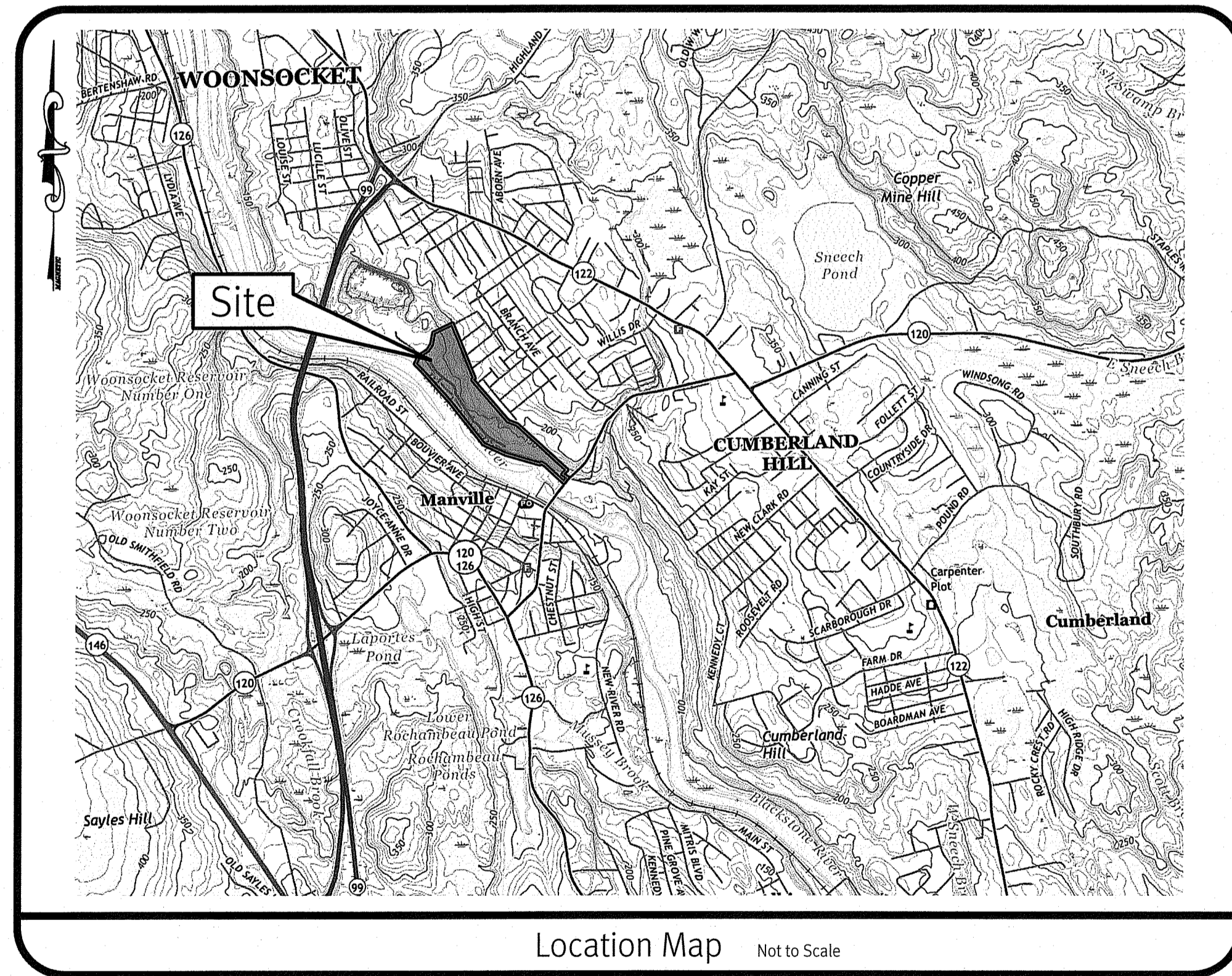


Design Development Plans

Cumberland Quarry Solar

6 Manville Hill Road
 Cumberland, Rhode Island
 Assessor's Plat 53 Lot 370 & 1603



Sheet Index

1. Cover Sheet
2. Aerial & 1/2 Mile USGS Map
3. General Notes & Legend
4. Boundary Survey
5. Overall Site Plan
6. Soil Erosion & Sediment Control Plan
7. Grading & Utilities Plan - 1
8. Grading & Utilities Plan - 2
9. Detail Sheet

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED JUN 25 2020 FILE # 20-0018
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

APR 30 2020

DIPrete Engineering
 Two Stafford Court Cranston, RI 02920
 tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
 Boston • Providence • Newport

KEVIN DEMERS

 REGISTERED PROFESSIONAL ENGINEER
 CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'issued for construction' and signed by a Diprete Engineering representative.
 The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By
5	01/27/2020	RI/SEA Response to Comments	K.I.D.
4	01/24/2020	Final Construction Set	K.I.D.
3	01/22/2020	Final Construction Review	K.I.D.
2	01/14/2020	Final Construction Submission	K.I.D.
1	01/14/2020	Preliminary Submission	K.I.D.
0	01/14/2020	Design Development Plans	K.I.D.
Drawn By:	M.L.D.	Description	Design By: K.I.D.

Cover
Cumberland Quarry Solar
 Cumberland, Rhode Island
 Client: **Ameresco, Inc.**
 111 Spleen Street, Suite 44, Framingham, MA 01701

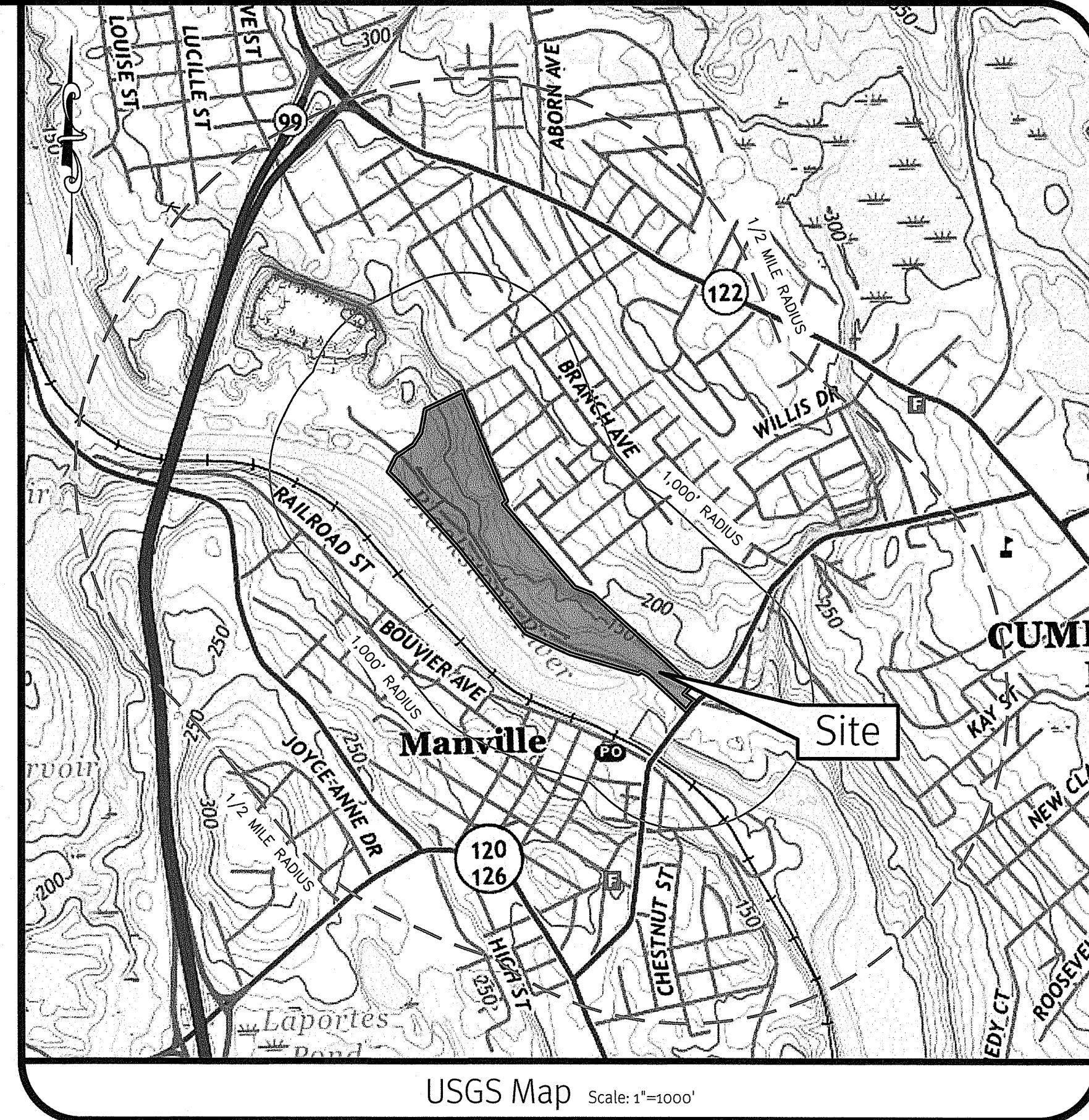


Photo obtained from Nearmap dated October 16, 2018.

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED 1 JUN 25 2020 FILE # 20-008
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Scale: 1"=150'
 0 75' 150' 300'

APR 30 2020

DiPrete Engineering
 Two Stafford Court Cranston, RI 02920
 Tel. 401-943-1000 fax. 401-464-6006 www.diprete-eng.com
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No.	Date	Description	By:
1	07/27/2019	ISSUE RESPONSE TO COMMENTS	K.I.D.
2	07/27/2019	COORDINATION SET	K.I.D.
3	07/25/2019	INTERCONNECTION REVIEW	K.I.D.
4	05/13/2019	PRELIMINARY SUBMISSION	K.I.D.
5	05/13/2019	DESIGN DEVELOPMENT PHASE	K.I.D.
6	04/07/2019	DESIGN	By:

Drawn By: M.I.D. Design By: K.I.D.

**Aerial & 1/2 Mile USGS Map
 Cumberland Quarry Solar**
 Cumberland, Rhode Island
 Client: Ameresco, Inc.
 111 Spleen Street, Suite 41, Framingham, MA 01701
 SHEET 2 OF 9

General Notes:

- THE SITE IS LOCATED ON THE TOWN OF CUMBERLAND ASSESSOR'S PLAT 53 LOTS 370 AND 1603.
- THE SITE IS APPROXIMATELY 36.9± ACRES AND IS ZONED I-2 (GENERAL INDUSTRIAL).
- THE OWNER OF AP 53 LOTS 370, 1603 IS: DOUGLAS VAUGHAN PROPERTIES, LLC
1036 GREAT ROAD
LINCOLN, RI 02865
- THIS SITE IS LOCATED IN FEMA FLOOD ZONES AE, X (SHADED), AND X (UNSHADED), AS WELL AS WITHIN A FLOODWAY AREA IN ZONE AE. REFERENCE FEMA FLOOD INSURANCE RATE MAP 44007C01766, MAP REVISED MARCH 2, 2009. (FLOOD PLAN DESCRIPTIONS SHOWN BELOW). ALL 100-YEAR FLOODPLAINS ARE LOCATED OUTSIDE THE PROJECT LIMITS.

ZONE AE - THIS SITE IS LOCATED IN FEMA FLOOD ZONE AE. ZONE AE ARE SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD. BASE FLOOD ELEVATIONS HAVE BEEN DETERMINED.

ZONE AE FLOODWAY AREA- THIS SITE IS LOCATED IN A FEMA FLOODWAY AREA IN ZONE AE. THE FLOODWAY IS THE CHANNEL OF A STREAM PLUS ANY ADJACENT FLOODPLAIN AREAS THAT MUST BE KEPT FREE OF ENCROACHMENT SO THAT THE 1% ANNUAL CHANCE FLOOD CAN BE CARRIED WITHOUT SUBSTANTIAL INCREASES IN FLOOD HEIGHTS.

ZONE X (UNSHADED) - THIS SITE IS LOCATED IN FEMA FLOOD ZONE X. ZONE X ARE AREAS WHERE THERE IS MINIMAL FLOODING.

ZONE X (SHADED) - THIS SITE IS LOCATED IN FEMA FLOOD ZONE X. ZONE X ARE AREAS OF 0.2% ANNUAL CHANCE OF FLOOD; AREAS OF 1% ANNUAL CHANCE OF FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.
- THE BOUNDARY LINE AS SHOWN ON THIS PLAN DEPICTS THE RESULTS OF A CLASS I BOUNDARY RETRACEMENT SURVEY AS PERFORMED BY DIPRETE ENGINEERING ASSOCIATES, INC. THIS PLAN IS NOT TO BE CONSTRUED AS A CLASS I BOUNDARY RETRACEMENT SURVEY PLAN AND IS NOT SUITABLE FOR RECORDING AS A CLASS I STANDARD SURVEY PLAN.
- ALL WORK PERFORMED HEREIN IS TO BE GOVERNED BY CURRENT EDITIONS OF THE RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, TOWN OF CUMBERLAND STANDARD SPECIFICATIONS AND DETAILS AND SPECIFICATIONS INCLUDED AS PART OF THE DRAWINGS. IN AREAS OF CONFLICT BETWEEN THE DIFFERENT SPECIFICATIONS, THE DESIGN PLANS AND PROJECT SPECIFICATIONS WILL TAKE PRECEDENCE OVER THE GENERAL SPECIFICATIONS AND THE DESIGN ENGINEER WILL INTERPRET THE CONSTRUCTION REQUIREMENT. THE CONTRACTOR IS ADVISED TO SUBMIT A REQUEST FOR INFORMATION (RFI) FOR ANY AREAS OF CONFLICT BEFORE COMMITTING TO CONSTRUCTION.
- THE SITE IS WITHIN A:
GROUNDWATER RECHARGE AREA (RIDEM)
COMMUNITY WELLHEAD PROTECTION AREA (RIDEM)
HISTORICAL DISTRICT (RIDEM)
- THE SITE IS NOT WITHIN A:
NATURAL HERITAGE AREA (RIDEM)
LOCAL CONSERVATION AREA (TOWN)
HISTORICAL CEMETERY (RIDEM)
- THE FOLLOWING DOCUMENTS ARE CONSIDERED PART OF THE PROJECT PLANS AND THE CONTRACTOR/ OWNER MUST MAINTAIN THESE DOCUMENTS AS PART OF A FULL PLAN SET:
 - SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC). THE SESC CONTAINS THE FOLLOWING:
 - EROSION CONTROL MEASURES
 - SHORT TERM MAINTENANCE
 - ESTABLISHMENT OF VEGETATIVE COVER
 - CONSTRUCTION POLLUTION PREVENTION
 - SEQUENCE OF CONSTRUCTION
 - OPERATION AND MAINTENANCE PLAN (O&M). THE O&M CONTAINS:
 - LONG TERM MAINTENANCE
 - LONG TERM POLLUTION PREVENTION
- THIS PLAN SET REFERENCES RIDOT STANDARD DETAILS (DESIGNATED AS RIDOT STD X.X.X.). RIDOT STANDARD DETAILS ARE AVAILABLE FROM RIDOT AND ONLINE AT: [HTTP://WWW.DOT.RI.GOV/BUSINESS/CONTRACTORSANDCONSULTANTS.PHP](http://www.dot.ri.gov/business/contractorsandconsultants.php).
- THE SITE DOES NOT REQUIRE SEWER OR WATER.
- THE DRAINAGE SYSTEM MEETS THE TOWN OF CUMBERLAND SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. BASED ON THE CONSTRUCTION METHOD OF THE SOLAR RACKING SYSTEM, A NEGLIGIBLE AMOUNT OF IMPERVIOUS AREA IS PROPOSED. GROUND COVER WILL ALSO BE IMPROVED VIA LOAM AND SEED OF DISTURBED GRAVEL AREAS AS SHOWN. THEREFORE NO PROPOSED PERMANENT STORMWATER CONTROLS ARE REQUIRED. THE STORMWATER MANAGEMENT SYSTEM MEETS THE RIDEM BEST MANAGEMENT PRACTICES.
- THE SITE IS PROPOSED TO BE BUILT IN 1 PHASE.
- SOIL EVALUATIONS WERE COMPLETED BY DIPRETE ENGINEERING ON MARCH 1, 2019.
- ANY PROPRIETARY PRODUCTS REFERENCED IN THIS PLAN SET ARE REPRESENTATIVE OF THE MINIMUM DESIGN REQUIREMENTS FOR THE PURPOSE IT PROPOSES TO SERVE. ALTERNATIVES TO ANY PROPRIETARY PRODUCT MAY BE SUBMITTED TO THE ENGINEER OF RECORD FOR CONSIDERATION, WHICH MUST BE ACCOMPANIED BY APPROPRIATE SPECIFICATION SHEETS/ DESIGN CALCULATIONS THAT DEMONSTRATE THE ALTERNATIVE(S) MEET THE MINIMUM DESIGN PARAMETERS OF THE PRODUCT SHOWN ON THE PLANS. NO ALTERNATIVES MAY BE USED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
- THERE ARE NO WELLS WITHIN 400' OF THE PROPOSED SOLAR DEVELOPMENT AREA.

