

# DEVELOPMENT & MANAGEMENT PLAN (PHASE 3)



BARRETTE FARMS

# SOLAR PANEL FACILITY

1 BALLARD ROAD  
THOMPSON, CT 06227



1 GRIFFIN ROAD SOUTH  
BLOOMFIELD, CT 06002  
OFFICE: (860)-580-7174



3 SADDLEBROOK DRIVE PHONE: (860)-663-1697  
KILLINGWORTH, CT 06419 FAX: (860)-663-0935  
WWW.ALLPOINTSTECH.COM

NO	DATE	REVISION
0	07/11/16	CSC SUBMISSION
1	12/01/16	D&M PLAN - PHASE 3
2		
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4		
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## SITE INFORMATION

SITE NAME: "BARRETTE FARMS"  
PROJECT LOCATION: 1 BALLARD ROAD  
THOMPSON, CT 06277

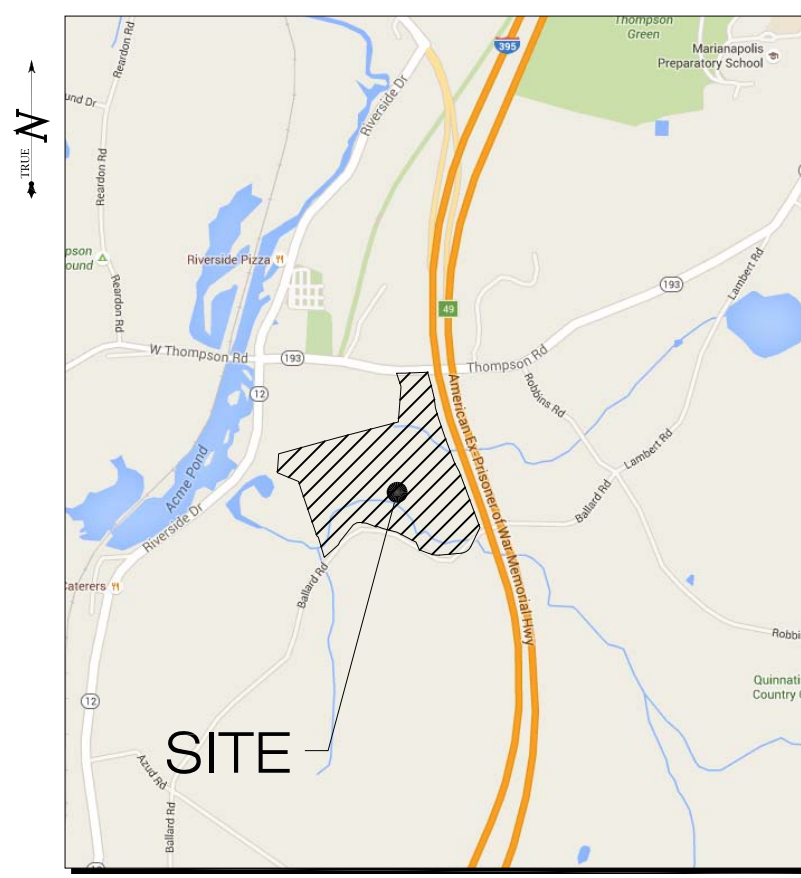
SITE TYPE/DESCRIPTION: ADD GROUND MOUNTED SOLAR PANEL ARRAYS W/  
ASSOCIATED GRAVEL ACCESS DRIVE & EQUIPMENT.  
ADD CHAIN LINK FENCE GATE & ELECTRIC  
INTERCONNECTION FROM NEW FACILITY TO EXIST.  
ELECTRICAL GRID.

PROPERTY OWNER: BARRETTE, BERNARD J & LUCILLE T  
129 ROBBINS ROAD  
THOMPSON, CT 06277

ENGINEER CONTACT: BRADLEY J. PARSONS  
(860) 663-1697 x208

LATITUDE: 41°56'39"N  
LONGITUDE: 71°53'03"W  
ELEVATION: 332± AMSL

ZONE: I-ZONE (INDUSTRIAL)  
FEMA FIRM DESIGNATION: PANEL #0901170014B - ZONE C  
TOTAL SITE ACREAGE: 49.26 ACRES  
TOTAL DISTURBED AREA: 14.14± ACRES



LOCATION MAP  
SCALE: 1"=1000'

## DESIGN PROFESSIONALS OF RECORD

PROF: BRADLEY J. PARSONS, P.E.  
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.  
ADD: 3 SADDLEBROOK DRIVE  
KILLINGWORTH, CT 06419

## NOTE:

## C-TECSOLAR "BARRETTE FARMS"

SITE 1 BALLARD ROAD  
ADDRESS: THOMPSON, CT

APT FILING NUMBER: CT481111

DRAWN BY: BJP

CHECKED BY: SMC

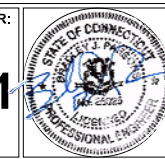
DATE: 07/11/16

## SHEET TITLE:

COVER SHEET & INDEX

## SHEET NUMBER:

CV-1





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BLOOMFIELD, CT 06002  
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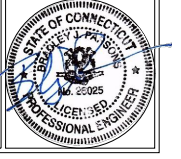
DATE: 07/11/16

