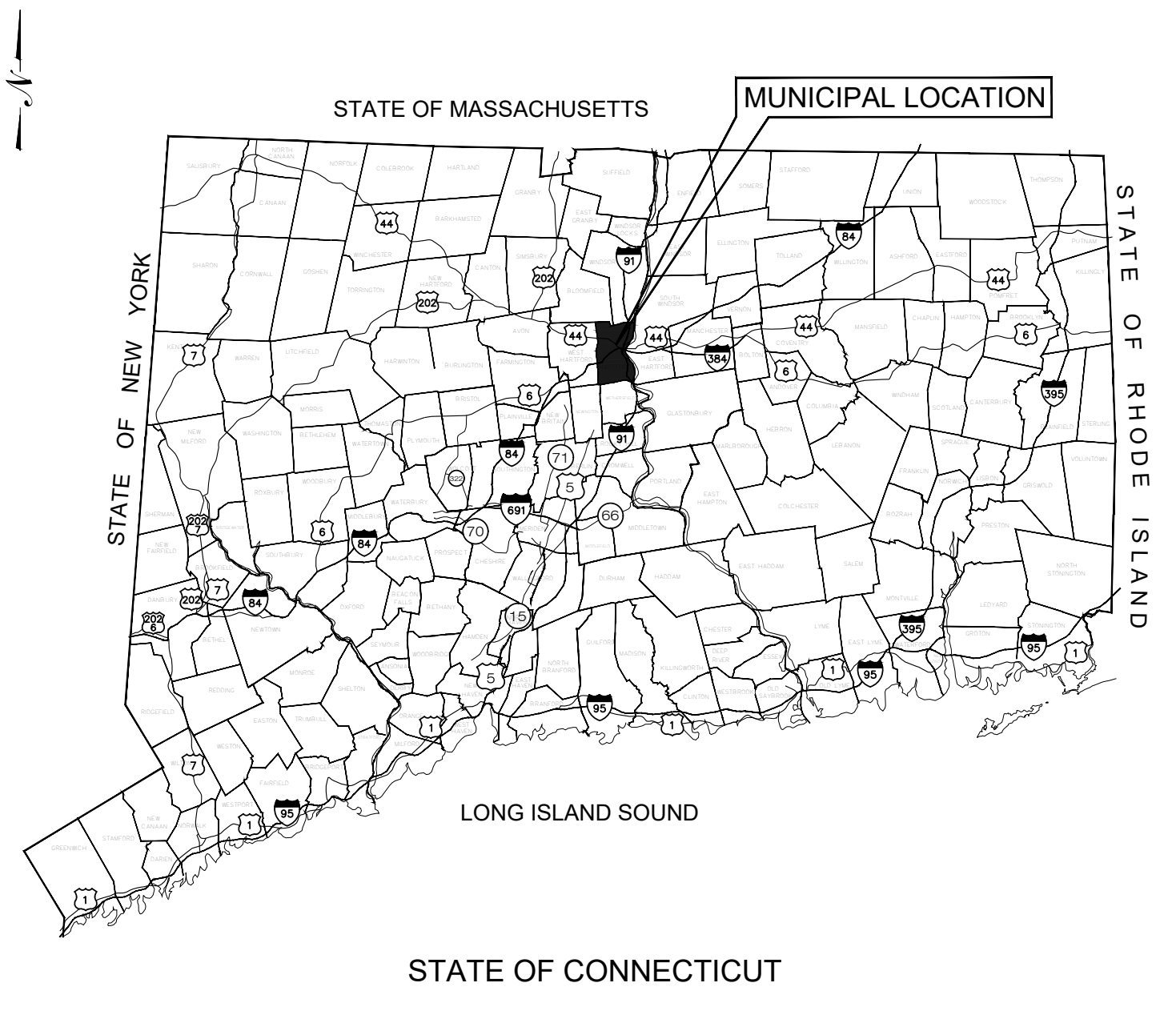
No core forest or prime farmland will be affected, as the capped landfill has neither resource.

Grassland bird species are known to be utilizing the maintained turf habitat. A 50-foot buffer will be maintained from that habitat, and construction activities will be limited to the species' non-breeding season.

Portions of the Facility will be visible from the surrounding areas in areas where the Landfill and existing solar facility are also visible.

APPENDIX A

PROJECT PLANS



CTEC SOLAR

"HARTFORD LANDFILL"

180 LIEBERT ROAD HARTFORD, CT 06120



1 GRIFFIN ROAD S, SUITE 200
BLOOMFIELD, CT 06002
OFFICE: (860)-580-7174



567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC PERMIT SET

NO	DATE	REVISION
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DESIGN PROFESSIONAL OF RECORD

PROF: THOMAS E. LITTLE, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CITY OF HARTFORD
ADDRESS: 550 MAIN STREET, SUITE 200 HARTFORD, CT 06103

HARTFORD LANDFILL

SITE ADDRESS: 180 LIEBERT ROAD HARTFORD, CT 06120
APT FILING NUMBER: CT481510
DRAWN BY: TEL
DATE: 10/20/2023 CHECKED BY: SMC

SHEET TITLE:
TITLE SHEET & INDEX

SHEET NUMBER:
T-1

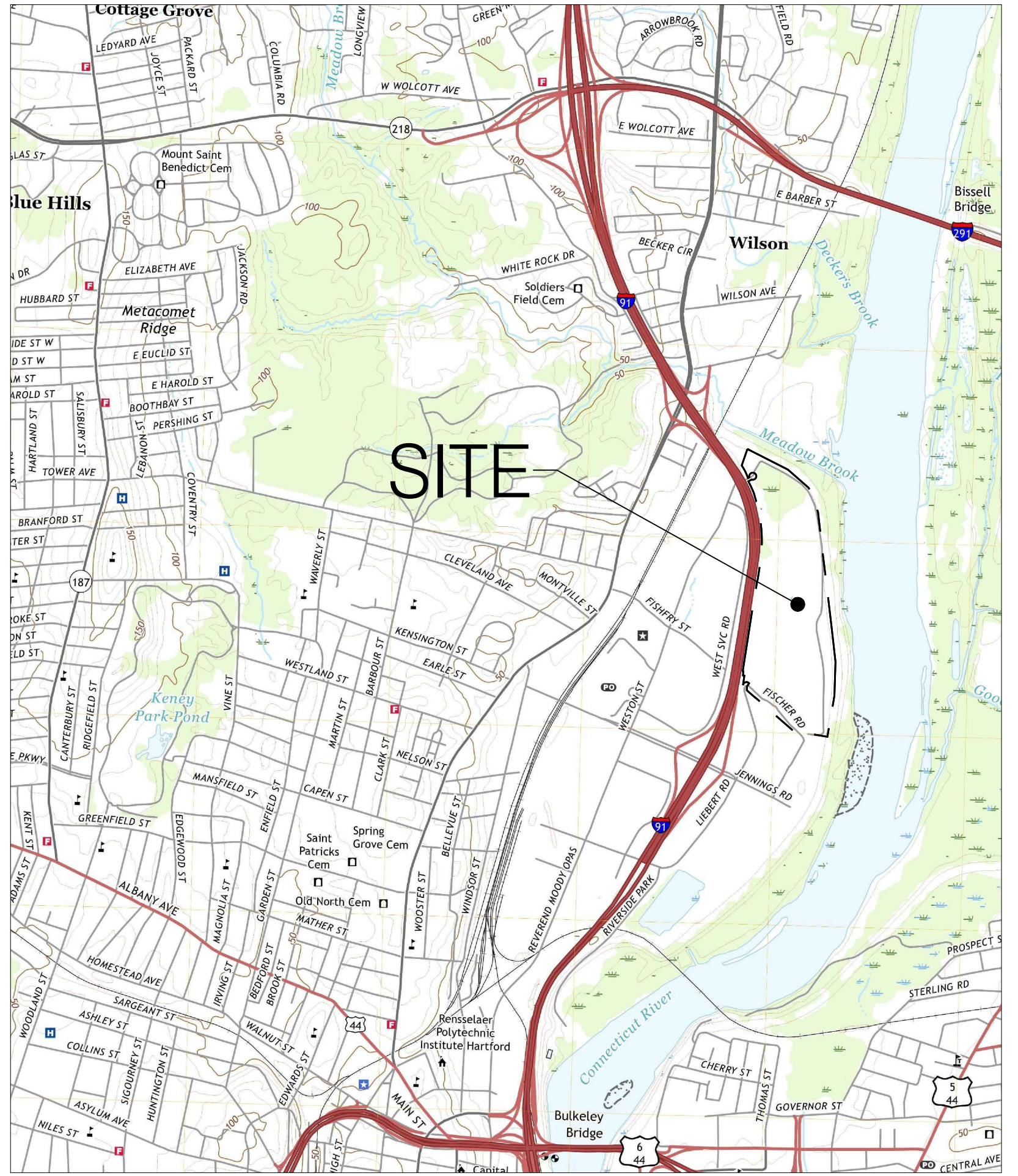
LIST OF DRAWINGS

- T-1 TITLE SHEET & INDEX
- VR-01 PROPERTY AND LANDFILL MSW/INTERIM ASH CLOSURE AREA DRAWING - PROVIDED BY FUSS & O'NEILL
- GN-1 GENERAL NOTES
- OP-1 OVERALL LOCUS MAP
- SP-0 OVERALL SITE PLAN
- SP-1 SITE & UTILITY PLAN
- SP-2 SITE & UTILITY PLAN
- SP-3 SITE & UTILITY PLAN
- DN-1 SITE DETAILS

SITE INFORMATION

SITE NAME: "HARTFORD LANDFILL"
 LOCATION: 180 LIEBERT ROAD HARTFORD, CT 06120
 SITE TYPE/DESCRIPTION: ADD (1) 3.38MW (AC) BALLAST MOUNTED SOLAR PANEL ARRAY W/ ASSOCIATED EQUIPMENT.
 PROPERTY OWNER: CITY OF HARTFORD 550 MAIN STREET HARTFORD, CT 06103
 APPLICANT: CTEC SOLAR 1 GRIFFIN ROAD SOUTH, SUITE 200 BLOOMFIELD, CT 06002
 ENGINEER CONTACT: THOMAS E. LITTLE, P.E. (860) 552-2046 X203
 LATITUDE: 41°47'39.91" N
 LONGITUDE: 72°39'04.78" W
 ELEVATION: 134± AMSL
 MBLU: 323-77-2
 ZONE: OS - OPEN SPACE
 EXISTING LAND USE: INDUSTRIAL
 PROPOSED LAND USE: COMMUNICATIONS, TRANSPORTATION AND PUBLIC UTILITY USES
 - LARGE SCALE GROUND MOUNTED SOLAR PHOTOVOLTAIC INSTALLATIONS
 TOTAL SITE ACREAGE: 124.43± AC.
 TOTAL DISTURBED AREA: 13.75± AC.
 APPROX. VOLUME OF CUT: 0± CY
 APPROX. VOLUME OF FILL: 0± CY
 APPROX. NET VOLUME: 0± CY OF CUT/FILL

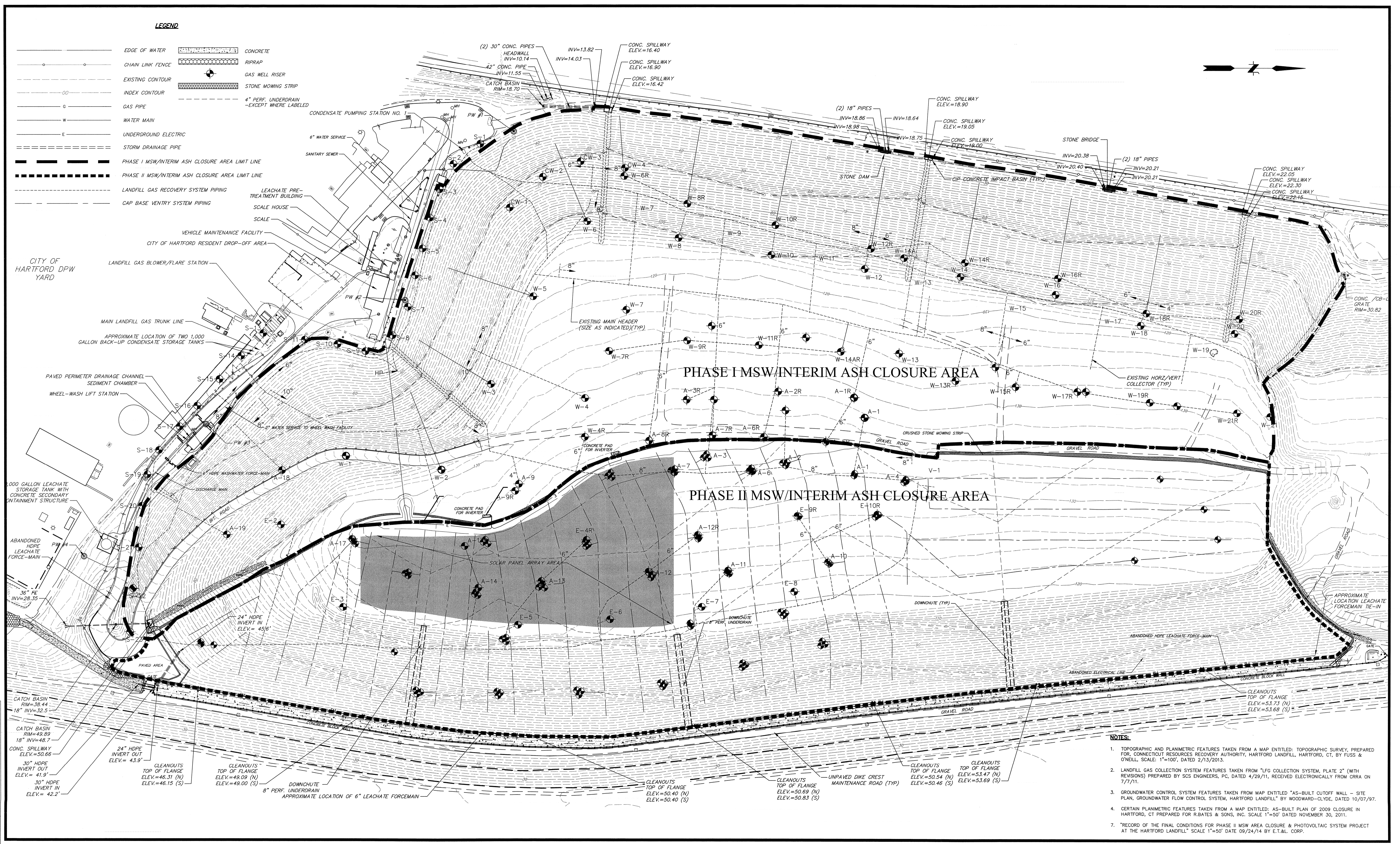
USGS TOPOGRAPHIC MAP



SCALE: 1" = 2000± SOURCE: USGS 7.5 ESSEX QUADRANGLE, CT 2012

LEGEND

	EDGE OF WATER		CONCRETE
	CHAIN LINK FENCE		RIPRAP
	EXISTING CONTOUR		GAS WELL RISER
	INDEX CONTOUR		STONE MOWING STRIP
	GAS PIPE		4" PERF. UNDERDRAIN -EXCEPT WHERE LABELED
	WATER MAIN		
	UNDERGROUND ELECTRIC		
	STORM DRAINAGE PIPE		
	PHASE I MSW/INTERIM ASH CLOSURE AREA LIMIT LINE		
	PHASE II MSW/INTERIM ASH CLOSURE AREA LIMIT LINE		
	LANDFILL GAS RECOVERY SYSTEM PIPING		
	CAP BASE ENTRY SYSTEM PIPING		



PHASE I MSW/INTERIM ASH CLOSURE AREA

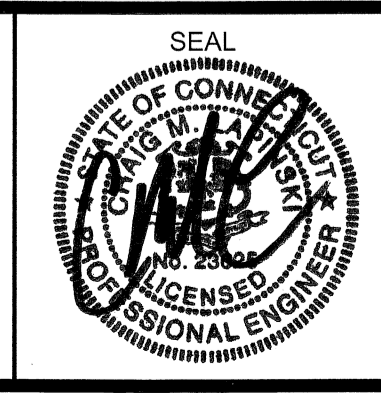
PHASE II MSW/INTERIM ASH CLOSURE AREA

- NOTES:**
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 2. LANDFILL GAS COLLECTION SYSTEM FEATURES TAKEN FROM "LFG COLLECTION SYSTEM, PLATE 2" (WITH REVISIONS) PREPARED BY SCS ENGINEERS, PC, DATED 4/29/11, RECEIVED ELECTRONICALLY FROM CRRA ON 7/7/11.
 3. GROUNDWATER CONTROL SYSTEM FEATURES TAKEN FROM MAP ENTITLED "AS-BUILT CUTOFF WALL - SITE PLAN, GROUNDWATER FLOW CONTROL SYSTEM, HARTFORD LANDFILL" BY WOODWARD-CLYDE, DATED 10/07/97.
 4. CERTAIN PLANIMETRIC FEATURES TAKEN FROM A MAP ENTITLED: AS-BUILT PLAN OF 2009 CLOSURE IN HARTFORD, CT PREPARED FOR R.BATES & SONS, INC. SCALE 1"=50' DATED NOVEMBER 30, 2011.
 5. "RECORD OF THE FINAL CONDITIONS FOR PHASE II MSW AREA CLOSURE & PHOTOVOLTAIC SYSTEM PROJECT AT THE HARTFORD LANDFILL" SCALE 1"=50' DATE 09/24/14 BY E.T.L. CORP.

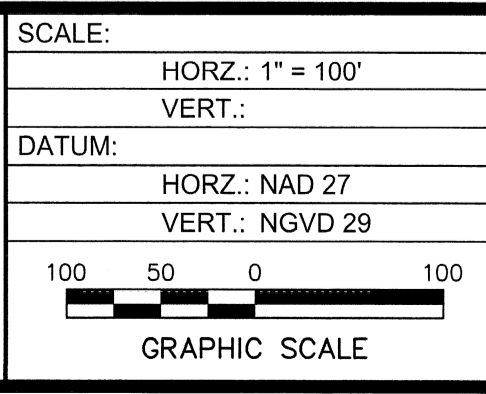
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 LAYER STATE:

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

SEAL

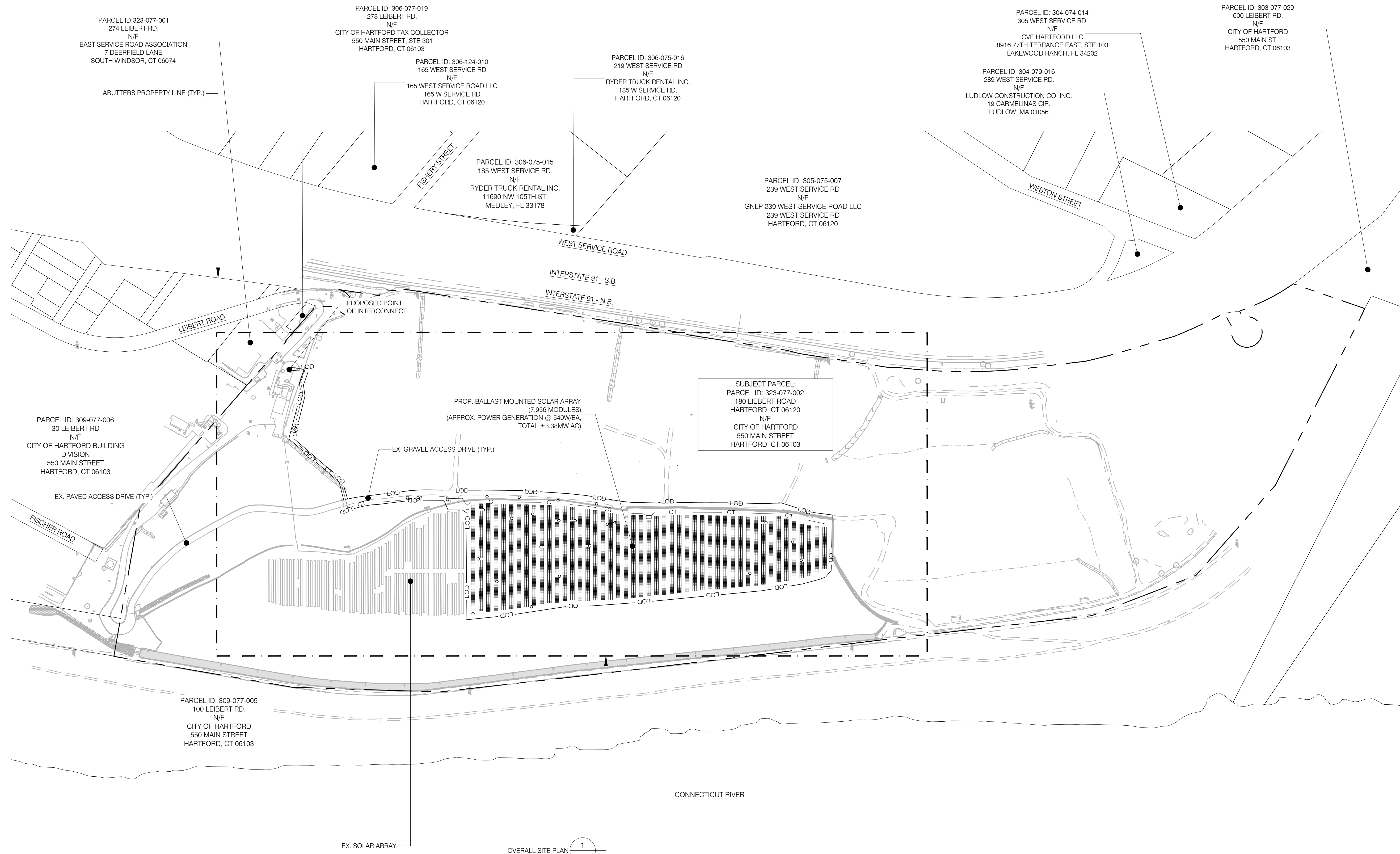


SCALE:
 HORIZ.: 1" = 100'
 VERT.:
 DATUM:
 HORIZ.: NAD 27
 VERT.: NGVD 29



RECORD DRAWING - MSW/INTERIM ASH CLOSURE AREA
 PREPARED FOR
 MATERIALS INNOVATION AND RECYCLING AUTHORITY
 HARTFORD LANDFILL
 HARTFORD CONNECTICUT

PROJ. No.: 2013187.H12
 DATE: 11/19/2014
VR-01



**1 GRIFFIN ROAD S, SUITE 200
BLOOMFIELD, CT 06002
OFFICE: (860)-580-7174**



567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

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DESIGN PROFESSIONAL OF RECORD

PROF: THOMAS E. LITTLE, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CITY OF HARTFORD

ADDRESS: 550 MAIN STREET, SUITE 200 HARTFORD, CT 06103

HARTFORD LANDFILL

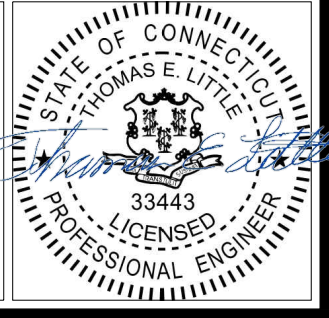
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ADDRESS: HARTFORD, CT 06120

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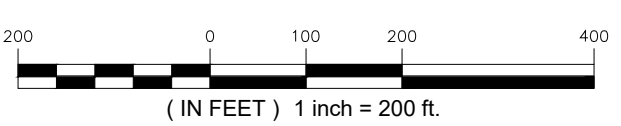
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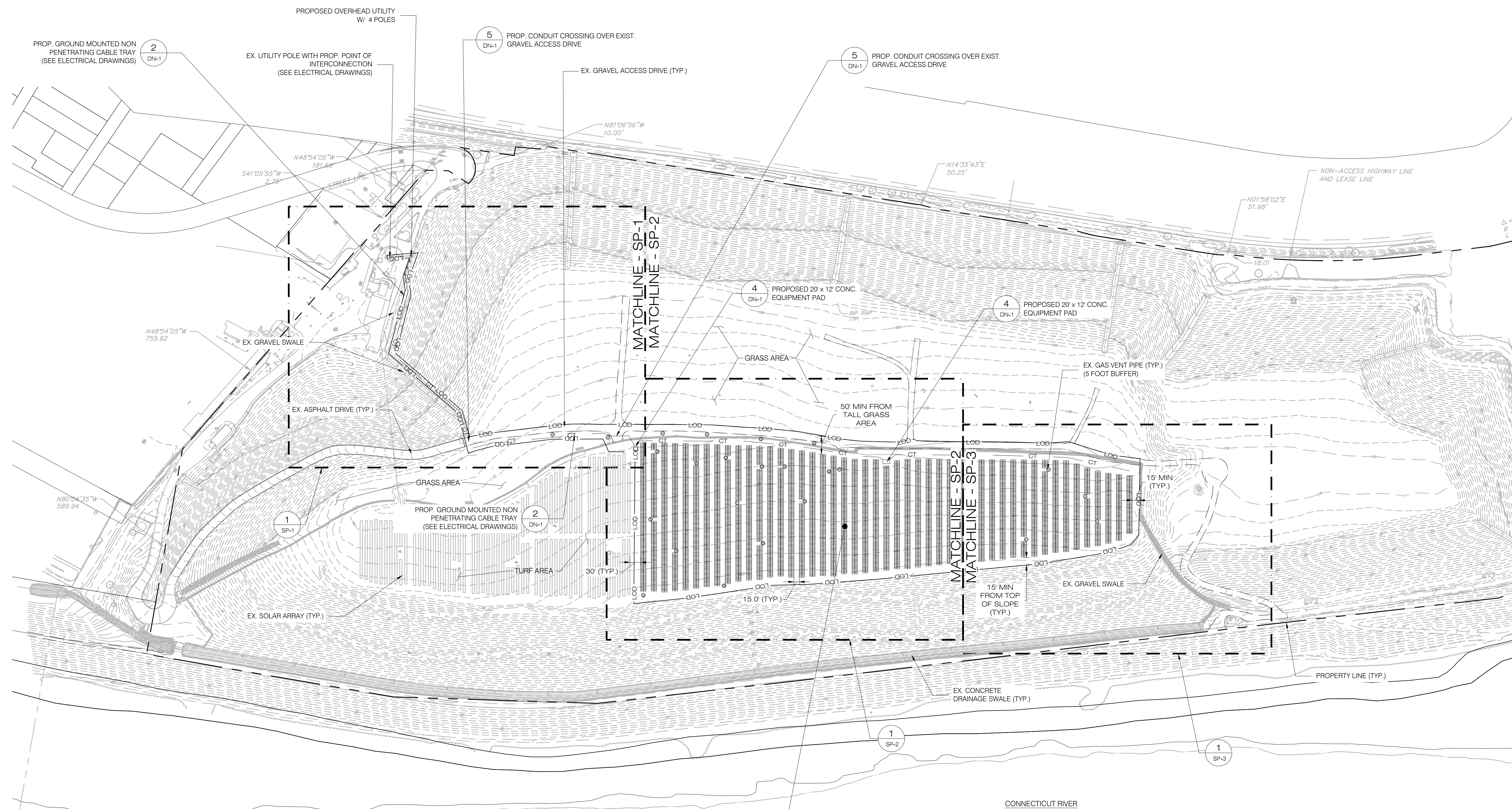
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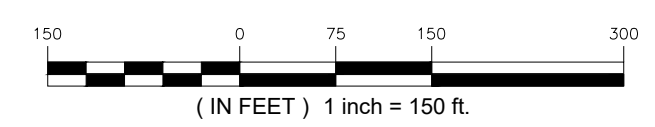


OVERALL SITE PLAN
1 SP-0



PROP. BALLAST MOUNTED SOLAR ARRAY
(7,956 MODULES)
(APPROX. POWER GENERATION @ 540W/EA,
TOTAL ±3.38MW AC)

