# Site Plans

Application Issued for Date Issued December 2, 2019 July 28, 2020 Latest Issue

# Photovoltaic Installation

117 Oil Mill Road Waterford, Connecticut

### **Applicant**

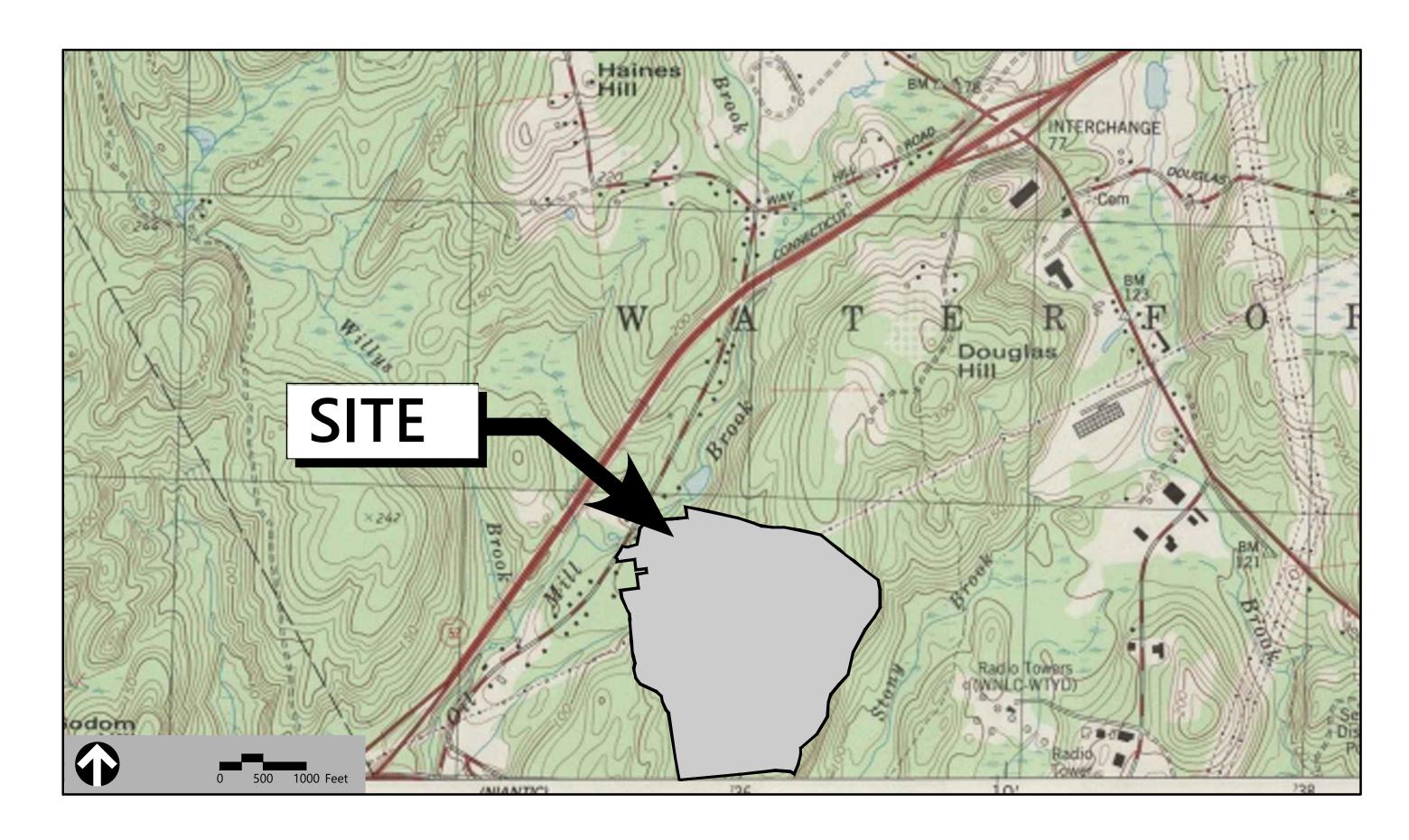
GRE Gacrux, LLC 10 Main Street, Suite E Middletown, CT 06457

### Map / Lot: 80 / 5497

### Owner

Rosalie Irene Maguire & Todd Carl Willis 149 Watson Road Preston, CT 06365

### Attachment B





No.	Drawing Title	Latest Issue
C-1	Legend and General Notes	July 28, 202
C-2	Key Plan	July 28, 202
C-3.0	Layout and Materials Plan - Overall	July 28, 202
C-3.1-3.12	Layout and Materials Plan	July 28, 202
C-4.0	Grading and Drainage Plan - Overall	July 28, 202
C-4.1-4.12	Grading and Drainage Plan	July 28, 202
C-5.0	Erosion and Sediment Control Plan - Overall	July 28, 202
C-5.1-5.12	Erosion and Sediment Control Plan	July 28, 202
C-6.1-6.2	Site Details	July 28, 202

	Refe	erence Drawings	
<b>e</b>	No.	Drawing Title	Latest Issue
20	Sheets	1 & 2 Property Survey	February 22, 201

Exist.	Prop.		Exist.	Prop.	
		PROPERTY LINE			CONCRETE
		PROJECT LIMIT LINE		4.5 1.5 % 1.5	HEAVY DUTY PAVEMENT
		RIGHT-OF-WAY/PROPERTY LINE			BUILDINGS
					RIPRAP
		EASEMENT SETTINGS	<u> </u>		CONSTRUCTION EXIT
		BUILDING SETBACK		///// 	CONSTRUCTION EXIT
10+00	10+00	PARKING SETBACK	27.35 TC×	27.35 TC×	TOP OF CURB ELEVATION
		BASELINE	26.85 BC×	26.85 BC×	BOTTOM OF CURB ELEVATION
		CONSTRUCTION LAYOUT	132.75 ×	132.75 ×	SPOT ELEVATION
		ZONING LINE	45.0 TW × 38.5 BW	45.0 TW × 38.5 BW	TOP & BOTTOM OF WALL ELEVATIO
		TOWN LINE		30.3 BW	BORING LOCATION
		LIMIT OF DISTURBANCE			TEST PIT LOCATION
·		WETLAND LINE WITH FLAG	→ MW	☐ MW	MONITORING WELL
		FLOODPLAIN			MONTONING WEEL
		100-YEAR FLOOD LIMITS	——UD ——	——UD——	UNDERDRAIN
		100 TEARTEOOD EIIVIITS	12"D	12″D→	DRAIN
		GRAVEL ROAD	6™RD	6″RD>	ROOF DRAIN
EOP	EOP		12"S	1 <u>2"</u> S	SEWER
BB	BB	EDGE OF PAVEMENT	FM	<u>FM</u>	FORCE MAIN
BC	BC	BITUMINOUS BERM	OHW	——ОНW——	OVERHEAD WIRE
		BITUMINOUS CURB	6"W	6 <b>"</b> W	WATER
CC	CC CG	CONCRETE CURB	4"FP	4*FP	FIRE PROTECTION
		CURB AND GUTTER		2*DW	DOMESTIC WATER
CC	<u>ECC</u>	EXTRUDED CONCRETE CURB	3°G	G	GAS
CC	MCC	MONOLITHIC CONCRETE CURB	E	——Е—	ELECTRIC
CC	PCC	PRECAST CONC. CURB	STM	——STM——	STEAM
SGE	<u>SGE</u>	SLOPED GRAN. EDGING	T	т	TELEPHONE
VGC	<u>VGC</u>	VERT. GRAN. CURB	FA	FA	FIRE ALARM
,		LIMIT OF CURB TYPE		—— CATV——	
		SAWCUT	CATV	— CATV	CABLE TV
Y/	<u> </u>			<b>III</b>	CATCH BASIN
11111111		BUILDING			DOUBLE CATCH BASIN
	<b>]</b> EN	BUILDING ENTRANCE	<b>633</b> 0	<del></del>	GUTTER INLET
	<b>j</b> ∢⊔	LOADING DOCK	<b>(D)</b>	•	DRAIN MANHOLE
*		BOLLARD	=TD=	<del>:::::::::::::::::::::::::::::::::::::</del>	TRENCH DRAIN
D	D	DUMPSTER PAD	Γ	r	PLUG OR CAP
-	<del>-</del>	SIGN	CO	co	CLEANOUT
<b>⇒</b>	<b>=</b>	DOUBLE SIGN	<b>&gt;</b>	<b>&gt;</b>	FLARED END SECTION
			_		HEADWALL
7 7		STEEL GUARDRAIL			
		WOOD GUARDRAIL	(\$)	•	SEWER MANHOLE
			CS	ĈS <b>●</b>	CURB STOP & BOX
		PATH	WV	₩V ●	WATER VALVE & BOX
	~~~~	TREE LINE	TSV	TSV	
× ×	-× ×	WIRE FENCE	<del></del>	<b>→</b>	TAPPING SLEEVE, VALVE & BOX
·	•	FENCE	HYD	HYD	SIAMESE CONNECTION
	-	STOCKADE FENCE	WM	<b>⊚</b> • WM	FIRE HYDRANT
XXXXXXX		STONE WALL	PIV	⊡ PIV	WATER METER
		RETAINING WALL	0	•	POST INDICATOR VALVE
		STREAM / POND / WATER COURSE	<b>W</b>		WATER WELL
		DETENTION BASIN	GG	GG O	GAS GATE
0 0 0 0 0 0 0 0		HAY BALES	GM ⊡	GM ⊡	GAS METER
		SILT FENCE	Ē	EMH	ELECTRIC MANILLOLF
		SILT FENCE SILT SOCK / STRAW WATTLE	EM	EM	ELECTRIC MANHOLE
` '	· · · · · · · · · · · · · · · · · · ·	SILI SOCK / STIVAVV VVALILE	_	<u>.</u>	ELECTRIC METER
4	—— 4 ——	MINOR CONTOUR	<b>‡</b>	<b>*</b>	LIGHT POLE
20	20	MAJOR CONTOUR	(1)	<b>●</b> TMH	TELEPHONE MANHOLE
(10)	(10)	DADKING COLINIT	T	T	TRANSFORMER PAD
W	_	PARKING COUNT		•	
DM	©10)	COMPACT PARKING STALLS	-0-	<del></del>	UTILITY POLE