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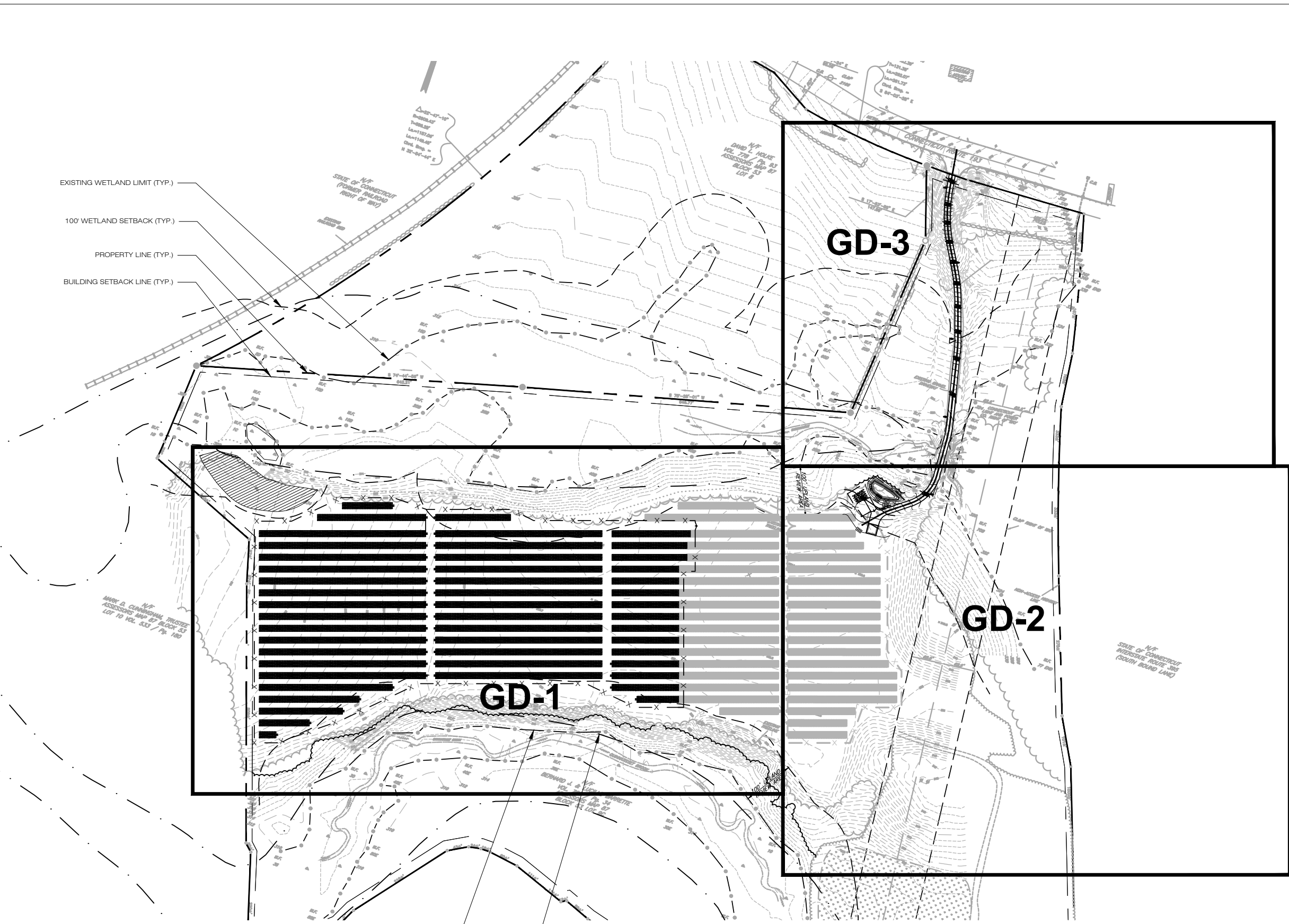
OVERALL  
GRADING & DRAINAGE  
PLAN

SHEET NUMBER:

GD-0

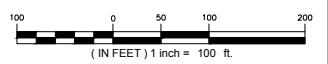


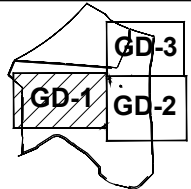
- EXISTING WETLAND LIMIT (TYP.)
- 100' WETLAND SETBACK (TYP.)
- PROPERTY LINE (TYP.)
- BUILDING SETBACK LINE (TYP.)