Soil Erosion and Sedimentation Control Notes:

- THE CONTRACTOR IS RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENT CONTROL ON SITE WHICH MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS AND AUTHORITY HAVING JURISDICTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER, THE DIRECTOR OF PUBLIC WORKS, THE TOWN ENGINEER, AND RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
- ALL EROSION CONTROL, TEMPORARY SWALES, TEMPORARY SEDIMENT TRAPS, TEMPORARY SEDIMENTATION PONDS, ETC. TO BE INSTALLED PER THE RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL LATEST EDITION AND THE SOIL EROSION SEDIMENTATION CONTROL PLAN (SESC).
- TEMPORARY SWALES ARE TO BE USED TO CONTROL RUNOFF DURING CONSTRUCTION OF THE PROPOSED ROADWAY. TEMPORARY SWALES TO BE VEGETATED AFTER CONSTRUCTION. EROSION CONTROL MATS ARE TO BE INSTALLED, IF NECESSARY, TO PREVENT EROSION AND SUPPORT VEGETATION. AFTER CONSTRUCTION IS COMPLETE AND TRIBUTARY AREAS TO THE SWALES HAVE BEEN STABILIZED, THE TEMPORARY SWALES ARE TO BE CLEARED AND FINAL DESIGN, INCLUDING INSTALLATION OF THE GRASS SWALE TO BE PER THE DESIGN PLANS.
- ONCE THE SEDIMENT TRAPS ARE NO LONGER REQUIRED AND ALL TRIBUTARY AREAS HAVE BEEN STABILIZED, THE TEMPORARY SEDIMENTATION BASIN TO BE CLEARED AND BROUGHT TO FINAL DESIGN GRADES.
- INLET PROTECTION IS TO BE INSTALLED ON ALL CATCH BASINS ONCE CONSTRUCTED.
- FOR SEQUENCE OF CONSTRUCTION, PROJECT PHASING AND CONSTRUCTION PHASING SEE SESC PLAN.
- CONTRACTOR MAY MODIFY SEQUENCE OF CONSTRUCTION WITH APPROVAL FROM DESIGN ENGINEER AND OWNER.
- IF CONCRETE TRUCKS ARE WASHED OUT ON SITE, ALL WASHOUT MUST BE COMPLETED IN THE DESIGNATED CONCRETE WASHOUT AREA.

Traffic Notes:

- ALL TRAFFIC CONTROL MUST CONFORM TO THE MUTCD CONTROL DEVICES CURRENT EDITION.
- DURING CONSTRUCTION, TRAFFIC CONES ARE TO BE USED FOR SEPARATION OF ACTIVE TRAFFIC FROM WORK ZONE PER MUTCD REQUIREMENTS.
- DURING CONSTRUCTION FLAGGERS MUST BE EMPLOYED TO ENSURE SAFETY FOR INTERACTION OF CONSTRUCTION VEHICLES AND ACTIVE TRAFFIC.
- ALL SIGNS, FLAGGERS, TRAFFIC CONTROL DEVICES, AND TEMPORARY TRAFFIC ZONE ACTIVITIES MUST MEET THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL (MUTCD) LATEST EDITION AND SUBSEQUENT ADDENDA.
- TEMPORARY CONSTRUCTION SIGNS MUST BE MOUNTED ON RIDOT APPROVED SUPPORTS AND MUST BE REMOVED OR COVERED WHEN NOT APPLICABLE.

Soil Information:

(REFERENCE: USDA NATURAL RESOURCES CONSERVATION SERVICE)

SOIL NAME	DESCRIPTION
AfB	AGAWAM FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES
CaD	CANTON-CHARLTON-ROCK OUTCROP COMPLEX, 15 TO 35 PERCENT
HkC	HINCKLEY GRAVELLY SANDY LOAM, ROLLING
Pg	PITS, GRAVEL
Ru	RUMNEY FINE SANDY LOAM
UD	UDORTHERTS-URBAN LAND COMPLEX
WhB	WOODBRIIDGE FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES

Grading and Utility Notes:

- CONSTRUCTION TO COMMENCE SPRING 2020 OR UPON RECEIPT OF ALL NECESSARY APPROVALS.
- THE CONTRACTOR MUST COORDINATE WITH ALL OF THE APPROPRIATE UTILITY COMPANIES FOR AGREEMENTS TO SERVICE THE PROPOSED BUILDING. THIS MUST BE DONE PRIOR TO CONSTRUCTION. NO REPRESENTATIONS ARE MADE BY DIPRETE ENGINEERING THAT UTILITY SERVICE IS AVAILABLE.
- THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING FINISH GRADING AND DRAINAGE AROUND THE BUILDING TO ENSURE SURFACE WATER AND/OR GROUNDWATER ARE DIRECTED AWAY FROM THE STRUCTURE.
- PRIOR TO START OF CONSTRUCTION, CONTRACTOR MUST VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES. CONTRACTOR MUST NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- ALL PROPOSED UNDERGROUND UTILITIES SERVING THE SITE AND BUILDINGS TO BE COORDINATED WITH OWNER, SOLAR ENGINEER, AND DESIGN ENGINEER PRIOR TO INSTALLATION.
- ALL CUT AND FILL AREAS ARE TO BE DONE UNDER THE DIRECTION OF A PROFESSIONAL GEOTECHNICAL ENGINEER WITH TESTING AND CERTIFICATION TO BE PROVIDED TO THE APPLICANT AT THE COMPLETION OF THE PROJECT. DIPRETE ENGINEERING IS NOT PROVIDING THE FILL SPECIFICATION, GEOTECHNICAL ENGINEERING, STRUCTURAL ENGINEERING SERVICES, OR SUPERVISION AS PART OF THESE DRAWINGS.
- NO STOCKPILING OF MATERIAL TO BE LOCATED IN THE RIGHT OF WAY AND NO OPEN TRENCHES ARE TO BE LEFT OVERNIGHT.
- ALL LOAM IN DISTURBED AREAS TO BE STOCKPILED FOR FUTURE USE.
- ALL EXCESS SOIL, TREES, ROCKS, BOULDERS, AND OTHER REFUSE, MUST BE DISCARDED OFF SITE IN AN ACCEPTABLE MANNER AT AN APPROVED LOCATION. STUMPS MUST BE GROUND ON SITE OR REMOVED.
- NO STUMP DUMPS ARE PROPOSED ON SITE.

Abbreviations Legend

ADA	AMERICANS WITH DISABILITY ACT	OHW	OVERHEAD WIRE
AHJ	AUTHORITY HAVING JURISDICTION	PE	POLYETHYLENE
AP	ASSESSOR'S PLAT	P	PROPERTY LINE
BC	BOTTOM OF CURB	PR	PROPOSED
BT	BOTTOM OF TESTHOLE	PVC	POLYVINYL CHLORIDE
BIT	BITUMINOUS (BERM)	R	RADIUS
BIO	BIORETENTION	R&D	REMOVE AND DISPOSE
BS	BASEMENT SLAB ELEVATION	RCP	REINFORCED CONCRETE PIPE
BW	FINISHED GRADE AT BOTTOM OF WALL	RIBB	RHODE ISLAND
CB	CATCH BASIN	RL	ROOF LEADER
(C)	CALCULATED	ROW	RIGHT OF WAY
CL	CENTERLINE	S	SLOPE
(CA)	CHORD ANGLE	SD	SUBDRAIN
CLDIP	CONCRETE LINED DUCTILE IRON PIPE	SED	SEDIMENT FOREBAY
CO	CLEAN OUT	SF	SQUARE FOOT
CONC	CONCRETE	SFL	STATE FREEWAY LINE
(D)	DEED	SFM	SEWER FORCE MAIN
DCB	DOUBLE CATCH BASIN	SG	SLAB ON GRADE ELEVATION
DI	DROP INLET	SHL	STATE HIGHWAY LINE
DMH	DRAINAGE MANHOLE	SMH	SEWER MANHOLE
DP	DETENTION POND	SNDP	SAND FILTER
ELEV	ELEVATION	SS	SIDE SLOPE
EOP	EDGE OF PAVEMENT	STA	STATION
ESC	EROSION AND SEDIMENT CONTROL	TC	TOP OF CURB
EX	EXISTING	TD	TRENCH DRAIN
FES	FLARED END SECTION	TF	TOP OF FOUNDATION
FFE	FINISH FLOOR ELEVATION	TRANS	TRANSITION
GS	GARAGE SLAB ELEVATION	TW	TOP OF WALL (FINISHED)
GW	GROUND WATER TABLE		GRADE AT TOP OF WALL
HW	HEADWALL	TYP	TYPICAL
HC	HIGH CAPACITY CATCH BASIN GRATE	UDS	UNDERGROUND
HDPE	HIGH DENSITY POLYETHYLENE	UIS	UNDERGROUND
ID	INLINE DRAIN	UP	UTILITY POLE
INV	INVERT	WQ	WATER QUALITY
IP	INFILTRATION POND		
LF	LINEAR FEET		
LOD	LIMIT OF DISTURBANCE		
LP	LIGHT POLE		
(M)	MEASURED		
N/F	NOW OR FORMERLY		

Existing Legend

(AS SHOWN ON PROPOSED PLANS)
NOT ALL ITEMS SHOWN WILL APPEAR ON PLANS

	PROPERTY LINE		NAIL FOUND/SET
	ASSESSORS LINE		DRILL HOLE FOUND/SET
	BUILDING		BOUND FOUND/SET
	BRUSHLINE		SIGN
	TREELINE		BOLLARD
	GUARDRAIL		SOIL EVALUATION
	FENCE		CATCH BASIN
	DIRT PATH		DOUBLE CATCH BASIN
	STONE WALL		DRAINAGE MANHOLE
	MINOR CONTOUR LINE		FLARED END SECTION
	MAJOR CONTOUR LINE		GUY POLE
	WATER LINE		ELECTRIC MANHOLE
	SEWER LINE		UTILITY/POWER POLE
	SEWER FORCE MAIN		LIGHTPOST
	GAS LINE		SEWER/SEPTIC MANHOLE
	ELECTRIC LINE		SEWER VALVE
	OVERHEAD WIRES		CLEANOUT
	DRAINAGE LINE		HYDRANT
	SOILS LINES		IRRIGATION VALVE
	50' PERIMETER WETLAND		WATER VALVE
	100' RIVERBANK WETLAND		WELL
	200' RIVERBANK WETLAND		MONITORING WELL
	FEMA BOUNDARY		UNKNOWN MANHOLE
	RIVER		GAS VALVE
	WETLAND LINE & FLAG		BENCH MARK
	STATE HIGHWAY LINE		STREAM FLOW DIRECTION
	STATE FREEWAY LINE		

Proposed Legend

NOT ALL ITEMS SHOWN WILL APPEAR ON PLANS

	PROPERTY LINE		DRAINAGE LINE
	BUILDING SETBACKS		PERFORATED SUBDRAIN
	CHAINLINK FENCE		SWALE
	RETAINING WALL		SEWER FORCE MAIN
	MINOR CONTOUR LINE		GAS LINE
	MAJOR CONTOUR LINE		WATER LINE
	SPOT ELEVATION		HYDRANT ASSEMBLY
	EDGE OF PAVEMENT		WATER SHUT OFF
	BITUMINOUS BERM (RIDOT STD 7.5.1)		WATER VALVE
	CONCRETE CURB (RIDOT STD 7.1.0)		THRUST BLOCK
	BUILDING FOOTPRINT		SEWER LINE
	BUILDING OVERHANG		OVERHEAD WIRE
	ASPHALT PAVEMENT		ELECTRIC, TELEPHONE, CABLE LINE
	HEAVY DUTY ASPHALT PAVEMENT		LIMIT OF DISTURBANCE/ LIMIT OF CLEARING
	HEAVY DUTY CONCRETE		SEDIMENTATION BARRIER, SILT FENCE (RIDOT STD 9.2.0), COMPOST SOCK OR APPROVED EQUAL
	CONCRETE		SLOPES STEEPER THAN 3:1 (2:1 OR 1:1 SLOPES)
	ASPHALT SIDEWALK		UNDERGROUND INFILTRATION OUTLINE
	PROPOSED LOAM & SEED AREAS		POND ACCESS
	SAWCUT LINE		RIP RAP
	SIGN (RIDOT STD 24.6.2 AS APPLICABLE)		SAND FILTER
	SINGLE LIGHT		BIO RETENTION
	DOUBLE LIGHT		CATCH BASIN
	OVERHANGING LIGHT		DOUBLE CATCH BASIN
	ACCESSIBLE PARKING SPACE SYMBOLS		MANHOLE
	BUILDING INGRESS/EGRESS		FLARED END SECTION
			HEAD WALL

Diprete Engineering
Two Stafford Court, Cranston, RI 02920
Tel: 401-943-1000 Fax: 401-641-0606 www.diprete-eng.com

KEVIN DEMERS
REGISTERED PROFESSIONAL ENGINEER CIVIL

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No.	Date	Description	By:	Design By: K.L.D.
1	11/21/2019	ISSUE FOR PERMITS TO COMMENTS	K.L.D.	
2	1/24/2020	COORDINATION SET	K.L.D.	
3	11/05/2019	INTERCOMMISSION REVIEW	K.L.D.	
4	05/21/2019	PERMITS SUBMISSION	K.L.D.	
5	05/21/2019	PERMITS SUBMISSION	K.L.D.	
6	05/19/2019	DESIGN DEVELOPMENT PLANS	K.L.D.	