DYL	DYL	DOUBLE YELLOW LINE	0-	<b>•</b> -	GUY POLE
SL	SL	STOP LINE	Ţ	<u> </u>	GUY WIRE & ANCHOR
		CROSSWALK	HH ©	HH ©	HAND HOLE
		ACCESSIBLE CURB RAMP	PB ⊡	PB ⊡	PULL BOX
E.	<u> </u>	ACCESSIBLE PARKING	Mate	chline	MATCHUNE
E	E.	VAN-ACCESSIBLE PARKING		<u></u>	MATCHLINE
C+	C.F	AULA MCCESSIDEE LALVILLA			

A I		• .		
Ab	brev	/ıatı	on	S

	Abbreviations
General	
ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
BIT	BITUMINOUS
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EX	EXISTING
FDN	FOUNDATION
FFE	FIRST FLOOR ELEVATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TS	TOP OF SLOPE
TYP	TYPICAL
Utility	
СВ	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
FM	FORCE MAIN
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
НН	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
l=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PIV	POST INDICATOR VALVE
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE

#### Notes

#### General

- CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" (811 OR 1-800-922-4455) AT LEAST 72 HOURS BEFORE EXCAVATING.
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
- 3. WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS.
- 4. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
- 5. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S
- 6. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
- 7. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
- 8. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
- 9. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
- 10. THIS PROJECT DISTURBS MORE THAN FIVE ACRES OF LAND AND WILL REQUIRE ADHERENCE TO AND REGISTRATION FOR THE CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATERS FROM CONSTRUCTION ACTIVITIES, EFFECTIVE OCTOBER 1, 2019.
- 11. STAGING AND STOCKPILE AREAS SHALL NOT BE LOCATED WITHIN ANY WETLAND AND ABUTTING RESOURCE AREA AND SHALL BE LOCATED WITHIN THE LIMITS OF DISTURBANCE.

#### Utilities

- 1. THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR IT'S REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.
- 2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.
- 3. RIM ELEVATIONS FOR DRAIN AND SEWER MANHOLES, WATER VALVE COVERS, GAS GATES, ELECTRIC AND TELEPHONE PULL BOXES, AND MANHOLES, AND OTHER SUCH ITEMS, ARE APPROXIMATE AND SHALL BE SET/RESET AS FOLLOWS:
  - A. PAVEMENTS AND CONCRETE SURFACES: FLUSH
  - B. ALL SURFACES ALONG ACCESSIBLE ROUTES: FLUSH
  - C. LANDSCAPE, LOAM AND SEED, AND OTHER EARTH SURFACE AREAS: ONE INCH ABOVE SURROUNDING AREA AND TAPER EARTH TO THE RIM ELEVATION.
- 4. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). FINAL DESIGN LOADS AND LOCATIONS TO BE COORDINATED WITH OWNER AND ARCHITECT.
- 5. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR AND SHALL BE RESPONSIBLE FOR PAYING FEES FOR POLE RELOCATION AND FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES, WHETHER WORK IS PERFORMED BY CONTRACTOR OR BY THE UTILITIES COMPANY.
- 6. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND SHALL FURNISH EXCAVATION, INSTALLATION, AND BACKFILL OF ELECTRICAL FURNISHED SITEWORK RELATED ITEMS SUCH AS PULL BOXES, CONDUITS, DUCT BANKS, LIGHT POLE BASES, AND CONCRETE PADS. SITE CONTRACTOR SHALL FURNISH CONCRETE ENCASEMENT OF DUCT BANKS IF REQUIRED BY THE UTILITY COMPANY AND AS INDICATED ON THE DRAWINGS.

#### Layout and Materials

- PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.
- 2. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL 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.
- 3. FINAL LAYOUT SUBJECT TO CONDITIONS ENCOUNTERED IN THE FIELD.

#### Demolition

- 1. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
- 2. THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE WORK.
- 3. UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. MOREOVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.