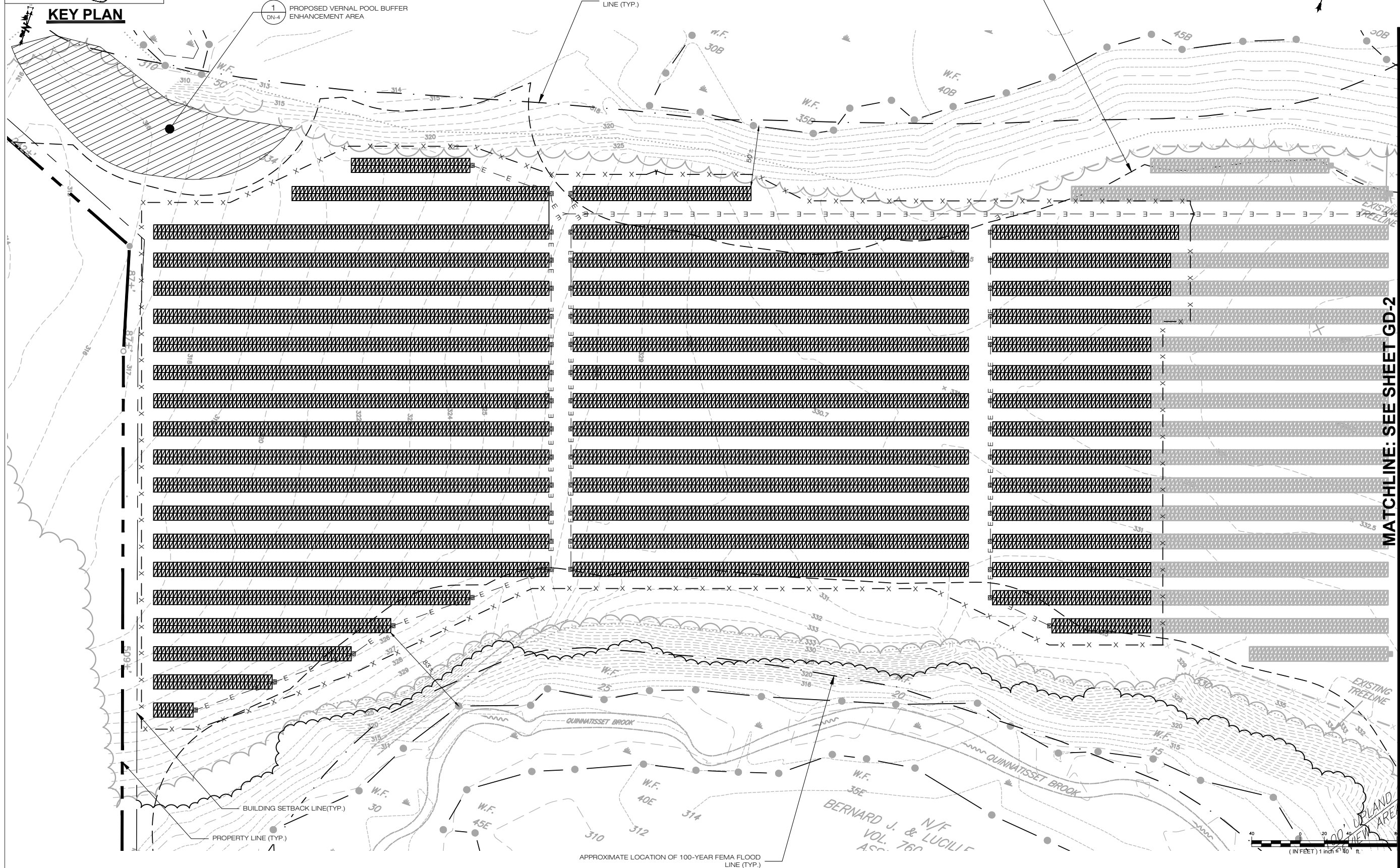
EXISTING WETLAND LIMIT (TYP.)

APPROXIMATE LOCATION OF 100-YEAR FEMA FLOOD LINE (TYP.)





**KEY PLAN**



**C-TECSOLAR**  
 1 GRIFFIN ROAD SOUTH  
 BLOOMFIELD, CT 06002  
 OFFICE: (860)-580-7174

**ALL-POINTS**  
 TECHNOLOGY CORPORATION  
 3 SADDLEBROOK DRIVE PHONE: (860)-663-1697  
 KILLINGWORTH, CT 06419 FAX: (860)-663-0935  
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 KILLINGWORTH, CT 06419

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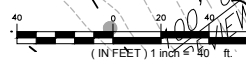
**C-TECSOLAR**  
**"BARRETTE FARMS"**  
 SITE 1 BALLARD ROAD  
 ADDRESS: THOMPSON, CT  
 APT FILING NUMBER: CT481111  
 DRAWN BY: BJP  
 CHECKED BY: SMC  
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SHEET TITLE:  
**GRADING & DRAINAGE PLAN**

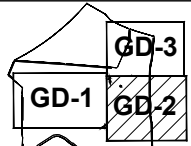
SHEET NUMBER:  
**GD-1**



MATCHLINE: SEE SHEET GD-2



BERNARD J. & LUCILLE  
 VOL. 760  
 ASS. 760



**KEY PLAN**

**MATCHLINE: SEE SHEET GD-3**

**MATCHLINE: SEE SHEET GD-1**



- 8 PROPOSED INFILTRATION BASIN  
DN-1  
BOTTOM ELEV. = 323.00  
TOP ELEV. = 327.00
- 2 PROPOSED 12' WIDE GRAVEL  
DN-1  
MAINTENANCE DRIVE (TYP.)

- 100' WETLAND SETBACK (TYP.)
- WETLAND LIMIT (TYP.)
- BUILDING SETBACK LINE (TYP.)
- NON-ACCESS HIGHWAY LINE (PROPERTY LINE)

N/F  
STATE OF CONNECTICUT  
INTERSTATE ROUTE 395  
(SOUTH BOUND LANE)



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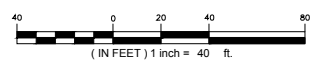
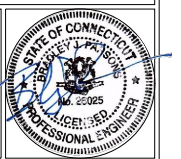
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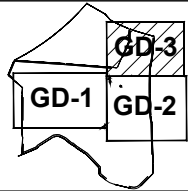
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 ADDRESS: THOMPSON, CT  
 APT FILING NUMBER: CT481111  
 DRAWN BY: BJP  
 CHECKED BY: SMC  
 DATE: 07/11/16