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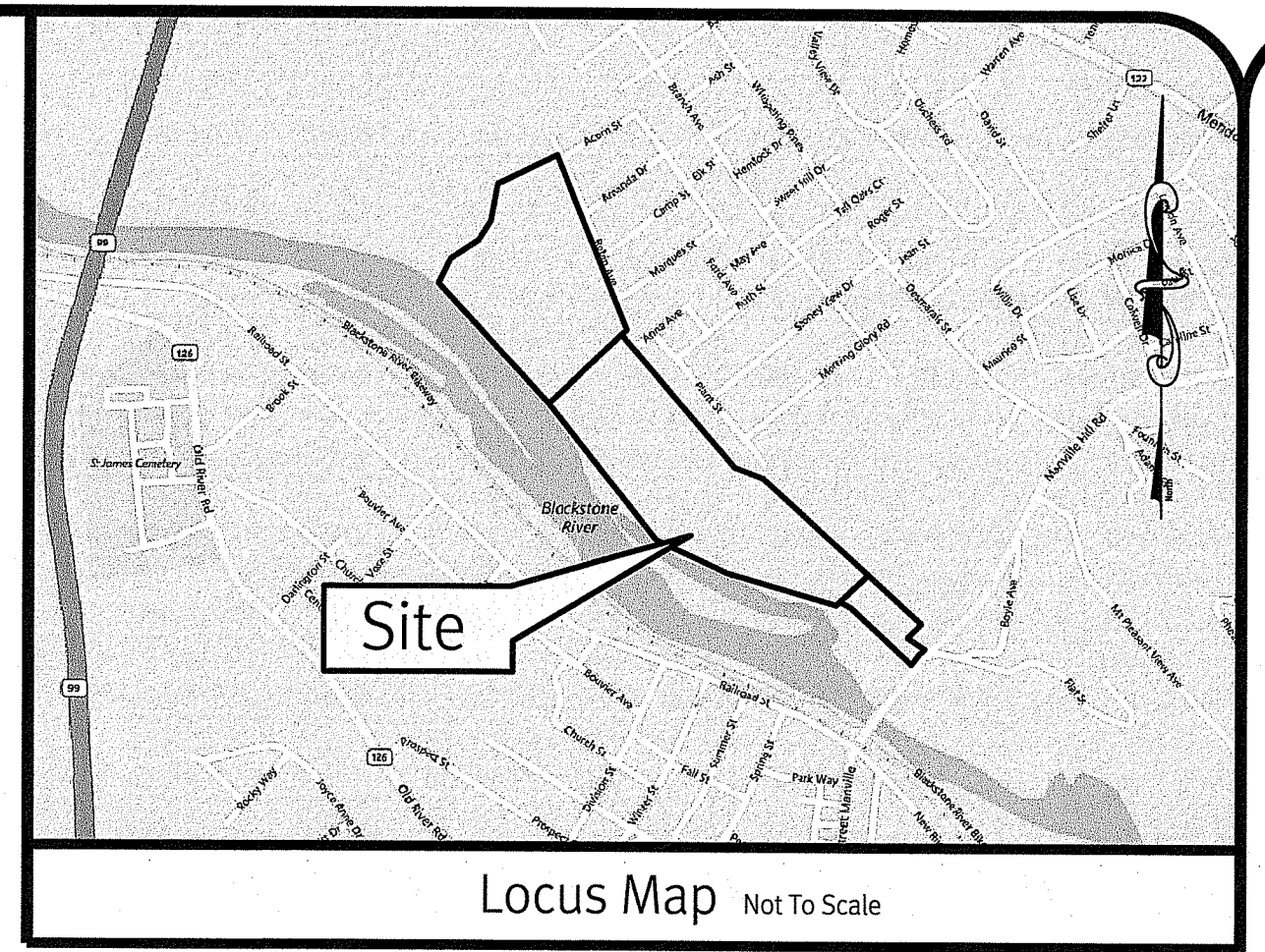
APR 30 2020

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Cumberland, Rhode Island
CLIENT: Ameresco, Inc.
111 Spleen Street, Suite 41, Framingham, MA 01701

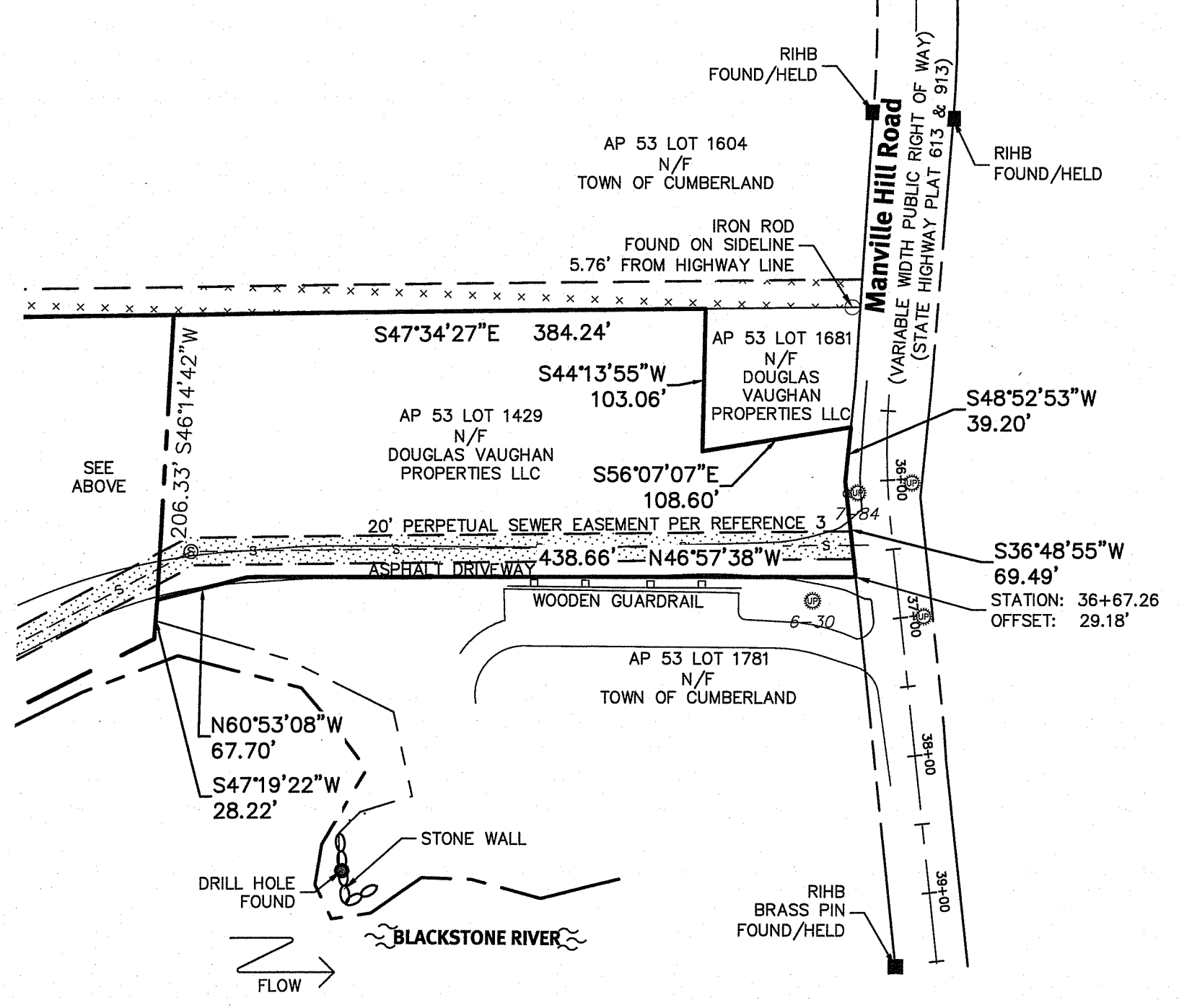
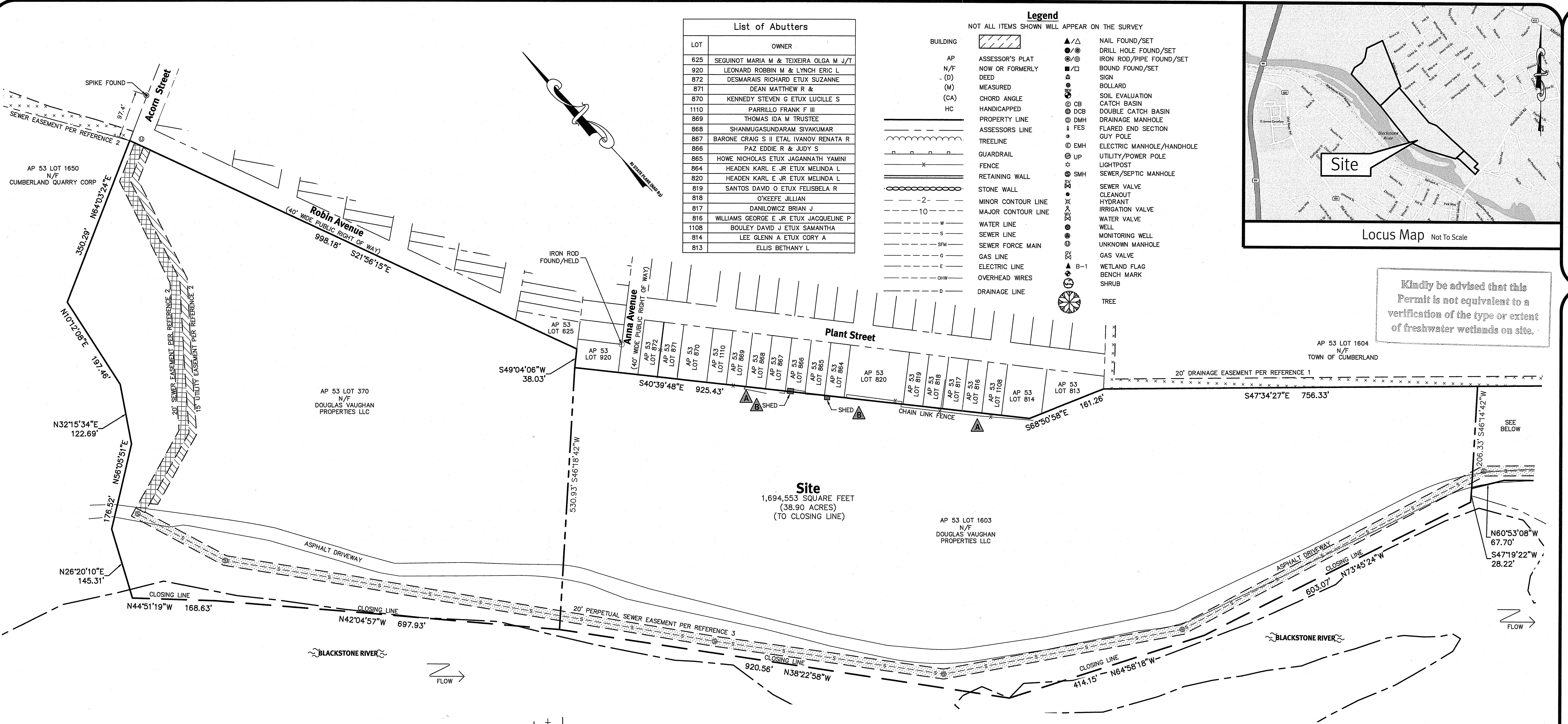
List of Abutters	
LOT	OWNER
625	SEQUINOT MARIA M & TEIXEIRA OLGA M J/T
920	LEONARD ROBBIN M & LYNCH ERIC L
872	DESMARIS RICHARD ETUX SUZANNE
871	DEAN MATTHEW R &
870	KENNEDY STEVEN G ETUX LUCILLE S
1110	PARRILLO FRANK F III
869	THOMAS IDA M TRUSTEE
868	SHANMUGASUNDARAM SIVAKUMAR
867	BARONE CRAIG S II ETAL IVANOV RENATA R
866	PAZ EDDIE R & JUDY S
865	HOWE NICHOLAS ETUX JAGANNATH YAMINI
864	HEADEN KARL E JR ETUX MELINDA L
820	HEADEN KARL E JR ETUX MELINDA L
819	SANTOS DAVID O ETUX FELISBELA R
818	O'KEEFE JILLIAN
817	DANILOWICZ BRIAN J
816	WILLIAMS GEORGE E JR ETUX JAQUELINE P
1108	BOULEY DAVID J ETUX SAMANTHA
814	LEE GLENN A ETUX CORY A
813	ELLIS BETHANY L

Legend
NOT ALL ITEMS SHOWN WILL APPEAR ON THE SURVEY

	ASSESSOR'S PLAT		NAIL FOUND/SET
	NOW OR FORMERLY DEED		DRILL HOLE FOUND/SET
	MEASURED		IRON ROD/PIPE FOUND/SET
	CHORD ANGLE		BOUND FOUND/SET
	HANDICAPPED		SIGN
	PROPERTY LINE		BOLLARD
	ASSESSOR'S LINE		SOIL EVALUATION
	TREELINE		CATCH BASIN
	GUARDRAIL		DOUBLE CATCH BASIN
	FENCE		DRAINAGE MANHOLE
	RETAINING WALL		FLARED END SECTION
	STONE WALL		GUY POLE
	MINOR CONTOUR LINE		ELECTRIC MANHOLE/HANDHOLE
	MAJOR CONTOUR LINE		UTILITY/POWER POLE
	WATER LINE		LIGHTPOST
	SEWER LINE		SEWER/SEPTIC MANHOLE
	SEWER FORCE MAIN		SEWER VALVE
	GAS LINE		CLEANOUT
	ELECTRIC LINE		HYDRANT
	OVERHEAD WIRES		IRRIGATION VALVE
	DRAINAGE LINE		WATER VALVE
			WELL
			MONITORING WELL
			UNKNOWN MANHOLE
			GAS VALVE
			WETLAND FLAG
			BENCH MARK
			SHRUB
			TREE



Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.



Plan References:

- "PLAN SHOWING MINOR SUBDIVISION OF LAND PREPARED FOR THE TOWN OF CUMBERLAND AND NORTHERN RHODE ISLAND COLLABORATIVE, LLC.", CUMBERLAND, RI. SCALE 1"=60'. DATED FEBRUARY 2004. PLAN BY UDM LAND SCIENCES. RECORDED IN PLAT CARD 1340.
- "ADMINISTRATIVE SUBDIVISION PREPARED FOR DOUGLAS VAUGHAN PROPERTIES, LLC. CLASS I SURVEY OF AP 53, LOTS 370 & 1650", CUMBERLAND, RI. SCALE 1"=160'. DATED FEBRUARY 10, 2010. PLAN BY MLC SURVEYING INC. RECORDED IN PLAT CARD 1558.
- "BLACKSTONE VALLEY SEWER DISTRICT COMMISSION, EAST PROVIDENCE, RHODE ISLAND", CUMBERLAND, RI. SCALE 1"=80'. DATED OCTOBER 1988. PLAN BY WATERMAN ENGINEERING CO. RECORDED IN DEED BOOK 220 PAGE 248 AND 254.
- "BOUNDARY AND TOPOGRAPHIC SURVEY PLAN TOWN OF CUMBERLAND R.I. ASSESSOR'S PLAT 53 LOT 1603", CUMBERLAND, RI. SCALE 1"=20'. DATED DECEMBER 6, 1999. PLAN BY WATERMAN ENGINEERING CO. RECORDED IN DEED BOOK 627 PAGE 336.
- "HOME CREST CUMBERLAND HILL, R.I. OWNED BY THE CITY AND SUBURBAN LAND TRUST PROVIDENCE, R.I.", CUMBERLAND, RI. SCALE 1"=120'. DATED JULY 1919. PLAN BY C. LOUIS DUNKLEE, ENGR. RECORDED IN PLAN BOOK 2 PAGE 44.
- "INSIDE PLAT LOTS OWNED BY ALBERT T. QUAY", CUMBERLAND, RI. SCALE 1"=40'. DATED OCTOBER 1919. PLAN BY ARNOLD SEAGRAVE CIVIL ENGINEER. RECORDED IN PLAT CARD 4.
- RHODE ISLAND STATE HIGHWAY PLAT 613
- RHODE ISLAND STATE HIGHWAY PLAT 913

List of Possible Encroachments:

- CHAIN LINK FENCE OVER PROPERTY LINE
- SHED OVER PROPERTY LINE

General Notes:

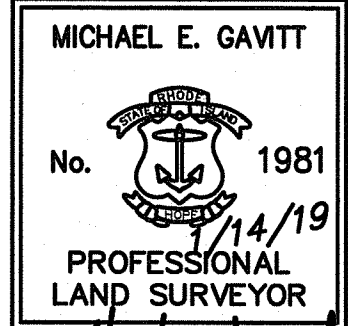
- THE PARCEL IS FOUND ON ASSESSOR'S PLAT 53, LOTS 370, 1429, AND 1603 IN THE TOWN OF CUMBERLAND, PROVIDENCE COUNTY, RHODE ISLAND.
- THE OWNER PER DEED BOOK 1665, PAGE 32 IS DOUGLAS VAUGHAN PROPERTIES, LLC.
- BASED ON GRAPHICAL PLOTTING ONLY, THE PARCEL IS LOCATED IN ZONE X AND ZONE AE (ELEV.=114') PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP 44007001760, DATED MARCH 2, 2009. THIS DESIGNATION MAY CHANGE BASED UPON REVIEW BY A FLOOD ZONE SPECIALIST OR BY THE RESULTS OF A COMPREHENSIVE FLOOD STUDY.
- THE PARCEL IS ZONED I-2 BASED ON TOWN OF CUMBERLAND GIS. ANY OVERLAY DISTRICTS, SPECIAL PERMITS OR VARIANCES SPECIFIC TO THIS SITE ARE NOT TAKEN INTO CONSIDERATION. PLEASE CONTACT THE ZONING DEPARTMENT FOR ANY ADDITIONAL INFORMATION OR FOR A CERTIFICATE OF ZONING.
- THERE WERE NO CEMETERIES, GRAVE SITES AND OR BURIAL GROUNDS OBSERVED WITHIN THE LIMITS OF THE SURVEY.
- FIELD SURVEY PERFORMED BY DIPRETE ENGINEERING ON JANUARY 8, 2019. THIS PLAN REFLECTS ON THE GROUND CONDITIONS AS OF THAT DATE.
- THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. DIPRETE ENGINEERING IS NOT RESPONSIBLE FOR ANY UNKNOWN OR UNRECORDED EASEMENTS, DEEDS OR CLAIMS THAT A TITLE REPORT WOULD DISCLOSE.
- A CLOSING LINE IS AN ARBITRARY SURVEY LINE USED FOR COMPUTATIONAL PURPOSES ONLY AND IS NOT TO BE MISINTERPRETED AS A PROPERTY LINE.