#### osion Control

- 1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
- 2. CONTRACTOR OR QUALIFIED INSPECTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS OR MORE FREQUENTLY AS NEEDED, (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY-FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
- 3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.

- 4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED
- 5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.
- 6. VEGETATIVE SLOPE STABILIZATION WILL BE IMPLEMENTED WITHIN 72 HOURS AFTER GRADING OR CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. VEGETATIVE SLOPE STABILIZATION WILL BE USED TO MINIMIZE EROSION ON SLOPES OF 3:1 OR STEEPER. ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER MAY BE ESTABLISHED BY HYDRO-SEEDING OR SODDING. A SUITABLE TOPSOIL, GOOD SEEDBED PREPARATION, AND ADEQUATE LIME, FERTILIZER AND WATER WILL BE PROVIDED FOR EFFECTIVE ESTABLISHMENT OF THESE VEGETATIVE STABILIZATION METHODS. MULCH WILL ALSO BE USED AFTER PERMANENT SEEDING TO PROTECT SOIL FROM THE IMPACT OF FALLING RAIN AND TO INCREASE THE CAPACITY OF THE SOIL TO ABSORB WATER.

#### Document Use

- 1. THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN FOR WHICH IT WAS CREATED WITHOUT THE EXPRESSED, WRITTEN CONSENT OF VHB. ANY UNAUTHORIZED USE, REUSE, MODIFICATION OR ALTERATION, INCLUDING AUTOMATED CONVERSION OF THIS DOCUMENT SHALL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO VHB.
- 2. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
- 3. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.



100 Great Meadow Road Suite 200 Wethersfield, CT 06109 860.807.4300

### **Photovoltaic Installation**

117 Oil Mill Road Waterford, Connecticut

No.	Revision	Date	Appvd
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

Designed by

Checked by

Issued for Date

Application

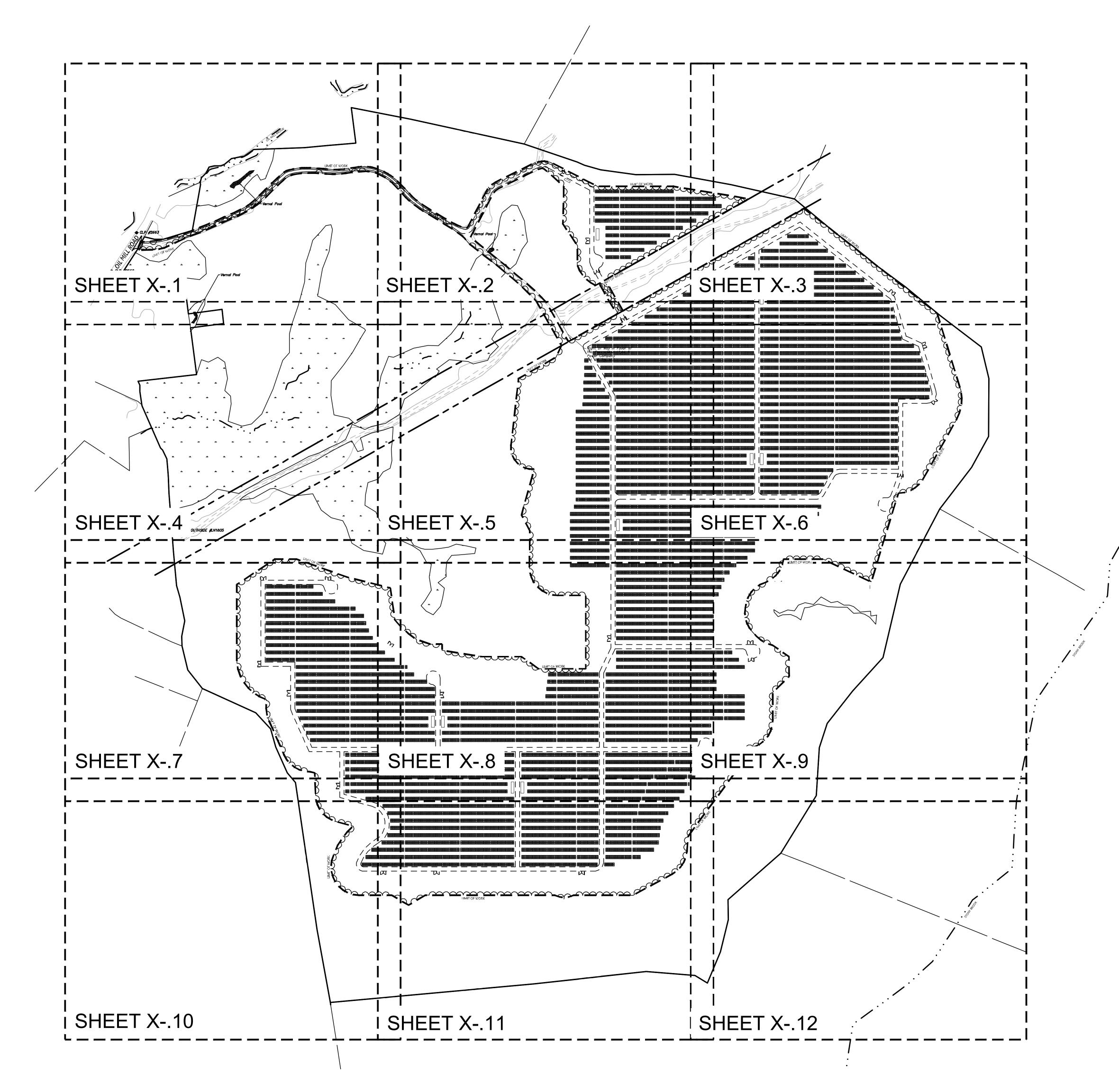
December 2, 2019

Not Approved for Construction

Legend and General Notes

Drawing Number

**C**-1









### Photovoltaic Installation

117 Oil Mill Road Waterford, Connecticut

No.	Revision	Date	Appvd.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

Issued for	Date
Designed by	Checked by

Not Approved for Construction

Key Plan

Drawing Number

C-2

2 43

#### PROJECT INFORMATION

PARCEL SIZE: ±152 ACRES

ZONE DESIGNATION: RU-120 RURAL RESIDENTIAL

LIMIT OF WORK: ±75 ACRES

AREA OF PROPOSED TREE CLEARING: ±75 ACRES (PRE-TIMBER HARVEST)

NON-DISTURBANCE BUFFER TO WETLANDS: > 100'

PROPOSED NUMBER OF PANELS: 45,566

PANEL TYPE: JINKO SOLAR EAGLE HC 72M G2 400W

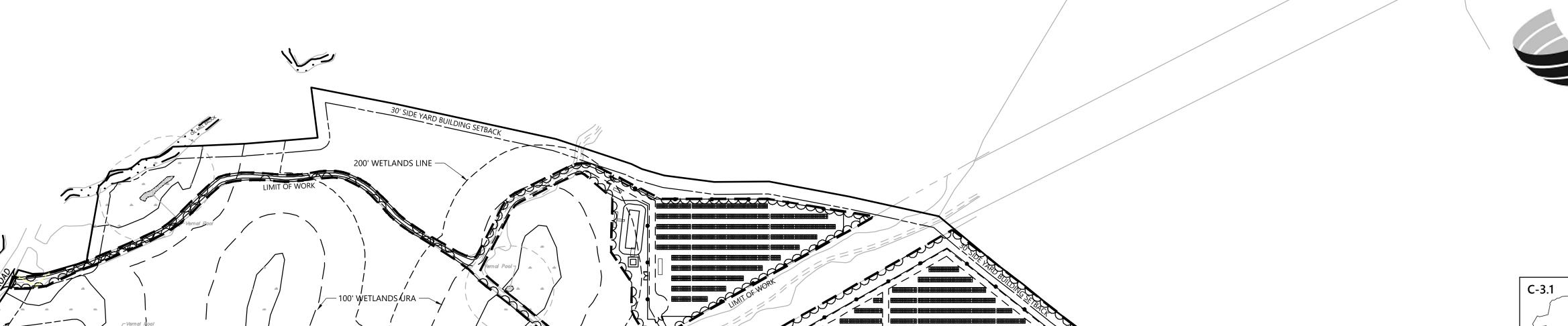
ROW SPACING: 14.5' CLEAR

TILT ANGLE: 25°

INVERTER TYPE: SOLECTRIA RENEWABLES XGI 1000-60/65

SYSTEM POWER: 18.23 MW-DC / ±15.33 MW-AC

50' FRONT YARD BUILDING SETBACK





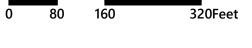
100 Great Meadow Road Suite 200 Wethersfield, CT 06109 860.807.4300

		_
C-3.1	C-3.2	C-3.3
C-3.4	C-3.5	C-3.6
C-3.7	C-3.8	C-3.9
C-3.10	C-3.11	C-3.12
		$\int$

Key

Not To Scale





### **Photovoltaic Installation**

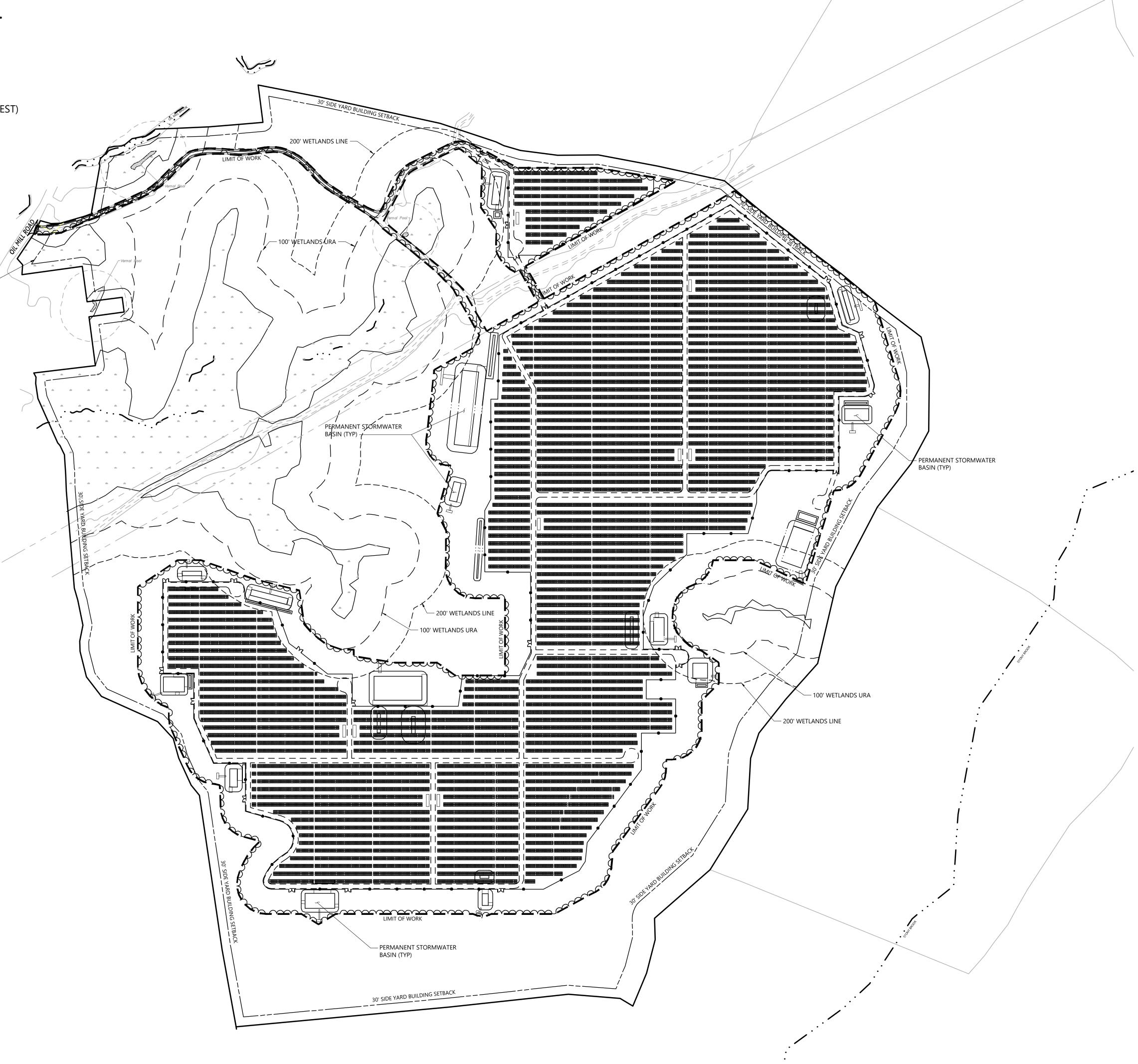
117 Oil Mill Road Waterford, Connecticut

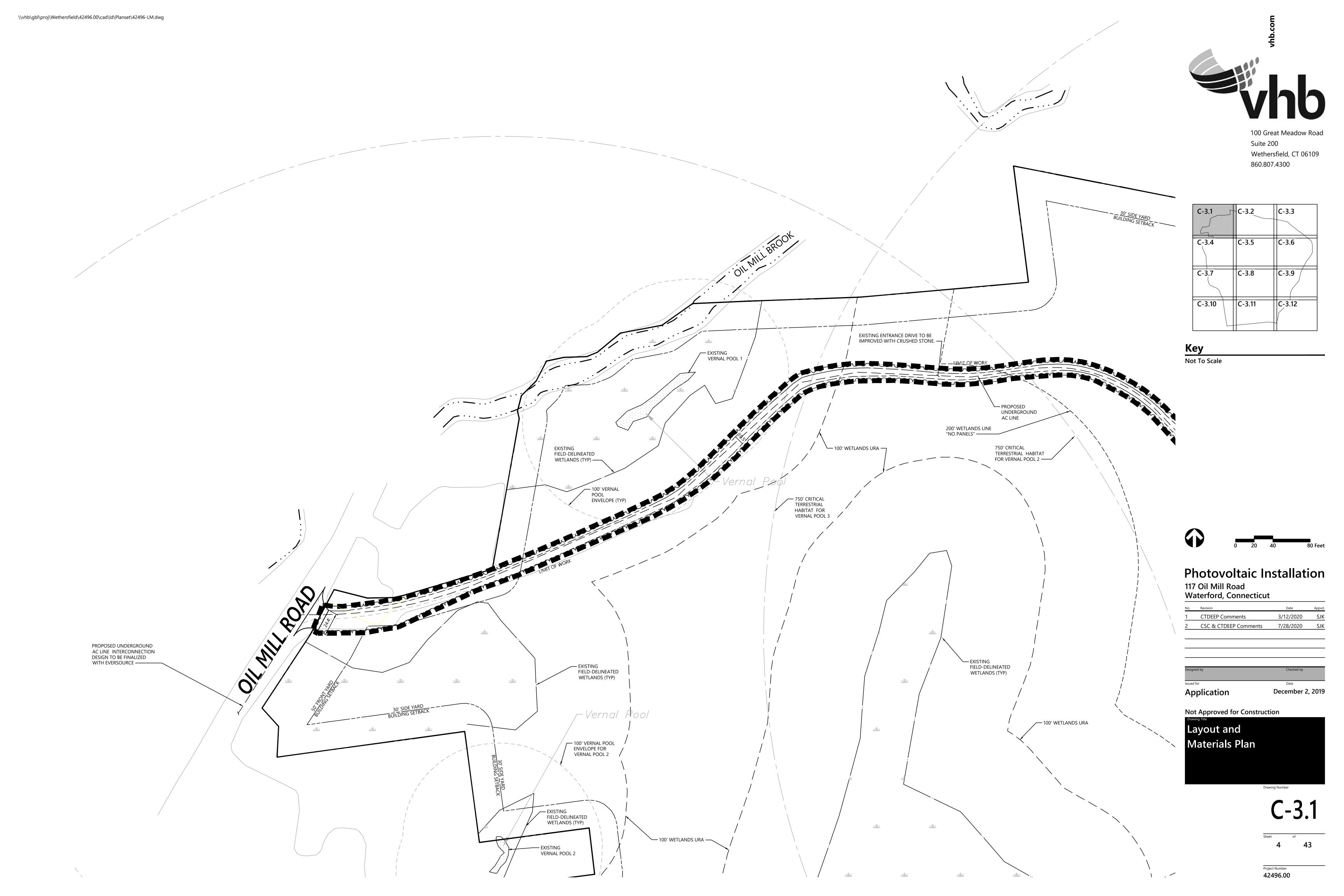
No.	Revision	Date	Appvd.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

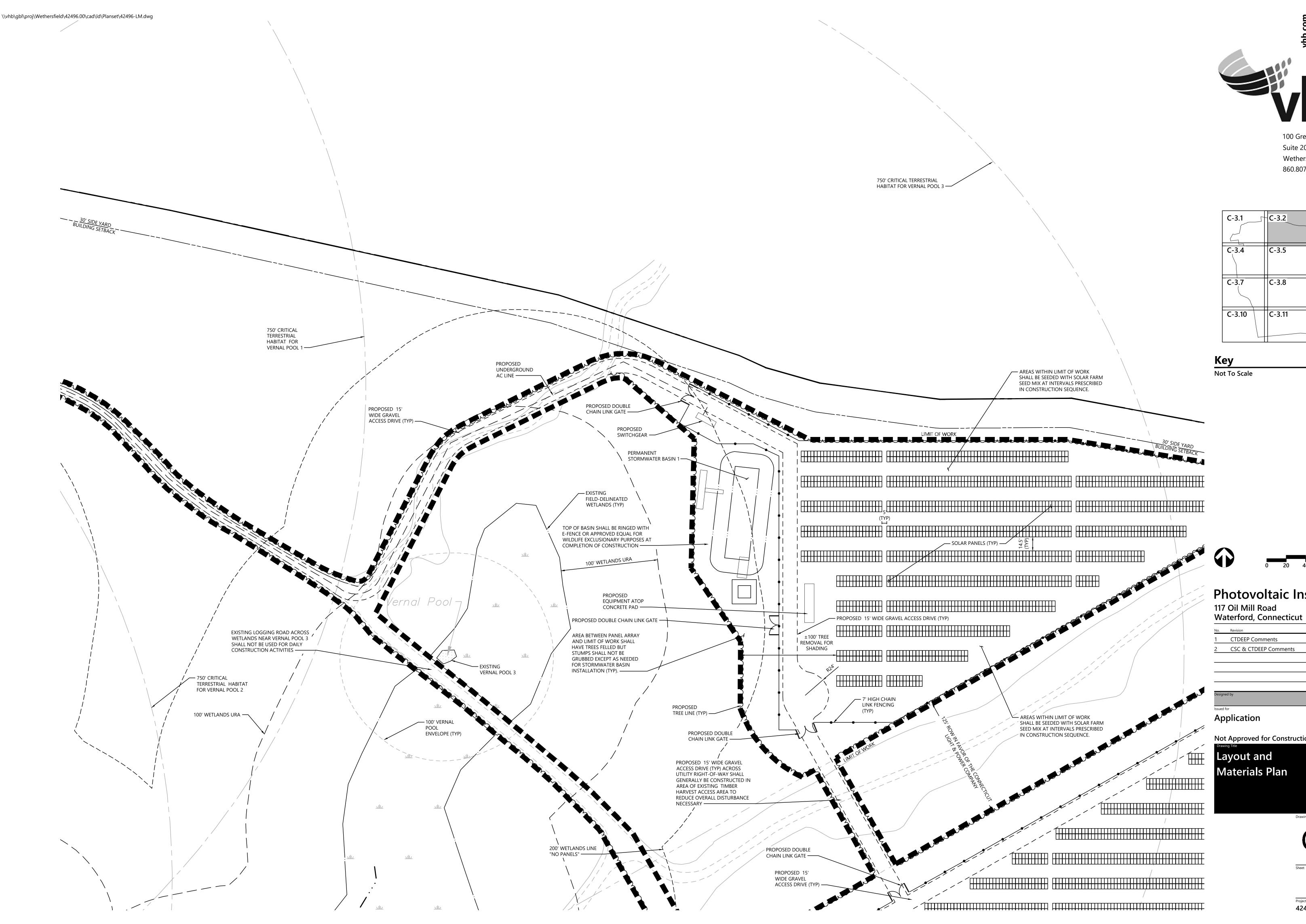
December 2, 2019 **Application** 

Not Approved for Construction

Layout and **Materials Plan - Overall** 









Suite 200

860.807.4300

100 Great Meadow Road

Wethersfield, CT 06109

			_
C-3.1	1	C-3.2	C-3.3
C-3.4		C-3.5	C-3.6
C-3.7		C-3.8	C-3.9
C-3.10		C-3.11	C-3.12
			$\int$

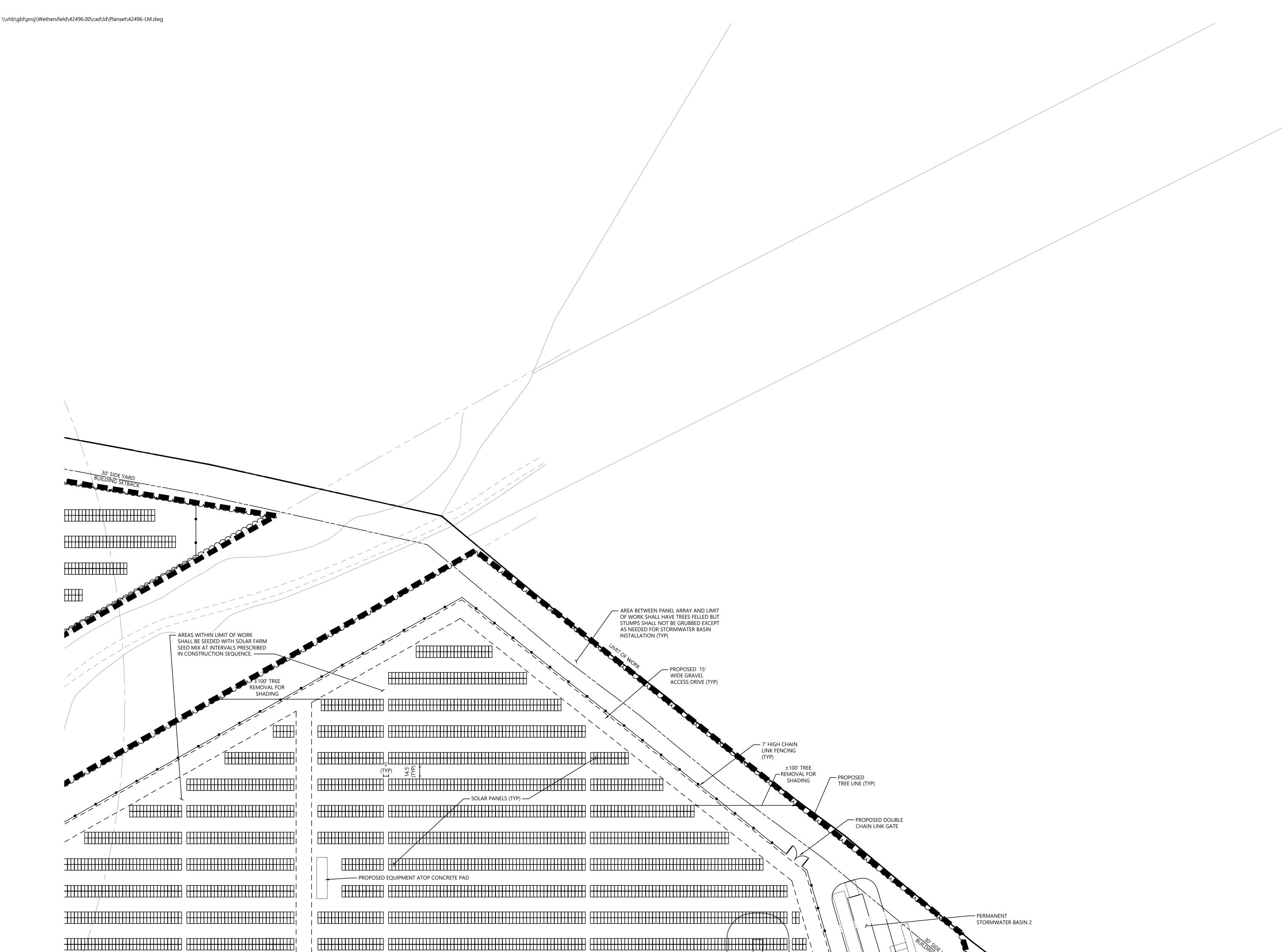


No.	Revision	Date	Appvd.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