**SHEET TITLE:**  
 GRADING & DRAINAGE  
 PLAN

**SHEET NUMBER:**  
**GD-2**





**KEY PLAN**



**MATCHLINE: SEE SHEET GD-2**



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KILLINGWORTH, CT 06419

**NOTE:**

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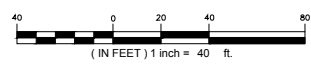
SITE 1 BALLARD ROAD  
ADDRESS: THOMPSON, CT  
APT FILING NUMBER: CT481111  
DRAWN BY: BJP  
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DATE: 07/11/16

**SHEET TITLE:**

**GRADING & DRAINAGE PLAN**

**SHEET NUMBER:**

**GD-3**





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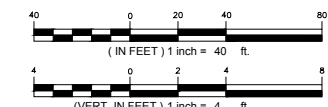
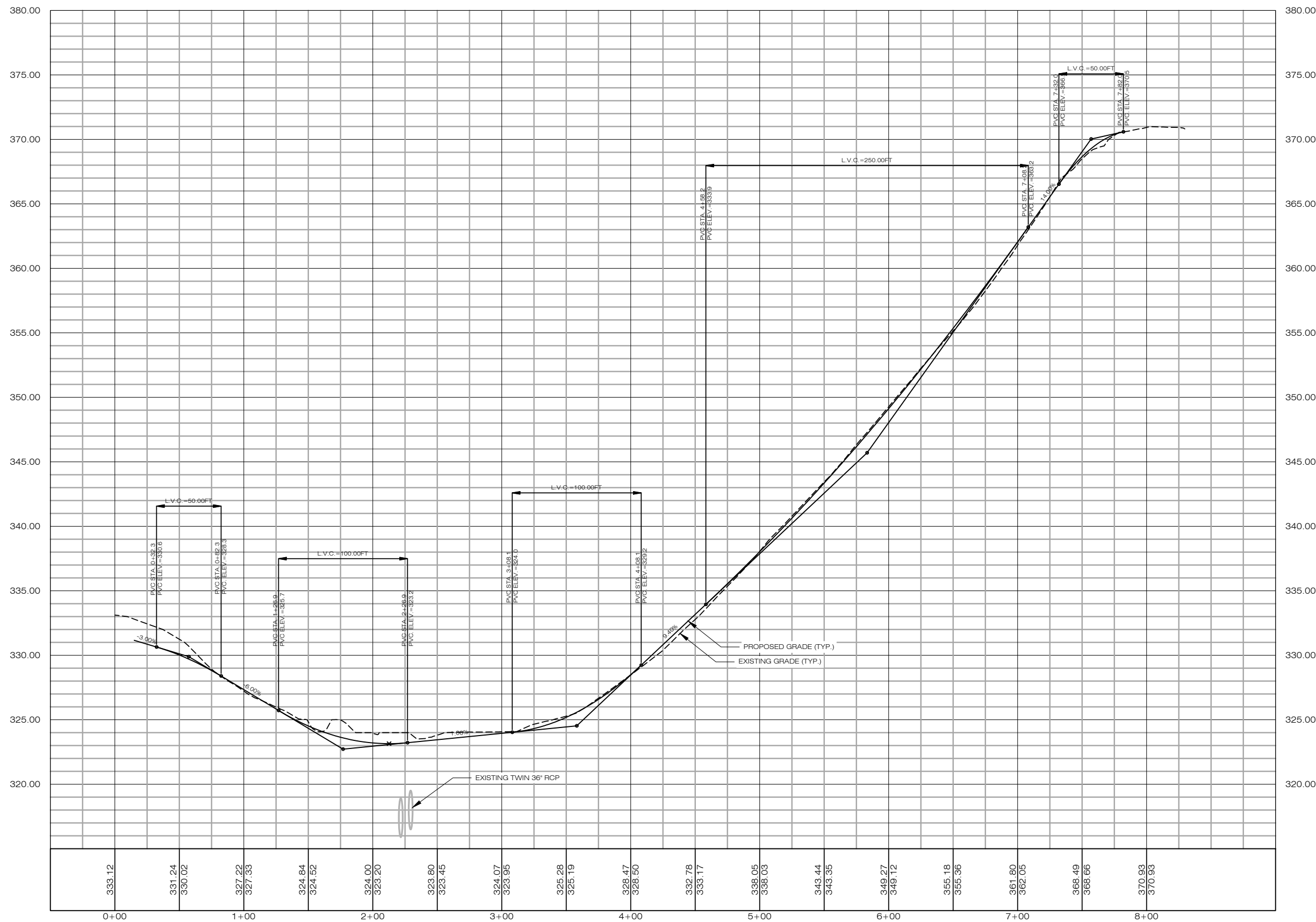
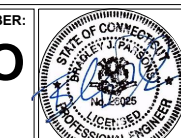
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SHEET TITLE:

ACCESS DRIVE  
PROFILE

SHEET NUMBER:

PRO  
-1



## ENVIRONMENTAL NOTES

WETLAND AND VERNAL POOL PROTECTION PLAN  
AS A RESULT OF THE PROJECT'S LOCATION IN THE VICINITY OF WETLAND RESOURCES AND VERNAL POOL HABITAT, THE FOLLOWING BEST MANAGEMENT PRACTICES ("BMPs") SHALL BE IMPLEMENTED BY THE CONTRACTOR TO AVOID UNINTENTIONAL IMPACTS TO PROXIMATE WETLAND RESOURCES OR MORTALITY TO VERNAL POOL HERPETOFAUNA (I.E., SPOTTED SALAMANDER, WOOD FROG, TURTLES, ETC.) DURING CONSTRUCTION ACTIVITIES. THE VERNAL POOL SPECIFIC BMPs 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]). BMPs ASSOCIATED WITH THE PROTECTION OF WETLANDS (INCLUDING SECTIONS 1A, 1C, 1D, 2A, 2D, 3A, 3B, 3C, 4B, 4C, 5A, AND 6A) WILL 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. 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 WETLAND RESOURCES AND ASSOCIATED HERPETOFAUNA PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONTACT DEAN GUSTAFSON, SENIOR ENVIRONMENTAL SCIENTIST AT APT, AT LEAST 5 BUSINESS DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING. MR. GUSTAFSON CAN BE REACHED BY PHONE AT (860) 864-9515 OR VIA EMAIL AT DGUSTAFSON@ALLPOINTSTECH.COM.

THE PROPOSED WETLAND AND VERNAL POOL PROTECTION PROGRAM CONSISTS OF SEVERAL COMPONENTS INCLUDING: INSTALLATION OF EROSION CONTROLS; PERIODIC INSPECTION AND MAINTENANCE OF ISOLATION STRUCTURES; HERPETOFAUNA SWEEPS; EDUCATION OF ALL CONTRACTORS AND SUB-CONTRACTORS PRIOR TO INITIATION OF WORK ON THE SITE; PROTECTIVE MEASURES; AND, REPORTING.

### 1. EROSION AND SEDIMENTATION CONTROLS

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. INSTALLATION OF EROSION AND SEDIMENTATION CONTROLS, REQUIRED FOR EROSION CONTROL COMPLIANCE AND CREATION OF A BARRIER TOO 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 TO BE USED ON SLOPES. 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. OFTIMES 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.

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

d. ALL SILT FENCING OR OTHER POTENTIAL BARRIERS TO SAFE HERPETOFAUNA MIGRATION SHALL BE REMOVED WITHIN 30 DAYS OF COMPLETION OF WORK AND PERMANENT STABILIZATION OF SITE SOILS SO THAT REPTILE AND AMPHIBIAN MOVEMENT BETWEEN UPLANDS AND WETLANDS IS NOT RESTRICTED.

### 2. 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; CONNECTICUT AND FEDERAL LISTING STATUS OF SPECIES THAT COULD BE ENCOUNTERED; TYPICAL SPECIES BEHAVIOR; AND PROPER PROCEDURES IF SPECIES ARE ENCOUNTERED. THE MEETING WILL FURTHER EMPHASIZE THE NON-AGGRESSIVE NATURE OF THESE SPECIES, THE ABSENCE OF NEED TO DESTROY SUCH ANIMALS AND THE NEED TO FOLLOW PROTECTIVE MEASURES AS DESCRIBED IN SECTION 4 BELOW. THE CONTRACTOR WILL DESIGNATE ONE OF ITS WORKERS AS THE "PROJECT MONITOR", WHO WILL RECEIVE MORE INTENSE TRAINING ON THE IDENTIFICATION AND PROTECTION OF HERPETOFAUNA.

b. THE CONTRACTOR WILL DESIGNATE A MEMBER OF ITS CREW AS THE PROJECT MONITOR TO BE RESPONSIBLE FOR THE PERIODIC "SWEEPS" FOR HERPETOFAUNA WITHIN THE CONSTRUCTION ZONE EACH MORNING, DURING AND ALL TRANSPORTATION OF VEHICLES ALONG THE ACCESS DRIVE, AND FOR ANY GROUND DISTURBANCE WORK. THIS INDIVIDUAL WILL RECEIVE MORE INTENSE TRAINING FROM APT ON THE IDENTIFICATION AND PROTECTION OF HERPETOFAUNA IN ORDER TO PERFORM SWEEPS DURING LARGE VEHICLE/EQUIPMENT MOVEMENTS. THIS SWEEP WILL INCLUDE AN ESCORT BY THE PROJECT MONITOR FOR LARGE VEHICLE/EQUIPMENT MOVEMENTS AND INCLUDE VISUAL INSPECTION OF THE WORK AREA FOR ANY HERPETOFAUNA ALONG THE EXISTING PAVED ACCESS DRIVE. ANY HERPETOFAUNA DISCOVERED WOULD BE TRANSLOCATED OUTSIDE THE WORK ZONE IN THE GENERAL DIRECTION THE ANIMAL WAS ORIENTED.

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

d. 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, THE POTENTIAL FOR ENCOUNTERING VARIOUS AMPHIBIANS AND REPTILES AND PRECAUTIONS TO BE TAKEN TO AVOID INJURY TO OR MORTALITY OF THESE ANIMALS.

### 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 PROJECTS 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. 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

- REFUELING OF VEHICLES OR MACHINERY SHALL OCCUR A MINIMUM OF 100 FEET FROM WETLANDS OR WATERCOURSES AND SHALL TAKE PLACE ON AN IMPERVIOUS PAD WITH SECONDARY CONTAINMENT DESIGNED TO CONTAIN FUELS.
- 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 OR WATERCOURSES.