Certification:

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOWS:

TYPE OF SURVEY	MEASUREMENT SPECIFICATION
LIMITED CONTENT BOUNDARY SURVEY - PERIMETER	CLASS 1

THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS:
PERIMETER RETRACEMENT PERFORMED BY DIPRETE ENGINEERING FOR THE PURPOSE OF SITE ENGINEERING AND PERMITTING.

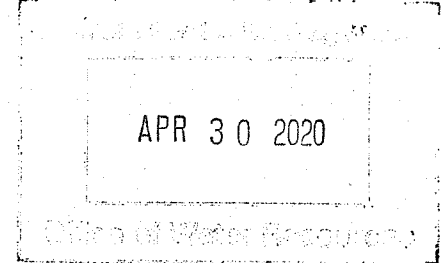


BY MICHAEL E. GAWITT, RIPLS #1981
C.O.A. NO. LS-A160



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JUN 25 2020 FILE # 20-008
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

This Plan Should Be Indexed By The Following Streets:
• Manville Hill Road



DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-943-0006 www.diprete-eng.com

Boston • Providence • Newport

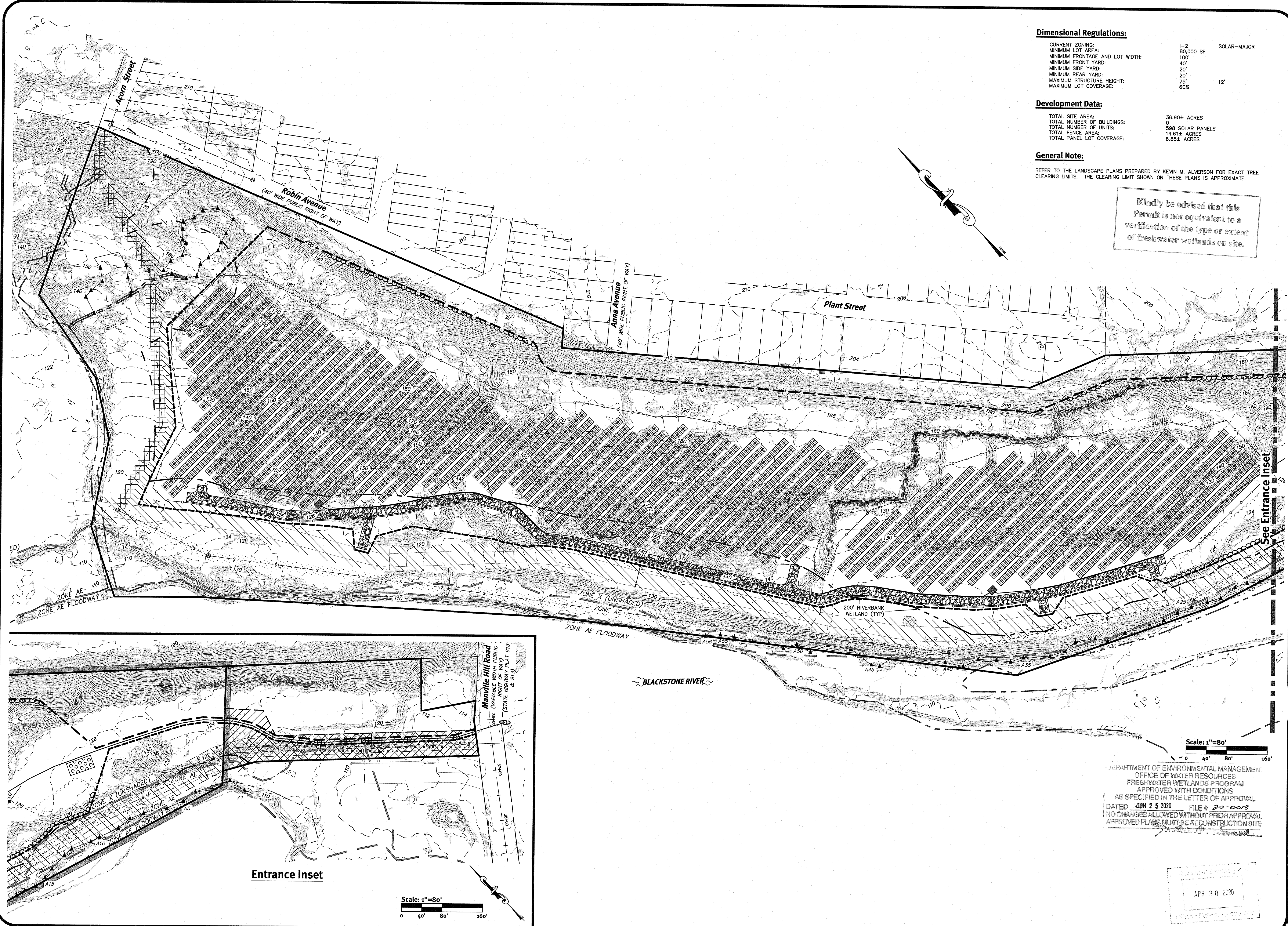
No.	Date	Boundary Survey Description	Drawn By: A.J.F.
0	1/14/19		

Boundary Survey
Cumberland Quarry Solar
Cumberland, Rhode Island

Client: **Ameresco, Inc.**
111 Spleen Street, Framingham, Massachusetts 01701

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SHEET 4 OF 9



Dimensional Regulations:

CURRENT ZONING:	I-2	SOLAR-MAJOR
MINIMUM LOT AREA:	80,000 SF	
MINIMUM FRONTAGE AND LOT WIDTH:	100'	
MINIMUM FRONT YARD:	40'	
MINIMUM SIDE YARD:	20'	
MINIMUM REAR YARD:	20'	
MAXIMUM STRUCTURE HEIGHT:	75'	12'
MAXIMUM LOT COVERAGE:	60%	

Development Data:

TOTAL SITE AREA:	36.90± ACRES
TOTAL NUMBER OF BUILDINGS:	0
TOTAL NUMBER OF UNITS:	998 SOLAR PANELS
TOTAL FENCE AREA:	14.61± ACRES
TOTAL PANEL LOT COVERAGE:	6.85± ACRES

General Note:
REFER TO THE LANDSCAPE PLANS PREPARED BY KEVIN M. ALVERSON FOR EXACT TREE CLEARING LIMITS. THE CLEARING LIMIT SHOWN ON THESE PLANS IS APPROXIMATE.

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DiPrete Engineering
Two Stafford Court, Cranston, RI 02920
tel 401-943-1000 fax 401-943-6000 www.diprete-eng.com

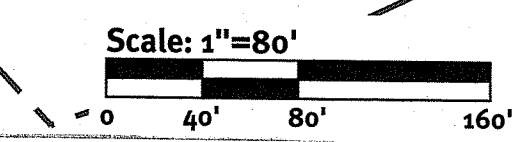
KEVIN DEMERS
REGISTERED PROFESSIONAL ENGINEER CIVIL

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The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA compliance in the implementation of this plan and design.

No.	Date	Description	By
1	4/27/2020	PERMITS RESPONSE TO COMMENTS	K.L.D.
2	5/13/2020	COORDINATION SET	K.L.D.
3	5/20/2020	PERMITS RESPONSE TO COMMENTS	K.L.D.
4	5/21/2020	PERMITS RESPONSE TO COMMENTS	K.L.D.
5	5/21/2020	PERMITS RESPONSE TO COMMENTS	K.L.D.
6	5/21/2020	PERMITS RESPONSE TO COMMENTS	K.L.D.
7	5/21/2020	PERMITS RESPONSE TO COMMENTS	K.L.D.
8	5/21/2020	PERMITS RESPONSE TO COMMENTS	K.L.D.
9	5/21/2020	PERMITS RESPONSE TO COMMENTS	K.L.D.
10	5/21/2020	PERMITS RESPONSE TO COMMENTS	K.L.D.

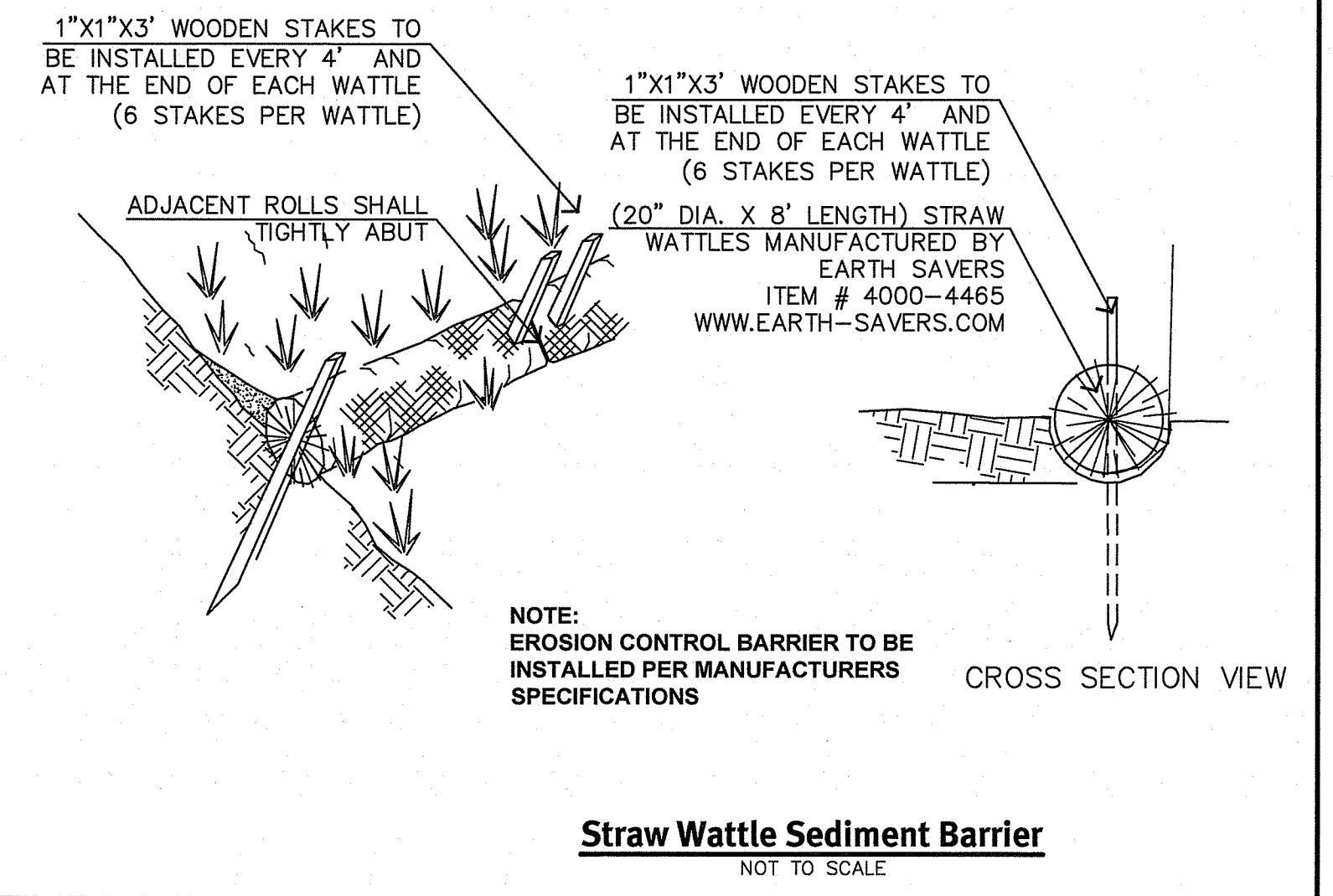
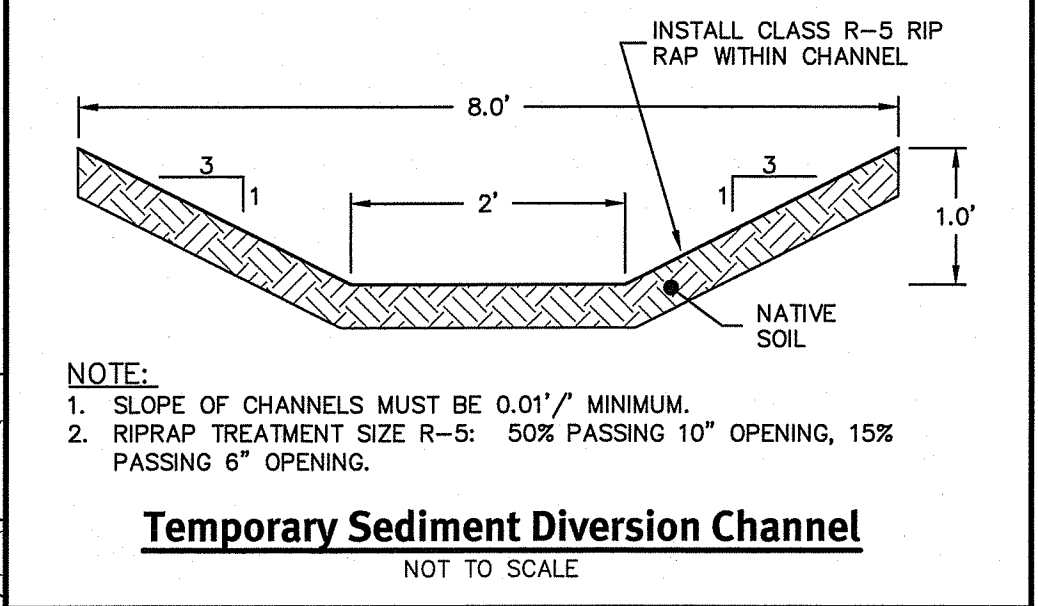
Drawn By: M.L.D. Design By: K.L.D.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JUN 25 2020 FILE # 20-0008
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE



