Robinson+Cole

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Also admitted in
Massachusetts
and New York

October 22, 2024

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

Re: Petition No. 1572 – East Windsor Solar Two, LLC petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 4.0-megawatt AC solar photovoltaic electric generating facility located at 31 Thrall Road, East Windsor, Connecticut, and associated electrical interconnection.

Development and Management Plan Submission

Dear Attorney Bachman:

Enclosed please find fifteen (15) copies of the Development and Management ("D&M") Plan for the approved solar photovoltaic electric generating facility at 31 Thrall Road in East Windsor, Connecticut including:

1. Final site plan drawings prepared by All Points Technologies, submitted in accordance with Condition Nos. 2.a, 2.b, 2.c and 2.d of the Council's October 12, 2024, Decision and Order ("D&O"). The Final Vernal Pool BMPs are addressed in Note 4 on Plan Sheet GN-2 of the plan set. Please note the relocation of the transformer equipment pads to an area outside the limits of the stormwater basin. *See* Attachment 1.

2. A detailed Landscaping Plan prepared by VHB pursuant to Conditions 2.f. of the Council's D&O. *See* Attachment 2.

3. A Well Location Plan prepared by the Petitioner in accordance with Condition No. 2.e of the D&O, showing the results of an investigation of area wells and the potential impacts posed by the development of the Thrall Road solar facility. More precisely, the Petitioner has reviewed the existing well information provided by the North Central District Health Department (NCDHD). The attached Well Location drawing shows the locations of area wells, the distance to the closest solar panels and well depth information, to the extent that information was available and provided by the NCDHD. The closest well to the Project Area is 179.9' to the southeast on property at 44 Thrall Road. This well is drilled to a depth of 205 feet. According to NCDHD information, each of the surrounding water supply wells extend into the underlying bedrock to depths of 165 to 280 feet. As part of the development of the Down To Earth Consulting, LLC, Geotechnical Engineering Report, the Petitioner conducted (10) soil borings to depths of 17 feet. No ground water was encountered in any of these boring. The East Windsor Solar Two project proposes the installation of solar panel support piles driven into the topsoil and sand substrate to a depth of 10-14 feet, well above the depth of area wells. As such, no impact to the surrounding bedrock wells is anticipated to occur from construction activity associated with the project. Additionally, the Toxicity Characteristic Leaching Procedure (TCLP) test performed on the solar modules the Petitioner intends to use, show that the materials used in the installation of the modules and the modules themselves are below the "regulatory limits" and do not constitute hazardous waste. The Well Location drawing and the Geotechnical Engineering Report is included in Attachment 3.

4. A Final O&M Plan as required by Condition No. 2.f of the D&O, including an update regarding the inspection, maintenance, & replacement of the dead or dying landscape plantings. *See* Attachment 4.

5. A final Petroleum Storage and Spill Prevention Plan in accordance with Condition No. 2.g of the D&O, including a spill reporting form. *See* Attachment 5.

6. A final sheep grazing plan that was previously included in Appendix J of the Petition, filed in accordance with Condition No. 2.j of the D&O. The updated Sheep Grazing Plan (Revised October 2024) includes minor adjustments to the paddock areas to reflect the most current site design and includes the hold harmless language requested by the Council. *See* Attachment 6.

Please NOTE: This filing does not include the Final Structural Design for the Solar Racking System as required by Condition No. 2.i of the D&O. Final design drawings are in process will be submitted as soon as possible.

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Together, this information constitutes the Petitioners D&M Plan submission for the approved solar facility 31 Thrall Road, East Windsor, Connecticut.

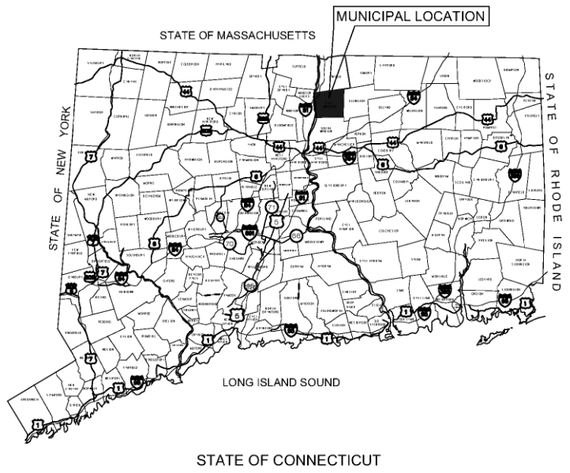
We respectfully request that this information be reviewed, and this matter be placed on the next available Siting Council agenda for approval. Please feel free to contact me if you have any questions or require additional information. Thank you.

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Jason E. Bowsza, First Selectman
Ruthanne Calabrese, Town Planner
Robert DeCrescenzo, Esq. Town Attorney

ATTACHMENT 1



EAST WINDSOR SOLAR TWO, LLC

"EAST WINDSOR SOLAR TWO"
31 THRALL ROAD
BROAD BROOK, CT 06016

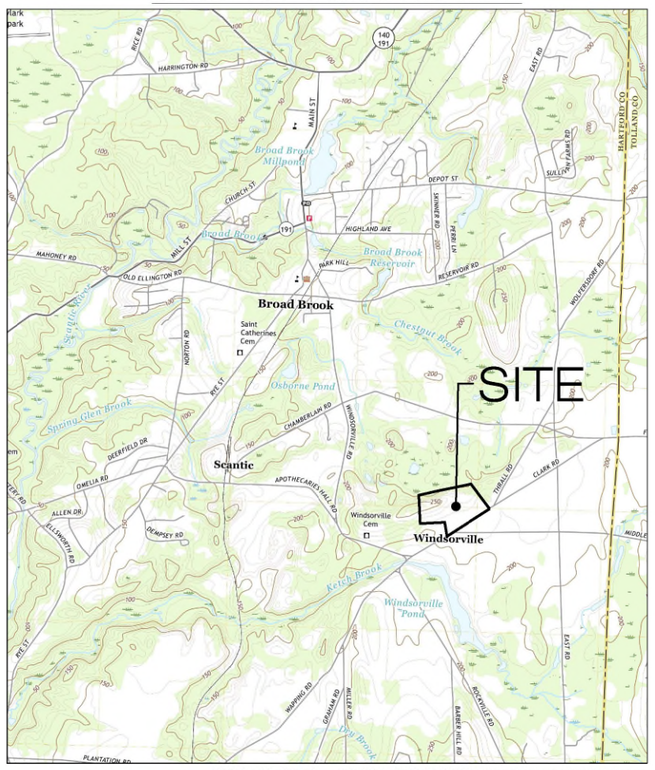
CSC PETITION PLAN SET
APRIL 3, 2023

LIST OF DRAWINGS

SITE INFORMATION

SITE NAME:	"EAST WINDSOR SOLAR TWO"
LOCATION:	31 THRALL ROAD BROAD BROOK, CT 06016
SITE TYPE/DESCRIPTION:	ADD GROUND MOUNTED SOLAR PANEL ARRAY W/ ASSOCIATED EQUIPMENT, GRAVEL ACCESS ROAD, AND STORMWATER MANAGEMENT.
PROPERTY OWNER:	CATHOLIC CEMETERIES ASSOCIATION OF THE ARCHDIOCESE OF HARTFORD, INC. 700 MIDDLETOWN AVE. NORTH HAVEN, CT 06473
APPLICANT:	EAST WINDSOR SOLAR TWO, LLC 124 LASALLE ROAD, 2ND FLOOR WEST HARTFORD, CT 06107
ENGINEER CONTACT:	ROBERT C. BURNS, P.E. (860) 552-2036
LATITUDE:	41°53'39.37" N
LONGITUDE:	72°31'51.58" W
ELEVATION:	220'± AMSL
MBLU:	49-60-15
ZONE:	R-3
EXISTING LAND USE:	RESIDENTIAL - FARMING
PROPOSED LAND USE:	COMMUNICATIONS, TRANSPORTATION AND PUBLIC UTILITY USES - LARGE SCALE GROUND MOUNTED SOLAR PHOTOVOLTAIC INSTALLATIONS
TOTAL SITE:	35.68± AC.
TOTAL DISTURBED AREA:	24.70± AC.
PROP. SITE GRADING	
APPROX. VOLUME OF CUT :	0± CY
APPROX. VOLUME OF FILL:	0± CY
APPROX. OVERALL NET VOLUME:	0± CY OF CUT
PROP. GRAVEL ACCESS ROAD:	890± LINEAR FEET
PROP. SILT FENCE:	2,650± LINEAR FEET
TREE CLEARING AREA:	0± ACRE
IMPERVIOUS AREA:	17,500± SQUARE FEET

USGS TOPOGRAPHIC MAP



SCALE : 1" = 2000'± SOURCE: USGS 7.5 BROAD BROOK QUADRANGLE, CT 2021

EAST WINDSOR SOLAR TWO, LLC
124 LASALLE ROAD
2ND FLOOR
WEST HARTFORD, CT, 06107

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHAUL 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	04/03/23	DRAFT SET FOR REVIEW: RCB
1	04/25/23	CSC PETITION: RCB
2	05/01/23	CSC PETITION: RCB
3	06/19/23	SWPCP SUBMISSION: RCB
4	08/13/24	CSC REVISIONS: UKA
5		
6		

DESIGN PROFESSIONAL OF RECORD

PROF: ROBERT C. BURNS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHAUL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CATHOLIC CEMETERIES ASSOCIATION OF THE ARCHDIOCESE OF HARTFORD, INC.
ADDRESS: 700 MIDDLETOWN AVE. NORTH HAVEN, CT 06473

EAST WINDSOR SOLAR TWO

SITE ADDRESS: 31 THRALL ROAD BROAD BROOK, CT 06016

APT FILING NUMBER: CT590340

DRAWN BY: CSH

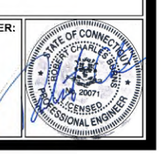
DATE: 04/03/23 CHECKED BY: RCB

SHEET TITLE:

TITLE SHEET

SHEET NUMBER:

T-1

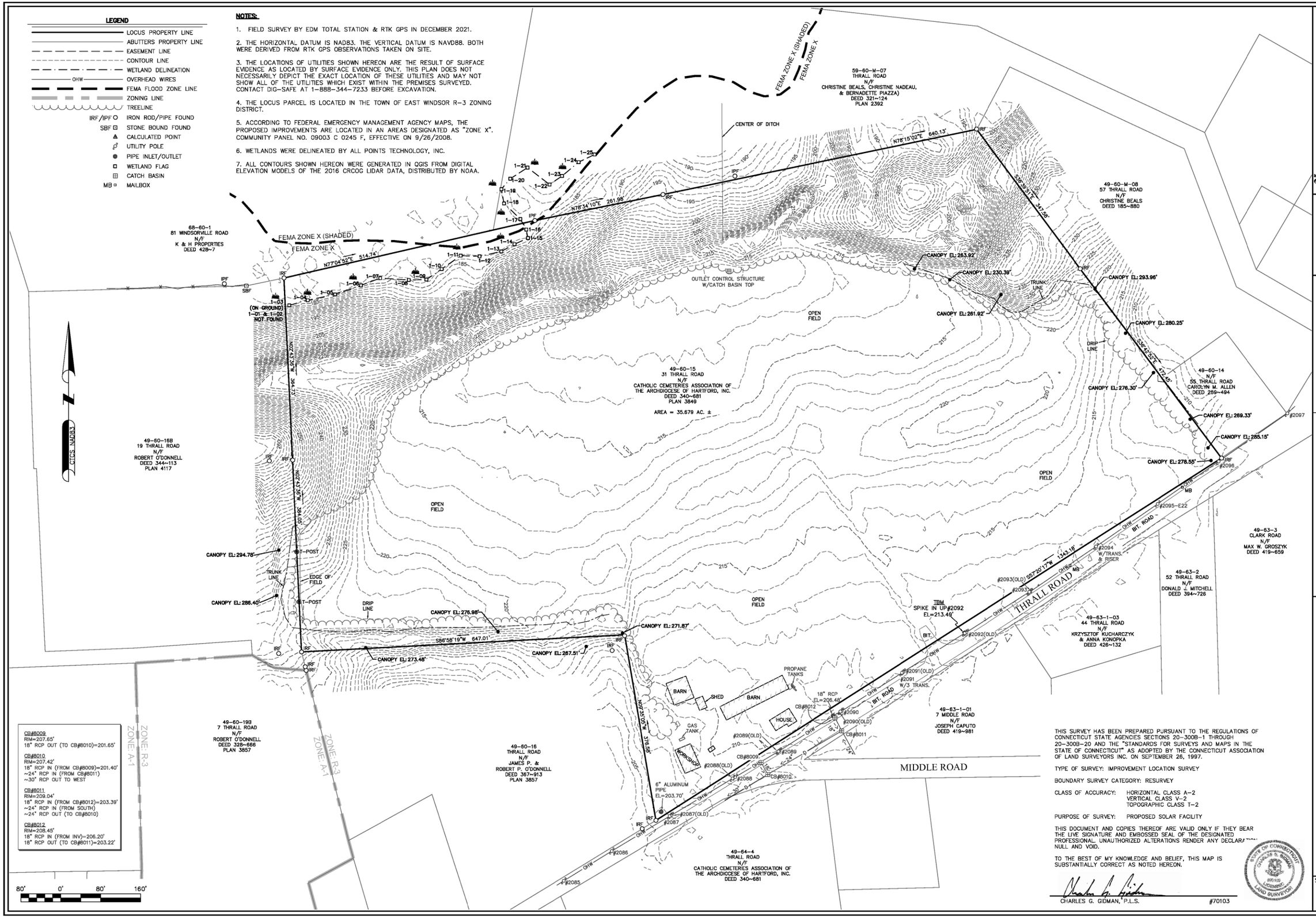


LEGEND

- LOCUS PROPERTY LINE
- ABUTTERS PROPERTY LINE
- EASEMENT LINE
- CONTOUR LINE
- WETLAND DELINEATION
- OHW — OVERHEAD WIRES
- FEMA FLOOD ZONE LINE
- ZONING LINE
- TREELINE
- IRF/IPF ○ IRON ROD/PIPE FOUND
- SBF ⊡ STONE BOUND FOUND
- CALCULATED POINT
- UTILITY POLE
- PIPE INLET/OUTLET
- WETLAND FLAG
- CATCH BASIN
- MB ▫ MAILBOX

NOTES:

1. FIELD SURVEY BY EDM TOTAL STATION & RTK GPS IN DECEMBER 2021.
2. THE HORIZONTAL DATUM IS NAD83. THE VERTICAL DATUM IS NAVD88. BOTH WERE DERIVED FROM RTK GPS OBSERVATIONS TAKEN ON SITE.
3. THE LOCATIONS OF UTILITIES SHOWN HEREON ARE THE RESULT OF SURFACE EVIDENCE AS LOCATED BY SURFACE EVIDENCE ONLY. THIS PLAN DOES NOT NECESSARILY DEPICT THE EXACT LOCATION OF THESE UTILITIES AND MAY NOT SHOW ALL OF THE UTILITIES WHICH EXIST WITHIN THE PREMISES SURVEYED. CONTACT DIG-SAFE AT 1-888-344-7233 BEFORE EXCAVATION.
4. THE LOCUS PARCEL IS LOCATED IN THE TOWN OF EAST WINDSOR R-3 ZONING DISTRICT.
5. ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY MAPS, THE PROPOSED IMPROVEMENTS ARE LOCATED IN AN AREAS DESIGNATED AS "ZONE X". COMMUNITY PANEL NO. 09003 C 0245 F, EFFECTIVE ON 9/26/2008.
6. WETLANDS WERE DELINEATED BY ALL POINTS TECHNOLOGY, INC.
7. ALL CONTOURS SHOWN HEREON WERE GENERATED IN QGIS FROM DIGITAL ELEVATION MODELS OF THE 2016 CRCOG LIDAR DATA, DISTRIBUTED BY NOAA.



THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300B-1 THROUGH 20-300B-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS INC. ON SEPTEMBER 26, 1997.

TYPE OF SURVEY: IMPROVEMENT LOCATION SURVEY

BOUNDARY SURVEY CATEGORY: RESURVEY

CLASS OF ACCURACY: HORIZONTAL CLASS A-2
VERTICAL CLASS V-2
TOPOGRAPHIC CLASS T-2

PURPOSE OF SURVEY: PROPOSED SOLAR FACILITY

THIS DOCUMENT AND COPIES THEREOF ARE VALID ONLY IF THEY BEAR THE LIVE SIGNATURE AND EMBOSSED SEAL OF THE DESIGNATED PROFESSIONAL. UNAUTHORIZED ALTERATIONS RENDER ANY DECLARATION NULL AND VOID.

TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

CHARLES G. GIDMAN, P.L.S. #70103

STATE OF CONNECTICUT CHARLES G. GIDMAN 70103 LICENSED LAND SURVEYOR

NORTHEAST SURVEY CONSULTANTS
3 FERRY STREET
STUDIO 1 EAST
EASTHAMPTON, MA 01027
(413) 203-5144

BOUNDARY SURVEY & LIDAR CONTOURS

SURVEYOR:	–
ENGINEER:	CGG
DRAFTING:	–
DESIGN:	JDG
FIELD WORK:	–
HORZ. SCALE:	1"=80'
PROJECT NUMBER:	21-123
VERT. SCALE:	–
DRAWING NAME:	21-123.DWG
DATE:	3-29-2023

PLAN OF LAND IN EAST WINDSOR, CT

PREPARED FOR

VEROGY

SHEET NO. 1 OF 1

GENERAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH PROJECT DEVELOPER STANDARDS, TOWN OF EAST WINDSOR STANDARDS, CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION, CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS IN THE ABOVE REFERENCED INCREASING HIERARCHY. IF SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL APPLY.

2. IF NO PROJECT CONSTRUCTION SPECIFICATION PACKAGE IS PROVIDED BY THE PROJECT DEVELOPER OR THEIR REPRESENTATIVE, THE CONTRACTOR SHALL COMPLY WITH THE MANUFACTURER, TOWN OF EAST WINDSOR, CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION, OR CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AND BE IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.

3. THE PROJECT DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING AND STORMWATER PERMITS REQUIRED BY GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL EAST WINDSOR CONSTRUCTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.

4. REFER TO PLANS, DETAILS AND REPORTS PREPARED BY ALL-POINTS TECHNOLOGY CORPORATION FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE PROJECT DEVELOPER IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING/CONSTRUCTION. ANY CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS SHALL BE CONFIRMED WITH THE PROJECT DEVELOPER'S CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.

5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS, MATERIALS PER PLANS AND SPECIFICATIONS TO THE PROJECT DEVELOPER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.

6. SHOULD ANY UNKNOWN OR INCORRECTLY LOCATED EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE PROJECT DEVELOPER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.

7. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE PROJECT DEVELOPER OR OTHERS DURING OCCUPIED HOURS, EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE PROJECT DEVELOPER AND THE LOCAL MUNICIPALITY. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.

8. THE CONTRACT LIMIT IS THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS.

9. THE CONTRACTOR SHALL ABIDE BY ALL OSHA, FEDERAL, STATE AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.

10. THE CONTRACTOR SHALL COMPLY WITH OSHA CFR 29 PART 1926 FOR EXCAVATION TRENCHING AND TRENCH PROTECTION REQUIREMENTS.

11. THE ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ENGINEER HAS NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OF PERSONNEL OR TO SUPERVISE SAFETY AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.

12. THE CONTRACTOR SHALL RESTORE ANY DRAINAGE STRUCTURE, PIPE, CONDUIT, PAVEMENT, CURBING, SIDEWALKS, LANDSCAPED AREAS OR SIGNAGE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE PROJECT DEVELOPER OR THE TOWN OF EAST WINDSOR.

13. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE PROJECT DEVELOPER AT THE END OF CONSTRUCTION.

14. ALTERNATIVE METHODS AND PRODUCTS, OTHER THAN THOSE SPECIFIED, MAY BE USED IF REVIEWED AND APPROVED BY THE PROJECT DEVELOPER, ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING/CONSTRUCTION PROCESS.

15. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AT "811" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.

16. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.

SITE PLAN NOTES

1. THE SURVEY WAS PROVIDED BY NORTHEAST SURVEY CONSULTANTS, DATED MARCH 29, 2023.

2. THERE ARE WETLANDS LOCATED ON THE SITE AS INDICATED ON THE PLANS. WETLAND BOUNDARIES WERE FLAGGED AND LOCATED BY ALL-POINTS TECHNOLOGY CORPORATION, IN MAY 2021.

3. THE CONTRACTOR SHALL FOLLOW THE RECOMMENDED SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE EROSION CONTROL PLAN OR SUBMIT AN ALTERNATE PLAN FOR APPROVAL BY THE ENGINEER AND/OR PERMITTING AGENCIES PRIOR TO THE START OF CONSTRUCTION. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.

4. PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATERCOURSE OR WETLANDS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. IN ADDITION, THE CONTRACTOR SHALL ADHERE TO "EROSION CONTROL PLAN" CONTAINED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO POST ALL BONDS AS REQUIRED BY GOVERNMENT AGENCIES WHICH WOULD GUARANTEE THE PROPER IMPLEMENTATION OF THE PLAN.

5. ALL SITE WORK, MATERIALS OF CONSTRUCTION, AND CONSTRUCTION METHODS FOR EARTHWORK AND STORM DRAINAGE WORK, SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS AND APPLICABLE SECTIONS OF THE PROJECT SPECIFICATIONS MANUAL. OTHERWISE THIS WORK SHALL CONFORM TO THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION AND PROJECT GEOTECHNICAL REPORT IF THERE IS NO PROJECT SPECIFICATIONS MANUAL. ALL FILL MATERIAL UNDER STRUCTURES AND PAVED AREAS SHALL BE PER THE ABOVE STATED APPLICABLE SPECIFICATIONS, AND/OR PROJECT GEOTECHNICAL REPORT, AND SHALL BE PLACED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER. MATERIAL SHALL BE COMPACTED IN 8" LIFTS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557 AT 95% PERCENT OF OPTIMUM MOISTURE CONTENT.

6. ALL DISTURBANCE INCURRED TO PUBLIC, MUNICIPAL, COUNTY, STATE PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF EAST WINDSOR AND STATE OF CONNECTICUT.

7. IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL AND NOTIFY THE PROJECT DEVELOPER AND/OR PROJECT DEVELOPER'S ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE PROJECT DEVELOPER AND/OR PROJECT DEVELOPER'S ENVIRONMENTAL CONSULTANT.

UTILITY NOTES

1. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE TOWN OF EAST WINDSOR TO SECURE CONSTRUCTION PERMITS AND FOR PAYMENT OF FEES FOR STREET CUTS AND CONNECTIONS TO EXISTING UTILITIES.
2. REFER TO DRAWINGS BY PROJECT DEVELOPER FOR THE ONSITE ELECTRICAL DRAWINGS AND INTERCONNECTION TO EXISTING ELECTRICAL GRID. SITE CONTRACTOR SHALL SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY AT BUILDING CONNECTION POINT OR AT EXISTING UTILITY OR PIPE CONNECTION POINT. THESE DETAILS ARE NOT INCLUDED IN THESE PLANS.
3. UTILITY LOCATIONS AND PENETRATIONS ARE SHOWN FOR THE CONTRACTOR'S INFORMATION AND SHALL BE VERIFIED WITH THE ELECTRICAL ENGINEER AND THE PROJECT DEVELOPER'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
4. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE PROP. SANITARY SEWERS AND WHERE PROP. STORM PIPING WILL CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT THE PROJECT DEVELOPER IN THE EVENT OF ANY DISCOVERED OR UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED SANITARY SEWERS, STORM PIPING AND UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
5. UTILITY CONNECTION DESIGN AS REFLECTED ON THE PLAN MAY CHANGE SUBJECT TO UTILITY PROVIDER AND GOVERNING AUTHORITY STAFF REVIEW.
6. THE CONTRACTOR SHALL ENSURE THAT ALL UTILITY PROVIDERS AND GOVERNING AUTHORITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY PROVIDER.
7. THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH THE RESPECTIVE UTILITY PROVIDERS FOR SERVICE INSTALLATIONS AND CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY PROVIDERS AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTIONS, RELOCATIONS, INSPECTIONS, AND DEMOLITION UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATIONS MANUAL AND/OR GENERAL CONDITIONS OF THE CONTRACT.
8. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT. AFTER UTILITY INSTALLATION IS COMPLETED, THE CONTRACTOR SHALL INSTALL TEMPORARY AND/OR PERMANENT PAVEMENT REPAIR AS DETAILED ON THE DRAWINGS OR AS REQUIRED BY THE TOWN OF EAST WINDSOR.
9. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
10. RELOCATION OF UTILITY PROVIDER FACILITIES, SUCH AS POLES, SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY PROVIDER.
11. THE CONTRACTOR SHALL COMPACT PIPE BACKFILL IN 8" LIFTS ACCORDING TO THE PIPE BEDDING DETAILS. TRENCH BOTTOM SHALL BE STABLE IN HIGH GROUNDWATER AREAS. A PIPE FOUNDATION SHALL BE USED PER THE TRENCH DETAILS AND IN AREAS OF ROCK EXCAVATION.
12. CONTRACTOR TO PROVIDE STEEL SLEEVES AND ANNULAR SPACE SAND FILL FOR UTILITY PIPE AND CONDUIT CONNECTIONS UNDER FOOTINGS.
13. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION FOR APPROVAL PRIOR TO BACKFILLING, IN ACCORDANCE WITH THE APPROPRIATE UTILITY PROVIDER REQUIREMENTS.
14. A ONE-FOOT MINIMUM VERTICAL CLEARANCE BETWEEN WATER, GAS, ELECTRICAL, AND TELEPHONE LINES AND STORM PIPING SHALL BE PROVIDED. A SIX-INCH MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN STORM PIPING AND SANITARY SEWER. A 6-INCH TO 18-INCH VERTICAL CLEARANCE BETWEEN SANITARY SEWER PIPING AND STORM PIPING SHALL REQUIRE CONCRETE ENCASEMENT OF THE PROP. SANITARY PIPING.
15. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPE, CONDUIT, PAVEMENT, CURBING, SIDEWALKS, DRAINAGE STRUCTURE, SWALE OR LANDSCAPED AREAS DISTURBED DURING CONSTRUCTION, TO THEIR ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE PROJECT DEVELOPER AND THE TOWN OF EAST WINDSOR.
16. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY, AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE INCLUDING SERVICES. CONTACT "CALL BEFORE YOU DIG" AT 811 72 HOURS PRIOR TO CONSTRUCTION AND VERIFY ALL UNDERGROUND AND OVERHEAD UTILITY AND STORM DRAINAGE LOCATIONS. THE CONTRACTOR SHALL EMPLOY THE USE OF A UTILITY LOCATING COMPANY TO PROVIDE SUBSURFACE UTILITY ENGINEERING CONSISTING OF DESIGNATING UTILITIES AND STORM PIPING ON PRIVATE PROPERTY WITHIN THE CONTRACT LIMIT AND CONSISTING OF DESIGNATING AND LOCATING WHERE PROP. UTILITIES AND STORM PIPING CROSS EXISTING UTILITIES AND STORM PIPING WITHIN THE CONTRACT LIMITS.
17. THE CONTRACTOR SHALL ARRANGE AND COORDINATE WITH UTILITY PROVIDERS FOR WORK TO BE PERFORMED BY UTILITY PROVIDERS. THE CONTRACTOR SHALL PAY ALL UTILITY FEES UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATION MANUAL AND GENERAL CONDITIONS, AND REPAIR PAVEMENTS AS NECESSARY.
18. ELECTRIC DRAWINGS AND REQUIREMENTS ARE NOT INCLUDED AS PART OF THIS DRAWING SET AND SHOULD BE OBTAINED FROM THE PROJECT DEVELOPER.
19. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE PROJECT DEVELOPER, ENGINEER, AND APPROPRIATE REGULATORY AGENCIES PRIOR TO INSTALLATION.
20. THE CONTRACTOR SHALL MAINTAIN ALL FLOWS AND UTILITY CONNECTIONS TO EXISTING BUILDINGS WITHOUT INTERRUPTION UNLESS/UNTIL AUTHORIZED TO DISCONNECT BY THE PROJECT DEVELOPER, TOWN OF EAST WINDSOR, UTILITY PROVIDERS AND GOVERNING AUTHORITIES.