1 OVERALL SITE PLAN
SCALE: 1" = 150'-0"



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WATERFORD, CT 06385

OWNER: CITY OF HARTFORD

ADDRESS: 550 MAIN STREET, SUITE 200
HARTFORD, CT 06103

HARTFORD LANDFILL

SITE ADDRESS: 180 LIEBERT ROAD
HARTFORD, CT 06120

APT FILING NUMBER: CT481510

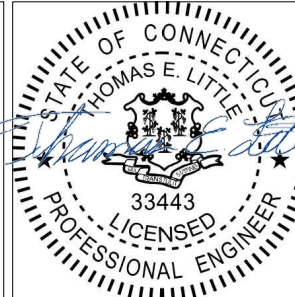
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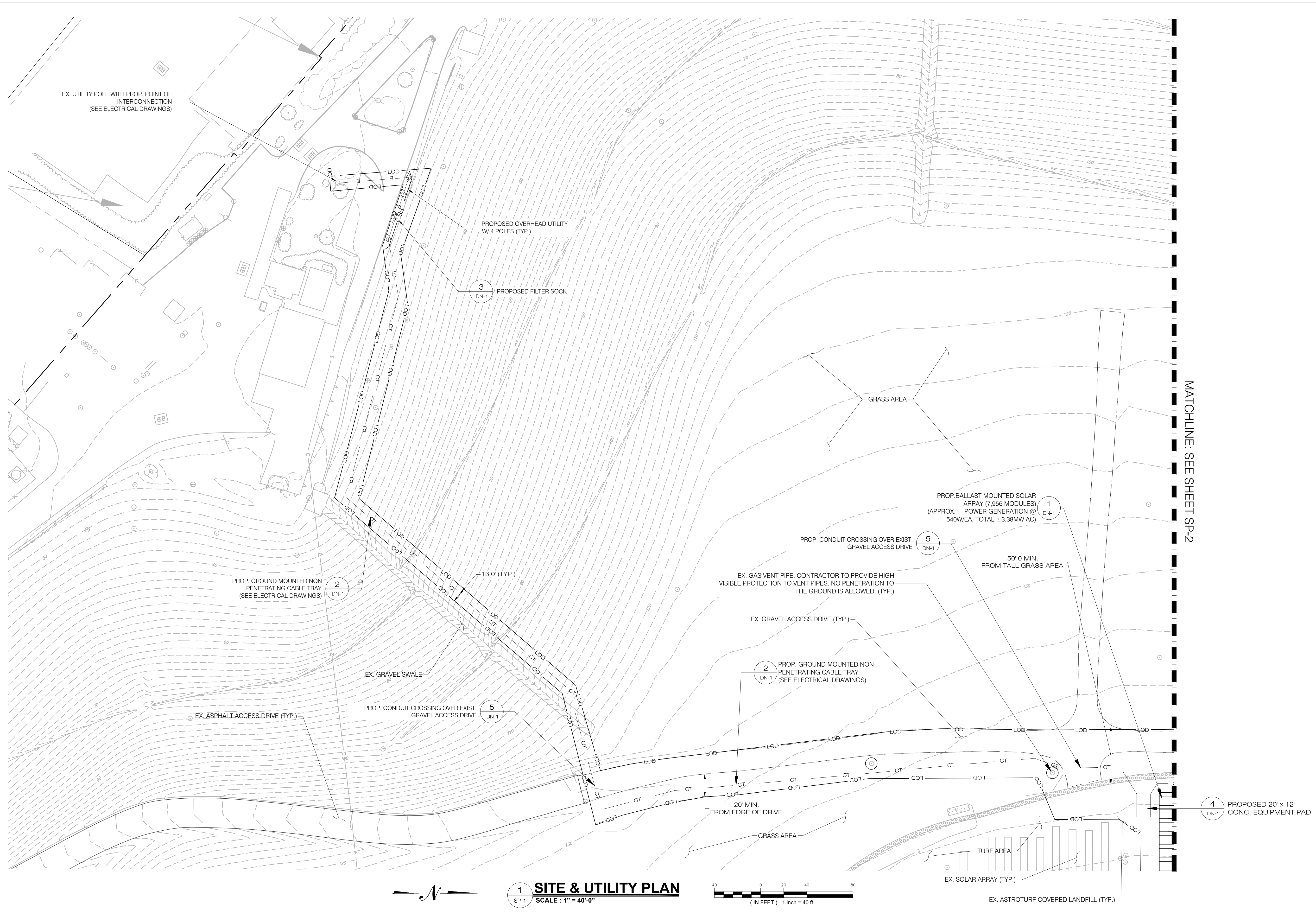
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OVERALL SITE PLAN

SHEET NUMBER:

SP-0





MATCHLINE: SEE SHEET SP-2

CTEC SOLAR
 1 GRIFFIN ROAD S, SUITE 200
 BLOOMFIELD, CT 06002
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ALL-POINTS TECHNOLOGY CORPORATION
 567 VAUXHALL STREET EXTENSION - SUITE 311
 WATERFORD, CT 06385 PHONE: (860)-663-1697
 WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

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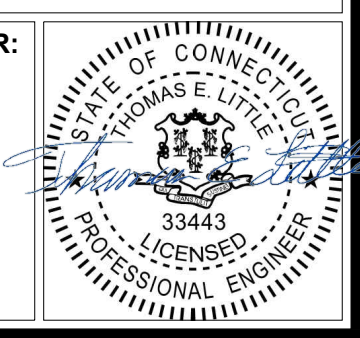
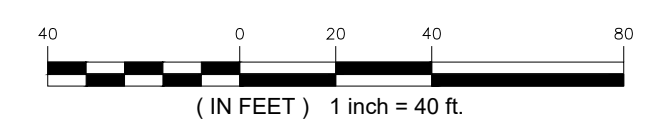
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 PROF: THOMAS E. LITTLE, P.E.
 COMP: ALL-POINTS TECHNOLOGY CORPORATION P.C.
 ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385
 OWNER: CITY OF HARTFORD
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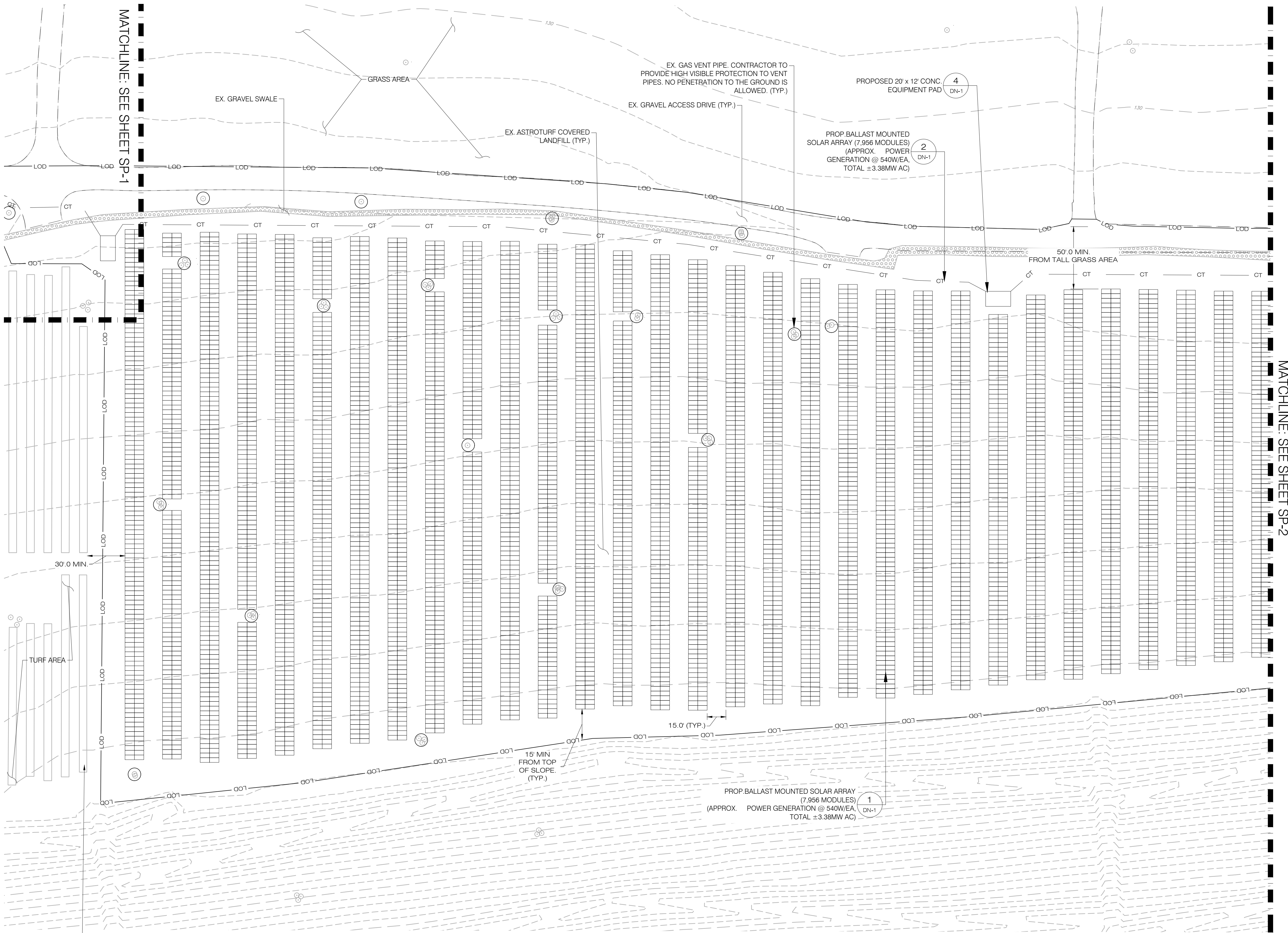
HARTFORD LANDFILL
 SITE: 180 LIEBERT ROAD
 ADDRESS: HARTFORD, CT 06120
 APT FILING NUMBER: CT481510
 DRAWN BY: TEL
 DATE: 10/20/2023 CHECKED BY: SMC

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SITE & UTILITY PLAN

SHEET NUMBER:
SP-1

1 SITE & UTILITY PLAN
 SP-1 SCALE: 1" = 40'-0"





1 GRIFFIN ROAD S, SUITE 200
BLOOMFIELD, CT 06002
OFFICE: (860)-580-7174



567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
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HARTFORD LANDFILL

SITE ADDRESS: 180 LIEBERT ROAD HARTFORD, CT 06120

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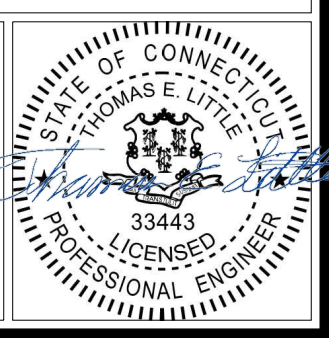
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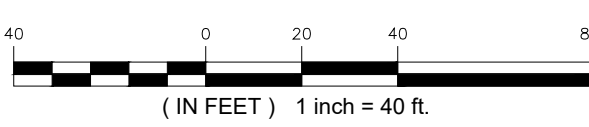
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1 SITE & UTILITY PLAN
SP-1 SCALE: 1" = 40'-0"



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HARTFORD LANDFILL

SITE ADDRESS: 180 LIEBERT ROAD HARTFORD, CT 06120

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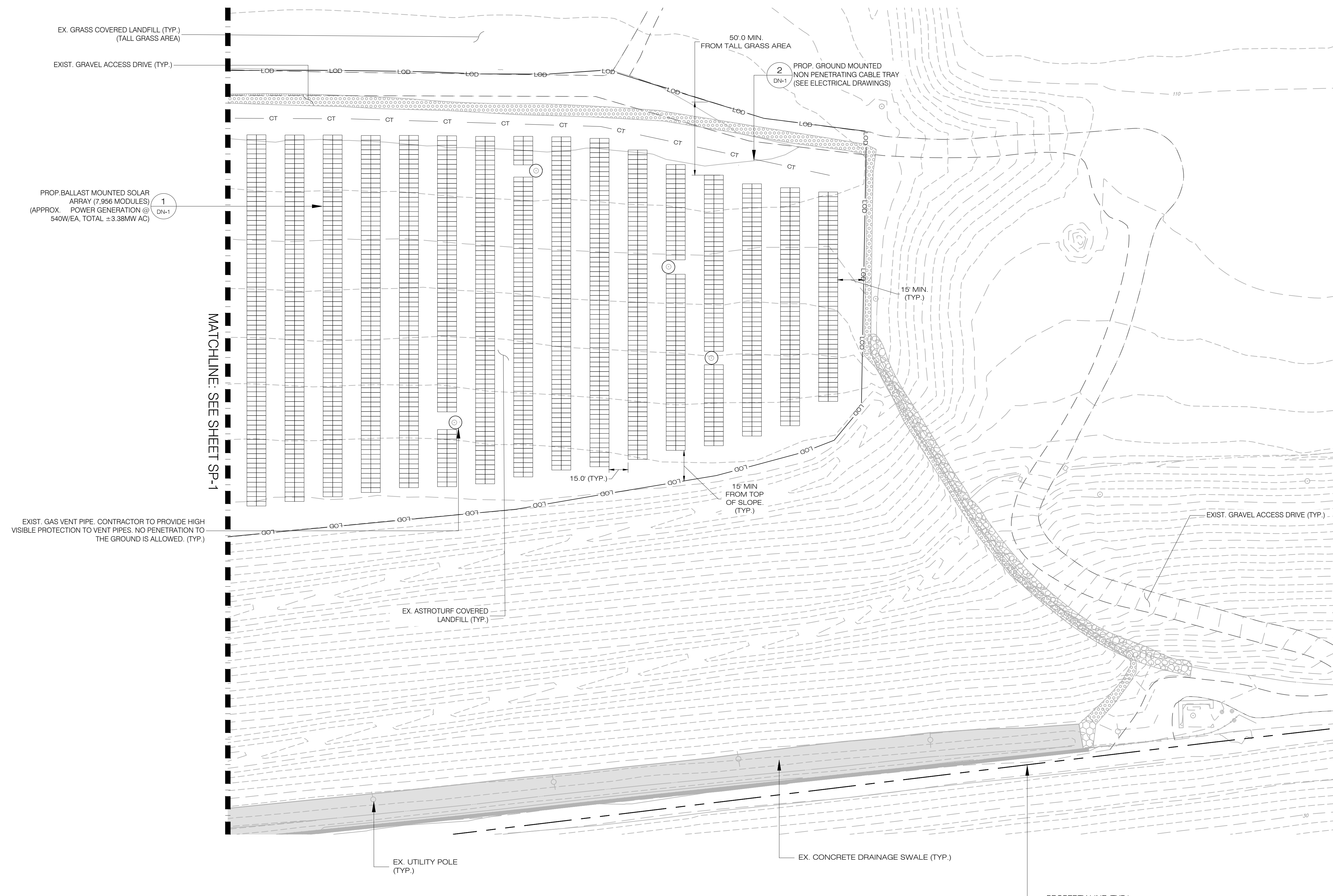
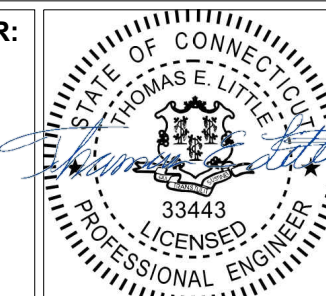
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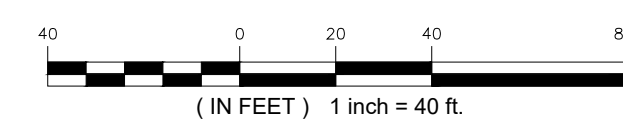
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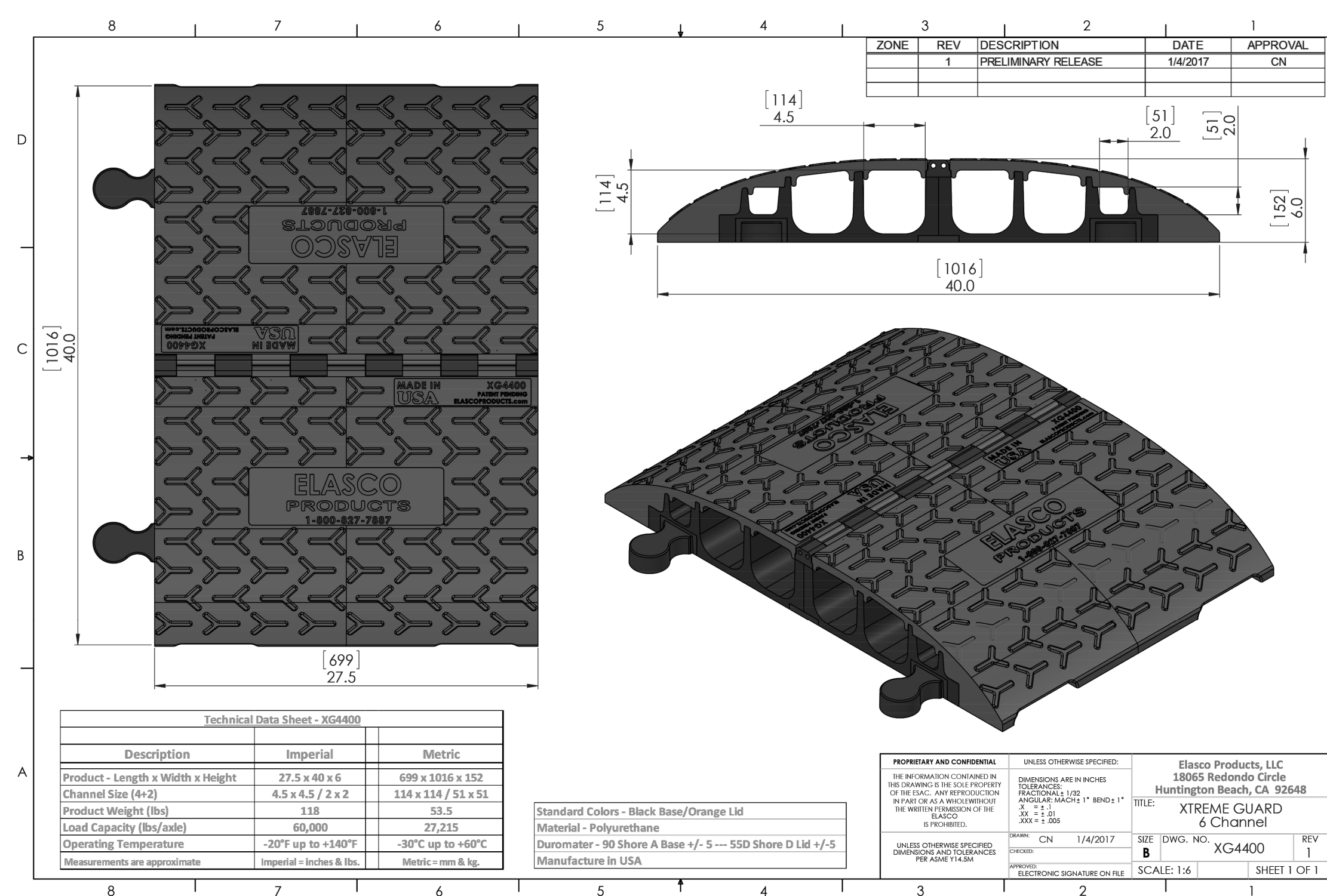
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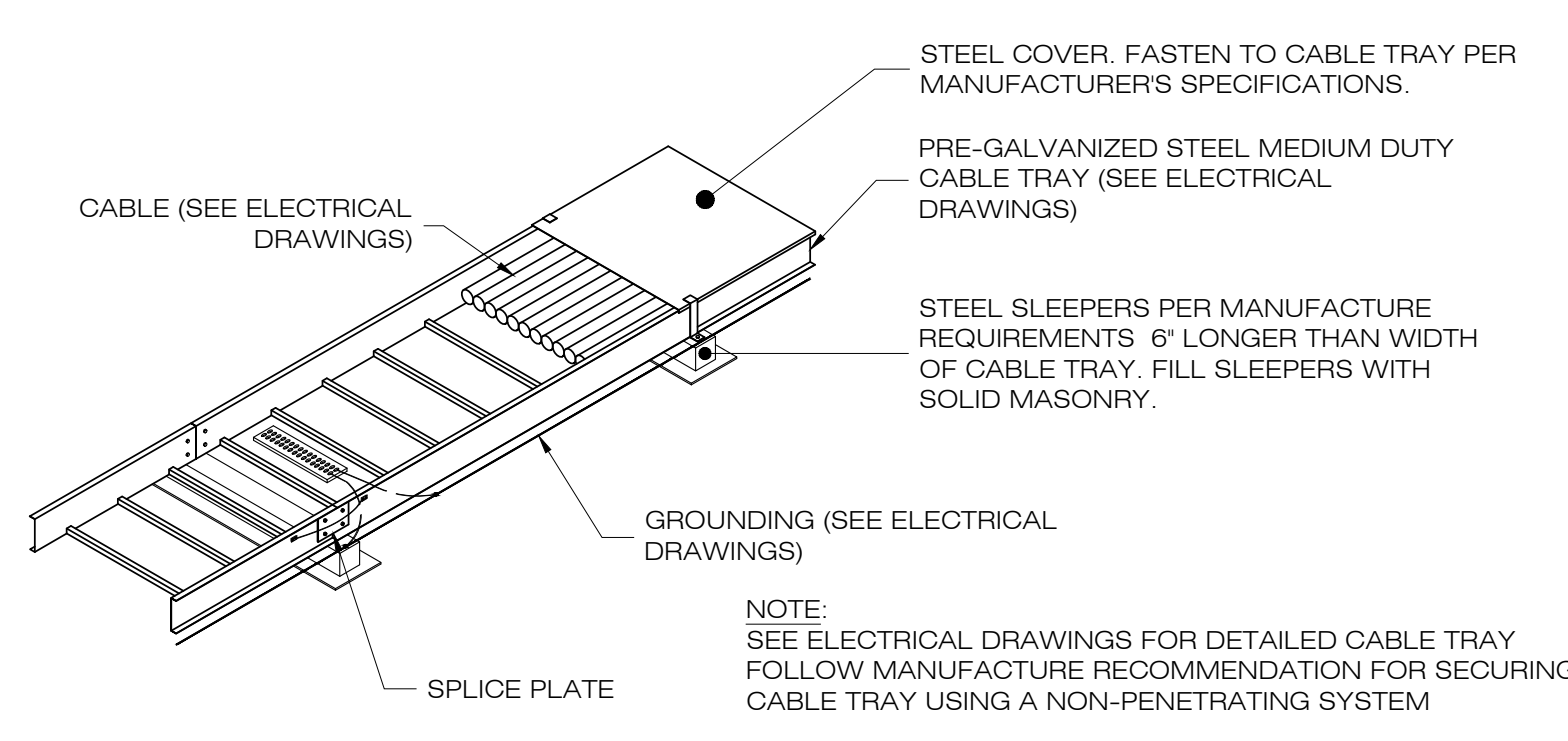


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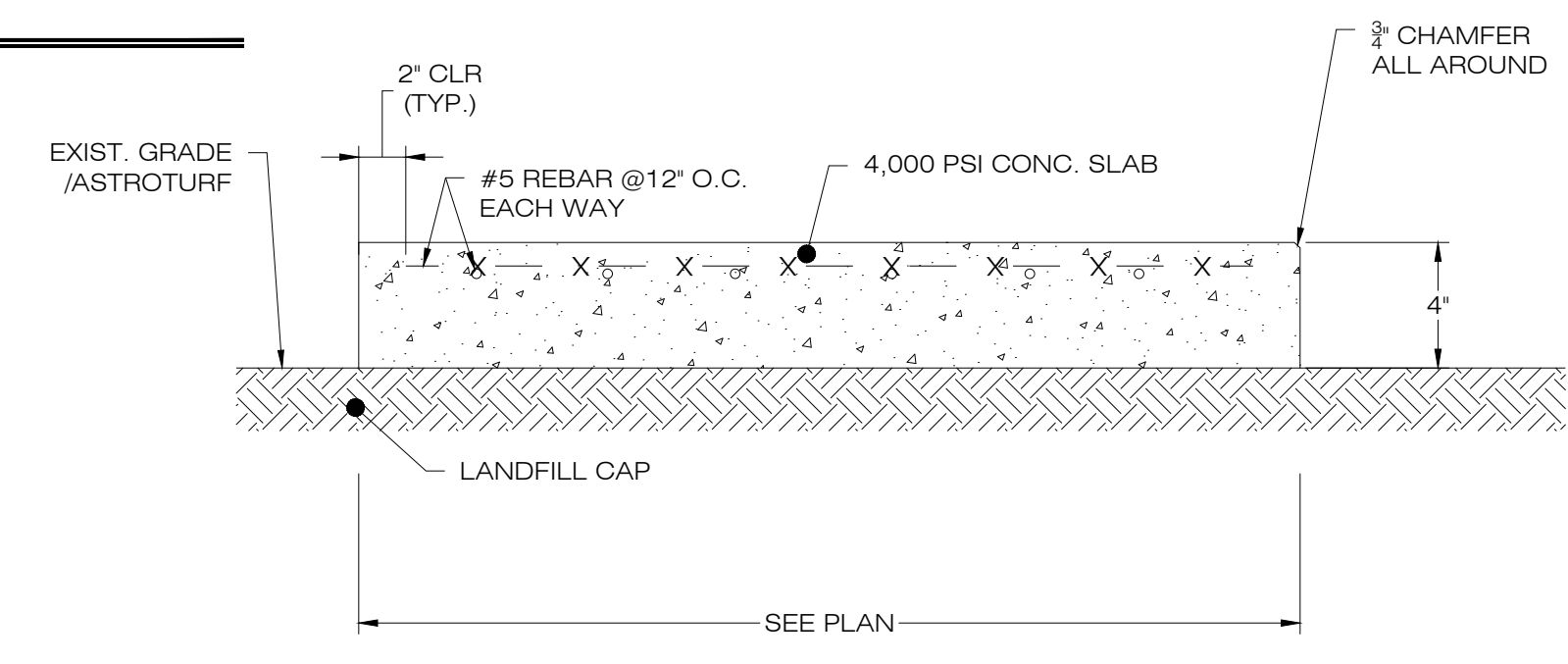
- NOTES:**
- SEE MANUFACTURER'S DETAIL SHEETS FOR ADDITIONAL INFORMATION REGARDING DRIVABLE CABLE GUARD.
 - SIZE PER NUMBER & SIZE OF CONDUITS - SEE ELECTRICAL DRAWINGS FOR MORE DETAILS.

5 CONDUIT CROSSING
DN-1 SCALE: N.T.S.



- NOTES:**
- SEE ELECTRICAL DRAWINGS FOR ADDITIONAL DETAILS ON CABLE TRAY SYSTEM.

2 GROUND MOUNTED CABLE TRAY
DN-1 SCALE: N.T.S.



- NOTES:**
- FOUNDATION & STONE BASE SHALL BE AS REQUIRED BY GEOTECHNICAL ENGINEER.
 - CONCRETE PAD DESIGN TO BE COMPLETED BY OTHERS. SEE ELECTRICAL DRAWINGS FOR MORE DETAILS.