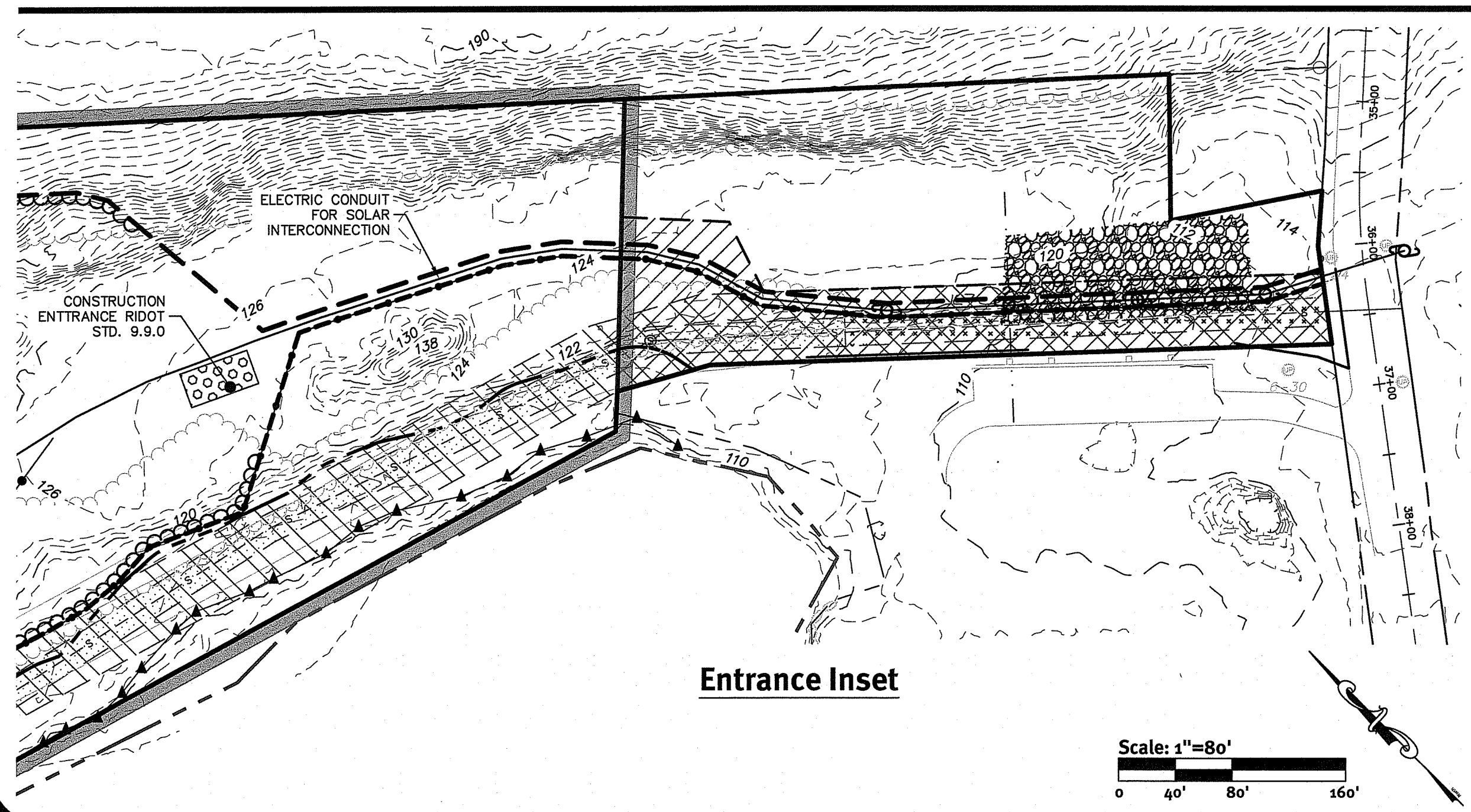
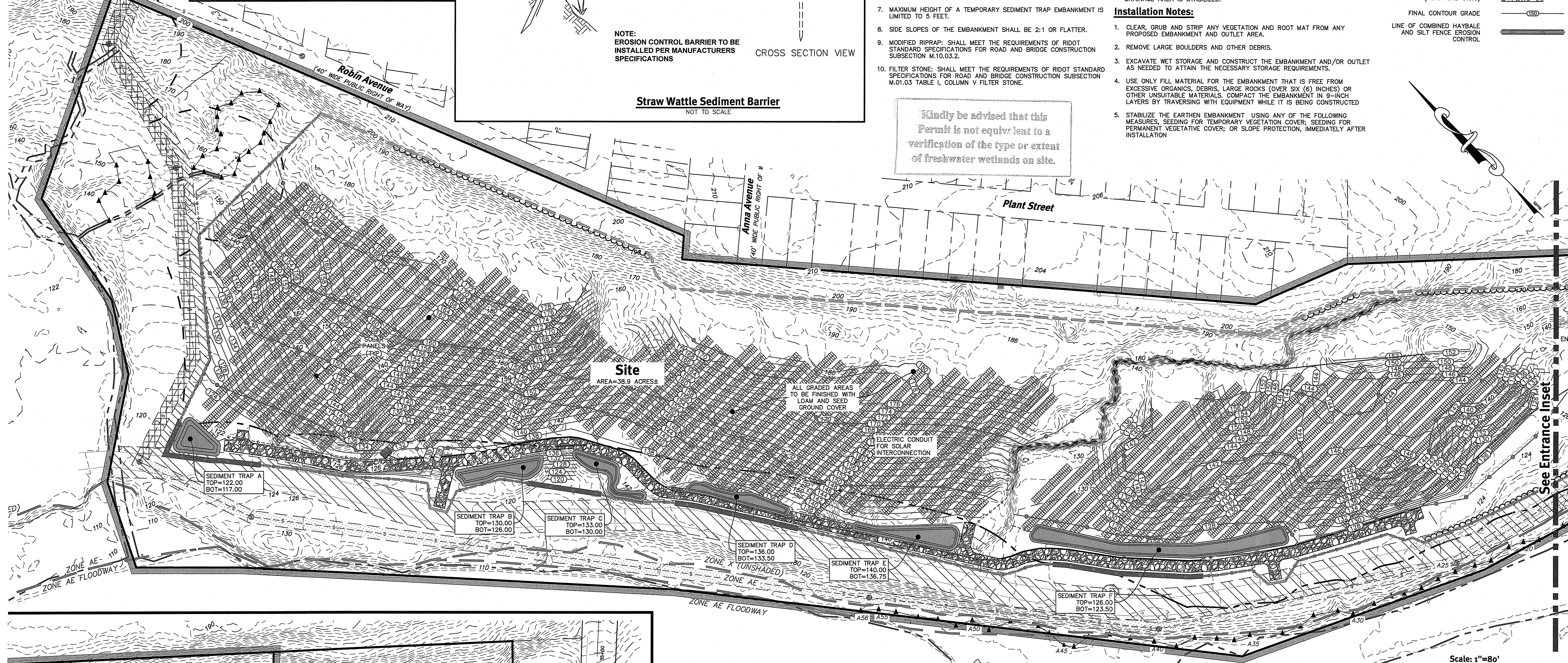
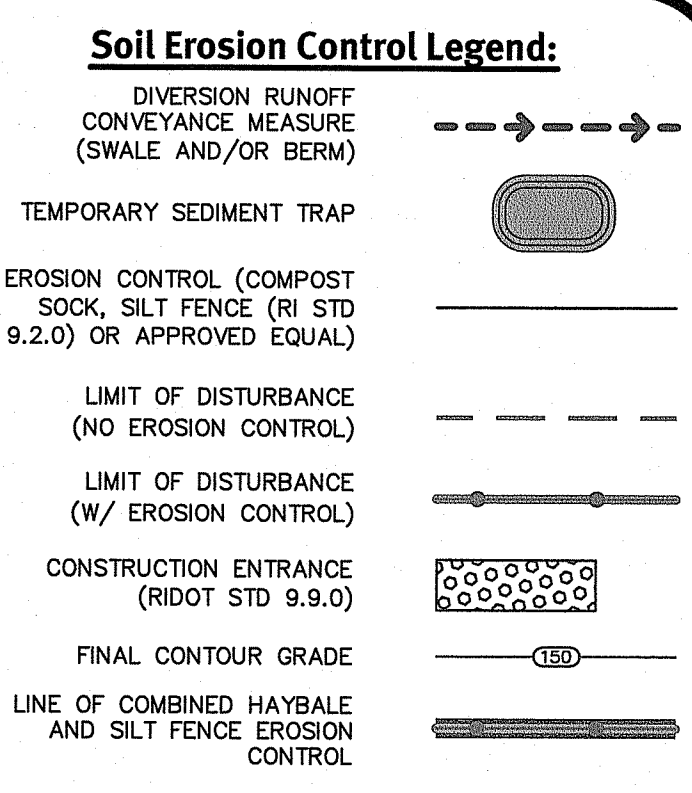
APR 30 2020

Overall Site Plan
Cumberland Quarry Solar
Cumberland, Rhode Island
Client: Ameresco, Inc.
111 Spleen Street, Suite 411, Framingham, MA 01701

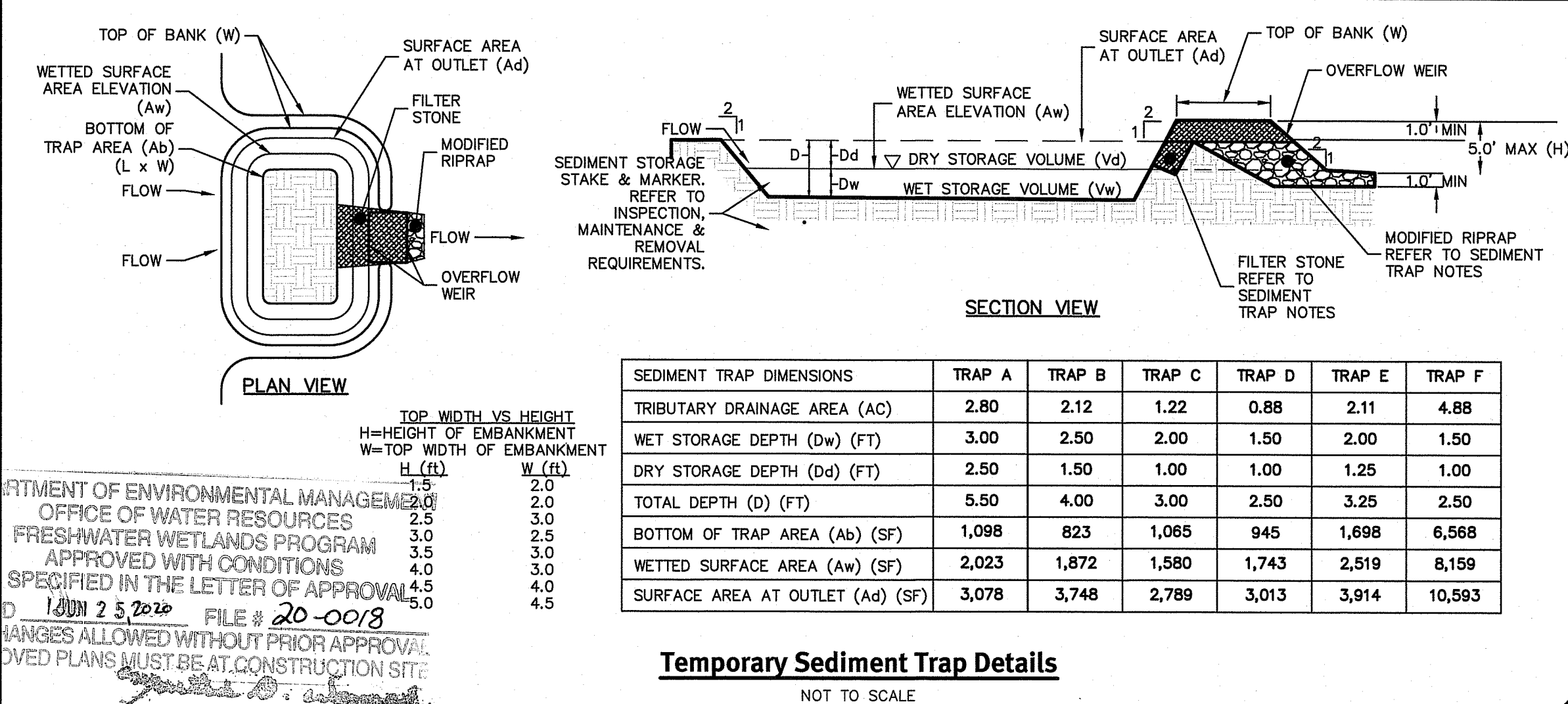
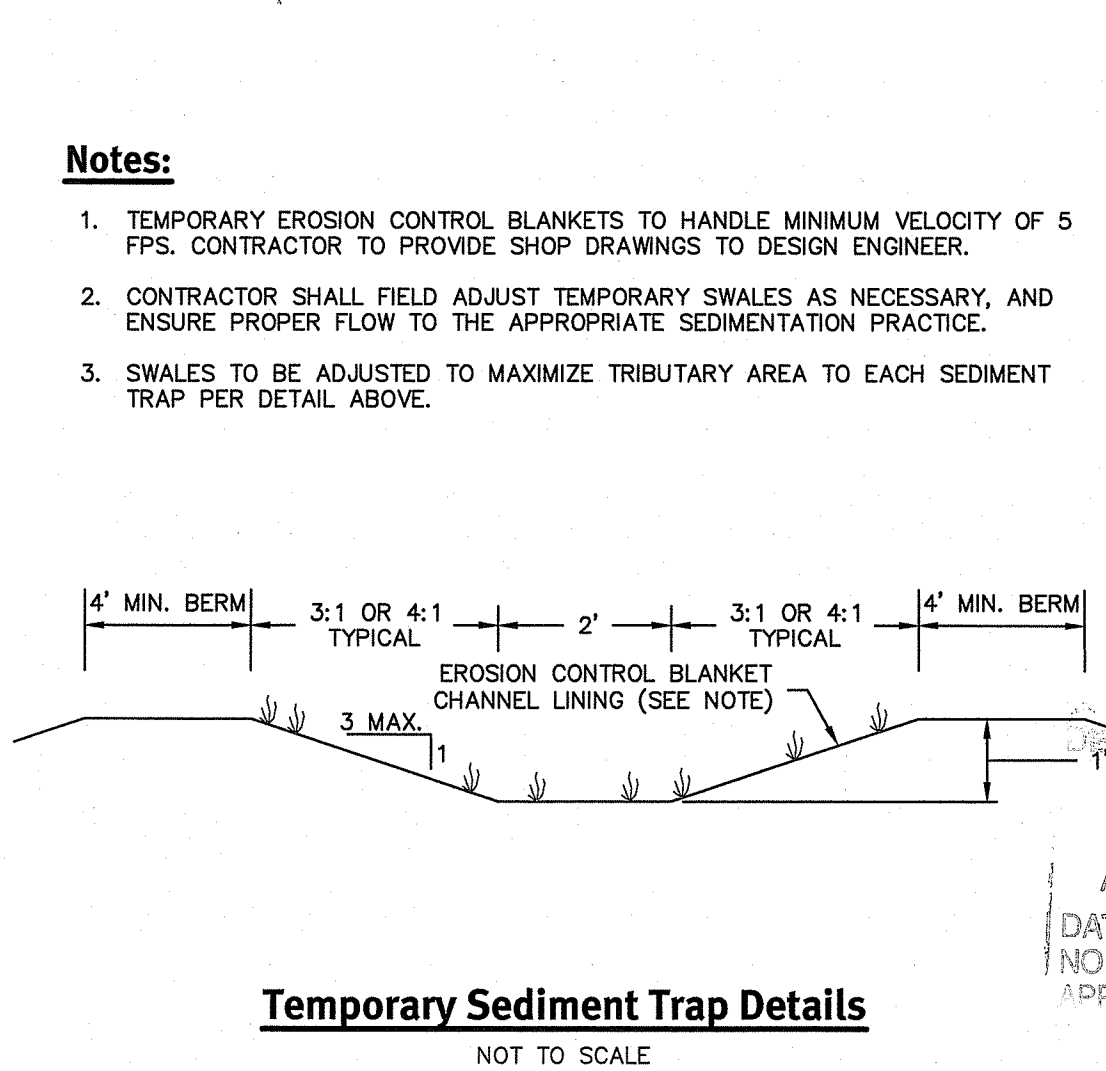


- Sediment Trap Notes:**
1. THE TEMPORARY SEDIMENT TRAPS SHALL MEET ALL REQUIREMENTS FOR TEMPORARY SEDIMENT TRAPS OUTLINED IN THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (LATEST REVISION) SECTION SIX: SEDIMENT CONTROL MEASURES
 2. THE TEMPORARY SEDIMENT TRAP SHALL HAVE AN INITIAL STORAGE VOLUME OF 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA.
 3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER EXCEPT FOR THE EXCAVATED WET STORAGE AREA WHERE SLOPES SHALL NOT EXCEED 1.5:1.
 4. THE OUTLET SHALL BE LOCATED AT THE MOST DISTANT HYDRAULIC POINT FROM THE INLET.
 5. THE OUTLET CONSISTS OF A PERVIOUS STONE DIKE WITH A CORE OF MODIFIED RIPRAP AND FACED ON THE UPSTREAM SIDE WITH STONE.
 6. TEMPORARY SEDIMENT TRAPS MUST OUTLET ONTO STABILIZED GROUND.
 7. MAXIMUM HEIGHT OF A TEMPORARY SEDIMENT TRAP EMBANKMENT IS LIMITED TO 5 FEET.
 8. SIDE SLOPES OF THE EMBANKMENT SHALL BE 2:1 OR FLATTER.
 9. MODIFIED RIPRAP: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.10.03.2.
 10. FILTER STONE: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.01.03 TABLE I, COLUMN V FILTER STONE.