#### ii. INITIAL SPILL RESPONSE PROCEDURES

- STOP OPERATIONS AND SHUT OFF EQUIPMENT.
- REMOVE ANY SOURCES OF SPARK OR FLAME.
- CONTAIN THE SOURCE OF THE SPILL.
- DETERMINE THE APPROXIMATE VOLUME OF THE SPILL.
- IDENTIFY THE LOCATION OF NATURAL FLOW PATHS TO PREVENT THE RELEASE OF THE SPILL TO SENSITIVE NEARBY WATERWAYS OR WETLANDS.
- ENSURE THAT FELLOW WORKERS ARE NOTIFIED OF THE SPILL.

#### iii. SPILL CLEAN UP & CONTAINMENT

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

#### iv. REPORTING

- COMPLETE AN INCIDENT REPORT.
- SUBMIT A COMPLETED INCIDENT REPORT TO THE CONNECTICUT SITING COUNCIL.

### 4. PROTECTIVE MEASURES

a. A THOROUGH COVER SEARCH OF THE CONSTRUCTION AREA WILL BE PERFORMED BY APT'S 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. APT'S ENVIRONMENTAL MONITOR WILL ALSO SWEEP THE EXISTING PAVED ACCESS DRIVE IN ADVANCE OF THE CONTRACTORS INITIAL MOBILIZATION OF EQUIPMENT AND MATERIALS TO THE SUBJECT PROPERTY. ANY HERPETOFAUNA DISCOVERED WOULD BE TRANSLOCATED OUTSIDE THE WORK ZONE IN THE GENERAL DIRECTION THE ANIMAL WAS ORIENTED. PERIODIC INSPECTIONS WILL BE PERFORMED BY APT'S ENVIRONMENTAL MONITOR THROUGHOUT THE DURATION OF THE CONSTRUCTION.

b. ANY STORMWATER MANAGEMENT FEATURES, PITS 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 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 AND PESTICIDE RESTRICTIONS

a. CONTRACTORS WILL AVOID THE USE OF HERBICIDES AND PESTICIDES AT THE FACILITY.

### 6. REPORTING

a. MONTHLY INSPECTION REPORTS (BRIEF NARRATIVE AND APPLICABLE PHOTOS) WILL BE SUBMITTED TO THE CONNECTICUT SITING COUNCIL FOR COMPLIANCE VERIFICATION. ANY OBSERVATIONS OF HERPETOFAUNA WILL BE INCLUDED IN THE REPORTS. ANY OBSERVATIONS OF RARE SPECIES WILL BE REPORTED TO THE CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION NATURAL DIVERSITY DATA BASE.

## VERNAL POOL BUFFER ENHANCEMENT PLANTING SCHEDULE

### Vernal Pool Buffer Enhancement Planting Schedule!

Quantity	Botanical Name	Common Name	Size	Spacing
<b>Trees</b>				
30	<i>Populus tremuloides</i>	Quaking Aspen	4-6'	15 ft on center
30	<i>Pinus strobus</i>	Eastern White Pine	4-6'	15 ft on center
<b>Shrubs</b>				
20	<i>Comptonia peregrina</i>	Sweet Fern	3-4'	10 ft on center
20	<i>Cornus racemosa</i>	Gray dogwood	3-4'	10 ft on center
20	<i>Photinia melanocarpa</i>	Black chokeberry	3-4'	10 ft on center
20	<i>Morella pensylvanica</i>	Bayberry	3-4'	10 ft on center
20	<i>Rhus typhina</i>	Staghorn Sumac	3-4'	10 ft on center

#### Notes:

- Vernal Pool Buffer Enhancement Area to be undersown with Ernst Conservation Seeds Showy Northeast Native Wildflower & Grass Mix - ERNMX-153, or approved equivalent. This seed mix provides a permanent cover of native grasses, forbs and wildflowers to provide both good erosion control and wildlife habitat value.
- Plantings to be placed in Vernal Pool Buffer Enhancement Area (hatched area) as shown on plan.

## VERNAL POOL BUFFER ENHANCEMENT AREA NOTES

THE VERNAL POOL BUFFER ENHANCEMENT PLAN PROPOSED IN THE NORTHWEST CORNER OF THE PROJECT SITE HAS BEEN DESIGNED TO ENHANCE THE TERRESTRIAL HABITAT LOCATED IN CLOSE PROXIMITY TO A VERNAL POOL. THE PROPOSED NATIVE PLANTINGS WILL SIGNIFICANTLY ENHANCE THE VERNAL POOL'S TERRESTRIAL HABITAT VALUE OF THIS BUFFER AREA BY PROVIDING WOODY TREE AND SHRUB COVER TO AN AREA CURRENTLY VOID OF WOODY VEGETATION. THE VERNAL POOL BUFFER ENHANCEMENT AREA WILL BE CONSTRUCTED PER THE FOLLOWING:

- ALL-POINTS TECHNOLOGY CORPORATION, P.C. ("APT") WILL SERVE AS THE ENVIRONMENTAL MONITOR FOR THIS PROJECT TO OBSERVE ALL PHASES OF THE VERNAL POOL BUFFER ENHANCEMENT PLAN (THE "PLAN"), INCLUDING APPLICATION OF TOPSOIL AND PLANTINGS, TO ENSURE THAT THE PLAN IS IMPLEMENTED PROPERLY. THE CONTRACTOR SHALL CONTACT DEAN GUSTAFSON, SENIOR WETLAND SCIENTIST AT APT, AT LEAST 5 BUSINESS DAYS PRIOR TO SCHEDULE A PRE-CONSTRUCTION MEETING. MR. GUSTAFSON CAN BE REACHED BY PHONE AT (860) 663-1697 EXT. 201 OR VIA EMAIL AT DGUSTAFSON@ALLPOINTSTECH.COM.
- PRIOR TO ANY EARTHWORK, EROSION CONTROLS (I.E., STRAW WATTLE) WILL BE INSTALLED ALONG THE NORTH SIDE OF THE VERNAL POOL BUFFER ENHANCEMENT AREA, WHICH IS LOCATED CLOSE TO WETLAND/VERNAL POOL RESOURCES.
- A MINIMUM OF 6 INCHES OF WEED FREE TOPSOIL WILL BE SPREAD ALONG THE VERNAL POOL BUFFER ENHANCEMENT AREA SINCE THIS AREA CURRENTLY LACKS ANY TOPSOIL.
- VERNAL POOL BUFFER ENHANCEMENT AREA PLANTINGS SHALL TAKE PLACE ONCE THE ABOVE LISTED TASKS HAVE BEEN COMPLETED. THE VERNAL POOL BUFFER ENHANCEMENT AREA WILL BE PLANTED WITH NATIVE TREES AND SHRUBS AS NOTED IN THE VERNAL POOL BUFFER PLANTING PLAN AND SCHEDULE AND UNDER SOWN WITH A NATIVE WILDLIFE/CONSERVATION SEED MIX AFTER THE GRADING IS COMPLETED. SOIL CONDITIONING ACTIVITIES, INCLUDING AMENDING PLANTING HOLES WITH WEED FREE TOPSOIL AND/OR COMPOST, WILL BE COMBINED WITH THE TREE AND SHRUB PLANTING PROCESS.
- PLANTINGS SHALL OCCUR EITHER DURING THE EARLY-MID SPRING OR FALL PLANTING SEASONS.
- THE PLANTING STOCK SPECIMENS SHALL BE INSPECTED BY THE ENVIRONMENTAL MONITOR FOR HEALTH, PEST, AND SUITABLE FOR USE WITHIN THE VERNAL POOL BUFFER ENHANCEMENT AREA. UNSUITABLE SPECIMENS THAT ARE REJECTED SHALL BE REPLACED BY THE CONTRACTOR WITH SUITABLE SPECIMENS. ANY PLANTING SUBSTITUTIONS SHALL BE APPROVED BY THE ENVIRONMENTAL MONITOR.
- ALL WOODY PLANT STOCK SHALL BE CONTAINER-GROWN OR BURLAP BALLED. PLANTING WITHIN THE VERNAL POOL BUFFER ENHANCEMENT AREA WILL CONFORM TO THE PLANS. ONLY PLANT MATERIALS NATIVE TO CONNECTICUT SHALL BE USED. SPECIES NOT SPECIFIED IN THE PLAN SHALL NOT BE USED WITHOUT WRITTEN APPROVAL FROM THE ENVIRONMENTAL MONITOR. INVASIVE PLANT SPECIES SHALL NOT BE USED IN THE VERNAL POOL BUFFER ENHANCEMENT AREA.
- ALL PLANT MATERIALS INSTALLED SHALL MEET OR EXCEED THE SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN. ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR TO REMAIN ALIVE AND HEALTHY FOR TWELVE (12) MONTHS PERIOD FROM THE DATE OF PLANTING.
- UPON COMPLETION OF PLANTING, THE VERNAL POOL BUFFER ENHANCEMENT AREA SHALL BE MULCHED WITH A 2 TO 3-INCH THICK LAYER OF LEAF LITTER OR OTHER NATURAL ORGANIC MATERIAL (E.G., STRAW) FREE OF WEED SEEDS AND INVASIVE SPECIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CAREFUL INSTALLATION, MAINTENANCE (INCLUDING WATERING, AS NECESSARY), AND ESTABLISHMENT OF THE PLANT MATERIAL IN THE VERNAL POOL BUFFER ENHANCEMENT AREA. A MAINTENANCE SCHEDULE FOR IRRIGATION (AS NECESSARY) SHALL BE ESTABLISHED BY THE CONTRACTOR.
- ALL PLANTINGS TO BE SPACED RANDOMLY IN ACCORDANCE WITH THE VERNAL POOL BUFFER ENHANCEMENT AREA TO SIMULATE NATURAL GROWTH PATTERNS. THE ENVIRONMENTAL MONITOR WILL ASSIST THE CONTRACTOR WITH SPACING OF TREES AND SHRUBS.
- THE EROSION CONTROL BARRIERS SHALL BE DISASSEMBLED AND PROPERLY DISPOSED OF FOLLOWING PLANTING OF THE VERNAL POOL BUFFER ENHANCEMENT AREA AND PERMANENT STABILIZATION OF EXPOSED SOILS WITH VEGETATION. SEDIMENT COLLECTED BY THESE DEVICES WILL BE REMOVED AND DISPOSED OF IN A MANNER THAT PREVENTS EROSION AND TRANSPORT TO NEARBY VERNAL POOL/WETLAND RESOURCES.