4 TYPICAL CONCRETE EQUIPMENT PAD
DN-1 SCALE: N.T.S.



Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: March 01, 2021

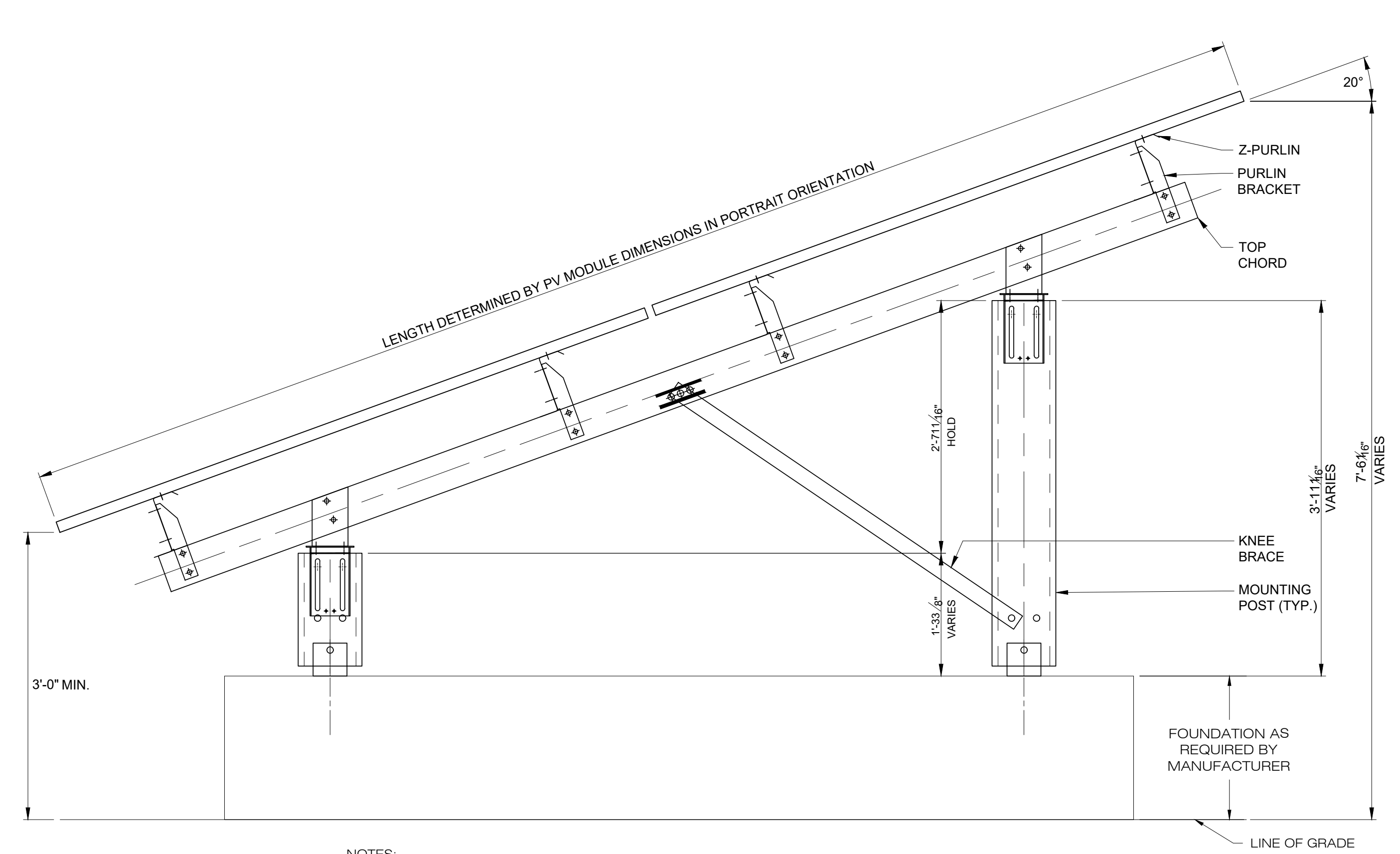
Ernst Solar Farm Seed Mix - ERNMx-186

Botanical Name	Common Name	Price/lb
45.50 % <i>Festuca rubra</i>	Creeping Red Fescue	2.20
15.00 % <i>Festuca ovina var. duriuscula</i> , 'Jetty'	Hard Fescue, 'Jetty'	3.52
15.00 % <i>Festuca ovina var. duriuscula</i> , <i>Gladiator</i>	Hard Fescue, <i>Gladiator</i>	3.52
10.00 % <i>Festuca rubra ssp. commutata</i>	Chewings Fescue	2.70
5.00 % <i>Poa pratensis</i> , 'Selway'	Kentucky Bluegrass, 'Selway'	3.08
5.00 % <i>Poa pratensis</i> , <i>Appalachian</i>	Kentucky Bluegrass, <i>Appalachian</i>	3.08
4.50 % <i>Trifolium repens</i> , <i>Dutch</i>	White Clover, <i>Dutch</i>	4.84

100.00 %
Seeding Rate: 6 lb per 1,000 sq ft
Lawn & Turfgrass Sites; Solar Sites

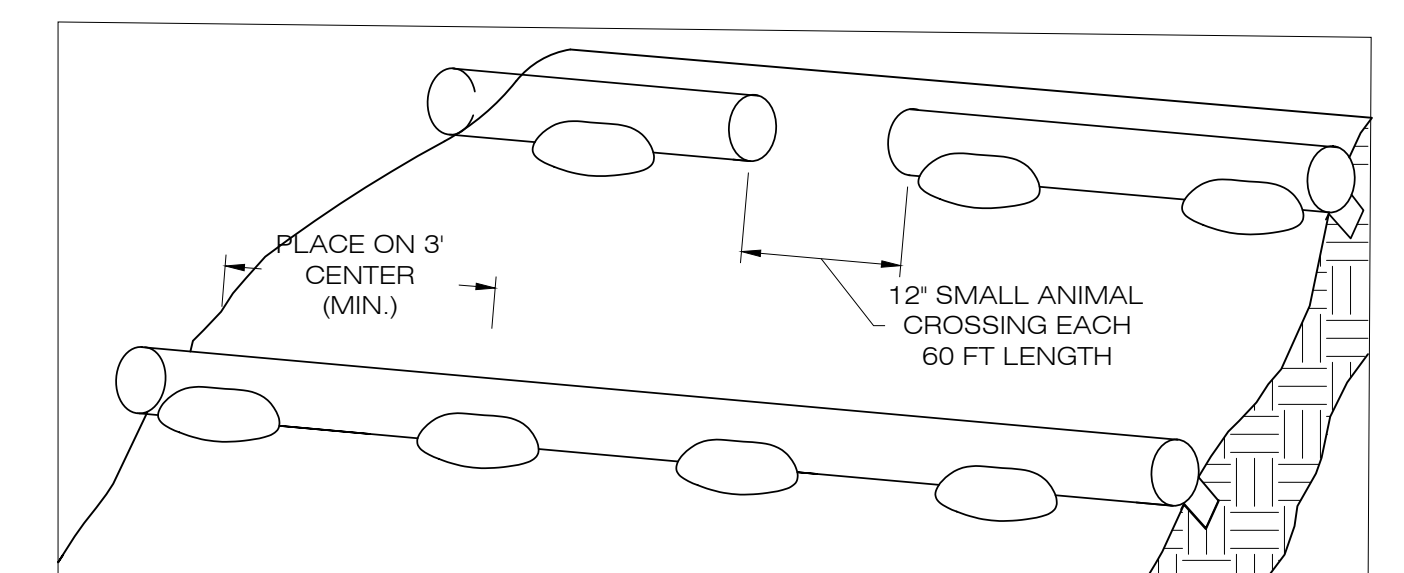
Provide a 2' clearance between the ground and the solar panels. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

6 SEMI-SHADE MIX
DN-1 SCALE: N.T.S.



- NOTES:**
- SEE MANUFACTURER'S DETAIL SHEETS FOR ADDITIONAL INFORMATION REGARDING RACKING SYSTEM REQUIREMENTS AND INSTALLATION PROCEDURES. RACKING SYSTEM TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
 - FOUNDATION & STONE BASE SHALL BE AS REQUIRED BY GEOTECHNICAL ENGINEER & RACKING MANUFACTURER.

1 TYPICAL BALLAST MOUNTED RACKING SYSTEM
DN-1 SCALE: N.T.S.



- PLACE THE SOCK IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE SOCK ON THE UPHILL SIDE. SOCKS SHALL BE INSTALLED IN 60 FT CONTINUOUS LENGTHS WITH ADJACENT SOCKS TIGHTLY ABUT. EVERY 60 FT THE SOCK ROW SHALL BE SPACED 12 INCHES CLEAR, END TO END, FOR AMPHIBIAN AND REPTILE TRAVEL. THE OPEN SPACES SHALL BE STAGGERED MID LENGTH OF THE NEXT DOWN GRADIENT SOCK.
- SECURE THE SOCK WITH 50LB SANDBAGS EVERY 3-4' (0.9 - 1.2 M) AND WITH A SANDBAG ON EACH END. SANDBAGS SHOULD BE PLACED ON THE DOWN SLOPE SIDE OF THE SOCK. THE SANDBAGS SHOULD BE PLACED SO THAT THEY ARE EQUIVALENT OR HIGHER THAN THE HEIGHT OF THE FILTER SOCK TO AVOID ROLLING.

3 COMPOST FILTER SOCK SEDIMENTATION CONTROL BARRIER
DN-1 SCALE: N.T.S.

CTEC SOLAR
1 GRIFFIN ROAD S, SUITE 200
BLOOMFIELD, CT 06002
OFFICE: (860)-580-7174

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

CSC PERMIT SET

NO	DATE	REVISION
0		
1		
2		
3		
4		
5		
6		

DESIGN PROFESSIONAL OF RECORD

PROF: THOMAS E. LITTLE, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION P.C.
ADD: 567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CITY OF HARTFORD
ADDRESS: 550 MAIN STREET, SUITE 200 HARTFORD, CT 06103

HARTFORD LANDFILL

SITE: 180 LIEBERT ROAD
ADDRESS: HARTFORD, CT 06120
APT FILING NUMBER: CT481510
DRAWN BY: TEL
DATE: 10/20/2023 CHECKED BY: SMC

SHEET TITLE:

SITE DETAILS

SHEET NUMBER:



APPENDIX B

PRODUCT INFORMATION SHEETS



144HC M10 SL Bifacial Module

144 Half-Cut Monocrystalline 520W – 540W

21%

Utilizes the latest M10 size super high efficiency Monocrystalline PERC cells. Half cut design further reduces cell to module (CTM) losses.

Stability & Looks

Rugged, double webbed frame design withstands wind, snow, and other mechanical stresses. Framed Glass-Backsheet aesthetic is ideal for high visibility installation.

Anti-Reflective

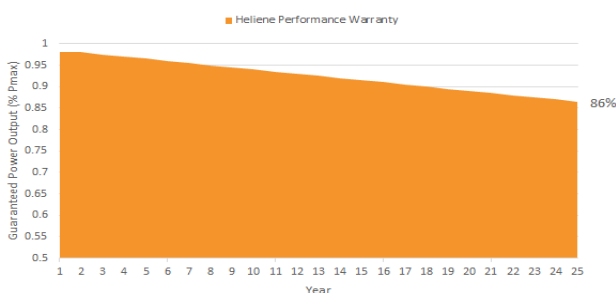
Premium solar glass with anti reflective coating delivers more energy throughout the day

High Reliability

Proven resistance to PID and reliable in high temperature and humidity environments.

No Compromise Guarantee

15 Year Workmanship Warranty
25 Year Linear Performance Guarantee



Manufactured Using International Quality System Standards: ISO9001

Half-Cut Design with Split Junction Box Technology

Bifacial Technology Enabling Additional Energy Harvest from Rear Side

1500V System Voltage Rating

World-class Quality

- Heliene's fully automated manufacturing facilities with state-of-the-art robotics and computer aided inspection systems ensure the highest level of product quality and consistency
- All manufacturing locations are compliant with international quality standards and are ISO 9001 certified
- Heliene modules have received Top Performer rankings in several categories from PV Evolution Labs (PV EL) independent quality evaluations

Bankable Reputation

- Established in 2010, Heliene is recognized as highly bankable Tier 1 manufacturer of solar modules and has been approved for use by the U.S. Department of Defense, U.S. Army Corps of Engineers and from numerous top tier utility scale project debt providers
- By investing heavily in research and development, Heliene has been able to stay on the cutting edge of advances in module technology and manufacturing efficiency

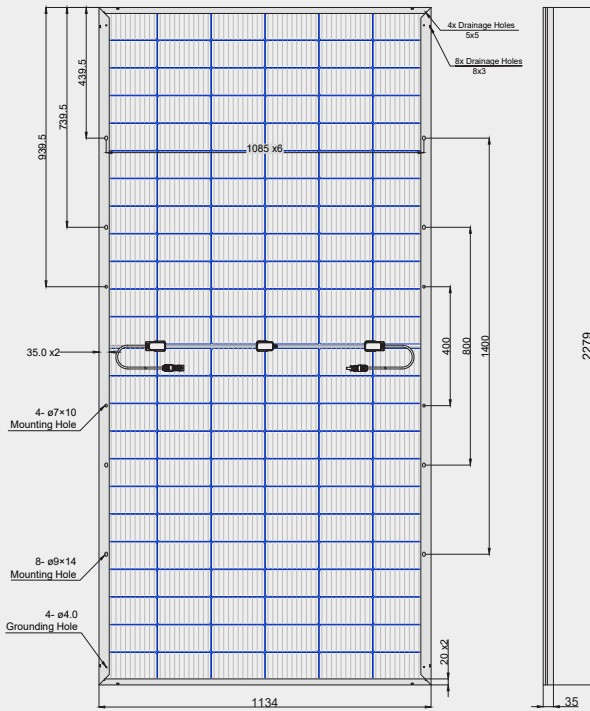
Local Sales, Service, and Support

- With sales offices across the U.S. and Canada, Heliene prides itself on unsurpassed customer support for our clients. Heliene has become the brand of choice for many of the leading residential installers, developers and Independent Power Producers due to our innovative technology, product customization capability and just in time last-mile logistics support
- Local sales and customer support means answered phone calls and immediate answers to your technical and logistics questions. We understand your project schedules often change with little warning and endeavor to work with you to solve your project management challenges

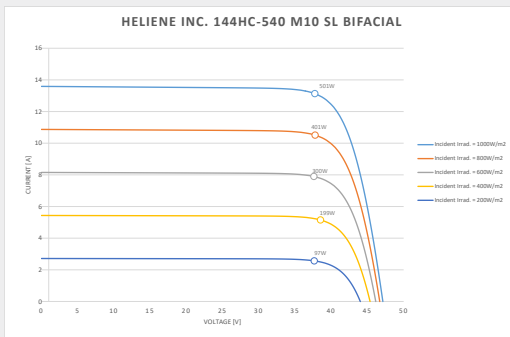
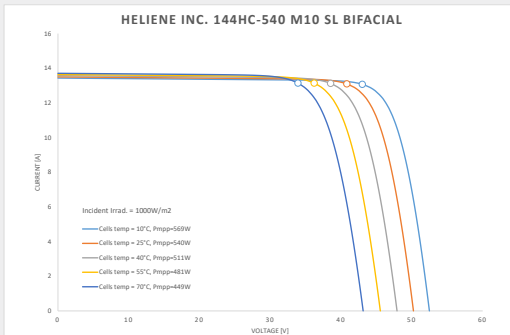




Dimensions for 144HC M10 SL Bifacial Series Modules



I-V Curves for 144HC M10 SL Bifacial Series Modules



Certifications & Listing



Electrical Data (STC)

Peak Rated Power	P _{mp} (W)	540	535	530	525	520
Maximum Power Voltage	V _{mp} (V)	42.32	42.13	41.94	41.75	41.56
Maximum Power Current	I _{mp} (A)	12.77	12.70	12.64	12.58	12.52
Open Circuit Voltage	V _{oc} (V)	50.22	49.97	49.72	49.23	48.73
Short Circuit Current	I _{sc} (A)	13.50	13.44	13.37	13.32	13.28
Module Efficiency	Eff (%)	20.9	20.7	20.5	20.3	20.1
Maximum Series Fuse Rating	MF (A)	30	30	30	30	30
Power Output Tolerance		[- 0/+3%]				
Bifaciality Factor		70%				

STC - Standard Test Conditions: Irradiation 1000 W/m² - Air mass AM 1.5 - Cell temperature 25 °C

Electrical Data (NMOT)

Maximum Power	P _{mp} (W)	400	395	390	385	380
Maximum Power Voltage	V _{mp} (V)	39.19	38.58	38.58	37.97	37.96
Maximum Power Current	I _{mp} (A)	10.21	10.24	10.11	10.14	10.01
Open Circuit Voltage	V _{oc} (V)	47.13	46.89	46.66	46.20	45.73
Short Circuit Current	I _{sc} (A)	10.87	10.82	10.77	10.72	10.70

NMOT - Nominal Module Operating Temperature:
Irradiance at 800W/m², Ambient Temperature 20°C, Wind speed 1m/s

Mechanical Data

Solar Cells	144 Half Cut, M10, 182mm, PERC Cells
Module Construction	Framed Glass-Backsheet
Dimensions (L x W x D)	2279 x 1134 x 35 mm (89.72 x 44.65 x 1.38 inch)
Weight	29.2 kg (64.3 lbs)
Frame	Double Webbed 15-Micron Anodized Aluminum Alloy
Glass	3.2mm Low-Iron Content, High-Transmission, PV Solar Glass with Anti Reflective Coating
Junction Box	IP-68 rated with 3 bypass diodes
Output Cables	0.3-meter Symmetrical Cables
Connectors	Multi-Contact/ Stäubli MC4

Certifications

UL Certification

UL61215, UL61730

Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	+45°C (±2°C)
Temperature Coefficient of P _{max}	-0.36%/°C
Temperature Coefficient of V _{oc}	-0.28%/°C
Temperature Coefficient of I _{sc}	0.034%/°C

Maximum Ratings

Operational Temperature	-40°C to +85°C
Max System Voltage	1500V
Mech. Load Test (Front)	113 psf / 5400 Pa
Mech. Load Test (Back)	50 psf / 2400 Pa
Fire Type	Type 1

Warranty

15 Year Workmanship Warranty
25 Year Linear Power Guarantee

Packaging Configuration

Modules per box:	31 pieces
Modules per 40' Container:	620 pieces
Modules per 53' Trailer:	806 pieces



SOLECTRIA® XGI 1500-166 SERIES

PREMIUM 3-PHASE TRANSFORMERLESS UTILITY-SCALE INVERTERS

FEATURES

- Made in the USA with global components
- Buy American Act (BAA) compliant
- Four models:
 - 125kW/125kVA,
 - 125kW/150kVA,
 - 150kW/166kVA,
 - 166kW/166kVA
- Additional models available certified to UL1699b, Photovoltaic DC Arc-Fault Circuit Protection
- 99.0% peak efficiency
- Flexible solution for distributed and centralized system architecture
- Advanced grid-support functionality Rule 21/UL1741SB
- Robust, dependable, & built to last
- Lowest O&M and installation costs
- Access all inverters on site via WiFi from one location
- Remote diagnostics and firmware upgrades
- SunSpec Modbus Certified
- Tested compatible with the TESLA PowerPack Microgrid System app for system visibility

OPTIONS

- String combiners for distributed and centralized systems
- Web-based monitoring
- Extended warranty



Yaskawa Solectria Solar's XGI 1500 utility-scale string inverters are designed for high reliability and built of the highest quality components that were selected, tested and proven to last beyond their warranty.

XGI 1500 inverters provide advanced grid-support functionality and meet the latest IEEE 1547 and UL1741SB standards for safety. They are the most powerful 1500 VDC string inverters in the PV market and have been engineered for both distributed and centralized system architecture.

Designed and engineered in Lawrence, MA, XGI inverters are assembled and tested at Yaskawa America's facilities in Buffalo Grove, IL. They are Made in the USA with global components and are compliant with the Buy American Act.

SOLECTRIA® XGI 1500-166 SERIES TECHNICAL DATA

SPECIFICATIONS

SOLECTRIA XGI 1500 Model		XGI 1500-125/125-UL XGI 1500-125/125-UL-A	XGI 1500-125/150-UL XGI 1500-125/150-UL-A	XGI 1500-150/166-UL XGI 1500-150/166-UL-A	XGI 1500-166/166-UL XGI 1500-166/166-UL-A
DC Input	Absolute Max Input Voltage	1500 VDC	1500 VDC	1500 VDC	1500 VDC
	Max Power Input Voltage Range (MPPT)	860-1250 VDC	860-1250 VDC	860-1250 VDC	860-1250 VDC
	Operating Voltage Range (MPPT)	860-1450 VDC	860-1450 VDC	860-1450 VDC	860-1450 VDC
	Number of MPP Trackers	1 MPPT	1 MPPT	1 MPPT	1 MPPT
	Max Operating Input Current	148.3 A	148.3 A	178.0 A	197.7 A
	Max Operating PV Power	128 kW	128 kW	153 kW	170 kW
	Max DC/AC Ratio Max Rated PV Power	2.6 332 kW	2.6 332 kW	2.2 332 kW	2.0 332 kW
	Max Rated PV Short-Circuit Current ($\sum I_{sc} \times 1.25$)	500 A	500 A	500 A	500 A
AC Output	Nominal Output Voltage	600 VAC, 3-Ph	600 VAC, 3-Ph	600 VAC, 3-Ph	600 VAC, 3-Ph
	AC Voltage Range	-12% to +10%	-12% to +10%	-12% to +10%	-12% to +10%
	Continuous Real Output Power	125 kW	125 kW	150 kW	166 kW
	Continuous Apparent Output Power	125 kVA	150 kVA	166 kVA	166 kVA
	Max Output Current	120 A	144 A	160 A	160 A
	Nominal Output Frequency	60 Hz	60 Hz	60 Hz	60 Hz
	Power Factor (Unity default)	+/- 0.80 Adjustable	+/- 0.80 Adjustable	+/- 0.80 Adjustable	+/- 0.80 Adjustable
	Total Harmonic Distortion (THD) @ Rated Load	<3%	<3%	<3%	<3%
	Grid Connection Type	3-Ph + N/GND	3-Ph + N/GND	3-Ph + N/GND	3-Ph + N/GND
	Fault Current Contribution (1 cycle RMS)	144 A	173 A	192 A	192 A
Efficiency	Peak Efficiency	98.9%	98.9%	99.0%	99.0%
	CEC Average Efficiency	98.5%	98.5%	98.5%	98.5%
	Tare Loss	2.75 W	2.75 W	2.75 W	2.75 W
Temperature	Ambient Temp Range	-40°F to 140°F (-40C to 60C)		-40°F to 140°F (-40C to 60C)	
	De-Rating Temperature	122°F (50C)		113°F (45C)	
	Storage Temperature Range	-40°F to 167°F (-40C to 75C)		-40°F to 167°F (-40C to 75C)	
	Relative Humidity (non-condensing)	0 - 95%		0 - 95%	
	Operating Altitude	Full Power up to 9,840 ft (3.0 km); De-Rate to 70% of Full Power at 13,123 ft (4.0 km)			
Communications	Advanced Graphical User Interface	WiFi			
	Communication Interface	Ethernet			
	Third-Party Monitoring Protocol	SunSpec Modbus TCP/IP			
	Web-Based Monitoring	Optional			
	Firmware Updates	Remote and Local			
Testing & Certifications	Safety Listings & Certifications	UL1741SB, IEEE 1547, UL 1998 (All models) UL 1699b Photovoltaic Arc-Fault Circuit Protection Certified (-A models)			
	Advanced Grid Support Functionality	Rule 21, UL 1741SB			
	Testing Agency	ETL			
	FCC Compliance	FCC Part 15 (Subpart B, Class A)			
Warranty	Standard and Options	5 Years Standard; Option for 10 Years			
Enclosure	Acoustic Noise Rating	73 dBA @ 1 m ; 67dBA @ 3 m			
	DC Disconnect	Integrated 2-Pole 250 A DC Disconnect			
	Mounting Angle	Vertical only			
	Dimensions	Height: 29.5 in. (750 mm) Width: 39.4 in. (1000 mm) Depth: 15.1 in. (380 mm)			
	Weight	270 lbs (122 kg)			
	Enclosure Rating and Finish	Type 4X, Polyester Powder-Coated Aluminum			



APPENDIX C

STORMWATER MANAGEMENT MEMORANDUM



DRAINAGE MEMORANDUM

PROPOSED
HARTFORD LANDFILL
SOLAR PROJECT

180 LIEBERT ROAD
HARTFORD, CT 06103

Prepared for:

**CTEC Solar
1 Griffin Road South
Bloomfield, CT**

Prepared by:

**All-Points Technology Corporation, P.C.
567 Vauxhall Street Extension, Suite 311
Waterford, CT 06385**

December 2023

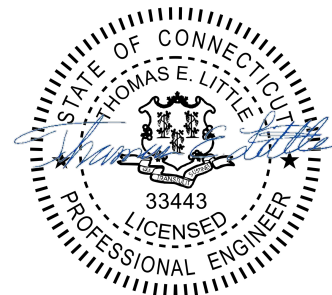


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DEVELOPED SITE CONDITIONS	1
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Introduction

At the request of CTEC Solar, All-Points Technology Corporation, P.C. ("APT") has undertaken the design development of a proposed four and a third megawatt (± 4.30 MW) direct current (DC), ± 3.38 MW (AC) alternating current solar electric generating facility in Hartford, Connecticut (the "Project"). The Project, known as the Hartford Landfill project, involves the installation of solar panels and associated equipment on the capped Hartford Landfill at 180 Liebert Road in Hartford, Connecticut ("Site").

The purpose of this memo is to provide explanation as to why the project does not require a new stormwater analysis and is not anticipated to have any stormwater drainage impacts. The design is intended to be in full compliance with the State regulations while taking prevailing site conditions and practical factors into account.

Existing Site Conditions

The Site is a city-owned irregular shaped parcel located at 180 Liebert Road in Hartford, Connecticut, that consists of approximately 122.44 \pm acres of developed land. The property has an existing capped landfill on the majority of the site with an existing solar facility on the southeastern portion of the landfill. Existing wetlands occupy the northern portion of the lot, outside of the proposed project area.

The Site's existing topography generally slopes radially from high points in the middle of the parcel. Within the project area, the topography slopes from high points to the east and to the west and includes slopes that range from approximately 0 to 4 percent throughout. Elevations within the project area range from approximately 46 ft AMSL feet to approximately 134 ft AMSL.

The site is an existing capped landfill. The existing landfill cap is covered on the western portion of the top of the Site with a layer of soil and pasture vegetation. The eastern portion of the top of the Site is covered with "AstroTurf". The existing slopes around the perimeter of the cap are covered with soil, vegetation and associated drainage swales which collect all of the existing stormwater runoff. A gravel access drive runs through the middle of the landfill.

Developed Site Conditions

The Project will be constructed in the eastern area of the top of the closed landfill. Access to the Site will be provided via the existing access drive from the existing City of Hartford Recycling Facility to the south of the site. The Project includes the installation of $\pm 7,956$ solar panels (Heliene 144HC M10 SL Bifacial 540W modules) on ballasted racking systems and associated utility features within 13.75 \pm acres of the Site. There will be no ground penetration or earthworks associated with this project other than the utility poles.

There is no net increase in impervious areas associated with this project. All existing stormwater collections systems have already been designed and installed to accommodate stormwater runoff from the existing surfaces, which are all considered impervious surfaces. No portion of the project area is within a wetland setback area or a flood zone.

Conclusion

Since the existing landfill site has stormwater control devices already installed and there is no proposed ground disturbance other than the installation of the utility poles near the proposed interconnect. Furthermore, there will be no increase increase in impervious area or change in ground cover, which will result in an insignificant increase in stormwater run-off. Thus, no improvements are being proposed to the existing stormwater facilities. In conclusion, the proposed solar array is not expected to result in any change in runoff conditions to the surrounding areas and properties.

APPENDIX D

DEEP FORESTRY AND DOAG CORRESPONDENCE



November 30, 2023

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

cc: Michael Morrison
Commercial Project Coordinator
CTEC Solar
1 Griffin Rd S Suite 200,
Bloomfield, CT 06002

RE: Hartford Landfill, 180 Liebert Road, Hartford. ±3.3-megawatt (AC) solar photovoltaic electric generating facility

Dear Ms. Bachman,

Michael Morrison, Commercial Project Coordinator representing CTEC Solar, LLC (“Petitioner”) has contacted the Connecticut Department of Energy and Environmental Protection (“DEEP”) Bureau of Natural Resources and informed us of the intention to file a petition for a declaratory ruling with the Connecticut Siting Council. The Petitioner proposes to construct a solar project with a capacity of two or more megawatts, to be located at 180 Liebert Road, Hartford, Connecticut. (“Site”).

Pursuant to Sec. 16-50k of the Connecticut General Statutes the DEEP Bureau of Natural Resources staff have reviewed documents submitted by Michael Morrison concerning this proposed project, which includes a site map attached to an email received November 27, 2023. In conducting such review of the proposed project, DEEP Bureau of Natural Resources has determined that such proposed project, as represented in the above-mentioned documents **will not** materially affect the status of such Site as core forest.

Nothing in this letter relieves the Petitioner of other obligations under applicable federal, state, and local law that may be necessary as part of the proposed project design and implementation.

If you have any questions, you may contact me at 860-424-3060, or by mail at 79 Elm Street, Sixth Floor, Hartford, CT 06106-5127.

Connecticut is one of the most heavily forested states in America. Our forests clean our air and water, shelter our wildlife, sequester carbon, contribute tens of millions of dollars to our economy, and add immeasurably to the quality of our lives. Yet every day, our forests are under threat. Invasive insects and diseases and our dense and growing human population continue to stress our forests in unprecedented ways. Thank you for helping us to conserve a healthy core forest for future generations, providing public transparency and working to make thoughtful development choices.

Sincerely,



Christopher Martin, State Forester
Bureau of Natural Resources
Department of Energy and Environmental Protection

CC: Bryan P. Hurlburt, Connecticut Department of Agriculture
Eileen Underwood, Connecticut Department of Agriculture
Jenny Dickson, Acting Chief, Bureau of Natural Resources, DEEP
DEEP.OPPD@ct.gov
siting.council@ct.gov



CONNECTICUT DEPARTMENT OF AGRICULTURE

450 Columbus Blvd, Suite 701 | Hartford, Connecticut 06103 | 860.713.2500
Office of the Commissioner
An Equal Opportunity Employer



January 10, 2024

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: CTEC Solar – 180 Liebert Road in Hartford, proposed 3.3-Megawatt AC solar project –
NMA Letter from Agency

Dear Executive Director Bachman:

Pursuant to 16-50k(a) of the Connecticut General Statutes, we have reviewed the above cited project with respect to agricultural impacts, specifically, to determine whether “...such project will not materially affect the status of such land as prime farmland...”

The Petitioner is proposing to construct a 3.3-megawatt solar photovoltaic electric generating facility to be located on the synthetic capped portion of the City of Hartford’s former landfill.

Based on preliminary information provided to DOAG on November 27, 2023 (enclosed), the Department of Agriculture concludes this project **will not** materially affect the status of project land as prime farmland.

Should any changes raise concerns to the Agency, we reserve the right to modify our position on this project, including opposing it, as detailed plans are provided by the Petitioner. Nothing in this letter relieves the Petitioner of other obligations under applicable federal, state, and local law that may be necessary as part of the proposed project design and implementation.

If you have any questions, please feel free to contact Eileen Underwood of my staff. Eileen can be reached at eileen.underwood@ct.gov.

Sincerely,

Bryan P. Hurlburt
Commissioner

Enc.