- Inspection, Maintenance, and Removal Requirements:**
1. INSTALL "SEDIMENT STORAGE" STAKE WITH A MARKER AT ONE HALF OF THE WET STORAGE VOLUME.
 2. INSPECT THE TEMPORARY SEDIMENT TRAP AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCH OR GREATER.
 3. CHECK THE OUTLET TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT.
 4. CHECK FOR SEDIMENT ACCUMULATION AND FILTRATION PERFORMANCE.
 5. WHEN SEDIMENTS HAVE ACCUMULATED TO ONE HALF THE MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATER THE TRAP AS NEEDED, REMOVE SEDIMENTS AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS.
 6. DISPOSE OF THE SEDIMENT REMOVED FROM THE BASIN IN A SUITABLE AREA.
 7. THE TEMPORARY SEDIMENT TRAP MAY BE REMOVED AFTER THE CONTRIBUTING DRAINAGE AREA IS STABILIZED.
- Installation Notes:**
1. CLEAR, GRUB AND STRIP ANY VEGETATION AND ROOT MAT FROM ANY PROPOSED EMBANKMENT AND OUTLET AREA.
 2. REMOVE LARGE BOULDERS AND OTHER DEBRIS.
 3. EXCAVATE WET STORAGE AND CONSTRUCT THE EMBANKMENT AND/OR OUTLET AS NEEDED TO ATTAIN THE NECESSARY STORAGE REQUIREMENTS.
 4. USE ONLY FILL MATERIAL FOR THE EMBANKMENT THAT IS FREE FROM EXCESSIVE ORGANICS, DEBRIS, LARGE ROCKS (OVER SIX (6) INCHES) OR OTHER UNSUITABLE MATERIALS. COMPACT THE EMBANKMENT IN 9-INCH LAYERS BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
 5. STABILIZE THE EARTHEN EMBANKMENT USING ANY OF THE FOLLOWING MEASURES: SEEDING FOR TEMPORARY VEGETATION COVER; SEEDING FOR PERMANENT VEGETATIVE COVER; OR SLOPE PROTECTION, IMMEDIATELY AFTER INSTALLATION



Note: This Plan Must Be Reproduced In Color



Diprete Engineering
Two Stafford Court, Cranston, RI 02930
Tel: 401-943-1000 Fax: 401-464-6006 www.diprete-eng.com

Soil Erosion & Sediment Control Plan
Cumberland Quarry Solar
Cumberland, Rhode Island

Client: **Ameresco, Inc.**
111 Spleen Street, Suite 44, Frammingham, MA 01701

Design By: M.L.D.
Drawn By: M.L.D.

NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

DATED: JUN 25 2020 FILE # 20-0018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL

Scale: 1"=80'

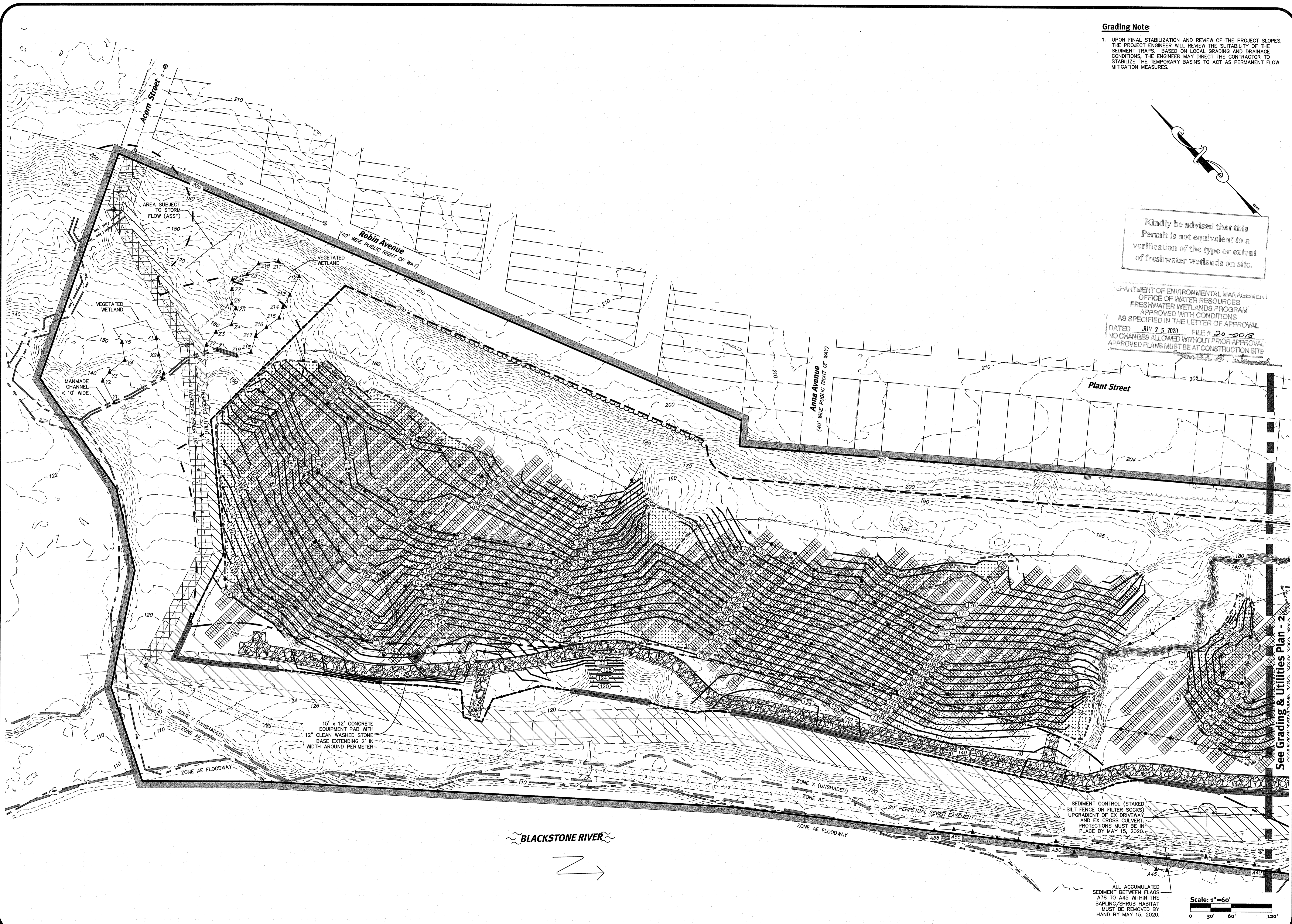
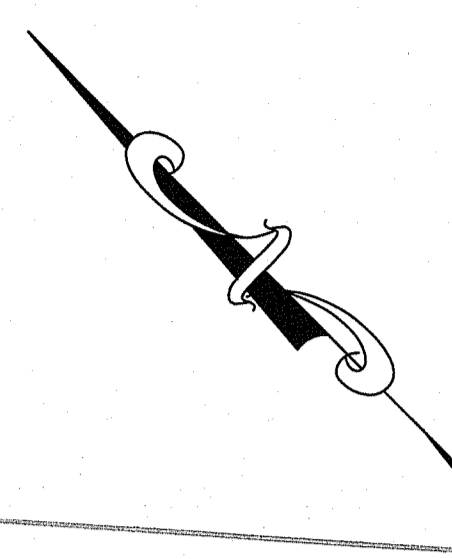
SHEET 6 OF 9

Grading Note

1. UPON FINAL STABILIZATION AND REVIEW OF THE PROJECT SLOPES, THE PROJECT ENGINEER WILL REVIEW THE SUITABILITY OF THE SEDIMENT TRAPS, BASED ON LOCAL GRADING AND DRAINAGE CONDITIONS, THE ENGINEER MAY DIRECT THE CONTRACTOR TO STABILIZE THE TEMPORARY BASINS TO ACT AS PERMANENT FLOW MITIGATION MEASURES.

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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AREA SUBJECT TO STORM FLOW (ASSF)

VEGETATED WETLAND

VEGETATED WETLAND

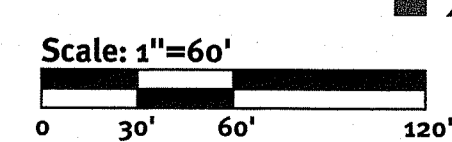
MANMADE CHANNEL 10' WIDE

20' SEWER EASEMENT
15' UTILITY EASEMENT

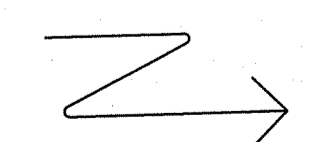
15' x 12' CONCRETE EQUIPMENT PAD WITH CLEAN WASHED STONE BASE EXTENDING 2' IN WIDTH AROUND PERIMETER

SEDIMENT CONTROL (STAKED SILT FENCE OR FILTER SOCKS) UPGRADIENT OF EX DRIVEWAY AND EX CROSS CULVERT. PROTECTIONS MUST BE IN PLACE BY MAY 15, 2020.

ALL ACCUMULATED SEDIMENT BETWEEN FLAGS A38 TO A45 WITHIN THE SAPLING/SHRUB HABITAT MUST BE REMOVED BY HAND BY MAY 15, 2020.



BLACKSTONE RIVER



Diprete Engineering

Two Stafford Court, Cranston, RI 02920
tel: 401-943-1000 fax: 401-641-6006 www.diprete-eng.com

Boston • Providence • Newport

KEVIN DEMERS
REGISTERED PROFESSIONAL ENGINEER
CIVIL

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The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA compliance in the implementation of this plan and design.

No.	Date	Description	By
1	04/27/2020	Issue for Construction	KL/D
2	05/12/2020	Revised for Construction	KL/D
3	05/27/2020	Final Submission	KL/D
4	06/02/2020	Final Submission	KL/D
5	06/02/2020	Final Submission	KL/D

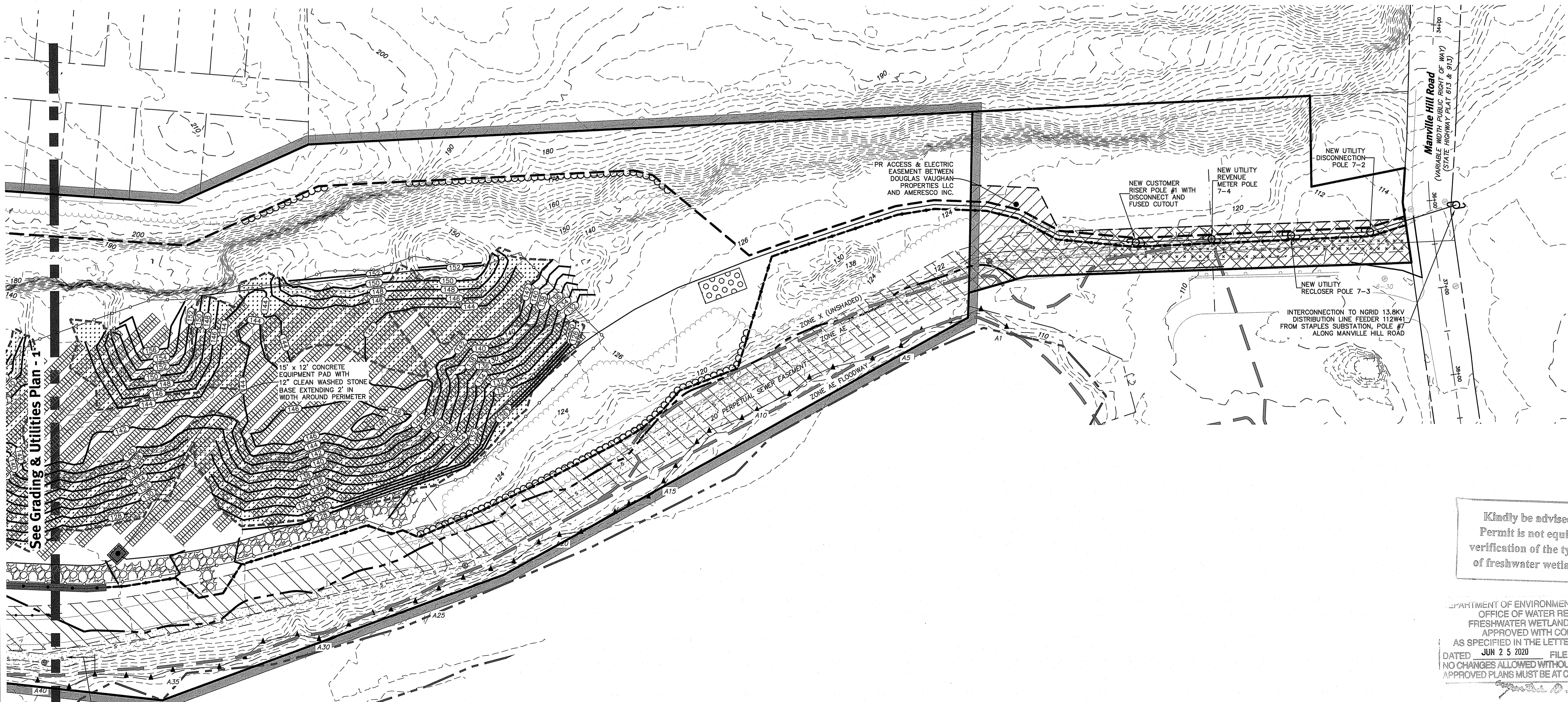
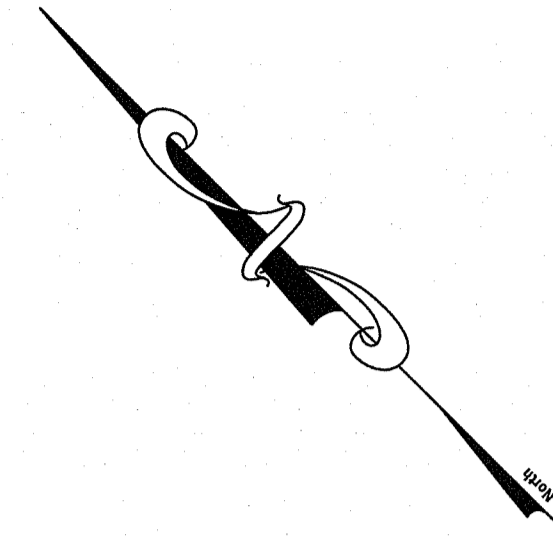
Drawn By: MLD, Design By: KLD.

Grading & Utilities Plan - 1
Cumberland Quarry Solar

Ameresco, Inc.
111 Spleen Street, Suite 41, Framingham, MA 01701

Grading Note

1. UPON FINAL STABILIZATION AND REVIEW OF THE PROJECT SLOPES, THE PROJECT ENGINEER WILL REVIEW THE SUITABILITY OF THE SEDIMENT TRAPS. BASED ON LOCAL GRADING AND DRAINAGE CONDITIONS, THE ENGINEER MAY DIRECT THE CONTRACTOR TO STABILIZE THE TEMPORARY BASINS TO ACT AS PERMANENT FLOW MITIGATION MEASURES.