December 2, 2019

Not Approved for Construction

Layout and **Materials Plan** 





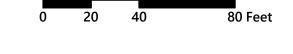
100 Great Meadow Road Suite 200 Wethersfield, CT 06109 860.807.4300

C-3.1	C-3.2	C-3.3
C-3.4	C-3.5	C-3.6
C-3.7	C-3.8	C-3.9
C-3.10	C-3.11	C-3.12

Key

Not To Scale





### Photovoltaic Installation

117 Oil Mill Road Waterford, Connecticut

opvd.
SJK
SJK
•

Designed by

Checked by

Issued for Date

Application

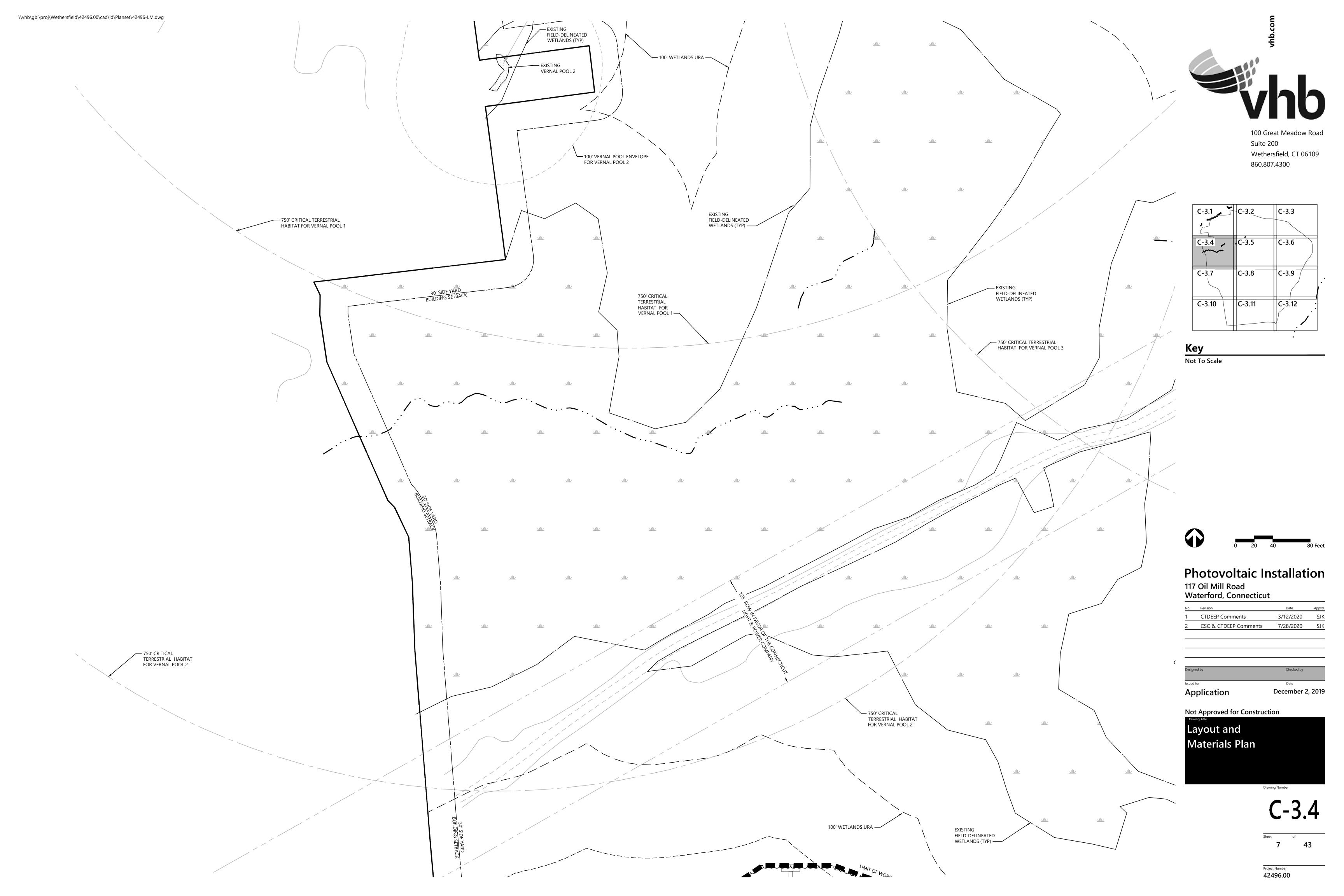
December 2, 2019

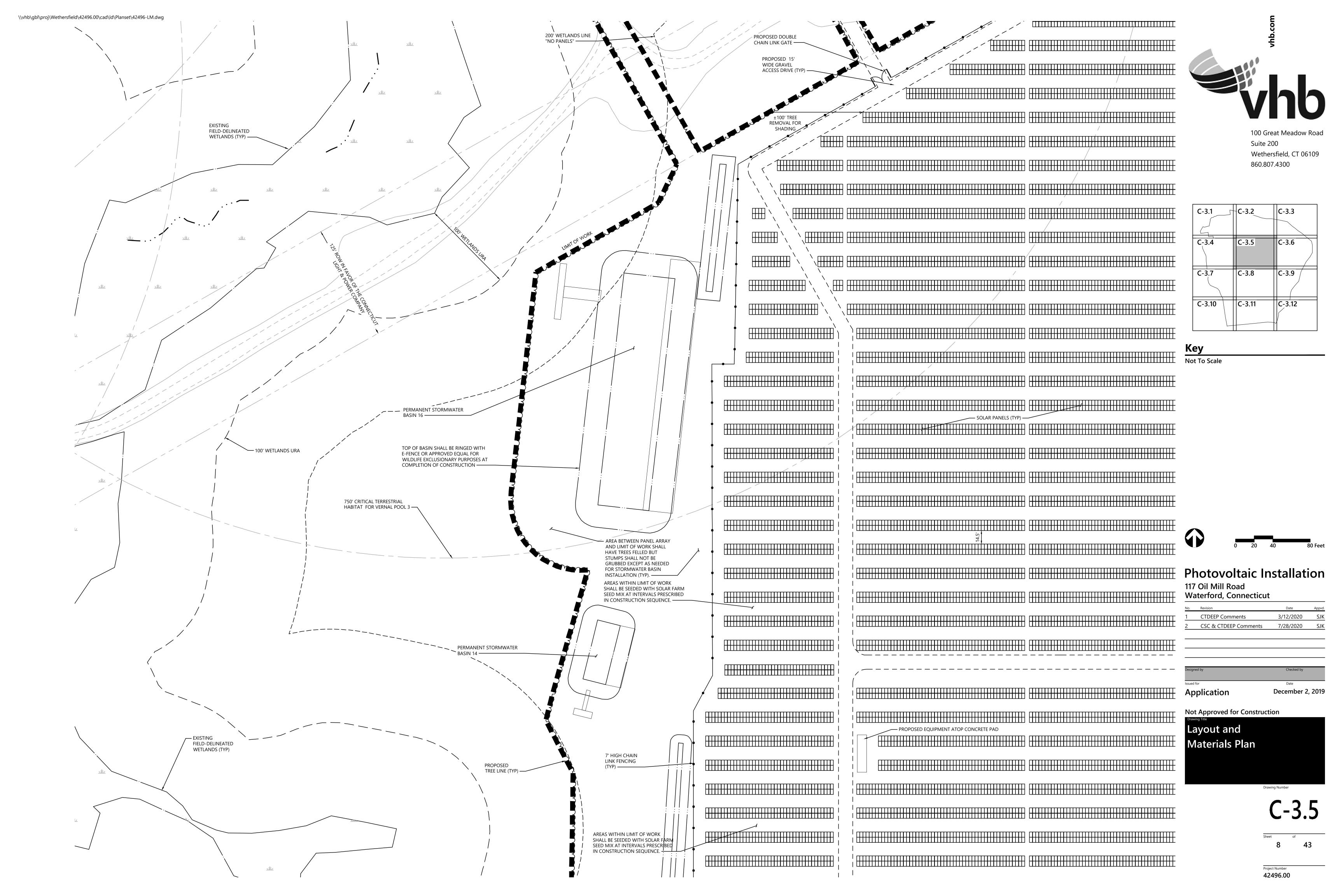
Not Approved for Construction

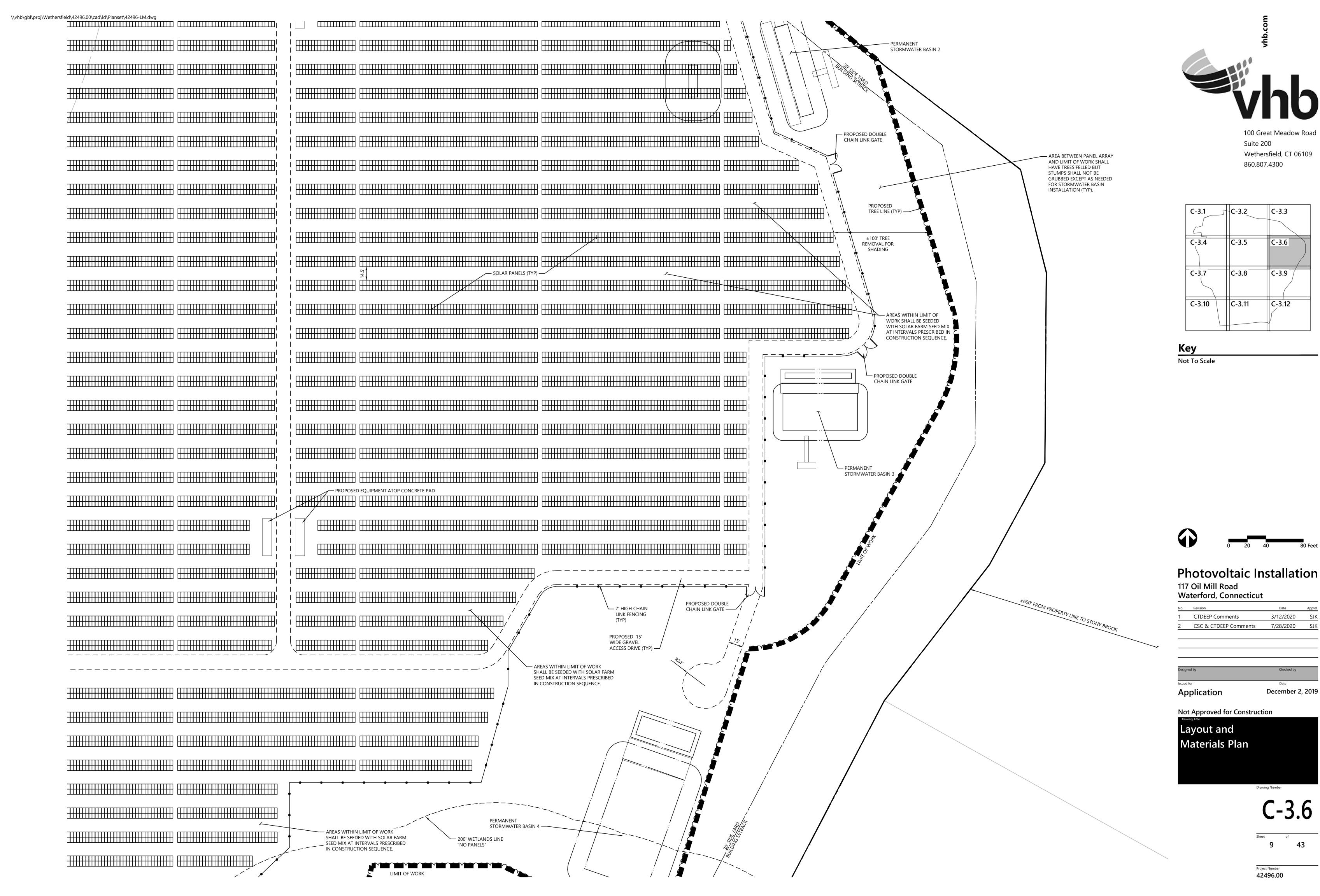
Layout and Materials Plan

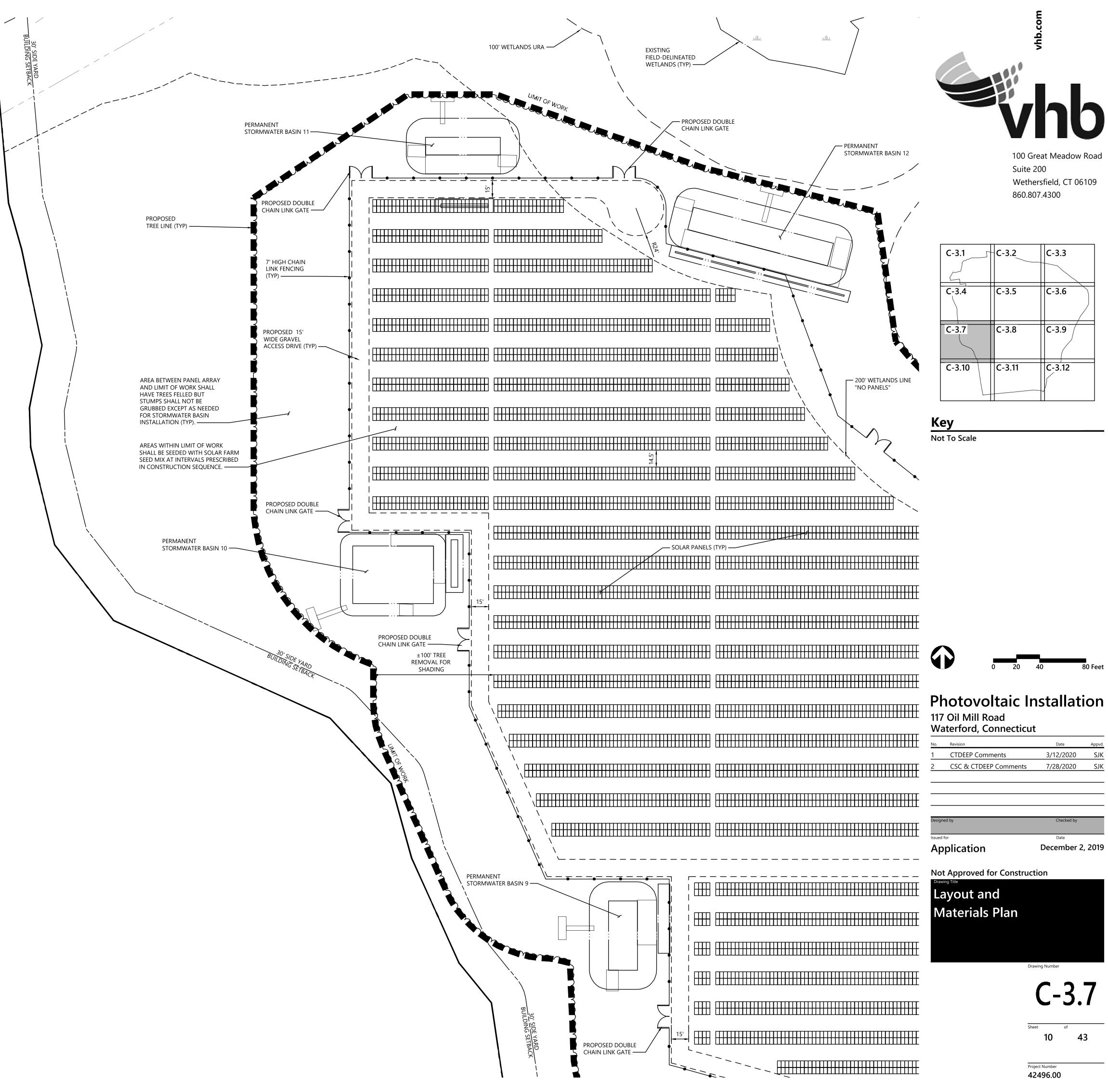
C-3.3

6 43





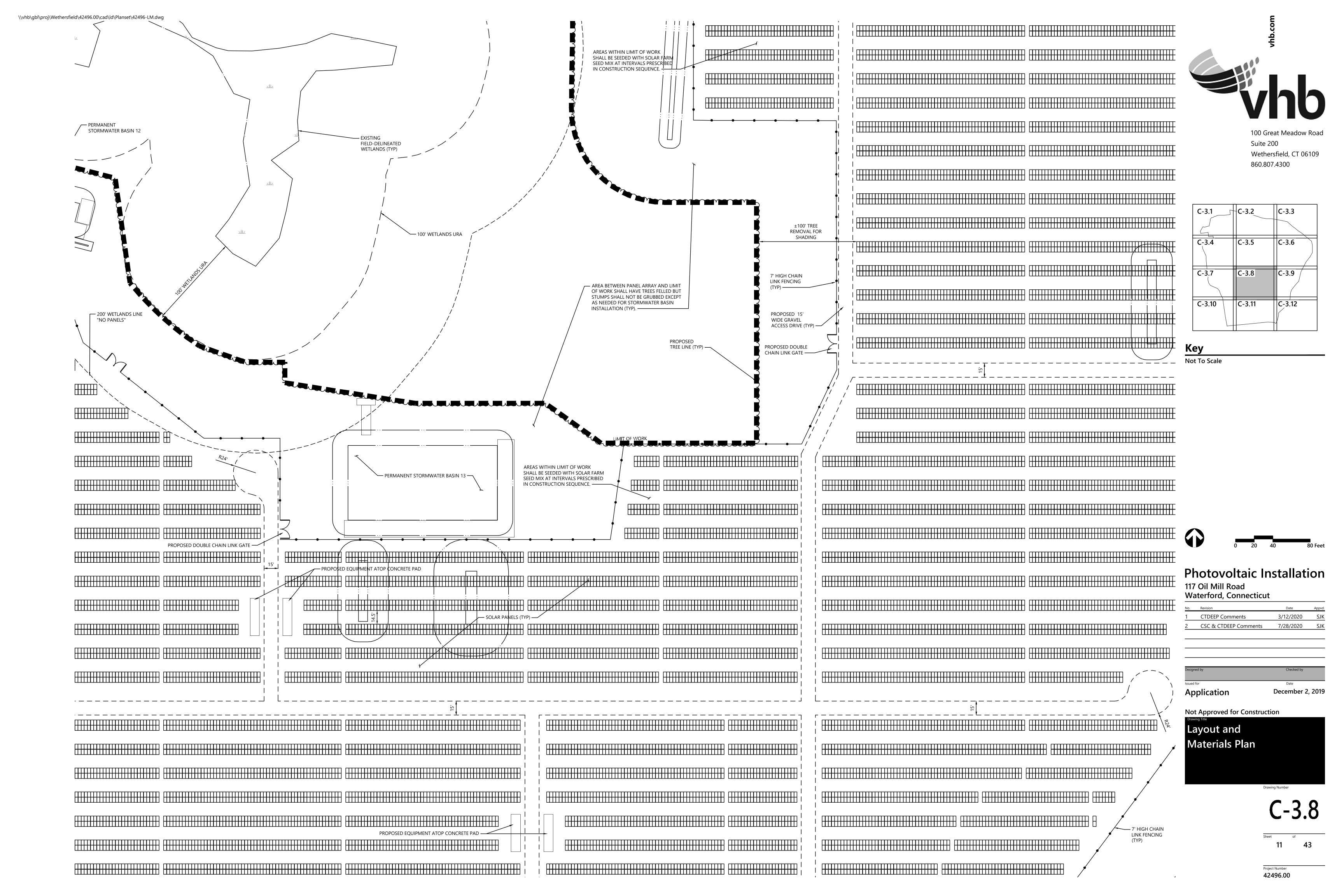


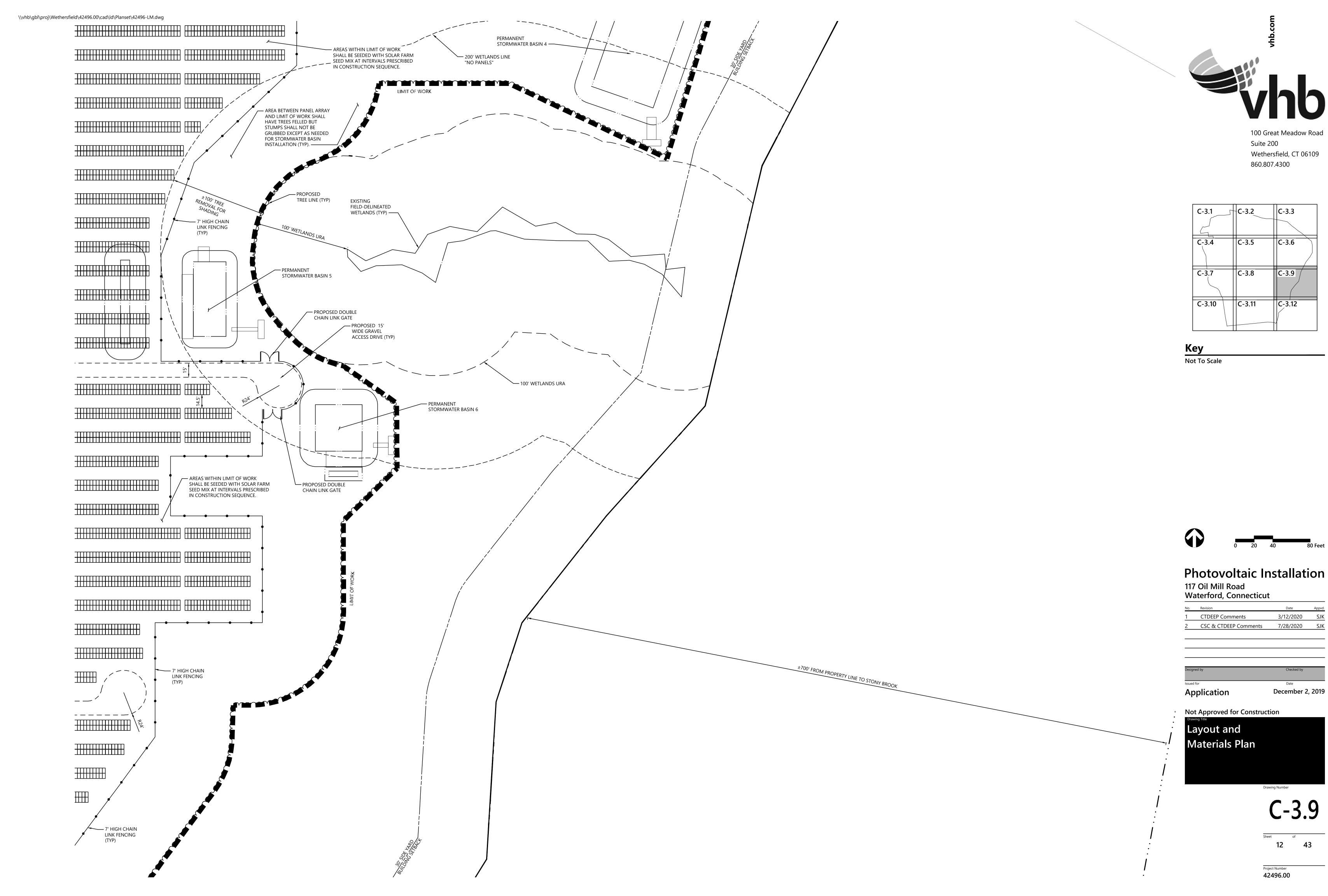




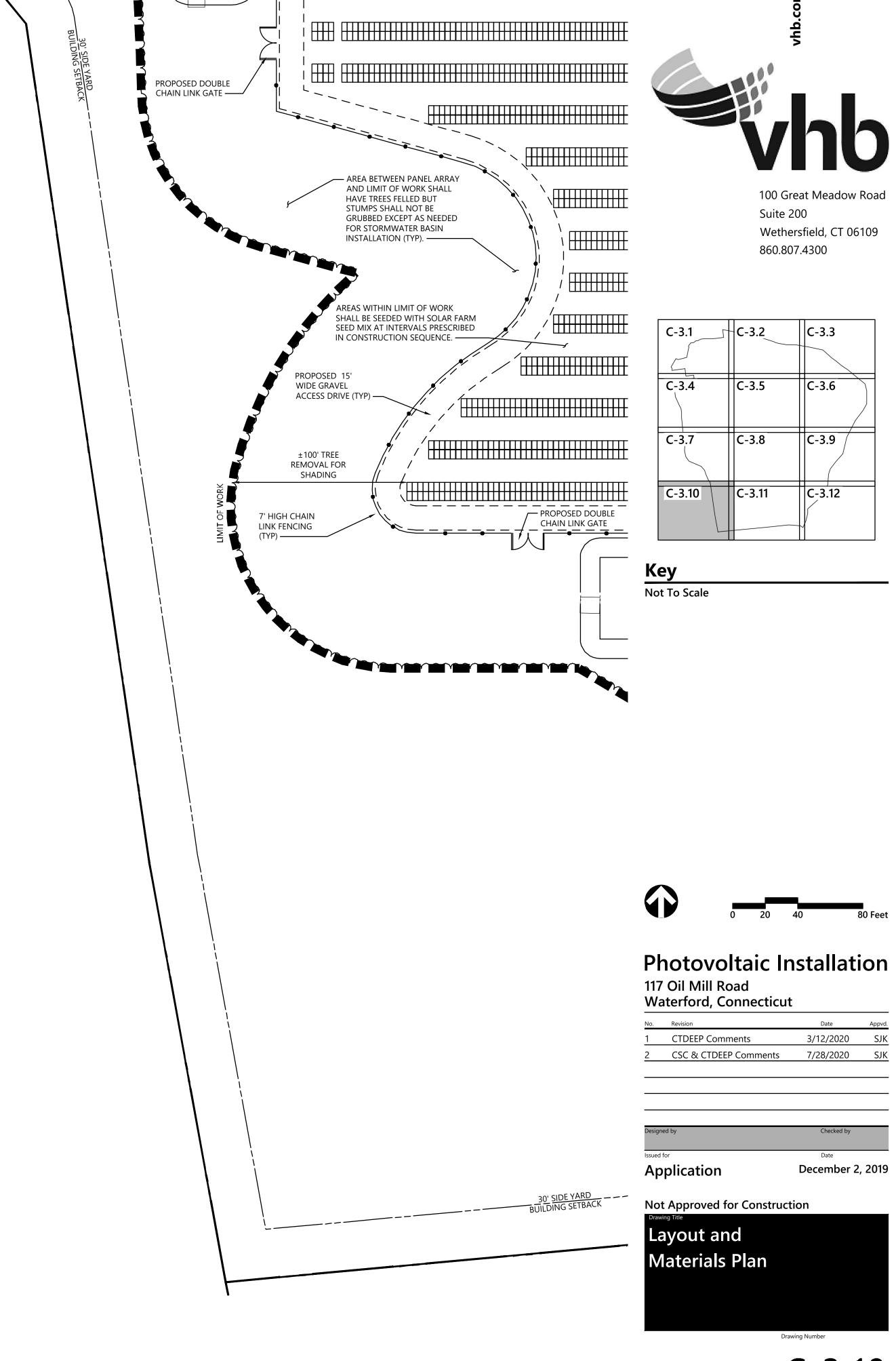


3/12/2020 SJK CSC & CTDEEP Comments 7/28/2020 SJK



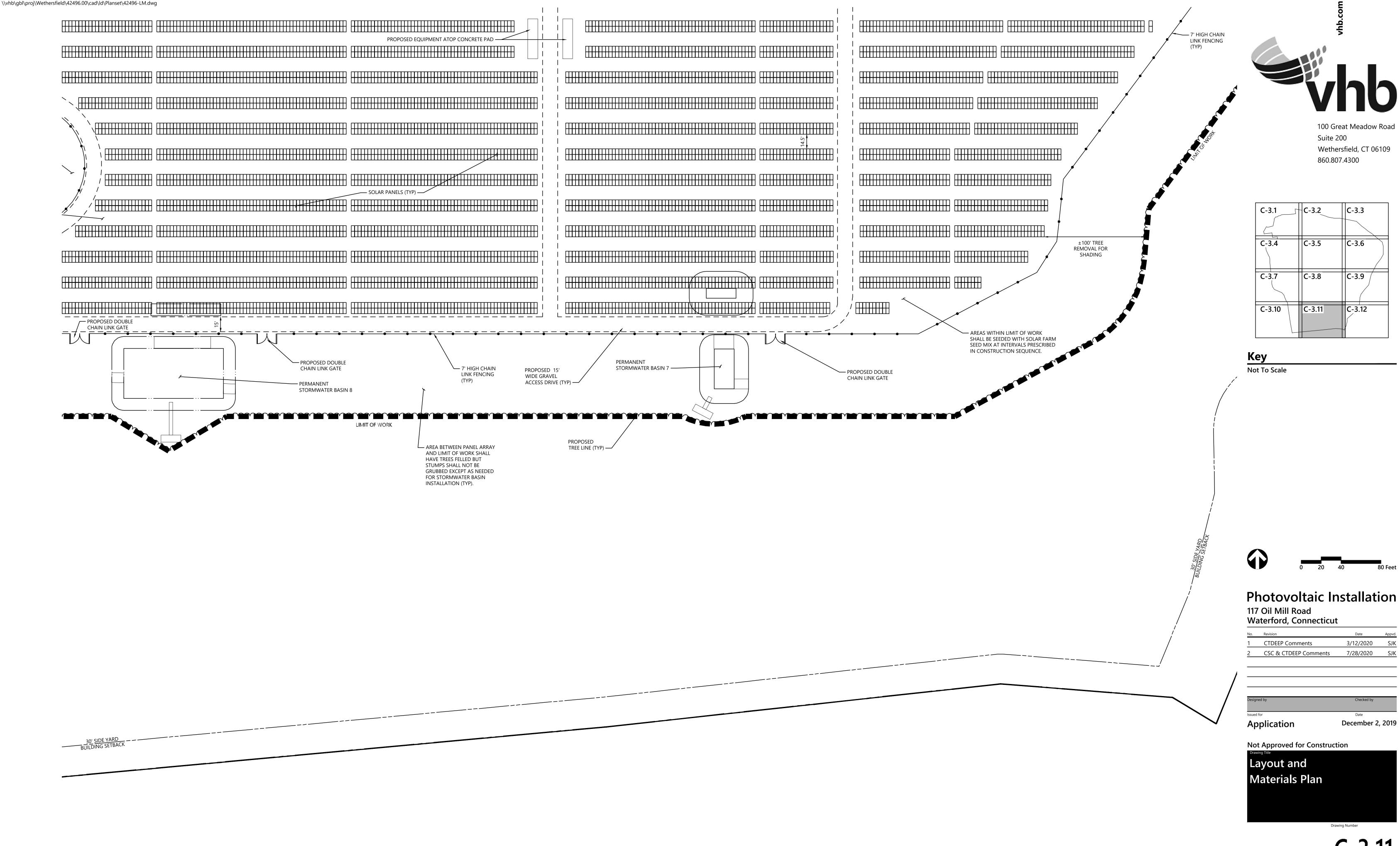


\\vhb\gbl\proj\Wethersfield\42496.00\cad\ld\Planset\42496-LM.dwg



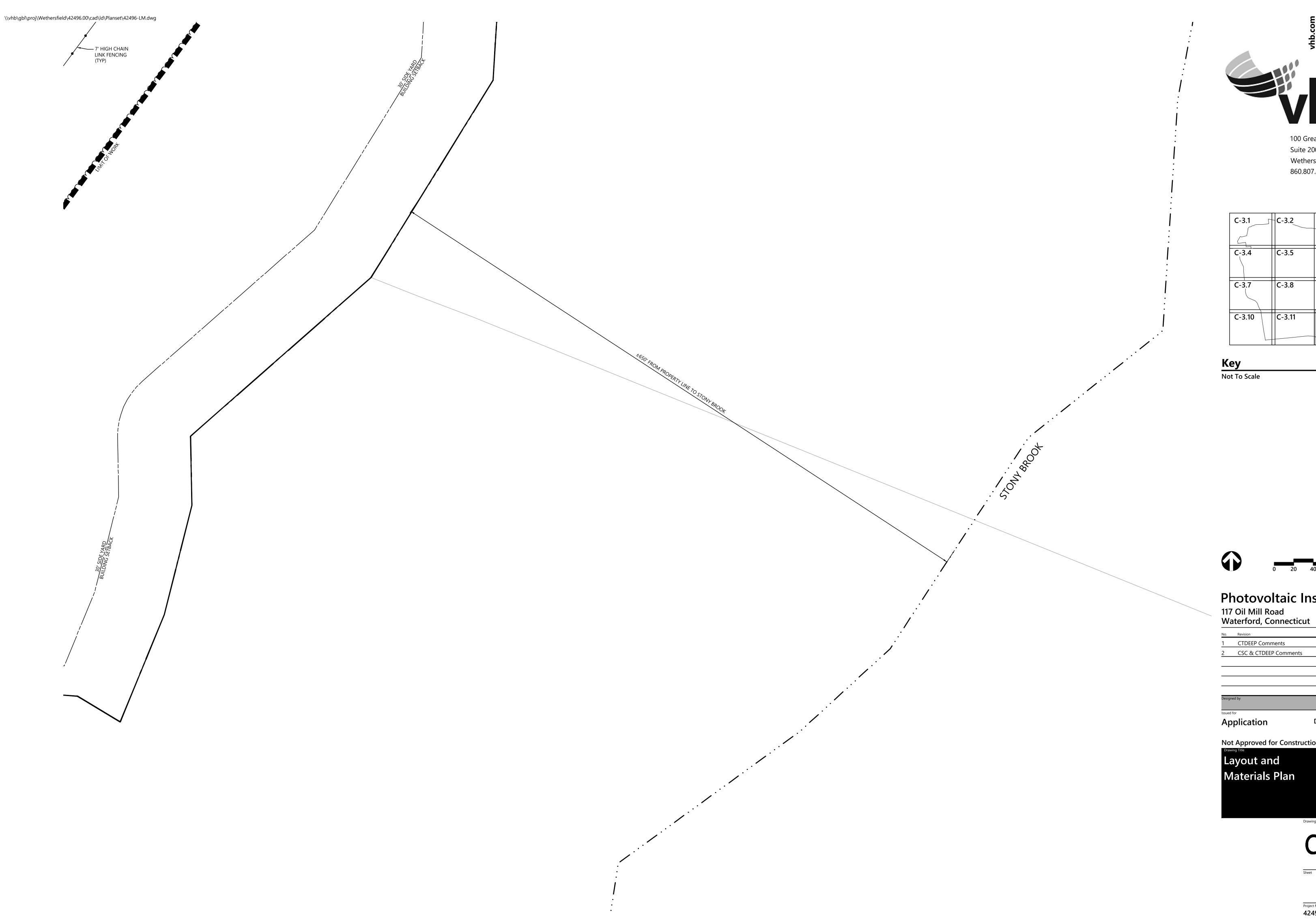
C-3.10

Sheet of **13 43** 



C-3.11

.. ..



C-3.1	7	C-3.2	C-3.3
C-3.4		C-3.5	C-3.6
C-3.7	Ŧ	C-3.8	C-3.9
C-3.10	T	C-3.11	C-3.12
	C-3.4	C-3.4	C-3.4 C-3.5 C-3.7 C-3.8

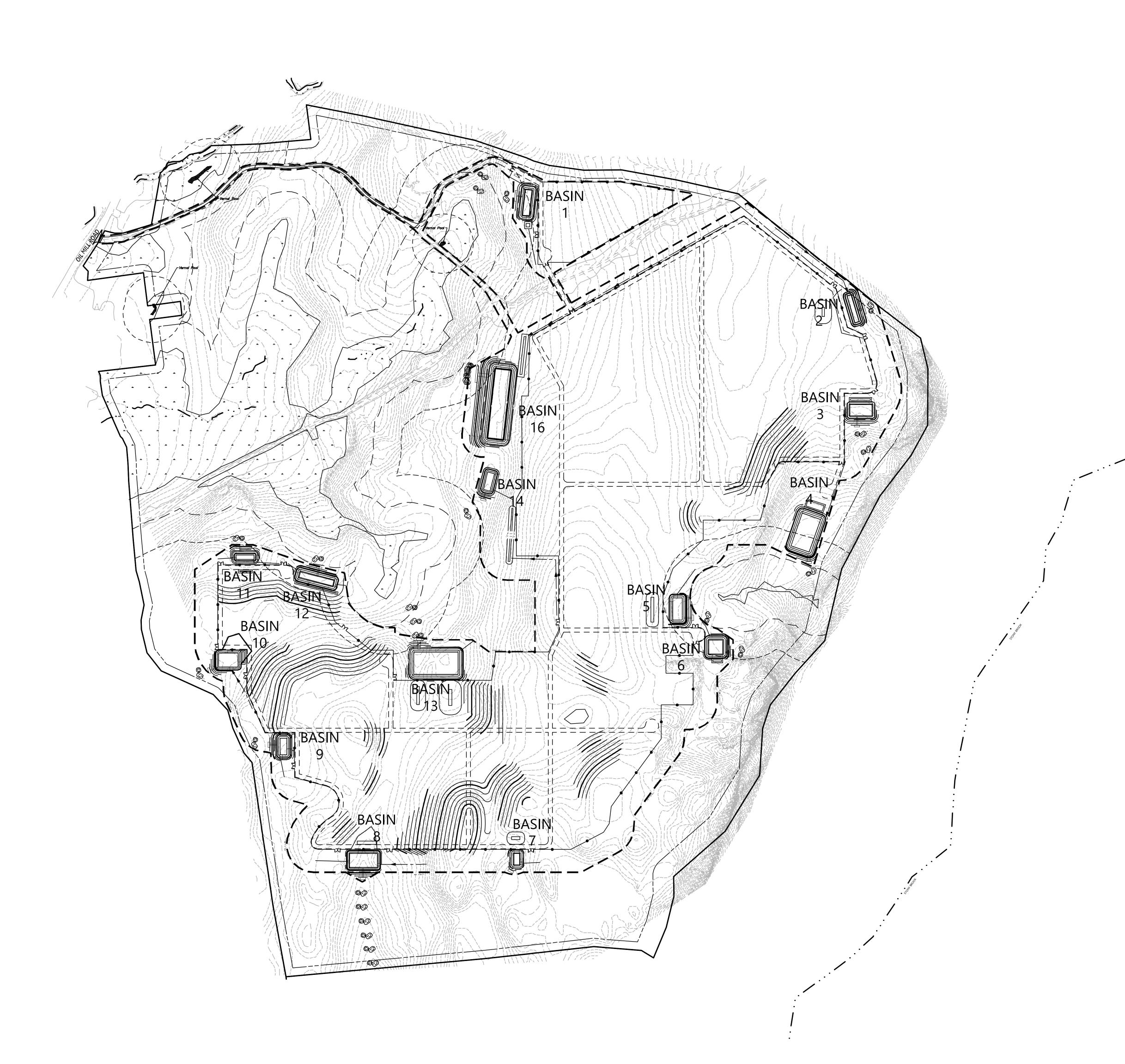
### Photovoltaic Installation

3/12/2020 SJK CTDEEP Comments CSC & CTDEEP Comments 7/28/2020 SJK

December 2, 2019

Not Approved for Construction
Drawing Title

Layout and **Materials Plan** 





C-4.1	C-4.2	C-4.3
4		
C-4.4	C-4.5	C-4.6
C-4.7	C-4.8	C-4.9
C-4.10	C-4.11	C-4.12

Key Not To Scale





### Photovoltaic Installation

117 Oil Mill Road Waterford, Connecticut

CTDEEP Comments 3/12/2020 SJK CSC & CTDEEP Comments 7/28/2020 SJK

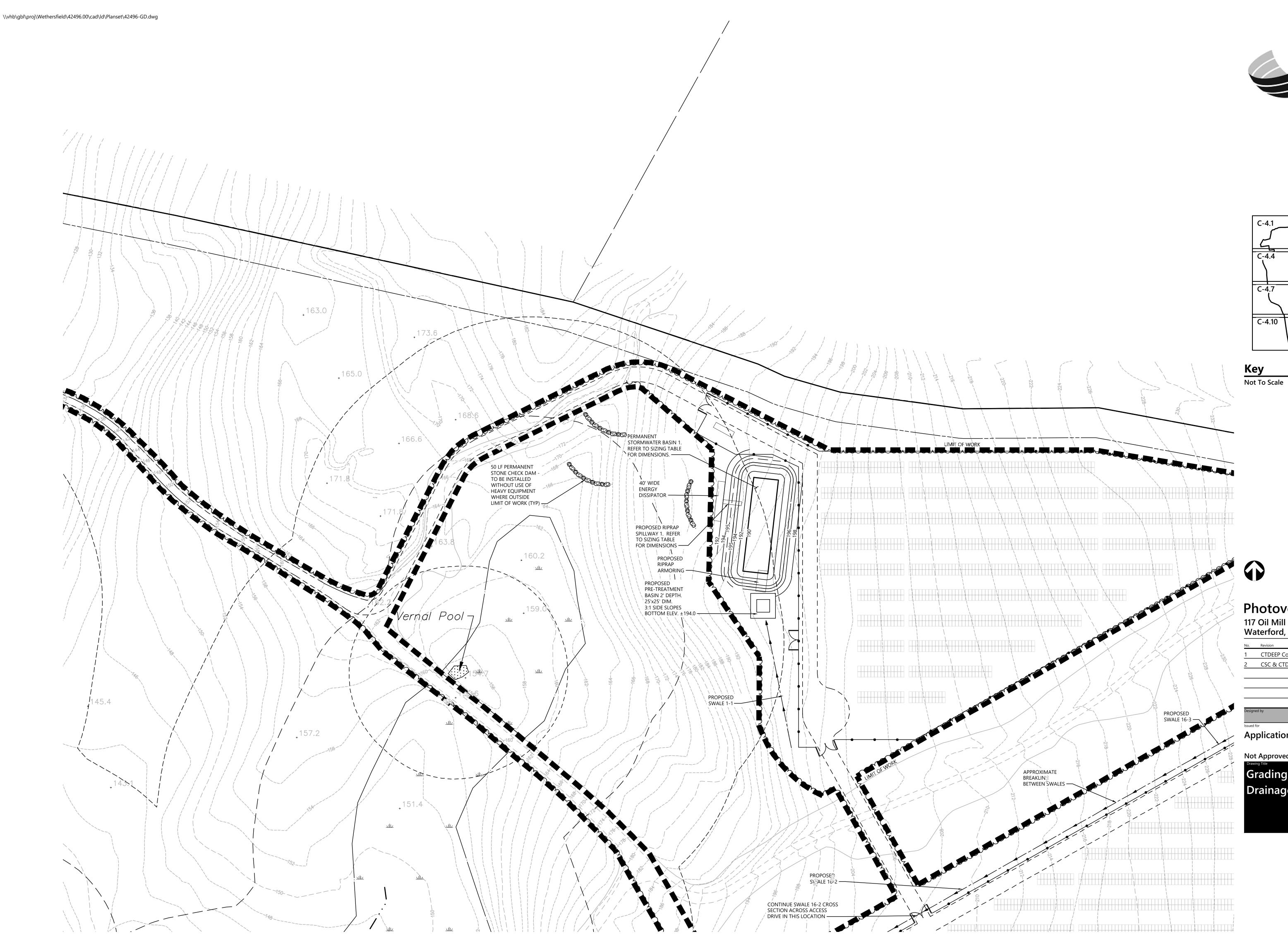
**Application** December 2, 2019

Not Approved for Construction

Grading and Drainage Plan - Overall



CSC & CTDEEP Comments 7/28/2020 SJK





C-4.1	7	C-4.2	C-4.3
{	╛		
C-4.4		C-4.5	C-4.6
C-4.7		C-4.8	C-4.9
C-4.10		C-4.11	C-4.12
			<b> </b>

## Photovoltaic Installation

117 Oil Mill Road Waterford, Connecticut

No.	Revision	Date	Appvd.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

December 2, 2019 **Application** 

Not Approved for Construction

**Grading and Drainage Plan** 



Suite 200

860.807.4300

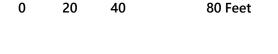
Wethersfield, CT 06109

C-4.1	C-4.2	C-4.3
C-4.4	C-4.5	C-4.6
C-4.7	C-4.8	C-4.9
C-4.10	C-4.11	C-4.12

Key

Not To Scale





### Photovoltaic Installation

117 Oil Mill Road Waterford, Connecticut

No.	Revision	Date	Appvd.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

Designed by

Checked by

Issued for

Date

Application

December 2, 2019

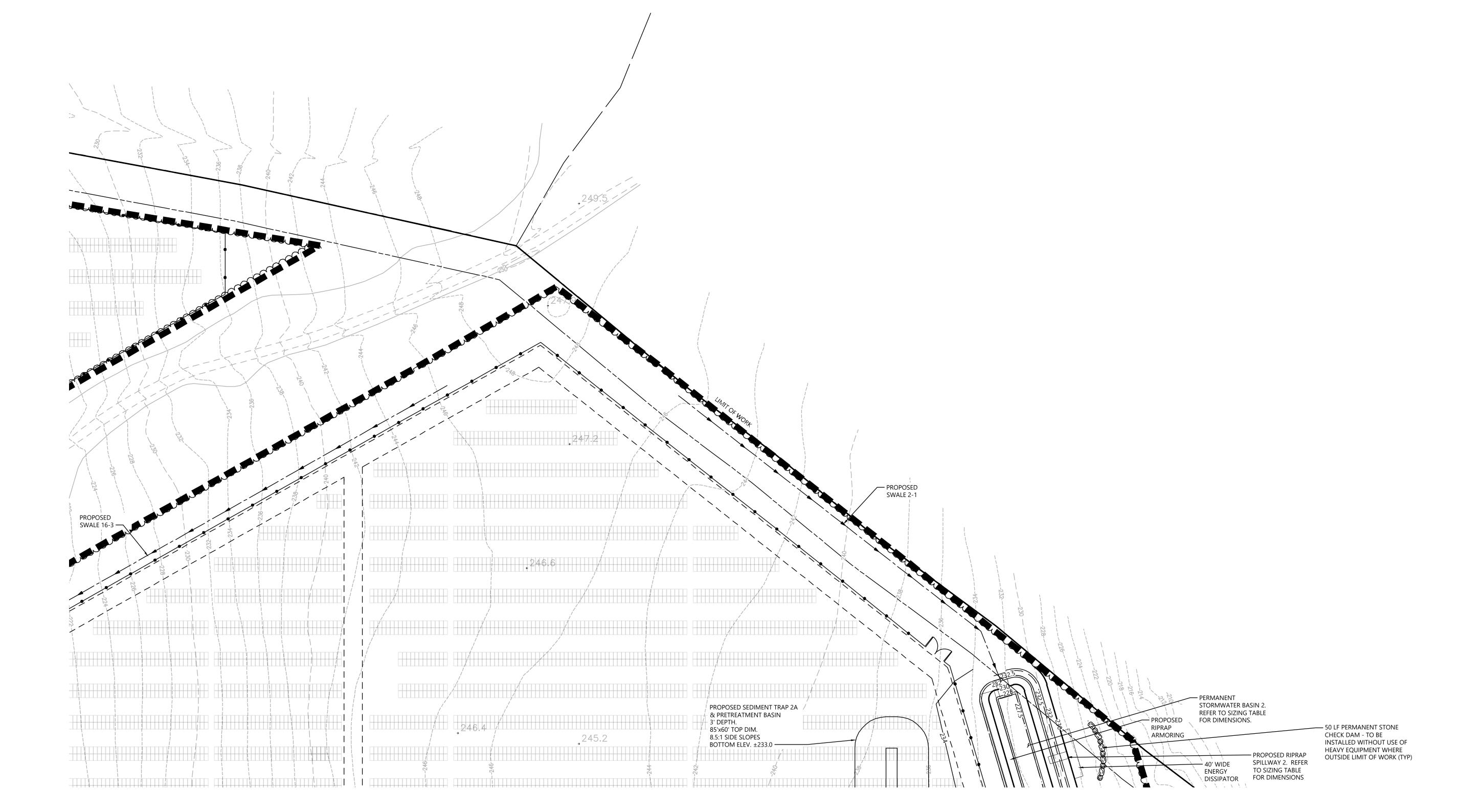
1-1-

Not Approved for Construction

Grading and
Drainage Plan

C-4.3

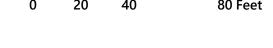
of 19 43







_	
C-4.2	C-4.3
C-4.5	C-4.6
C-4.8	C-4.9
C-4.11	C-4.12
	C-4.5



### Photovoltaic Installation

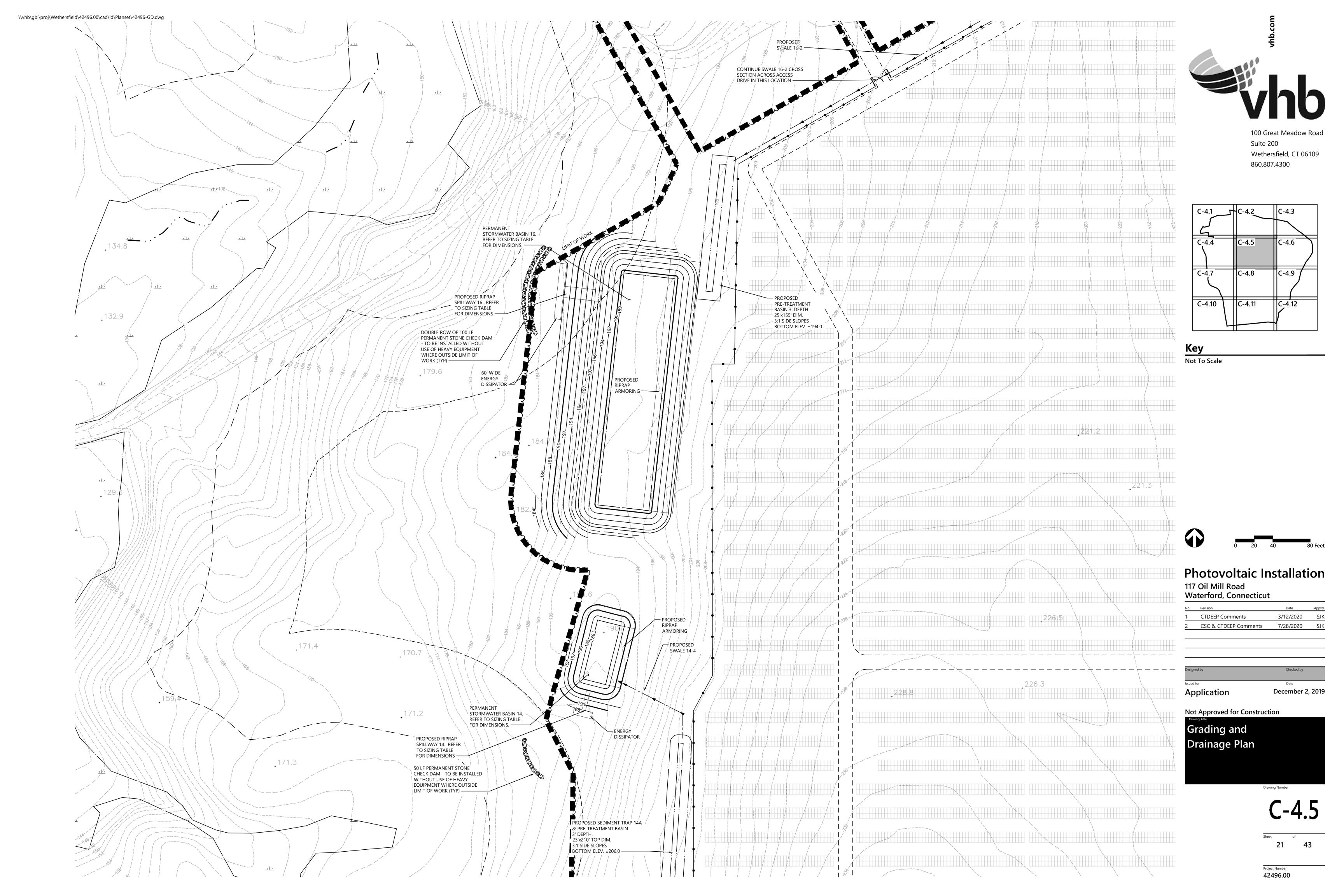
117 Oil Mill Road Waterford, Connecticut

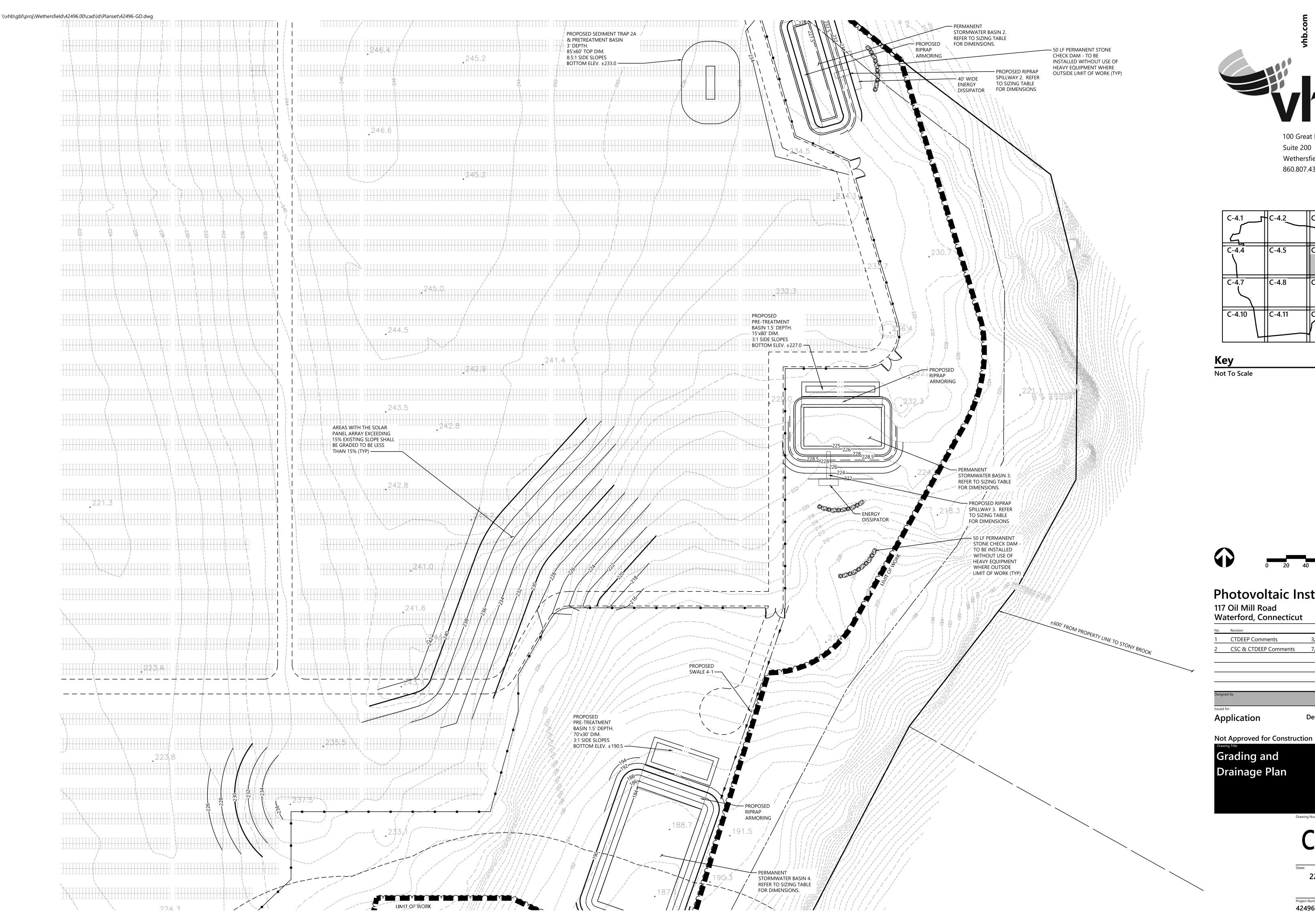
CTDEEP Comments 3/12/2020 SJK CSC & CTDEEP Comments 7/28/2020 SJK

December 2, 2019

Not Approved for Construction

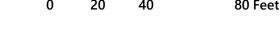
**Grading and** Drainage Plan







C-4.1	C-4.2	C-4.3
2		
C-4.4	C-4.5	C-4.6
C-4.7	C-4.8	C-4.9
C-4.10	C-4.11	C-4.12



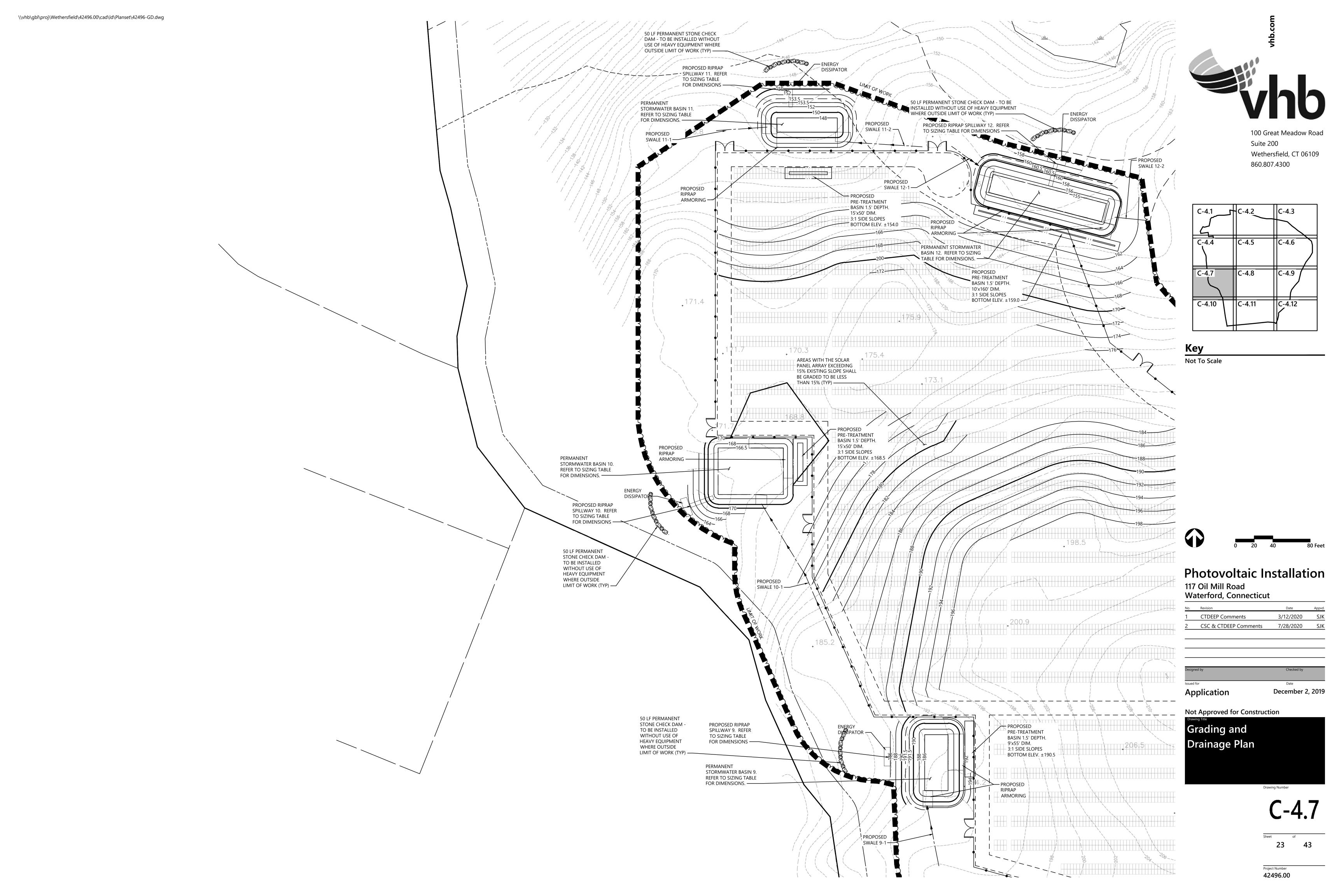
### **Photovoltaic Installation**

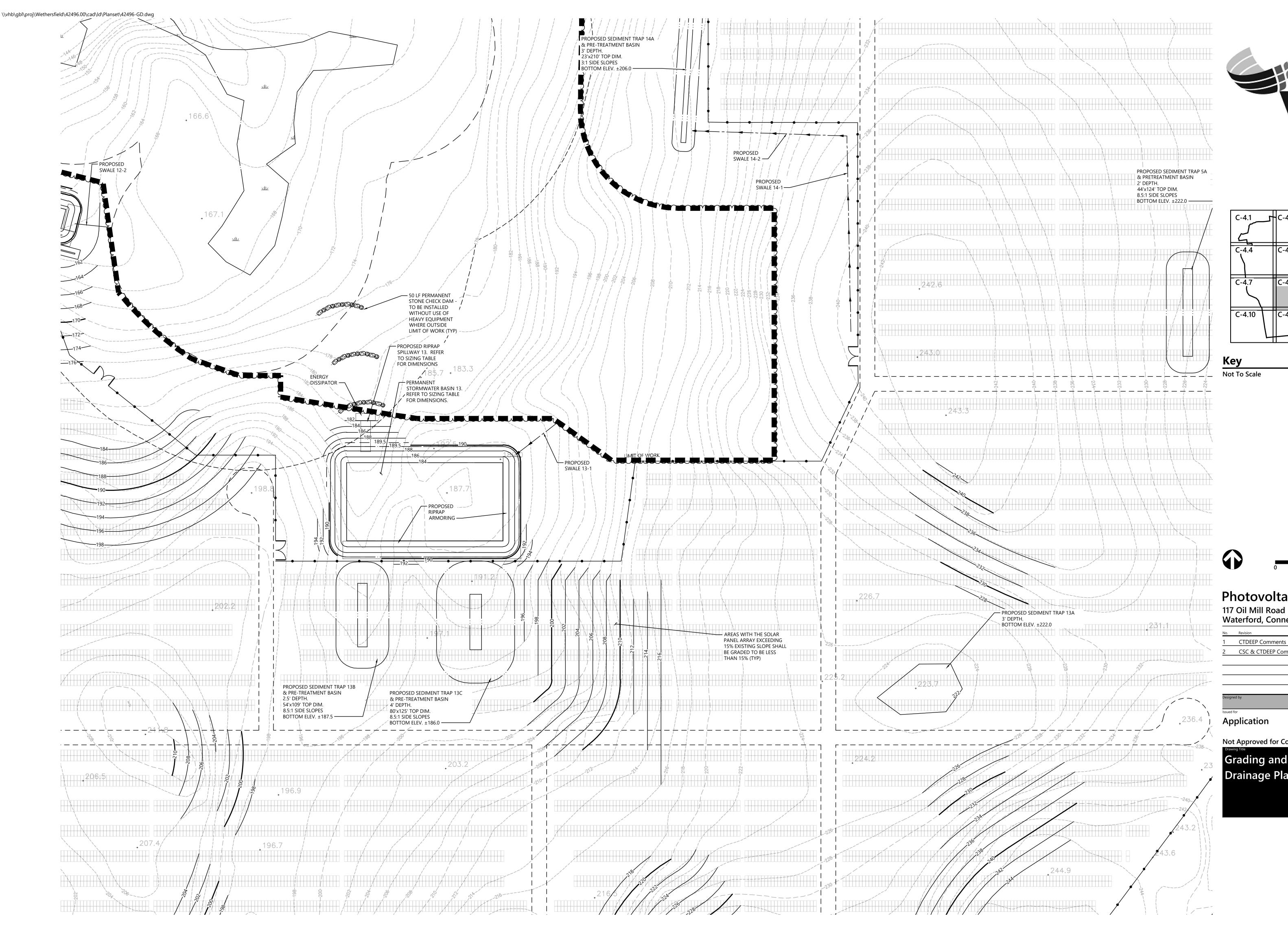
117 Oil Mill Road

No.	Revision	Date	Appvd.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

**Grading and** Drainage Plan

December 2, 2019







C-4.1	C-4.2	C-4.3
4		
C-4.4	C-4.5	C-4.6
C-4.7	C-4.8	C-4.9
C-4.10	C-4.11	C-4.12

Not To Scale



### **Photovoltaic Installation**

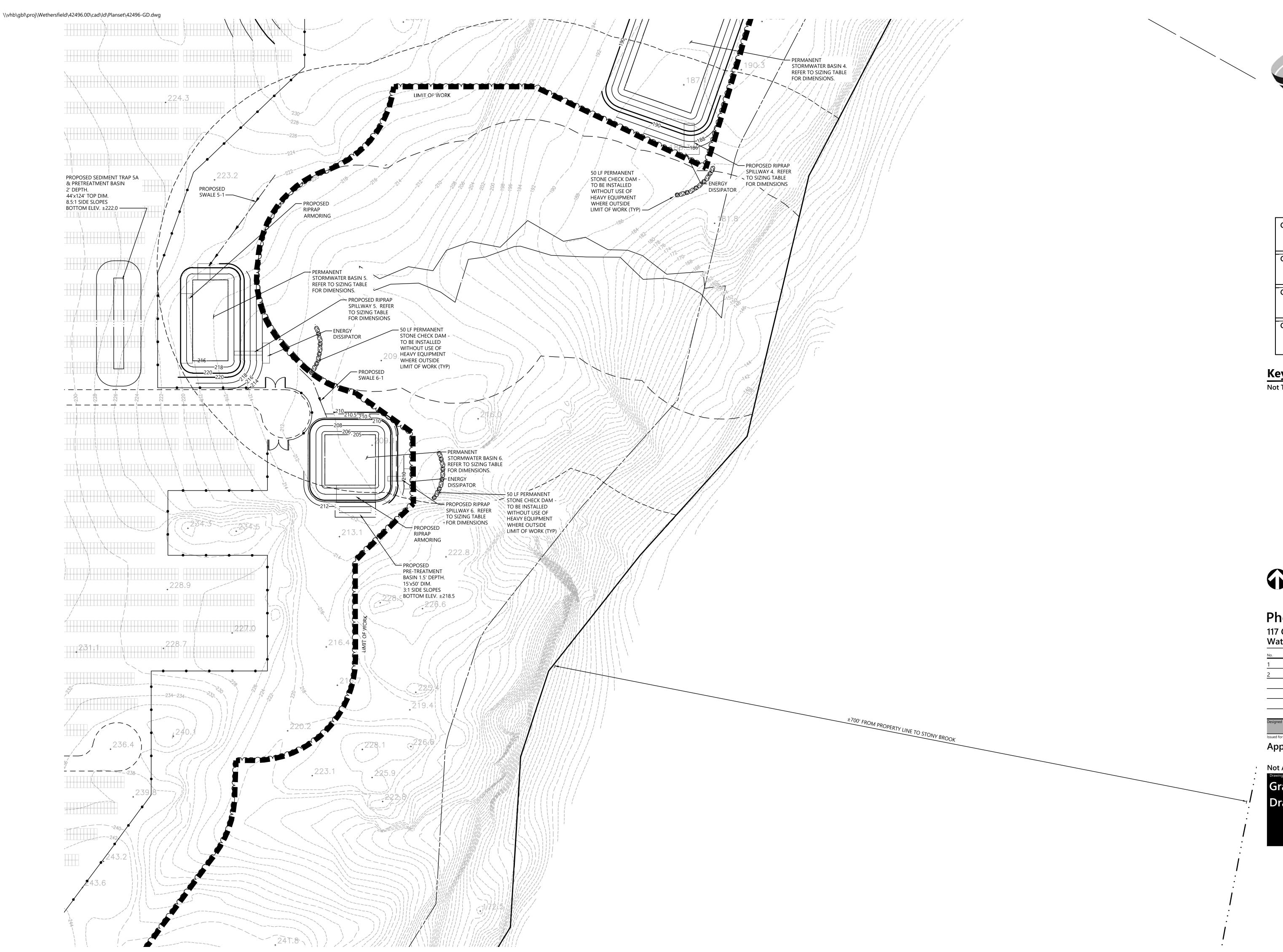
Waterford, Connecticut

).	Revision	Date	Appvd.