Cc: Katie Dykes, Commissioner, Department of Energy and Environmental Protection
Michael Morrison, CTEC Solar

November 27, 2023

Commissioner Bryan P. Hurlburt
Connecticut Department of Agriculture
450 Columbus Boulevard, Suite 701
Hartford, CT 06103

Re: CTEC Solar, LLC's Request for No Material Impact Letter
Hartford Landfill, 180 Liebert Road, Hartford

Dear Commissioner Hurlburt:

Pursuant to Connecticut General Statutes ("C.G.S.") Section 16-50k(a), CTEC Solar, LLC ("CTEC") is seeking written confirmation from the Department of Agriculture ("Department") that the solar photovoltaic electric generating project described below will not materially affect the status of any identified prime farmland.

CTEC plans to filing a petition for a declaratory ruling with the Connecticut Siting Council, pursuant to CGS Sections 4-176 and 16-50k, for the proposed construction, maintenance and operation of a ±3.3-megawatt (AC) solar photovoltaic electric generating facility and associated electrical interconnection equipment (the "Project") at 180 Liebert Road, Hartford, Connecticut ("Property"). The Project will be located on the site of the former, now closed City of Hartford Landfill ("Landfill"). The Project will occupy approximately 13.75 acres, with the solar array installed on the synthetic capped portion of the Landfill and the electrical interconnection route crossing a small portion of the maintained turf area. No prime farmland is located on the Landfill proper or within the Project boundaries.

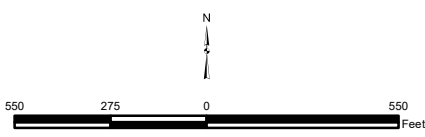
Attached is a figure depicting Prime and Statewide Important Farmland Soils within the northern portion of the Property. As shown, no portion of the Project is within that area. No impacts to Prime Farmland soils will occur. C-TEC therefore requests that the Department provide written concurrence that no material impact on Prime Farmland soils will result from development of the Project.

Should the Department have any questions regarding this request or the Project, please do not hesitate to contact me. Thank you.



- Legend**
- Property
 - Site
 - Approximate Parcel Boundary
 - Municipal Boundary
 - Farmland Soils**
 - Prime Farmland Soils
 - Statewide Important Farmland Soils

Map Notes:
 Base Map Source: 2019 Aerial Photograph (CTECO)
 Map Scale: 1 inch = 550 feet
 Map Date: November 2023



Farmland Soils Map

Proposed Solar Facility
 Hartford Landfill
 180 Liebert Road
 Hartford, Connecticut



APPENDIX E

USFWS/NDDDB COMPLIANCE STATEMENT



USFWS & NDDB COMPLIANCE

December 13, 2023

Mr. Michael Morrison
Commercial Project Coordinator
CTEC SOLAR
1 Griffin Road S, Suite 200
Bloomfield, Connecticut 06002

Re: Hartford Landfill – 180 Liebert Road, Hartford, Connecticut
APT Job No: CT481510

On behalf of CTEC SOLAR, All-Points Technology Corporation, P.C. (“APT”) performed an evaluation with respect to possible Federally- and State-listed, Threatened, Endangered or Special Concern species in order to determine if the proposed referenced solar energy generation facility (the “Facility” or “Project”) would result in a potential adverse effect to listed species.

APT understands that CTEC SOLAR proposes the construction of a solar energy generation facility on a portion of the Hartford Landfill site located at 180 Liebert Road in Hartford, Connecticut (“Subject Property”).

USFWS

The federal consultation was completed in accordance with Section 7 of the Endangered Species Act through the U.S. Fish and Wildlife Service’s (“USFWS”) Information, Planning, and Conservation System (“IPaC”). Based on the results of the IPaC review, one federally listed¹ Endangered species is known to occur in the vicinity of the Property documented as the northern long-eared bat (“NLEB”; *Myotis septentrionalis*). Please refer to the enclosed official species list.² As a result of this preliminary finding, APT performed an evaluation to determine if the proposed referenced Facility would result in a likely adverse effect to NLEB.

The proposed Facility would be located within the Hartford Landfill, primarily on synthetic turf that is integrated into the landfill’s cap system. No tree clearing will result from the project; trees potentially provide NLEB habitat. A review of the Connecticut Department of Energy & Environmental Protection (“CTDEEP”) Wildlife Division Natural Diversity Data Base (“NDDB”) NLEB habitat map³ revealed that the proposed Facility is not within 150 feet of a known occupied NLEB maternity roost tree and is not within 0.25 mile of a known NLEB hibernaculum. The nearest NLEB habitat resource to the proposed Facility is located ±10.9 miles to the northwest in East Granby.

¹ Listing under the federal Endangered Species Act

² Monarch butterfly (*Danaus plexippus*), a Candidate species, is also listed for the Property. Candidate species have no current protections under the ESA and there is no requirement to consider project impacts.

³ *Northern long-eared bat areas of concern in Connecticut to assist with Federal Endangered Species Act Compliance* map. February 1, 2016.

NLEB has been reclassified as Endangered under the ESA. The reclassification eliminates use of the previous 4(d) rule for NLEB; 4(d) rules may only be applied to Threatened species. A NLEB Interim Consultation Framework has been developed by USFWS for projects that are reasonably certain to occur before April 1, 2024 (date on which the NLEB Interim Consultation Framework expires) to facilitate transition from the 4(d) rule to typical ESA consultation procedures for Endangered species. APT submitted the effects determination using the new NLEB Determination Key ("DKey") within the IPaC system for this Facility and determined it would have "No Effect" on NLEB. No further consultation/coordination for this project is required with USFWS. Please refer to the enclosed USFWS October 25, 2023 letter confirming the NLEB "No Effect" determination and ESA compliance for the Facility.

NDDB

APT reviewed the most recent DEEP NDDB mapping (June 2023), which revealed that a NDDB polygon is located within the Property. Please refer to the enclosed NDDB Map which depicts the NDDB polygon encompassing the northern and eastern portion of the Subject Property. Since the proposed Facility and Subject Property are located within a NDDB buffer area, consultation with DEEP is required in accordance with their review policy⁴. Prior informal consultation revealed that State-listed grassland bird species (savannah sparrow, grasshopper sparrow, bobolink, and eastern meadowlark) are documented to use maintained grassland that occupies much of the capped landfill. A 50-foot buffer will be provided between the proposed Facility and the grassland habitat to the west to avoid "edge effect" disturbances to any breeding activity by State-listed grassland bird species. In addition, the proposed Facility would restrict construction activities to the non-breeding season for these grassland bird species between October 1st – May 1st. With these protective measures, the proposed Facility would not adversely impact State-listed grassland bird species. NDDB responded with a Determination Letter (NDDB No. 202308708) on November 28, 2023 concurring with the proposed protective measures. Please see attached NDDB Determination Letter.

Therefore, the proposed Facility is not anticipated to adversely impact any federal or state Threatened, Endangered or Special Concern species.

Sincerely,
All-Points Technology Corporation, P.C.



Dean Gustafson
Senior Biologist

Enclosures

⁴ DEEP Requests for NDDB State Listed Species Reviews. <https://portal.ct.gov/DEEP/NDDB/Requests-for-NDDB-Environmental-Reviews>

USFWS Letters

- ▶ Species List
- ▶ NLEB Determination Key Letter



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To:
Project Code: 2024-0008867
Project Name: C-Tec Hartford Landfill Solar

October 25, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Updated 4/12/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the “**New England Field Office Endangered Species Project Review and Consultation**” website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

<https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review>

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat - (Updated 4/12/2023) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

<https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis>

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at newengland@fws.gov to see if reinitiation is necessary.

Additional Info About Section 7 of the Act

Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/service/section-7-consultations>

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

<https://www.fws.gov/program/migratory-bird-permit>

<https://www.fws.gov/library/collections/bald-and-golden-eagle-management>

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

PROJECT SUMMARY

Project Code: 2024-0008867
Project Name: C-Tec Hartford Landfill Solar
Project Type: Power Gen - Solar
Project Description: C-Tec Solar intends to lease a portion of the ±122.44-acre Property at the Hartford Landfill, 180 Liebert Road in Hartford, Connecticut for development of a solar photovoltaic electric generating facility. The Property contains the closed and capped Hartford Landfill.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.795705600000005,-72.65207829244906,14z>



Counties: Hartford County, Connecticut

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To:
Project code: 2024-0008867
Project Name: C-Tec Hartford Landfill Solar

October 25, 2023

Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'C-Tec Hartford Landfill Solar'

Dear Deborah Gustafson:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 25, 2023, for 'C-Tec Hartford Landfill Solar' (here forward, Project). This project has been assigned Project Code 2024-0008867 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of "No Effect" on the northern long-eared bat. If there are no updates on listed species, no further consultation/coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the New England Ecological Services Field Office and reference Project Code 2024-0008867 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

C-Tec Hartford Landfill Solar

2. Description

The following description was provided for the project 'C-Tec Hartford Landfill Solar':

C-Tec Solar intends to lease a portion of the ±122.44-acre Property at the Hartford Landfill, 180 Liebert Road in Hartford, Connecticut for development of a solar photovoltaic electric generating facility. The Property contains the closed and capped Hartford Landfill.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.795705600000005,-72.65207829244906,14z>



DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (*Myotis septentrionalis*). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

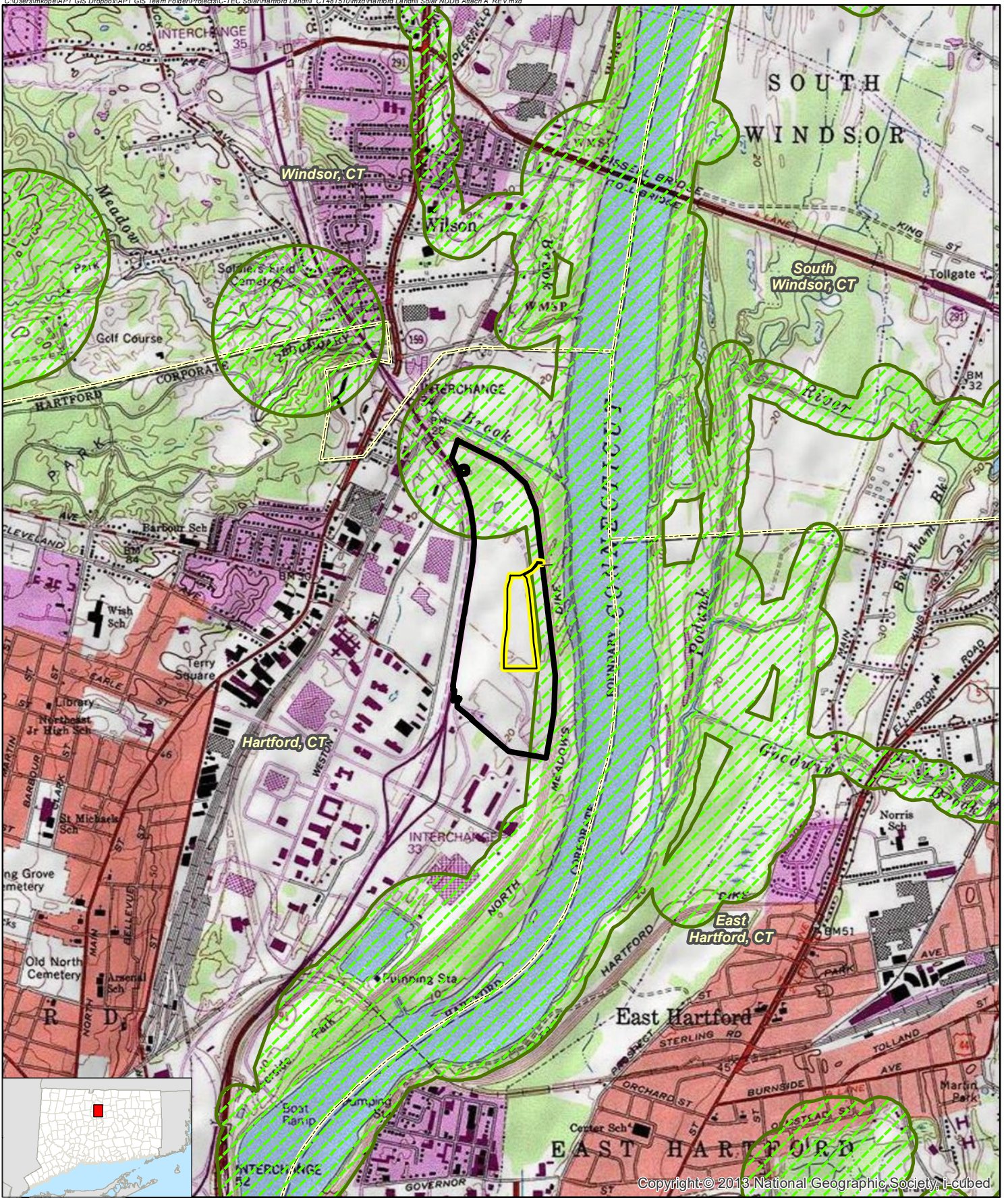
2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats are likely to be present in the action area, answer "NO" and continue through the key.

Do you want to make a no effect determination?

Yes

NDDDB Consultation

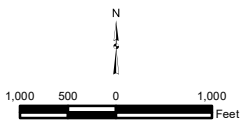
- ▶ NDDDB Map
- ▶ NDDDB Determination Letter



Copyright © 2013 National Geographic Society, I-cubed

- Legend**
- Site
 - Project Area
 - Natural Diversity Database (updated June 2023)
 - Municipal Boundary

Map Notes:
 Base Map Source: USGS 7.5 Minute Topographic
 Quadrangle Map, Hartford North, CT (1984)
 Map Scale: 1:24,000
 Map Date: October 2023



**Attachment A:
 Overview Map**

Proposed Solar Energy Facility
 Hartford Landfill
 180 Liebert Road
 Hartford, Connecticut





11/28/2023

Dean Gustafson
C-TEC SOLAR, LLC
1 Griffin Rd S
Bloomfield, CT 06002
dgustafson@allpointstech.com

Subject: Hartford Landfill

Filing #: 103584

NDDDB - New Determination Number: 202308708

Expiration Date: 11/28/2025

Location: 180 Leibert Rd, Hartford

I have reviewed Natural Diversity Database (NDDDB) maps and files regarding this project. According to our records, there are State-listed species (RCSA Sec. 26-306) documented nearby the area.

- **Grasshopper sparrow (*Ammodramus savannarum*) State Endangered**
- **Eastern meadowlark (*Sturnella magna*) State Threatened**
- **Savannah sparrow (*Passerculus sandwichensis*) State Special Concern**
- **Bobolink (*Dolichonyx oryzivorus*) State Special Concern**

In Connecticut, grasslands are among the most threatened and rare habitats. There are seven species of breeding grassland birds and that require grasslands as their primary habitat that are state listed in Connecticut. Most of Connecticut's grasslands would revert to forest without active management. Increasing development pressures on Connecticut's most important grassland habitats, exacerbates this loss of habitat through natural succession.

- I concur your site placement will minimize impacts. The solar array will be confined to the capped engineered turf and provide a 50 foot buffer to suitable habitat.

Construction activities: Land disturbance activities including digging, ground clearing, heavy machinery driving staging, or trampling that will occur more than 100 feet into or cut across in a way that fragments large parcels of grassland habitat should be done when grassland birds are not breeding. Breeding primarily takes place between **May 1- August 30**.

- Conduct land disturbance activities outside of the breeding season to avoid impact to the individuals.

Site Management: Be aware that mowing as a management technique in and around solar panels will need to consider the life history requirements for grassland birds. Mowing is major source of human induced nest failure.

- Avoid mowing or vehicular traffic in grassland habitat during peak use by these species (April 15-August 15).

Your submission information indicates that your project requires a state permit, license, registration, or authorization, or utilizes state funding or involves state agency action. This NDDDB - New determination may be utilized to fulfill the Endangered and Threatened Species requirements for state-issued permit applications, licenses, registration submissions, and authorizations.

Please be aware of the following limitations and conditions:

Natural Diversity Database information includes all information regarding listed species available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, land owners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as enhance existing data. Such new information is incorporated into the Database and accessed through the ezFile portal as it becomes available. New information may result in additional review, and new or modified restrictions or conditions may be necessary to remain in compliance with certain state permits.

- During your work listed species may be encountered on site. A report must be submitted by the observer to the Natural Diversity Database promptly and additional review and restrictions or conditions may be necessary to remain in compliance with certain state permits. Please fill out the [appropriate survey form](#) and follow the instructions for submittal.
- Your project involves the state permit application process or other state involvement, including state funding or state agency actions; please note that consultations with your permit analyst or the agency may result in additional requirements. In this situation, additional evaluation of the proposal by the DEEP Wildlife Division may be necessary and additional information, including but not limited to species-specific site surveys, may be required. Any additional review may result in specific restrictions or conditions relating to listed species that may be found at or in the vicinity of the site.
- If your project involves preparing an Environmental Impact Assessment, this NDDDB consultation and determination should not be substituted for biological field surveys assessing on-site habitat and species presence.
- The NDDDB - New determination for the Hartford Landfill as described in the submitted information and summarized at the end of this document is valid until 11/28/2025. This determination applies only to the project as described in the submission and summarized at the end of this letter. Please re-submit an updated Request for Review if the project's scope of work and/or timeframe changes, including if work has not begun by 11/28/2025.

If you have further questions, please contact me at the following:

Shannon Kearney
CT DEEP Bureau of Natural Resources
Wildlife Division
Natural Diversity Database
79 Elm Street
Hartford, CT 06106-5127
(860) 424-3170
Shannon.Kearney@ct.gov

Please reference the Determination Number 202308708 when you e-mail or write. Thank you for consulting the Natural Diversity Data Base.

Shannon Kearney
Wildlife Division- Natural Diversity Data Base
79 Elm Street
Hartford, CT 06106-5127
(860) 424-3170
Shannon.Kearney@ct.gov

Application Details:

Project involves federal funds or federal permit:	No
Project involves state funds, state agency action, or relates to CEPA request:	No
Project requires state permit, license, registration, or authorization:	Yes
DEEP enforcement action related to project:	
Project Type:	Energy and Utility Production Facilities and Distribution Infrastructure
Project Sub-type:	New facility construction
Project Name:	Hartford Landfill
Project Description:	

APPENDIX F

SHPO CORRESPONDENCE AND CULTURAL RESOURCES RECONNAISSANCE SURVEY REPORT



Department of Economic and
Community Development

State Historic Preservation Office

February 9, 2021

Mr. David R. George
Heritage Consultants
PO Box 310249
Newington, CT 06131

Subject: Phase IA Cultural Resource Reconnaissance Survey
Proposed Solar Facility
180 Liebert Road
Hartford, Connecticut
ENV-21-0417

Dear Mr. George:

The State Historic Preservation Office (SHPO) has reviewed the cultural resource reconnaissance survey prepared by Heritage Consultants, LLC (Heritage), dated October 27, 2020. The proposed activities are under the jurisdiction of the Connecticut Siting Council and are subject to review by this office pursuant to the Connecticut Environmental Policy Act (CEPA). The proposed undertaking includes the construction of a solar facility, which is to occupy an approximately 22.3 acre project area within a larger 122.4 acre parcel. The parcel is bordered to the north by forested area, to the east by the Connecticut River, to the south by an industrial park, and to the west by Interstate 91. Access is to be from the south, through existing paved roads. The submitted report is well-written, comprehensive, and meet the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*.

No previously recorded archaeological sites are located within 0.5 miles of the project area. Similarly, no properties listed on either the State or National Register of Historic Places are located within 0.5 miles of the project area. Soils are characterized as Dump soils and Udorthents, like subjected to extensive disturbance such as cutting, smoothing, or filling.

As a result of the information submitted, SHPO concurs with the findings of the report that additional archeological investigations of the project area is not warranted and that no historic properties will be affected by the proposed activities.

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | ct.gov/historic-preservation

An Affirmative Action/Equal Opportunity Employer An Equal Opportunity Lender



Department of Economic and
Community Development

State Historic Preservation Office

This office appreciates the opportunity to review and comment upon this project. For additional information, please contact Marena Wisniewski, Environmental Reviewer, at (860) 500-2357 or marena.wisniewski@ct.gov.

Sincerely,

A handwritten signature in black ink that reads "Jonathan Kinney". The signature is written in a cursive style with a prominent flourish at the end.

Jonathan Kinney
Deputy State Historic Preservation Officer

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | ct.gov/historic-preservation

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October 27, 2020

Mr. Brian Parker
All-Points Technology Corporation
3 Saddlebrook Drive
Killingworth, Connecticut 06419

RE: Preliminary Archaeological Assessment of a Proposed Solar Facility Located at 180 Liebert Road in Hartford, Connecticut

Mr. Parker:

Heritage Consultants, LLC (Heritage), is pleased to have this opportunity to provide All-Points Technology Corporation (All-Points) with the following preliminary archaeological assessment of a proposed solar facility at 180 Liebert Road in Hartford, Connecticut (Figure 1). This location contains the former Hartford Landfill (<https://www.hartfordbusiness.com/article/hartford-landfill-officially-closes-after-75-years>. Accessed on October 27, 2020). The current project entailed completion of a cultural resources summary based on the examination of data obtained from the Connecticut State Historic Preservation Office (CT-SHPO), as well as GIS data, including historical mapping, aerial photographs, and topographic quadrangles, maintained by Heritage. This investigation is based upon project location information provided to Heritage by All-Points. The objectives of this study were to gather and present data regarding previously identified cultural resources situated within 0.8 km (0.5 mi) of the proposed solar facility and to investigate the project area in terms of its natural and historical characteristics so that the need for completing additional cultural resources investigations could be determined.

Figure 2, which is a historical map excerpt dating from 1855, shows that the region containing the proposed solar facility was developed by the middle of the nineteenth century with numerous residences and buildings present to the east and to the west of the Connecticut River. Residences located in the general vicinity of the project area in 1855 included those associated with Timothy Mather, Moses Cook, Edward Goodwin, and Joseph Pratt, Jr., as well as several additional labeled and unlabeled buildings in the larger project region. As of 1855, an unlabeled railroad line also extended from north to south and was situated to the west of the proposed project area; an unlabeled road is also visible to the west of the railroad line. A subsequent historical map dating from 1869 depicts what appears to have been a slight decrease in settlement and activity in the general region; however, the residences of T. Mather, M. Cook, and C. Goodwin were still visible. The 1869 map also shows the same railroad line as the 1855 map, however, as of this date it is labeled as the Hartford and New Haven Railroad. The unlabeled road depicted on the 1855 map is labeled as Main Street on the 1869 map (Figure 3). By the time of a subsequent 1884 map, there were no labeled residences remaining along the above-referenced railroad line; however, an increased number of residences were mapped on the east side of the river (Figure 4).

The earliest readily available aerial image of the region containing the proposed solar facility dates from 1934 (Figure 5). It shows that the project area contained what appears to be agricultural fields and few trees at that time. No residences or structures are shown on the 1934 aerial in the immediate vicinity of the proposed solar facility. The Hartford and New Haven Railroad, shown on the 1869 map and still in

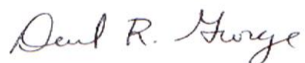
operation of as 1934, began service in 1844 and transferred operations in 1872 when it merged with the Hartford and Springfield Railroad to form the New Haven, Hartford, and Springfield Railroad.

A 1951 aerial photo of the project region shows the project area had undergone significant changes during the first half of the twentieth century. The Hartford landfill, which now encompasses the project area, was opened in 1940 and is visible in the 1951 image. The landfill originally served as an open-burning dump and the dark areas on the aerial image likely represent areas where trashed was incinerated (Figure 6). At the time of a subsequent 2004 aerial image, Interstate 91 was visible to the west of the project area. By 2004, the landfill had been transformed into a trash-to-energy facility (Figure 7). The Hartford Landfill ceased operations in 2008 and a four-phase capping project began in that year. The capping project was finished in 2015. It is clear in the 2008 and 2019 aerial images that solar panels had been installed on the summit of the landfill during the capping project (Figures 8 and 9).

A review of cultural resources on file with the CT-SHPO revealed that there are no previously identified archaeological sites or National Register of Historic Places properties or districts situated within 0.8 km (0.5 mi) of the proposed solar facility (Figures 10 and 11). Soils located within the project area are described as Dump soils (302) (Figure 12). Dumps soils are areas that are used for garbage disposal from both residences and commercial businesses. Other soils in the immediate area are described as Udorthents soils. They are generally well to excessively drained and have been subjected to extensive disturbance such as cutting, smoothing, or filling. Udorthents soils have no archaeological sensitivity.

Based on the current condition of the project area, as well as the historical changes and extensive disturbance to the region noted above, it is the professional opinion of Heritage Consultants, LLC that no additional archaeological examination of this area is recommended prior to construction of the proposed solar facility. If you have any questions regarding this Technical Memorandum, or if we may be of additional assistance with this or any other projects you may have, please do not hesitate to call us at 860-299-6328. or email us info@heritage-consultants.com. We are at your service.

Sincerely,



David R. George, M.A., R.P.A

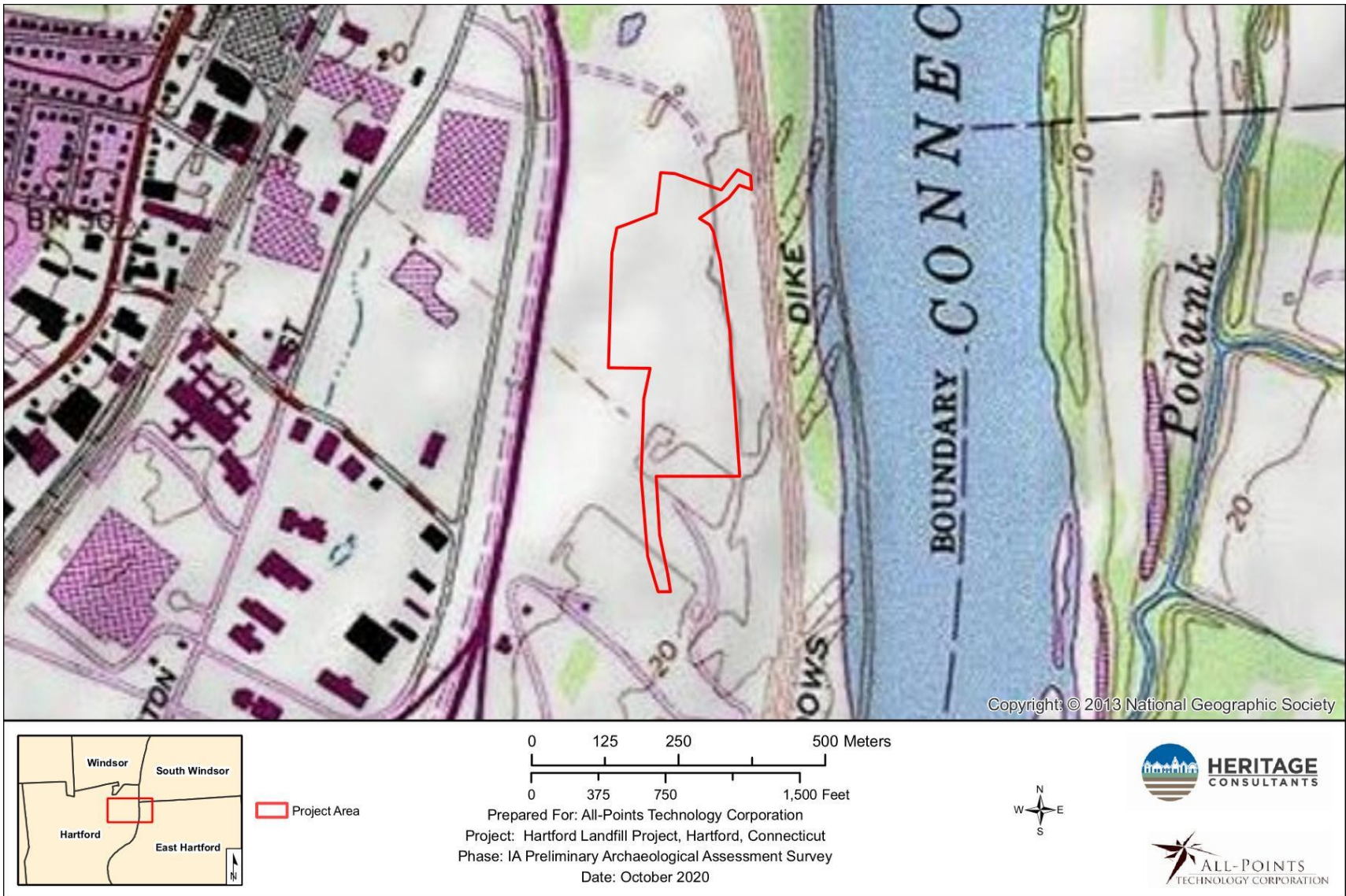


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the proposed project area in Hartford, Connecticut.