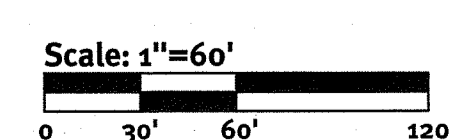


See Grading & Utilities Plan - 1

15' x 12' CONCRETE EQUIPMENT PAD WITH 12" CLEAN WASHED STONE BASE EXTENDING 2' IN WIDTH AROUND PERIMETER

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
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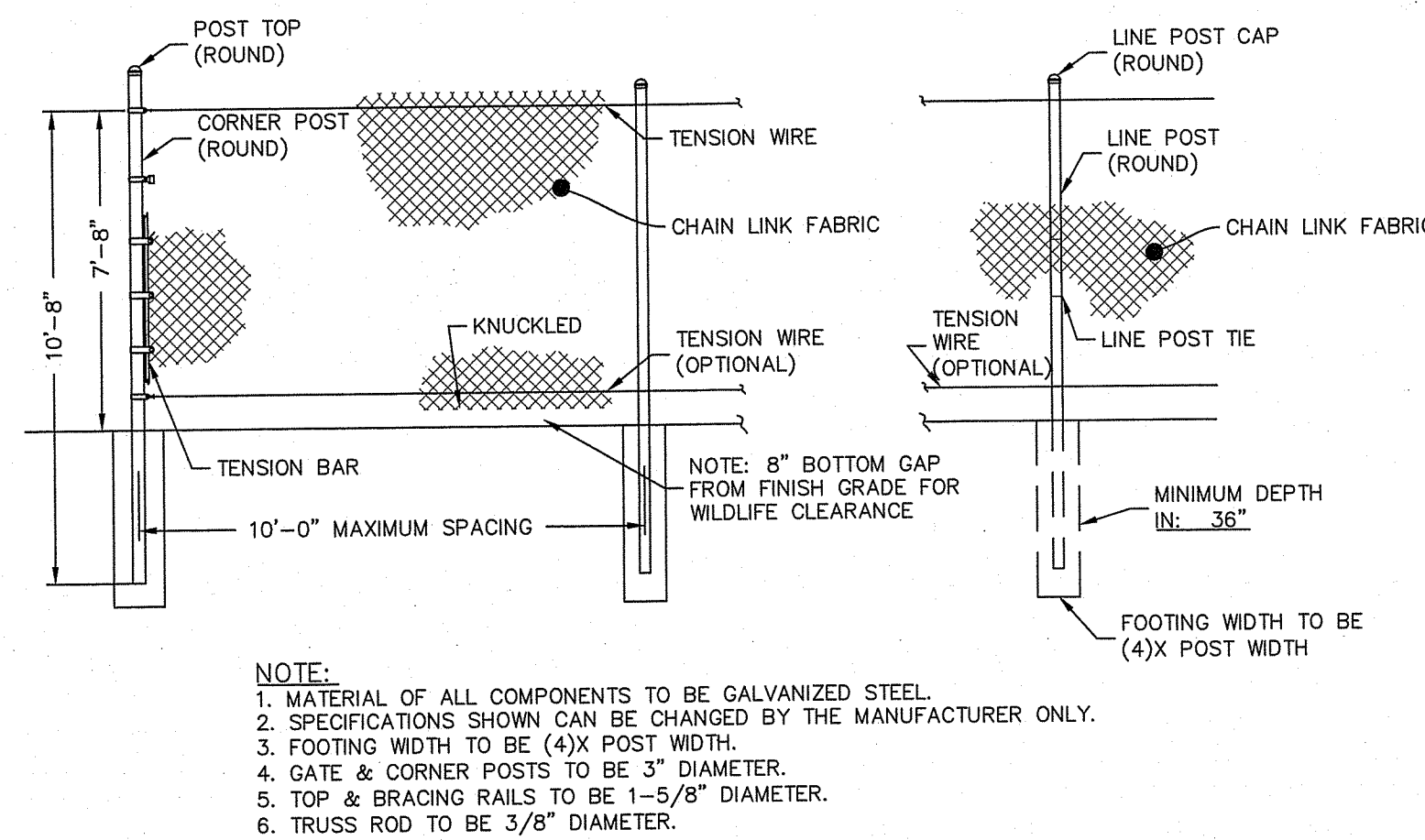
ALL ACCUMULATED SEDIMENT BETWEEN FLAGS A38 TO A45 WITHIN THE SAPLING/SHRUB HABITAT MUST BE REMOVED BY HAND BY MAY 15, 2020.

KEVIN DEMERS
Kevin Demers
REGISTERED PROFESSIONAL ENGINEER
CIVIL

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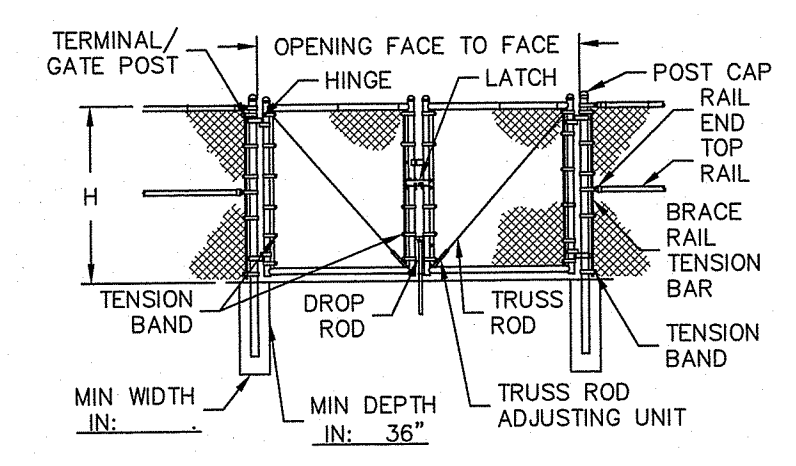
No.	Date	Description	By:	Design By: K.J.D.
1	05/21/2020	Final Submission	K.J.D.	
2	05/21/2020	Final Submission	K.J.D.	
3	05/21/2020	Final Submission	K.J.D.	
4	05/21/2020	Final Submission	K.J.D.	

Grading & Utilities Plan - 2
Cumberland Quarry Solar
Cumberland, Rhode Island
Client: Ameresco, Inc.
111 Spleen Street, Suite 41, Framingham, MA 01701



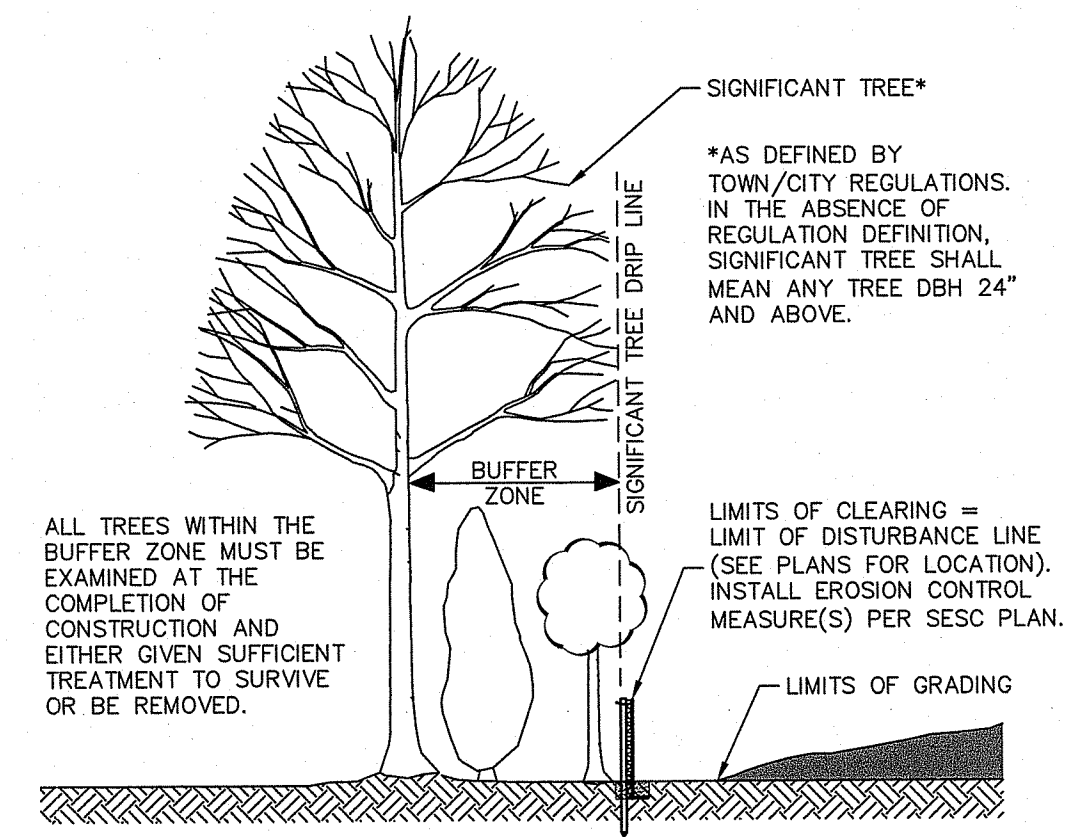
- NOTE:**
1. MATERIAL OF ALL COMPONENTS TO BE GALVANIZED STEEL.
 2. SPECIFICATIONS SHOWN CAN BE CHANGED BY THE MANUFACTURER ONLY.
 3. FOOTING WIDTH TO BE (4)X POST WIDTH.
 4. GATE & CORNER POSTS TO BE 3" DIAMETER.
 5. TOP & BRACING RAILS TO BE 1-5/8" DIAMETER.
 6. TRUSS ROD TO BE 3/8" DIAMETER.

Fence Detail
NOT TO SCALE



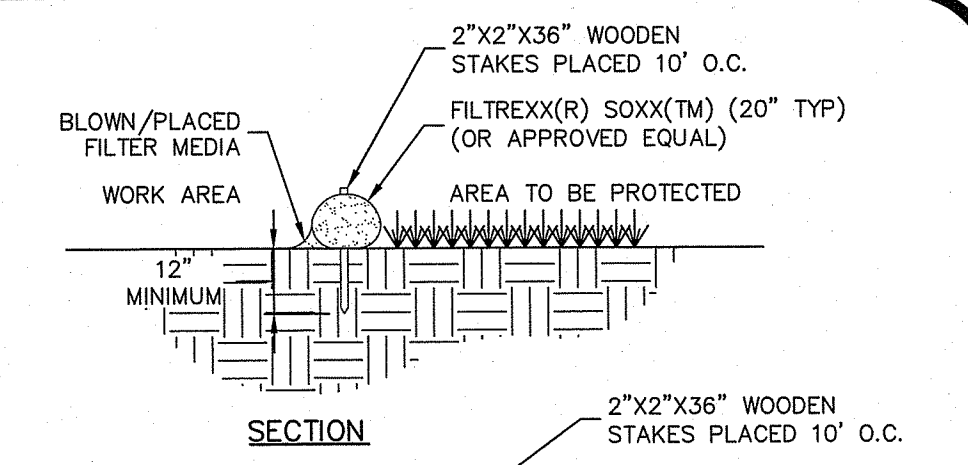
- NOTE:**
1. MATERIAL OF ALL COMPONENTS TO BE GALVANIZED STEEL.
 2. SPECIFICATIONS SHOWN CAN BE CHANGED BY THE MANUFACTURER ONLY.
 3. FOOTING WIDTH TO BE (4)X POST WIDTH.
 4. GATE & CORNER POSTS TO BE 3" DIAMETER.
 5. TOP & BRACING RAILS TO BE 1-5/8" DIAMETER.
 6. TRUSS ROD TO BE 3/8" DIAMETER.

Double Swing Gate 20' Opening
NOT TO SCALE



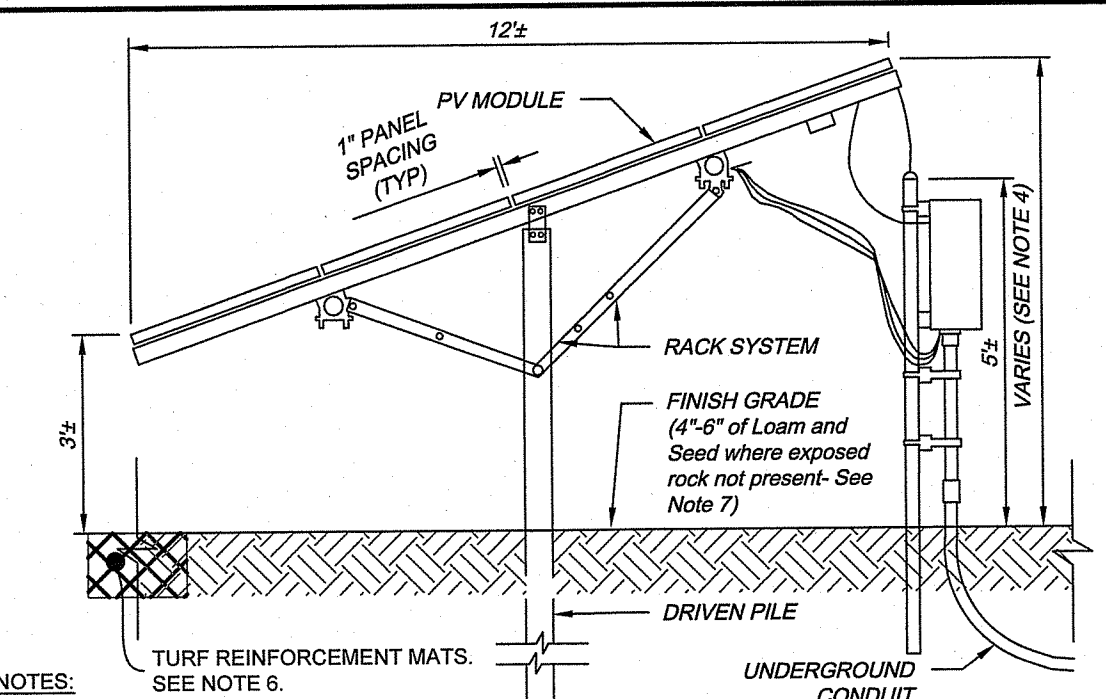
NOTE: LIMIT OF DISTURBANCE (LOD) MUST BE STAKED OUT PRIOR TO CONSTRUCTION. IF ANY SIGNIFICANT TREE DRIP LINE IS ENCRoACHING PAST THE LOD, CONTRACTOR MUST CONTACT SITE ENGINEER PRIOR TO CONSTRUCTION.

Limit of Disturbance at Vegetation
NOT TO SCALE



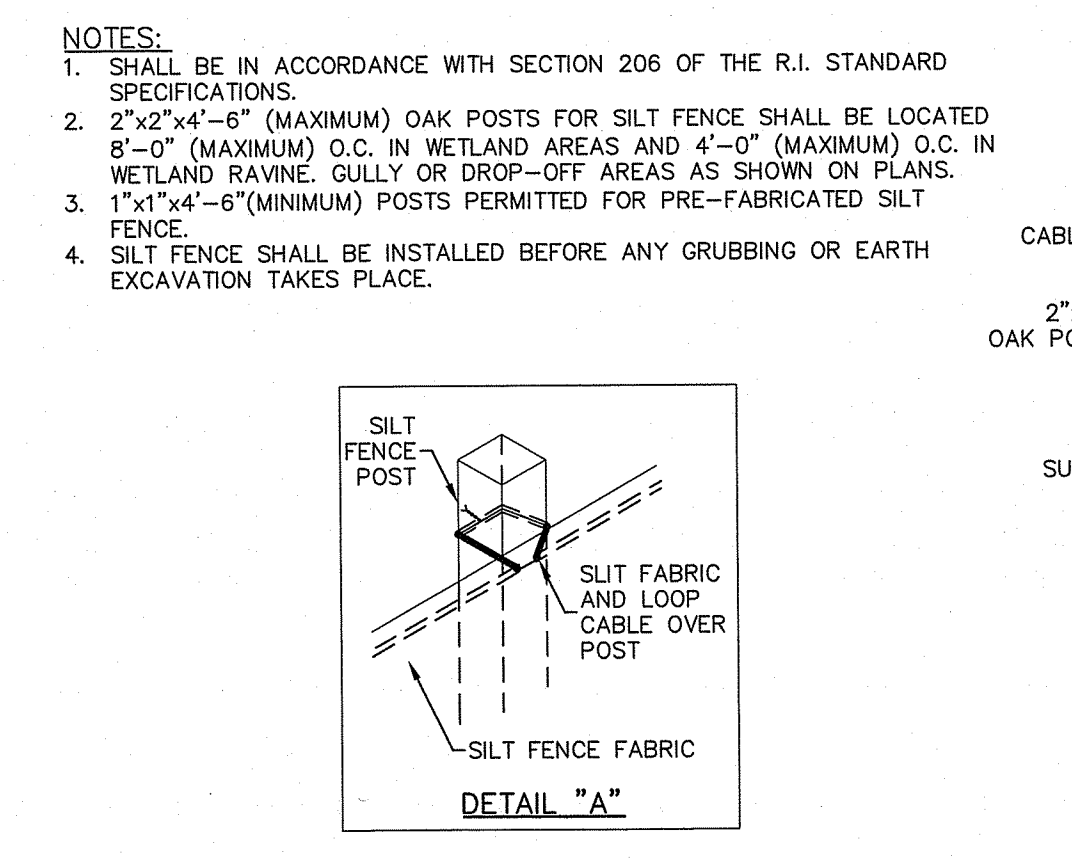
- NOTES:**
1. ALL MATERIAL TO MEET FILTREXX(R) SPECIFICATIONS
 2. FILTER MEDIA(TM) FILL TO MEET APPLICATION REQUIREMENTS.
 3. COMPOST MATERIAL TO BE DISPersed ON SITE, AS DETERMINED BY ENGINEER
 4. STAKES ARE NOT TO BE USED IN PAVEMENT AREAS.
 5. SELF WEIGHT OF FILTREXX SYSTEM IS ADEQUATE TO PREVENT SYSTEM MOVEMENT ONCE POSITIONED ALONG AREA SHOWN ON PLANS.
 6. CONTRACTOR TO PLACE FILTREXX SEDIMENT CONTROL OR APPROVED EQUAL AROUND ALL CURB INLET LOCATIONS AS SPECIFIED ON PLANS.