GENERAL LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
BUILDING SETBACK		
EASEMENT		
TREE LINE		
WETLAND		
WETLAND BUFFER		
VERNAL POOL		
VERNAL POOL BUFFER		
WATERCOURSE		
WATERCOURSE BUFFER		
LIMIT OF PLOWED AREA		
MAJOR CONTOUR		
MINOR CONTOUR		
UNDERGROUND ELECTRIC		E E
OVERHEAD ELECTRIC	OHW	OH OH
BASIN		
FENCE		X X X
LIMIT OF DISTURBANCE		LOD
SILT FENCE		SF SF

EAST WINDSOR SOLAR TWO, LLC
124 LASALLE ROAD
2ND FLOOR
WEST HARTFORD, CT, 06107

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHAUL 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: ROBERT C. BURNS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHAUL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CATHOLIC CEMETERIES ASSOCIATION OF THE ARCHDIOCESE OF HARTFORD, INC.
ADDRESS: 700 MIDDLETOWN AVE. NORTH HAVEN, CT 06473

EAST WINDSOR SOLAR TWO

SITE ADDRESS: 31 THRALL ROAD BROAD BROOK, CT 06016

APT FILING NUMBER: CT590340

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SHEET TITLE:

GENERAL NOTES

SHEET NUMBER:

GN-1

STATE OF CONNECTICUT ROBERT CHARLES BURNS 20071 LICENSED PROFESSIONAL ENGINEER

ENVIRONMENTAL NOTES RESOURCE PROTECTION MEASURES

RESOURCE PROTECTION PROGRAM

AS A RESULT OF THE FACILITY'S LOCATION IN THE VICINITY OF SENSITIVE WETLAND AND VERNAL POOL HABITAT THE FOLLOWING PROTECTION PROGRAM SHALL BE IMPLEMENTED BY THE CONTRACTOR TO AVOID UNINTENTIONAL IMPACTS TO THESE RESOURCES INCLUDING PROXIMATE WETLAND RESOURCES OR MORTALITY TO VERNAL POOL HERPETOFAUNA (I.E., WOOD FROG, SALAMANDERS, TURTLES, ETC.) DURING CONSTRUCTION ACTIVITIES. THE VERNAL POOL SPECIFIC PROTECTION MEASURES SHALL BE IMPLEMENTED SHOULD CONSTRUCTION ACTIVITIES OCCUR DURING PEAK AMPHIBIAN MOVEMENT PERIODS (EARLY SPRING BREEDING [MARCH 1ST TO MAY 15TH] AND LATE SUMMER DISPERSAL [JULY 15TH TO SEPTEMBER 15TH]). PROTECTION MEASURES ASSOCIATED WITH WETLANDS SHALL BE IMPLEMENTED REGARDLESS OF THE TIME OF YEAR.

IT IS OF THE UTMOST IMPORTANCE THAT THE CONTRACTOR COMPLIES WITH THE REQUIREMENT FOR THE INSTALLATION OF PROTECTIVE MEASURES AND THE EDUCATION OF ITS EMPLOYEES AND SUBCONTRACTORS PERFORMING WORK ON THE PROJECT SITE. THE WETLAND AND VERNAL POOL PROTECTION MEASURES SHALL BE IMPLEMENTED AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES UNTIL PERMANENT STABILIZATION OF SITE SOILS HAS OCCURRED.

ALL POINTS TECHNOLOGY CORPORATION, P.C. ("APT") WILL SERVE AS THE ENVIRONMENTAL MONITOR FOR THIS PROJECT TO ENSURE THAT THESE PROTECTION MEASURES ARE IMPLEMENTED PROPERLY AND WILL PROVIDE AN EDUCATION SESSION ON THE PROJECTS PROXIMITY TO SENSITIVE WETLANDS AND ASSOCIATED VERNAL POOL HERPETOFAUNA PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONTACT DEAN GUSTAFSON, SENIOR WETLAND SCIENTIST AT APT, AT LEAST 5 BUSINESS DAYS PRIOR TO THE PRE CONSTRUCTION MEETING. MR. GUSTAFSON CAN BE REACHED BY PHONE AT (860) 552-2033 OR VIA EMAIL AT DGUSTAFSON@ALLPOINTSTECH.COM.

THIS RESOURCE PROTECTION PROGRAM CONSISTS OF SEVERAL COMPONENTS INCLUDING: EDUCATION OF ALL CONTRACTORS AND SUB CONTRACTORS PRIOR TO INITIATION OF WORK ON THE SITE; INSTALLATION OF EROSION CONTROLS; PETROLEUM MATERIALS STORAGE AND SPILL PREVENTION; PROTECTIVE MEASURES; RARE SPECIES PROTECTION MEASURES; HERBICIDE, PESTICIDE, AND SALT RESTRICTIONS; AND REPORTING.

1. CONTRACTOR EDUCATION:

   A. PRIOR TO WORK ON SITE AND INITIAL DEPLOYMENT/MOBILIZATION OF EQUIPMENT AND MATERIALS, THE CONTRACTOR SHALL ATTEND AN EDUCATIONAL SESSION AT THE PRE CONSTRUCTION MEETING WITH APT. THIS ORIENTATION AND EDUCATIONAL SESSION WILL CONSIST OF INFORMATION SUCH AS, BUT NOT LIMITED TO: IDENTIFICATION OF WETLAND RESOURCES PROXIMATE TO WORK AREAS, REPRESENTATIVE PHOTOGRAPHS OF TYPICAL HERPETOFAUNA THAT MAY BE ENCOUNTERED, TYPICAL SPECIES BEHAVIOR, AND PROPER PROCEDURES IF SPECIES ARE ENCOUNTERED, AND THE ENVIRONMENTALLY SENSITIVE NATURE OF THE DEVELOPMENT SITE.

   B. THE CONTRACTORS PROJECT MONITOR WILL BE PROVIDED WITH CELL PHONE AND EMAIL CONTACTS FOR APT PERSONNEL. EDUCATIONAL POSTER MATERIALS WILL BE PROVIDED BY APT AND DISPLAYED ON THE JOB SITE TO MAINTAIN WORKER AWARENESS AS THE PROJECT PROGRESSES.

   C. APT WILL ALSO POST CAUTION SIGNS THROUGHOUT THE PROJECT SITE FOR THE DURATION OF THE CONSTRUCTION PROJECT PROVIDING NOTICE OF THE ENVIRONMENTALLY SENSITIVE NATURE OF THE WORK AREA.

2. EROSION AND SEDIMENTATION CONTROLS/ISOLATION BARRIERS

   A. PLASTIC NETTING USED IN A VARIETY OF EROSION CONTROL PRODUCTS (I.E., EROSION CONTROL BLANKETS, FIBER ROLLS [WATTLES], REINFORCED SILT FENCE) HAS BEEN FOUND TO ENTANGLE WILDLIFE, INCLUDING REPTILES, AMPHIBIANS, BIRDS AND SMALL MAMMALS. NO PERMANENT EROSION CONTROL PRODUCTS OR REINFORCED SILT FENCE WILL BE USED ON THE PROJECT. TEMPORARY EROSION CONTROL PRODUCTS THAT WILL BE EXPOSED AT THE GROUND SURFACE AND REPRESENT A POTENTIAL FOR WILDLIFE ENTANGLEMENT WILL USE EITHER EROSION CONTROL BLANKETS AND FIBER ROLLS COMPOSED OF PROCESSED FIBERS MECHANICALLY BOUND TOGETHER TO FORM A CONTINUOUS MATRIX (NETLESS) OR NETTING COMPOSED OF PLANAR WOVEN NATURAL BIODEGRADABLE FIBER TO AVOID/MINIMIZE WILDLIFE ENTANGLEMENT.

   B. THE EXTENT OF THE EROSION CONTROLS WILL BE AS SHOWN ON THE SITE PLANS. THE CONTRACTOR SHALL HAVE ADDITIONAL SEDIMENTATION AND EROSION CONTROLS STOCKPILED ON SITE SHOULD FIELD OR CONSTRUCTION CONDITIONS WARRANT EXTENDING DEVICES. IN ADDITION TO THE CONTRACTOR MAKING THESE DETERMINATIONS, REQUESTS FOR ADDITIONAL CONTROLS WILL ALSO BE AT THE DISCRETION OF THE ENVIRONMENTAL MONITOR.

   C. INSTALLATION OF EROSION AND SEDIMENTATION CONTROLS, REQUIRED FOR EROSION CONTROL COMPLIANCE AND CREATION OF A BARRIER TO POSSIBLE MIGRATING/DISPERSING HERPETOFAUNA (ONLY APPLICABLE DURING THE SEASONAL RESTRICTION PERIOD AND WILL BE INSTALLED AT THE DISCRETION OF THE ENVIRONMENTAL MONITOR), SHALL BE PERFORMED BY THE CONTRACTOR IF ANY SOIL DISTURBANCE OCCURS OR HEAVY MACHINERY IS ANTICIPATED. THE ENVIRONMENTAL MONITOR WILL INSPECT THE WORK ZONE AREA PRIOR TO AND FOLLOWING EROSION CONTROL BARRIER INSTALLATION. IN ADDITION, WORK ZONES IN PROXIMITY TO VERNAL POOL RESOURCES WILL BE INSPECTED PRIOR TO AND FOLLOWING EROSION CONTROL BARRIER INSTALLATION TO ENSURE THE AREA IS FREE OF HERPETOFAUNA AND SATISFACTORILY INSTALLED. THE INTENT OF THE BARRIER IS TO SEGREGATE THE MAJORITY OF THE WORK ZONE FROM MIGRATING/DISPERSING HERPETOFAUNA. OFTENTIMES COMPLETE ISOLATION OF A WORK ZONE IS NOT FEASIBLE DUE TO ACCESSIBILITY NEEDS AND LOCATIONS OF STAGING/MATERIAL STORAGE AREAS, ETC. IN THOSE CIRCUMSTANCES, THE BARRIERS WILL BE POSITIONED TO DEFLECT MIGRATING/DISPERSAL ROUTES AWAY FROM THE WORK ZONE TO MINIMIZE POTENTIAL ENCOUNTERS WITH HERPETOFAUNA AT THE DISCRETION OF THE ENVIRONMENTAL MONITOR.

   D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS OF THE SEDIMENTATION AND EROSION CONTROLS FOR TEARS OR BREACHES AND ACCUMULATION LEVELS OF SEDIMENT, PARTICULARLY FOLLOWING STORM EVENTS THAT GENERATE A DISCHARGE, AS DEFINED BY AND IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. THE CONTRACTOR SHALL NOTIFY THE APT ENVIRONMENTAL MONITOR WITHIN 24 HOURS OF ANY BREACHES OF THE SEDIMENTATION AND EROSION CONTROLS AND ANY SEDIMENT RELEASES BEYOND THE PERIMETER CONTROLS THAT IMPACT WETLANDS, THE VERNAL POOL, OR AREAS WITHIN 100 FEET OF WETLANDS. THE APT ENVIRONMENTAL MONITOR WILL PROVIDE PERIODIC INSPECTIONS OF THE SEDIMENTATION AND EROSION CONTROLS THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES ONLY AS IT PERTAINS TO THEIR FUNCTION TO PROTECT NEARBY WETLANDS. SUCH INSPECTIONS WILL GENERALLY OCCUR ONCE PER MONTH. THE FREQUENCY OF MONITORING MAY INCREASE DEPENDING UPON SITE CONDITIONS, LEVEL OF CONSTRUCTION ACTIVITIES IN PROXIMITY TO SENSITIVE RECEPTORS, OR AT THE REQUEST OF REGULATORY AGENCIES. IF THE ENVIRONMENTAL MONITOR IS NOTIFIED BY THE CONTRACTOR OF A SEDIMENT RELEASE, AN INSPECTION WILL BE SCHEDULED SPECIFICALLY TO INVESTIGATE AND EVALUATE POSSIBLE IMPACTS TO WETLAND RESOURCES.

   E. THIRD PARTY MONITORING OF SEDIMENTATION AND EROSION CONTROLS WILL BE PERFORMED BY OTHER PARTIES, AS NECESSARY, UNDER APPLICABLE LOCAL, STATE AND/OR FEDERAL REGULATIONS AND PERMIT CONDITIONS.

   F. NO EQUIPMENT, VEHICLES OR CONSTRUCTION MATERIALS SHALL BE STORED WITHIN 100 FEET OF WETLAND RESOURCES.

   G. ALL SILT FENCING AND OTHER EROSION CONTROL DEVICES SHALL BE REMOVED WITHIN 30 DAYS OF COMPLETION OF WORK AND PERMANENT STABILIZATION OF SITE SOILS. IF FIBER ROLLS/WATTLES, STRAW BALES, OR OTHER NATURAL MATERIAL EROSION CONTROL PRODUCTS ARE USED, SUCH DEVICES WILL NOT BE LEFT IN PLACE TO BIODEGRADE AND SHALL BE PROMPTLY REMOVED AFTER SOILS ARE STABLE SO AS NOT TO CREATE A BARRIER TO WILDLIFE MOVEMENT. SEED FROM SEEDING OF SOILS SHOULD NOT SPREAD OVER FIBER ROLLS/WATTLES AS IT MAKES THEM HARDER TO REMOVE ONCE SOILS ARE STABILIZED BY VEGETATION.

3. PETROLEUM MATERIALS STORAGE AND SPILL PREVENTION

   A. CERTAIN PRECAUTIONS ARE NECESSARY TO STORE PETROLEUM MATERIALS, REFUEL AND CONTAIN AND PROPERLY CLEAN UP ANY INADVERTENT FUEL OR PETROLEUM (I.E., OIL, HYDRAULIC FLUID, ETC.) SPILL DUE TO THE PROJECT'S LOCATION IN PROXIMITY TO WETLAND RESOURCES.

   B. A SPILL CONTAINMENT KIT CONSISTING OF A SUFFICIENT SUPPLY OF ABSORBENT PADS AND ABSORBENT MATERIAL WILL BE MAINTAINED BY THE CONTRACTOR AT THE CONSTRUCTION SITE THROUGHOUT THE DURATION OF THE PROJECT. IN ADDITION, A WASTE DRUM WILL BE KEPT ON SITE TO CONTAIN ANY USED ABSORBENT PADS/MATERIAL FOR PROPER AND TIMELY DISPOSAL OFF SITE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL LAWS.

   C. SERVICING OF MACHINERY SHALL NOT OCCUR WITHIN 100 FEET OF WETLANDS.

   D. AT A MINIMUM, THE FOLLOWING PETROLEUM AND HAZARDOUS MATERIALS STORAGE AND REFUELING RESTRICTIONS AND SPILL RESPONSE PROCEDURES WILL BE ADHERED TO BY THE CONTRACTOR.

   I. PETROLEUM AND HAZARDOUS MATERIALS STORAGE AND REFUELING
      1. REFUELING OF VEHICLES OR MACHINERY SHALL OCCUR A MINIMUM OF 100 FEET FROM WETLANDS AND SHALL TAKE PLACE ON AN IMPERVIOUS PAD WITH SECONDARY CONTAINMENT DESIGNED TO CONTAIN FUELS.
      2. ANY FUEL OR HAZARDOUS MATERIALS THAT MUST BE KEPT ON SITE SHALL BE STORED ON AN IMPERVIOUS SURFACE UTILIZING SECONDARY CONTAINMENT A MINIMUM OF 100 FEET FROM WETLANDS.

   II. INITIAL SPILL RESPONSE PROCEDURES
      1. STOP OPERATIONS AND SHUT OFF EQUIPMENT.
      2. REMOVE ANY SOURCES OF SPARK OR FLAME.
      3. CONTAIN THE SOURCE OF THE SPILL.
      4. DETERMINE THE APPROXIMATE VOLUME OF THE SPILL.
      5. IDENTIFY THE LOCATION OF NATURAL FLOW PATHS TO PREVENT THE RELEASE OF THE SPILL TO SENSITIVE NEARBY WETLANDS AND VERNAL POOL.
      6. ENSURE THAT FELLOW WORKERS ARE NOTIFIED OF THE SPILL.

   III. SPILL CLEAN UP & CONTAINMENT
      1. OBTAIN SPILL RESPONSE MATERIALS FROM THE ON SITE SPILL RESPONSE KIT. PLACE ABSORBENT MATERIALS DIRECTLY ON THE RELEASE AREA.
      2. LIMIT THE SPREAD OF THE SPILL BY PLACING ABSORBENT MATERIALS AROUND THE PERIMETER OF THE SPILL.
      3. ISOLATE AND ELIMINATE THE SPILL SOURCE.
      4. CONTACT APPROPRIATE LOCAL, STATE AND/OR FEDERAL AGENCIES, AS NECESSARY.
      5. CONTACT A DISPOSAL COMPANY TO PROPERLY DISPOSE OF CONTAMINATED MATERIALS.

   IV. REPORTING
      1. COMPLETE AN INCIDENT REPORT.
      2. SUBMIT A COMPLETED INCIDENT REPORT TO LOCAL, STATE AND FEDERAL AGENCIES, AS NECESSARY, INCLUDING THE CONNECTICUT SITING COUNCIL.

4. WETLAND AND VERNAL POOL PROTECTIVE MEASURES

   A. A THOROUGH COVER SEARCH OF THE CONSTRUCTION AREA WILL BE PERFORMED BY APTS ENVIRONMENTAL MONITOR FOR HERPETOFAUNA PRIOR TO AND FOLLOWING INSTALLATION OF THE SILT FENCING BARRIER TO REMOVE ANY SPECIES FROM THE WORK ZONE PRIOR TO THE INITIATION OF CONSTRUCTION ACTIVITIES. ANY HERPETOFAUNA DISCOVERED WOULD BE TRANSLOCATED OUTSIDE THE WORK ZONE IN THE GENERAL DIRECTION THE ANIMAL WAS ORIENTED. PERIODIC INSPECTIONS WILL BE PERFORMED BY APTS ENVIRONMENTAL MONITOR THROUGHOUT THE DURATION OF THE CONSTRUCTION.

   B. ANY RUTS OR ARTIFICIAL DEPRESSIONS THAT COULD HOLD WATER CREATED INTENTIONALLY OR UNINTENTIONALLY BY SITE CLEARING/CONSTRUCTION ACTIVITIES WILL BE PROPERLY FILLED IN AND PERMANENTLY STABILIZED WITH VEGETATION TO AVOID THE CREATION OF VERNAL POOL "DECOY POOLS" THAT COULD INTERCEPT AMPHIBIANS MOVING TOWARD THE VERNAL POOLS. STORMWATER MANAGEMENT FEATURES SUCH AS LEVEL SPREADERS WILL BE CAREFULLY REVIEWED IN THE FIELD TO ENSURE THAT STANDING WATER DOES NOT ENDURE FOR MORE THAN A 24 HOUR PERIOD, WHERE FEASIBLE AT THE DISCRETION OF THE ENVIRONMENTAL MONITOR, TO AVOID CREATION OF DECOY POOLS AND MAY BE SUBJECT TO FIELD DESIGN CHANGES. ANY SUCH PROPOSED DESIGN CHANGES WILL BE REVIEWED BY THE DESIGN ENGINEER TO ENSURE STORMWATER MANAGEMENT FUNCTIONS ARE MAINTAINED.

   C. EROSION CONTROL MEASURES WILL BE REMOVED NO LATER THAN 30 DAYS FOLLOWING FINAL SITE STABILIZATION SO AS NOT TO IMPEDE MIGRATION OF HERPETOFAUNA OR OTHER WILDLIFE.

5. HERBICIDE, PESTICIDE, AND SALT RESTRICTIONS

   A. THE USE OF HERBICIDES AND PESTICIDES AT THE FACILITY SHALL BE MINIMIZED. IF HERBICIDES AND/OR PESTICIDES ARE REQUIRED AT THE FACILITY, THEIR USE WILL BE USED IN ACCORDANCE WITH CURRENT INTEGRATED PEST MANAGEMENT ("IPM") PRINCIPLES WITH PARTICULAR ATTENTION TO AVOID/MINIMIZE APPLICATIONS WITHIN 100 FEET OF WETLAND AND VERNAL POOL RESOURCES.

   B. MAINTENANCE OF THE FACILITY DURING THE WINTER MONTHS SHALL NOT INCLUDE THE APPLICATION OF SALT OR SIMILAR PRODUCTS FOR MELTING SNOW OR ICE.

6. REPORTING

   A. COMPLIANCE MONITORING REPORTS (BRIEF NARRATIVE AND APPLICABLE PHOTOS) DOCUMENTING EACH APT INSPECTION WILL BE SUBMITTED BY APT TO THE PERMITTEE AND ITS CONTRACTOR FOR COMPLIANCE VERIFICATION OF THESE PROTECTION MEASURES. THESE REPORTS ARE NOT TO BE USED TO DOCUMENT COMPLIANCE WITH ANY OTHER PERMIT AGENCY APPROVAL CONDITIONS (I.E., DEEP STORMWATER PERMIT MONITORING, ETC.). ANY NON-COMPLIANCE OBSERVATIONS OF EROSION CONTROL MEASURES OR EVIDENCE OF EROSION OR SEDIMENT RELEASE WILL BE IMMEDIATELY REPORTED TO THE PERMITTEE AND ITS CONTRACTOR AND INCLUDED IN THE REPORTS ALONG WITH ANY OBSERVATIONS OF VERNAL POOL HERPETOFAUNA.

   B. FOLLOWING COMPLETION OF THE CONSTRUCTION PROJECT, APT WILL PROVIDE A FINAL COMPLIANCE MONITORING REPORT TO THE PERMITTEE DOCUMENTING IMPLEMENTATION OF THE RESOURCE PROTECTION PROGRAM AND MONITORING OBSERVATIONS. THE PERMITTEE IS RESPONSIBLE FOR PROVIDING A COPY OF THE FINAL COMPLIANCE MONITORING REPORT TO THE CONNECTICUT SITING COUNCIL FOR COMPLIANCE VERIFICATION.

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ENVIRONMENTAL NOTES RESOURCE PROTECTION MEASURES

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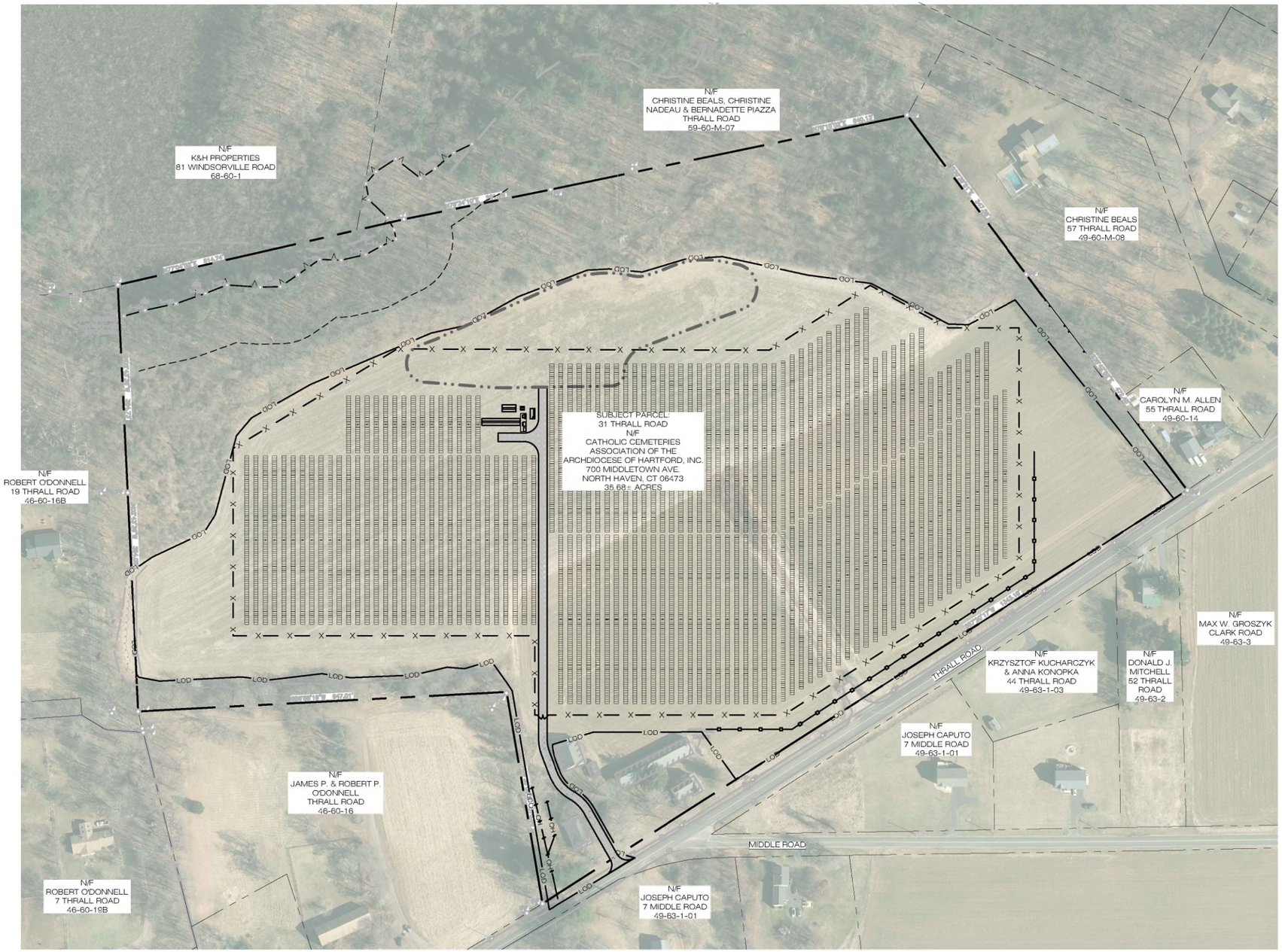
STATE OF CONNECTICUT ROBERT CHARLES BURNS 20071 LICENSED PROFESSIONAL ENGINEER



1 OP-1 **OVERALL LOCUS MAP**
SCALE : 1" = 100'-0"

100 0 50 100 200
(IN FEET) 1 inch = 100 ft.

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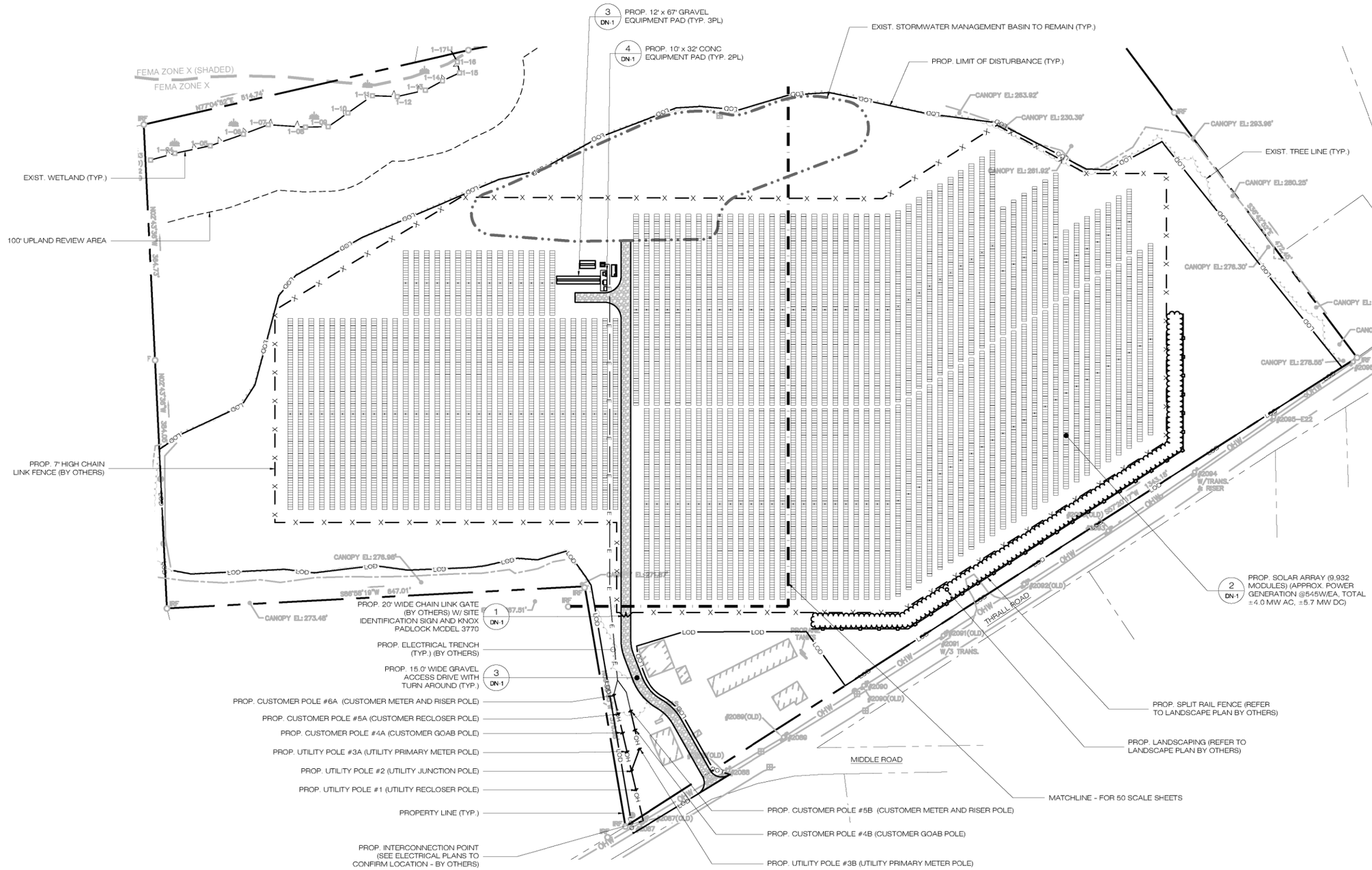
STATE OF CONNECTICUT ROBERT CHARLES BURNS 21071 LICENSED PROFESSIONAL ENGINEER



1 OP-2 **PARTIAL SITE PLAN**
SCALE : 1" = 80'-0"

80 0 40 80 160
(IN FEET) 1 inch = 80 ft.