## POST CONSTRUCTION MONITORING

- THE VERNAL POOL BUFFER ENHANCEMENT AREA WILL BE MONITORED BY THE ENVIRONMENTAL MONITOR DURING PLANTING ACTIVITIES AND FOR A PERIOD OF TWO GROWING SEASONS FOLLOWING PLANTING.
- THE ENVIRONMENTAL MONITOR WITH EXPERIENCE IN VERNAL POOL BUFFER ENHANCEMENT WILL PERFORM POST CONSTRUCTION MONITORING OF THE VERNAL POOL BUFFER ENHANCEMENT AREA. DEAN GUSTAFSON, SENIOR WETLAND SCIENTIST AT ALL-POINTS TECHNOLOGY CORPORATION, P.C. ("APT"), WILL SERVE AS THE ENVIRONMENTAL MONITOR FOR THIS PROJECT TO ENSURE COMPLIANCE WITH ENHANCEMENT OF THE VERNAL POOL TERRESTRIAL AREA. MR. GUSTAFSON CAN BE REACHED BY PHONE AT (860) 663-1697 EXT. 201 OR VIA EMAIL AT DGUSTAFSON@ALLPOINTSTECH.COM.
- POST CONSTRUCTION INSPECTIONS OF THE VERNAL POOL BUFFER ENHANCEMENT AREA WILL BE PERFORMED BY THE ENVIRONMENTAL MONITOR TWICE EACH YEAR GENERALLY AS FOLLOWS: LATE SPRING/EARLY SUMMER AND LATE SUMMER/EARLY FALL, FOR A PERIOD OF TWO (2) YEARS. THE VERNAL POOL BUFFER ENHANCEMENT AREA WILL BE INSPECTED TO ASSESS THE GENERAL HEALTH OF PLANTINGS, SOIL STABILIZATION AND PRESENCE OF INVASIVE PLANTS. INVASIVE PLANTS WILL INCLUDE SPECIES AS DETERMINED BY THE CONNECTICUT INVASIVE PLANTS COUNCIL IN ACCORDANCE WITH CONNECTICUT GENERAL STATUTES §22A-381A THROUGH §22A-381D WITH A FOCUS ON COMMON WOODY INVASIVE SHRUBS WHICH ARE IN THE PROJECTS VICINITY.
- ANNUAL SUMMARY MONITORING REPORTS WILL BE SUBMITTED BY THE ENVIRONMENTAL MONITOR TO THE CONNECTICUT SITING COUNCIL NO LATER THAN DECEMBER 31ST FOR EACH OF THE TWO MONITORING YEARS. THE REPORTS WILL PROVIDE DETAILS ON THE THREE SUCCESS STANDARDS DESCRIBED BELOW AND IF ANY CORRECTIVE MEASURES (I.E., REPLACEMENT OF PLANTINGS, INVASIVE PLANT TREATMENT, ETC.) WERE PERFORMED.
- THE VERNAL POOL BUFFER ENHANCEMENT AREA WILL BE ASSESS USING THREE SUCCESS STANDARDS, AS DESCRIBED AS FOLLOWS: 1) AT LEAST 80% OF THE AERIAL SURFACE OF THE VERNAL POOL BUFFER ENHANCEMENT AREA SHALL BE ESTABLISHED WITH NATIVE SHRUB AND TREE VEGETATION AFTER THE SECOND GROWING SEASON FOLLOWING THE DATE OF PLANTINGS; 2) CONTROL OF INVASIVE WOODY SPECIES WITH LESS THAN 10% TOTAL AERIAL COVERAGE BY END OF MONITORING PERIOD; AND, 3) ALL SLOPES AND SOILS WITHIN AND ADJACENT TO THE VERNAL POOL BUFFER ENHANCEMENT AREA ARE PERMANENTLY STABILIZED WITH VEGETATION AND ANY EROSION CONTROL BARRIERS REMOVED NO LATER THAN THE END OF THE SECOND GROWING SEASON.
- SHOULD THE VERNAL POOL BUFFER ENHANCEMENT AREA NOT SATISFY THE THREE SUCCESS STANDARDS IDENTIFIED ABOVE AFTER THE SECOND GROWING SEASON, MONITORING SHALL CONTINUE TO UNTIL SUCCESS THESE STANDARDS HAVE BEEN ATTAINED.
- THE VERNAL POOL BUFFER ENHANCEMENT PLAN AS SET FORTH HEREIN WILL NOT BE CONSIDERED FULFILLED UNTIL MITIGATION SUCCESS HAS BEEN DEMONSTRATED THROUGH ATTAINMENT OF THE THREE (3) SUCCESS STANDARDS AND WRITTEN VERIFICATION FROM THE CONNECTICUT SITING COUNCIL HAS BEEN RECEIVED.



## VERNAL POOL BUFFER ENHANCEMENT

SCALE: N.T.S.



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3 SADDLEBROOK DRIVE PHONE: (860)-663-1697  
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### NO DATE REVISION

0	07/11/16	CSC SUBMISSION
1	12/01/16	D&M PLAN SUBMISSION
2		
3		
4		
5		
6		

### DESIGN PROFESSIONALS OF RECORD

PROF: BRADLEY J. PARSONS P.E.  
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.  
ADD: 3 SADDLEBROOK DRIVE  
KILLINGWORTH, CT 06419

### NOTE:

### C-TECSOLAR "BARRETTE FARMS"

SITE 1 BALLARD ROAD

ADDRESS: THOMPSON, CT

APT FILING NUMBER: CT481111

DRAWN BY: BJP

CHECKED BY: SMC

DATE: 07/11/16

### SHEET TITLE:

### ENVIRONMENTAL NOTES & SPECIFICATIONS

SHEET NUMBER:

DN-4