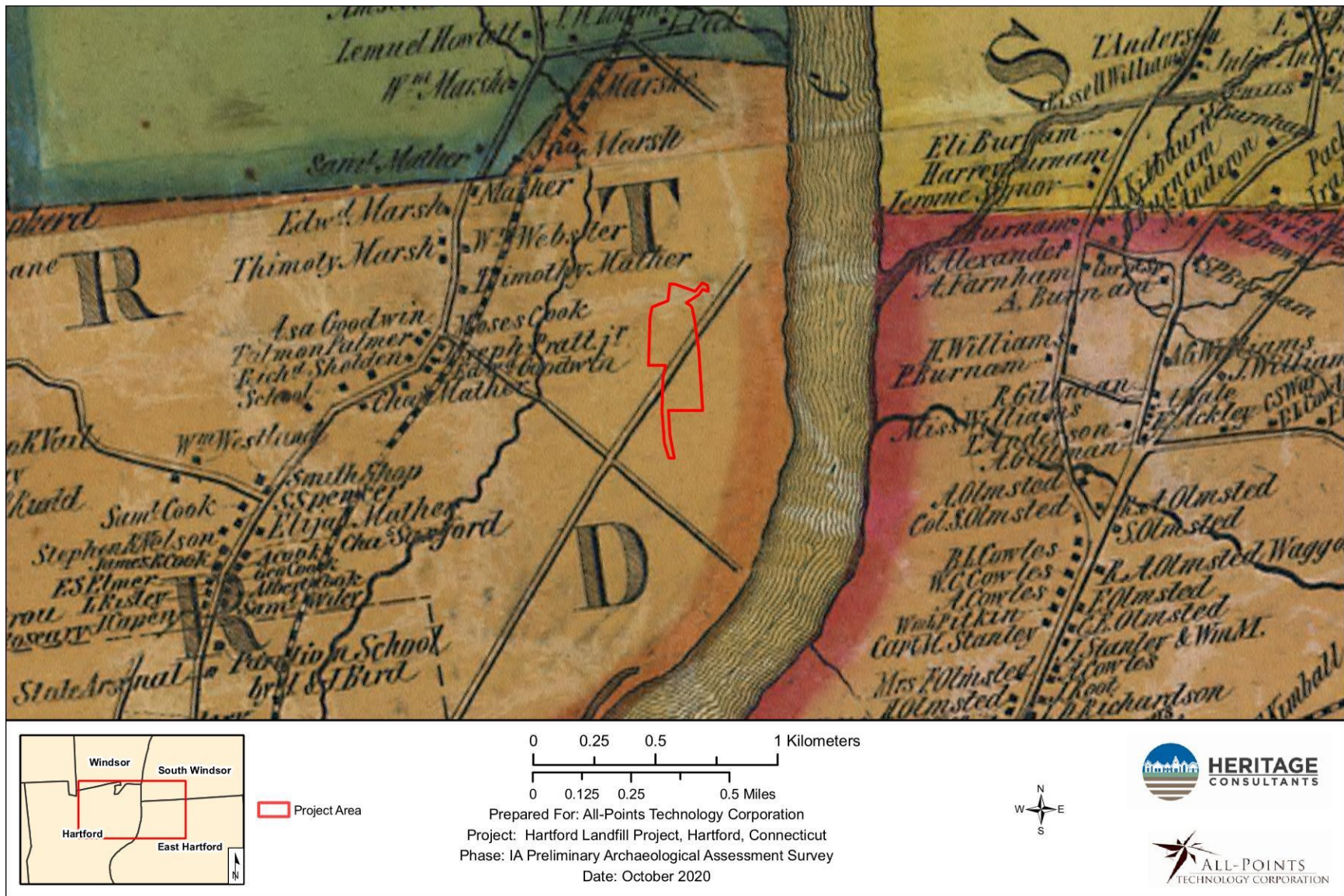


Figure 2. Excerpt from an 1855 map showing the proposed project area in Hartford, Connecticut.

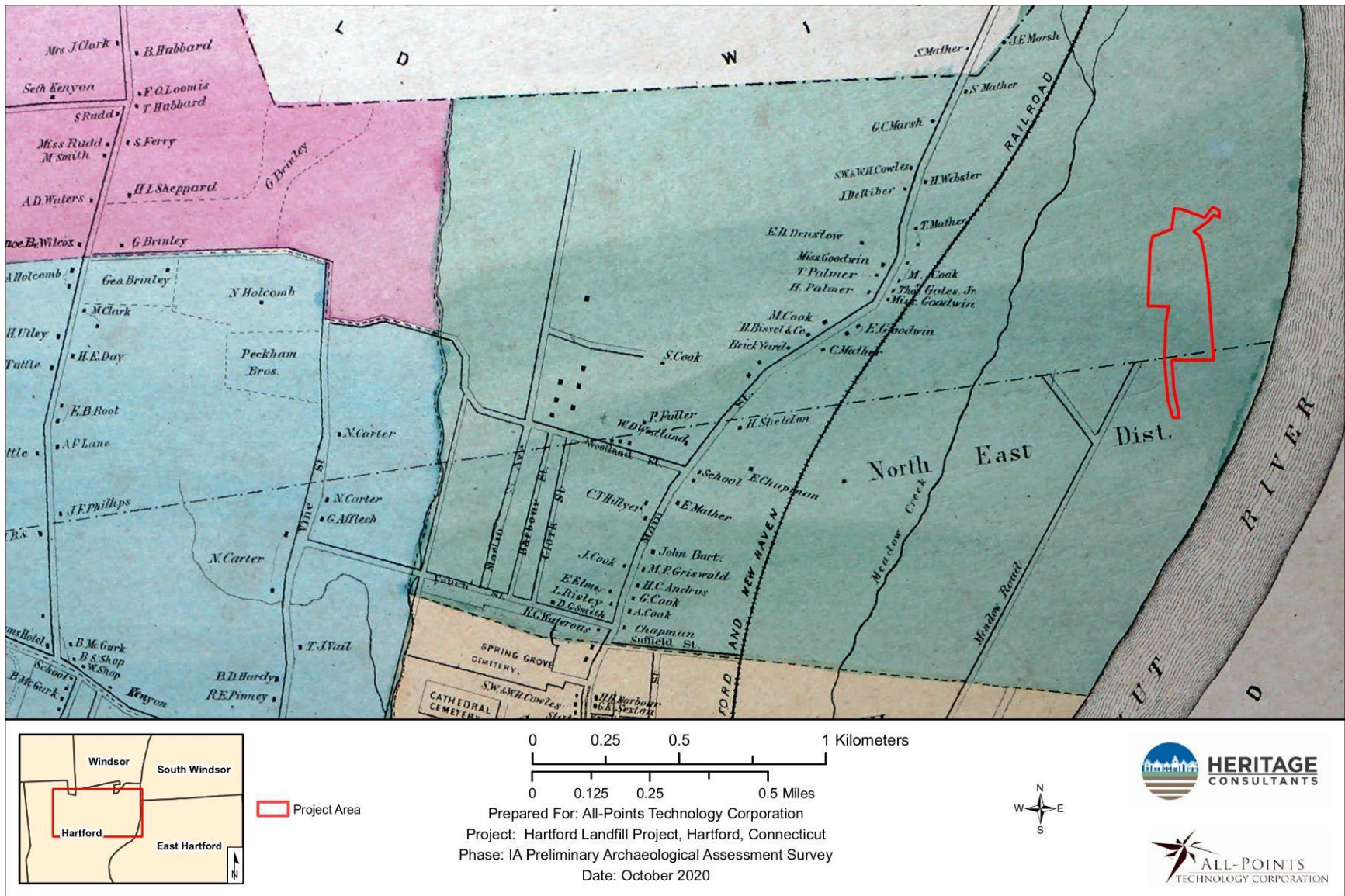


Figure 3. Excerpt from an 1869 map showing the proposed project area in Hartford, Connecticut.

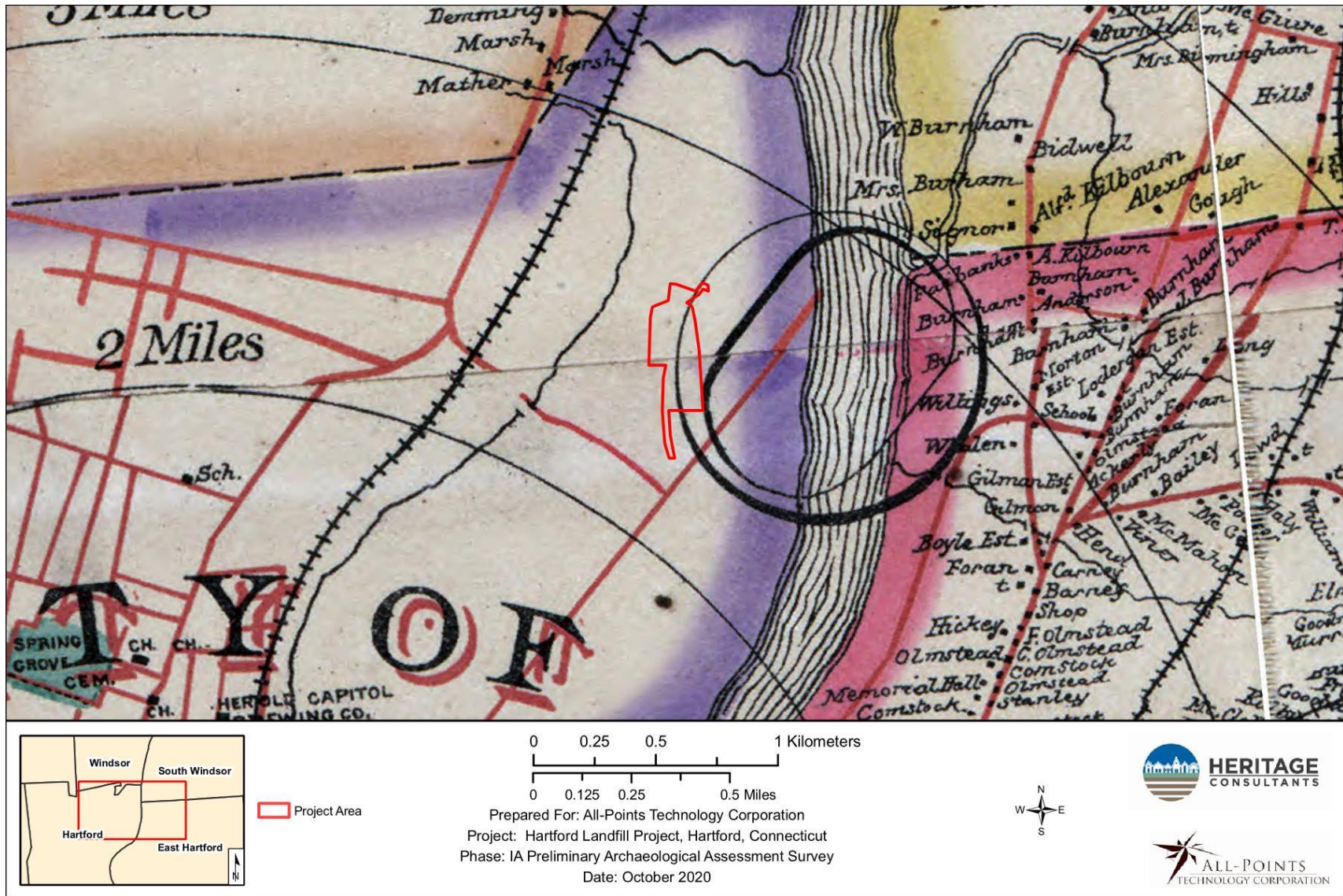


Figure 4. Excerpt from an 1884 map showing the proposed project area in Hartford, Connecticut.



Figure 5. Excerpt from a 1934 aerial image showing the proposed project area in Hartford, Connecticut.

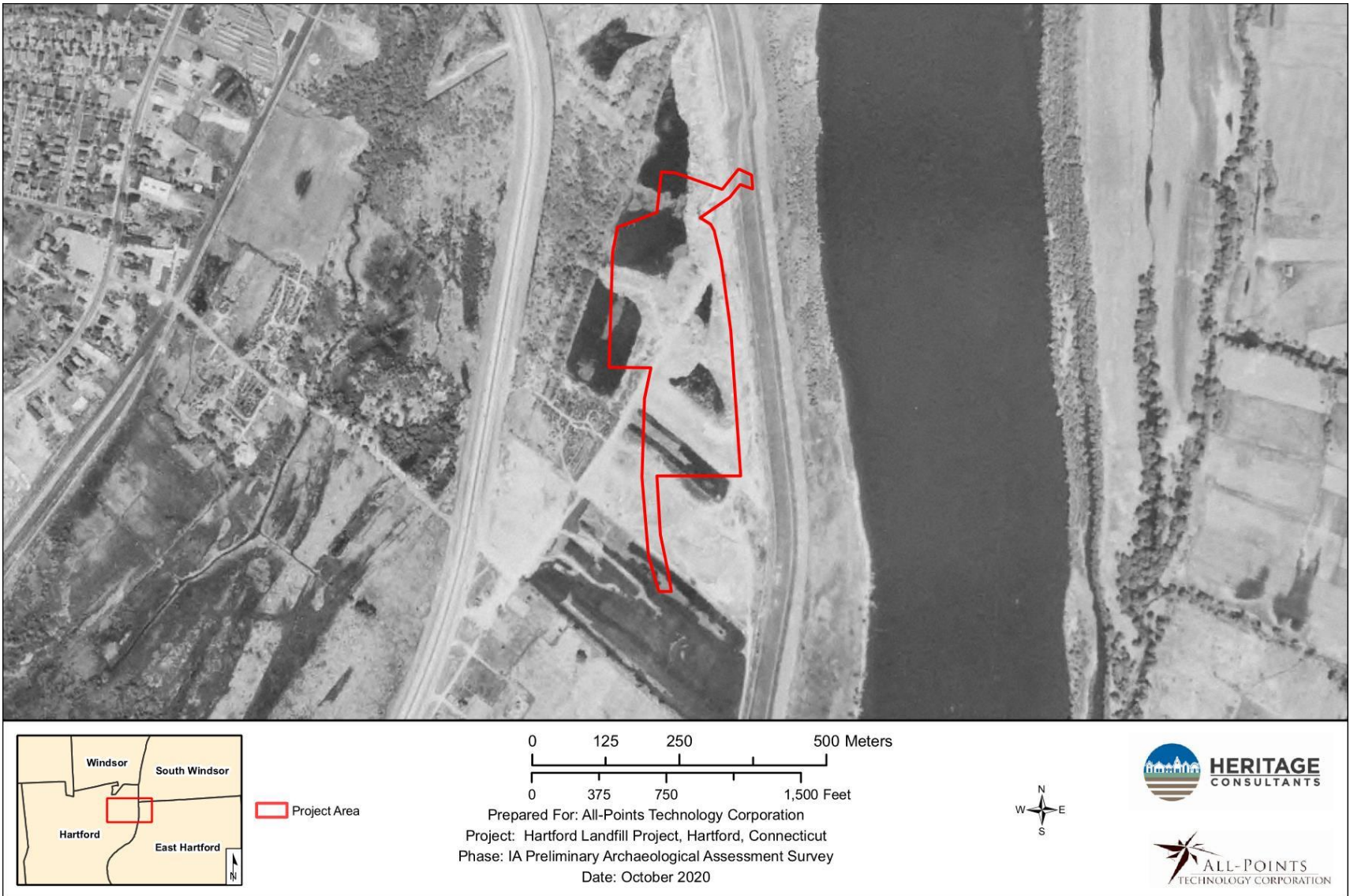


Figure 6. Excerpt from a 1951 aerial image showing the proposed project area in Hartford, Connecticut.

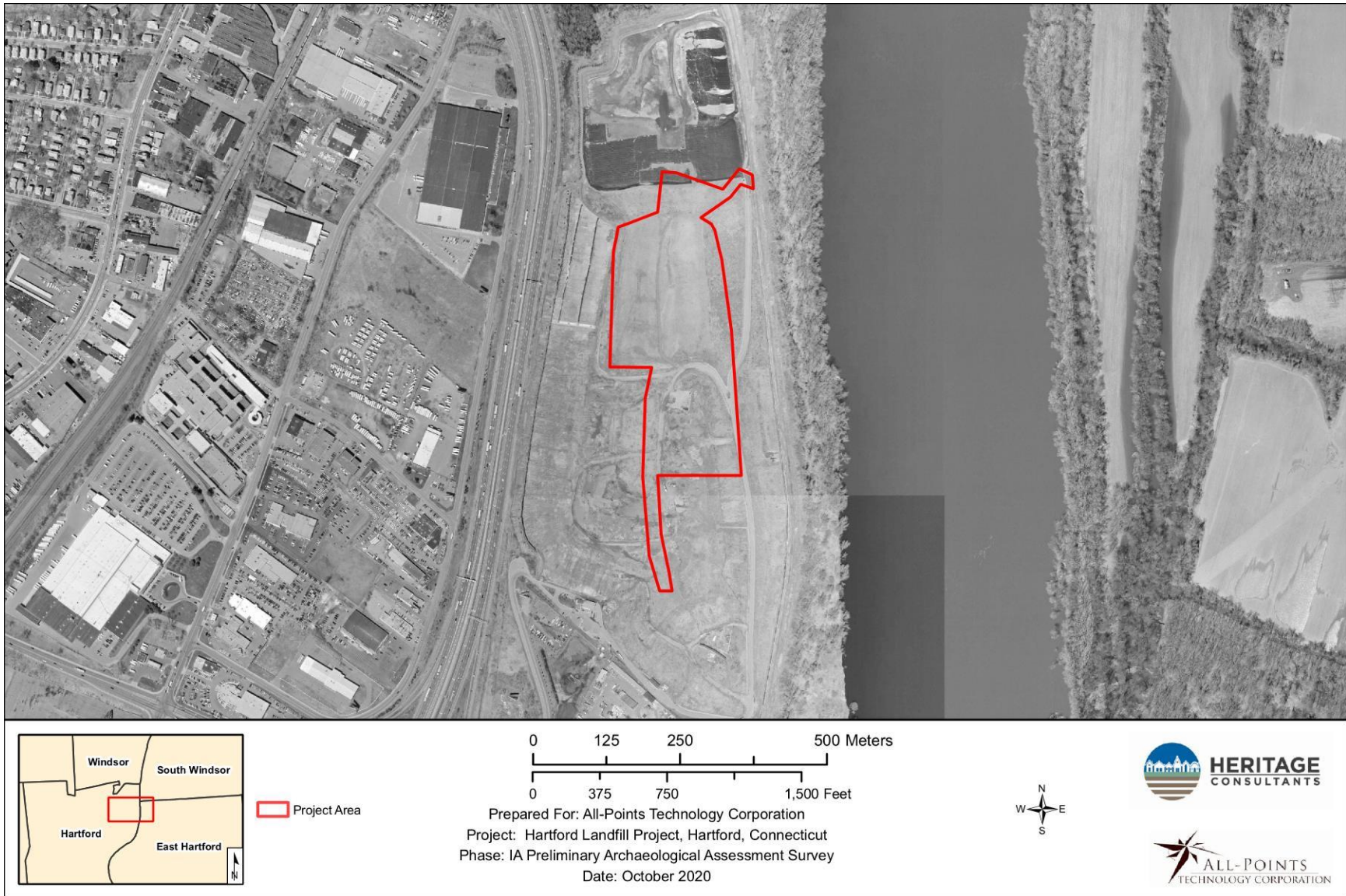


Figure 7. Excerpt from a 2004 aerial image showing the proposed project area in Hartford, Connecticut.



Figure 8. Excerpt from a 2016 aerial image showing the proposed project area in Hartford, Connecticut.



Figure 9. Excerpt from a 2019 aerial image showing the proposed project area in Hartford, Connecticut.

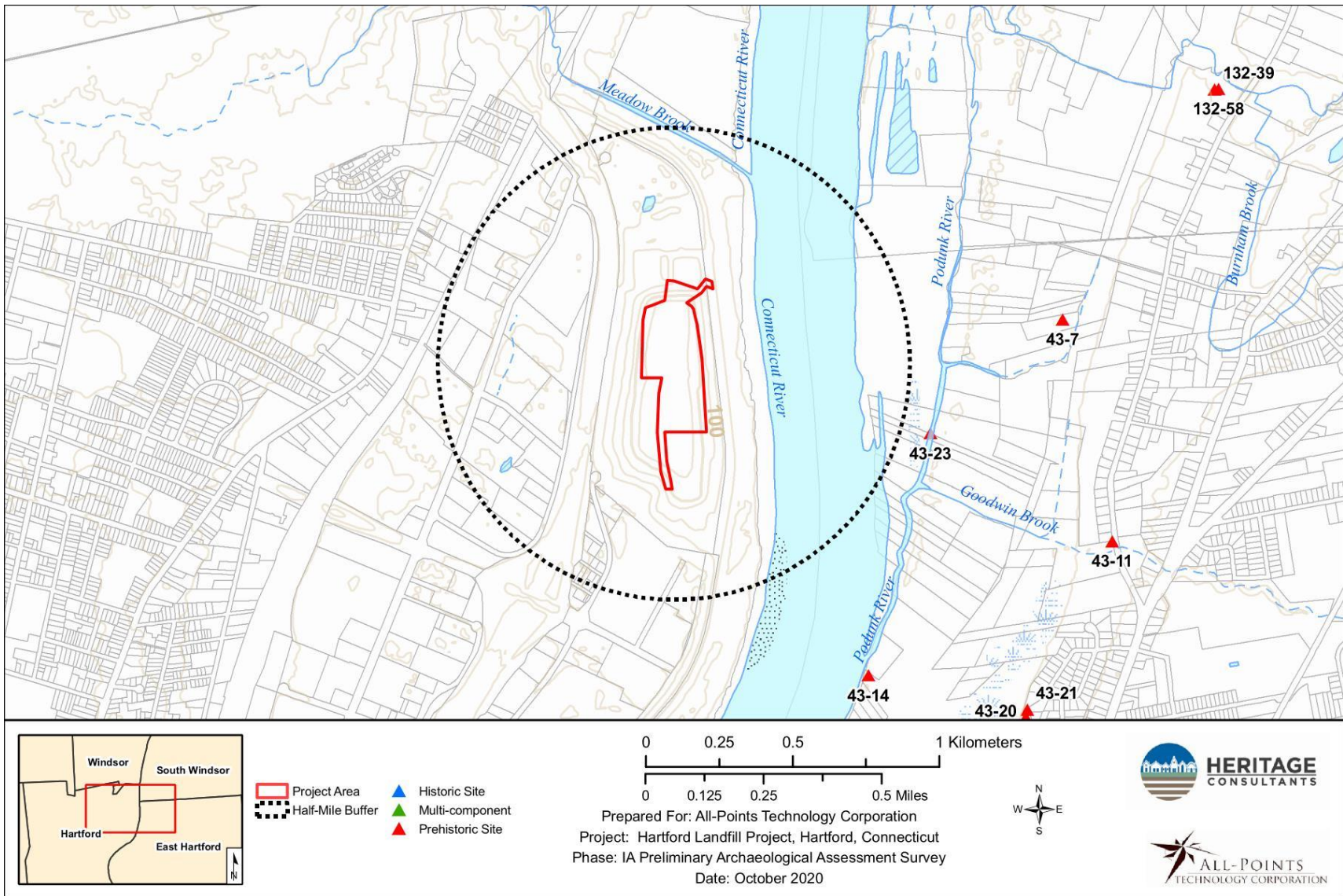


Figure 10. Digital map showing the location of previously identified archaeological sites within 0.8 km (500 ft) of the proposed project area in Hartford, Connecticut.

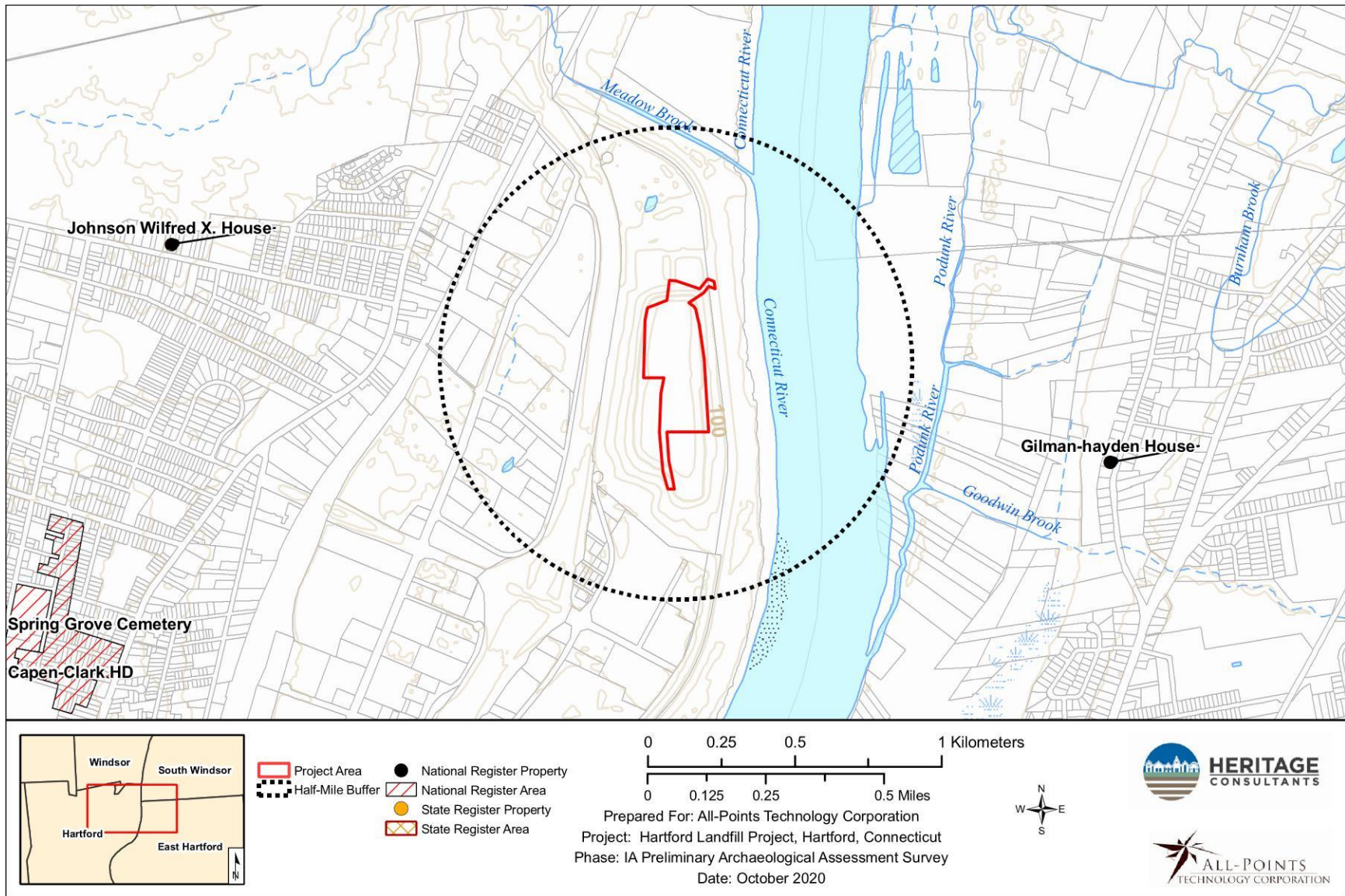


Figure 11. Digital map showing the locations of National and State Register of Historic Places properties within 0.8 km (500 ft) of the proposed project area in Hartford, Connecticut.