	CTDEEP Comments	3/12/2020	SJK
	CSC & CTDEEP Comments	7/28/2020	SJK
	CSC & CTDEET COMMENTS	172072020	

December 2, 2019

Not Approved for Construction

**Grading and** Drainage Plan





C-4.1	7	C-4.2		C-4.3	
4					
C-4.4		C-4.5		C-4.6	
C-4.7		C-4.8		C-4.9	
C-4.10		C-4.11	$\downarrow$	C-4.12	
	C-4.4	C-4.4	C-4.4 C-4.5 C-4.8	C-4.4 C-4.5 C-4.8	C-4.4

Not To Scale

### **Photovoltaic Installation**

117 Oil Mill Road Waterford, Connecticut

No.	Revision	Date	Appvd.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK
2	CSC & CIDEEP Comments	7/28/2020	SJK

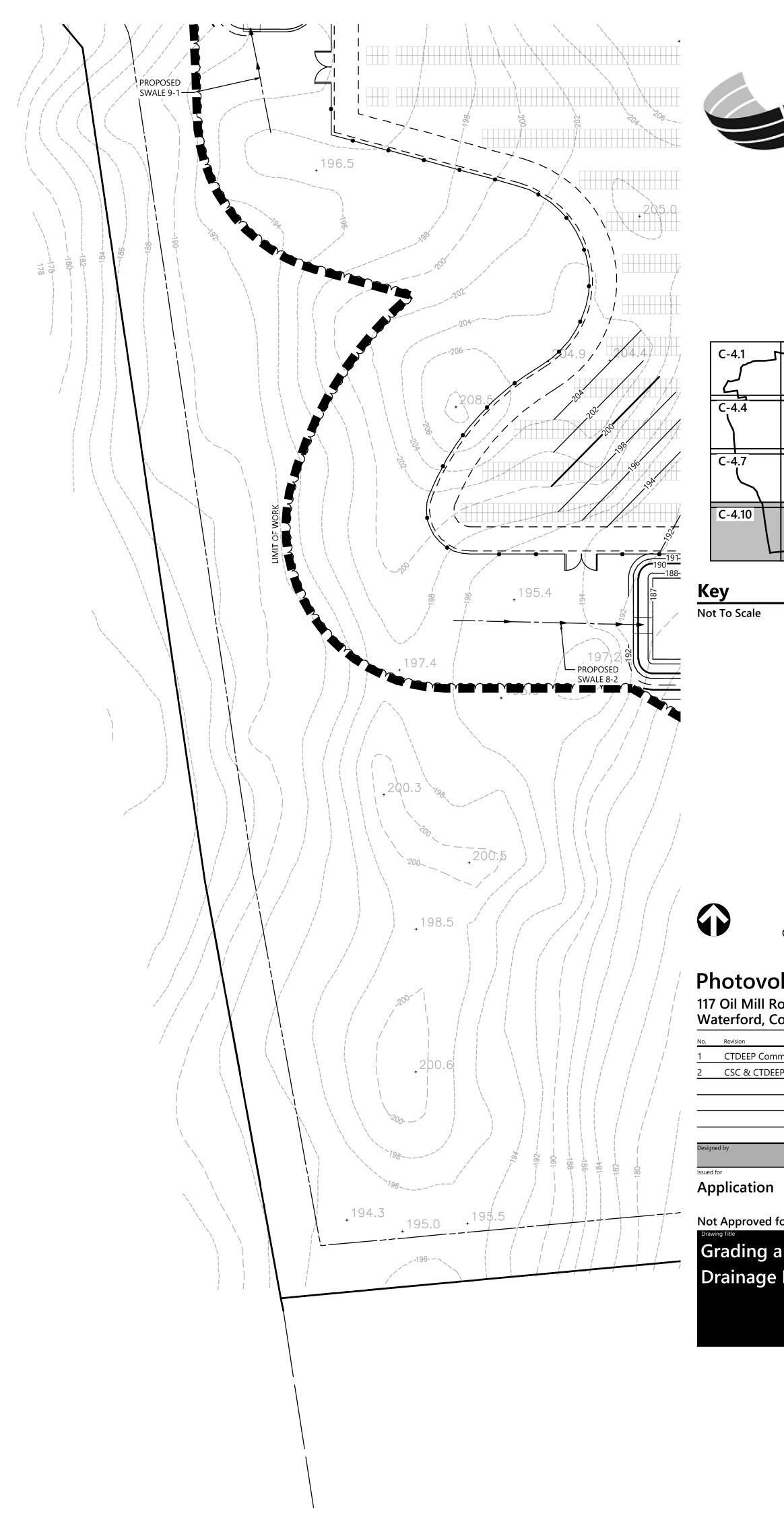
**Application** December 2, 2019

Not Approved for Construction

**Grading and** 

**Drainage Plan** 

 $\wedge black the large of the$ 





100 Great Meadow Road Suite 200 Wethersfield, CT 06109 860.807.4300

C-4.1	C-4.2	C-4.3
4		
C-4.4	C-4.5	C-4.6
C-4.7	C-4.8	C-4.9
C-4.10	C-4.11	C-4.12



### Photovoltaic Installation

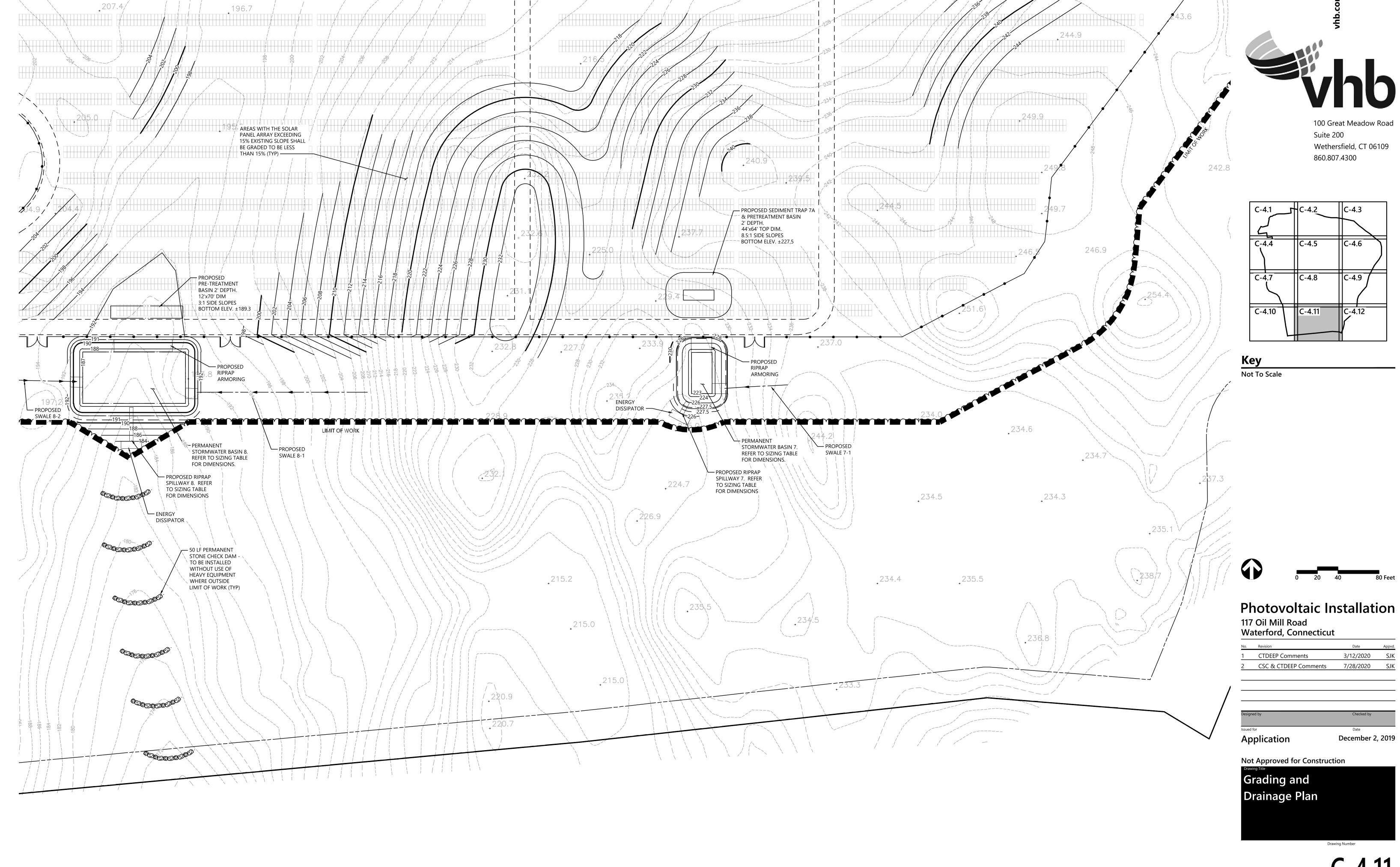
117 Oil Mill Road Waterford, Connecticut

No.	Revision	Date	Appvd.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

December 2, 2019

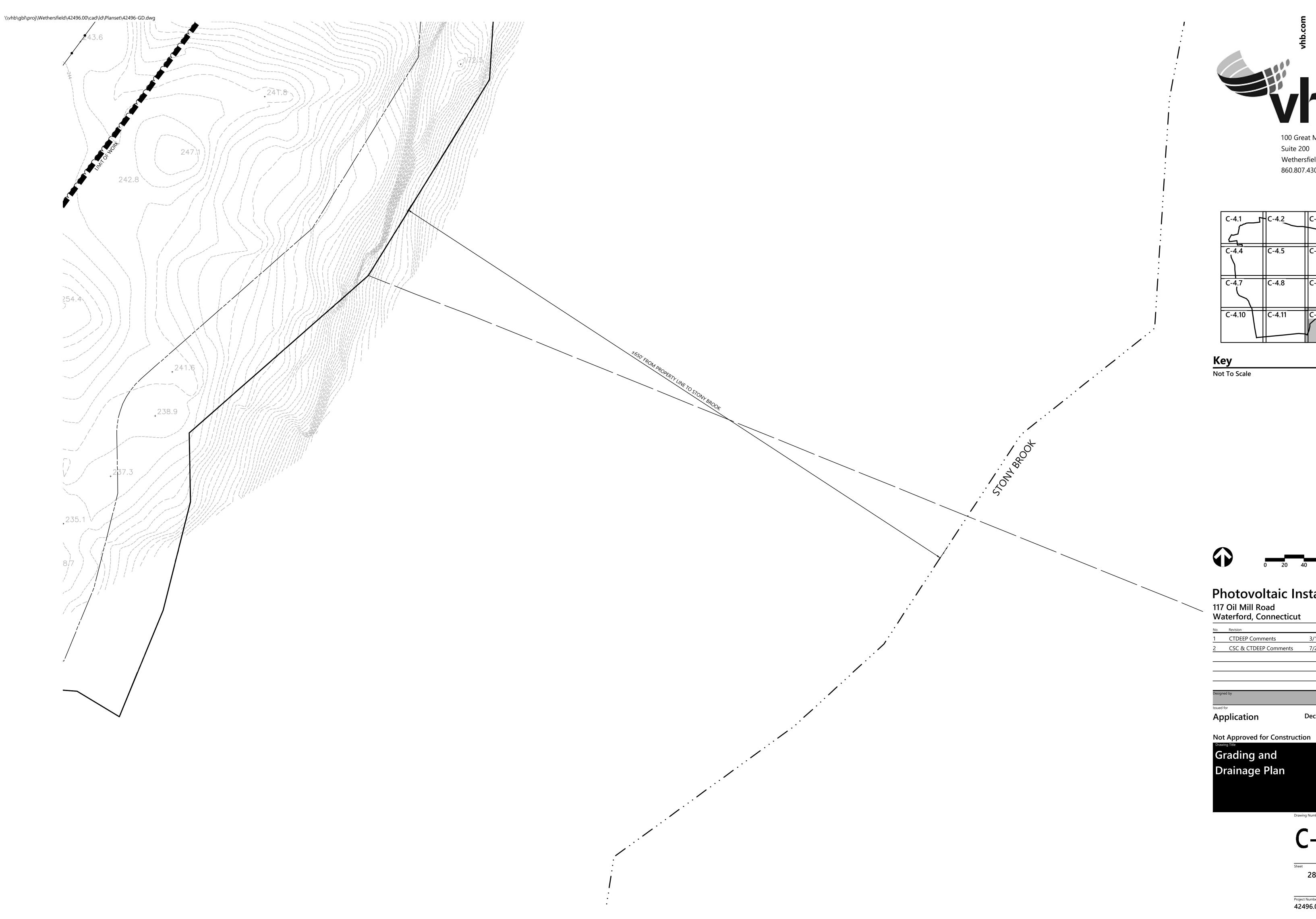
Not Approved for Construction

**Grading and** Drainage Plan



C-4.11

27 43





		_
C-4.1	C-4.2	C-4.3
2		
C-4.4	C-4.5	C-4.6
C-4.7	C-4.8	C-4.9
C-4.10	C-4.11	C-4.12

### Photovoltaic Installation

3/12/2020 SJK CTDEEP Comments CSC & CTDEEP Comments 7/28/2020 SJK

December 2, 2019

Grading and Drainage Plan

#### **CONSTRUCTION SEQUENCING**

- ALL CONSTRUCTION ACTIVITIES ARE EXPECTED TO BEGIN IN THE SUMMER/FALL OF 2020 AND BE COMPLETED BY THE END OF 2021. THE GENERAL CONSTRUCTION NOTES ARE AS FOLLOWS:
- 1. THE SITE CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT ROADS/HIGHWAYS AND THEIR DRAINAGE SYSTEM NEIGHBORING PROPERTIES, WETLANDS AND REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT. DESIGNATED ACCESS DRIVES MUST BE USED TO THE MAXIMUM EXTENTS POSSIBLE. IT IS REQUIRED THAT THE SITE CONTRACT PERFORM A DAILY INSPECTION OF ALL EROSION AND SEDIMENT CONTROL
- A CTDEEP-APPROVED QUALIFIED INSPECTOR SHALL BE ASSIGNED TO BE RESPONSIBLE FOR PERFORMING INSPECTIONS AND PREPARING REPORTS IN ACCORDANCE WITH SECTION 5(B)(4)(B) OF THE CONSTRUCTION GENERAL PERMIT. THESE INSPECTIONS SHALL TAKE PLACE WEEKLY, AT A MINIMUM, AND SHALL BE REQUIRED WITHIN 24 HOURS OF A RAINFALL EVENT EXCEEDING 0.5 INCHES. IT IS ALSO ANTICIPATED THAT REPRESENTATIVES FROM CTDEEP AND/OR THE STATE CONSERVATION DISTRICT WILL PERFORM PERIODIC INSPECTIONS.
- ENGINEER OF RECORD SHALL PERFORM THREE (3) MONTHLY PLAN IMPLEMENTATION INSPECTIONS WITHIN THE FIRST 90 DAYS OF CONSTRUCTION ACTIVITY, AS REQUIRED BY CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION.
- 4. THROUGHOUT THE COURSE OF THE CONSTRUCTION PROJECT, ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE WARRANTED AT THE DISCRETION OF THE QUALIFIED INSPECTOR AND/OR DESIGN ENGINEER. THESE IMPROVEMENTS MUST BE IMPLEMENTED IN A TIMELY FASHION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION GENERAL PERMIT. ADDITIONALLY, AREAS OF PROPOSED COMPACTED NATIVE SOIL ROADS SHALL BE CONVERTED TO STABLE GRAVEL ROADS IF/AS DETERMINED BY THE QUALIFIED INSPECTOR OR **ENGINEER OF RECORD**
- 5. PRIOR TO CONSTRUCTION, THE APPLICANT SHALL PROVIDE THE TOWN OF WATERFORD WITH THE NAME OF CONTACT AND 24-HOUR CONTACT INFORMATION.
- 6. CONTRACTOR SHALL ADHERE TO 2002 CONNECTICUT GUIDELINES FOR EROSION AND
- SEDIMENT CONTROL, AS AMENDED. 7. THE CONTRACTOR SHALL FLAG THE LIMITS OF CLEARING NECESSARY TO FACILITATE THE
- PRE-CONSTRUCTION MEETING. 8. THE CONTRACTOR SHALL HOLD PRE-CONSTRUCTION MEETING(S). ATTENDEES SHALL INCLUDE, BUT NOT BE LIMITED TO, REPRESENTATIVES OF THE GENERAL CONTRACTOR, SITE CONTRACTOR, CTDEEP, TOWN OF WATERFORD, ENGINEER OF RECORD, AND QUALIFIED SWPPP INSPECTOR.
- 9. THE CONTRACTOR SHALL CONTACT CALL-BEFORE-YOU-DIG (1-800-922-4455) PRIOR TO ENGAGING IN ANY EXCAVATION ACTIVITIES AT THE SITE. 10. THE CONTRACTOR SHALL NOTIFY THE TOWN OF WATERFORD AGENT, ZONING ENFORCEMENT

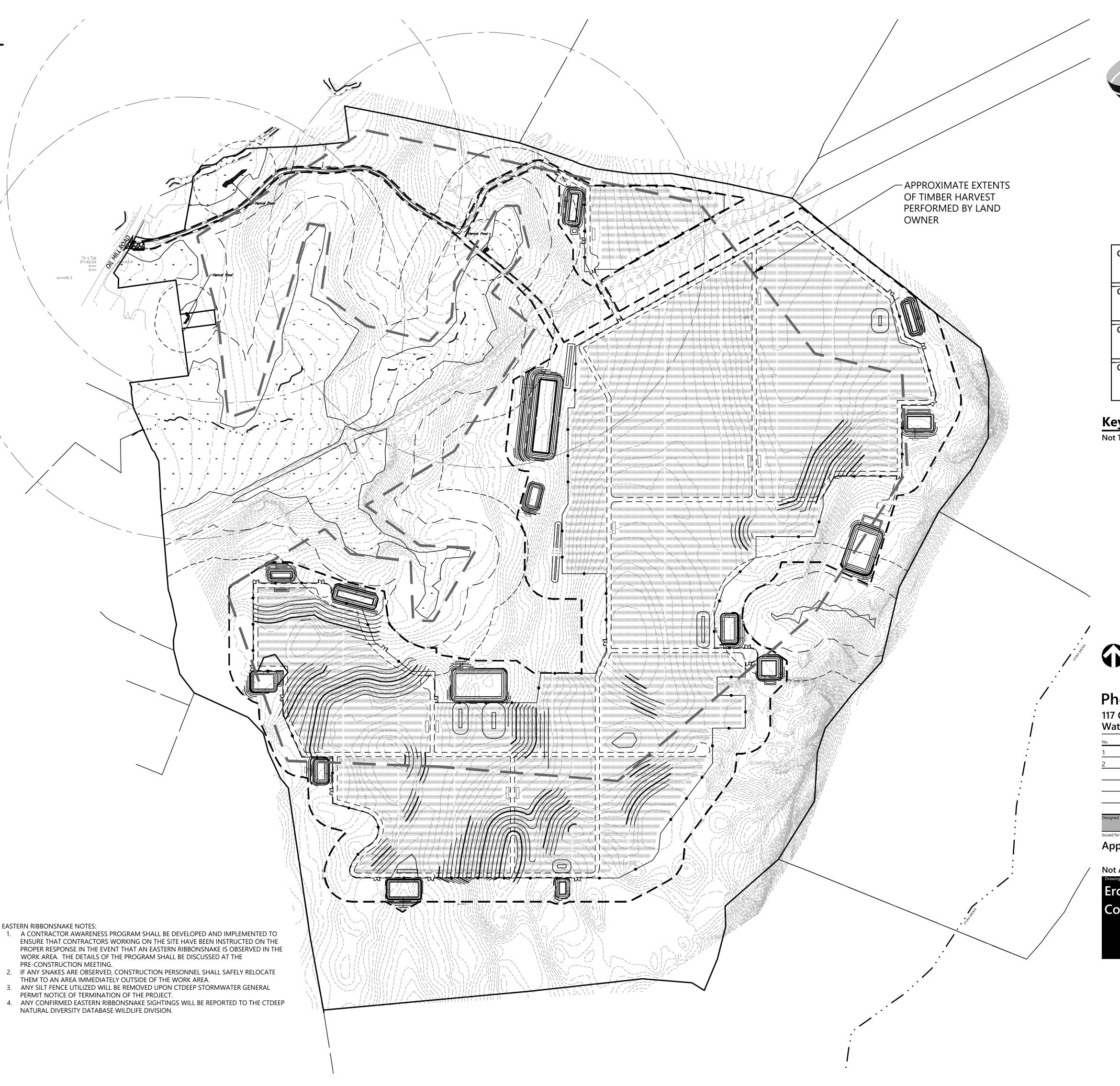
OFFICER, AND ENGINEERING DEPARTMENT, 48 HOURS PRIOR TO COMMENCEMENT OF ANY

- 11. NO CONSTRUCTION OF SITE IMPROVEMENTS MAY BEGIN UNTIL THE PROPER EROSION
- CONTROL MEASURES SERVING THE AREA TO BE DISTURBED ARE IN PLACE.
- 12. ANTICIPATED WORK HOURS WILL BE BETWEEN 6:30 AM AND 5:00 PM. 13. HIGH FLOTATION TIRE EQUIPMENT SHALL BE USED TO THE MAXIMUM EXTENTS PRACTICABLE IN LIEU OF TRACK CONSTRUCTION EQUIPMENT IN AN EFFORT TO AVOID COMPACTION OF THE NATIVE SOILS.

#### PRE-CONSTRUCTION SITE PROTECTION SEQUENCE (2020)

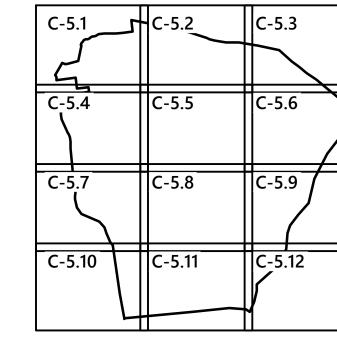
- 1. INSTALL STABILIZED VEHICLE CONSTRUCTION EXIT AT THE EXISTING ROAD INTERSECTING WITH OIL MILL ROAD.
- SURVEY AND MARK ALL WOODLAND CLEARING LIMITS.
- MARK TREES TO BE FELLED WITHIN 10 FEET OF CLEARING LIMITS AND INSTALL TREE
- PROTECTION FOR TREES TO BE PRESERVED WITHIN 10 FEET OF CLEARING LIMITS. 4. FIELD SURVEY AND MARK BOUNDARY BETWEEN CLEARING LIMITS AND GRUBBING LIMITS.
- THE USE OF A TUB GRINDER IS RECOMMENDED FOR THE MULCHING OF FELLED TREES.
- 6. AS TREES ARE CLEARED AND GRUBBED, GRIND TOPS AND ROOT BALLS IN TUB GRINDER TO CREATE MATERIAL FOR WOOD CHIP MULCH BERM.
- 7. ACCESS ROADS SHALL BE DESIGNATED AS EARLY AS FEASIBLE AND USED PRIMARILY FOR
- 8. AS MATERIAL IS PRODUCED, INSTALL MULCH BERM AT THE LIMIT OF DISTURBANCE GENERALLY IN AREAS OF CLEARED FOREST. MULCH BERM HAS NOMINAL DIMENSIONS OF 1.5 TO 2 FEET 9. IMMEDIATELY INSIDE THE PERIMETER MULCH BERM, INSTALL ENTRENCHED SILT FENCE
- FOLLOWING STANDARDS OF THE 2002 CONNECTICUT GUIDELINES FOR EROSION AND SEDIMENT CONTROL. MULCH BERM AND PERIMETER SILT FENCE SHALL BE MAINTAINED IN PERPETUITY UNTIL COMPLETION OF CONSTRUCTION. NO WORK SHALL BE ALLOWED OUTSIDE OF THESE LIMITS 10. CONCURRENT WITH ITEMS 2 THROUGH 9 ABOVE, THE CONTRACTOR SHALL ADDRESS ONGOING
- EROSION PROBLEMS USING TEMPORARY DIVERSIONS AND FILLING AND GRADING GULLIES. TRACK GULLIES UP AND DOWN SLOPE AND HYDROSEED WITH A THERMALLY-TREATED WOOD BONDED FIBER MATRIX (BFM) MULCH WITH TACKIFIER. A STAPLED BIODEGRADABLE EROSION CONTROL BLANKET WITHOUT MONOFILAMENT MESH IS AN ACCEPTABLE ALTERNATIVE FOR
- 11. INSTALL TEMPORARY SEDIMENT TRAPS IN ACCORDANCE WITH THE APPROVED SITE-SPECIFIC SWPCP AND CT GUIDELINES. THE ENGINEER OF RECORD SHALL INSPECT FEATURES TO CONFIRM REQUIRED STORAGE CAPACITIES ARE PROVIDED AND THAT OUTLETS AND/OR SPILLWAYS ARE CONSTRUCTED CORRECTLY. DISCHARGE AREAS BELOW OUTFALLS MUST BE INSPECTED TO CONFIRM FLOW WILL BE OVER STABLE GROUND AND SHEET FLOW IS ENCOURAGED. IF DISTURBED SOILS ARE PRESENT, THE ENGINEER OF RECORD TO PROVIDE CORRECT MEASURES TO ADDRESS CONDITION.
- 12. SEED AND PROTECT DISTURBED SOILS AROUND SEDIMENT TRAPS AND BASINS WITHIN 72 HOURS OF COMPLETION. SECURE SEED WITH A THERMALLY-TREATED BFM APPLIED FOLLOWING MANUFACTURER'S SPECIFICATIONS FOR USE AT SPECIFIED APPLICATION RATES. AN ANIONIC POLYACRYLAMIDE PRODUCT MAY BE INCLUDED WITH THE TACKIFIER TO PROMOTE SOIL STABILITY. ALL OTHER AMENDMENTS SHOULD BE PRESCRIBED BASED ON THE RESULT OF SOIL
- 13. INSTALL OTHER EROSION AND SEDIMENT CONTROLS FOLLOWING THE CT GUIDELINES AND MANUFACTURER'S DIRECTIONS. DURING CONSTRUCTION, THE CONTRACTOR SHALL INSTALL MEASURES AS REQUIRED BY THE ENGINEER OF RECORD OR QUALIFIED INSPECTOR, TO PREVENT SEDIMENT-LADEN RUNOFF FROM REACHING WETLANDS OR DISCHARGING OFFSITE.
- 14. ESTABLISH DESIGNATED VEHICULAR TRAFFIC ACCESS ROADS (GRAVEL, OR COMPACTED NATIVE SOIL, PER PLANS) THAT SHALL BE USED AS PRIMARY ACCESSES. EFFORTS MUST BE MADE TO MINIMIZE VEHICULAR TRAFFICKING ACROSS NON-DESIGNATED AREAS TO THE EXTENTS
- 15. AREAS DISTURBED DURING THIS SEQUENCE MUST BE HYDROSEEDED AND ALLOWED TO GROW THROUGH A GROWING SEASON (SPRING, OR FALL) PRIOR TO INITIATION OF CONSTRUCTION
- 16. SPREADED MULCH AND FELLED BRANCHES FROM PRE-EXISTING TIMBER HARVEST ON SITE SHALL BE CLEANED AND AREAS SEEDED. MATERIAL CLEANED IN THIS WAY MAY BE REPURPOSED FOR THE USE OF WOOD CHIP MULCH BERMS ALONG THE SITE PERIMETER OR REMOVED FROM THE SITE. THE USE OF HYDROSEED COMBINED WITH TACKIFIER AND POLYACRLAMIDE (PAM) IS RECOMMENDED FOR THIS RESEEDING. THE CLEANUP AREAS SHALL BE LEFT UNDISTURBED THROUGH A FULL GROWING SEASON BEFORE INITIATION OF THE CONSTRUCTION SEQUENCE CAN TAKE PLACE.

- PERFORM MASS EARTHWORK ON THE SITE AND INSTALL PERIMETER FENCE TO SERVE AS CONSTRUCTION BARRIER. MASS EARTHWORK SHALL ONLY MEAN REGRADING TO MEET THE PROPOSED GRADING DEPICTED ON THE PLANS. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FROM AREAS PROPOSED FOR REGRADING.
- 2. TOPSOIL SHALL BE REPLACED TO 3" MINIMUM DEPTH OVER REGRADED AREAS UPON COMPLETION OF MASS EARTHWORK ACTIVITIES AND AREAS WHICH WERE DISTURBED BY MASS EARTHWORK OPERATIONS SHALL BE RESEEDED WITHIN 72 HOURS OF COMPLETION. 3. AREAS DISTURBED BY MASS EARTHWORK SHALL BE RESEEDED WITH HYDROSEED, COMBINED
- WITH TACKIFIER AND PAM. 4. DRIVE PILES FOR SOLAR PANEL RACKING.
- 5. THE INSTALLATION OF RACKING SHALL FOLLOW THE PILE DRIVING BY ROUGHLY ONE WEEK STARTING FROM THE SAME POINT. IT IS ANTICIPATED THAT APPROXIMATELY 13 ACRES OF PILES WILL BE IN AHEAD OF RACKING ON AVERAGE.
- 6. RESEED AND REGRADE ALL AREAS DISTURBED BY CONSTRUCTION TRAFFIC WITHIN THE ARRAYS WHERE RACKS ARE INSTALLED AS EARLY AS POSSIBLE. RUTS AND RILLS SHALL BE SMOOTHED AND GRADED AS DISCOVERED.