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PARTIAL SITE PLAN

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STATE OF CONNECTICUT ROBERT CHARLES BURNS 20071 LICENSED PROFESSIONAL ENGINEER

EROSION CONTROL NOTES

EROSION AND SEDIMENT CONTROL PLAN NOTES

1. THE CONTRACTOR SHALL CONSTRUCT ALL SEDIMENT AND EROSION CONTROLS IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE TOWN OF EAST WINDSOR, PERMITTEE, AND/OR SWPCP MONITOR. ALL PERIMETER SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CLEARING AND GRUBBING AND DEMOLITION OPERATIONS.

2. THESE DRAWINGS ARE ONLY INTENDED TO DESCRIBE THE SEDIMENT AND EROSION CONTROL MEASURES FOR THIS SITE. SEE CONSTRUCTION SEQUENCE FOR ADDITIONAL INFORMATION. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN ARE SHOWN AS REQUIRED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL EROSION CONTROL MEASURES ARE CONFIGURED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION OF SOILS AND PREVENT THE TRANSPORT OF SEDIMENTS AND OTHER POLLUTANTS TO STORM DRAINAGE SYSTEMS AND/OR WATERCOURSES. ACTUAL SITE CONDITIONS OR SEASONAL AND CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS, AS REQUIRED, AND AS DIRECTED BY THE PERMITTEE AND/OR SWPCP MONITOR. REFER TO SITE PLAN FOR GENERAL INFORMATION AND OTHER CONTRACT PLANS FOR APPROPRIATE INFORMATION.

3. A BOND OR LETTER OF CREDIT MAY BE REQUIRED TO BE POSTED WITH THE GOVERNING AUTHORITY FOR THE EROSION CONTROL INSTALLATION AND MAINTENANCE.

4. THE CONTRACTOR SHALL APPLY THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN IN CONJUNCTION WITH CONSTRUCTION SEQUENCING, SUCH THAT ALL ACTIVE WORK ZONES ARE PROTECTED. ADDITIONAL AND/OR ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, OWNER, SITE ENGINEER, MUNICIPAL OFFICIALS, OR ANY GOVERNING AGENCY. THE CONTRACTOR SHALL CONTACT THE OWNER AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED BY THE CONTRACTOR.

5. THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CONSTRUCTION SO AS NOT TO DISTURB UNPROTECTED WETLAND AREAS OR INSTALLED SEDIMENTATION AND EROSION CONTROL MEASURES. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS WEEKLY AND WITHIN 24 HOURS OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCHES OR GREATER TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS AS NECESSARY IN A TIMELY MANNER.

6. THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIAL (SILT FENCE, COMPOST FILTER SOCK, EROSION CONTROL BLANKET, ETC.) ON-SITE FOR PERIODIC MAINTENANCE AND EMERGENCY REPAIRS.

7. ALL FILL MATERIAL PLACED ADJACENT TO ANY WETLAND AREA SHALL BE GOOD QUALITY, WITH LESS THAN 5% FINES PASSING THROUGH A #200 SIEVE (BANK RUN), SHALL BE PLACED IN MAXIMUM ONE FOOT LIFTS, AND SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN THE CONTRACT SPECIFICATIONS.

8. PROTECT EXISTING TREES THAT ARE TO BE SAVED BY FENCING, ORANGE SAFETY FENCE, CONSTRUCTION TAPE, OR EQUIVALENT FENCING/TAPE. ANY LIMB TRIMMING SHOULD BE DONE AFTER CONSULTATION WITH AN ARBORIST AND BEFORE CONSTRUCTION BEGINS IN THAT AREA; FENCING SHALL BE MAINTAINED AND REPAIRED DURING CONSTRUCTION.

9. CONSTRUCTION ENTRANCES (ANTI-TRACKING PADS) SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR CONSTRUCTION ACTIVITY AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF ALL CONSTRUCTION IF REQUIRED. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED. CONTRACTOR SHALL ENSURE THAT ALL VEHICLES EXITING THE SITE ARE PASSING OVER THE ANTI-TRACKING PADS PRIOR TO EXISTING.

10. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SEDIMENT BARRIER UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNHILL SIDE OF THE BARRIER.

11. NO CUT OR FILL SLOPES SHALL EXCEED 2:1 EXCEPT WHERE STABILIZED BY ROCK FACED EMBANKMENTS OR EROSION CONTROL BLANKETS. ALL SLOPES SHALL BE SEEDED AND BANKS WILL BE STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING UNTIL TURF IS ESTABLISHED.

12. DIRECT ALL DEWATERING PUMP DISCHARGE TO A SEDIMENT CONTROL DEVICE CONFORMING TO THE GUIDELINES WITHIN THE APPROVED LIMIT OF DISTURBANCE IF REQUIRED. DISCHARGE TO STORM DRAINS OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR AND APPROVED BY THE PERMITTEE OR MUNICIPALITY.

13. THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ON-SITE AT ALL TIMES AND SECURED APPROPRIATELY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE/CONTAINMENT.

14. MINIMIZE LAND DISTURBANCES. SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE. MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDED WITH TACKIFIER.

15. SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY (OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM) DURING CONSTRUCTION. FOR DUST CONTROL, PERIODICALLY MOISTEN EXPOSED SOIL SURFACES WITH WATER ON UNPAVED TRAVELWAYS TO KEEP THE TRAVELWAYS DAMP. CALCIUM CHLORIDE MAY ALSO BE APPLIED TO ACCESS ROADS. DUMP TRUCK LOADS EXITING THE SITE SHALL BE COVERED.

16. VEGETATIVE ESTABLISHMENT SHALL OCCUR ON ALL DISTURBED SOIL, UNLESS THE AREA IS UNDER ACTIVE CONSTRUCTION, IT IS COVERED IN STONE OR SCHEDULED FOR PAVING WITHIN 30 DAYS. TEMPORARY SEEDING OR NON-LIVING SOIL PROTECTION OF ALL EXPOSED SOILS AND SLOPES SHALL BE INITIATED WITHIN THE FIRST 7 DAYS OF SUSPENDING WORK IN AREAS TO BE LEFT LONGER THAN 30 DAYS.

17. MAINTAIN ALL PERMANENT AND TEMPORARY SEDIMENT CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP CONCRETE PADS, CLEAN THE STORMWATER MANAGEMENT SYSTEMS AND REMOVE ALL TEMPORARY SEDIMENT CONTROLS ONCE THE SITE IS FULLY STABILIZED AND APPROVAL HAS BEEN RECEIVED FROM PERMITTEE OR THE MUNICIPALITY.

18. SEEDING MIXTURES SHALL BE FUZZ & BUZZ MIX - PREMIUM - ERNMX-147, OR APPROVED EQUAL. NEW ENGLAND EROSION CONTROL/ RESTORATION MIX FOR DETENTION BASINS & MOIST SITES, OR APPROVED EQUAL, SHALL BE UTILIZED ON THE BOTTOM OF THE BASIN & FUZZ & BUZZ MIX - PREMIUM - ERNMX-147, OR APPROVED EQUAL, ON THE SIDE SLOPES OF THE BASIN. SEE SHEET DN-2 FOR ALL SEED MIXTURES.

CONSTRUCTION OPERATION AND MAINTENANCE PLAN - BY CONTRACTOR

E&S MEASURE	INSPECTION SCHEDULE	MAINTENANCE REQUIRED
CONSTRUCTION ENTRANCE	DAILY	PLACE ADDITIONAL STONE, EXTEND THE LENGTH OR REMOVE AND REPLACE THE STONE. CLEAN PAVED SURFACES OF TRACKED SEDIMENT.
SILT FENCE	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR/REPLACE WHEN FAILURE OR DETERIORATION IS OBSERVED. REMOVE SILT WHEN IT REACHES 1/2 THE HEIGHT OF THE FENCE.
TOPSOIL/BORROW STOCKPILES	DAILY	REPAIR/REPLACE SEDIMENT BARRIERS AS NECESSARY.
TEMPORARY SEDIMENT BASIN	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.5"	REMOVE SEDIMENT ONCE IT HAS ACCUMULATED TO ONE HALF OF MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATERING AS NEEDED. RESTORE TRAP TO ORIGINAL DIMENSIONS. REPAIR/REPLACE BAFFLES WHEN FAILURE OR DETERIORATION IS OBSERVED.
TEMPORARY SEDIMENT TRAP	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.5"	REMOVE SEDIMENT ONCE IT HAS ACCUMULATED TO ONE HALF OF MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATERING AS NEEDED. RESTORE TRAP TO ORIGINAL DIMENSIONS. REPAIR/REPLACE BAFFLES WHEN FAILURE OR DETERIORATION IS OBSERVED.
TEMPORARY SOIL PROTECTION	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR ERODED OR BARE AREAS IMMEDIATELY. RESEED AND MULCH.

SEDIMENT & EROSION CONTROL NARRATIVE

1. THE PROJECT INVOLVES THE CONSTRUCTION OF A GROUND MOUNTED SOLAR PANEL FACILITY WITH ASSOCIATED EQUIPMENT, INCLUDING GRADING OF APPROXIMATELY 24.70± ACRES OF EXISTING LOT.

THE PROPOSED PROJECT INVOLVES THE FOLLOWING CONSTRUCTION:

A. CLEARING, GRUBBING, AND GRADING OF EXISTING LOT.
B. CONSTRUCTION OF 9,932 GROUND MOUNTED SOLAR PANELS AND ASSOCIATED EQUIPMENT.
B. THE STABILIZATION OF DISTURBED AREAS WITH PERMANENT VEGETATIVE TREATMENTS.

2. FOR THIS PROJECT, THERE ARE APPROXIMATELY 24.70± ACRES OF THE SITE BEING DISTURBED WITH NEGLIGIBLE INCREASE IN THE IMPERVIOUS AREA OF THE SITE. IMPERVIOUS AREAS ARE LIMITED TO THE CONCRETE PADS FOR ELECTRICAL EQUIPMENT & GRAVEL ACCESS DRIVE.

3. THE PROJECT SITE, AS MAPPED IN THE SOIL SURVEY OF STATE OF CONNECTICUT (NRCS, VERSION 18, DEC 6, 2018), CONTAINS TYPE 37C & 38E (HYDROLOGIC SOIL GROUP A) AND 704A & 704B (HYDROLOGIC SOIL GROUP B). A GEOTECHNICAL ENGINEERING REPORT IS AVAILABLE UNDER SEPARATE COVER.

4. IT IS ANTICIPATED THAT CONSTRUCTION WILL BE COMPLETED IN APPROXIMATELY 4-6 MONTHS.

5. REFER TO THE CONSTRUCTION SEQUENCING AND EROSION AND SEDIMENTATION NOTES FOR INFORMATION REGARDING SEQUENCING OF MAJOR OPERATIONS IN THE ON-SITE CONSTRUCTION PHASES.

6. STORMWATER MANAGEMENT DESIGN CRITERIA UTILIZES THE APPLICABLE SECTIONS OF THE 2004 CONNECTICUT STORMWATER QUALITY MANUAL AND THE TOWN OF EAST WINDSOR STANDARDS, TO THE EXTENT POSSIBLE AND PRACTICABLE FOR THIS PROJECT ON THIS SITE. EROSION AND SEDIMENTATION MEASURES ARE BASED UPON ENGINEERING PRACTICE, JUDGEMENT AND THE APPLICABLE SECTIONS OF THE CONNECTICUT EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, LATEST EDITION.

7. DETAILS FOR THE TYPICAL STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION MEASURES ARE SHOWN ON THE PLAN SHEETS OR PROVIDED AS SEPARATE SUPPORT DOCUMENTATION FOR REVIEW IN THIS PLAN.

8. CONSERVATION PRACTICES TO BE USED DURING CONSTRUCTION:
   A. STAGED CONSTRUCTION.
   B. MINIMIZE THE DISTURBED AREAS TO THE EXTENT PRACTICABLE DURING CONSTRUCTION;
   C. STABILIZE DISTURBED AREAS WITH TEMPORARY OR PERMANENT MEASURES AS SOON AS POSSIBLE, BUT NO LATER THAN 7-DAYS FOLLOWING DISTURBANCE;
   D. MINIMIZE IMPERVIOUS AREAS;
   E. UTILIZE APPROPRIATE CONSTRUCTION EROSION AND SEDIMENTATION MEASURES.

9. THE FOLLOWING SEPARATE DOCUMENTS ARE TO BE CONSIDERED A PART OF THE EROSION AND SEDIMENTATION PLAN:
   A. STORMWATER MANAGEMENT REPORT DATED APRIL 2023.
   B. SWPCP, TO BE ISSUED AT A LATER DATE.

SUGGESTED CONSTRUCTION SEQUENCE

THE FOLLOWING SUGGESTED SEQUENCE OF CONSTRUCTION ACTIVITIES IS PROJECTED BASED UPON ENGINEERING JUDGEMENT AND BEST MANAGEMENT PRACTICES. THE CONTRACTOR MAY ELECT TO ALTER THE SEQUENCING TO BEST MEET THE CONSTRUCTION SCHEDULE, THE EXISTING SITE ACTIVITIES AND WEATHER CONDITIONS. SHOULD THE CONTRACTOR ALTER THE CONSTRUCTION SEQUENCE OR ANY EROSION AND SEDIMENTATION CONTROL MEASURES THEY SHALL MODIFY THE STORMWATER POLLUTION CONTROL PLAN ("SWPCP") AS REQUIRED BY THE GENERAL PERMIT. MAJOR CHANGES IN SEQUENCING AND/OR METHODS MAY REQUIRE REGULATORY APPROVAL PRIOR TO IMPLEMENTATION.

1. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING. PHYSICALLY FLAG THE LIMITS OF DISTURBANCE IN THE FIELD AS NECESSARY TO FACILITATE THE PRE-CONSTRUCTION MEETING.

2. CONDUCT A PRE-CONSTRUCTION MEETING TO DISCUSS THE PROPOSED WORK AND EROSION AND SEDIMENTATION CONTROL MEASURES. THE MEETING SHOULD BE ATTENDED BY THE OWNER, THE OWNER'S REPRESENTATIVE(S), THE GENERAL CONTRACTOR, DESIGNATED SUB-CONTRACTORS AND THE PERSON, OR PERSONS, RESPONSIBLE FOR THE IMPLEMENTATION, OPERATION, MONITORING AND MAINTENANCE OF THE EROSION AND SEDIMENTATION MEASURES. THE CONSTRUCTION PROCEDURES FOR THE ENTIRE PROJECT SHALL BE REVIEWED AT THIS MEETING.

3. NOTIFY CALL BEFORE YOU DIG AT 811, AS REQUIRED, PRIOR TO THE START OF CONSTRUCTION.

PHASE 1

4. REMOVE EXISTING IMPEDIMENTS AS NECESSARY AND PROVIDE MINIMAL DISTURBANCE TO INSTALL THE REQUIRED CONSTRUCTION ENTRANCE.

5. INSTALL PERIMETER EROSION CONTROL.

6. CLEAN OUT EXISTING DRYWELL IN EXISTING STORMWATER MANAGEMENT BASIN AND INSTALL SILT SACK & HAYBALES.

7. INSTALL ACCESS DRIVE.

8. INSTALL ELECTRICAL CONDUIT, RACKING POSTS FOR GROUND MOUNTED SOLAR PANELS & GROUND MOUNTED SOLAR PANELS AND COMPLETE ELECTRICAL INSTALLATION.

9. TEMPORARILY SEED DISTURBED AREAS NOT UNDER CONSTRUCTION FOR THIRTY (30) DAYS OR MORE.

PHASE 2

10. AFTER SUBSTANTIAL COMPLETION OF THE INSTALLATION OF THE SOLAR PANELS, COMPLETE REMAINING SITE WORK, INCLUDING ANY REQUIRED LANDSCAPE SCREENING, CHAIN LINK FENCE, AND STABILIZE ALL DISTURBED AREAS.

11. FINE GRADE, RAKE, SEED AND MULCH ALL REMAINING DISTURBED AREAS.

12. AFTER THE SITE IS STABILIZED AND WITH THE APPROVAL OF THE PERMITTEE AND IF NECESSARY THE CONSERVATION AGENT, REMOVE PERIMETER EROSION AND SEDIMENTATION CONTROLS.

13. THE SITE SHALL BE MONITORED EVERY MONTHLY OF THE YEAR FOR TWO (2) FULL GROWING SEASONS (GROWING SEASONS ARE APRIL-OCTOBER).

14. ISSUE NOTICE OF TERMINATION UPON COMPLETION OF MONITORING REQUIRED PER APPENDIX I.

EAST WINDSOR SOLAR TWO, LLC
124 LASALLE ROAD
2ND FLOOR
WEST HARTFORD, CT, 06107

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567 VAUXHAUL 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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1	04/25/23	CSC PETITION: RCB
2	05/01/23	CSC PETITION: RCB
3	06/19/23	SWPCP SUBMISSION: RCB
4	08/13/24	CSC REVISIONS: UKA
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DESIGN PROFESSIONAL OF RECORD

PROF: ROBERT C. BURNS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHAUL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CATHOLIC CEMETERIES ASSOCIATION OF THE ARCHDIOCESE OF HARTFORD, INC.
ADDRESS: 700 MIDDLETOWN AVE. NORTH HAVEN, CT 06473

EAST WINDSOR SOLAR TWO

SITE ADDRESS: 31 THRALL ROAD BROAD BROOK, CT 06016

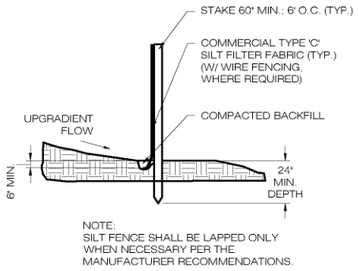
APT FILING NUMBER: CT590340

DRAWN BY: CSH
DATE: 04/03/23 CHECKED BY: RCB

SHEET TITLE:
SEDIMENTATION & EROSION CONTROL NOTES

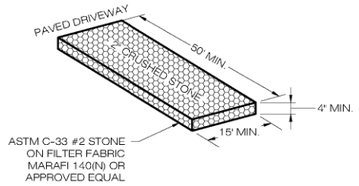
SHEET NUMBER:
EC-1

STATE OF CONNECTICUT ROBERT CHARLES BURNS 20071 LICENSED PROFESSIONAL ENGINEER



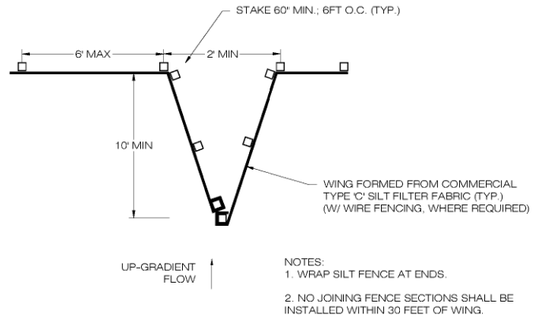
1 EC-2 SILT FENCE DETAIL

SCALE : N.T.S.



2 EC-2 CONSTRUCTION ENTRANCE DETAIL

SCALE : N.T.S.

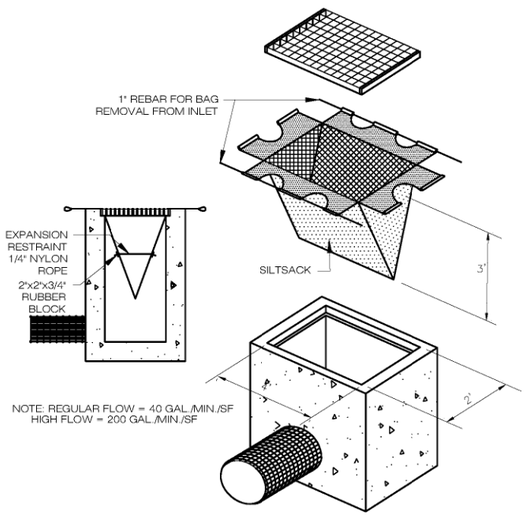


NOTES:
1. WRAP SILT FENCE AT ENDS.

2. NO JOINING FENCE SECTIONS SHALL BE INSTALLED WITHIN 30 FEET OF WING.

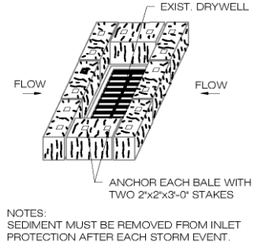
3 EC-2 SILT FENCE WING DETAIL

SCALE : N.T.S.



4 EC-2 SILTSACK DETAIL

SCALE : N.T.S.



NOTES:
SEDIMENT MUST BE REMOVED FROM INLET PROTECTION AFTER EACH STORM EVENT.

5 EC-2 HAY BALES AT CATCH BASINS

SCALE : N.T.S.

TEMPORARY SEDIMENT BASIN SIZING TABLE

TRAP/BASIN NAME	DRAINAGE AREA (AC)	REQ. DRY VOLUME (CF)	REQ. WET VOLUME (CF)	PROP. BTM. ELEV. (FT)	PROP. WEIR CREST ELEV. (FT)	PROP. TOP ELEV. (FT)	DRY VOL. PROVIDED (CF)	WET VOL. PROVIDED (CF)	TOTAL VOL. PROVIDED (CF)
TSB-1	13.60	7,680	15,360	211.00	213.5	214.0	96,832	13,619	110,451

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EAST WINDSOR SOLAR TWO

SITE ADDRESS: 31 THRALL ROAD BROAD BROOK, CT 06016

APT FILING NUMBER: CT590340

DRAWN BY: CSH

DATE: 04/03/23 CHECKED BY: RCB

SHEET TITLE:
SEDIMENTATION & EROSION CONTROL DETAILS

SHEET NUMBER:
EC-2

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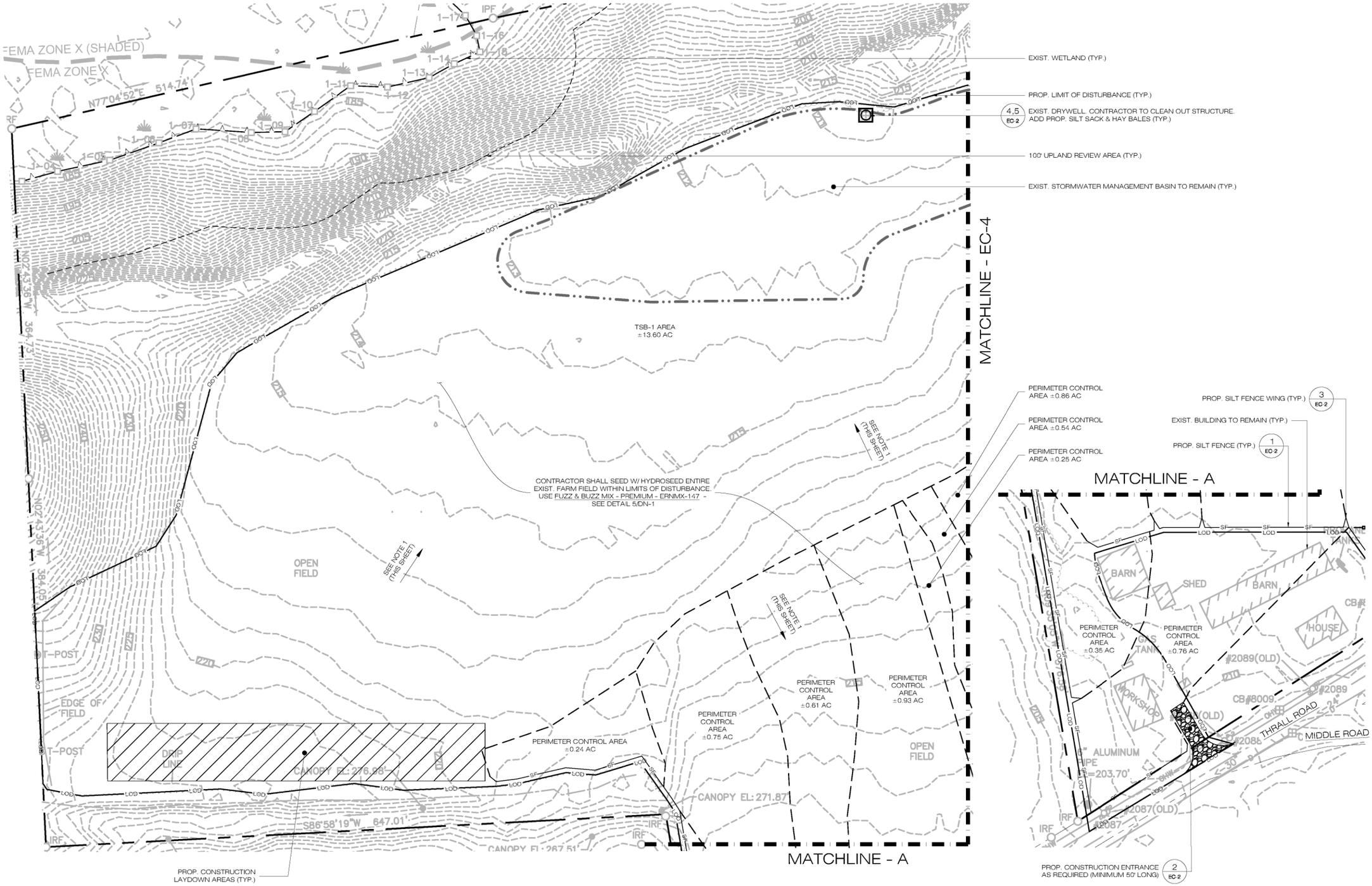

1 EC-3 **PHASE 1 - SEDIMENTATION & EROSION CONTROL PLAN**
SCALE : 1" = 50'-0"

(IN FEET) 1 inch = 50 ft.

NOTES:
1. GRADE/SHAPE AREA AS REQUIRED TO MAINTAIN EXIST. DRAINAGE PATTERNS.