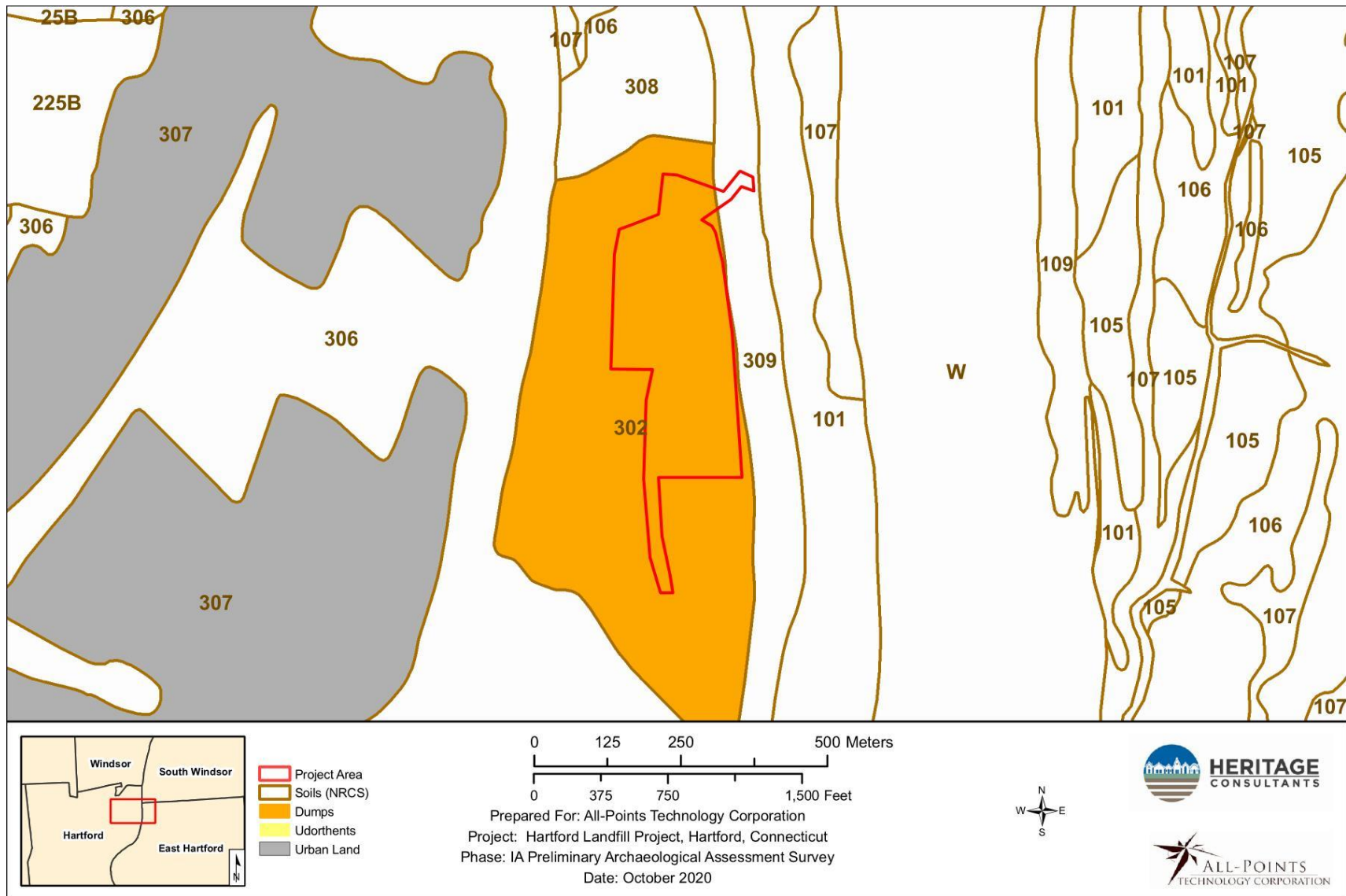


Figure 12. Digital map depicting the various soil types in the vicinity of the proposed project area in Hartford, Connecticut.

PROJECT REVIEW COVER FORM

This is: a new submittal supplemental information other Date Submitted: _____

PROJECT INFORMATION

Project Name: _____

Project Proponent: _____
The individual or group sponsoring, organizing, or proposing the project.

Project Street Address: _____
Include street number, street name, and or Route Number. If no street address exists give closest intersection.

City or Town: _____ County: _____
Please use the municipality name and **not** the village or hamlet.

PROJECT DESCRIPTION

Describe the overall project in detail. As applicable, provide any information regarding past land use, project area size, renovation plans, demolitions, and/or new construction. Note if this will included in a separate attachment:

List all state and federal agencies involved in the project and indicate the funding, permit, license or approval program pertaining to the proposed project:

Agency Type	Agency Name	Program Name
<input type="checkbox"/> State <input type="checkbox"/> Federal		
<input type="checkbox"/> State <input type="checkbox"/> Federal		
<input type="checkbox"/> State <input type="checkbox"/> Federal		
<input type="checkbox"/> State <input type="checkbox"/> Federal		

If there is no state or federal agency involvement, please state the reason for your review request:

FOR SHPO USE ONLY

Based on the information submitted to our office for the above named property and project, it is the opinion of the Connecticut State Historic Preservation Office that no historic properties will be affected by the proposed activities.*

Mary Dunne/Catherine Labadia
Deputy State Historic Preservation Officer

Date

*All other determinations of effect will result in a formal letter from this office

PROJECT REVIEW COVER FORM

CULTURAL RESOURCES IDENTIFICATION

Background research for previously identified historic properties within a project area may be undertaken at the SHPO's office. To schedule an appointment, please contact Catherine Labadia, 860-500-2329 or Catherine.labadia@ct.gov. Some applicants may find it advantageous to hire a qualified historic preservation professional to complete the identification and evaluation of historic properties.

Are there any historic properties listed on the State or National Register of Historic Places within the project area?

Yes No Do Not Know **If yes, please identify:** _____

Architecture

Are there any buildings, structures, or objects within the project area (houses, bridges, barns, walls, etc.)?

- Yes (attach clearly labelled photographs of each resource and applicable property cards from the municipality assessor)
 No (proceed to next section)

Are any of the buildings, structures or objects greater than 50 years old? Yes No Do Not Know

If the project involves rehabilitation, demolition, or alterations to existing buildings older than 50 years, provide a work plan (If window replacements are proposed, provide representative photographs of existing windows).

Archeology

Does the proposed project involve ground disturbing activities?

- Yes (provide below or attach a description of current and prior land use and disturbances. Attach an excerpt of the soil survey map for the project area. These can be created for free at: <https://websoilsurvey.nrcs.usda.gov>)

 No

CHECKLIST (Did you attach the following information?)

<p style="text-align: center;">Required for all Projects</p> <input type="checkbox"/> Completed Form <input type="checkbox"/> Map clearly labelled depicting project area <input type="checkbox"/> Photographs of current site conditions <input type="checkbox"/> Site or project plans for new construction	<p style="text-align: center;">Required for Projects with architectural resources</p> <input type="checkbox"/> Work plans for rehabilitation or renovation <input type="checkbox"/> Assessor's Property Card <p style="text-align: center;">Required for Projects with ground disturbing activities</p> <input type="checkbox"/> Soil survey map
<p>Suggested Attachments, as needed</p> <input type="checkbox"/> Supporting documents needed to explain project <input type="checkbox"/> Supporting documents identifying historic properties <input type="checkbox"/> Historic maps or aerials (available at http://magic.lib.uconn.edu or https://www.historicaerials.com/)	

PROJECT CONTACT

Name: _____ Firm/Agency: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Email: _____

Federal and state laws exist to ensure that agencies, or their designated applicants, consider the impacts of their projects on historic resources. At a minimum, submission of this completed form with its attachments constitutes a request for review by the Connecticut SHPO. The responsibility for preparing documentation, including the identification of historic properties and the assessment of potential effects resulting from the project, rests with the federal or state agency, or its designated applicant. The role of SHPO is to review, comment, and consult. SHPO's ability to complete a timely project review largely depends on the quality of the materials submitted. Please mail the completed form with all attachments to the attention of Environmental Review at the address above. Electronic submissions are not accepted at this time.

The proposed project is located at the closed and capped Hartford Landfill at 180 Liebert Road in Hartford, CT and will occupy 22.3 acres of land. The project area is situated in the central portion of the 122.4 acre site atop a portion of the landfill that consists of primarily of an engineered synthetic capping system with a smaller portion of the proposed facility located on maintained turf that is regularly mowed. All equipment will be installed above grade so as not to damage the capping system.

APPENDIX G

VIEWSHED MAPS AND PHOTO-SIMULATIONS



PHOTOGRAPHIC DOCUMENTATION & SIMULATIONS



HARTFORD LANDFILL
180 LIEBERT ROAD
HARTFORD, CT

PREPARED FOR:



PREPARED BY:

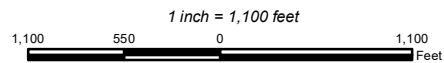
All-Points Technology Corporation, P.C.
567 Vauxhall Street Extension – Suite 311
Waterford, CT 06320



PHOTO LOG

Legend

- Property
- Proposed Solar Modules
- Photographic Location



EXISTING



PHOTOGRAPHED ON 11/15/2023

PHOTO

1

LOCATION

POST OFFICE - 141 WESTON STREET

ORIENTATION

NORTHEAST



PHOTO

1

LOCATION

POST OFFICE - 141 WESTON STREET

ORIENTATION

NORTHEAST

EXISTING



24mm Focal Length

PHOTOGRAPHED ON 11/15/2023

PHOTO	LOCATION	ORIENTATION
2	HARTFORD AMERICAN JOB CENTER PARKING LOT - 3580 MAIN STREET	SOUTHEAST

PROPOSED



PHOTO

LOCATION

ORIENTATION

2

HARTFORD AMERICAN JOB CENTER PARKING LOT - 3580 MAIN STREET

SOUTHEAST

EXISTING



PHOTO

3

LOCATION

JENNINGS ROAD

ORIENTATION

NORTHEAST

PHOTOGRAPHED ON 11/15/2023
24mm Focal Length

PROPOSED



PHOTO

3

LOCATION

JENNINGS ROAD

ORIENTATION

NORTHEAST

EXISTING



PHOTOGRAPHED ON 11/15/2023

PHOTO	LOCATION	ORIENTATION
4	FUTURE RIVERFRONT RECAPTURE PARK	SOUTH

PROPOSED



PHOTO

LOCATION

ORIENTATION

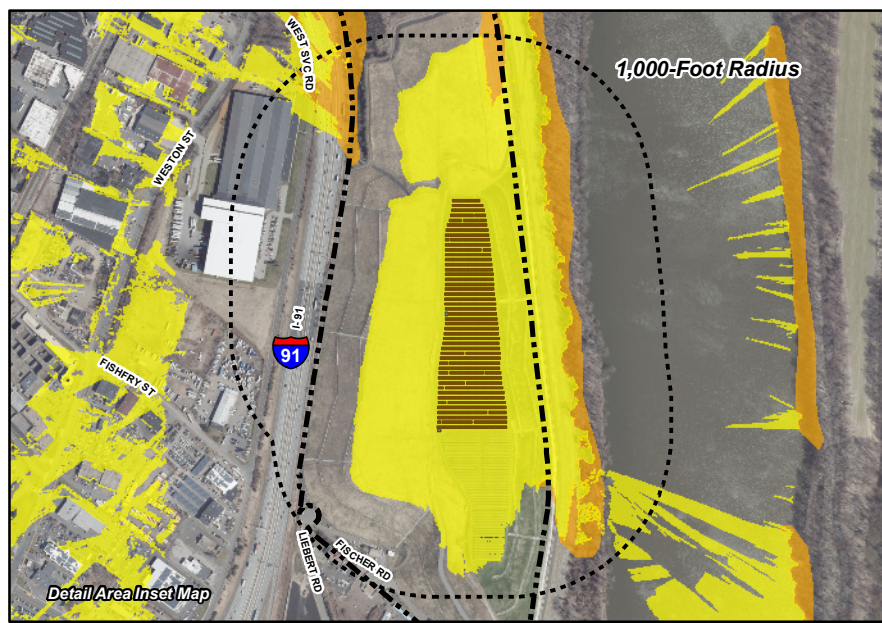
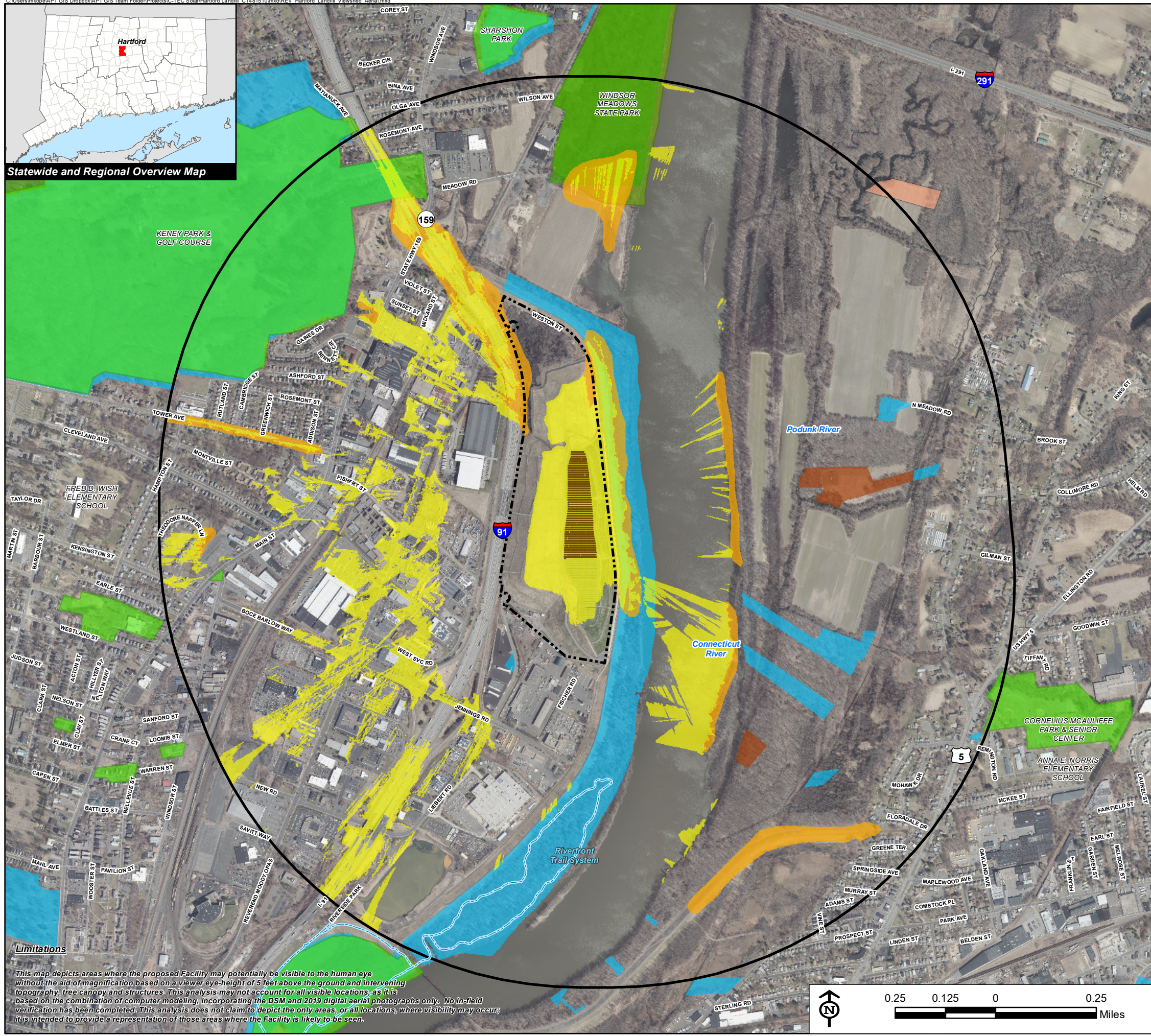
4

FUTURE RIVERFRONT RECAPTURE PARK

SOUTH



Statewide and Regional Overview Map



Detail Area Inset Map

Viewshed Analysis Map

Proposed Solar Energy Facility
 Hartford Landfill
 180 Liebert Road
 Hartford, Connecticut

Proposed solar panels to be mounted on approximate 10' AGL support structures. Forest canopy height and topographic contours are derived from LiDAR data. Study area encompasses a 1-mile radius and includes 2,492 acres. Base Map Source: 2019 Aerial Photograph (CTECO) Map Date: November 2023

Legend

- Site
- Study Area (1-Mile Radius)
- Solar Modules
- Concrete Pad
- Predicted Year-Round Visibility (219 Acres)
- Areas of Potential Seasonal Visibility (79 Acres)
- Trail
- Scenic Highway
- DEEP Boat Launches
- streets
- Municipal and Private Open Space Property
- State Forest/Park
- Protected Open Space Property**
- Federal
- Land Trust
- Municipal
- Private
- State

Data Sources:

Physical Geography / Background Data
 A digital surface model (DSM) was created from the State of Connecticut 2016 LiDAR LAS data points. The first return LiDAR LAS values, associated with the highest feature in the landscape (such as a treetop or top of building), were used to capture the natural and built features on the Earth's surface beyond the approximate limits of clearing associated with the proposed solar facility. The "bare-earth" return values were utilized to reflect proposed conditions where vegetative clearing associated with the proposed solar facility would occur.

Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP. Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)

Dedicated Open Space & Recreation Areas
 Connecticut Department of Energy and Environmental Protection (DEEP): DEEP Property (May 2007); Federal Open Space (1997); Municipal and Private Open Space (1997); DEEP Boat Launches (1994)
 Connecticut Forest & Parks Association, Connecticut Walk Books East & West

Other

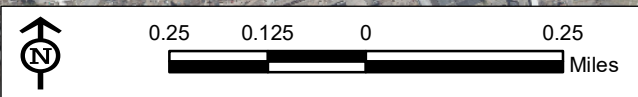
CTDOT Scenic Strips (based on Department of Transportation data)

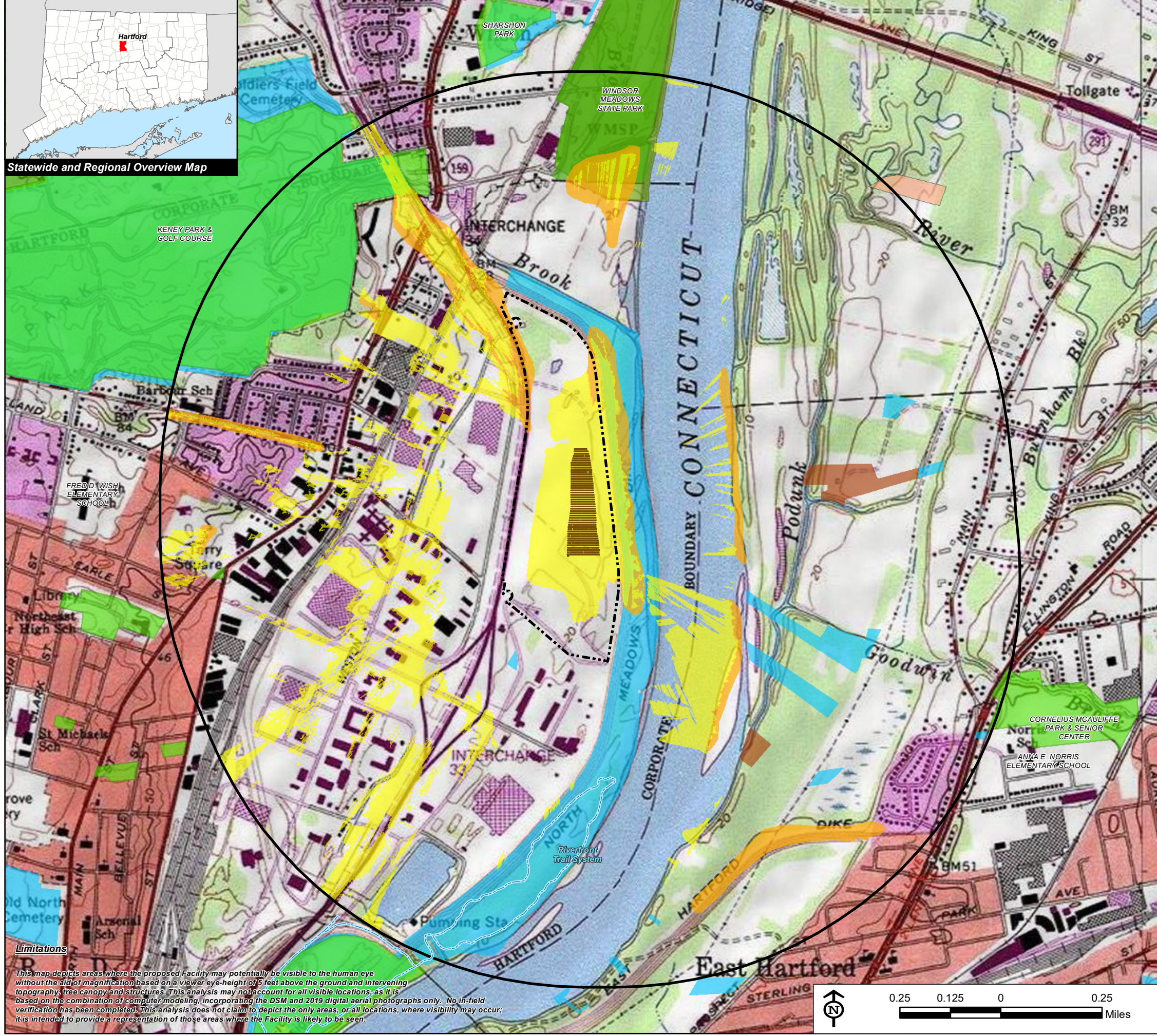
Notes

**Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.

Limitations

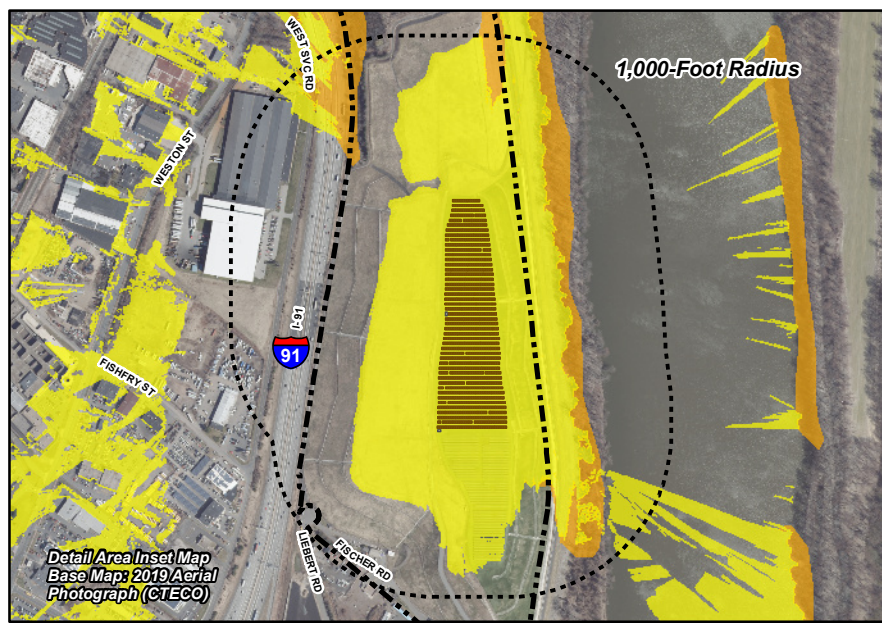
This map depicts areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography, tree canopy and structures. This analysis may not account for all visible locations, as it is based on the combination of computer modeling, incorporating the DSM and 2019 digital aerial photographs only. No in-field verification has been completed. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.





Statewide and Regional Overview Map

Limitations
 This map depicts areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography, tree canopy and structures. This analysis may not account for all visible locations, as it is based on the combination of computer modeling, incorporating the DSM and 2019 digital aerial photographs only. No in-field verification has been completed. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.



Detail Area Inset Map
 Base Map: 2019 Aerial Photograph (CTECO)

Viewshed Analysis Map

Proposed Solar Energy Facility
 Hartford Landfill
 180 Liebert Road
 Hartford, Connecticut

Proposed solar panels to be mounted on approximate 10' AGL support structures. Forest canopy height and topographic contours are derived from LiDAR data. Study area encompasses a 1-mile radius and includes 2,492 acres. Base Map Source: USGS 7.5 Minute Topographic Quadrangle Map, Hartford North, CT (1992) Map Date: November 2023

Legend

- Site
- Study Area (1-Mile Radius)
- Solar Modules
- Concrete Pad
- Predicted Year-Round Visibility (219 Acres)
- Areas of Potential Seasonal Visibility (79 Acres)
- Trail
- Scenic Highway
- DEEP Boat Launches
- Municipal and Private Open Space Property
- State Forest/Park
- Protected Open Space Property**
- Federal
- Land Trust
- Municipal
- Private
- State

Data Sources:

Physical Geography / Background Data
 A digital surface model (DSM) was created from the State of Connecticut 2016 LiDAR LAS data points. The first return LiDAR LAS values, associated with the highest feature in the landscape (such as a treetop or top of building), were used to capture the natural and built features on the Earth's surface beyond the approximate limits of clearing associated with the proposed solar facility. The "bare-earth" return values were utilized to reflect proposed conditions where vegetative clearing associated with the proposed solar facility would occur.

Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP. Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)

Dedicated Open Space & Recreation Areas
 Connecticut Department of Energy and Environmental Protection (DEEP): DEEP Property (May 2007); Federal Open Space (1997); Municipal and Private Open Space (1997); DEEP Boat Launches (1994)
 Connecticut Forest & Parks Association, Connecticut Walk Books East & West

Other

CTDOT Scenic Strips (based on Department of Transportation data)

Notes

**Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.



APPENDIX H

FEDERAL AVIATION ADMINISTRATION DETERMINATIONS



Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 10101 Hillwood Parkway
 Fort Worth, TX 76177

Aeronautical Study No.
 2023-ANE-6104-OE

Issued Date: 11/27/2023

Scott M. Chasse, P.E.
 All-Points Technology Corporation
 3 Saddlebrook Dr
 Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 7
 Location: Hartford, CT
 Latitude: 41-47-47.08N NAD 83
 Longitude: 72-39-06.12W
 Heights: 131 feet site elevation (SE)
 10 feet above ground level (AGL)
 141 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 05/27/2025 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

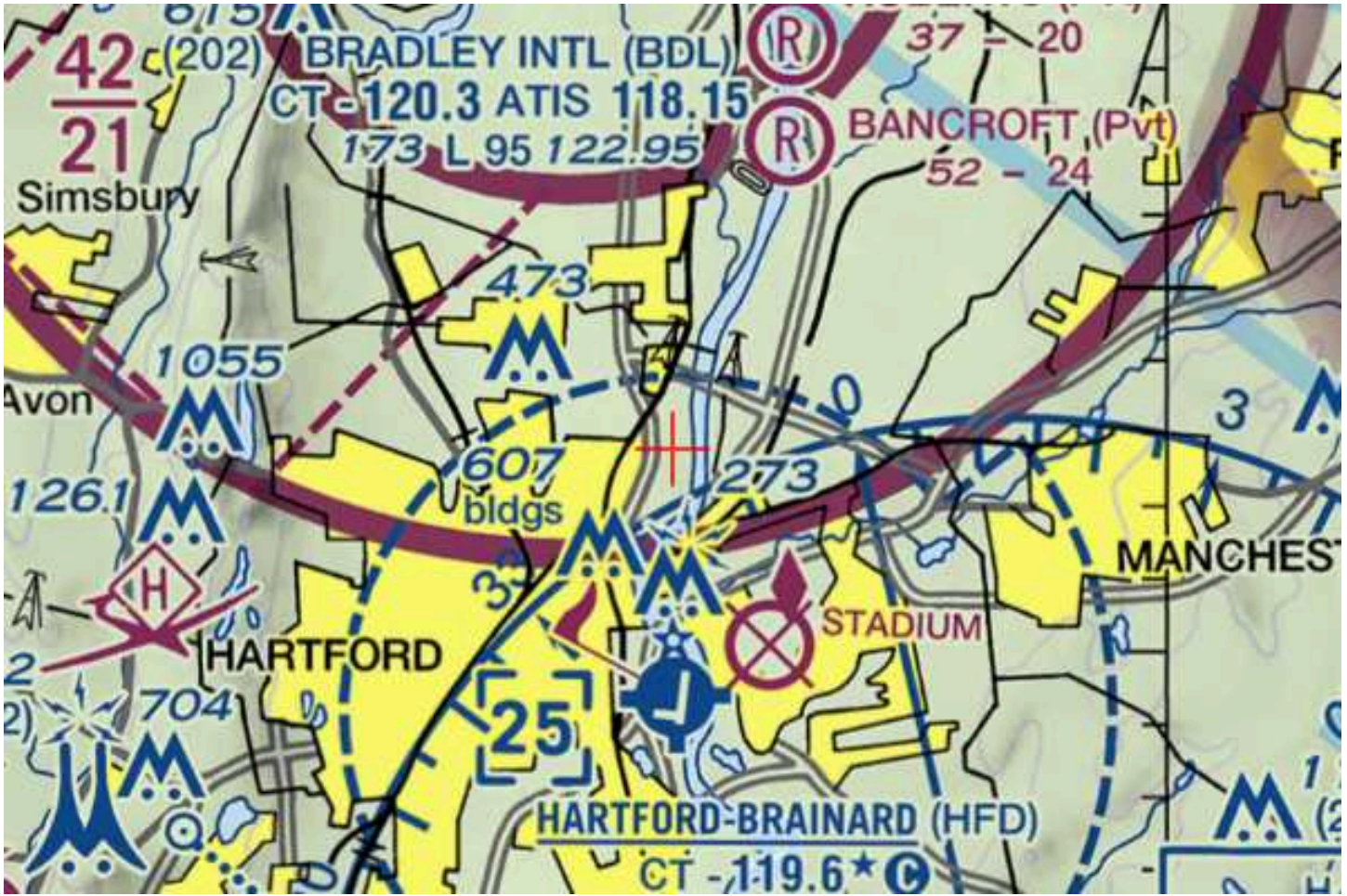
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6104-OE.