Filtrexx Sediment Control (or Approved Equal)
NOT TO SCALE

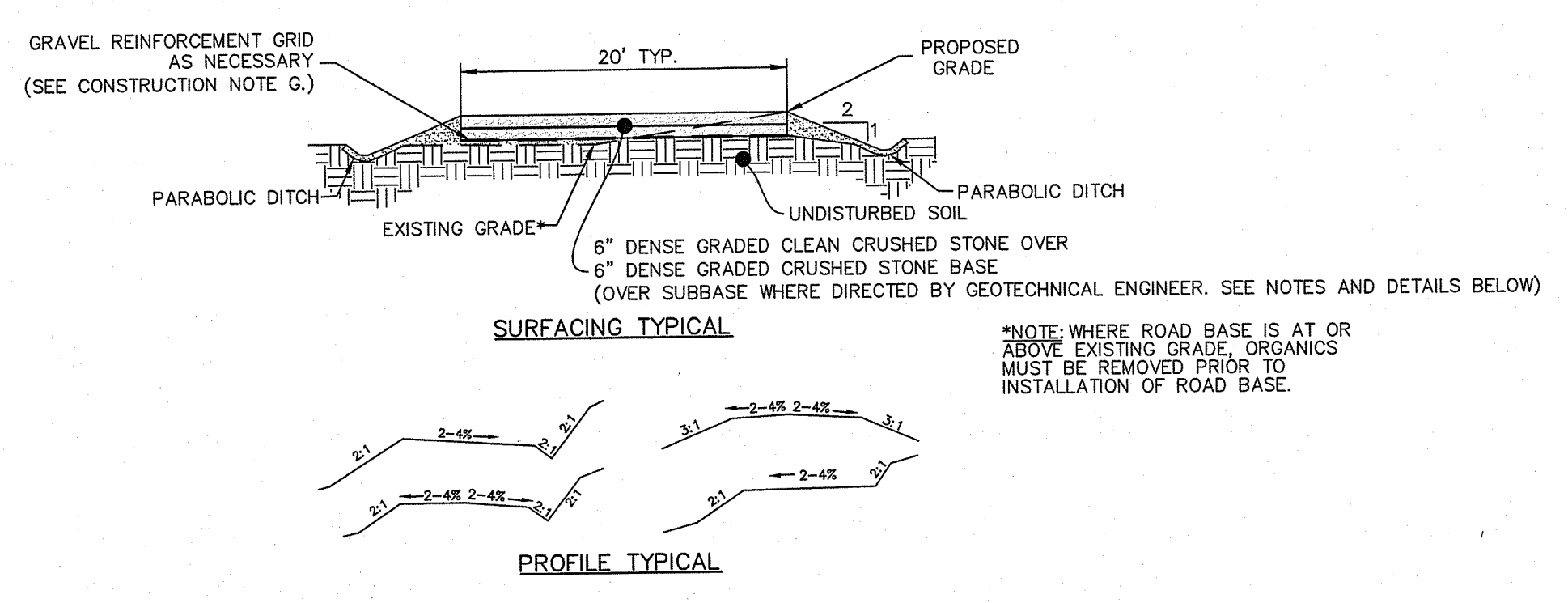


- NOTES:**
1. ADJACENT ARRAY TABLES SHALL BE INSTALLED WITH A MINIMUM OF 6 INCHES OF SEPARATION.
 2. ROWS OF ARRAY TABLES SHALL BE INSTALLED WITH A MINIMUM OF 13 FEET OF SEPARATION.
 3. TYPICAL SOLAR PANEL RACKING SYSTEM SHOWN. SELECTED RACKING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 4. INSTALLED HEIGHT WILL VARY BASED ON THE RACKING LAYOUT AND FINAL DESIGN BUT WILL BE LESS THAN 12 PER ZONING CODE REQUIREMENTS.
 5. SEE PLANS FOR PANEL TYPE, QUANTITY AND LOCATIONS.
 6. PERMANENT TURF MATS TO BE INSTALLED IF EROSION ISSUES PERSIST AFTER PERMANENT STABILIZATION AND/OR TO SUPPORT PERMANENT STABILIZATION.
 7. SEED FOR SITE TO BE LOW GROWING, SHADE TOLERANT NATIVE GRASSES WHICH WILL NOT REQUIRE FERTILIZER FOR GROWTH.

Solar Panel Racking
NOT TO SCALE



Silt Fence Detail
NOT TO SCALE



SURFACING TYPICAL

PROFILE TYPICAL

CLEAN CRUSHED STONE SPECIFICATIONS	
SIEVE DESIGNATION	PERCENTAGE BY MASS (WEIGHT) PASSING SQUARE MESH SIEVES
90mm (3.5in)	100
75mm (3in)	90-100
50mm (2in)	75-100
25mm (1in)	50-80
12.5mm (0.5in)	30-60
4.75mm (No.4)	0-40
7.5mm (No. 200)	0

DENSE GRADED CLEAN CRUSHED STONE:

A. DENSE GRADED CLEAN CRUSHED STONE MUST CONSIST OF CLEAN, WASHED, HARD, UNIFORMLY GRADED, CRUSHED STONE. IT MUST BE SUFFICIENTLY FREE FROM DIRT, DELETERIOUS MATERIAL, AND PIECES THAT ARE STRUCTURALLY WEAK AND MUST MEET THE FOLLOWING REQUIREMENTS:

B. SOURCE OF MATERIAL MUST BE OBTAINED FROM AREAS STRIPPED AND CLEANED OF SOIL AND DEBRIS BEFORE BLASTING.

C. MATERIAL COARSER THAN THE 4.75mm (No. 4) SIEVE MUST NOT BE MORE THAN 30 PERCENT, BY MASS (WEIGHT), OF THIN AND/OR ELONGATED PIECES.

BASE SPECIFICATIONS	
SIEVE DESIGNATION	PERCENTAGE BY MASS (WEIGHT) PASSING SQUARE MESH SIEVES
90mm (3.5in)	100
75mm (3in)	90-100
50mm (2in)	75-100
25mm (1in)	50-80
12.5mm (0.5in)	30-60
4.75mm (No.4)	15-40
7.5mm (No. 200)	0-6

DENSE GRADED CRUSHED STONE FOR BASE:

A. DENSE GRADED CRUSHED STONE FOR BASE MUST CONSIST OF CLEAN, HARD, UNIFORMLY GRADED, CRUSHED STONE. IT MUST BE SUFFICIENTLY FREE FROM DIRT, DELETERIOUS MATERIAL, AND PIECES THAT ARE STRUCTURALLY WEAK AND MUST MEET THE FOLLOWING REQUIREMENTS:

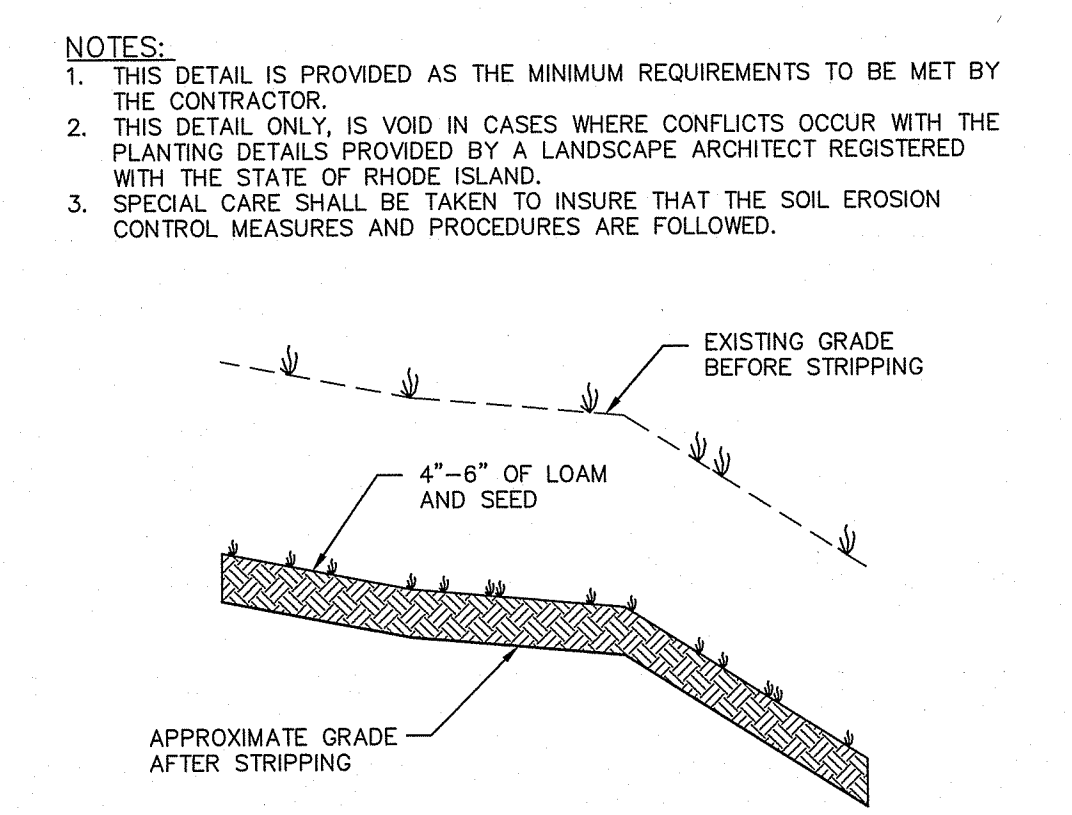
B. SOURCE OF MATERIAL MUST BE OBTAINED FROM AREAS STRIPPED AND CLEANED OF SOIL AND DEBRIS BEFORE BLASTING.

C. MATERIAL COARSER THAN THE 4.75mm (No. 4) SIEVE MUST NOT BE MORE THAN 30 PERCENT, BY MASS (WEIGHT), OF THIN AND/OR ELONGATED PIECES.

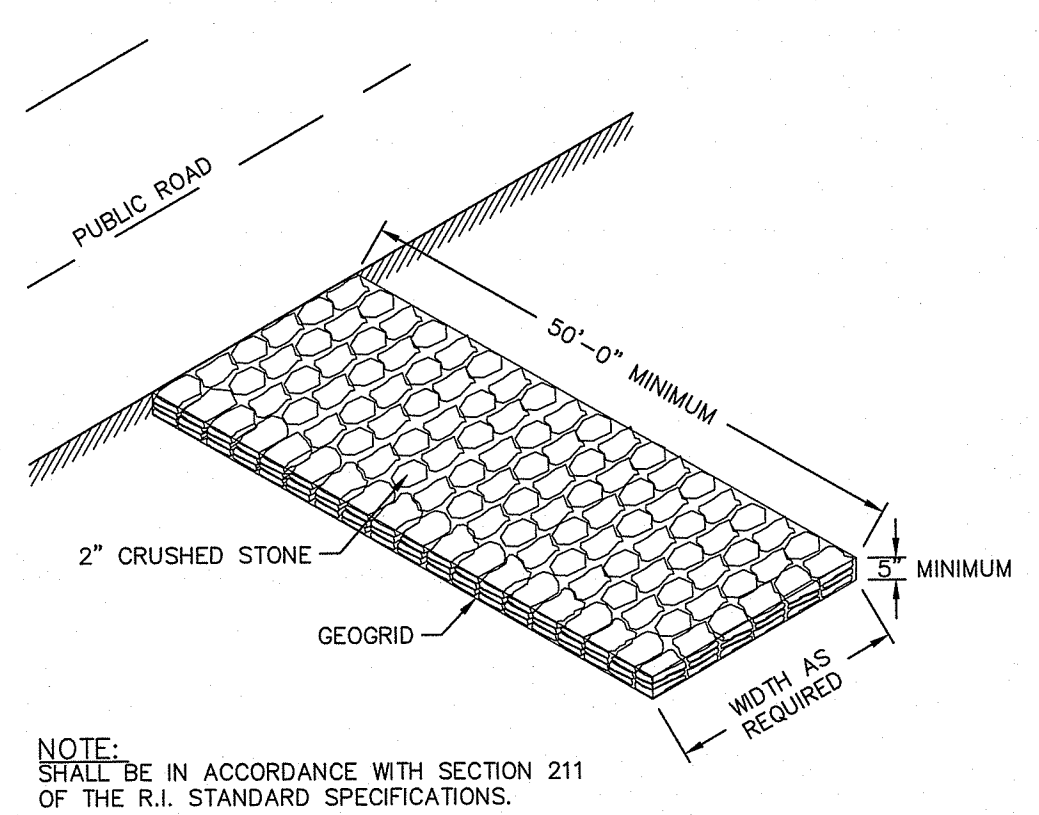
SUBBASE SPECIFICATIONS (WHERE DIRECTED)			
CONDITIONS:	ROAD THICKNESS	STONE SIZE	FINES
SUBBASE LAYER WITH GEOTEXTILE FABRIC (NOT EXCESSIVELY WET)	4" MIN.	3-3 1/2	0-6%
SUBBASE LAYER WITH GEOTEXTILE FABRIC (WET CONDITIONS)	6" MIN.	3-3 1/2	0-6%

- CONSTRUCTION NOTE:**
- CONSTRUCTION OPERATIONS MUST BE CARRIED OUT IN SUCH A MANNER TO MINIMIZE POTENTIAL EROSION AND WATER QUALITY DEGRADATION.
 - FIXED EROSION CONTROLS AND SITE STABILIZATION MUST BE CONDUCTED IN ACCORDANCE WITH APPROVED BMP'S OR PURSUANT TO PROJECT SPECIFIC PERMITS.
 - TREES, STUMPS, ROOTS, BRUSH AND WEEDS MUST BE REMOVED FROM THE WORK AREA IF DETERMINED NECESSARY TO SAFELY CONSTRUCT ROADWAY.
 - ON WEAK BEARING SOIL SUCH AS LOOSE ALLUVIAL OR WETLAND SOILS, SURFACE TREATMENTS SHOULD BE UNDERLAIN WITH WOVEN GEOTEXTILES.
 - AT MINIMUM, ROADSIDE DITCHES MUST BE 1FT BELOW ROAD SURFACE.
 - DISCHARGE POINTS FOR DITCHES MUST NOT BE NEAR WETLANDS OR STREAMS AND OR BE LOCATED AT THE DIRECTION OF THE DESIGN ENGINEER.
 - CONTRACTOR TO INSTALL GRAVEL REINFORCEMENT GRID AS NECESSARY TO PREVENT EROSION AND/OR VEHICULAR DAMAGE TO THE ACCESS ROAD.

Crushed Stone Access Path Detail
NOT TO SCALE



Re-Establishment Of Vegetative Cover (Area Of Topsoil Stripping)
NOT TO SCALE



Construction Access
NOT TO SCALE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JUN 25 2020 FILE # 20-0018
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
PROVED BY ANS MUST BE AT CONSTRUCTION SITE

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
Tel: 401-943-0000 Fax: 401-664-0006 www.diprete-eng.com

Boston Providence Newport

KEVIN DEMERS
REGISTERED PROFESSIONAL ENGINEER CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'issued for construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
1	11/27/2019	ISSUE PERMITS TO COMMENTS	KLD
2	1/21/2020	COORDINATION	KLD
3	1/24/2020	INTERCOMMISSION REVIEW	KLD
4	1/24/2020	PERMITTING SUBMISSION	KLD
5	1/24/2020	DESIGN DEVELOPMENT PHASE	KLD
6	1/24/2020	DESIGN DEVELOPMENT PHASE	KLD

Design By: KLD

Detail Sheet

Cumberland Quarry Solar
Cumberland, Rhode Island

Client: **Ameresco, Inc.**
111 Spleen Street, Suite 411, Frammingham, MA 01701

DATE: JUN 25 2020

SHEET 9 OF 9