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DRAWN BY: CSH
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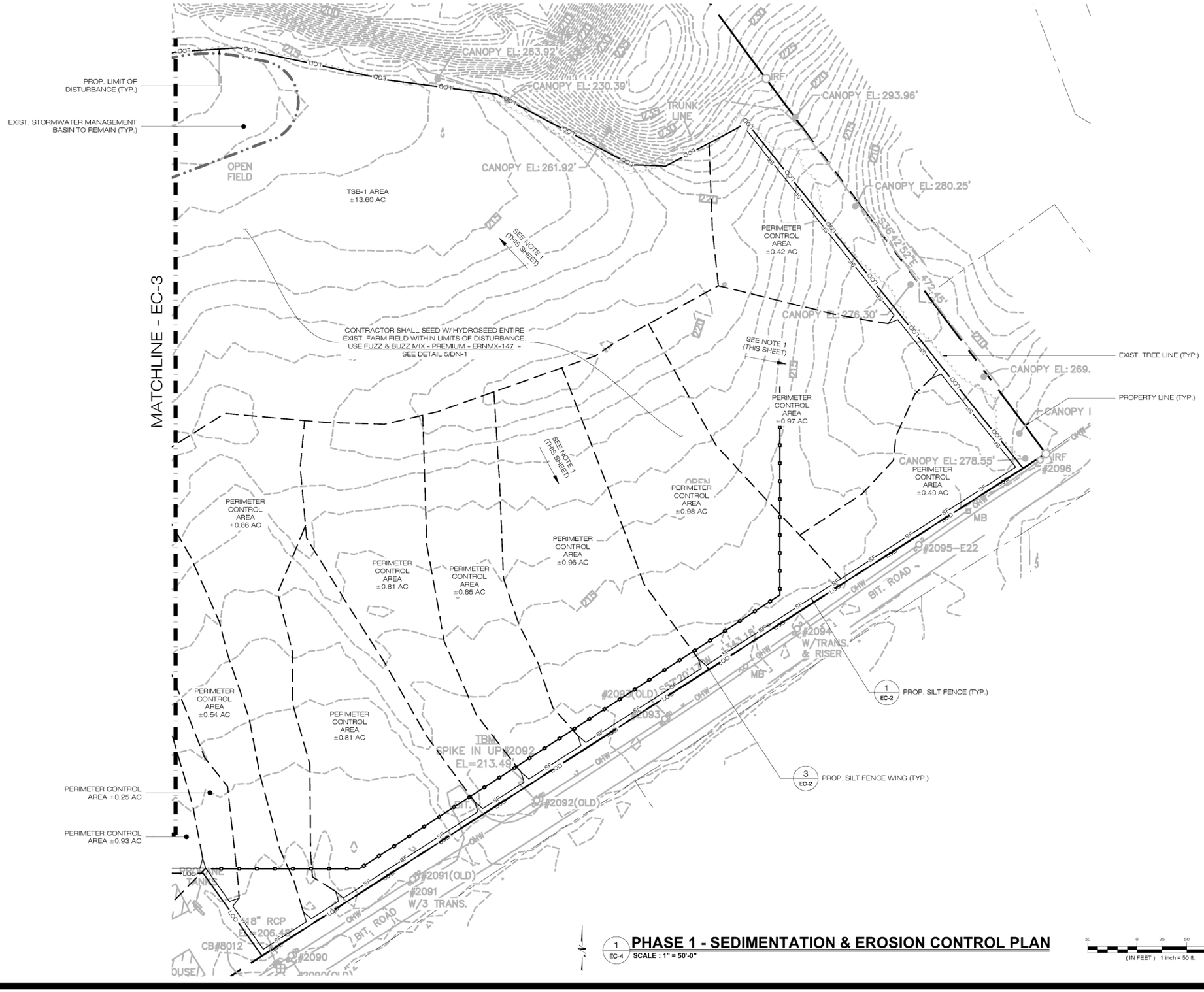
SHEET TITLE:
PHASE 1 SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:
EC-3

STATE OF CONNECTICUT ROBERT CHARLES BURNS 20071 LICENSED PROFESSIONAL ENGINEER



1 EC-4 **PHASE 1 - SEDIMENTATION & EROSION CONTROL PLAN**
SCALE : 1" = 50'-0"

50 0 25 50 100
(IN FEET) 1 inch = 50 ft.

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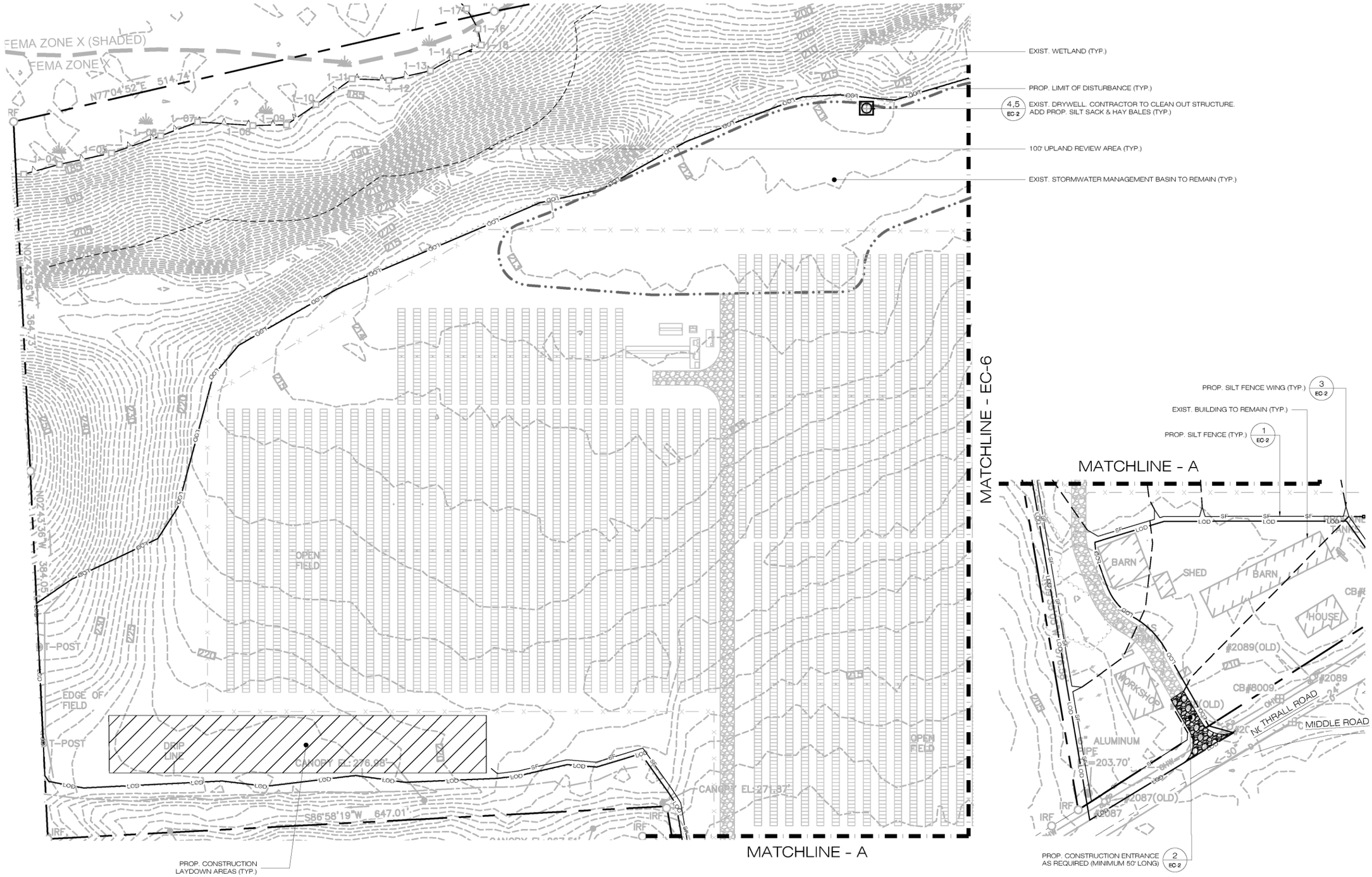
APT FILING NUMBER: CT590340

DRAWN BY: CSH
DATE: 04/03/23 CHECKED BY: RCB

SHEET TITLE:
PHASE 1 SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:
EC-4

STATE OF CONNECTICUT ROBERT CHARLES BURNS 20071 LICENSED PROFESSIONAL ENGINEER



1 EC-5 **PHASE 2 - SEDIMENTATION & EROSION CONTROL PLAN**

SCALE : 1" = 50'-0"

50 0 25 50 100

(IN FEET) 1 inch = 50 ft.

EAST WINDSOR SOLAR TWO, LLC
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APT FILING NUMBER: CT590340

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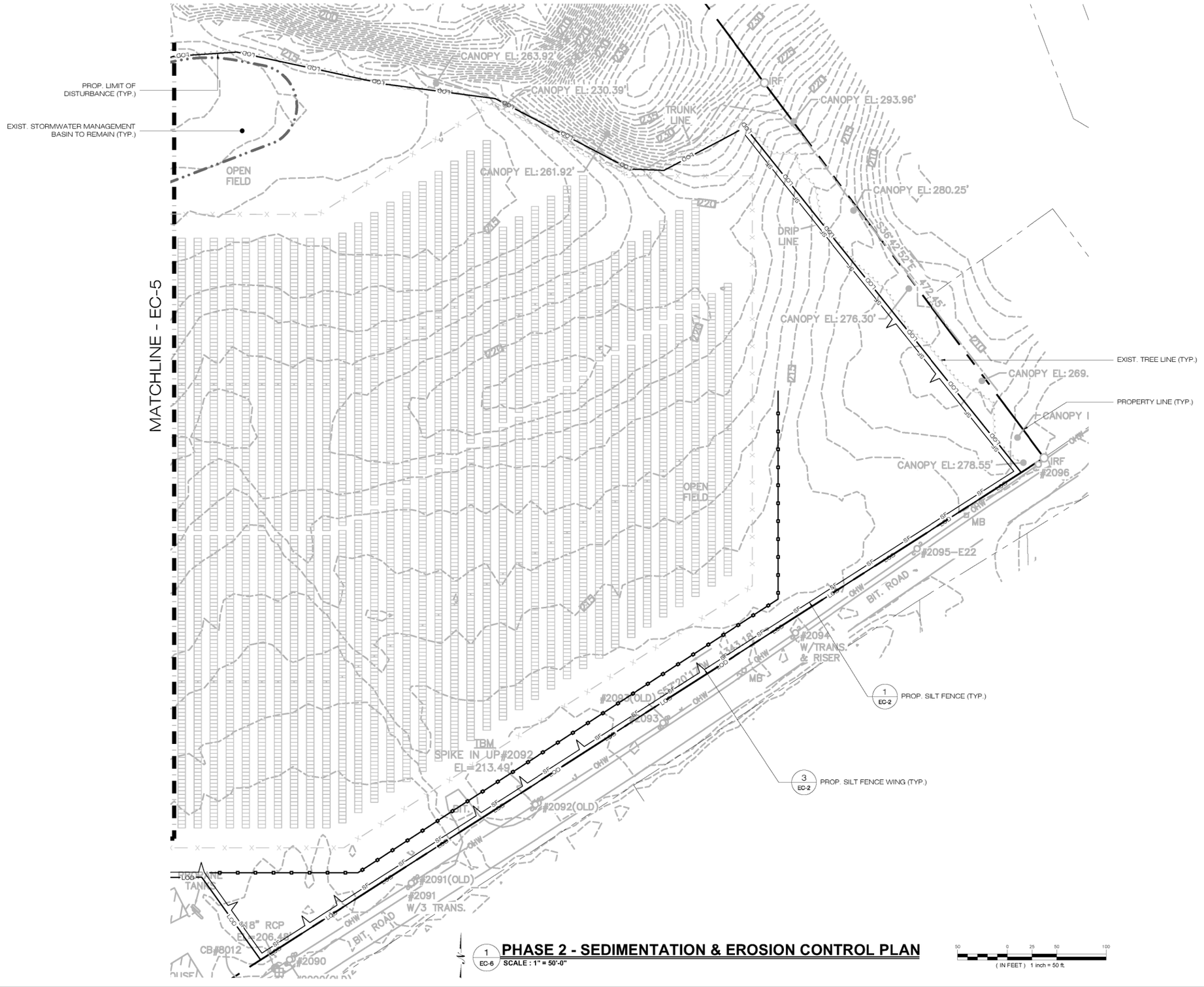
SHEET TITLE:
PHASE 2 SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:
EC-5

STATE OF CONNECTICUT ROBERT CHARLES BURNS 20071 LICENSED PROFESSIONAL ENGINEER



1 EC-6 **PHASE 2 - SEDIMENTATION & EROSION CONTROL PLAN**
SCALE : 1" = 50'-0"

50 0 25 50 100
(IN FEET) 1 inch = 50 ft.

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DESIGN PROFESSIONAL OF RECORD

PROF: ROBERT C. BURNS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHAUL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CATHOLIC CEMETERIES ASSOCIATION OF THE ARCHDIOCESE OF HARTFORD, INC.
ADDRESS: 700 MIDDLETOWN AVE. NORTH HAVEN, CT 06473

EAST WINDSOR SOLAR TWO

SITE ADDRESS: 31 THRALL ROAD BROAD BROOK, CT 06016

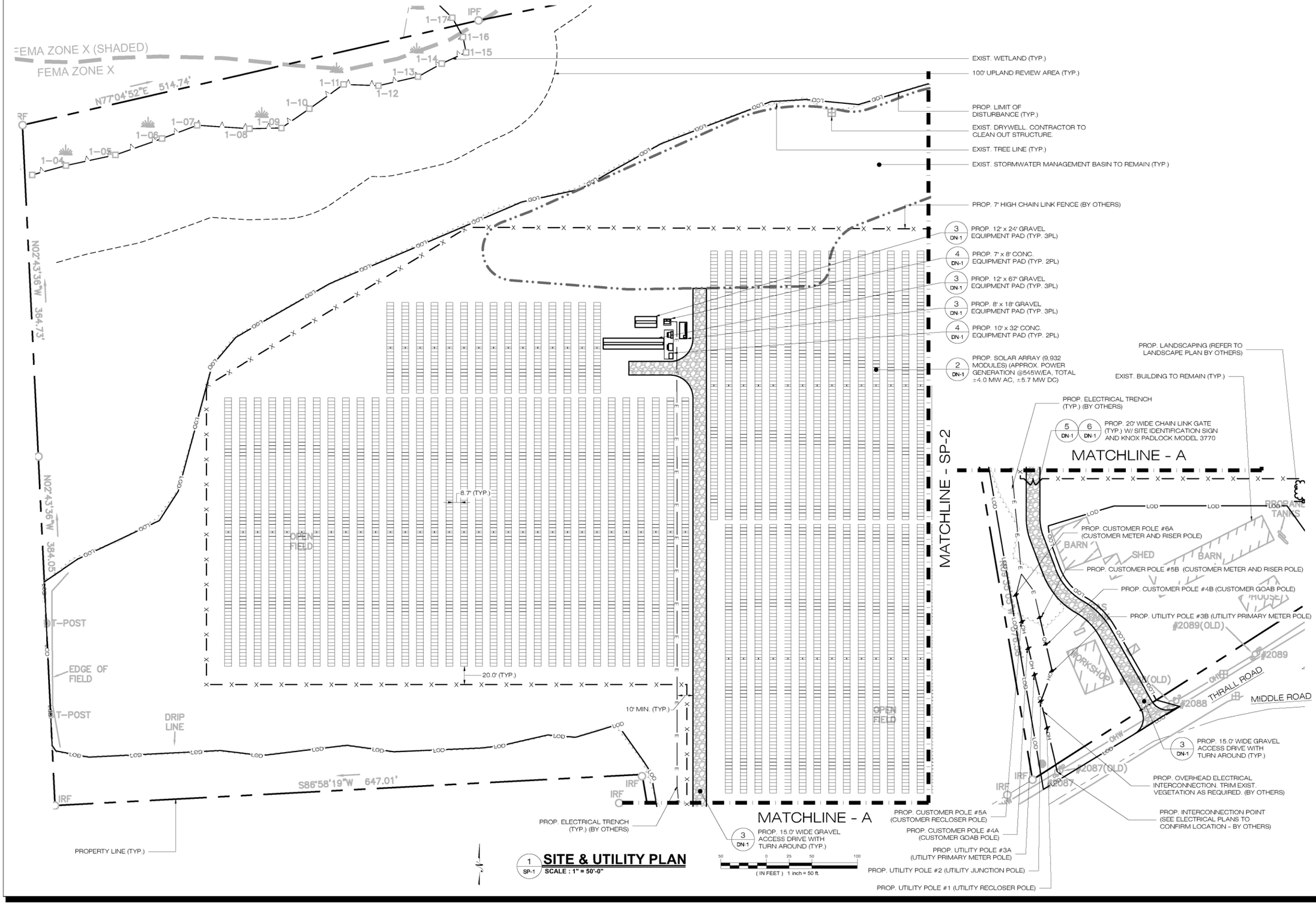
APT FILING NUMBER: CT590340

DRAWN BY: CSH
DATE: 04/03/23 CHECKED BY: RCB

SHEET TITLE:
PHASE 2 SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:
EC-6

STATE OF CONNECTICUT ROBERT CHARLES BURNS 20071 LICENSED PROFESSIONAL ENGINEER



1 SP-1 **SITE & UTILITY PLAN**
SCALE : 1" = 50'-0"

EAST WINDSOR SOLAR TWO, LLC
124 LASALLE ROAD
2ND FLOOR
WEST HARTFORD, CT, 06107

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHAUL 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	04/03/23	DRAFT SET FOR REVIEW: RCB
1	04/25/23	CSC PETITION: RCB
2	05/01/23	CSC PETITION: RCB
3	06/19/23	SWPCP SUBMISSION: RCB
4	08/13/24	CSC REVISIONS: UKA
5		
6		

DESIGN PROFESSIONAL OF RECORD

PROF: ROBERT C. BURNS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHAUL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CATHOLIC CEMETERIES ASSOCIATION OF THE ARCHDIOCESE OF HARTFORD, INC.
ADDRESS: 700 MIDDLETOWN AVE. NORTH HAVEN, CT 06473

EAST WINDSOR SOLAR TWO

SITE ADDRESS: 31 THRALL ROAD BROAD BROOK, CT 06016

APT FILING NUMBER: CT590340

DRAWN BY: CSH
DATE: 04/03/23 CHECKED BY: RCB

SHEET TITLE:
SITE & UTILITY PLAN

SHEET NUMBER:
SP-1

STATE OF CONNECTICUT ROBERT CHARLES BURNS 20071 LICENSED PROFESSIONAL ENGINEER

1 SP-2 **SITE & UTILITY PLAN**
SCALE : 1" = 50'-0"

50 0 25 50 100
(IN FEET) 1 inch = 50 ft.

EAST WINDSOR SOLAR TWO, LLC
124 LASALLE ROAD
2ND FLOOR
WEST HARTFORD, CT, 06107

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHAUL 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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3	06/19/23	SWPCP SUBMISSION: RCB
4	08/13/24	CSC REVISIONS: UKA
5		
6		

DESIGN PROFESSIONAL OF RECORD

PROF: ROBERT C. BURNS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHAUL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CATHOLIC CEMETERIES ASSOCIATION OF THE ARCHDIOCESE OF HARTFORD, INC.
ADDRESS: 700 MIDDLETOWN AVE. NORTH HAVEN, CT 06473

EAST WINDSOR SOLAR TWO

SITE ADDRESS: 31 THRALL ROAD BROAD BROOK, CT 06016

APT FILING NUMBER: CT590340

DRAWN BY: CSH
DATE: 04/03/23 CHECKED BY: RCB

SHEET TITLE:

SITE & UTILITY PLAN

SHEET NUMBER:

SP-2

STATE OF CONNECTICUT ROBERT CHARLES BURNS 20071 LICENSED PROFESSIONAL ENGINEER

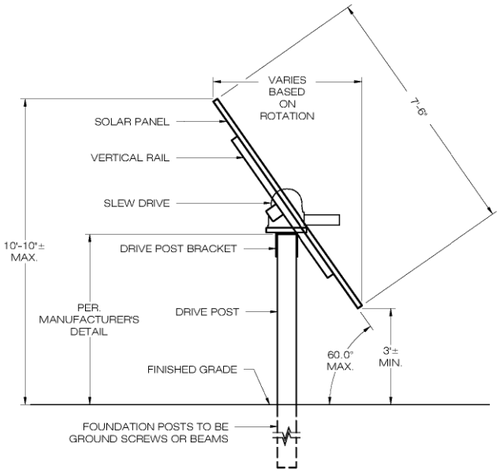
EAST WINDSOR
SOLAR TWO, LLC

IN CASE OF EMERGENCY
CALL T.B.D.

NOTES:
EMERGENCY CALL NUMBER TO BE PROVIDED ONCE DETERMINED.

1 DN-1 NOTIFICATION SIGN DETAIL

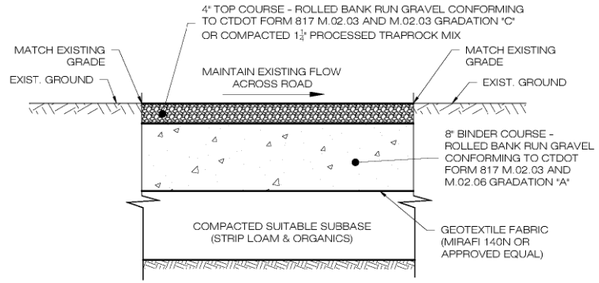
SCALE : N.T.S.



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.

2 DN-1 TYPICAL TRACKER POST MOUNTED RACKING SYSTEM

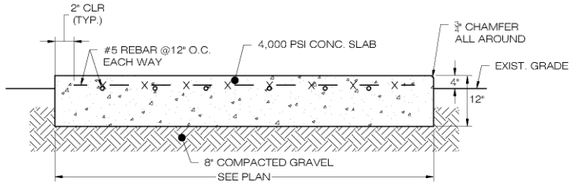
SCALE : N.T.S.



NOTES:
1. SUBBASE MAY CONSIST OF NATIVE MATERIALS IF FOUND ACCEPTABLE BY THE ENGINEER. SUBBASE TO BE COMPACTED TO 95% MAX DRY DENSITY.
2. SUBBASE IS TO BE FREE FROM DEBRIS AND UNSUITABLE MATERIALS.
3. CONTRACTOR SHALL INSTALL ACCESS ROAD FLUSH WITH EXISTING GRADE TO ENSURE DRAINAGE FLOW PATHS ARE MAINTAINED.
4. SEE PLAN VIEW SHEETS FOR ROAD WIDTH.

3 DN-1 GRAVEL ACCESS DRIVE/EQUIPMENT PAD SECTION

SCALE : N.T.S.



4 DN-1 CONCRETE EQUIPMENT PAD

SCALE : N.T.S.

NEW ENGLAND WETLAND PLANTS, INC
820 WEST STREET, AMHERST, MA 01002
PHONE: 413-548-8000 FAX 413-549-4000
EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM

New England Erosion Control/Restoration Mix For Detention Basins and Moist Sites

Botanical Name	Common Name	Indicator
Elymus riparius	Riverbank Wild Rye	FACW
Schizochyrium scoparium	Little Bluestem	FACU
Festuca rubra	Red Fescue	FACU
Andropogon gerardii	Big Bluestem	FAC
Panicum virgatum	Switch Grass	FAC
Vernonia noveboracensis	New York Ironweed	FACW+
Agrostis perennans	Upland Bentgrass	FACU
Bidens frondosa	Beggar Ticks	FACW
Eupatorium maculatum (Eutrochium maculatum)	Spotted Joe Pye Weed	OBL
Eupatorium perfoliatum	Boneset	FACW
Aster novae-angliae (Symphyotrichum novae-anglia	New England Aster	FACW-
Scirpus cyperinus	Wool Grass	FACW
Juncus effusus	Soft Rush	FACW+

PRICE PER LB. $37.00 MIN. QUANITY 3 LBS. **TOTAL:** $111.00 APPLY: 35 LBS/ACRE :1250 sq ft/lb

The New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites contains a selection of native grasses and wildflowers designed to colonize generally moist, recently disturbed sites where quick growth of vegetation is desired to stabilize the soil surface. It is an appropriate seed mix for ecologically sensitive restorations that require stabilization as well as long-term establishment of native vegetation. This mix is particularly appropriate for detention basins that do not hold standing water. Many of the plants in this mix can tolerate infrequent inundation, but not constant flooding. The mix may be applied by hand, by mechanical spreader, or by hydro-seeder. After sowing, lightly rake, roll or cultipack to insure good seed-to-soil contact. Best results are obtained with a Spring or late Summer seeding. Late Fall and Winter dormant seeding requires an increase in the application rate. A light mulching of clean, weed-free straw is recommended

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is $/bulk pound, FOB warehouse, Plus SH and applicable taxes.

5 DN-1 STORMWATER MANAGEMENT BASIN MIX

SCALE : N.T.S.

EAST WINDSOR SOLAR TWO, LLC
124 LASALLE ROAD
2ND FLOOR
WEST HARTFORD, CT, 06107

ALL-POINTS TECHNOLOGY CORPORATION
367 VAUXHAUL 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: ROBERT C. BURNS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 567 VAUXHAUL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385

OWNER: CATHOLIC CEMETERIES ASSOCIATION OF THE ARCHDIOCESE OF HARTFORD, INC.
ADDRESS: 700 MIDDLETOWN AVE. NORTH HAVEN, CT 06473

EAST WINDSOR SOLAR TWO

SITE ADDRESS: 31 THRALL ROAD BROAD BROOK, CT 06016

APT FILING NUMBER: CT590340

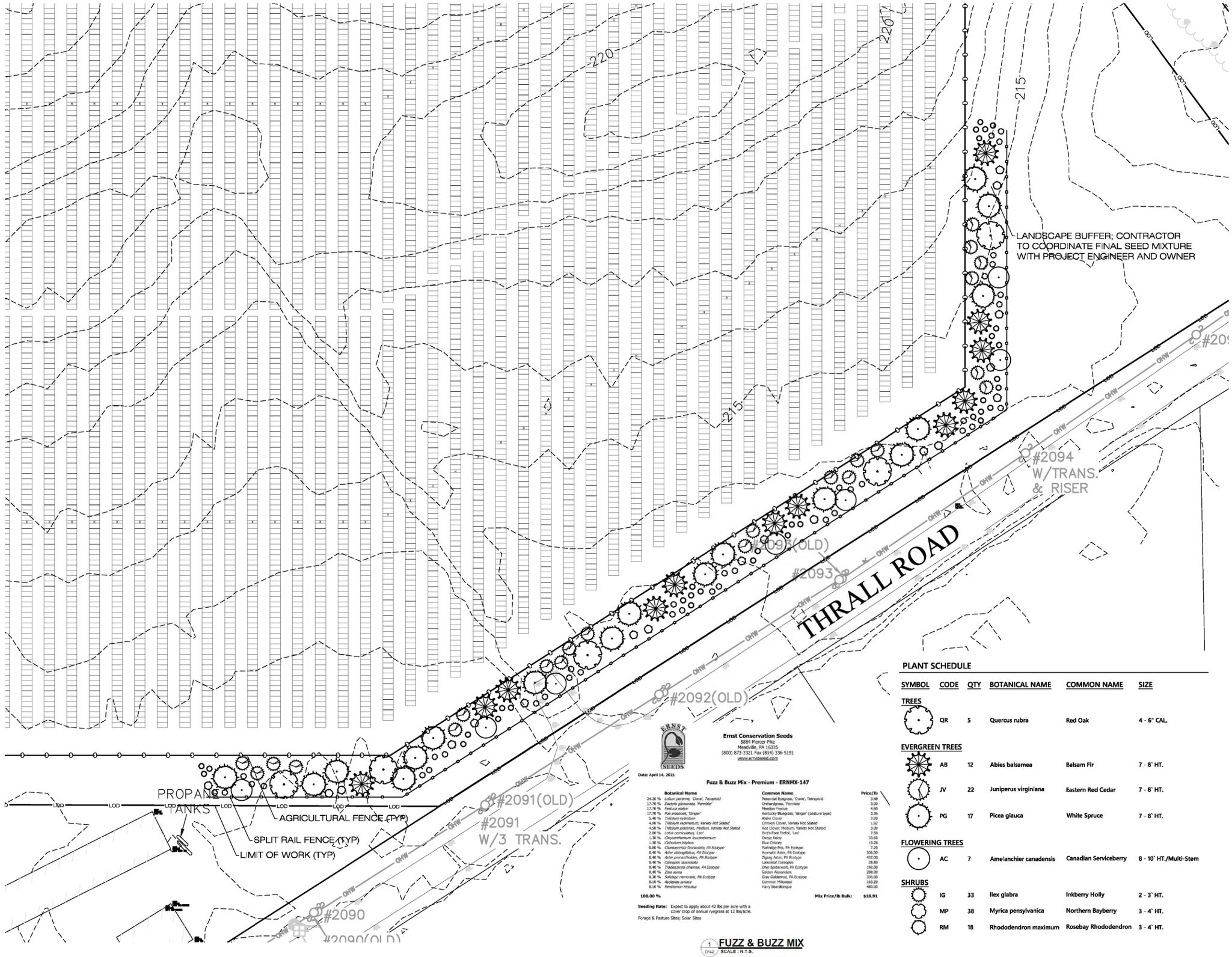
DRAWN BY: CSH
DATE: 04/03/23 CHECKED BY: RCB

SHEET TITLE:
SITE DETAILS

SHEET NUMBER:
DN-1

STATE OF CONNECTICUT ROBERT CHARLES BURNS 20071 LICENSED PROFESSIONAL ENGINEER

ATTACHMENT 2



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

Date: April 14, 2021

Fuzz & Buzz Mix - Premium - ERNMX-147

	Botanical Name	Common Name	Price/lb
24.20 %	*Lolium perenne, 'Crave', Tetraploid*	Perennial Ryegrass, 'Crave', Tetraploid	3.49
17.70 %	*Dactylis glomerata, 'Remidor'*	Orchardgrass, 'Remidor'	3.00
17.70 %	*Festuca elatior*	Meadow Fescue	4.80
17.70 %	*Poa pratensis, 'Ginger'*	Kentucky Bluegrass, 'Ginger' (pasture type)	3.26
5.40 %	*Trifolium hybridum*	Alsike Clover	3.90
4.90 %	*Trifolium incarnatum, Variety Not Stated*	Crimson Clover, Variety Not Stated	1.92
4.50 %	*Trifolium pratense, Medium, Variety Not Stated*	Red Clover, Medium, Variety Not Stated	3.00
2.00 %	*Lotus corniculatus, 'Leo'*	Bird's Foot Trefoil, 'Leo'	7.50
1.30 %	*Chrysanthemum leucanthemum*	Oxeye Daisy	33.60
1.30 %	*Cichorium intybus*	Blue Chicory	19.20
0.80 %	*Chamaecrista fasciculata, PA Ecotype*	Partridge Pea, PA Ecotype	7.20
0.40 %	*Aster oblongifolius, PA Ecotype*	Aromatic Aster, PA Ecotype	336.00
0.40 %	*Aster pronocholeles, PA Ecotype*	Zigzag Aster, PA Ecotype	432.00
0.40 %	*Coreopsis lanceolata*	Lanceleaf Coreopsis	28.80
0.40 %	*Tradescantia ohiensis, PA Ecotype*	Ohio Spiderwort, PA Ecotype	192.00
0.40 %	*Zizia aurea*	Golden Alexanders	288.00
0.30 %	*Solidago nemoralis, PA Ecotype*	Gray Goldenrod, PA Ecotype	336.00
0.10 %	*Asclepias syriaca*	Common Milkweed	163.20
0.10 %	*Penstemon hirsutus*	Hairy Beardtongue	480.00
100.00 %		**Mix Price/lb Bulk:**	**$10.91**

Seeding Rate: Expect to apply about 42 lbs per acre with a cover crop of annual ryegrass at 12 lbs/acre.