Signature Control No: 604809229-605572858

Stephanie Kimmel
Specialist

(DNE)

Attachment(s)
Map(s)





Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 10101 Hillwood Parkway
 Fort Worth, TX 76177

Aeronautical Study No.
 2023-ANE-6103-OE

Issued Date: 11/27/2023

Scott M. Chasse, P.E.
 All-Points Technology Corporation
 3 Saddlebrook Dr
 Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 6
 Location: Hartford, CT
 Latitude: 41-47-45.24N NAD 83
 Longitude: 72-39-06.66W
 Heights: 134 feet site elevation (SE)
 10 feet above ground level (AGL)
 144 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 05/27/2025 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

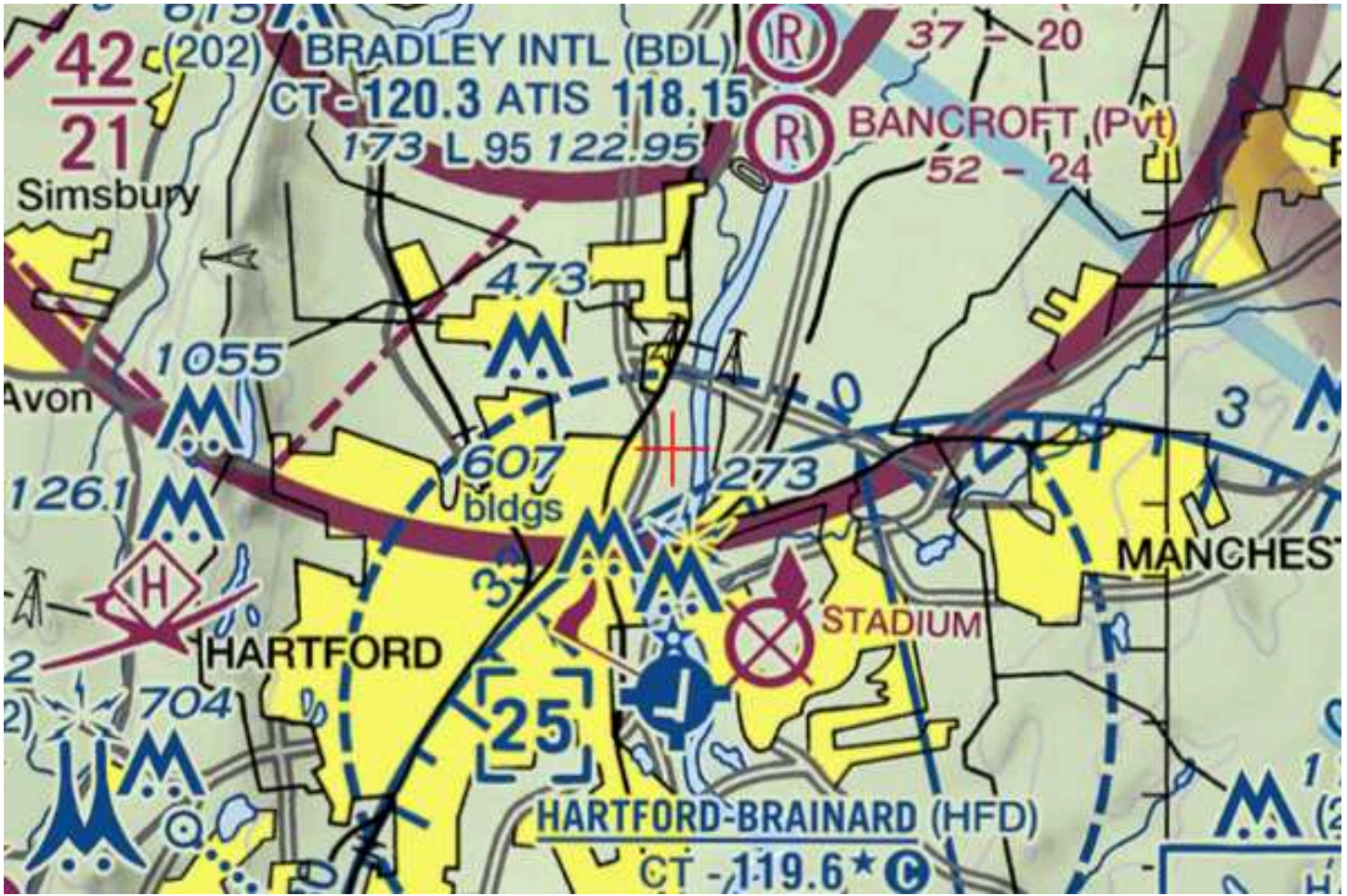
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6103-OE.

Signature Control No: 604809227-605572859

Stephanie Kimmel
Specialist

(DNE)

Attachment(s)
Map(s)





Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 10101 Hillwood Parkway
 Fort Worth, TX 76177

Aeronautical Study No.
 2023-ANE-6102-OE

Issued Date: 11/27/2023

Scott M. Chasse, P.E.
 All-Points Technology Corporation
 3 Saddlebrook Dr
 Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 5
 Location: Hartford, CT
 Latitude: 41-47-40.74N NAD 83
 Longitude: 72-39-06.70W
 Heights: 132 feet site elevation (SE)
 10 feet above ground level (AGL)
 142 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 05/27/2025 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

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This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

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This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6102-OE.

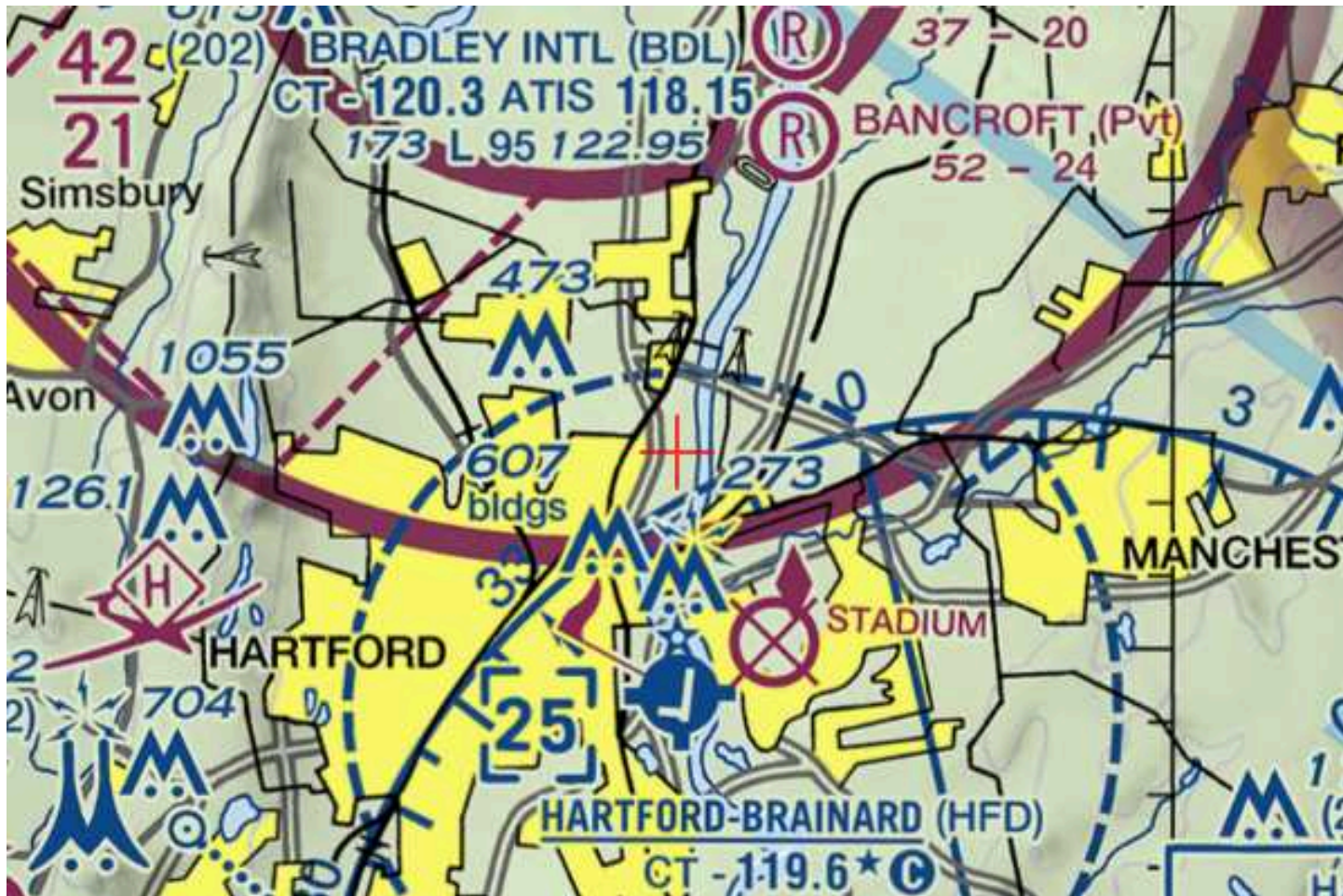
Signature Control No: 604809226-605572857

Stephanie Kimmel
Specialist

(DNE)

Attachment(s)

Map(s)





Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 10101 Hillwood Parkway
 Fort Worth, TX 76177

Aeronautical Study No.
 2023-ANE-6101-OE

Issued Date: 11/27/2023

Scott M. Chasse, P.E.
 All-Points Technology Corporation
 3 Saddlebrook Dr
 Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 4 (HP)
 Location: Hartford, CT
 Latitude: 41-47-33.32N NAD 83
 Longitude: 72-39-07.31W
 Heights: 135 feet site elevation (SE)
 10 feet above ground level (AGL)
 145 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 05/27/2025 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

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This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

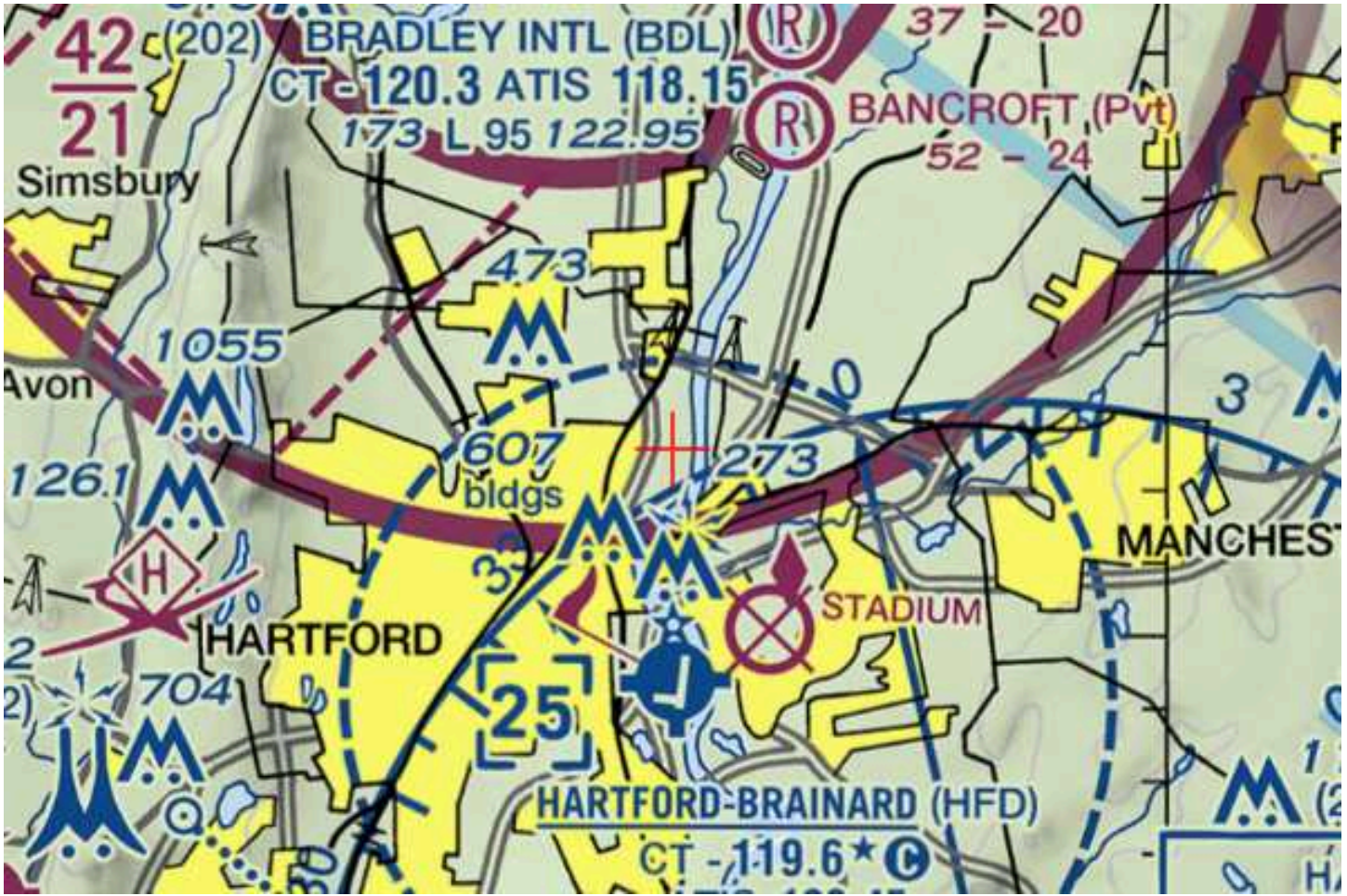
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6101-OE.

Signature Control No: 604809225-605572855

Stephanie Kimmel
Specialist

(DNE)

Attachment(s)
Map(s)





Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 10101 Hillwood Parkway
 Fort Worth, TX 76177

Aeronautical Study No.
 2023-ANE-6100-OE

Issued Date: 11/27/2023

Scott M. Chasse, P.E.
 All-Points Technology Corporation
 3 Saddlebrook Dr
 Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 3
 Location: Hartford, CT
 Latitude: 41-47-33.40N NAD 83
 Longitude: 72-39-01.80W
 Heights: 118 feet site elevation (SE)
 10 feet above ground level (AGL)
 128 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 05/27/2025 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

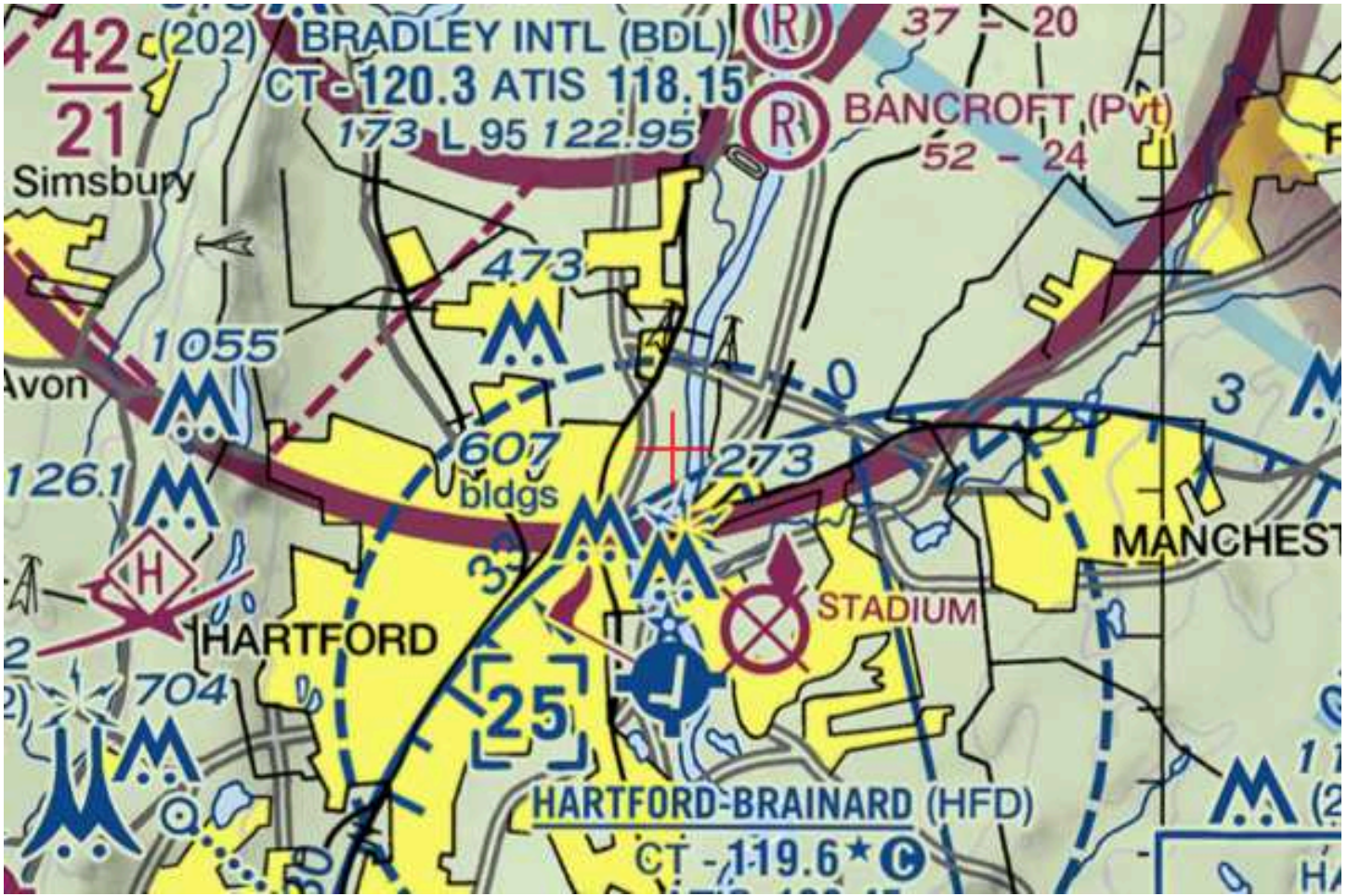
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6100-OE.

Signature Control No: 604809224-605572854

Stephanie Kimmel
Specialist

(DNE)

Attachment(s)
Map(s)





Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 10101 Hillwood Parkway
 Fort Worth, TX 76177

Aeronautical Study No.
 2023-ANE-6099-OE

Issued Date: 11/27/2023

Scott M. Chasse, P.E.
 All-Points Technology Corporation
 3 Saddlebrook Dr
 Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 2
 Location: Hartford, CT
 Latitude: 41-47-38.72N NAD 83
 Longitude: 72-39-02.34W
 Heights: 118 feet site elevation (SE)
 10 feet above ground level (AGL)
 128 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 05/27/2025 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

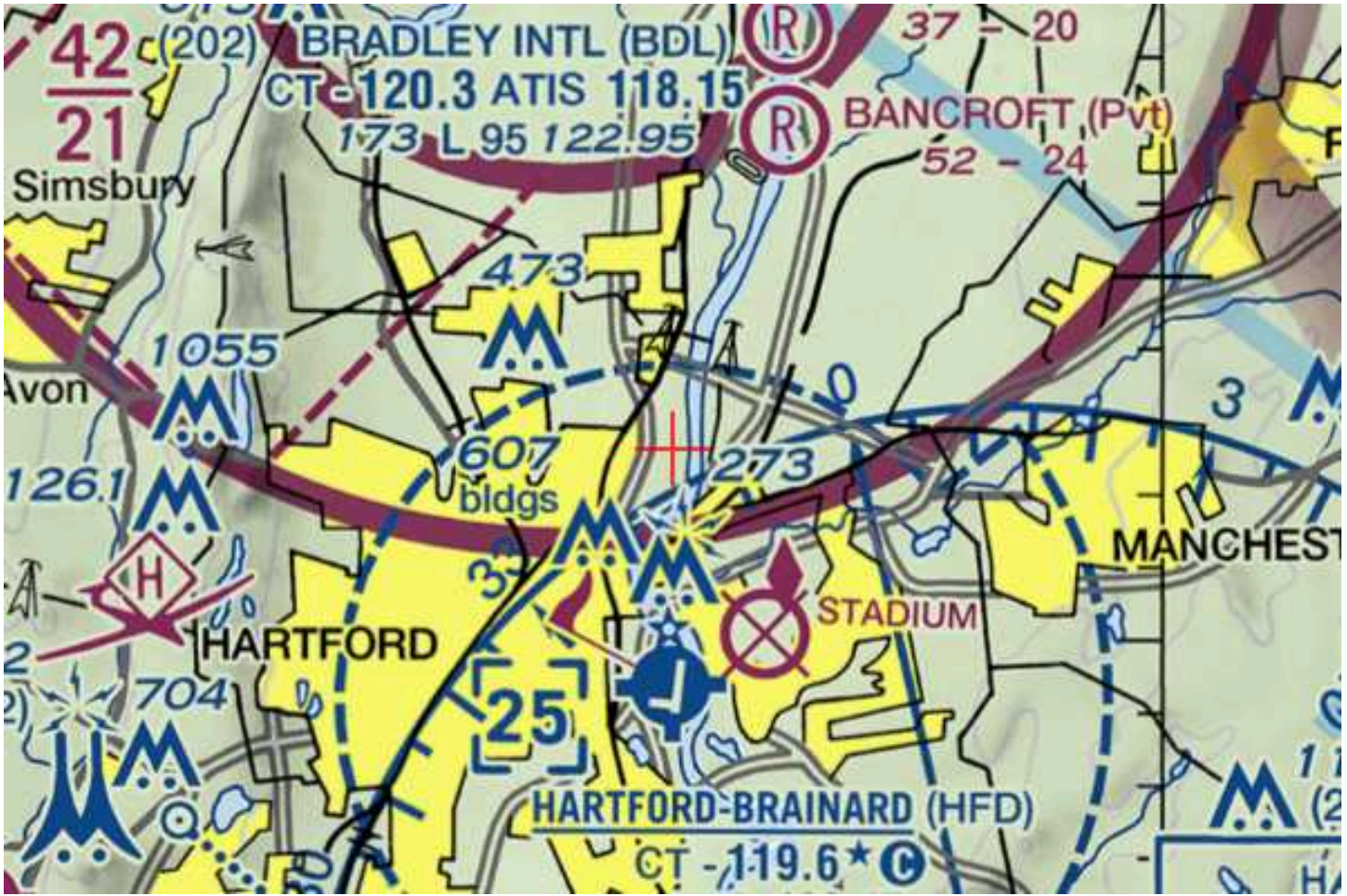
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6099-OE.

Signature Control No: 604809223-605572856

Stephanie Kimmel
Specialist

(DNE)

Attachment(s)
Map(s)





Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ANE-6098-OE

Issued Date: 11/27/2023

Scott M. Chasse, P.E.
All-Points Technology Corporation
3 Saddlebrook Dr
Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Solar Panel Point 1
Location:	Hartford, CT
Latitude:	41-47-47.01N NAD 83
Longitude:	72-39-03.92W
Heights:	123 feet site elevation (SE) 10 feet above ground level (AGL) 133 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
 Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 05/27/2025 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

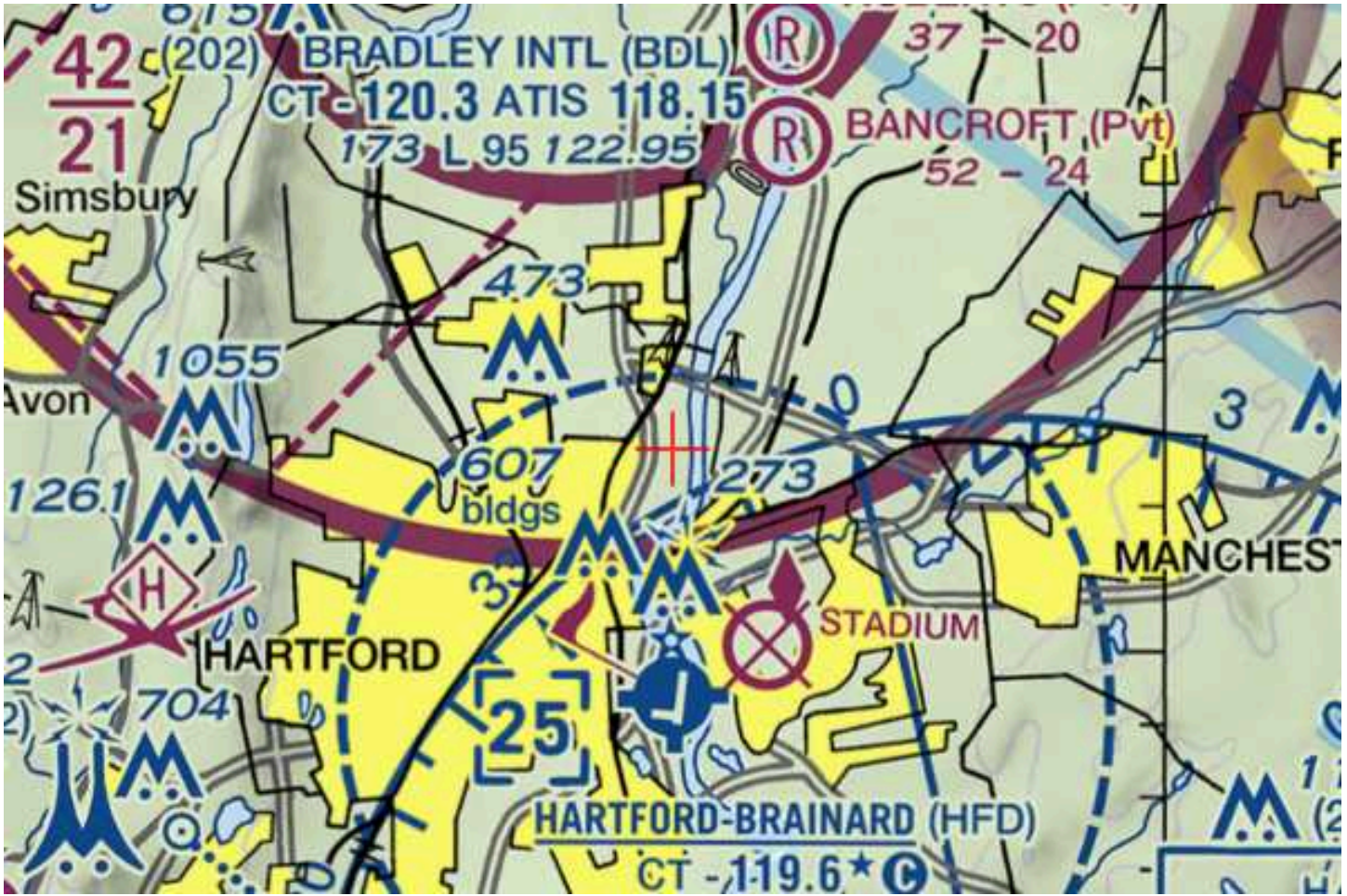
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6098-OE.

Signature Control No: 604809222-605572853

Stephanie Kimmel
Specialist

(DNE)

Attachment(s)
Map(s)





Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ANE-6097-OE

Issued Date: 11/21/2023

Scott M. Chasse, P.E.
All-Points Technology Corporation
3 Saddlebrook Dr
Killingworth, CT 06419

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Crane Point 7
Location:	Hartford, CT
Latitude:	41-47-47.08N NAD 83
Longitude:	72-39-06.12W
Heights:	131 feet site elevation (SE) 22 feet above ground level (AGL) 153 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Air Missions (NOTAM).

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6097-OE

Signature Control No: 604807731-605265534

(TMP)

Stephanie Kimmel
Specialist

Additional Condition(s) or Information for ASN 2023-ANE-6097-OE

Proposal: To construct and/or operate a(n) Crane to a height of 22 feet above ground level, 153 feet above mean sea level.

Location: The structure will be located 3.58 nautical miles north of HFD Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, marked-Chapters 3(Marked),14(Temporary),&15.