- 7. INSTALL SOLAR PANEL MODULES IN THE RACKING. MUCH OF THIS WORK IS ANTICIPATED TO BE PERFORMED BY HAND AND LIGHT CONSTRUCTION EQUIPMENT WHICH WILL CAUSE MINIMAL DISTURBANCE COMPARED TO THE USE OF HEAVY EQUIPMENT. DESIGNATED ACCESS ROADS SHALL STILL BE USED TO THE MAXIMUM EXTENTS POSSIBLE
- 8. UPON COMPLETION OF CONSTRUCTION, RE-SEED ALL DISTURBED AREAS WITHIN 72 HOURS AND PREVENT VEHICULAR TRAFFICKING OVER THESE AREAS. INSTALL FINAL LANDSCAPING. 9. THE TEMPORARY SEDIMENT TRAPS/BASINS AND THEIR ASSOCIATED DIVERSION CHANNELS MAY
- BE REMOVED ONCE ALL TRIBUTARY AREAS UPSTREAM OF THEM HAVE BEEN COMPLETED AND STABILIZED WITH 80 PERCENT VEGETATED COVER, AT THE DIRECTION OF THE QUALIFIED INSPECTOR AND/OR DESIGN ENGINEER. 10. AFTER SITE IS STABILIZED, AND AFTER INSPECTION BY DESIGN ENGINEER, OR OTHER OWNER'S
- REPRESENTATIVE, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROLS. ENTIRE SITE SHALL BE CHECKED FOR AND CLEANED OF SEDIMENT AS NEEDED.





100 Great Meadow Road Suite 200 Wethersfield, CT 06109 860.807.4300



Not To Scale





### Photovoltaic Installation

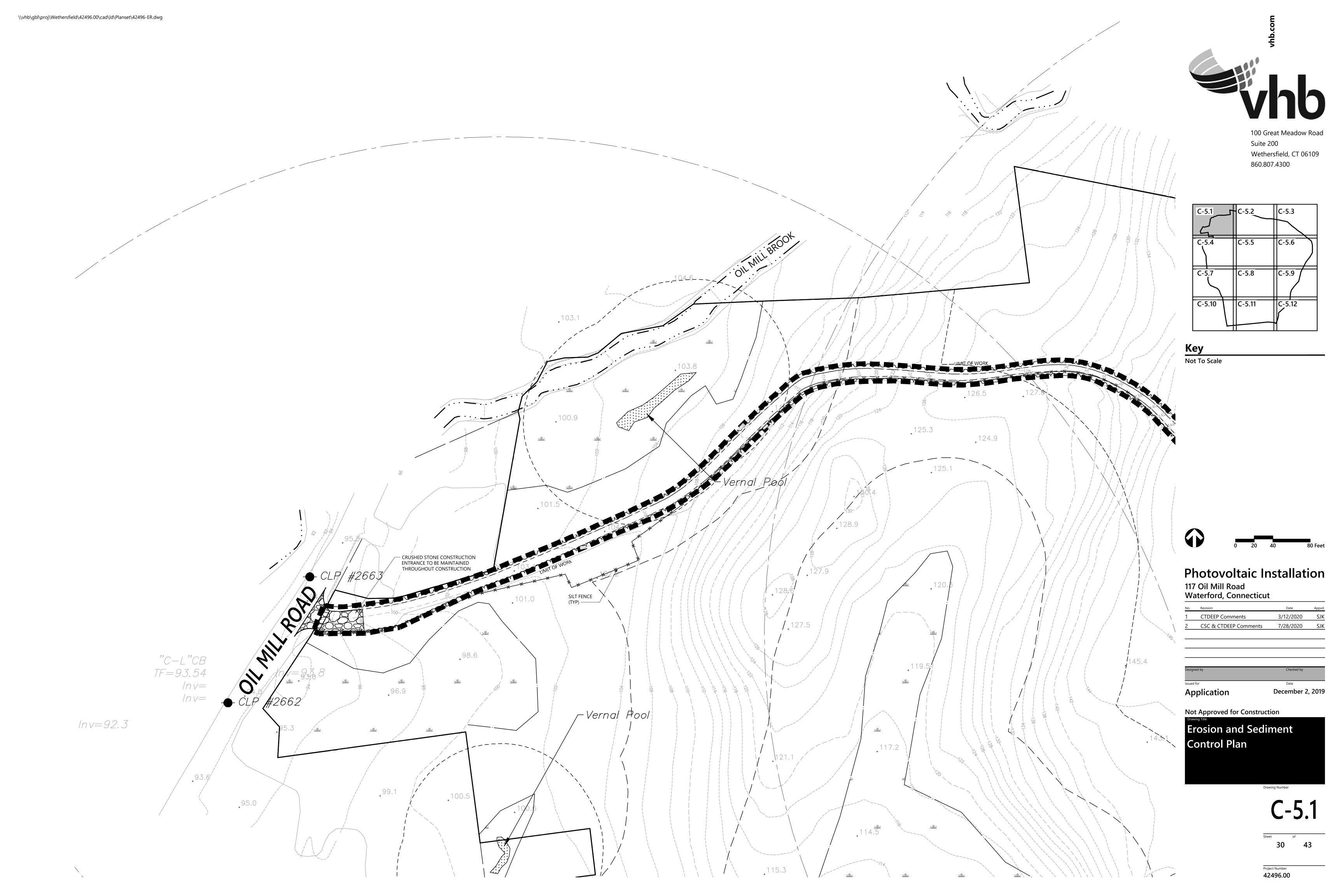
117 Oil Mill Road Waterford, Connecticut

No.	Revision	Date	Appvd.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

**Application** December 2, 2019

Not Approved for Construction

**Erosion and Sediment Control Plan - Overall** 







C-5	.11	C-5.2	C-5.3
5			
C-5.	.4	C-5.5	C-5.6
C-5.	.7	C-5.8	C-5.9
C-5	.10	C-5.11	C-5.12

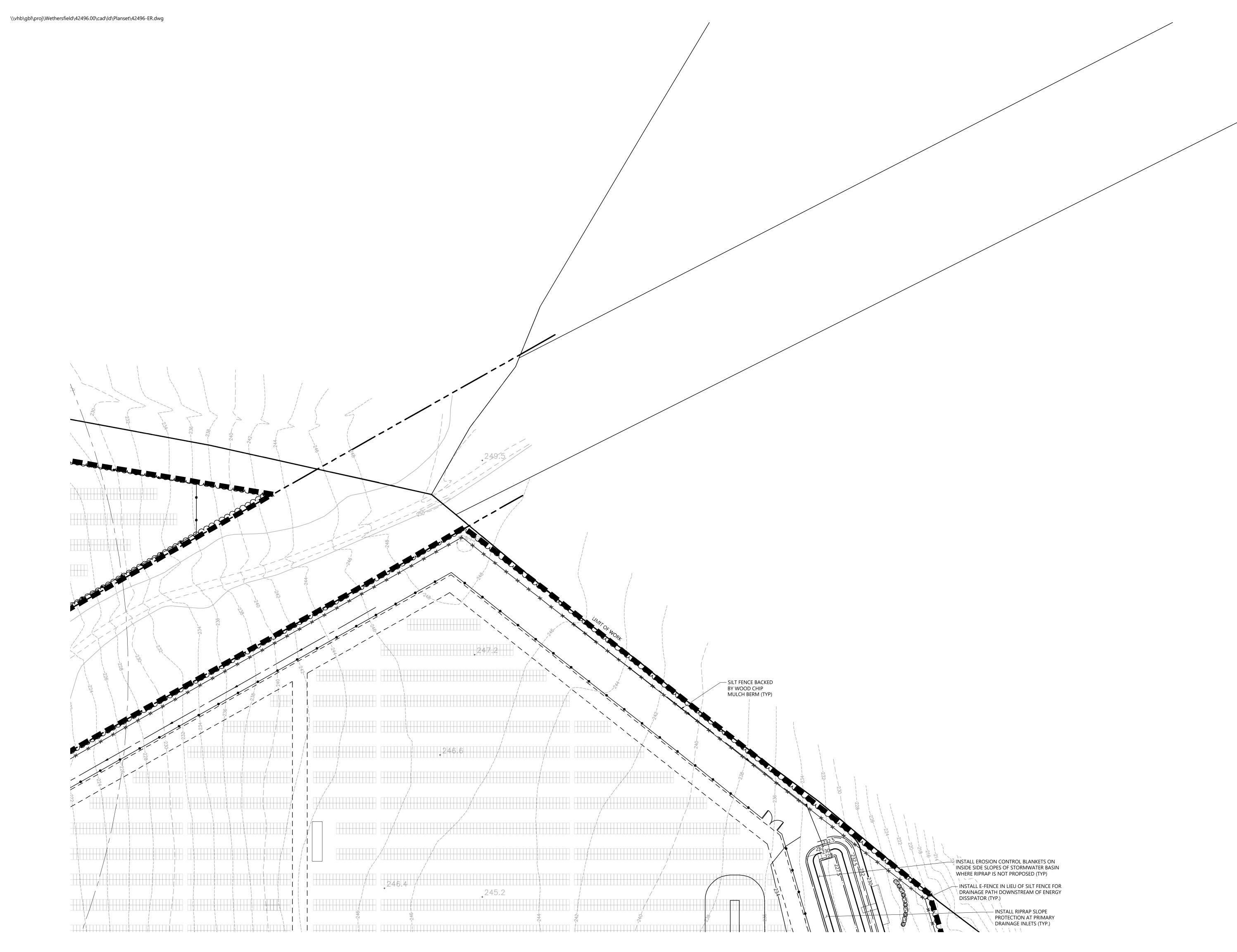
### Photovoltaic Installation 117 Oil Mill Road Waterford, Connecticut

No.	Revision	Date	Appvd.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

December 2, 2019

Not Approved for Construction

**Erosion and Sediment Control Plan** 





C-5.1	4	C-5.2	C-5.3
_{_			
C-5.4		C-5.5	C-5.6
C-5.7		C-5.8	C-5.9
C-5.10		C-5.11	C-5.12

Key Not To Scale



### Photovoltaic Installation

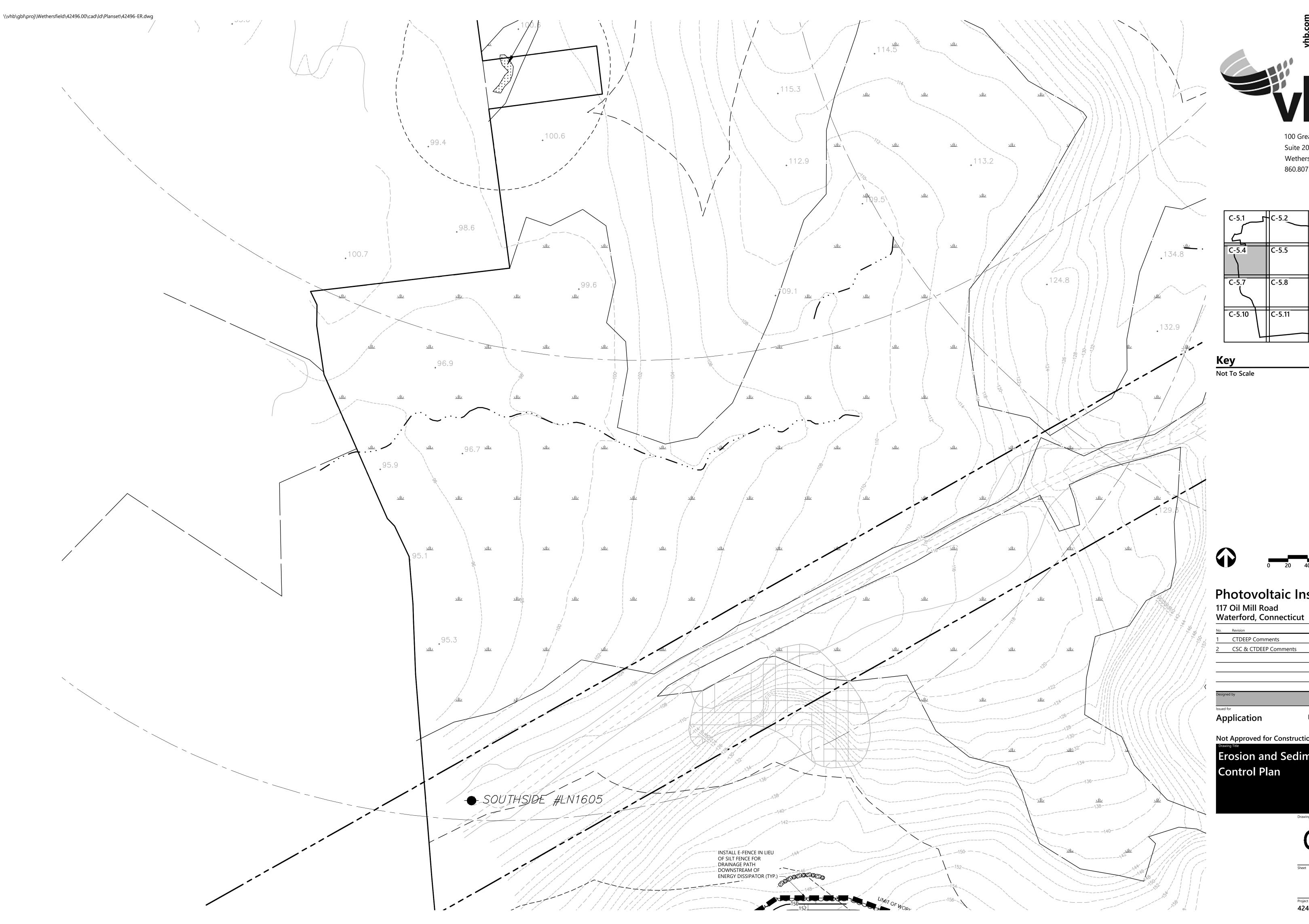
117 Oil Mill Road Waterford, Connecticut

NO.	Revision	Date	Арруа.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

**Application** December 2, 2019

Not Approved for Construction

**Erosion and Sediment Control Plan** 

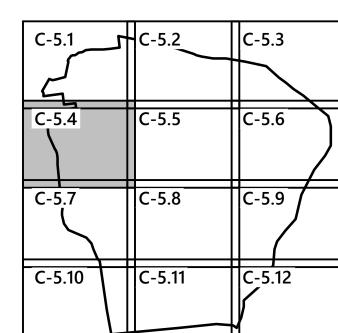




Suite 200

860.807.4300

Wethersfield, CT 06109





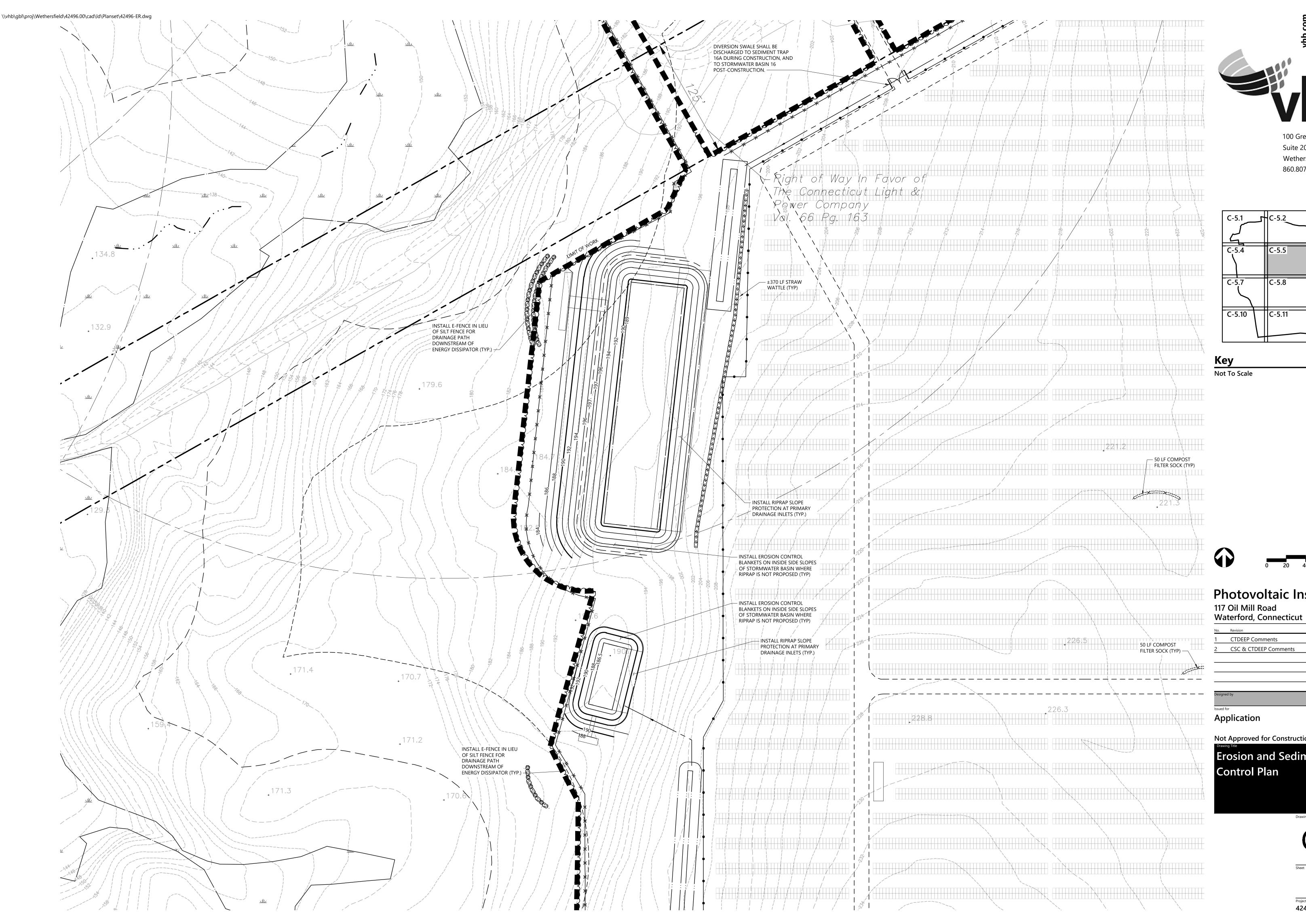
### **Photovoltaic Installation**

CTDEEP Comments 3/12/2020 SJK CSC & CTDEEP Comments 7/28/2020 SJK

December 2, 2019

Not Approved for Construction

**Erosion and Sediment Control Plan** 





C-5.1	C-5.2	C-5.3
4		
C-5.4	C-5.5	C-5.6
C-5.7	C-5.8	C-5.9
C-5.10	C-5.11	C-5.12

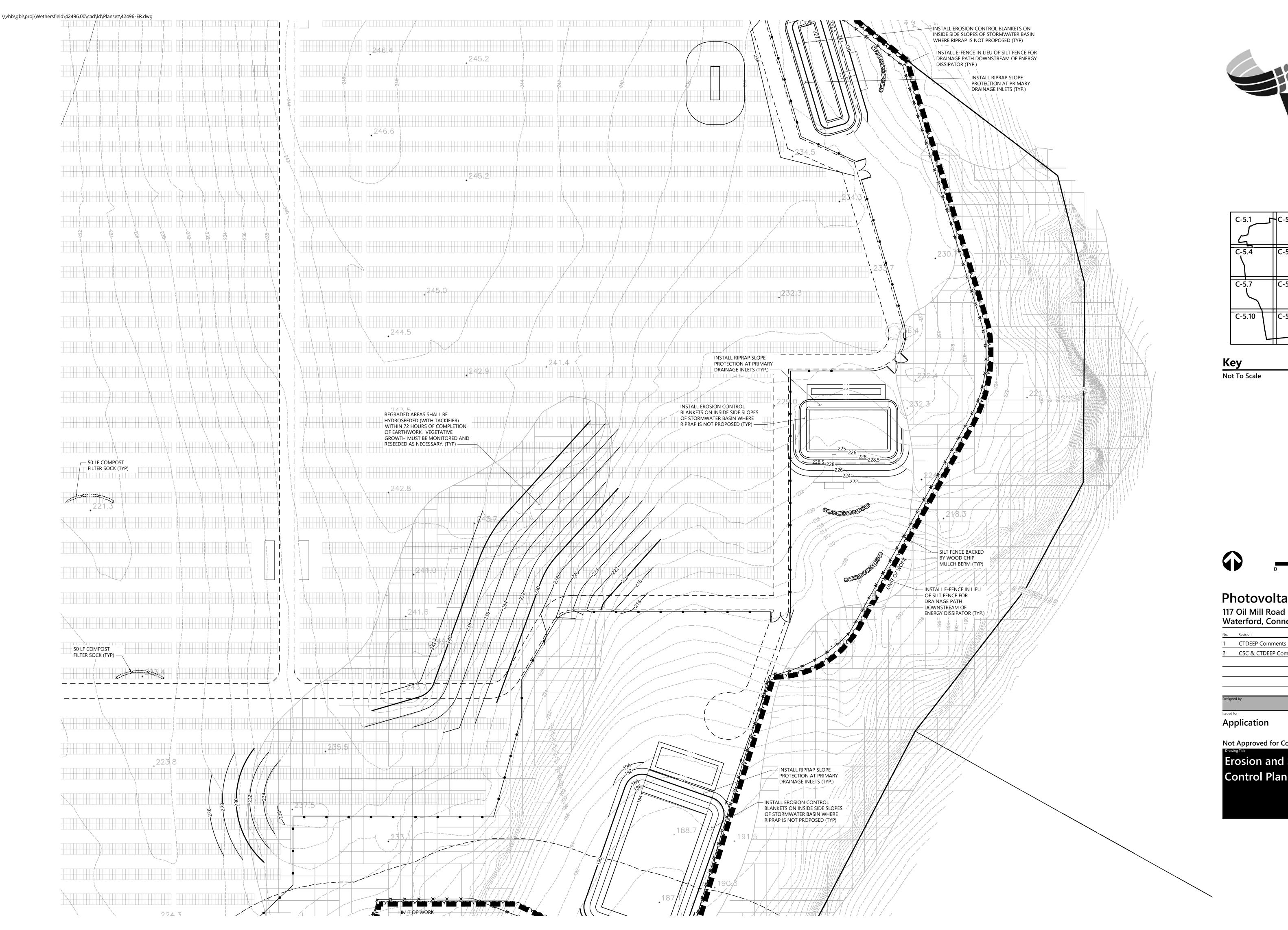
### Photovoltaic Installation

CTDEEP Comments CSC & CTDEEP Comments 7/28/2020 SJK

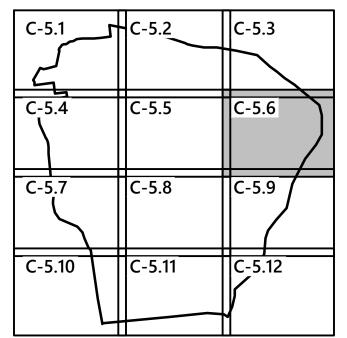
December 2, 2019

Not Approved for Construction

**Erosion and Sediment Control Plan** 









### **Photovoltaic Installation**

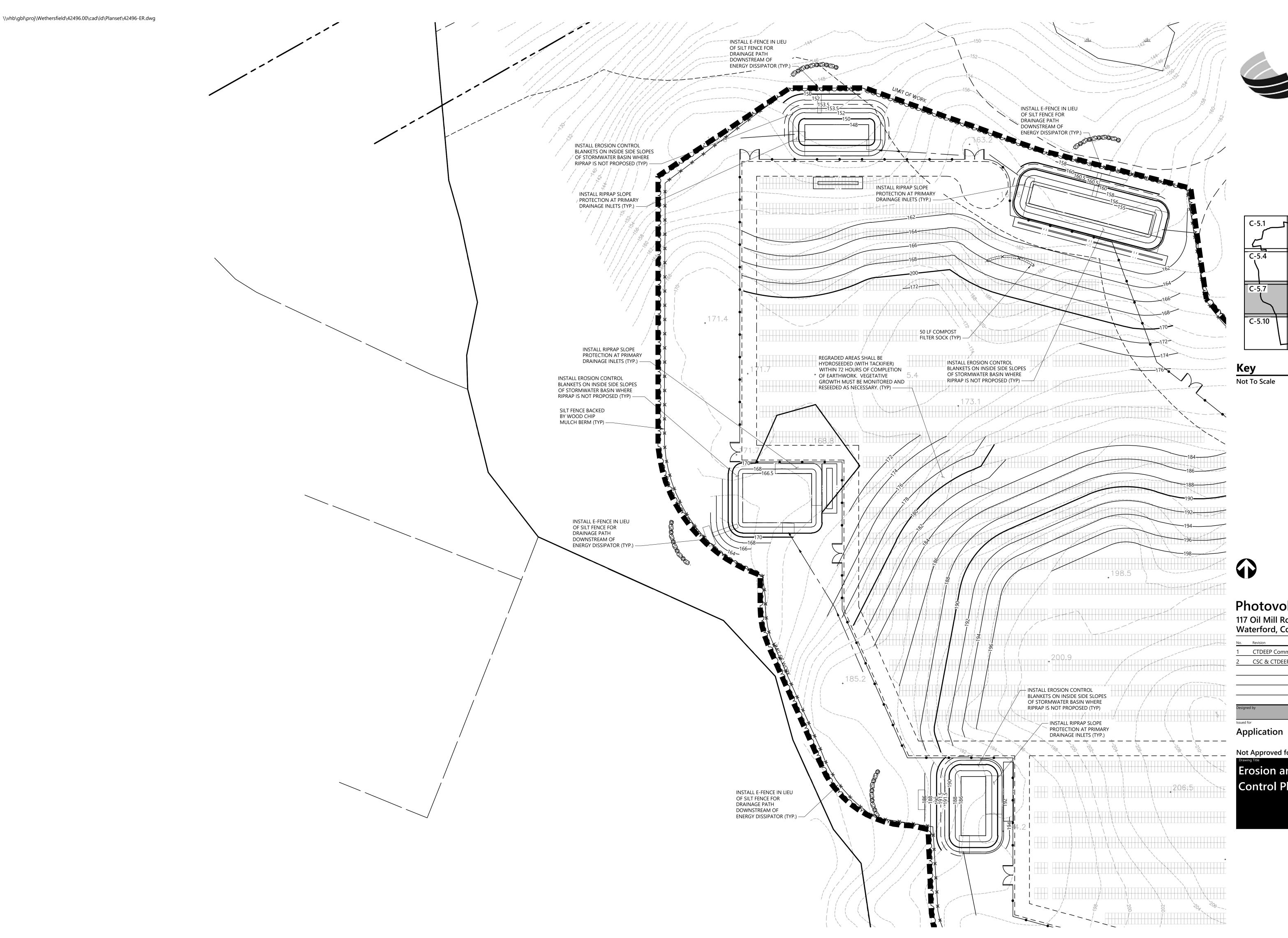
Waterford, Connecticut

Revision	Date	Appvd.