Forage & Pasture Sites; Solar Sites

1 DN-2 **FUZZ & BUZZ MIX**
SCALE : N.T.S.

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES					
	QR	5	Quercus rubra	Red Oak	4 - 6" CAL.
EVERGREEN TREES					
	AB	12	Abies balsamea	Balsam Fir	7 - 8` HT.
	JV	22	Juniperus virginiana	Eastern Red Cedar	7 - 8` HT.
	PG	17	Picea glauca	White Spruce	7 - 8` HT.
FLOWERING TREES					
	AC	7	Amelanchier canadensis	Canadian Serviceberry	8 - 10` HT./Multi-Stem
SHRUBS					
	IG	33	Ilex glabra	Inkberry Holly	2 - 3` HT.
	MP	38	Myrica pensylvanica	Northern Bayberry	3 - 4` HT.
	RM	18	Rhododendron maximum	Rosebay Rhododendron	3 - 4` HT.

vhb.com
vhb
100 Great Meadow Road
Suite 200
Wethersfield, CT 06109
860.807.4300

0 15 30 60 Feet

East Windsor Solar 2
31 Thrall Rd
Broad Brook, Connecticut

No.	Revision	Date	Appvd.

Designed by MDK Checked by SJK

Preliminary Review June 6, 2024

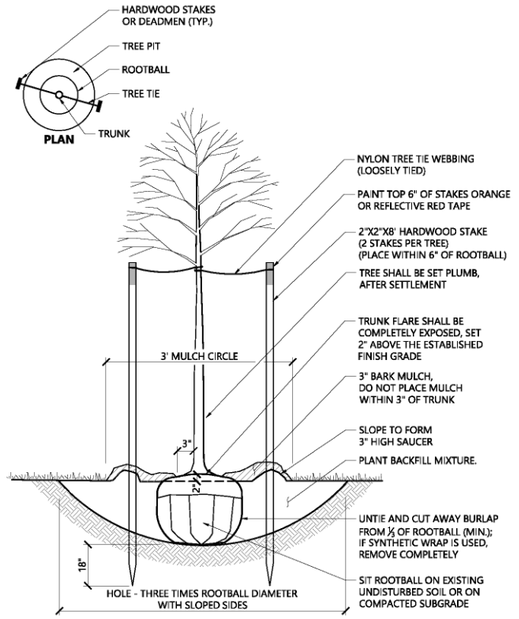
Not Approved for Construction

Landscape Plan

L-1.0

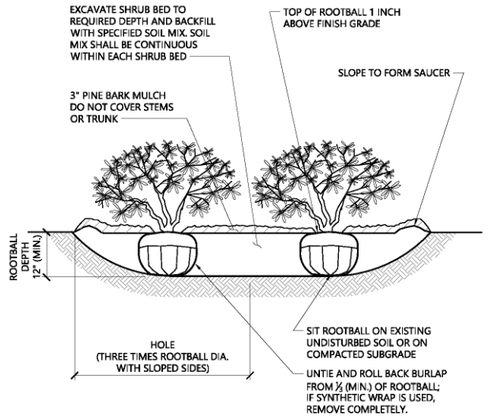
Sheet 1 of 2

43477.00



Tree Planting (For Trees Under 4" Caliper) 9/21

N.T.S. Source: VHB LD_602

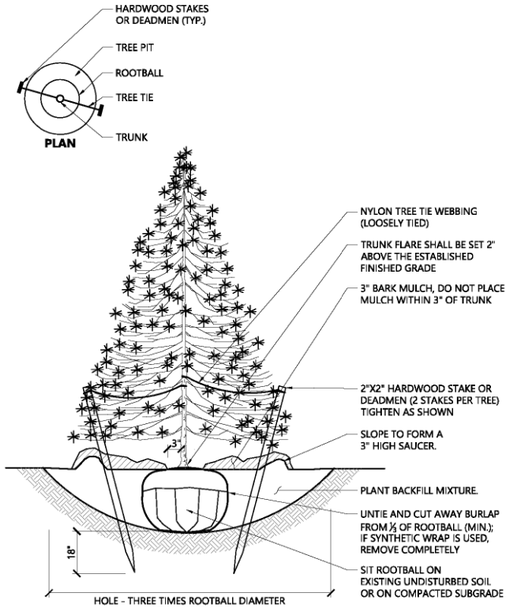


NOTES

1. LOOSEN ROOTS AT THE OUTER EDGE OF ROOTBALL OF CONTAINER GROWN SHRUBS.

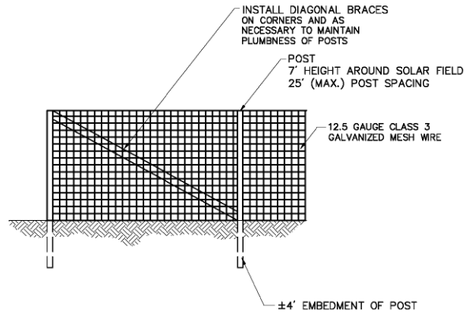
Shrub Bed Planting 1/16

N.T.S. Source: VHB LD_601



Evergreen Tree Planting 9/21

N.T.S. Source: VHB LD_604

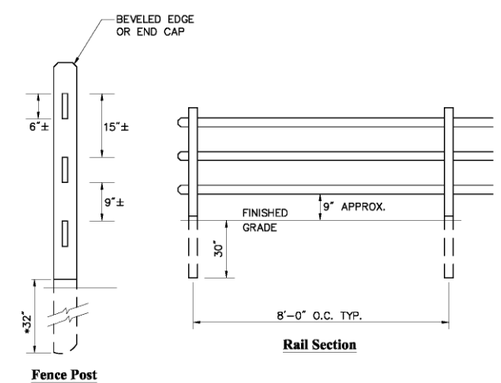


NOTES:

1. FINAL DESIGN OF FENCE TO BE DETERMINED.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF FENCE TO BE APPROVED PRIOR TO INSTALLATION.
3. POST HOLES TO BE AUGURED PRIOR TO POST INSTALLATION.
4. ALL POSTS TO BE PLUMB IN ALL DIRECTIONS.
5. INSTALL STAINLESS STEEL TIE WIRES AT 15" INTERVALS.
6. DIAGONAL BRACING TO BE INSTALLED AS REQUIRED TO KEEP POSTS PLUM WHEN FORCE IS TENSIONED.
7. FORCE FABRIC TO BE TENSIONED TO ELIMINATE SAGS.

Agricultural Fence 6/08

N.T.S. Source: By Others REV LD_480



* TREAT THIS SECTION OF POST WITH A WOOD PRESERVATIVE AS SPECIFIED BY THE FENCE MANUFACTURER.

NOTES:

1. FENCE SHALL BE MORGAN POST AND RAIL FENCE (3 ½ – FEET HIGH – 3 RAIL) AS SUPPLIED BY WALPOLE WOODWORKERS, INC. (1–800–343–6948) OR APPROVED EQUAL.
2. FENCE POSTS, SECTIONS, CAPS, ETC. SHALL BE NORTHERN WHITE CEDAR (STAINED WHITE).

Post and Rail Fence 6/08

N.T.S. Source: By Others LD_480

Planting Notes

1. ALL PROPOSED PLANTING LOCATIONS SHALL BE STAKED AS SHOWN ON THE PLANS FOR FIELD REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL BELOW GRADE AND ABOVE GROUND UTILITIES AND NOTIFY OWNERS REPRESENTATIVE OF CONFLICTS.
3. NO PLANT MATERIALS SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE OF ANY CONFLICT.
4. A 3-INCH DEEP MULCH PER SPECIFICATION SHALL BE INSTALLED UNDER ALL TREES AND SHRUBS, AND IN ALL PLANTING BEDS, UNLESS OTHERWISE INDICATED ON THE PLANS, OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
5. ALL TREES SHALL BE BALLED AND BURLAPPED, UNLESS OTHERWISE NOTED IN THE DRAWINGS OR SPECIFICATION, OR APPROVED BY THE OWNER'S REPRESENTATIVE.
6. FINAL QUANTITY FOR EACH PLANT TYPE SHALL BE AS GRAPHICALLY SHOWN ON THE PLAN. THIS NUMBER SHALL TAKE PRECEDENCE IN CASE OF ANY DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND ON THE PLAN. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLANT LIST AND PLANT LABELS PRIOR TO BIDDING.
7. ANY PROPOSED PLANT SUBSTITUTIONS MUST BE REVIEWED BY LANDSCAPE ARCHITECT AND APPROVED IN WRITING BY THE OWNER'S REPRESENTATIVE.
8. ALL PLANT MATERIALS INSTALLED SHALL MEET THE SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND CONTRACT DOCUMENTS.
9. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF FINAL ACCEPTANCE.
10. AREAS DESIGNATED "LOAM & SEED" SHALL RECEIVE MINIMUM 6" OF LOAM AND SPECIFIED SEED MIX. LAWNS OVER 2:1 SLOPE SHALL BE PROTECTED WITH EROSION CONTROL FABRIC.
11. ALL DISTURBED AREAS NOT OTHERWISE NOTED ON CONTRACT DOCUMENTS SHALL BE LOAM AND SEEDED OR MULCHED AS DIRECTED BY OWNER'S REPRESENTATIVE.
12. THIS PLAN IS INTENDED FOR PLANTING PURPOSES. REFER TO SITE / CIVIL DRAWINGS FOR ALL OTHER SITE CONSTRUCTION INFORMATION.

Tree Protection

1. EXISTING TREES TO REMAIN SHALL BE PROTECTED WITH TEMPORARY CONSTRUCTION FENCE. ERECT FENCE AT EDGE OF THE TREE DRIPLINE PRIOR TO START OF CONSTRUCTION.
2. CONTRACTOR SHALL NOT OPERATE VEHICLES WITHIN THE TREE PROTECTION AREA. CONTRACTOR SHALL NOT STORE VEHICLES OR MATERIALS, OR DISPOSE OF ANY WASTE MATERIALS, WITHIN THE TREE PROTECTION AREA.
3. DAMAGE TO EXISTING TREES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY A CERTIFIED ARBORIST AT THE CONTRACTOR'S EXPENSE.

Plant Maintenance Notes

1. CONTRACTOR SHALL PROVIDE COMPLETE MAINTENANCE OF THE LAWNS AND PLANTINGS. NO IRRIGATION IS PROPOSED FOR THIS SITE. THE CONTRACTOR SHALL SUPPLY SUPPLEMENTAL WATERING FOR NEW LAWNS AND PLANTINGS DURING THE ONE YEAR PLANT GUARANTEE PERIOD.
2. CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, AND EQUIPMENT FOR THE COMPLETE LANDSCAPE MAINTENANCE WORK. WATER SHALL BE PROVIDED BY THE CONTRACTOR.
3. WATERING SHALL BE REQUIRED DURING THE GROWING SEASON, WHEN NATURAL RAINFALL IS BELOW ONE INCH PER WEEK.
4. WATER SHALL BE APPLIED IN SUFFICIENT QUANTITY TO THOROUGHLY SATURATE THE SOIL IN THE ROOT ZONE OF EACH PLANT.
5. CONTRACTOR SHALL REPLACE DEAD OR DYING PLANTS AT THE END OF THE ONE YEAR GUARANTEE PERIOD. CONTRACTOR SHALL TURN OVER MAINTENANCE TO THE FACILITY MAINTENANCE STAFF AT THAT TIME.

vhb.com
vhb
100 Great Meadow Road
Suite 200
Wethersfield, CT 06109
860.807.4300

East Windsor Solar 2

31 Thrall Rd
Broad Brook, Connecticut

No.	Revision	Date	Apprd.

Designed by MDK Checked by SJK

Preliminary Review June 6, 2024

Not Approved for Construction

Landscape Details & Notes

L-2.0

Sheet 2 of 2

43477.00

ATTACHMENT 3

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

GEOTECHNICAL ENGINEERING REPORT
PROPOSED SOLAR ARRAY
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
BROAD BROOK, CONNECTICUT

Prepared for:

All-Points Technologies Corporation, P.C.
567 Vauxhall Street Extension – Suite 311
Waterford, Connecticut 06385

Prepared by:

Down To Earth Consulting, LLC
27 Siemon Company Drive #363W
Watertown, Connecticut 06795

File No. 0032-069.00
September 2023

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

September 14, 2023
File No. 0032-069.00

Ms. Jennifer Young Gaudet
All-Points Technology Corporation
567 Vauxhall Street Extension – Suite 311
Waterford, Connecticut 06385

Via email: jyounggaudet@allpointstech.com

Re: Geotechnical Engineering Report
Proposed Solar Array
East Windsor Solar Two
31 Thrall Road, Broad Brook, Connecticut

Down To Earth Consulting, LLC (DTE) is pleased to submit this geotechnical engineering report for the proposed East Windsor Solar Two project that will be located at 31 Thrall Road in Broad Brook, Connecticut (Site) for All-Points Technology Corporation (Client). Our services were completed in general accordance with our current Master Services Agreement. We appreciate this opportunity to work with you and look forward to our continued involvement. Please call if you have any questions.

Sincerely,

Down To Earth Consulting, LLC

Thomas J. Orszulak, P.E.
Project Manager

Raymond P. Janeiro, P.E.
Principal

TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION

Down To Earth Consulting, LLC, completed a subsurface exploration program and geotechnical engineering evaluation for the proposed solar array foundations. Our geotechnical engineering services included: reviewing provided project drawings, completing borings and field testing, characterizing subsurface conditions within the proposed solar array limits, completing laboratory soils testing, performing geotechnical engineering analyses, and providing geotechnical design and construction recommendations for the project. Refer to Figures 1 and 2 (in Appendix 1) for an area plan and site plan, respectively. Our services were based, in part, on a provided package titled *East Windsor Solar Two, CSC Petition Plan Set*, prepared by All-Points Technology Corporation, revision dated April 25, 2023.

2.0 BACKGROUND

The East Windsor Solar Two parcel generally consists of an open field and is generally bounded by Thrall Road to the south, residential properties to the east and west, and wetlands to the north. A proposed 4MW AC ground-mount solar array will be constructed at the Site. Nominal cuts on the order of 2-feet or less are anticipated to achieve design grades, as the solar array structures will generally conform to existing Site topography. Refer to Figure 2 (Appendix 1) for existing site features and the approximate proposed solar array locations.

3.0 SUBSURFACE DATA

3.1 GENERAL SITE GEOLOGY

Published surficial and bedrock geological map data (*1:24,000 scale, Geologic Map of the Broad Brook Quadrangle, Hartford and Tolland Counties, Roger B. Colton, 1965, and 1:125,000 scale, Bedrock Geological Map of Connecticut, John Rodgers, 1985*) was reviewed. The Site surficial material is mapped as stratified sand, silt, and gravel (Glaciofluvial Deposits). The underlying bedrock is classified as reddish-brown arkose (brownstone) of the Portland Formation.

3.2 TEST BORINGS

We observed and logged ten test borings (B-1 through B-10) drilled by our subcontractor General Borings, Inc. between July 31 and August 1, 2023. Boring locations are depicted on Figure 2 (Appendix 1) and the logs are included in Appendix 2. Borings were located in the field by taping/pacing from existing site features, thus their locations should be considered approximate.

The borings were drilled to explore the soil and groundwater conditions in the proposed solar array areas. Hollow-stem auger drilling methods were used to advance borings to depths of approximately 17 feet below existing grades.

Representative soil samples were obtained in the borings for soil classification and laboratory testing by split barrel sampling procedures in general accordance with ASTM D-1586. The split-spoon sampling procedure utilizes a standard 2-inch O.D. split-barrel sampler that is driven into the bottom of the boring with a 140-pound hammer falling a distance of 30 inches. The number of blows required to advance the sampler the middle 12-inches of a normal 24-inch penetration is

recorded as the Standard Penetration Resistance Value (N). The blows (i.e., "N-Value") are indicated on the boring logs at their depth of occurrence and provide an indication of the relative consistency of the material.

Groundwater levels were measured using a weighted tape in open drill holes and/or inferred from wet soil samples during drilling.

4.0 SUBSURFACE CONDITIONS

4.1 SUBSURFACE PROFILE

The generalized subsurface profile, as inferred from the subsurface data, consists of a surficial layer of Topsoil and Subsoil overlying natural Sand (Glaciofluvial) Deposits. The following is a more detailed description of the subsurface materials encountered:

4.1.1 Subsoil

Subsoil was encountered at each of the test boring locations below an approximately 9- to 10-inch-thick layer of Topsoil. The subsoil generally extended to depths up to approximately 3 feet below existing grades and consisted of loose to medium dense, brown, fine to coarse sand with little to some (10 to 35%) amounts of silt and trace minus amounts (0 to 3%) of roots.

4.1.2 Sand Deposits

Natural Sand Deposits were observed below the Subsoil in each of the borings. This material generally consisted of medium dense to dense, brown to red-brown, fine to coarse sand with trace to and (0% to 40%) amounts of silt and trace to some (0 to 35%) amounts of fine to coarse gravel. In some instances, the presence of cobbles and boulders were inferred by observed drilling behavior.

4.2 GROUNDWATER

Groundwater was not encountered within the limits of the subsurface investigation. Groundwater levels measured in the boreholes may not have had sufficient time to stabilize and should be considered approximate. Groundwater levels will vary depending on factors such as temperature, season, precipitation, construction activity, and other conditions, which may be different from those at the time of these measurements.

5.0 SOILS TESTING

5.1 LABORATORY TESTING

Soil samples were collected from 0 to 4 feet below grade at Borings B-4, B-6 and B-10 to evaluate the corrosivity potential of sampled soils. Samples were analyzed for pH (ASTM D4972), Sulfates (ASTM D4327), Chlorides (ASTM D4327), and Electrical Resistivity (ASTM G57). The results of the laboratory testing are included in Appendix 3. We recommend that a corrosion specialist be consulted to determine the need for corrosion protective measures.

5.2 SOIL RESISTIVITY TESTING

On July 31, 2023 and August 1, 2023, DTE field personnel conducted in-situ soil resistivity testing in accordance with accepted engineering practices using the Wenner electrode configuration. Electrodes were spaced at 5, 10, 20, 30, and 40 feet. Two sets of two approximately perpendicular resistivity lines were completed in the general vicinity of the proposed solar array area. The approximate locations and orientations of the resistivity lines are shown on the attached Figure 2. The results of the resistivity tests are as follows:

Electrode Spacing (ft)	Resistivity (ohm-cm)			
	Line 1	Line 2	Line 3	Line 4
5	54,578	73,249	46,247	51,418
10	75,643	103,602	60,323	60,323
20	99,006	95,099	67,255	65,110
30	102,663	83,705	69,285	64,919
40	78,898	92,380	88,320	58,293

Resistivity results will fluctuate depending on the degree of compaction, moisture content, constituent solubility, and temperature. Field resistivity values may also vary depending upon season, precipitation, and other conditions that may differ from those at the time of testing.

6.0 ENGINEERING IMPLICATIONS OF SUBSURFACE CONDITIONS

The proposed solar panel racking systems may be supported on driven steel pile foundations. The piles will need to be designed to resist compression, tension, and lateral loads. The pile design capacities will need to be determined based on the results of pile load testing completed at the Site. Obstructions may require predrilling of pilot holes to accommodate pile driving, which may impact the capacity of the piles. If piles cannot penetrate the soils sufficiently, drilling of oversized holes backfilled with grout or lean concrete may be required.

7.0 GEOTECHNICAL ENGINEERING RECOMMENDATIONS

We offer the following preliminary geotechnical design recommendations based on the subsurface conditions encountered at the Site, available project information, and the proposed construction.

7.1 SEISMIC DESIGN

The site class is “D” per the Building Code. Based on the standard penetration test results, visual soil classification, and design peak ground acceleration at this locale, the site soils are not susceptible to liquefaction.

7.2 DRIVEN PILE FOUNDATIONS

The proposed racking systems may be supported on driven steel piles end bearing in natural Sand Deposits. The steel piles should conform to ASTM A 572, Grade 50 and have hardened pile tips (e.g., pile driving shoes) to minimize pile damage on potential obstructions (e.g., boulders). A

minimum steel section corrosion loss of 1/16-inch all around the piles should be used. DTE recommends the following preliminary static design parameters for a driven pile foundation alternative:

DESCRIPTION	VALUE
Allowable End Bearing Capacity[1] Sand	5 kips per square foot (ksf)
Ultimate Skin Friction Value[2] Sand (>3.5 fbg)	1,000 pounds per square foot (psf)
Modulus of Lateral Subgrade Reaction[3] Sand (>2.5 fbg) – dry	125 pounds per cubic inch (pci)
Angle of Internal Friction Sand	34 degrees
Total Soil Unit Weight Sand	125 pounds per cubic foot (pcf)

1. End-bearing should be neglected for uplift calculations. Provided value assumes a factor of safety of 3.
2. Contribution to pile capacity within the frost depth (i.e., above depths of 3.5 feet) should be ignored. The uplift capacity should be based on the dead weight of the pile and side resistance provided by the subsurface soils (i.e., end bearing should be neglected).
3. To analyze foundation under lateral loading (e.g., Ensoft LPILE).
4. All values provided in this table are preliminary and must be verified in the field by load testing.

7.2.1 Pre-Drilling Alternative

If pre-drilling is required to accommodate pile installation in areas of driven pile refusal, we recommend all pre-drilled holes be drilled no deeper than 6 inches short of target installation depths. Additional pre-drilling recommendations presented in Section 6.0 should also be adopted for the project. The following preliminary static design parameters for a pre-drilled pile foundation alternative are recommended:

DESCRIPTION	VALUE
Allowable End Bearing Capacity[1] Sand	 5 kips per square foot (ksf)
Ultimate Skin Friction Value[2] Cuttings (>3.5 fbg) Natural Sand	 500 pounds per square foot (psf) 1,000 psf
Modulus of Lateral Subgrade Reaction[3] Cuttings (>2.5 fbg) – dry Natural Sand – dry	 50 pounds per cubic inch (pci) 125 pci
Angle of Internal Friction Cuttings Natural Sand	 30 degrees 34 degrees
Total Soil Unit Weight Cuttings Natural Sand	 115 pounds per cubic foot (pcf) 125 pcf
1. End-bearing should be neglected for uplift calculations. Provided value assumes a factor of safety of 3. 2. Contribution to pile capacity within the frost depth (i.e., above depths of 3.5 feet) should be ignored. The uplift capacity should be based on the dead weight of the pile and side resistance provided by the subsurface soils (i.e., end bearing should be neglected). 3. To analyze foundation under lateral loading (e.g., Ensoft LPILE). 4. All values provided in this table are preliminary and must be verified in the field by load testing.	

7.2.2 Additional Pile Design Recommendations

Center-to-center pile spacing should not be less than 30 inches or 3 pile diameters. Final pile order lengths should be established based on the results of pile testing and the contractor should be prepared to increase anticipated pile lengths as conditions are exposed in the field.

Piles should be installed to a minimum ultimate geotechnical axial capacity of the structural load multiplied by 2 (assuming load testing is performed). Based on the recommended pile type, bearing material, and anticipated loads, we estimate negligible pile settlements. We recommend an adfreeze stress of 500 psf be considered when determining frost heave load on the piles. The box perimeter of the pile acting over the recommended frost depth of 3.5 feet should be considered when determining the frost heave load on a pile.

The lateral capacity of the upper 30 inches of soil should be neglected due to loss of strength from frost action and the presence of loose surficial soils. Appropriate lateral capacity reductions associated with group effects should be used for piles having a center-to-center spacing of less than 5 times their largest cross-sectional dimension.

7.2.3 Load Testing and Drivability

Tension and lateral load tests should be performed on test piles to finalize foundation design for uplift and lateral load capacity. Compression load tests should also be completed if end bearing capacity of piles is used. Load tests should be completed near the boring explorations in order to

corroborate the load test and subsurface exploration data and develop final design recommendations. The testing results should be provided to DTE to reevaluate the above design parameters.

We recommend that a drivability analysis (i.e., Wave Equation Analysis for Piles (WEAP)) be performed for the site-specific conditions and selected pile driving hammer to evaluate the proposed pile driving equipment and development of stresses in the piles. The maximum allowable driving stress in both tension and compression should not exceed 45 ksi, which is based on applying a reduction factor of 0.9 to the yield strength of Grade 50 Steel.

7.3 GROUND SCREW FOUNDATION ALTERNATIVE

The proposed racking systems may also be supported on a ground screw foundation system (Krinner or similar) that derive their capacity in the natural Sand Deposits. Tension and lateral load tests should also be performed if a ground screw foundation system is selected to assess uplift and lateral capacities. Ground screw foundations are typically designed by a design-build contractor.

7.4 EQUIPMENT FOUNDATIONS

The proposed accessory structures may be designed as mat foundations bearing on a base course of at least 12-inches of Compacted Granular Fill (CGF) or Crushed Stone overlying proof-rolled natural Sand Deposits, or CGF or Crushed Stone placed above a proof-rolled natural soil subgrade. Soils with appreciable organic content (i.e., Topsoil and Subsoil) are not considered suitable bearing materials and must be excavated from foundation areas during site preparation.

When CGF is used beneath the foundations (e.g., in fill areas, if needed), we recommend that it be placed one foot beyond the edge of the foundations and at a one horizontal to one vertical slope away and down from the bottom outside edge of the foundations (i.e., foundation zone of influence). Crushed Stone can be used in place of CGF as it is much easier to compact.

We recommend a maximum allowable design bearing pressure of four kips per square foot (4 ksf) for foundations bearing on the recommended bearing materials. Shallow foundations should be embedded 42-inches below finished grades to account for frost. Based on the recommended bearing strata and anticipated loads, we anticipate that foundations will undergo less than one inch of total settlement and less than a half inch of differential settlement. Settlements will occur as the loads are applied and are expected to be complete at the end of construction.

We recommend an ultimate coefficient of sliding friction of 0.45. A factor of safety of at least 1.5 should be applied to calculated sliding resistance.

8.0 MATERIALS RECOMMENDATIONS

8.1 COMPACTED GRANULAR FILL

Compacted Granular Fill (CGF) for use as structural fill shall consist of inorganic soil free of clay, loam, ice and snow, tree stumps, roots, and other organic matter; graded within the following limits:

Sieve Size	Percent finer by weight
4-inches	100%
No. 10	30 - 100
No. 40	10 - 90
No. 200	0 - 12*

* To be considered non-frost susceptible, granular fill should have a maximum of 3 percent of particles by weight smaller than 0.02mm in effective diameter.