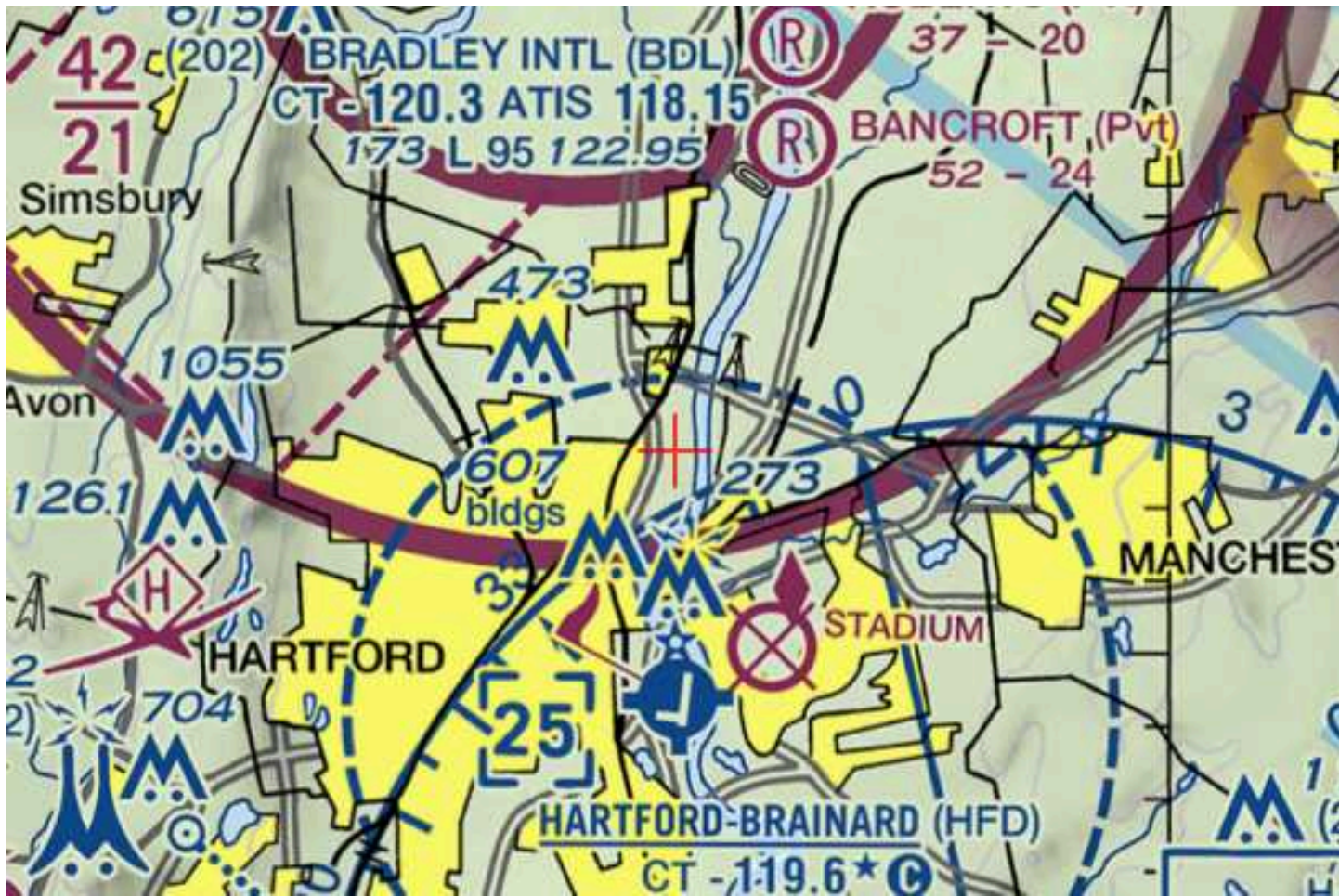
Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Air Missions (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that the manager of HARTFORD-BRAINARD, (860) 982-2443 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site.

It is required that the manager of Hartford Air Traffic Control Tower at 860-247-8599 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site. Additionally, please provide contact information for the onsite operator in the event that Air Traffic Control requires the temporary structure to be lowered immediately.

This determination expires on 05/21/2025 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.





Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ANE-6095-OE

Issued Date: 11/21/2023

Scott M. Chasse, P.E.
All-Points Technology Corporation
3 Saddlebrook Dr
Killingworth, CT 06419

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Crane Point 5
Location:	Hartford, CT
Latitude:	41-47-40.74N NAD 83
Longitude:	72-39-06.70W
Heights:	132 feet site elevation (SE) 22 feet above ground level (AGL) 154 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Air Missions (NOTAM).

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6095-OE

Signature Control No: 604807729-605265533

(TMP)

Stephanie Kimmel
Specialist

Additional Condition(s) or Information for ASN 2023-ANE-6095-OE

Proposal: To construct and/or operate a(n) Crane to a height of 22 feet above ground level, 154 feet above mean sea level.

Location: The structure will be located 3.48 nautical miles north of HFD Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, marked-Chapters 3(Marked),14(Temporary),&15.

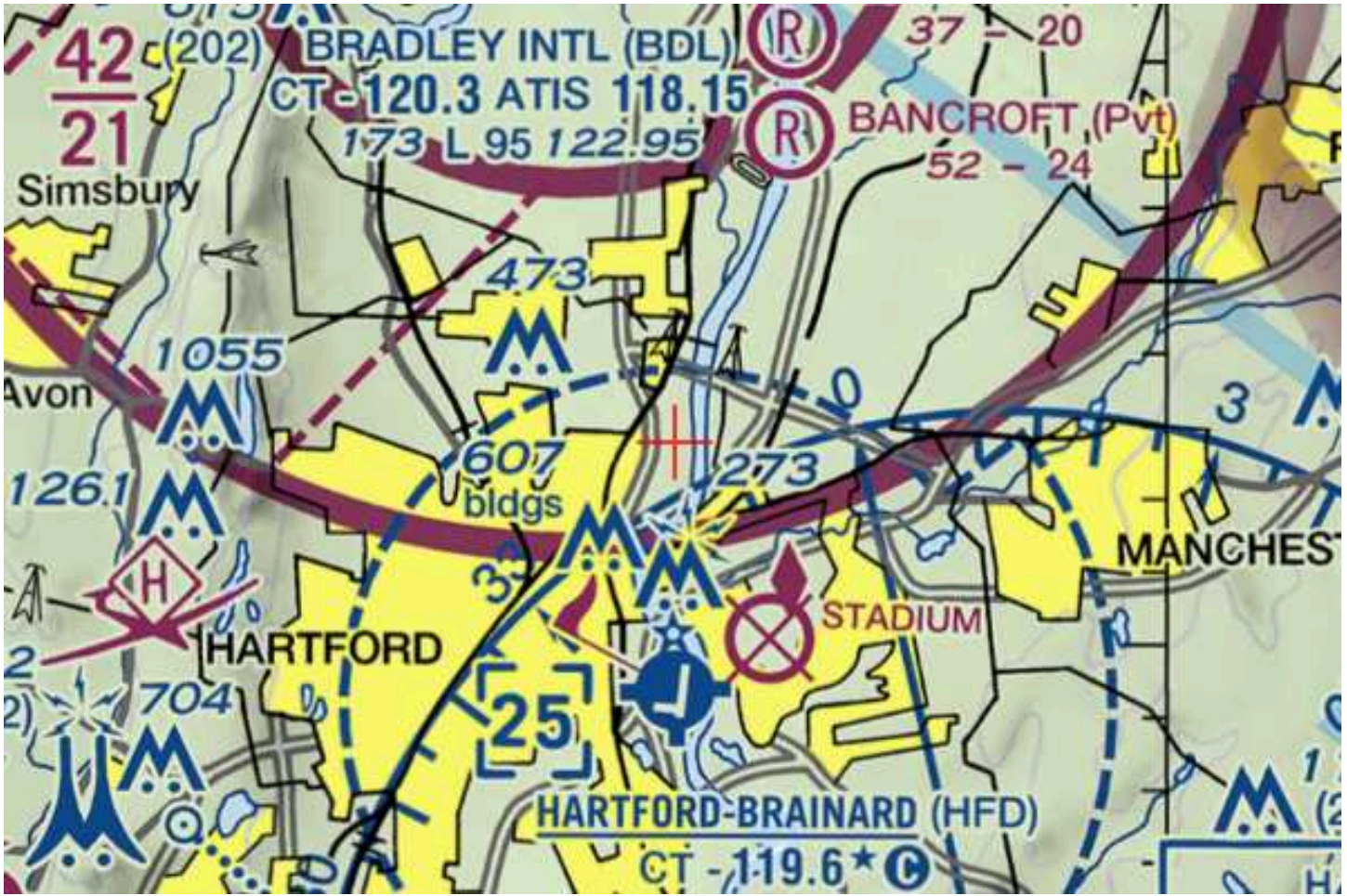
Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Air Missions (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that the manager of HARTFORD-BRAINARD, (860) 982-2443 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site.

It is required that the manager of Hartford Air Traffic Control Tower at 860-247-8599 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site. Additionally, please provide contact information for the onsite operator in the event that Air Traffic Control requires the temporary structure to be lowered immediately.

This determination expires on 05/21/2025 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.





Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ANE-6096-OE

Issued Date: 11/21/2023

Scott M. Chasse, P.E.
All-Points Technology Corporation
3 Saddlebrook Dr
Killingworth, CT 06419

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Crane Point 6
Location:	Hartford, CT
Latitude:	41-47-45.24N NAD 83
Longitude:	72-39-06.66W
Heights:	134 feet site elevation (SE) 22 feet above ground level (AGL) 156 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Air Missions (NOTAM).

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6096-OE

Signature Control No: 604807730-605265536

(TMP)

Stephanie Kimmel
Specialist

Additional Condition(s) or Information for ASN 2023-ANE-6096-OE

Proposal: To construct and/or operate a(n) Crane to a height of 22 feet above ground level, 156 feet above mean sea level.

Location: The structure will be located 3.55 nautical miles north of HFD Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, marked-Chapters 3(Marked),14(Temporary),&15.

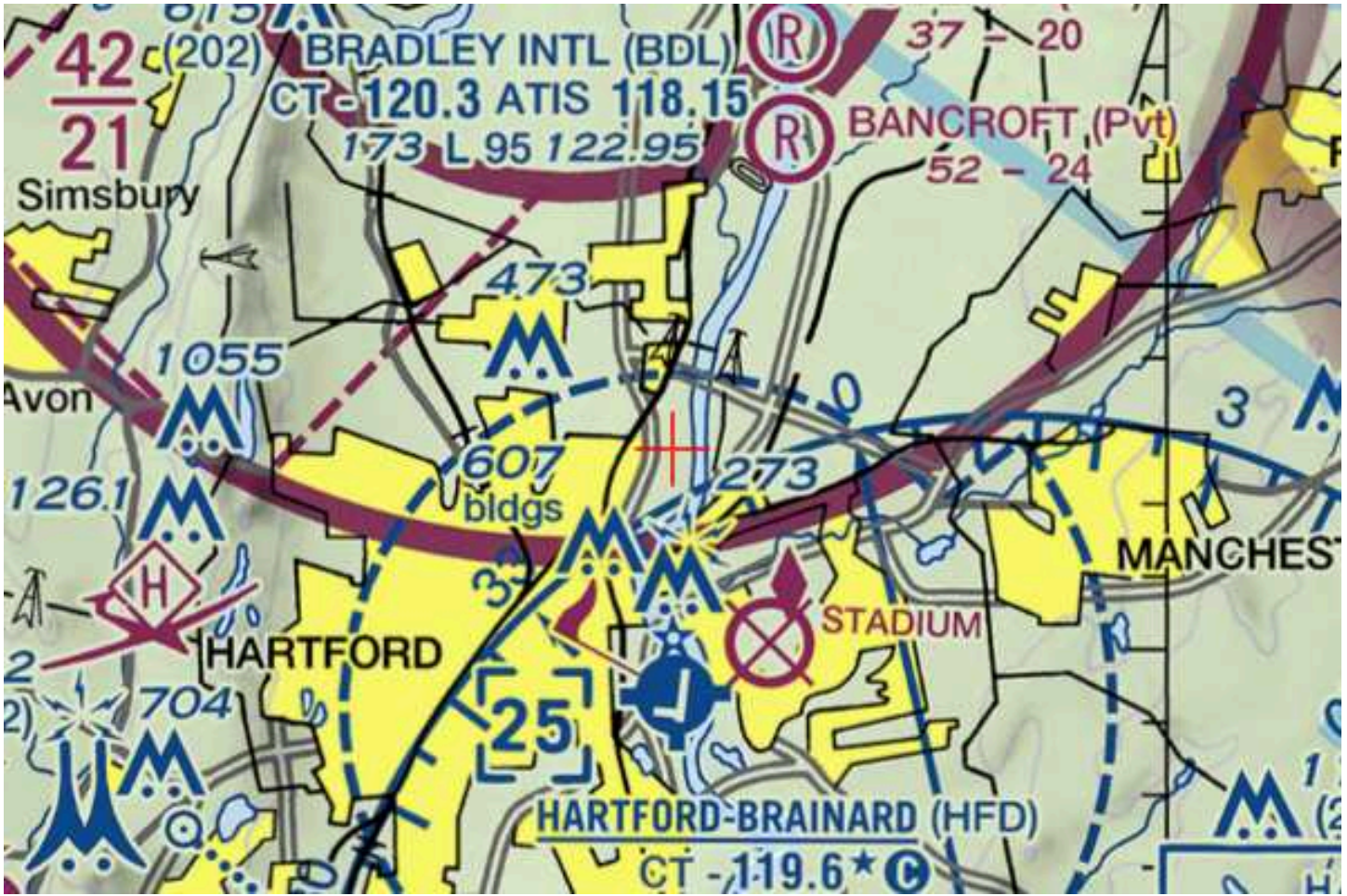
Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Air Missions (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that the manager of HARTFORD-BRAINARD, (860) 982-2443 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site.

It is required that the manager of Hartford Air Traffic Control Tower at 860-247-8599 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site. Additionally, please provide contact information for the onsite operator in the event that Air Traffic Control requires the temporary structure to be lowered immediately.

This determination expires on 05/21/2025 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.





Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ANE-6094-OE

Issued Date: 11/21/2023

Scott M. Chasse, P.E.
All-Points Technology Corporation
3 Saddlebrook Dr
Killingworth, CT 06419

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Crane Point 4 (HP)
Location:	Hartford, CT
Latitude:	41-47-33.32N NAD 83
Longitude:	72-39-07.31W
Heights:	135 feet site elevation (SE) 22 feet above ground level (AGL) 157 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Air Missions (NOTAM).

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6094-OE

Signature Control No: 604807728-605265535

(TMP)

Stephanie Kimmel
Specialist

Additional Condition(s) or Information for ASN 2023-ANE-6094-OE

Proposal: To construct and/or operate a(n) Crane to a height of 22 feet above ground level, 157 feet above mean sea level.

Location: The structure will be located 3.35 nautical miles north of HFD Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, marked-Chapters 3(Marked),14(Temporary),&15.

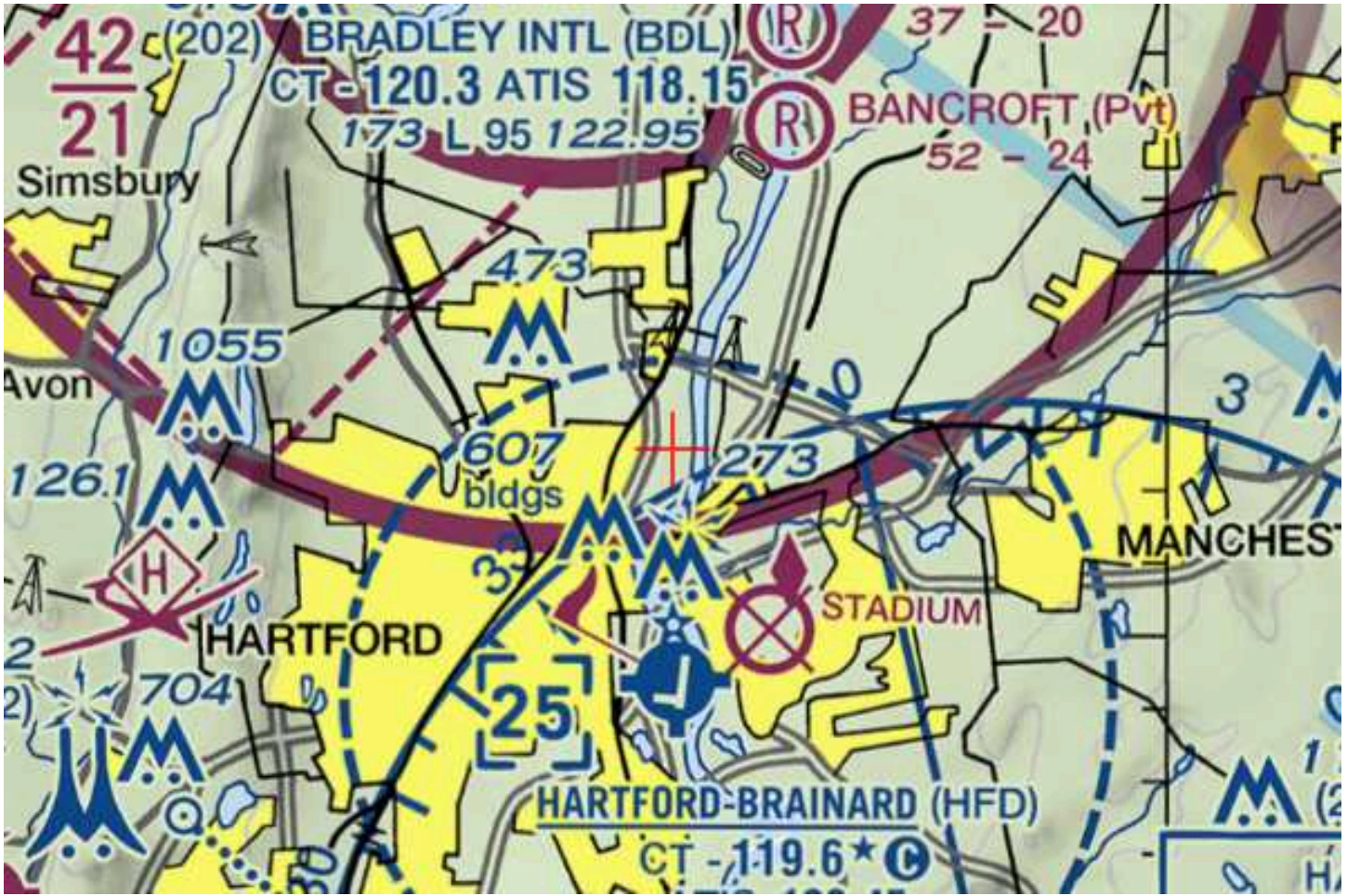
Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Air Missions (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that the manager of HARTFORD-BRAINARD, (860) 982-2443 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site.

It is required that the manager of Hartford Air Traffic Control Tower at 860-247-8599 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site. Additionally, please provide contact information for the onsite operator in the event that Air Traffic Control requires the temporary structure to be lowered immediately.

This determination expires on 05/21/2025 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.





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Aeronautical Study No.
2023-ANE-6093-OE

Issued Date: 11/21/2023

Scott M. Chasse, P.E.
All-Points Technology Corporation
3 Saddlebrook Dr
Killingworth, CT 06419

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Crane Point 3
Location:	Hartford, CT
Latitude:	41-47-33.40N NAD 83
Longitude:	72-39-01.80W
Heights:	118 feet site elevation (SE) 22 feet above ground level (AGL) 140 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Air Missions (NOTAM).

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6093-OE

Signature Control No: 604807727-605265539

(TMP)

Stephanie Kimmel
Specialist

Additional Condition(s) or Information for ASN 2023-ANE-6093-OE

Proposal: To construct and/or operate a(n) Crane to a height of 22 feet above ground level, 140 feet above mean sea level.

Location: The structure will be located 3.35 nautical miles north of HFD Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, marked-Chapters 3(Marked),14(Temporary),&15.

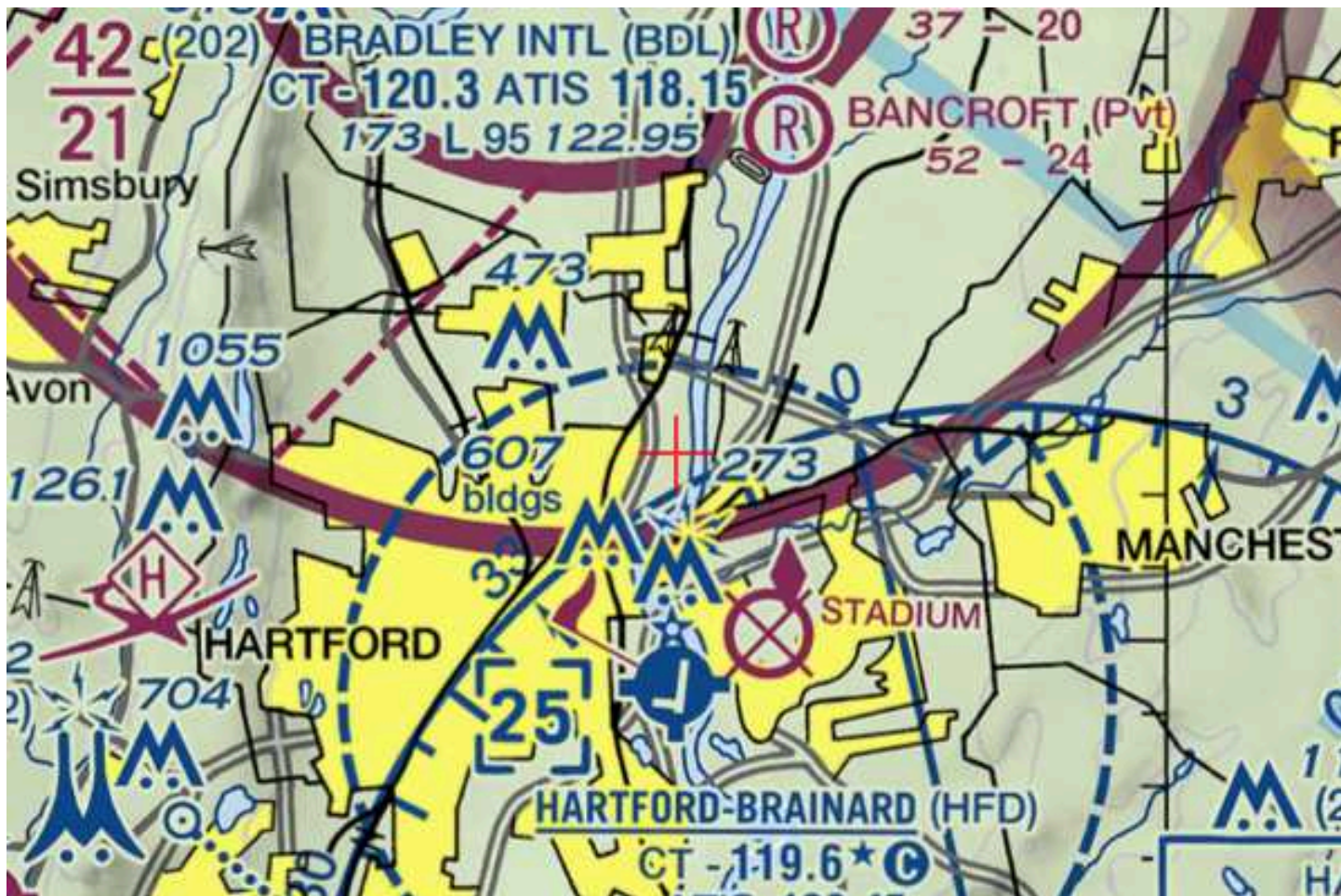
Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Air Missions (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that the manager of HARTFORD-BRAINARD, (860) 982-2443 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site.

It is required that the manager of Hartford Air Traffic Control Tower at 860-247-8599 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site. Additionally, please provide contact information for the onsite operator in the event that Air Traffic Control requires the temporary structure to be lowered immediately.

This determination expires on 05/21/2025 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.





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Aeronautical Study No.
2023-ANE-6092-OE

Issued Date: 11/21/2023

Scott M. Chasse, P.E.
All-Points Technology Corporation
3 Saddlebrook Dr
Killingworth, CT 06419

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Crane Point 2
Location:	Hartford, CT
Latitude:	41-47-38.72N NAD 83
Longitude:	72-39-02.34W
Heights:	118 feet site elevation (SE) 22 feet above ground level (AGL) 140 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Air Missions (NOTAM).

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6092-OE

Signature Control No: 604807725-605265537

(TMP)

Stephanie Kimmel
Specialist

Additional Condition(s) or Information for ASN 2023-ANE-6092-OE

Proposal: To construct and/or operate a(n) Crane to a height of 22 feet above ground level, 140 feet above mean sea level.

Location: The structure will be located 3.44 nautical miles north of HFD Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, marked-Chapters 3(Marked),14(Temporary),&15.

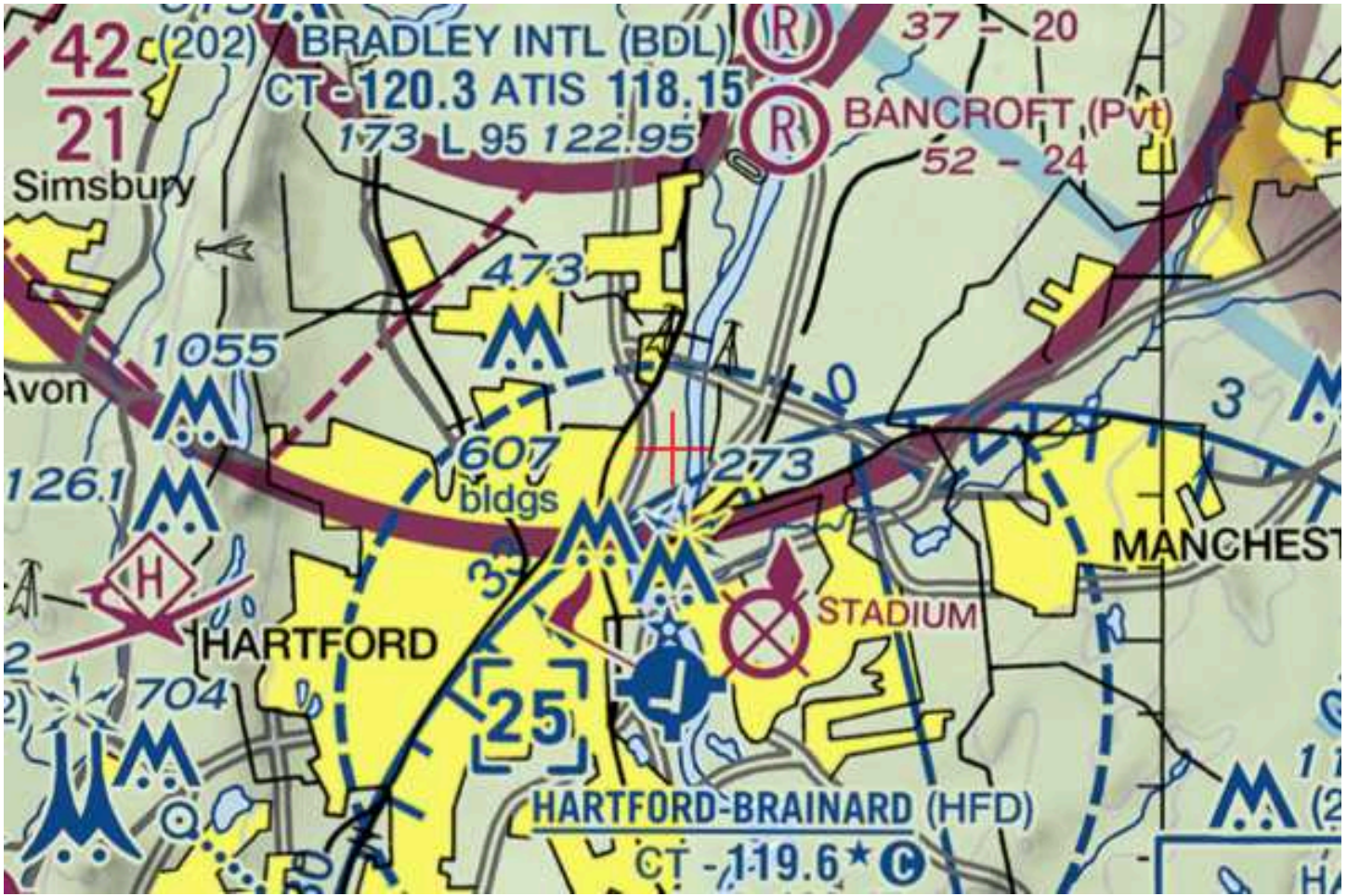
Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Air Missions (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that the manager of HARTFORD-BRAINARD, (860) 982-2443 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site.

It is required that the manager of Hartford Air Traffic Control Tower at 860-247-8599 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site. Additionally, please provide contact information for the onsite operator in the event that Air Traffic Control requires the temporary structure to be lowered immediately.

This determination expires on 05/21/2025 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.





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Aeronautical Study No.
2023-ANE-6091-OE

Issued Date: 11/21/2023

Scott M. Chasse, P.E.
All-Points Technology Corporation
3 Saddlebrook Dr
Killingworth, CT 06419

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Crane Point 1
Location:	Hartford, CT
Latitude:	41-47-47.01N NAD 83
Longitude:	72-39-03.92W
Heights:	123 feet site elevation (SE) 22 feet above ground level (AGL) 145 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Air Missions (NOTAM).

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-6091-OE

Signature Control No: 604807723-605265538

(TMP)

Stephanie Kimmel
Specialist

Additional Condition(s) or Information for ASN 2023-ANE-6091-OE

Proposal: To construct and/or operate a(n) Crane to a height of 22 feet above ground level, 145 feet above mean sea level.

Location: The structure will be located 3.58 nautical miles north of HFD Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, marked-Chapters 3(Marked),14(Temporary),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Air Missions (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that the manager of HARTFORD-BRAINARD, (860) 982-2443 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site.

It is required that the manager of Hartford Air Traffic Control Tower at 860-247-8599 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site. Additionally, please provide contact information for the onsite operator in the event that Air Traffic Control requires the temporary structure to be lowered immediately.

This determination expires on 05/21/2025 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