CTDEEP Comments	3/12/2020	SJK
CSC & CTDEEP Comments	7/28/2020	SJK
	CTDEEP Comments	CTDEEP Comments 3/12/2020

December 2, 2019

Not Approved for Construction

**Erosion and Sediment Control Plan** 





C-5.1	C-5.2	C-5.3
4		
C-5.4	C-5.5	C-5.6
C-5.7	C-5.8	C-5.9
C-5.10	C-5.11	C-5.12



### **Photovoltaic Installation**

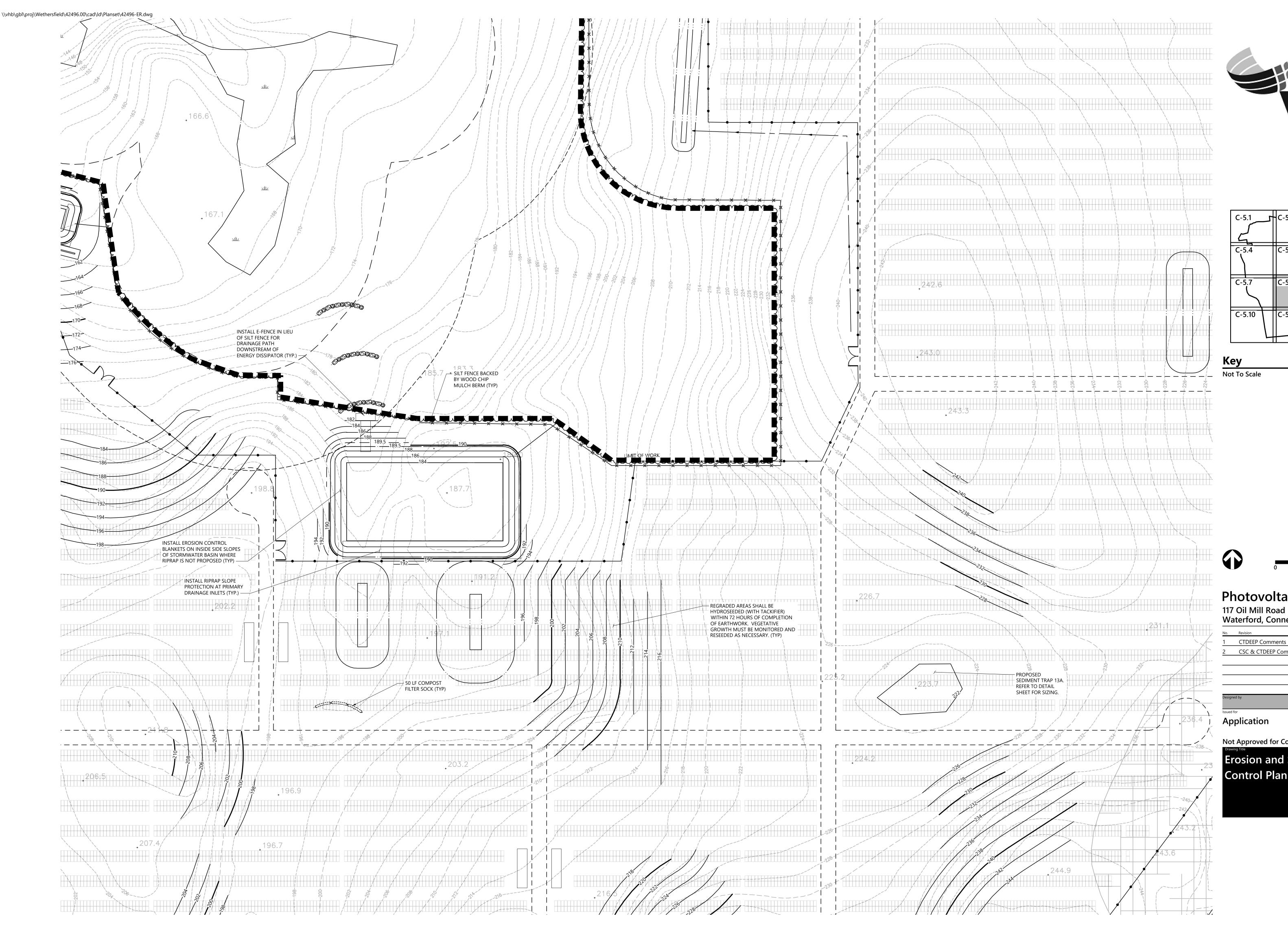
117 Oil Mill Road Waterford, Connecticut

No.	Revision	Date	Appvd.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

December 2, 2019

Not Approved for Construction

**Erosion and Sediment Control Plan** 

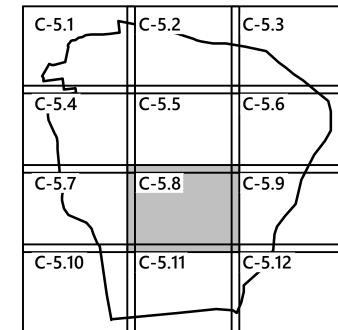




Suite 200

860.807.4300

Wethersfield, CT 06109





### **Photovoltaic Installation**

Waterford, Connecticut

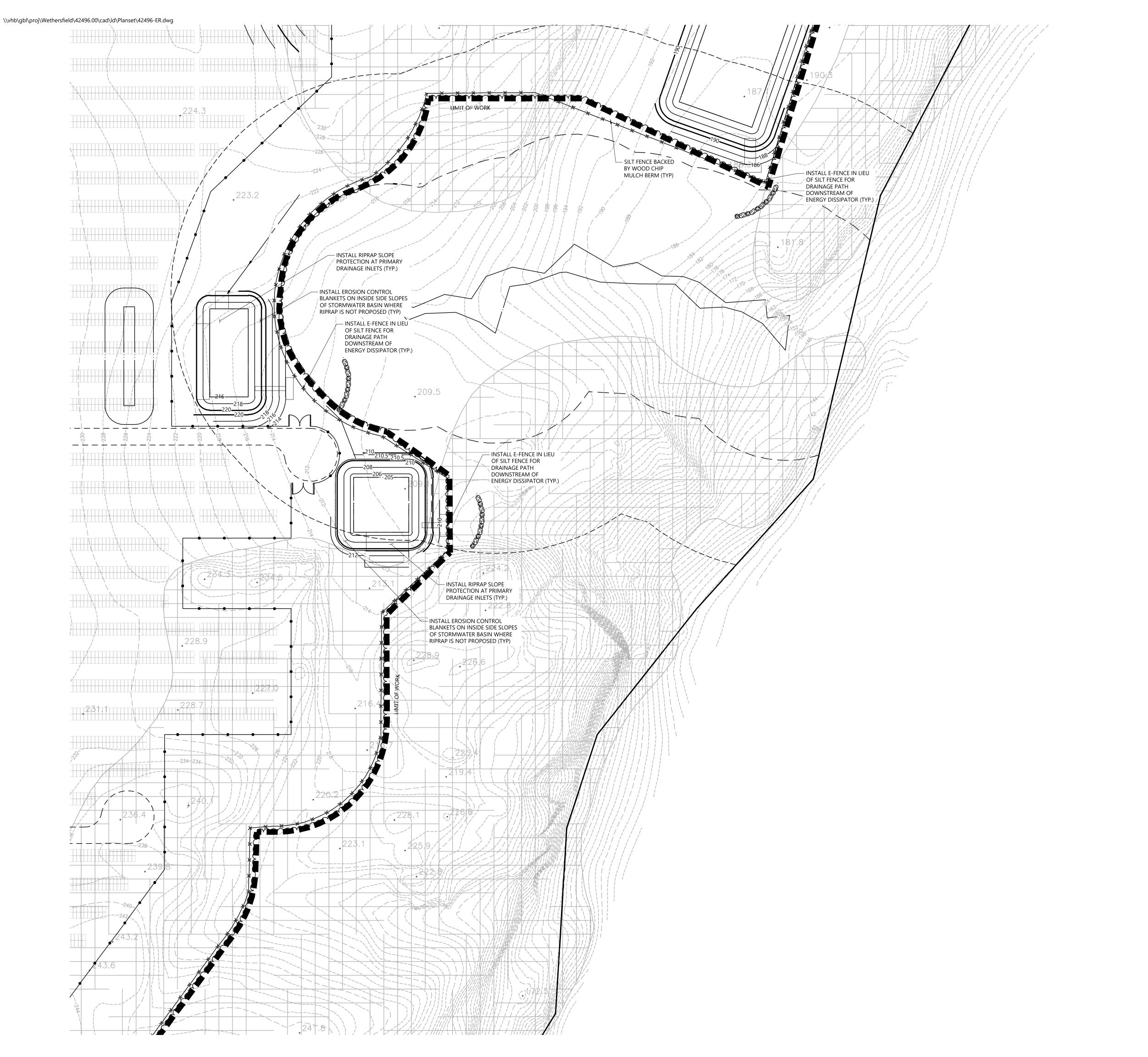
Revision	Date	Appvd.
CTDEEP Comments	3/12/2020	SJK
CSC & CTDEEP Comments	7/28/2020	SJK

December 2, 2019

Not Approved for Construction

**Erosion and Sediment Control Plan** 

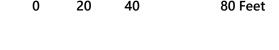
Drawing Number





C-5.1	C-5.2	C-5.3
2		
C-5.4	C-5.5	C-5.6
C-5.7	C-5.8	C-5.9
C-5.10	C-5.11	C-5.12

Not To Scale



### **Photovoltaic Installation**

117 Oil Mill Road Waterford, Connecticut

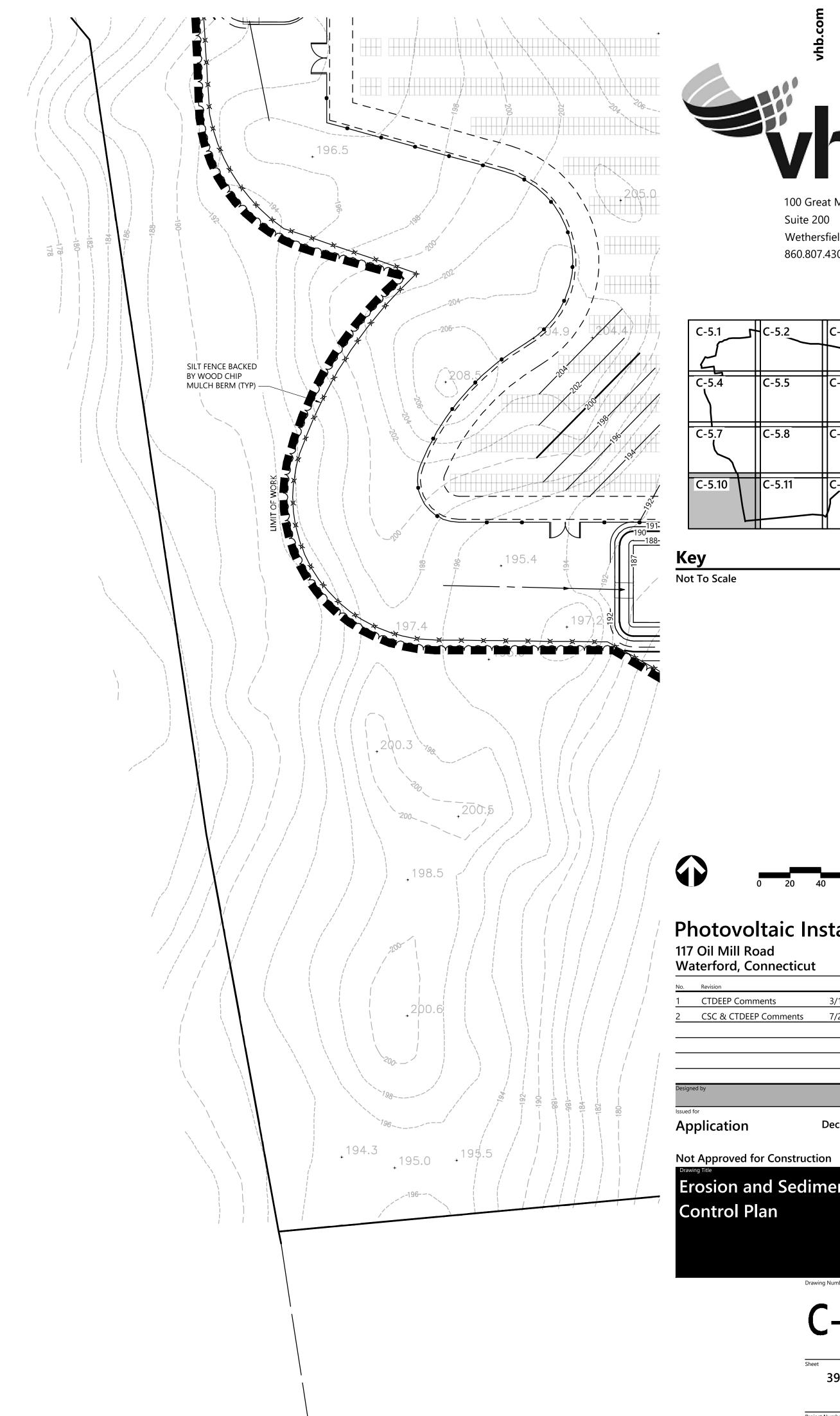
No.	Revision	Date	Appvd.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

**Application** December 2, 2019

Not Approved for Construction

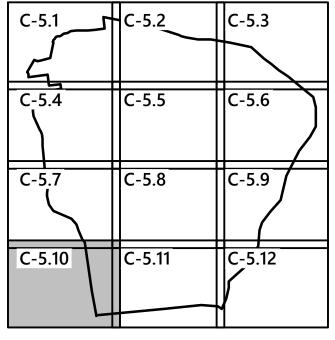
**Erosion and Sediment Control Plan** 

 $\wedge bl\proj\Wethersfield\42496.00\cad\ld\Planset\42496-ER.dwg$ 





100 Great Meadow Road Suite 200 Wethersfield, CT 06109 860.807.4300



Not To Scale





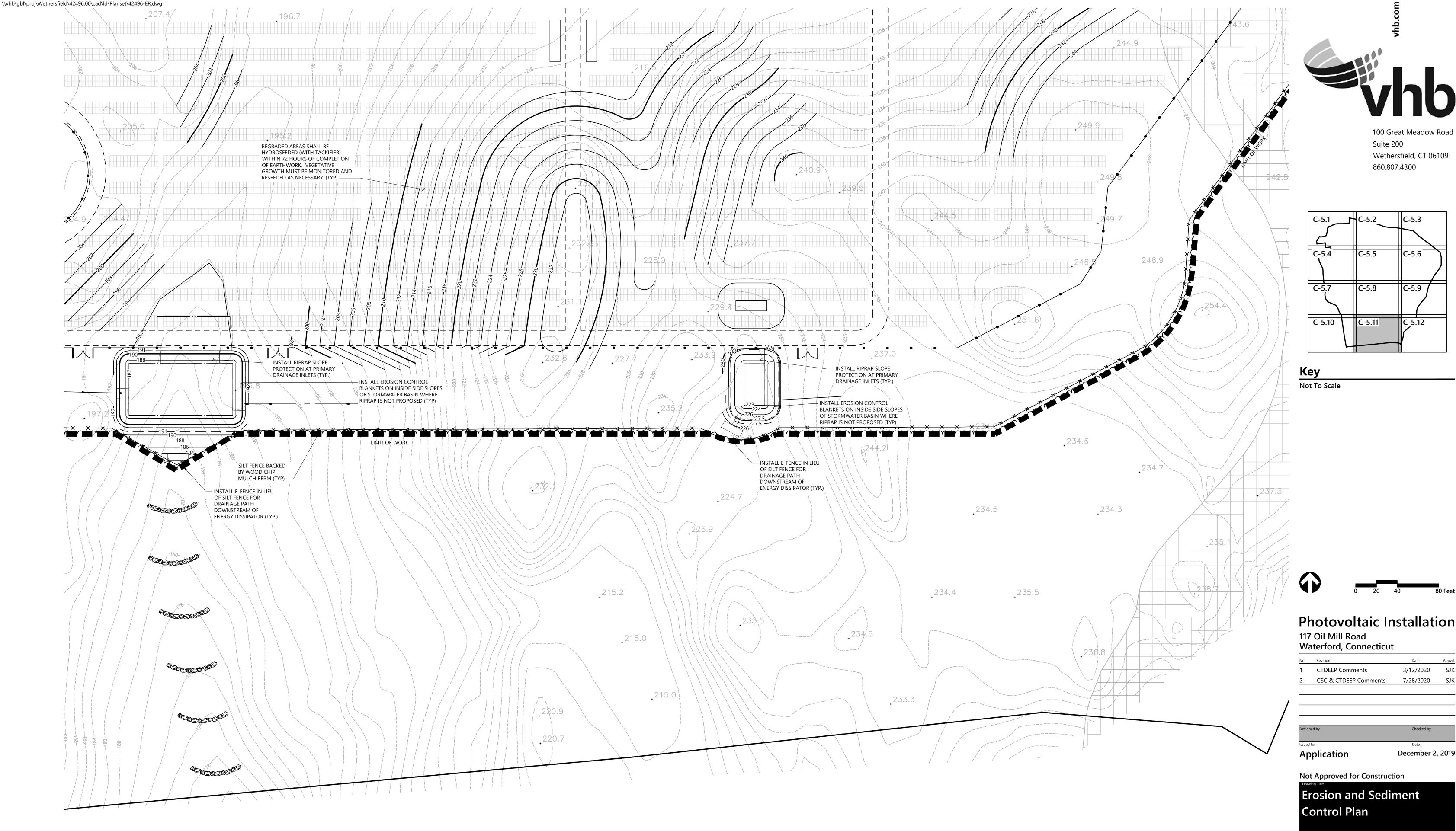
### **Photovoltaic Installation**

117 Oil Mill Road Waterford, Connecticut

No.	Revision	Date	Appvd
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

December 2, 2019

**Erosion and Sediment Control Plan** 



Wethersfield, CT 06109

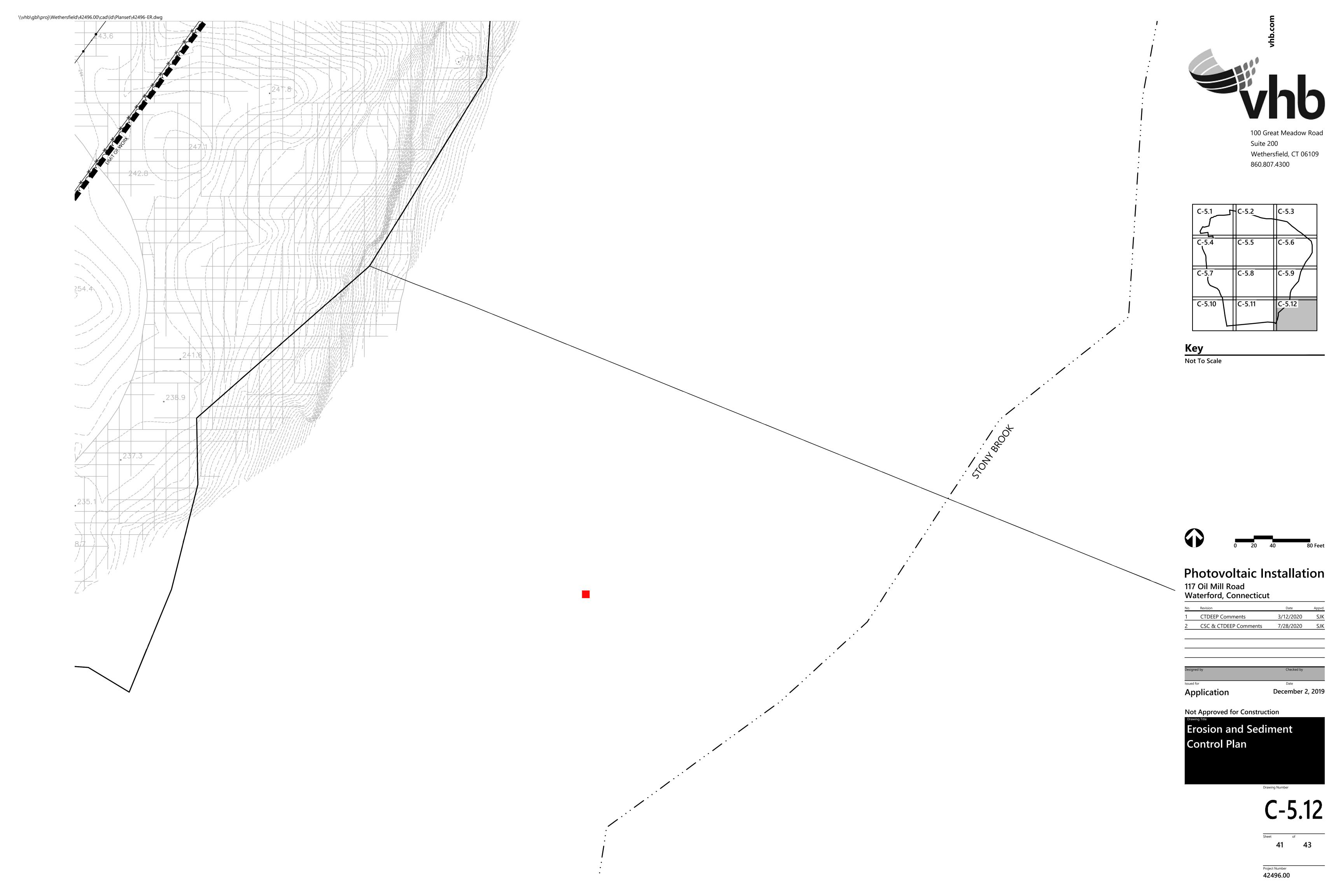
C-5.1	C-5.2	C-5.3
4		
C-5.4	C-5.5	C-5.6
C-5.7	C-5.8	C-5.9
C-5.10	C-5.11	C-5.12

### **Photovoltaic Installation**

3/12/2020 SJK CSC & CTDEEP Comments 7/28/2020 SJK

December 2, 2019

**Erosion and Sediment** 



Drive posts to depth of

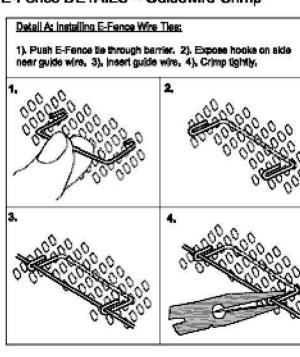
#### E-Fence™ DETAILS – Wildlife Exclusion

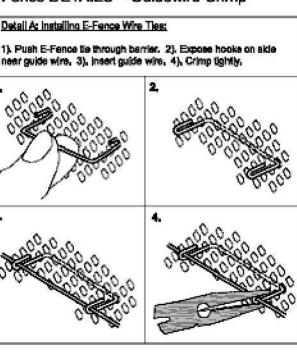
#### E-Fence<sup>™</sup> (Patent #US8402630, other patents pending) E-Fence DETAILS - Wildlife Exclusion - WPT T-Post - 8 FT c-c At Fence E-Fence Guide Wire T-Post 8' OC -> sections, overlap 12" and wire tie Crimps crimped to guide 14 ga. guide wire (3 to together to close all gaps wire 3' c-c (Detail A) 4" from top of berrier) E-Fence Guide Wire - wrap once around top of each post and Construction tension from post to post EFB20 Side 14 gauge galvanized wire ERTEC E-Fence 20" 3" from top of fence. 14" - height above ground Back fill fence side One at top, and one halfway. first, this side second Side A At E-Fence overlaps - sew sections together with wire-ties to completely eliminate all gaps. 6" - trench depth

#### Installation Notes:

- Excavate a trench a minimum of 4" wide and a minimum of 5"
- 2. T-posts shall be a minimum of 0.95 lbs/ft. T-posts shall be driven
- a minimum 18" deep into the ground 8' centers Insert barrier material into trench and attach to post in two places:
- 1) at 3" below top of fence and at 2) mid-height 4. At 3 inches from top of fence (above wire tie), wrap 14 gauge galvanized wire once around each T-post and pull the guide wire from post to post, wrap, secure and pull wire tight between each
- At segment overlaps (roll length 100 or 150 LF), overlap segments a minimum of 12". Eliminate all gaps by tying sections together with tie wire in two vertical rows, as shown.
- Push E-Fence Guide Wire Crimps through the E-Fence and crimp the ties to the guide wire on the other side of the fence (two crimps per tie) at 3' intervals, as illustrated in Detail A of the
- installation guidelines. Crimp to the guide-wire securely. E-Fence must be installed in continuous lengths (100 or 150 feet rolls). Do not cut segments into shorter lengths unless necessary due to sudden changes in elevation.
- Backfill trench with trench spoils. Backfill from E-Fence side of posts first so that E-Fence is pushed up against T-posts. Back fill other side to complete backfill.

#### E-Fence DETAILS - Guidewire Crimp





#### **E-Fence Installation Details**

Back-fill Side A first to

push E-Fence against

N.T.S. Source: Ertec Environmental Systems

-SELVAGE OF FABRIC KNUCKLED TOP & BOTTOM

CENTER

-TENSION

-TIE WIRES

CENTER RAIL

Elevation

TRUSS ROD-

TOP RAIL -

1" BEVEL—

FIN. GRD.-

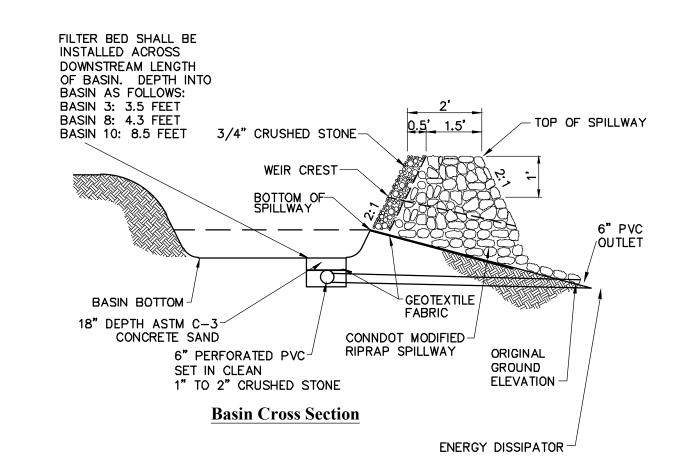
FENCE FABRIC — PER PLANS

CORNER, END OR LINE POSTS

CONCRETE FOOTING (3000 PSI-TYPE I)-

10" DIA. @ LINE POSTS OR 1'-4" @ CORNER, PULL OR END POSTS —





1. MATERIALS TO BE SUPPLIED AND INSTALLED IN CONFORMANCE WITH "CHAIN LINK MANUFACTURER'S INSTITUTE" PRODUCT MANUAL.

**Note:** 

2" DIAMOND MESH

OR BLACK VINYL,

TENSION WIRE

CHAIN LINK FABRIC

AS INDICATED ON PLANS

-6" GAP TO REMAIN OPEN

FOR WILDLIFE CROSSINGS

BELOW TENSION WIRE

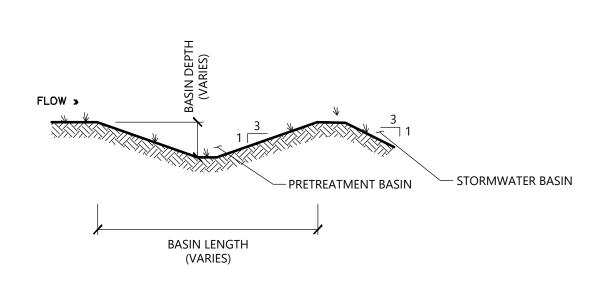
7' Chain Link Fence		6/08
N.T.S.	Source: VHB	LD_480

Section

- 1. ALL SIDE SLOPES SHALL NOT EXCEED 3:1
- 2. TOP OF EMBANKMENT SHALL BE 2' (MIN.) WIDTH AND 1' (MIN.) ABOVE TOP OF SPILLWAY. 3. SIDE SLOPES OF EMBANKMENT SHALL BE STABILIZED BY TEMPORARY SEEDING OR EROSION CONTROL
- BLANKETS AS DIRECTED BY THE ENGINEER. 4. REFER TO "PERMANENT STORMWATER BASIN SIZING" TABLE FOR VARIABLE SIZING.