8.2 CRUSHED STONE

Crushed Stone for use below foundations shall consist of sound, tough, durable, rock that is graded within the following:

Sieve Size	Percent finer by weight
5/8-inches	100%
1/2-inch	85 - 100
3/8 inch	15 - 45
No. 4	0 - 15
No. 8	0 - 5

8.3 COMPACTION REQUIRMENTS

CGF should be placed in loose lifts not exceeding 8-inches in depth and compacted to at least 95 percent of its maximum dry density, and within 2% of optimum moisture content, as determined by ASTM D1557, Method C (Modified Proctor) below foundations and other structures.

Crushed Stone is considered to be “self-compacting” and would negate the need to run laboratory proctor testing and have field density testing of in-place lifts. The Crushed Stone should be plate compacted to “chink up” the working surface in lifts. We recommend placing Crushed Stone in maximum 12-inch lifts and compacting the lifts with a minimum of four passes with a vibratory plate compactor weighing a minimum of 1,000 pounds and with a minimum centrifugal force of 10,000 pounds.

9.0 CONSTRUCTION RECOMMENDATIONS

9.1 DRIVEN PILES

Technical specifications should be prepared by the design team that require detailed material and construction submittals and proof of experience in pile installation. The installation method or combination of methods selected by the contractor should be submitted for review by the design team, prior to mobilization of equipment. Specifications should include provisions for removing encountered cobbles, boulders, and other obstructions as a contingency. Any pile driving refusal remedies (pre-drilling, etc.) that are adopted by the Contractor during construction will require that those piles also be load tested.

9.2 GROUND SCREW FOUNDATION ALTERNATIVE

Ground screws should be designed and installed by a specialty contractor with a minimum of 5 years of experience with designing and installing ground screw systems. The specialty contractor should also be licensed by the manufacturer of the selected ground screw system. The axial capacity of the ground screws must be confirmed during installation using the designer's recommended torque resistance. Predrilling may be required to install the ground screws in areas with frequent cobbles and boulders.

9.3 SHALLOW FOUNDATIONS – EQUIPMENT PADS

The proposed equipment areas should be cleared of existing vegetation and topsoil. Cobbles, boulders, and any identifiable compressible or deleterious materials should be removed. Topsoil, existing fill (including re-worked parent materials), and other unsuitable materials, must be removed from beneath bearing zones of influence to the top of firm, natural Sand Deposits prior to construction. Over-excavation below bearing areas should include the zone of influence, defined as the area beneath 1 horizontal to 1 vertical (1H:1V) lines extending downward and outward from pad areas. Equipment pads shall bear on a prepared subgrade of firm natural Sand Deposits, or CGF or Crushed Stone (over firm natural soils). Refer to Section 8.0 for material and placement recommendations.

Earthwork should be performed in dry conditions so that disturbance to foundation subgrades is limited. During earthwork, the Contractor should be responsible for protecting subgrades from the elements and maintaining the soils in a suitable state until completion of the project. Backfill should not be placed over a subgrade with standing water or that is frozen. Standing water, if present, should be removed and any soft and yielding soil should be removed prior to backfill placement. Excavations to subgrade levels should be performed using a smooth-edged bucket to minimize possible disturbance to the in-place subgrade soils.

Soil subgrades should be proof-rolled under the observation of a qualified Geotechnical Engineer with at least four (4) passes of a smooth-drum vibratory roller (minimum 8,000 pounds, minimum centrifugal force of 12,500 pounds) or, where approved by the geotechnical engineer, a vibratory plate compactor with a minimum of 2,500 pounds of centrifugal force. Any soft or loose zones identified during proof-rolling should be excavated and replaced with CGF, as necessary, and as required by the Geotechnical Engineer.

9.4 TEMPORARY EXCAVATIONS

The site soils are classified as OSHA Class "C" soil and can be cut at a maximum one vertical to one and a half horizontal (1V:1.5H) slope up to a maximum excavation depth of 20 feet. These maximum slope and excavation depths assume no surcharge load (i.e., stockpiles, construction equipment, etc.) at the top of the excavations or groundwater seepage.

9.5 TEMPORARY GROUNDWATER CONTROL

Based on information obtained from the subsurface exploration program, groundwater should not be encountered during construction. We anticipate that water (stormwater, perched water, etc.) can be managed with conventional sump pumps and trenches in the excavations. Stormwater runoff should not be permitted to accumulate on/within exposed subgrades and the runoff should be directed away from the exposed subgrade areas.

10.0 REVIEW OF FINAL DESIGN, PLANS, AND SPECIFICATIONS

When project plans are finalized, and specifications are available, they should be provided to DTE for review of conformance with our preliminary geotechnical recommendations. If any changes are made to the proposed structure locations or bearing levels, the recommendations provided in this report will need to be verified by DTE for applicability.

11.0 CONSTRUCTION QUALITY CONTROL

We further recommend that DTE be retained during earthwork construction to observe excavation to subgrade, fill placement and compaction, subgrade preparation, and deep foundation installation. The geotechnical engineer in the field should observe the work for compliance with the recommendations in this report, identify changes in subsurface conditions from those observed in the explorations should they become apparent, and assist in the development of design changes should subsurface conditions differ from those anticipated prior to the start of construction.

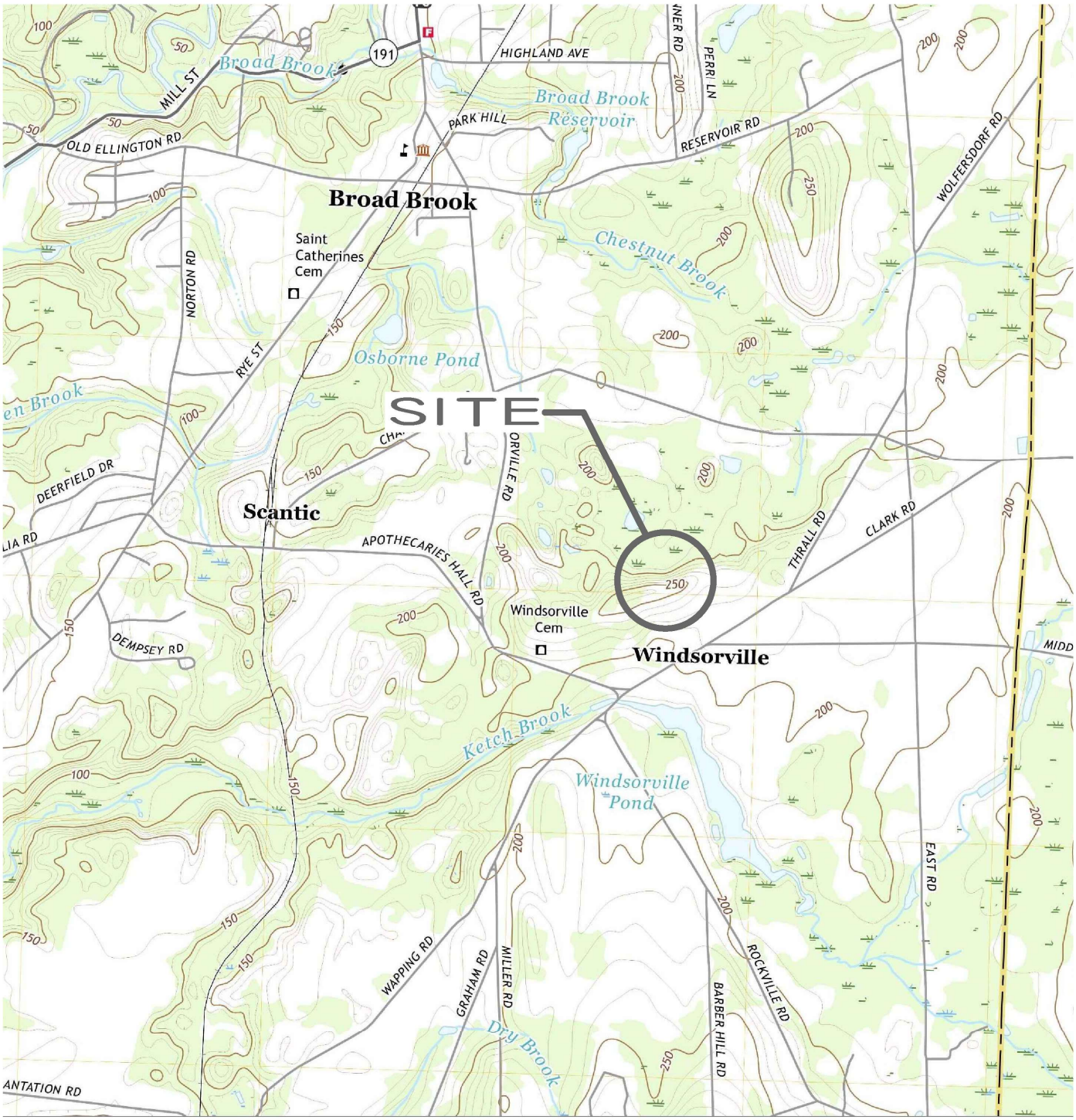
12.0 CLOSURE

We trust the information presented herein is sufficient for your use to progress design of the proposed solar array. We have enjoyed working with you on this project and look forward to our continued involvement. Please do not hesitate to call us if you have any questions.

This report is subject to the limitations included in Appendix 4.

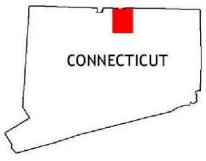
APPENDIX 1 -

FIGURES



DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

27 SIEMON COMPANY DRIVE – SUITE 363W
WATERTOWN, CONNECTICUT 06795



QUADRANGLE LOCATION

AREA PLAN
PROPOSED EAST WINDSOR SOLAR TWO
31 THRALL ROAD
BROAD BROOK, CONNECTICUT

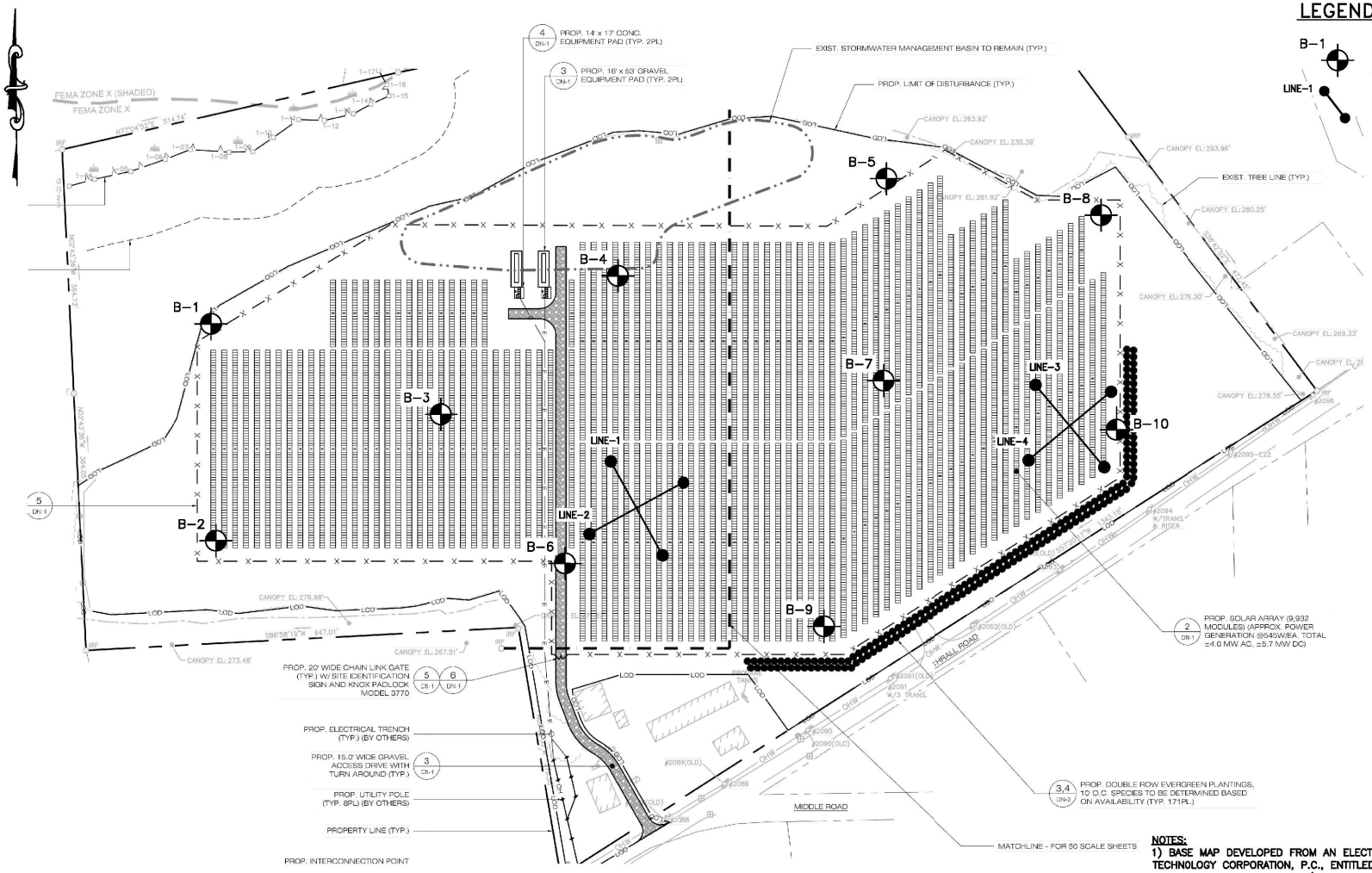
REFERENCE:
USGS TOPOGRAPHIC QUADRANGLE: BROAD BROOK, CT

SCALE 1"= 2,000'

2,000' 1,000' 0 2,000'

PROJECT NO.	0032–069.00
DATE:	8/4/23
FIGURE NO.	1

DRAWN BY: TJO	REVIEWED BY: RPJ



NOTES:

1) BASE MAP DEVELOPED FROM AN ELECTRONIC FILE PREPARED BY ALL-POINTS TECHNOLOGY CORPORATION, P.C., ENTITLED 'PARTIAL SITE PLAN', SHEET NUMBER: OP-2, DATED APRIL 3, 2023 (LAST REVISED APRIL 25, 2023). ORIGINAL SCALE 1:80.
2) BORINGS WERE COMPLETED BY GENERAL BORINGS, INC. AND OBSERVED BY DOWN TO EARTH CONSULTING, LLC.
3) RESISTIVITY TESTING WAS PERFORMED ON JULY 31 AND AUGUST 1, 2023 BY DOWN TO EARTH CONSULTING, LLC.
4) THE LOCATIONS OF THE EXPLORATIONS WERE DETERMINED BY TAPING AND VISUAL ESTIMATES FROM EXISTING SITE FEATURES. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

DESIGNED BY OTHERS					
DRAWN BY TJO					
CHECKED BY RPJ					
APPROVED BY RPJ	NO.	DATE	REVISIONS	DRWN.	CHKD	APPVD

SCALE 1" = 160'

160 80 0 160

DOWN TO EARTH CONSULTING, LLC
27 SIEMON COMPANY DRIVE – SUITE 363W
WATERTOWN, CONNECTICUT 06795

PROJECT
PROPOSED SOLAR ARRAY
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
BROAD BROOK, CONNECTICUT

DWG. TITLE.
SITE AND EXPLORATION LOCATION PLAN

FILE NO. 0032-069.00
SCALE AS NOTED
DATE 8/4/23
FIGURE NO. 2

APPENDIX 2 -

TEST BORING LOGS

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CONNECTICUT

BORING NO. B-1
SHEET 1 of 1
FILE NO. 0032-069.00
CHKD. BY TJO

Boring Co.	General Borings, Inc.	Boring Location	See Boring Location Plan		
Driller	John Wyant	Ground Surface El.	216'±	Datum	NAVD88
Logged By	Mateusz Fekieta	Date Start	8/1/2023	Date End	8/1/2023

Hammer Type:	Safety Hammer Driven by Lever
Sampler Size:	1-3/8" I.D. Split Spoon
Type Drill Rig:	Track Mounted D50 Diedrich
Drilling Method:	3.25-inch I.D. Hollow-Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
8/1/23	-	-	-	Not Encountered

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	18/24	0 to 2	2-6-12-23		Medium dense, brown, fine to coarse SAND, some Silt	9"+/- Topsoil
2								SUBSOIL
3		S-2	16/24	2 to 4	21-19-19-19		Dense, red-brown, fine SAND, little Silt	
4								
5								
6		S-3	20/24	5 to 7	6-13-17-19		Medium dense, brown, fine SAND, little Silt	
7								
8		S-4	19/24	7 to 9	10-19-20-19		Dense, brown, fine SAND, some Silt, wet (See Note 3)	
9								
10								SAND
11		S-5	20/24	10 to 12	6-14-14-15		Medium dense, brown, fine to medium SAND, trace Silt	
12								
13								
14								
15								
16		S-6	14/24	15 to 17	13-14-17-21		Dense, brown, fine to medium SAND, trace Silt	
17								
18							END OF EXPLORATION AT 17 FEET BELOW GROUND SURFACE	
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

SPT N-Values	SPT N-Values	Proportions
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%
Over 50 - Very Dense	16 to 30 - Very Stiff	
	Over 30 - Hard	

SYMBOL KEY

1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.
3) Borehole was left open for several hours. No water was observed within the borehole after several hours.

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CONNECTICUT

BORING NO. B-2
SHEET 1 of 1
FILE NO. 0032-069.00
CHKD. BY TJO

Boring Co.	General Borings, Inc.	Boring Location	See Boring Location Plan		
Driller	John Wyant	Ground Surface El.	221'±	Datum	NAVD88
Logged By	Mateusz Fekieta	Date Start	8/1/2023	Date End	8/1/2023

Hammer Type:	Safety Hammer Driven by Lever
Sampler Size:	1-3/8" I.D. Split Spoon
Type Drill Rig:	Track Mounted D50 Diedrich
Drilling Method:	3.25-inch I.D. Hollow-Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
8/1/23	-	-	-	Not Encountered

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	18/24	0 to 2	2-5-9-10		Medium dense, brown, fine to coarse SAND, some Silt	9" +/- Topsoil
2								SUBSOIL
3		S-2	18/24	2 to 4	7-5-5-5		Loose, brown, fine SAND, some Silt	
4								
5								
6		S-3	17/24	5 to 7	8-13-20-21		Dense, brown, fine to coarse SAND, trace Silt, trace fine Gravel	
7								
8		S-4	18//24	7 to 9	19-18-20-18		Dense, brown, fine SAND, trace Silt	
9								
10								SAND
11		S-5	18/24	10 to 12	13-14-17-18		Dense, brown, fine SAND, trace Silt	
12								
13								
14								
15								
16		S-6	16/24	15 to 17	7-13-15-16		Medium dense, brown, fine SAND, trace Silt	
17								
18							END OF EXPLORATION AT 17 FEET BELOW GROUND SURFACE	
19								
20								
21								
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31								
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33								
34								
35								
36								
37								
38								
39								
40								

SPT N-Values	SPT N-Values	Proportions	SYMBOL KEY	
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%	1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%	2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%	3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%	4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
Over 50 - Very Dense	16 to 30 - Very Stiff		5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
	Over 30 - Hard		6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CONNECTICUT

BORING NO. B-3
SHEET 1 of 1
FILE NO. 0032-069.00
CHKD. BY TJO

Boring Co.	General Borings, Inc.	Boring Location	See Boring Location Plan		
Driller	John Wyant	Ground Surface El.	215'±	Datum	NAVD88
Logged By	Mateusz Fekieta	Date Start	8/1/2023	Date End	8/1/2023

Hammer Type:	Safety Hammer Driven by Lever
Sampler Size:	1-3/8" I.D. Split Spoon
Type Drill Rig:	Track Mounted D50 Diedrich
Drilling Method:	3.25-inch I.D. Hollow-Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
8/1/23	-	-	-	Not Encountered

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	12/24	0 to 2	5-3-9-8		Medium dense, brown, fine to coarse SAND, some Silt	9"+/- Topsoil
2								SUBSOIL
3		S-2	17/24	2 to 4	10-28-39-28		Very dense, red-brown, fine to coarse SAND, little fine to coarse Gravel, little Silt	
4								
5								SAND
6		S-3	18/24	5 to 7	13-18-18-19		Dense, brown, fine to coarse SAND, little Silt, little fine Gravel	
7								
8		S-4	12/24	7 to 9	11-11-9-8		Medium dense, brown, fine to coarse SAND, little Silt, trace fine Gravel	
9								
10								
11		S-5	11/24	10 to 12	7-14-14-11		Medium dense, brown, fine to medium SAND, trace Silt	
12								
13								
14								
15								
16		S-6	12/24	15 to 17	4-3-3-3		Loose, brown, fine to medium SAND, trace Silt	
17								
18							END OF EXPLORATION AT 17 FEET BELOW GROUND SURFACE	
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SPT N-Values	SPT N-Values	Proportions	SYMBOL KEY	
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%	1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%	2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%	3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%	4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
Over 50 - Very Dense	16 to 30 - Very Stiff		5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
	Over 30 - Hard		6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CONNECTICUT

BORING NO. B-4
SHEET 1 of 1
FILE NO. 0032-069.00
CHKD. BY TJO

Boring Co.	General Borings, Inc.	Boring Location	See Boring Location Plan		
Driller	John Wyant	Ground Surface El.	214'±	Datum	NAVD88
Logged By	Mateusz Fekieta	Date Start	7/31/2023	Date End	7/31/2023

Hammer Type:	Safety Hammer Driven by Lever
Sampler Size:	1-3/8" I.D. Split Spoon
Type Drill Rig:	Track Mounted D50 Diedrich
Drilling Method:	3.25-inch I.D. Hollow-Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
7/31/23	-	-	-	Not Encountered

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	20/24	0 to 2	3-4-12-20		Medium dense, brown, fine SAND, little Silt, trace Roots	9"+/- Topsoil
2								SUBSOIL
3		S-2	14/24	2 to 4	21-20-16-13		Dense, red-brown, fine SAND, trace Silt, trace fine Gravel	
4								
5								
6		S-3	14/24	5 to 7	5-5-4-5		Loose, brown, fine to medium SAND, little Silt	
7								
8		S-4	16/24	7 to 9	7-5-8-12		Medium dense, red-brown, Top 8": fine to coarse SAND, little Silt; Bottom 8": fine SAND and SILT, wet (See Note 3)	
9								
10								SAND
11		S-5	14/24	10 to 12	16-13-10-10		Medium dense, red-brown, fine SAND and SILT	
12								
13								
14								
15								
16		S-6	16/24	15 to 17	6-13-17-18		Medium dense, brown, fine to coarse SAND, little Silt	
17								
18							END OF EXPLORATION AT 17 FEET BELOW GROUND SURFACE	
19								
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SPT N-Values	SPT N-Values	Proportions	SYMBOL KEY	
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%	1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%	2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%	3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%	4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
Over 50 - Very Dense	16 to 30 - Very Stiff		5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
	Over 30 - Hard		6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.
3) Borehole was left open overnight. No water was observed within the borehole on 8/1/23.

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CONNECTICUT

BORING NO. B-5
SHEET 1 of 1
FILE NO. 0032-069.00
CHKD. BY TJO

Boring Co.	General Borings, Inc.	Boring Location	See Boring Location Plan		
Driller	John Wyant	Ground Surface El.	214'±	Datum	NAVD88
Logged By	Mateusz Fekieta	Date Start	7/31/2023	Date End	7/31/2023

Hammer Type:	Safety Hammer Driven by Lever
Sampler Size:	1-3/8" I.D. Split Spoon
Type Drill Rig:	Track Mounted D50 Diedrich
Drilling Method:	3.25-inch I.D. Hollow-Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
7/31/23	-	-	-	Not Encountered

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	16/24	0 to 2	2-2-5-7		Loose, brown, fine SAND, some Silt, trace Roots	10"+/- Topsoil
2								SUBSOIL
3		S-2	18/24	2 to 4	11-21-16-20		Dense, reddish brown, fine SAND, little Silt	
4								
5								
6		S-3	19/24	5 to 7	5-5-5-5		Loose, brown, fine SAND, trace Silt	
7								
8		S-4	19/24	7 to 9	4-5-6-6		Medium dense, brown, fine SAND, trace Silt	
9								
10								SAND
11		S-5	20/24	10 to 12	4-6-7-8		Medium dense, brown, fine SAND, little Silt	
12								
13								
14								
15								
16		S-6	18/24	15 to 17	7-8-7-9		Medium dense, brown, fine to medium SAND, trace fine Gravel, trace Silt	
17								
18							END OF EXPLORATION AT 17 FEET BELOW GROUND SURFACE	
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SPT N-Values	SPT N-Values	Proportions
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%
Over 50 - Very Dense	16 to 30 - Very Stiff	
	Over 30 - Hard	

SYMBOL KEY

1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.
3) Cobbles and/or boulders were inferred based on auger chatter from about 11 to 14 feet.

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CONNECTICUT

BORING NO. B-6
SHEET 1 of 1
FILE NO. 0032-069.00
CHKD. BY TJO

Boring Co.	General Borings, Inc.	Boring Location	See Boring Location Plan		
Driller	John Wyant	Ground Surface El.	215'±	Datum	NAVD88
Logged By	Mateusz Fekieta	Date Start	8/1/2023	Date End	8/1/2023

Hammer Type:	Safety Hammer Driven by Lever
Sampler Size:	1-3/8" I.D. Split Spoon
Type Drill Rig:	Track Mounted D50 Diedrich
Drilling Method:	3.25-inch I.D. Hollow-Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
8/1/23	-	-	-	Not Encountered

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	16/24	0 to 2	2-3-5-5		Loose, brown, fine to medium SAND, little Silt	9" +/- Topsoil
2								SUBSOIL
3		S-2	16/24	2 to 4	6-6-6-9		Medium dense, brown, fine to medium SAND, trace Silt, trace fine Gravel	
4								
5								
6		S-3	18/24	5 to 7	10-15-15-12		Medium dense, brown, fine to medium SAND, trace Silt	
7								
8		S-4	19/24	7 to 9	16-12-10-9		Medium dense, brown, fine to medium SAND, trace Silt	
9								
10								SAND
11		S-5	14/24	10 to 12	8-11-11-11		Medium dense, brown, Top 7": fine SAND and SILT Bottom 7": fine SAND, trace Silt	
12								
13								
14								
15								
16		S-6	12/24	15 to 17	5-8-11-12		Medium dense, brown, fine SAND, trace Silt	
17								
18							END OF EXPLORATION AT 17 FEET BELOW GROUND SURFACE	
19								
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SPT N-Values	SPT N-Values	Proportions
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%
Over 50 - Very Dense	16 to 30 - Very Stiff	
	Over 30 - Hard	

SYMBOL KEY

1. S denotes split-barrel sampler.
2. ST denotes 3-inch O.D. undisturbed sample.
3. UO denotes 3-inch Osterberg undisturbed sample.
4. PEN denotes penetration length of sampler.
5. REC denotes recovered length of sample.
6. SPT denotes Standard Penetration Test.
7. WH denotes weight of hammer
8. WR denotes weight of rods
9. PP denotes Pocket Penetrometer.
10. FVST denotes field vane shear test.
11. RQD denotes Rock Quality Designation.
12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CONNECTICUT

BORING NO. B-7
SHEET 1 of 1
FILE NO. 0032-069.00
CHKD. BY TJO

Boring Co.	General Borings, Inc.	Boring Location	See Boring Location Plan		
Driller	John Wyant	Ground Surface El.	220'±	Datum	NAVD88
Logged By	Mateusz Fekieta	Date Start	7/31/2023	Date End	7/31/2023

Hammer Type:	Safety Hammer Driven by Lever
Sampler Size:	1-3/8" I.D. Split Spoon
Type Drill Rig:	Track Mounted D50 Diedrich
Drilling Method:	3.25-inch I.D. Hollow-Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
7/31/23	-	-	-	Not Encountered

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	13/24	0 to 2	3-2-4-5		Loose, brown, fine SAND, some Silt, trace Roots	10"+/- Topsoil
2								SUBSOIL
3		S-2	11/24	2 to 4	3-5-5-5		Loose, red-brown, fine to coarse SAND, some Silt,trace fine Gravel	
4								
5								
6		S-3	18/24	5 to 7	10-18-18-16		Dense, brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt	
7								
8		S-4	18/24	7 to 9	14-20-15-16		Dense, brown, fine to coarse SAND, little fine to coarse Gravel, trace Silt	
9								
10								SAND
11		S-5	19/24	10 to 12	10-16-16-24		Dense, brown, fine to coarse SAND, little fine Gravel, trace Silt	
12								
13								
14								
15								
16		S-6	17/24	15 to 17	9-11-11-15		Medium dense, brown, fine to coarse SAND, little fine Gravel, trace Silt	
17								
18							END OF EXPLORATION AT 17 FEET BELOW GROUND SURFACE	
19								
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SPT N-Values	SPT N-Values	Proportions
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%
Over 50 - Very Dense	16 to 30 - Very Stiff	
	Over 30 - Hard	

SYMBOL KEY

1. S denotes split-barrel sampler.
2. ST denotes 3-inch O.D. undisturbed sample.
3. UO denotes 3-inch Osterberg undisturbed sample.
4. PEN denotes penetration length of sampler.
5. REC denotes recovered length of sample.
6. SPT denotes Standard Penetration Test.
7. WH denotes weight of hammer
8. WR denotes weight of rods
9. PP denotes Pocket Penetrometer.
10. FVST denotes field vane shear test.
11. RQD denotes Rock Quality Designation.
12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.
3) Cobbles and/or boulders were inferred based on auger chatter from about 11 to 14 feet.

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CONNECTICUT

BORING NO. B-8
SHEET 1 of 1
FILE NO. 0032-069.00
CHKD. BY TJO

Boring Co.	General Borings, Inc.	Boring Location	See Boring Location Plan		
Driller	John Wyant	Ground Surface El.	220'±	Datum	NAVD88
Logged By	Mateusz Fekieta	Date Start	7/31/2023	Date End	7/31/2023

Hammer Type:	Safety Hammer Driven by Lever
Sampler Size:	1-3/8" I.D. Split Spoon
Type Drill Rig:	Track Mounted D50 Diedrich
Drilling Method:	3.25-inch I.D. Hollow-Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
7/31/23	-	-	-	Not Encountered

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	13/24	0 to 2	4-6-9-10		Medium dense, brown, fine SAND, some Silt, trace Roots	10"+/- Topsoil
2								SUBSOIL
3		S-2	11/24	2 to 4	14-14-11-9		Medium dense, brown, fine to medium SAND, trace Silt	
4								
5								
6		S-3	16/24	5 to 7	11-13-15-15		Medium dense, brown, fine to coarse SAND, little fine Gravel, trace Silt	
7								
8		S-4	15/24	7 to 9	17-16-20-21		Dense, brown, fine to coarse SAND, little fine Gravel, trace Silt	
9								
10								SAND
11		S-5	14/24	10 to 12	11-13-16-22		Medium dense, brown, fine to medium SAND, trace Silt	
12								
13								
14								
15								
16		S-6	11/24	15 to 17	10-11-28-31		Dense, brown, fine to coarse SAND, little fine Gravel, trace Silt	
17								
18							END OF EXPLORATION AT 17 FEET BELOW GROUND SURFACE	
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SPT N-Values	SPT N-Values	Proportions	SYMBOL KEY	
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%	1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%	2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%	3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%	4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
Over 50 - Very Dense	16 to 30 - Very Stiff		5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
	Over 30 - Hard		6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.
3) Cobbles and/or boulders were inferred based on auger chatter from about 11 to 14 feet.

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CONNECTICUT

BORING NO. B-9
SHEET 1 of 1
FILE NO. 0032-069.00
CHKD. BY TJO

Boring Co.	General Borings, Inc.	Boring Location	See Boring Location Plan		
Driller	John Wyant	Ground Surface El.	212'±	Datum	NAVD88
Logged By	Mateusz Fekieta	Date Start	8/1/2023	Date End	8/1/2023

Hammer Type:	Safety Hammer Driven by Lever
Sampler Size:	1-3/8" I.D. Split Spoon
Type Drill Rig:	Track Mounted D50 Diedrich
Drilling Method:	3.25-inch I.D. Hollow-Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
8/1/23	-	-	-	Not Encountered

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	16/24	0 to 2	2-3-13-13		Loose, brown, fine to coarse SAND, little Silt, little fine to coarse Gravel	9" +/- Topsoil
2								SUBSOIL
3		S-2	12/24	2 to 4	18-23-23-20		Dense, brown, fine to coarse SAND, little fine to coarse Gravel, trace Silt	
4								
5								
6		S-3	18/24	5 to 7	8-12-16-19		Medium dense, brown, fine to medium SAND, little Silt	
7								
8		S-4	12/24	7 to 9	20-36-32-28		Very dense, brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt	
9								
10								SAND
11		S-5	14/24	10 to 12	10-10-8-7		Medium dense, brown, fine to coarse SAND, little fine Gravel, trace Silt	
12								
13								
14								
15								
16		S-6	15/24	15 to 17	4-11-13-12		Medium dense, brown, fine to coarse SAND, trace Silt	
17								
18							END OF EXPLORATION AT 17 FEET BELOW GROUND SURFACE	
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SPT N-Values	SPT N-Values	Proportions
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%
Over 50 - Very Dense	16 to 30 - Very Stiff	
	Over 30 - Hard	

SYMBOL KEY

1. S denotes split-barrel sampler.
2. ST denotes 3-inch O.D. undisturbed sample.
3. UO denotes 3-inch Osterberg undisturbed sample.
4. PEN denotes penetration length of sampler.
5. REC denotes recovered length of sample.
6. SPT denotes Standard Penetration Test.
7. WH denotes weight of hammer
8. WR denotes weight of rods
9. PP denotes Pocket Penetrometer.
10. FVST denotes field vane shear test.
11. RQD denotes Rock Quality Designation.
12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CONNECTICUT

BORING NO. B-10
SHEET 1 of 1
FILE NO. 0032-069.00
CHKD. BY TJO

Boring Co.	General Borings, Inc.	Boring Location	See Boring Location Plan		
Driller	John Wyant	Ground Surface El.	215'±	Datum	NAVD88
Logged By	Mateusz Fekieta	Date Start	7/31/2023	Date End	7/31/2023

Hammer Type:	Safety Hammer Driven by Lever
Sampler Size:	1-3/8" I.D. Split Spoon
Type Drill Rig:	Track Mounted D50 Diedrich
Drilling Method:	3.25-inch I.D. Hollow-Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
7/31/23	-	-	-	Not Encountered

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	12/24	0 to 2	3-3-4-4		Loose, brown, fine SAND, some Silt, trace Roots	10"+/- Topsoil
2								SUBSOIL
3		S-2	14/24	2 to 4	3-7-19-22		Medium dense, reddish brown, fine to coarse SAND, little Silt	
4								
5								
6		S-3	8/24	5 to 7	22-43-48-30		Very dense, brown, fine to coarse SAND, little fine Gravel, trace Silt	
7								
8		S-4	1/24	7 to 9	37-41-38-34		Very dense, brown, fine to coarse SAND, little Silt	
9								
10								SAND
11		S-5	13/24	10 to 12	21-23-26-29		Dense, brown, fine to coarse SAND, little fine Gravel, trace Silt	
12								
13								
14								
15								
16		S-6	11/24	15 to 17	28-32-34-23		Very dense, brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt	
17								
18							END OF EXPLORATION AT 17 FEET BELOW GROUND SURFACE	
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

SPT N-Values	SPT N-Values	Proportions
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%
Over 50 - Very Dense	16 to 30 - Very Stiff	
	Over 30 - Hard	

SYMBOL KEY

1. S denotes split-barrel sampler.
2. ST denotes 3-inch O.D. undisturbed sample.
3. UO denotes 3-inch Osterberg undisturbed sample.
4. PEN denotes penetration length of sampler.
5. REC denotes recovered length of sample.
6. SPT denotes Standard Penetration Test.
7. WH denotes weight of hammer
8. WR denotes weight of rods
9. PP denotes Pocket Penetrometer.
10. FVST denotes field vane shear test.
11. RQD denotes Rock Quality Designation.
12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.
3) Cobbles and/or boulders were inferred based on auger chatter from about 11 to 14 feet.

APPENDIX 3 -

LABORATORY TESTING RESULTS

Thielsch
DIVISION OF THE RISE GROUP

195 Frances Avenue
Cranston RI, 02910
Phone: (401)-467-6454
Fax: (401)-467-2398
cts.thielsch.com
Let's Build a Solid Foundation

Client Information:	
Down to Earth Consulting, LLC	
Naugatuck, CT	
Project Manager:	Ray Janeiro
Assigned By:	Ray Janeiro
Collected By:	Client

Project Information:	
Proposed Solar Array	
Windsor, CT	
Project Number:	0032-069.00
Summary Page:	1 of 1
Report Date:	08.24.23

LABORATORY TESTING DATA SHEET, Report No.: 7423-H-178, Rev 1

Material Source	Sample ID	Depth (ft)	Laboratory No.	Identification Tests						Corrosivity Tests								Laboratory Log and Soil Description
				As Rcvd Moisture Content %	LL %	PL %	Gravel %	Sand %	Fines %	Resistivity (Mohms-cm)	Chloride (mg/kg)	Sulfate (mg/kg)	Sulfide (mg/kg)	Redox Potential (mv)	pH	Electrical Resist. As Rcvd Ohm-cm @ 60°F	Electrical Resist. Saturated Ohm-cm @ 60°F	
				D2216	D4318		D6913			EPA					D4972	G57		
Boring	B-4	0-4	23-S-3371							0.017	ND	ND			8.0	84500	25500	Corrosivity Only
Boring	B-6	0-4	23-S-3372							0.018	ND	14			8.4	80400	28700	Corrosivity Only
Boring	B-10	0-4	23-S-3373							0.023	ND	11			8.3	60700	33100	Corrosivity Only

pH tested by RB 08/14/23. ORP tested by RB 08/23/23.

Date Received: **08.14.23** Reviewed By: Date Reviewed: **08.24.23**

CERTIFICATE OF ANALYSIS

Kris Roland
Thielsch Engineering, Inc.
CTS Cranston
Cranston, RI 02910

RE: Proposed Solar Array - Down to Earth (74-23-0002.242)
ESS Laboratory Work Order Number: 23H0499

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 1:39 pm, Aug 21, 2023

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: Thielsch Engineering, Inc.
Client Project ID: Proposed Solar Array - Down to Earth

ESS Laboratory Work Order: 23H0499

SAMPLE RECEIPT

The following samples were received on August 14, 2023 for the analyses specified on the enclosed Chain of Custody Record.

The client did not deliver the samples in a cooler.

Lab Number	Sample Name	Matrix	Analysis
23H0499-01	B-4	Soil	9050A, D4327
23H0499-02	B-6	Soil	9050A, D4327
23H0499-03	B-10	Soil	9050A, D4327

CERTIFICATE OF ANALYSIS

Client Name: Thielsch Engineering, Inc.
Client Project ID: Proposed Solar Array - Down to Earth ESS Laboratory Work Order: 23H0499

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: Thielsch Engineering, Inc.
Client Project ID: Proposed Solar Array - Down to Earth

ESS Laboratory Work Order: 23H0499

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: Thielsch Engineering, Inc.
Client Project ID: Proposed Solar Array - Down to Earth
Client Sample ID: B-4
Date Sampled: 08/14/23 09:51
Percent Solids: 93

ESS Laboratory Work Order: 23H0499
ESS Laboratory Sample ID: 23H0499-01
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Chloride	**WL** ND (5)		D4327		1	JLK	08/16/23 21:53	mg/kg dry	DH31644
Resistivity	**WL 0.017** (N/A)		9050A		1	EEM	08/15/23 13:30	Mohms/cm	DH31517
Sulfate	**WL** ND (5)		D4327		1	JLK	08/16/23 21:53	mg/kg dry	DH31644

CERTIFICATE OF ANALYSIS

Client Name: Thielsch Engineering, Inc.
Client Project ID: Proposed Solar Array - Down to Earth
Client Sample ID: B-6
Date Sampled: 08/14/23 09:53
Percent Solids: 92

ESS Laboratory Work Order: 23H0499
ESS Laboratory Sample ID: 23H0499-02
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Chloride	**WL** ND (5)		D4327		1	JLK	08/16/23 22:10	mg/kg dry	DH31644
Resistivity	**WL 0.018** (N/A)		9050A		1	EEM	08/15/23 13:30	Mohms/cm	DH31517
Sulfate	**WL 14** (5)		D4327		1	JLK	08/16/23 22:10	mg/kg dry	DH31644

CERTIFICATE OF ANALYSIS

Client Name: Thielsch Engineering, Inc.
Client Project ID: Proposed Solar Array - Down to Earth
Client Sample ID: B-10
Date Sampled: 08/14/23 09:57
Percent Solids: 86

ESS Laboratory Work Order: 23H0499
ESS Laboratory Sample ID: 23H0499-03
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Chloride	**WL** ND (6)		D4327		1	JLK	08/16/23 22:59	mg/kg dry	DH31644
Resistivity	**WL 0.023** (N/A)		9050A		1	EEM	08/15/23 13:30	Mohms/cm	DH31517
Sulfate	**WL 11** (6)		D4327		1	JLK	08/16/23 22:59	mg/kg dry	DH31644

CERTIFICATE OF ANALYSIS

Client Name: Thielsch Engineering, Inc.
Client Project ID: Proposed Solar Array - Down to Earth

ESS Laboratory Work Order: 23H0499

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch DH31644 - General Preparation										
Blank										
Chloride	ND	5	mg/kg wet							
Sulfate	ND	5	mg/kg wet							
LCS										
Chloride	10		mg/L	10.00		96	85-115			
Sulfate	10		mg/L	10.00		101	80-120			

CERTIFICATE OF ANALYSIS

Client Name: Thielsch Engineering, Inc.
Client Project ID: Proposed Solar Array - Down to Earth ESS Laboratory Work Order: 23H0499

Notes and Definitions

WL	Results obtained from a deionized water leach of the sample.
U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: Thielsch Engineering, Inc.
Client Project ID: Proposed Solar Array - Down to Earth

ESS Laboratory Work Order: 23H0499

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Thielsch Engineering, Inc - ESS

Shipped/Delivered Via: Client

ESS Project ID: 23H0499
Date Received: 8/14/2023
Project Due Date: 8/21/2023
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? No
   Temp: 20.2 Iced with: None
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	463079	Yes	N/A	Yes	8 oz jar	NP	
2	463080	Yes	N/A	Yes	8 oz jar	NP	
3	463081	Yes	N/A	Yes	8 oz jar	NP	

2nd Review
Were all containers scanned into storage/lab? Initials TD Yes / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 8/14/23 12:29
Reviewed By: Date & Time: 8/14/23 1239

ESS Laboratory
Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS LAB PROJECT ID: 23H0499

Turn Time: Standard X Rush Approved By: _____

Reporting Limits -

State where samples were collected: CT

Is this project for any of the following: (please circle)
MA-MCP CT-RCP RGP DOD Other_____

Electonic Deliverable Yes_X__ No____
Format: Excel___ Access___ PDF_X_ Other_____

Project Manager: Kris Roland
Company: Thielsch Engineering
Address: 195 Frances Ave
Cranston, RI 02910

Project # 74-23-0002.242

Project Name / Client Name:
Proposed Solar Array
Down to Earth Consulting, LLC

Contract Pricing __x___
Special Pricing WO#: _____

ESS Lab Sample ID	Date	Collection Time	Grab -G Composite-C	Matrix	Sample Identification	# of Container	Analysis: Sulfate D4327	Chloride D4327	Resistivity (EPA)							Comment #
1	8.14.23	9:51	C	S	B-4	1	X	X	X							
2	8.14.23	9:53	C	S	B-6	1	X	X	X							
3	8.14.23	9:57	C	S	B-10	1	X	X	X							
Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-_CH_3OH_____							1	1	1							
Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA																

Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present _____Yes ___No
Seals Intact _____ Yes _____No NA:____
Cooler Temperature: 20.2

Sampled by : RB

Comments: Please send reports to kroland@thielsch.com, mcolman@thielsch.com, rroth@thielsch.com,

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8.14.23 1009	[signature]			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Please E-mail all changes to Chain of Custody in writing.

Page ____ of ____

APPENDIX 4 -

LIMITATIONS

LIMITATIONS

Explorations

1. The analyses and recommendations submitted in this report are based in part upon the data obtained from subsurface explorations by Down To Earth Consulting, LLC (DTE) and others. The nature and extent of variations between these explorations may not become evident until construction. If variations then appear evident, it will be necessary to reevaluate the recommendations of this report.

2. The generalized soil profile described in the text is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized and have been developed by interpretations of widely spaced explorations and samples; actual soil transitions are probably more erratic. For specific information, refer to the boring logs.

3. Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. These data have been reviewed and interpretations have been made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, tidal, temperature, and other factors occurring since the time measurements were made.

Review

4. In the event that any changes in the nature, design or location of the proposed solar array are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing by DTE. It is recommended that this firm be provided the opportunity for a general review of final design and specifications in order that earthwork and foundation recommendations may be properly interpreted and implemented in the design and specifications.

Construction

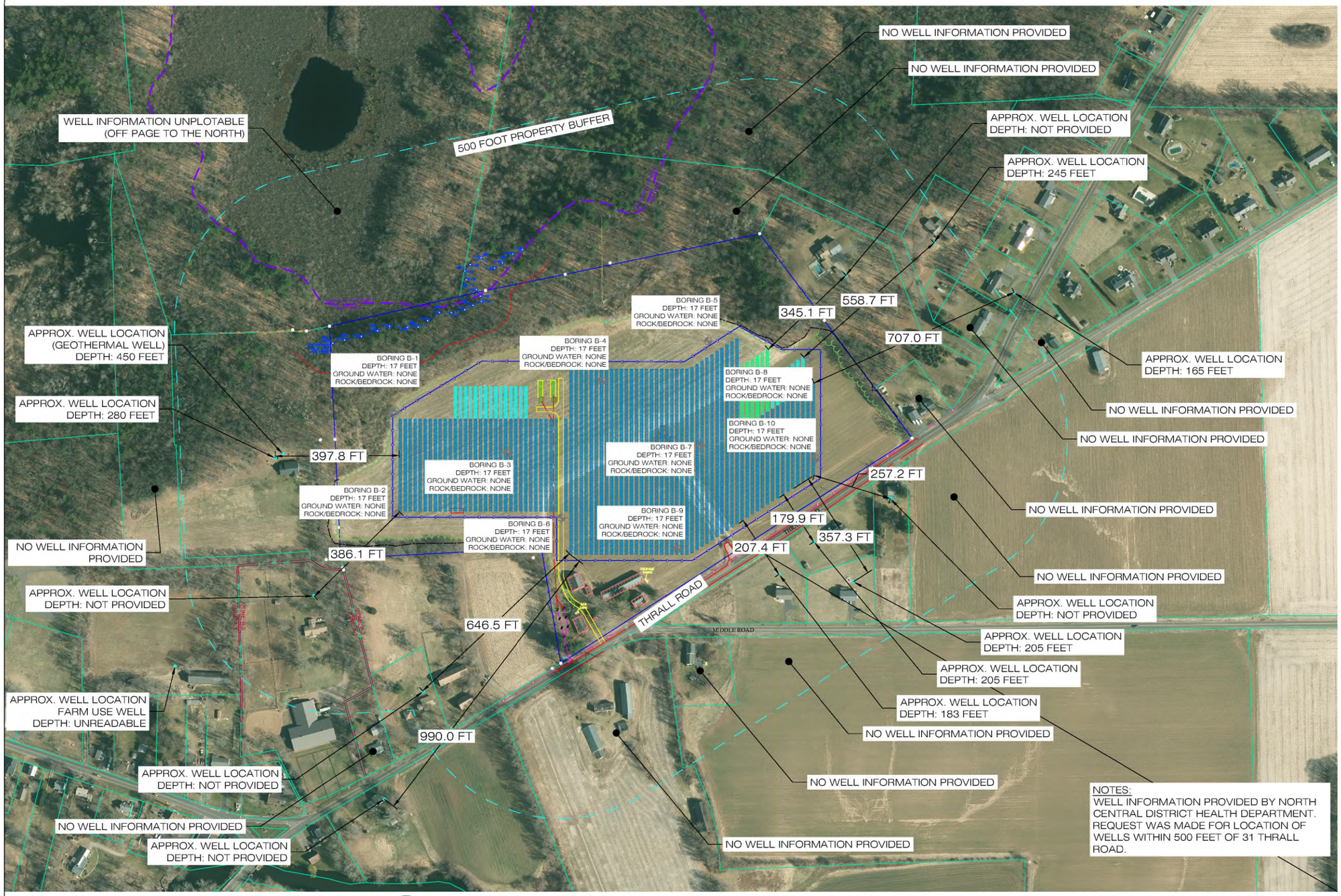
5. It is recommended that this firm be retained to provide soil engineering services during construction of the earthworks and foundation phases of the work. This is to observe compliance with the design concepts, specifications, and recommendations and to allow design changes in the event that subsurface conditions differ from those anticipated prior to start of construction.

Use of Report

6. This report has been prepared for the exclusive use of All-Points Technology Corporation for specific application to the project noted in this geotechnical report in accordance with generally accepted soil and foundation engineering practices. No other warranty, express or implied, is made.

7. This soil and foundation engineering report has been prepared for this project by DTE. This report is for design purposes only and is not sufficient to prepare an accurate bid. Contractors wishing a copy of the report may secure it with the understanding that its scope is limited to design considerations only.

8. This report may contain comparative cost estimates for the purpose of evaluating alternative foundation schemes. These estimates may also involve approximate quantity evaluations. It should be noted that quantity estimates may not be accurate enough for construction bids. Since DTE has no control over labor and materials cost and design, the estimates of construction costs have been made on the basis of experience. DTE does not guarantee the accuracy of cost estimates as compared to contractor's bids for construction costs.



WL-1 WELL LOCATIONS

SCALE: 1" = 150'

General Notes

No.	Revision/Issue	Date

Firm Name and Address

VEROGY

124 LASALLE ROAD, 2ND FLOOR
WEST HARTFORD, CT 06107

Project Name and Address

EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CT 06016
41.893834, −72.531022

Project	Sheet
EW. SOLAR TWO	WL – 1
Date: 05/14/23	
Drawn By: BJP	

ATTACHMENT 4

Operations and Maintenance Plan

East Windsor Solar Two

Date:

April 2023, Revised October 2024

Prepared By:

East Windsor Solar Two, LLC

124 LaSalle Road, 2nd Floor | West Hartford, CT 06107 | (860) 288-7215 | www.verogy.com

Table of Contents

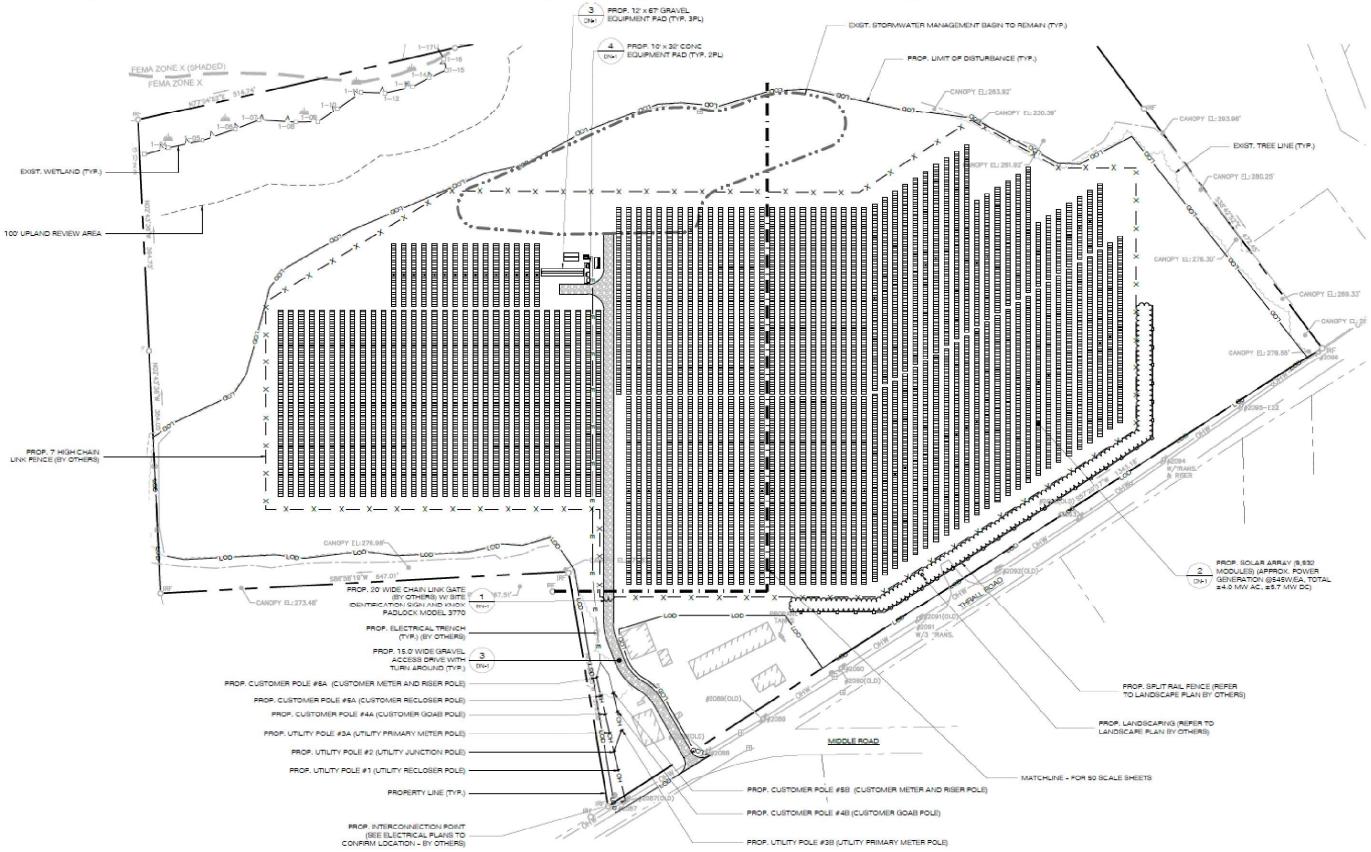
Operations and Maintenance Plan

1. Introduction

East Windsor Solar Two, LLC ("Owner") is responsible for maintaining and servicing the photovoltaic (PV) electric system as well as the related facilities during the operational phase of the project. Related facilities include fencing, lighting, grass, roads, storm water devices, etc. This O&M Plan describes the project components, commissioning procedures, monitoring system, Maintenance provisions and emergency response

2. Project Description

The proposed Project is a 4.0 MW AC ground mounted solar array located in East Windsor, CT that will consist of solar modules, inverters, switchgear, transformers, and electrical systems interconnected to the utility grid along Thrall Road. The Project also includes access roads, security fencing and stormwater management areas.



3. Contact Information

Table 1. Project Contact Information

Owner	East Windsor Solar Two, LLC 124 LaSalle Road, 2nd Floor West Hartford, CT 06107 (860)288-7215 development@verogy.com
O&M Service Provider	VCP EPC, LLC 124 LaSalle Road, 2nd Floor West Hartford, CT 06107 (860)288-7215 sdenino@verogy.com

4. Commissioning

Prior to the project reaching operation, the following inspections and tests will be performed by the O&M provider. The results will be included in the projects commissioning report.

- Full visual Inspection
- Mechanical inspection including torque verification of critical connections
- String Testing (IV curve test)
- Full System Production Evaluation
- Thermal Scanning

5. Monitoring

The O&M provider will utilize a continuous 24/7 remote monitoring system to provide alarm and performance data of the system. The monitoring system will include full site and inverter level production and alarms as well as site weather and irradiance data. The O&M provider will analyze performance data to make sure that the system is performing as designed and will be responsible for dispatching crews for system maintenance and repair related issues. The O&M provider will be contractually obligated to comply with this O&M Plan, as well as the conditions of all permits or regulatory approvals.

6. Maintenance

O&M services are outlined below. (The frequency of these services is outlined in Table 2)

6.1. Site Access

The solar array and all associated equipment shall be located behind a fence with gates as depicted on the construction drawings or as directed by permitting authorities. Access to that facility shall be granted to authorized personnel only. Access to that facility shall be arranged with the Owner or O&M provider as identified in table 1. Provisions will be in place for Emergency personnel to access the site via a universal key box (i.e. Knox Box) that will have that appropriate key(s) to access the facility.

6.2. Equipment Maintenance

The O&M provider and/or its authorized subcontractors will inspect and maintain electrical and PV equipment in accordance with the manufacturer's requirements to maintain proper operation and warranty status.

The O&M provider will also perform the following inspections. The results from these inspections/tests will be provided in an O&M inspection report.