  5. PERIMETER SILT FENCE SHALL BE REMOVED IMMEDIATELY DOWNSTREAM FROM SPILLWAY AND
- REPLACED WITH E-FENCE.
- 6. PERFORATED PVC AND CONCRETE SAND FOR SAND FILTERS SHALL BE INSTALLED ONLY UPON FULL STABILIZATION OF UPSTREAM AREAS. 6" PVC SHALL BE INSTALLED AND CAPPED AT TIME OF BASIN
- 7. PERFORATIONS IN UNDERDRAIN PIPING SHALL BE 0.5 INCH SPACED 6 INCHES APART. 8. FILTER BEDS HAVE BEEN SIZED TO DRAIN THE STORMWATER BASIN WITHIN ONE DAY IN ACCORDANCE WITH 2004 STORMWATER QUALITY MANUAL. ASSUMPTION OF 20 FEET/DAY HYDRAULIC CONDUCTIVITY FOR MEDIUM SAND AND BASIN VOLUME UNDER BOTTOM OF SPILLWAY.

#### **Earthen Surface Sand Filter Basin**

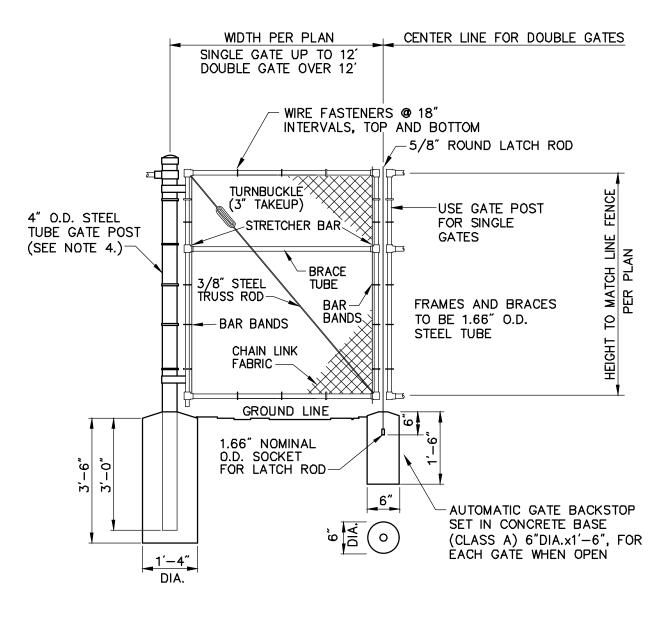
N.T.S. Source: VHB



1. PRETREATMENT BASIN LENGTH, WIDTH, AND DEPTH AS NOTED ON SITE PLANS. 2. SIDE SLOPES SHALL BE 3:1.

#### **Pretreatment Basin**

N.T.S. Source: VHB

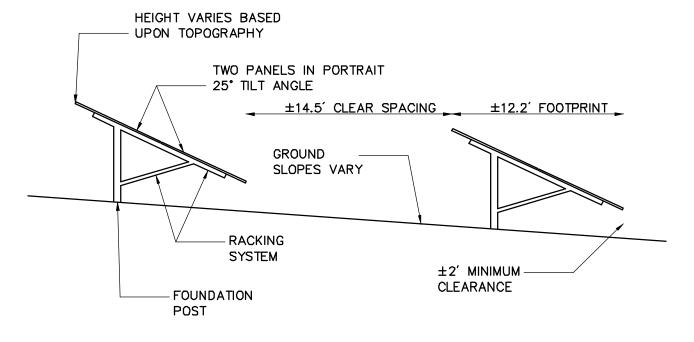


#### **Notes:**

- 1. CHAIN LINK FABRIC FOR GATES TO BE THE SAME AS REQUIRED FOR FENCE.
- 2. GATE POST BASE-PORTLAND CEMENT CONCRETE (3000 PSI).
- 3. FENCE FABRIC, POSTS, FRAMEWORKS, AND HARDWARE SHALL BE GALVANIZED STEEL OR BLACK VINYL (AS INDICATED ON PLANS) PER SPECIFICATIONS.
- 4. GATE POSTS TO BE USED ON EACH SIDE OF SINGLE AND DOUBLE GATE OPENINGS.

#### **Chain Link Fence Gate**

6/08 N.T.S. Source: VHB LD\_482

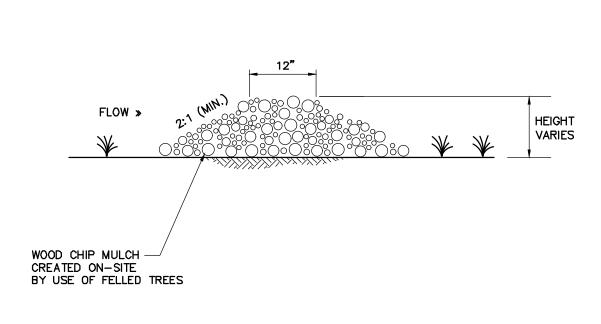


**Notes:** 

FINAL DETERMINATION OF PANEL TYPE, RACKING SYSTEM, AND FOUNDATION POSTS TO BE DETERMINED PENDING BEST AVAILABLE TECHNOLOGY AT TIME OF CONSTRUCTION AND STRUCTURAL GROUND TESTING.

#### **Cross Section of Panel Array**

N.T.S. Source: VHB



NOTES:

1. WOOD CHIP MULCH BERM TO BE INSTALLED DOWNSTREAM OF PERIMETER SILT FENCE IN VARIOUS LOCATIONS AROUND SITE.

### **Wood Chip Mulch Berm**

N.T.S.

7/20

Source: VHB

100 Great Meadow Road

Wethersfield, CT 06109

Suite 200

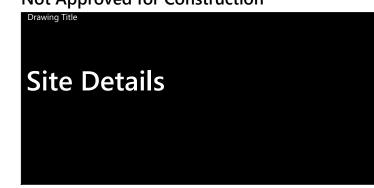
860.807.4300

#### **Photovoltaic Installation** 117 Oil Mill Road Waterford, Connecticut

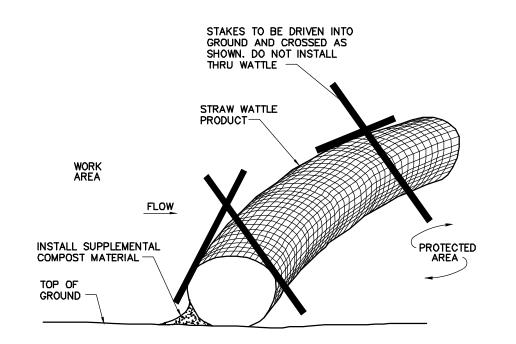
**CTDEEP Comments** 3/12/2020 SJK CSC & CTDEEP Comments 7/28/2020 SJK

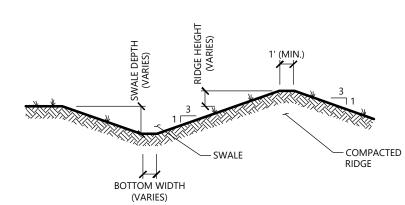
**Application** December 2, 2019

**Not Approved for Construction** 



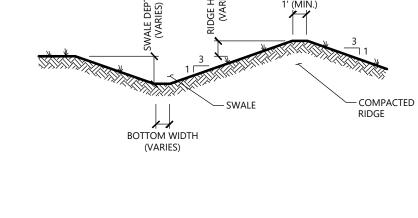






1. ALL SIDE SLOPES SHALL NOT EXCEED 3:1 2. REFER TO "DIVERSION SWALE SIZING" TABLE FOR SELECTION OF LINING MATERIAL TO BE INSTALLED OVER ENTIRE SWALE AREA. 3. REFER TO "DIVERSION SWALE SIZING" TABLE FOR VARIABLE SIZING.
4.THE INTENT IS TO USE THE MATERIAL EXCAVATED FROM THE SWALE TO CONSTRUCT THE RIDGE.

Source: VHB



**WOOD STAKE** JOINT DETAIL 1. IN THE EVENT THAT BOULDERS OR SHALLOW LEDGE ARE ENCOUNTERED WHERE SILT FENCE IS PROPOSED, THE CONTRACTOR SHALL REMOVE THE OBTRUSION IN ORDER TO BE ABLE TO ACHIEVE PROPER EMBEDMENT DEPTHS, OR RELOCATE THE SILT FENCE UPHILL SUCH THAT IT DOES IMPACT THE PROJECT. **Silt Fence Barrier** 

Source: VHB

1 ½" X 1 ½" X 4' WOOD STAKE

OR APPROVED EQUAL —

SILT FENCE -

WORK AREA

FLOW

GROUND —

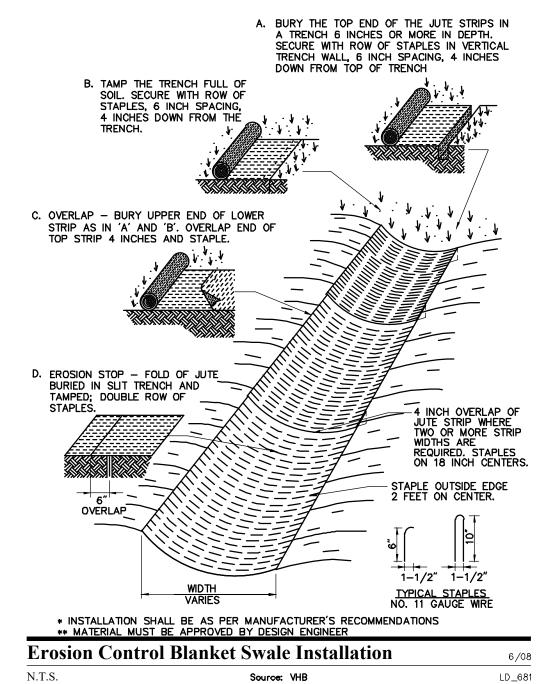
N.T.S.

4" EMBEDMENT

PLACE 4" OF FABRIC ALONG TRENCH AWAY

FROM PROTECTED AREA

BACKFILL AND COMPACT —



1. SHALL BE INSTALLED AT THE OUTLET FROM EACH STORMWATER BASIN SPILLWAY.

BOTTOM BOTTOM/CREST WIDTH AT BASE, BERM ELEVATION, FT

231.0

226.5

188.0

218.0

209.0

226.0

188.5

190.0

168.5

152.0

158.5

232.5

228.5

190.0

220.0

210.5

227.5

191.0

191.5

170.0

153.5

160.5

Plan View -MOUNTABLE BERM 11/2" CRUSHED STONE-**Cross-section Notes:**  ENTRANCE WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO

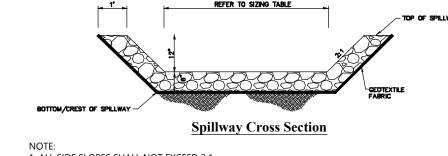
PROVIDED AS NEEDED.

N.T.S.

3. STABILIZED CONSTRUCTION EXIT SHALL BE REMOVED PRIOR TO FINAL FINISH MATERIALS BEING INSTALLED. **Stabilized Construction Exit** 6/08 LD\_682

TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE

**Straw Wattle Installation** 8/12 N.T.S. LD\_658



1. ALL SIDE SLOPES SHALL NOT EXCEED 2:1 2. TOP OF EMBANKMENT SHALL BE 2' (MIN.) WIDTH AND 1' (MIN.) ABOVE TOP OF SPILLWAY. 3. SIDE SLOPES OF EMBANKMENT SHALL BE STABILIZED BY TEMPORARY SEEDING OR EROSION CONTROL BLANKETS AS DIRECTED BY THE ENGINEER. 4. REFER TO "PERMANENT STORMWATER BASIN SIZING" TABLE FOR VARIABLE SIZING. 5. PERIMETER SILT FENCE SHALL BE REMOVED IMMEDIATELY DOWNSTREAM FROM SPILLWAY.

**Stormwater Basin Spillway** 

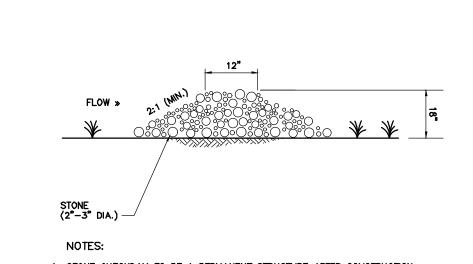
**Stone Check Dam** 

N.T.S.

**Diversion Swale** 

N.T.S.

N.T.S.



1. STONE CHECKDAM TO BE A PERMANENT STRUCTURE AFTER CONSTRUCTION.

Source: VHB

7' HIGH PERIMETER CHAIN LINK FENCE SOLAR PANELS 15% (MAX.) LONGITUDINAL SLOPE - 12" DEPTH DOT NO. 3 STONE CRUSHED STONE SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE CONNECTICUT DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR ROADS,

Source: VHB

LENGTH AT

BASIN BOTTOM

(TOE OF

SLOPE), FT

WIDTH AT BASIN BOTTOM

(TOE OF

SLOPE), FT

125

170

BRIDGES, AND INCIDENTAL CONSTRUCTION. ON-SITE ROCK MATERIAL SHALL BE CRUSHED AND USED IN THE CONSTRUCTION OF ACCESS ROAD TO THE MAXIMUM EXTENTS FEASIBLE.

**Perimeter Access Cross Section** 

BASIN TYPE

INFILTRATI□N

SAND FILTER

POND INFILTRATION

POND

INFILTRATI□N

SAND FILTER

SAND FILTER

POND

INFILTRATI□N

INFILTRATION

N.T.S.

NUMBER

**Energy Dissipator** 

227.5

184.0

216.0

205.0

223.0

186.0

186.0

165.5

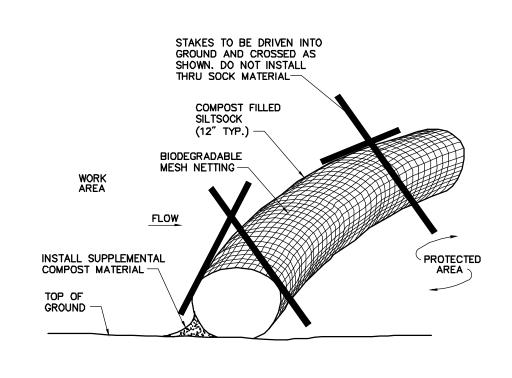
148.0

155.0

PERMANENT STORMWATER BASIN SIZING

SIDE SLOPES

LD\_650



SILTSOCK SHALL BE 12" DIAMETER FILTREXX SILTSOXX, OR APPROVED EQUAL.

2. SILTSOCKS SHALL OVERLAP A MINIMUM OF 12 INCHES. SILTSOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.

5. IF NON BIODEGRADABLE NETTING IS USED THE NETTING SHALL BE COLLECTED AND DISPOSED OF OFFSITE.

**Compost Filter Sock (CFS)** N.T.S. LD\_658

# IVERSION SWALE SIZING BOTTOM SIDE SWALE LINING INTO SUBJECT STATES OF SWALE LINING INTO SUBJECT SWALE SWAL APPROXIMATE TRIBUTARY

## **Photovoltaic Installation**

100 Great Meadow Road

Wethersfield, CT 06109

Suite 200

860.807.4300

117 Oil Mill Road Waterford, Connecticut

No.	Revision	Date	Appvd.
1	CTDEEP Comments	3/12/2020	SJK
2	CSC & CTDEEP Comments	7/28/2020	SJK

**Application** December 2, 2019

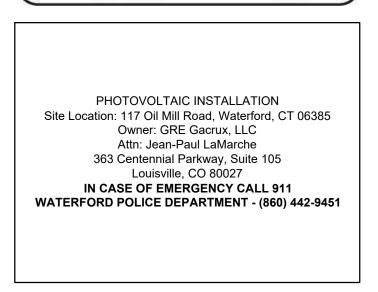
Not Approved for Construction

**Site Details** 

Project Number 42496.00

Drawing Number

ELECTRICAL HAZARD **AUTHORIZED PERSONNEL** ONLY



1. THE SITE FACILITY SIGN IS A DRAFT SHOWING THE MINIMUM AMOUNT OF INFORMATION THAT WILL BE PROVIDED. SIGN WILL BE 18" X 24". 2. ALL SIGNS WILL BE MOUNTED ONTO THE CHAIN LINK

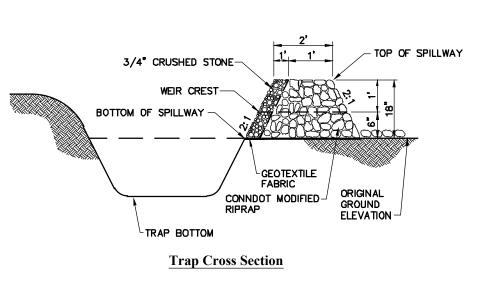
**Danger and Site Facility Signs** 

Sizing Tables for Temporary & Permanent Stormwater Features

BASIN BOTTOM -CONNDOT MODIFIED --RIPRAP SPILLWAY ORIGINAL GROUND ELEVATION -**Basin Cross Section** ENERGY DISSIPATOR -1. ALL SIDE SLOPES SHALL NOT EXCEED 3:1 2. TOP OF EMBANKMENT SHALL BE 2' (MIN.) WIDTH AND 1' (MIN.) ABOVE TOP OF SPILLWAY. 3. SIDE SLOPES OF EMBANKMENT SHALL BE STABILIZED BY TEMPORARY SEEDING OR EROSION CONTROL BLANKETS AS DIRECTED BY THE ENGINEER. 4. REFER TO "PERMANENT STORMWATER BASIN SIZING" TABLE FOR VARIABLE SIZING.
5. PERIMETER SILT FENCE SHALL BE REMOVED IMMEDIATELY DOWNSTREAM FROM SPILLWAY AND

**Permanent Stormwater Basin** 

3/4" CRUSHED STONE-



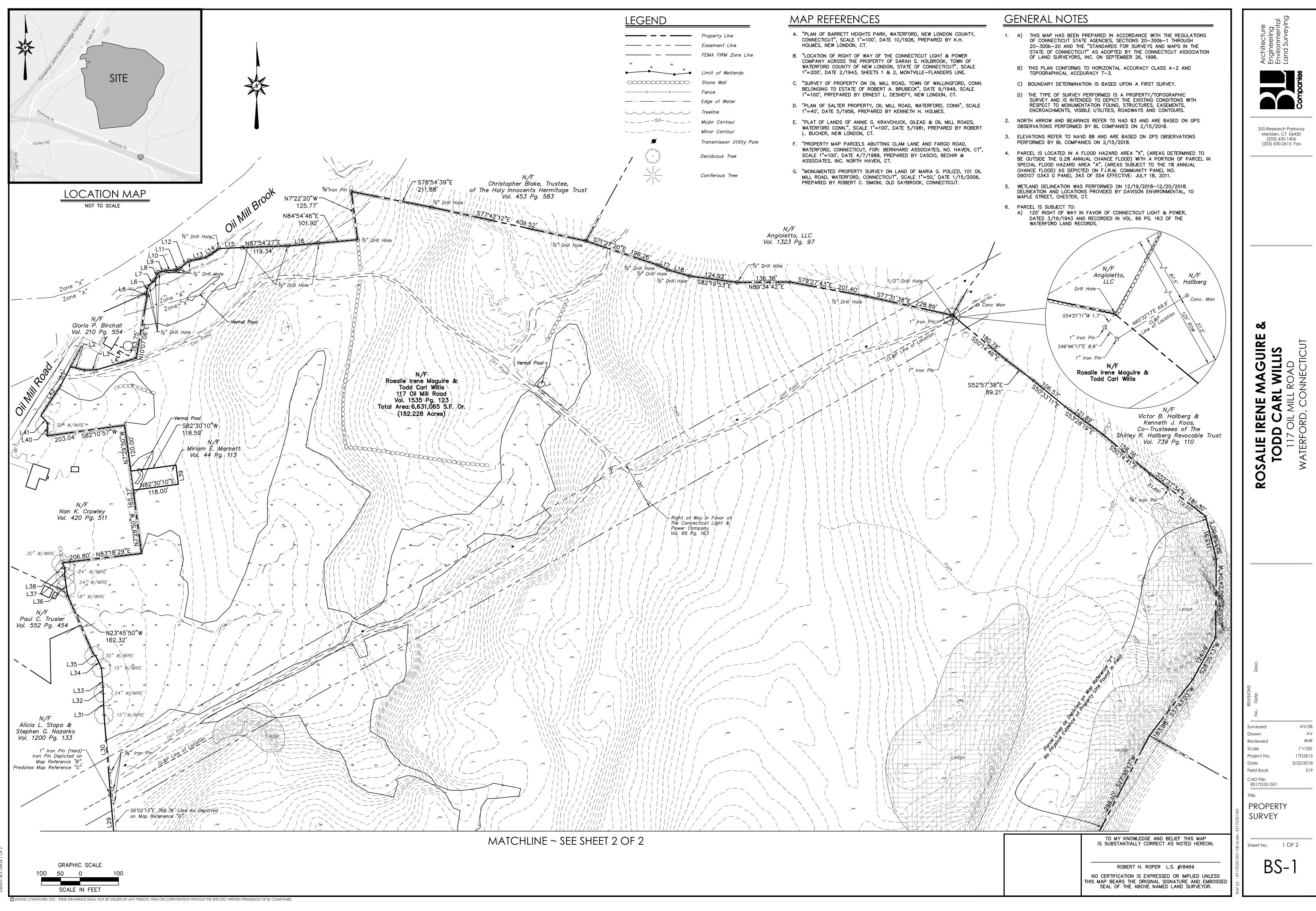
1. ALL SIDE SLOPES SHALL NOT EXCEED 3:1
2. SIDE SLOPES OF EMBANKMENT SHALL BE STABILIZED BY TEMPORARY SEEDING OR EROSION CONTROL BLANKETS AS DIRECTED BY THE ENGINEER. 3. TRAP SHALL BE DRAINED AND CLEANED OF SEDIMENT ONCE SEDIMENT IS > 1' ABOVE TRAP BOTTOM.

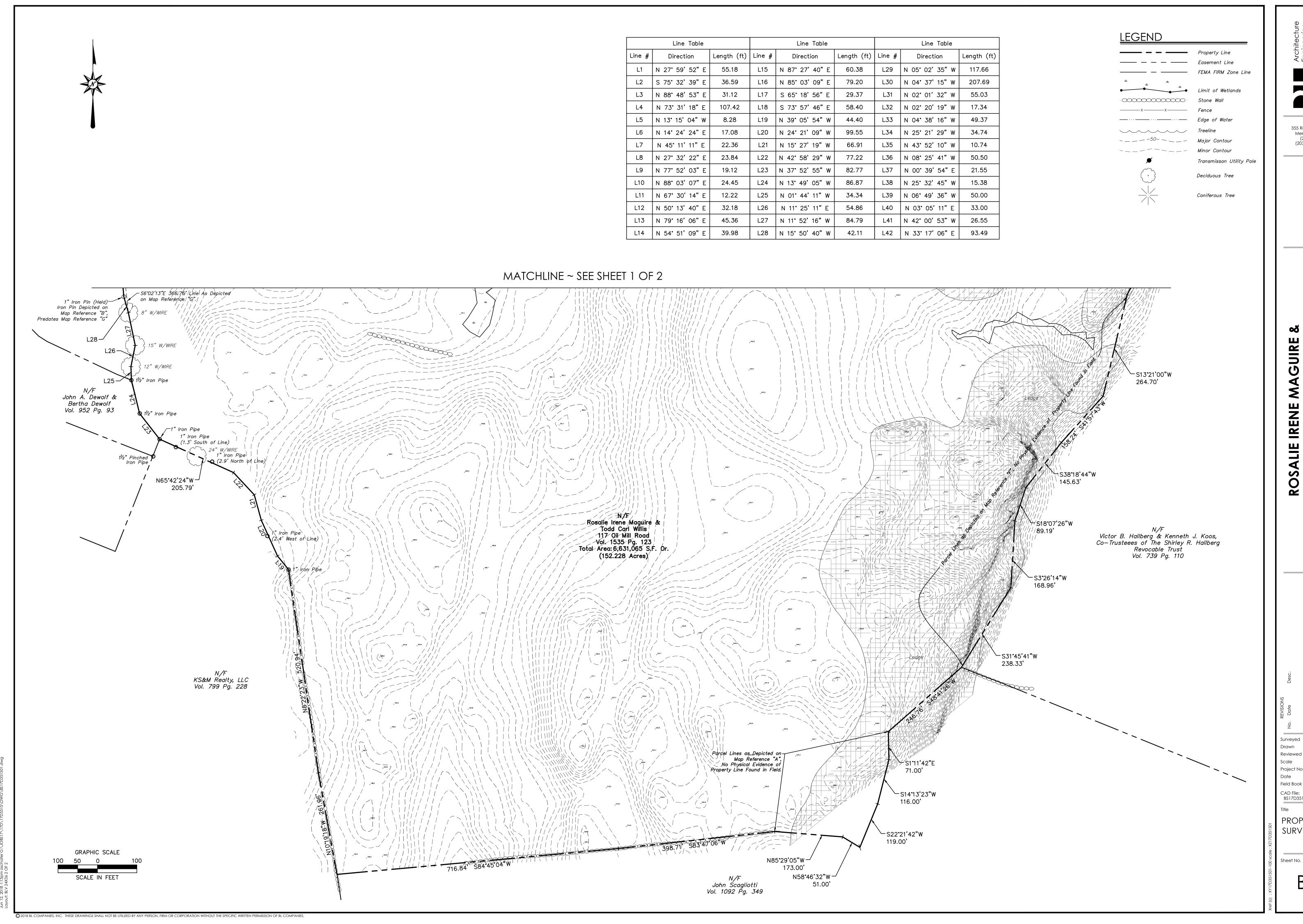
**Temporary Sediment Trap (TST)** 

N.T.S.

Source: VHB

184.0 189.5 188.0 186.5 190.0 192.0 189.0 195.5 197.0





355 Research Parkway Meriden, CT 06450 (203) 630-1406 (203) 630-2615 Fax

MAGUIRE RL WILLIS

AV/SB RHR 1''=100' 17D3515 2/22/2018

CAD File: BS17D351501

PROPERTY SURVEY

Sheet No. 2 OF 2

BS-1