- The operation of all safety devices will be reviewed and corrected to maintain proper function.
- Full visual Inspection of all equipment, subassemblies, wiring, connectors, etc.
- Thermal Scanning of electronic equipment, wiring terminations, connectors, etc.
- Mechanical inspection including torque verification of critical connections
- String Testing (IV curve test)
- Air filter elements

6.3. Site Maintenance

The O&M provider and/or its authorized subcontractors will visit the site monthly to assess site conditions and perform maintenance as needed. Signage and egress functionality will be inspected at this time and repaired, if necessary.

6.3.1. Grass Management

The primary means of vegetation management will come in the form of the Livestock Grazing Program to be deployed by East Windsor Solar Two, LLC in partnership with Hillview Farm of Connecticut. In Summary, the sheep grazing program will be used to control vegetation at the project site to achieve the following:

- Prevent panel shading from vegetation
- Control and remove invasive and unpalatable plant species
- Avoid the growth of brush and woody species under the solar panels
- Maintain a diverse forage population to support optimal sheep nutrition
- Encourage forage population to support optimal sheep nutrition
- Optimize sequestered soil carbon through increasing top-soil amount and root matter
- Control erosion

6.3.2. Panel Cleaning

Panel Cleaning is rarely necessary in the Northeast, but if the panels are to experience enough soiling to adversely affect production the panels will be cleaned using water and soft bristle brooms. No chemicals will be used.

6.3.3. Snow Maintenance

The O&M provider and/or its authorized subcontractors will clear snow from the access roads to all the electrical equipment pads as necessary. As required, snow will be plowed or removed in a manner to maintain emergency turnarounds. The Owner does not intend on removing snow from panels.

6.3.4. Landscape Maintenance

The O&M provider and/or its authorized subcontractors will inspect the health and condition of the landscape plantings annually and after any extreme weather events that have a high likely hood of affecting the overall health of the plantings. Dead or dying plantings shall be replaced as necessary with replacement occurring during seasonally appropriate times that are conducive towards successful root establishment and successful subsequent health and growth of the plantings.

6.3.5. Stormwater Basin/Control Maintenance

The O&M provider and/or its authorized subcontractors will inspect the outlet control structure annually to ensure that it is free from debris or any obstructions that might compromise the ability of the structure to control the flow of drainage from the basin.

6.4. Long-Term Stormwater Maintenance Plan

The O&M team will provide maintenance in accordance with the approved stormwater maintenance plan produced by the engineer of record.

Table 2. Scheduled Maintenance Activity

Task	Frequency
Visual Array & Equipment Inspection	1x per year or per equipment manufacturer requirements
Mechanical and Electrical Inspections	1x per year or per equipment manufacturer requirements
Panel Cleaning	As Needed
Mowing and Trimming / Co-use Sheep Grazing	In accordance with livestock grazing Plan. Mowing and trimming as needed.
Snow Removal	As needed
Perimeter Fence Inspection	1x per year
Stormwater Management System Inspection	1x per year or per engineer's stormwater management plan
Landscape Inspections	1x per year or more frequently if necessary due to extreme weather events

7. Emergency Response

The Owner will coordinate with the Town of East Windsor police and fire departments regarding access to the facility and emergency shutoff switches. Table 3 provides an emergency contact list for the Town of East Windsor. Each of the entrance gates will have a universal key lock (e.g. Knox lock) for emergency responders.

Table 3. Town of East Windsor Emergency Contacts

Emergencies	Dial 911
East Windsor Police Station	Roger T. Hart, Deputy Chief of Police 25 School Street East Windsor, CT 06088 Emergency Calls: 911 Routine Calls: (860)292-8240
Broad Brook Fire Department	Thomas Arcari, Fire Chief 125 Main Street Broad Brook, CT 06016 Emergency Calls: 911

ATTACHMENT 5

Spill Prevention and Materials Storage Plan

East Windsor Solar Two
4.0 MW AC Ground Mounted Solar Project
31 Thrall Road, East Windsor, Connecticut

Date:

October 2024

Prepared By:

VCP ECP, LLC

124 LaSalle Road, 2nd Floor

West Hartford, CT 06107

Table of Contents

1. Introduction

This Spill Prevention and Materials Storage Plan was developed for the construction of a 4.0 MW ground mounted solar array located at 31 Thrall Road, in East Windsor, Connecticut.

2. General Requirements

The project's location is proximate to sensitive environmental features and as such the Contractor is required to take precautions related to the storage of petroleum materials and equipment refueling. The Contractor is responsible for containing and properly cleaning up any inadvertent fuel or petroleum (i.e., oil, hydraulic fluid, biodegradable transformer insulating fluid, etc.) spill.

The Contractor shall not keep any above ground fuel or oil storage onsite greater than 1,320 gallons in cumulative volume.

The Contractor is responsible for keeping and maintaining a spill containment kit on Site for the duration of the construction of the project. The spill containment kit shall consist of a sufficient supply of absorbent pads and absorbent material, as well as contain this Spill Prevention and Materials Storage Plan. In addition, a waste drum will be kept on site to contain any used absorbent pads/material for proper and timely disposal off site in accordance with applicable local, state, and federal laws.

The Contractor shall make all workers and subcontractors on Site aware of this Spill Prevention and Materials Storage Plan and shall include it as part of their job briefings.

3. Specific Spill Response and Material Handling Procedures

The Contractor should adhere to the following spill response and material handling procedures.

Refueling and Material Storage

- All light duty construction support vehicles shall be fueled off site at a service station.
- Refueling of vehicles on site shall take place in a supervised manner to avoid any overfills.
- Refueling of vehicles or machinery shall take place on an impervious pad with secondary containment designed to contain petroleum fuels.
- Any refueling tanks and/or drums or other hazardous materials that must be kept on site shall be stored on an impervious surface utilizing secondary containment and be kept at least 100 feet from any wetlands or water courses located on site.

Initial Spill Response Procedure

- Immediately stop operation and shut off all equipment
- Remove any sources of ignition
- Locate the source of the spill and contain and/or stop the spill from continuing
- Once the spill is stopped or contained, follow any flow paths of the spill and prevent or contain any further release into sensitive environmental areas.

- Ensure that all contractors and subcontractors on site are notified of the spill.

Spill Clean Up

- Obtain the Spill Response Kit from the designated location on Site
- Place the absorbent materials directly on the spill
- Continue to place the absorbent materials around the spill to prevent any further release
- Ensure that the spill is eliminated or isolated at the source
- Determine the type and approximate amount of material that was spilled
- Contact the appropriate Site contacts and local, state, and/or federal agencies as required.
- Contact a disposal company to properly dispose of any contaminated materials
- Fill a report on the incident.

Reporting

- Complete an incident report for each spill
- Submit a completed incident report to local, state and federal agencies, as required.
- The Connecticut Department of Energy & Environmental Protection (DEEP), Emergency Response Unit should be contacted at: (860) 424-3338 or 866-DEP-SPIL (866-337-7745), 24/ hours/day, in the event of an emergency spill. Should these numbers become unavailable for any reason, call 860-424-3333.
- Immediately after the spill you are required to report facts such as:
    - The location;
    - The quantity and type of substance, material, or waste;
    - The date and the cause of the incident;
    - The name and address of the owner; and
    - The name and address of the person making the report and relationship to the owner

4. Site and Emergency Contact Information

Project Owner: East Windsor Solar Two, LLC Phone: (860) 288-7215	**Local Fire Department:** Thomas Arcari, Fire Chief Phone (non-emergency): (860)623-5940 Phone (emergency): 911
Project Site Contact: East Windsor Solar Two, LLC Name: Dan Sheridan – Project Superintendent Phone: 860.336.7244	**Local Police Department:** Phone (non-emergency): (860)292-8240 Phone (emergency): 911
Construction Oversight Contact: East Windsor Solar Two, LLC Name: Steven DeNino, Chief Operating Officer Phone: (860) 288-7215	**State Agency: Connecticut Department of Energy & Environmental Protection (DEEP), Emergency Response Unit** Phone: (860) 424-3338 Alternate Phone: (860) 424-3333
Spill Clean Up Contractor: **Clean Harbors Environmental** 51 Broderick Road, Bristol, CT 06010 Phone: (860) 583-8917	

5. Incident Report Template

East Windsor Solar Two - Spill Report Form

Date of Spill:_____ Date of Spill Discovery:_____

Time of Spill:_____ Time of Spill Discovery:_____

Name and Title of Discoverer:_____

Type of material spilled and manufacturer's name:_____

Legal Description of spill location to the quarter section:_____

Directions from nearest community:_____

Estimated volume of spill:_____

Weather conditions:_____

Topography and surface conditions of spill site:_____

Spill medium (pavement, sandy soil, water, etc.):_____

Proximity of spill to surface waters: _____

Did the spill reach a waterbody? _____Yes _____No

If so, was a sheen present? _____Yes _____No

Describe the causes and circumstances resulting in the spill:_____

_____

_____

Describe the extent of observed contamination, both horizontal and vertical: _____

_____

_____

Describe immediate spill control and/or cleanup methods used and implementation schedule: _

_____

Status of cleanup actions:_____

Name and Company for the following:

Construction Superintendent:_____

_____

Spill Coordinator:_____

_____

Verogy Representative:_____

Person Who Reported the Spill:_____

_____

Environmental Inspector:_____

Form completed by:_____Date:_____

Spill Coordinator must complete this for any spill, regardless of size, and submit the form to the Verogy Representative within 24 hours of the occurrence.

ATTACHMENT 6

Sheep Grazing Plan
Ground Mount PV Array

East Windsor Solar Two

Date:
January 2023, Revised October 2024

Prepared By:
East Windsor Solar Two, LLC / Verogy
in conjunction with Hillview Farm of Ellington Connecticut

124 LaSalle Road, 2nd Floor | West Hartford, CT 06107 | (860) 288-7215 | www.verogy.com

Introduction

Ground-mounted solar sites, by nature of their design, have ample fenced areas. The fencing at solar sites is uniquely suited to serve as grazing areas or be subdivided into grazing paddocks in a pasture rotation with sheep. The perimeter fencing also serves as predator deterrent, the solar panels provide shading and shelter for inhabitants, and the solar arrays provide palatable pasture species for ruminant nutrition. In turn, rotationally grazed sheep provide adequate and comparatively cheap vegetation management, optimal ground coverage and thus reduced erosion and run-off, as well as agricultural usage of lands that can add to the viability of farming communities.

The East Windsor Solar Two, LLC project, located in *East Windsor*, CT, is planned for approximately *17.3* acres. Sheep grazing will be used to control vegetation at the project site to:

- Prevent panel shading from vegetation,
- Control and remove invasive and unpalatable plant species,
- Avoid the growth of brush and woody species under the solar panels,
- Maintain a diverse forage population to support optimal sheep nutrition,
- Encourage flowering forb and plant species to maximize pollinator habitat,
- Optimize sequestered soil carbon through increasing top-soil amount and root matter,
- Control erosion.

To achieve these goals a rotational grazing system will be implemented. Rotational grazing is a technique where animals are moved as one group, from one pastured area ("paddock") to the next (Hodgson, 1979). Only one paddock is grazed at any given time throughout the rotation, while the other paddocks are given a rest period to achieve pasture regrowth. Compared to continuous or extensive grazing, rotational grazing inhibits weed growth, improves the health of pasture, sustains healthy vegetation, and improves sheep health.

Site Requirements

The perimeter fencing can be chain link or "ag type" woven wire and should be installed to the ground. It can be buried slightly below grade or have a maximum gap of 1-2". Gaps caused by uneven ground should be cleaned up with a dozer. If chain link fencing is used it should be installed with a bottom tensioning wire.

The perimeter gates should be installed to meet evenly and have an even spacing to the ground. The maximum gap between the gates and the ground should be 1-2". Care should be taken to add some gravel or grade the area to avoid large gaps.

The site should be building on an existing sod or hay-ground or planting an existing tilled field. The solar facility should be seeded with Ernst Conservation Seeds, Inc. Fuzz & Buzz mix or equivalent. The Fuzz & Buzz mix is the best way to blend grazing with solar and introducing pollinator friendly species. This seed mix was developed by Ernst and the Cornell Sheep Program in conjunction with the American Solar Grazing Association. For additional seedings, clover or legume mixes are a good option for vigor and grazing friendliness. For grass species fescue species should be avoided unless they are endophyte-free varieties.

Rotation planning

The East Windsor Solar Two, LLC project was assessed for a planned grazing rotation based on the preliminary panel layout, and *17.3* acres fenced area under panels. The grazing plan requires division of the solar array into smaller grazing units, known as *paddocks*. The site layout can be subdivided into four (4) different grazing paddocks with Electronet® fencing (Figure 1). The Electronet® is a portable fence that is a product familiar to farmers in in the grazing community. It is a white, lightweight fence that is energized using a portable battery, battery/solar, or 110V power supply. This fencing is simple to power on/off and will only be located inside the fenced areas. Its use is to facilitate grazing inside the permanently fenced areas only. The Electronet® will be installed by the grazing manager according to the grazing plan.

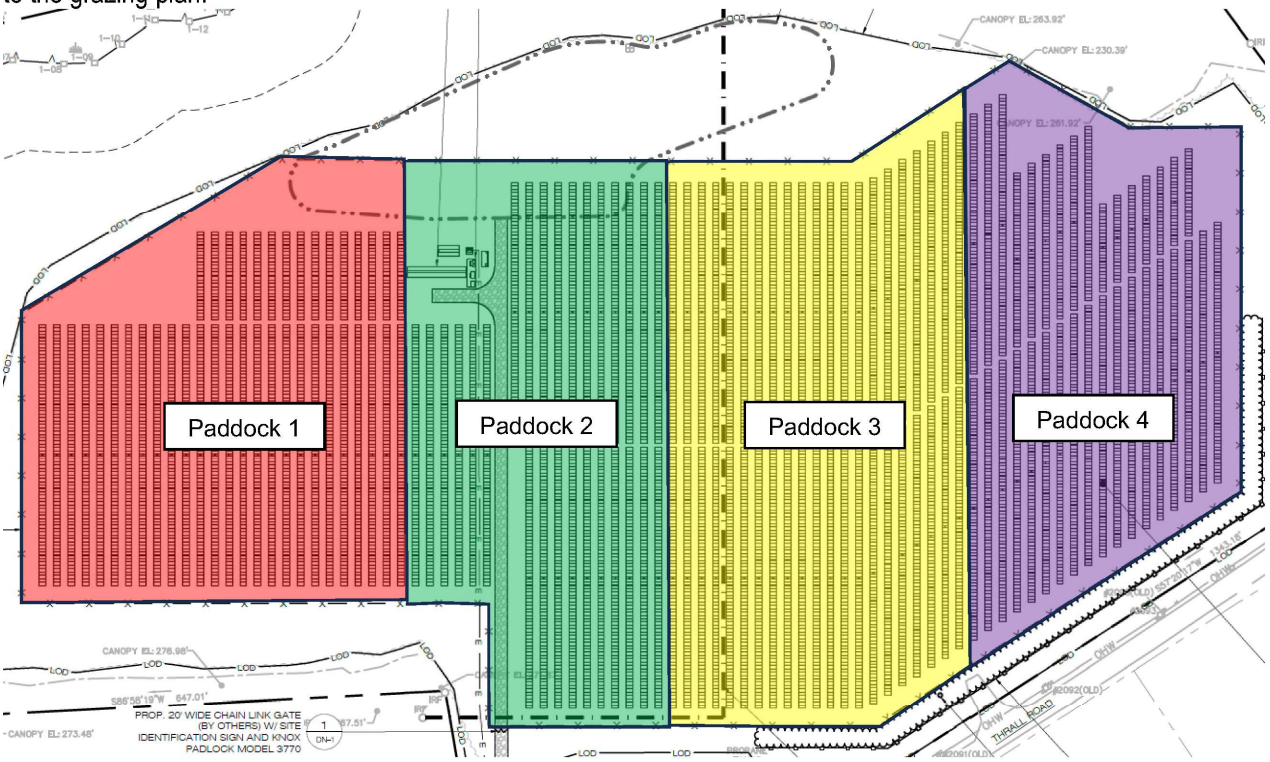


Figure 1. East Windsor Solar Two Layout with distinctly colored sections. Please note that this is an approximation and subject to change.

- Paddock 1 (4.3 acres)
- Paddock 2 (4.3 acres)
- Paddock 3 (4.3 acres)
- Paddock 4 (4.3 acres)

The number of grazing paddocks in each array is dependent on a unique set of factors. The number depends on size and layout of the permanently fenced array, panel orientation, and space used for access roads, inverter pads, and other non-forage producing areas.

Manure management is a subset of the flock management and sheep management planned for the solar site. The primary purpose of the placement of sheep on the solar site is to achieve vegetation management goals. The planned movement of the sheep around the solar site has the underlying benefit of moving and distributing sheep manure at the same time. Sheep manure is typically small and pelletized. For the layperson, sheep manure may resemble the manure of rabbits or deer. Similarly, the manure is typically invisible within a short period of time and begins nutrient cycling in the soils.

The correct sheep stocking rate and density (sheep per acre per unit of time) will be calculated before the grazing season based on site size, and quantity and type of vegetation present. This metric also ensures that no over-grazing occurs, and that the amount of manure deposition does not outpace the rate of manure decomposition throughout the grazing rotation.

The flock will not overwinter within the fenced area of the solar array.

Acreage

The sheep flock is sized to cover the four grazing paddocks in a full rotation, i.e. the amount of sheep needed to graze Paddock 1, 2, 3, and 4 with 4.3, 4.3, 4.3, and 4.3 acres, respectively, in a +/- 45-day rotation. The precise number of days per paddock may be adjusted over the season by the flock manager, depending on weather and forage growth conditions. The number of sheep determined by the grazing plan can be found in *Project Name* Project:

Table 1. Grazing Plan for East Windsor Solar Two Project

Enfield Solar One - Grazing Plan						
	Items	**Paddock 1**	**Paddock 2**	**Paddock 3**	**Paddock 4**	**Site Totals**
Paddock Info.	Total Paddock Area (ac)					17.3
	Number of Paddocks					4
	Paddock Rest Period (days)					45
	Paddock Use (days)					15
	Paddock Size (ac)	4.3	4.3	4.3	4.3	
Feed Anlysis	Vegetation Cover of Paddock (%),(ac)	80% 3.47	80% 3.47	80% 3.47	80% 3.47	80% 13.87
	Biomass (lbs/sy)	1.5	1.5	1.5	1.5	1.5
	Dry Matter (%), (lbs/sy)	20% 0.3	20% 0.3	20% 0.3	20% 0.3	20% 0.3
	Dry Matter per Acre (lbs)	1452	1452	1452	1452	1452
	Dry Matter per Paddock (lbs)	5034	5034	5034	5034	20137
	Refusals per Paddock (%), (lbs)	30% 1510	30% 1510	30% 1510	30% 1510	30% 6041
	Adjusted Dry Matter per Paddock (lbs)	3524	3524	3524	3524	14096
Feed Intake	Average sheep weight (lbs)					160.0
	Dry Matter Intake per Sheep (%),(lbs)					3.5% 5.6
Sheep Anlysis	Total Paddock Area (ac)					17.3
	Total Adjusted Dry Matter (lbs)					14096
	Number of Sheep for Site					42
	Sheep Stocking Rate					2.4

The rest time for a given grazed area is largely guided by management for the sheep flock's health. The rest time can be considered the window during which the sheep are not present in a given area and the space is given a rest. The pasture rest period (time between grazing periods) in the US Northeast should not be less than 40-days to minimize internal parasite pressure for sheep. Internal parasites are a health risk to the sheep but not to humans. Internal parasites of sheep are not zoonotic, but a threat only to the health of sheep. This health risk to sheep is minimized by following the following prescriptive grazing plan.

A common internal parasite specific to ruminates is the stomach nematode *H. contortus* or barber pole worm. It has a life cycle of 40 days; thus, a clean pasture can only be achieved with rest periods of 40+ days to avoid reinfection through ingestion of larvae. However, in effective grazing regimens with parasite-resistant sheep flocks, exceptions can be made by the flock manager if the vegetation pressure is too high to adhere to a 40-day rest period before re-grazing.

Sampling and analysis

In newly commissioned solar sites, full vegetation coverage cannot be expected in the first 1-2 years. Additionally, access roads, inverter pads and other site infrastructure will reduce the overall vegetation cover. The estimate for NY State solar sites lies between 65 and 85% vegetation coverage for new sites. This number should be estimated and

considered separately for each individual paddock. This number will be adjusted over subsequent years and grazing seasons.

As previous management regimes for solar sites might consist of hay fields, crop fields, marginal pastures or brush areas, the vegetation coverage is expected to be heterogeneous. Therefore, vegetation sampling must be performed to determine sheep stocking rate and density, which is a requirement prior to establishing a grazing rotation. Tabular dry matter and nutrient values as they are published for uniform stands of established crops, hay field or other, are not adequate for evaluating solar array site vegetation for grazing. A detailed organic matter (OM) vegetation sampling protocol is published on the American Solar Grazing Association (ASGA) website. The grazing rotation will largely depend on the amount of forage dry matter (DM) growing within the individual areas. Manager may perform vegetation sampling at intervals to analyze the nutritional value of the forage.

Forage analysis laboratories such as Dairy One provide detailed analyses that can be used to calculate the available DM per grazing paddock from submitted OM samples. Dry matter is a percent of total percent plant weight minus water content. These DM values are necessary to establish the amount of available feed for sheep, and eventually the sheep stocking rate and density. Typically, pasture DM values in the Northeastern US for well-maintained pastures are between 18-25%, depending on the season.

Typically, well managed Northeast pastures can achieve yields above 2,500 lbs DM per acre. The yield in the grazing plan draft above is substantially lower; it is expected that the solar array pastures will take time after establishment to reach their potential. It is necessary to plan a grazing rotation prior to the grazing season, which would be used to guide a flock manager's rotation plan. The flock manager would then use his/her own experience and observation to decide daily if the rotation plan is reasonable and responsible, and to make necessary adjustments in rotation days and stocking rates.

Pasture utilization should be between 70 and 85% to ensure optimal regrowth and animal nutrition. Thus, pasture refusals (uneaten vegetation remaining after grazing) should be part of the calculation and should be between 15% and 35%.

Two examples of common adjustments to rotation plans include: First, in late spring after rain events and with the warming weather, stocking rates may have to be increased to be able to clear the vegetation growth. Secondly, in the summer, sheep may have to be moved from paddock to paddock faster than they were in spring or fall due to the slowed growth of dormant cool-season vegetation.

Feed Intake

It is recommended to graze uniform animal groups that are either dry (non-lactating) ewes, open (non-pregnant) ewes, ewes in their early stages of pregnancy, yearling ewes or growing lambs of at least 60 lb. (or alternatively, 50% of their mature body weight in case of small breeds). In the case of groups of growing lambs, the lambs should be of the same sex or the males should be castrated.

Table 2. Body weight and feed intake

Breed	***Stage of production***	***Body weight, lbs***	***Feed intake, DM %BW***	***Feed intake, lbs DM***
Katahdin hair sheep	Growing lamb, 50% mature BW	65	2.5	1.6
	Yearling	110	3.0	3.3
	Open, dry ewe	130	3.5	4.6
Polypay composite	Growing lamb, 50% mature BW	80	2.5	2.0
	Yearling	130	3.0	3.9
	Open, dry ewe	160	3.5	5.6
Texel	Growing lamb, 50% mature BW	90	2.5	2.3

	Yearling	150	3.0	4.5
	Open, dry ewe	180	3.5	6.3

Depending on the breed and uniformity of the group of sheep, an average weight for the individual animals in the flock can be determined. Table 2. Body weight and feed intake, gives an overview of BW (body weight) and feed intake across popular Northeastern sheep breeds. According to NRC nutritional requirements for small ruminants (NRC, 2007), daily DM consumption per animal can be estimated as a percentage of bodyweight.

Totals

These calculations can be used to determine the optimal number of sheep per paddock according to body weight and stage of production. By using this with the chosen grazing rotation days (or rest period), the stocking rate (the necessary sheep number for the calculated grazing time within each paddock) can be calculated, and the optimal grazing flock size calculated.

On the 17.3-acre East Windsor Solar Two, LLC project, the grazing plan allows for 42 mature ewes managed in four grazing paddocks, a stocking rate of 2.4 sheep per acre, and 15 grazing days per paddock with a 45-day rest period.

Animal welfare recommendations

Regardless of season, ad libitum clean and fresh water access is crucial for animal welfare (NRC, 2007). Site-specific amenities like well water or connection to municipal water lines are ideal, but transported water is typical of solar grazing operations. For sheep of the recommended production stages (non-lactating and > 60 lbs growing lambs), water requirements are very low in spring and fall. Typically, dry, non-gestating ewes will consume between 5 and 10 % of their BW water daily.

Granulated mineral feed must be available ad libitum and contain adequate concentrations. Mineral feed should be offered in troughs that can be moved with the flock according to the rotation and rotation days. Mineral feed is specially blended and commercially available for sheep producers (Cargill, 2019).

Sheep will be visually inspected on every rotation day by the flock manager. A closer inspection of each member of the flock is recommended at regular intervals (every 6 weeks on site), including parasite monitoring or treatment with a FAMACHA (FAffa MAlan CHArt) protocol (Wyk and Bath, 2002), and 5-point checks (Bath and van Wyk, 2009).
Each spring, before the flocks begin the grazing season, certain protocols are recommended to ensure they are in optimal health before their work at the solar site begins:

- Feet must be checked and trimmed,
- Ear tags replaced or added, in compliance with USDA regulations,
- Wool sheep must be shorn,
- Wool sheep should be tail-banded,
- Body-condition scores should be recorded to monitor nutritional and health status across the grazing season,
- ***Sheep should be kept in a dry lot on hay 24 hours prior to moving on site in Spring and de-wormed with a commercially available de-wormer to prevent parasite infections on site.***

Emergency Protocols

In the event of a site emergency, the following protocol is to be on hand to ensure safe site access for emergency personnel:

- Clear signage will be displayed at the main gate with emergency contact information of the sheep manager. The manager should be contacted immediately in the event emergency personnel have to enter the site in order to ascertain if there are animals present, and to provide notification to the sheep manager that the animals may need to be removed.
- If portable electric fence is installed crossing site roadways, the fence charger will be placed clearly by the side of the roadway. In the event of emergency, the charger will only need to be switched off and the fence pulled up by hand to allow passage.
- If possible, animals should remain inside the site during an emergency, until the sheep manager can safely remove them. They will likely move as a flock away from any commotion and pose little risk of being in the way. If they do escape during the site emergency, they should be monitored and pushed towards fields and away from roads if possible.

Literature

Bath, G. F., and J. A. van Wyk. 2009. The Five Point Check© for targeted selective treatment of internal parasites in small ruminants. Small Ruminant Research 86(1):6-13. doi: https://doi.org/10.1016/j.smallrumres.2009.09.009

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HODGSON, J. 1979. Nomenclature and definitions in grazing studies. Grass and Forage Science 34(1):11-17. doi: 10.1111/j.1365-2494.1979.tb01442.x

NRC. 2007. Nutrient Requirements of Small Ruminants: Sheep, Goats, Cervids, and New World Camelids. The National Academies Press, Washington, DC.

Wyk, J. A. V., and G. F. Bath. 2002. The FAMACHA system for managing haemonchosis in sheep and goats by clinically identifying individual animals for treatment. Vet. Res. 33(5):509-529.

HOLD HARMLESS AGREEMENT

East Windsor Solar Two, LLC ("East Windsor S2") hereby agrees that it will indemnify and hold harmless the Connecticut Siting Council (the "Siting Council") and its respective employees, officers, agents, and representatives (collectively, the "Indemnified Parties") from and against any and all losses, claims, actions, costs and expenses, judgments, subrogations, or other damages (collectively, "Claims") brought against or incurred by the Siting Council or the Indemnified Parties due to injury to a person or damage to property at the solar photovoltaic facility site located at 31 Thrall Road in East Windsor, Connecticut (the "Premises") to the extent such injury or damage arises out of the agricultural co-use plan and the corresponding presence of third parties within the fenced solar facility site in the performance of the agricultural co-use plan, unless such Claims are the result of the negligence, recklessness or willful misconduct of the Siting Council or the Indemnified Parties.

This Hold Harmless Agreement shall remain in full force and effect for so long as East Windsor S2 is developing and operating the solar facility on the Premises and performing the agricultural co-use plan, and shall terminate upon the earlier of the decommissioning of the solar facility or the termination of the agricultural co-use plan.

IN WITNESS WHEREOF, this Hold Harmless Agreement has been executed as of the _____ day of _____, 2024.

East Windsor Solar Two, LLC

By: _____
Name: _____
Title: _____