

**DEFINITIVE SUBDIVISION PLAN**  
**PARCEL NUMBER 40-14-9**  
**278 OSBORNE ROAD**  
**TOWN OF WARE, HAMPSHIRE COUNTY**  
**BK 51160-177, LOT 14**  
**TOWN OF HARDWICK, WORCESTER COUNTY**  
**MASSACHUSETTS**

TOWN OF WARE

ZONE - RR  
AREA -60,000 S.F.  
FRONTAGE - 150'  
FRONT - 25 FT. (SOLAR)  
SIDE - 25 FT. (SOLAR )  
REAR - 25 FT. (SOLAR)  
50 FT. MIN BUFFER TO RESIDENTIAL USE FOR SOLAR FIELDS

TOWN OF HARDWICK

ZONE - AR-60  
AREA -60,000 S.F.  
FRONTAGE - 200'  
FRONT - 35 FT.  
SIDE - 40 FT.  
REAR - 20 FT.  
50 FT. MIN BUFFER TO RESIDENTIAL USE

RECORD PARCELS (ASSESSORS)

WARE 40-14-9  
HARDWICK 124/094.0-0000-0014.0

RECORD OWNERS

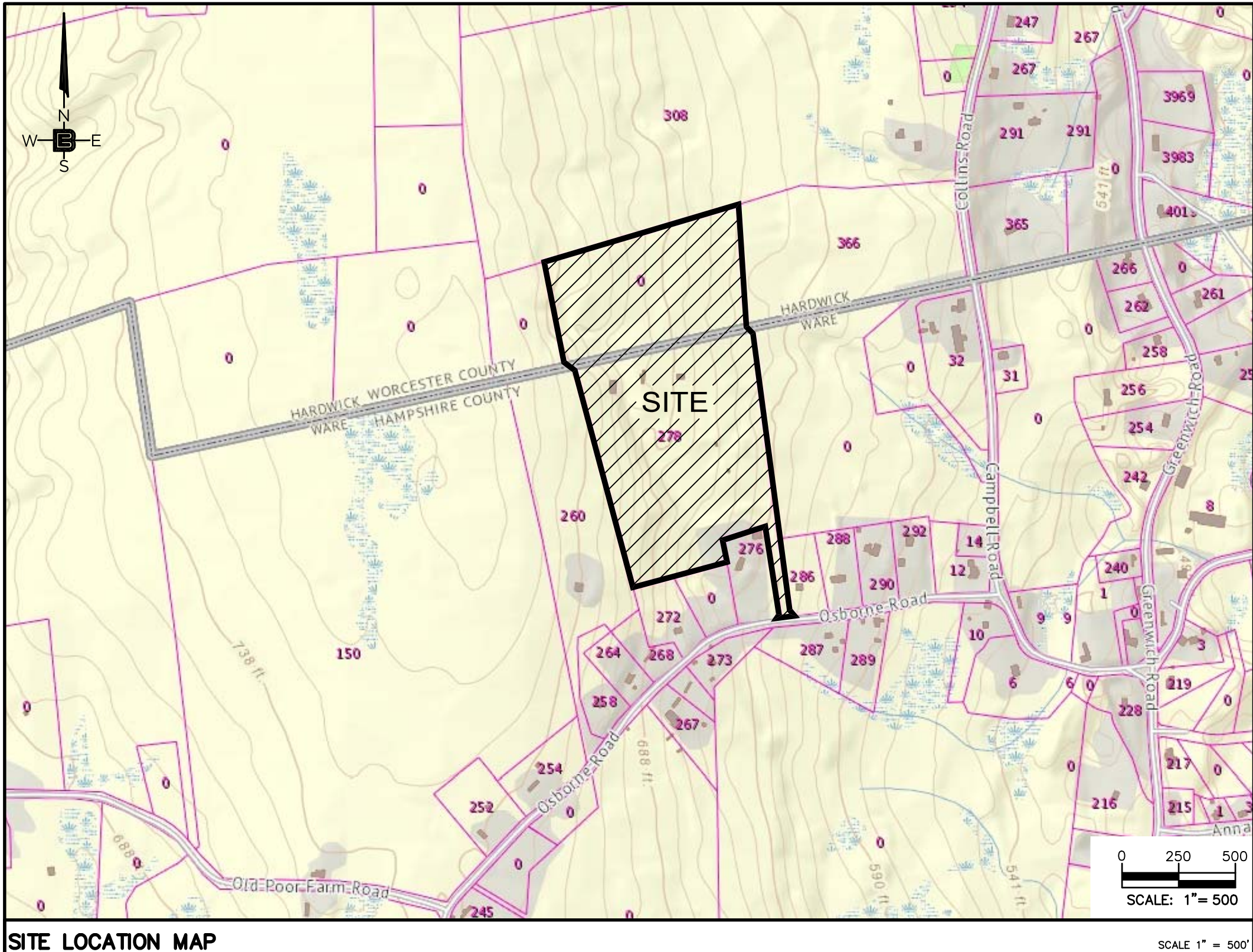
JOEL J HARDER  
54 GOULD ROAD  
WARE, MA 01082  
DB.11374 PG.181  
DB.51160 PG.177

DEVELOPER/APPLICANT

MELINK SOLAR DEVELOPMENT  
276 N. FOREST AVE. NE  
MARIETTA, GA 30060

PERMITS

SPECIAL PERMIT - WARE PLANNING BOARD  
NOTICE OF INTENT- WARE CONSERVATION COMMISSION  
NOTICE OF INTENT- HARDWICK CONSERVATION COMMISSION  
SITE PLAN REVIEW - HARDWICK PLANNING BOARD



DRAWING LIST			
DWG. #	DRAWING TITLE	DATED/ LAST REVISED	REV. #
C-1	COVER SHEET	1-11-21	2
C-2	EXISTING CONDITIONS PLAN	7-31-20	0
C-3	OVERALL SITE AND SUBDIVISION PLAN	1-11-21	2
C-4	DETAILED SUBDIVISION PLAN	1-11-21	2
C-5	ROAD PLAN & PROFILE	1-11-21	2
C-5.1	GRADING & DRAINAGE PLAN (SECTION 1)	1-11-21	1
C-5.2	GRADING & DRAINAGE PLAN (SECTION 2)	12-10-20	0
C-6	SITE DETAILS	12-10-20	1
C-7	SITE DETAILS - 2	7-31-20	0

THE UNDERSIGNED AGREE TO COMPLY WITH ALL RULES  
AND REGULATIONS FOR THE SUBDIVISION OF LAND IN  
THE TOWN OF WARE AS ADOPTED BY THE TOWN AND  
THE PLANNING BOARD AND ALL FURTHER AMENDMENTS  
OR ADDITIONS THERETO.

DATE: \_\_\_\_\_

**TOWN OF HARDWICK PLANNING BOARD**

---



---



---



---



---



---



---



---

**DATE:**

DATE: \_\_\_\_\_

[illegible]

DATE: \_\_\_\_\_

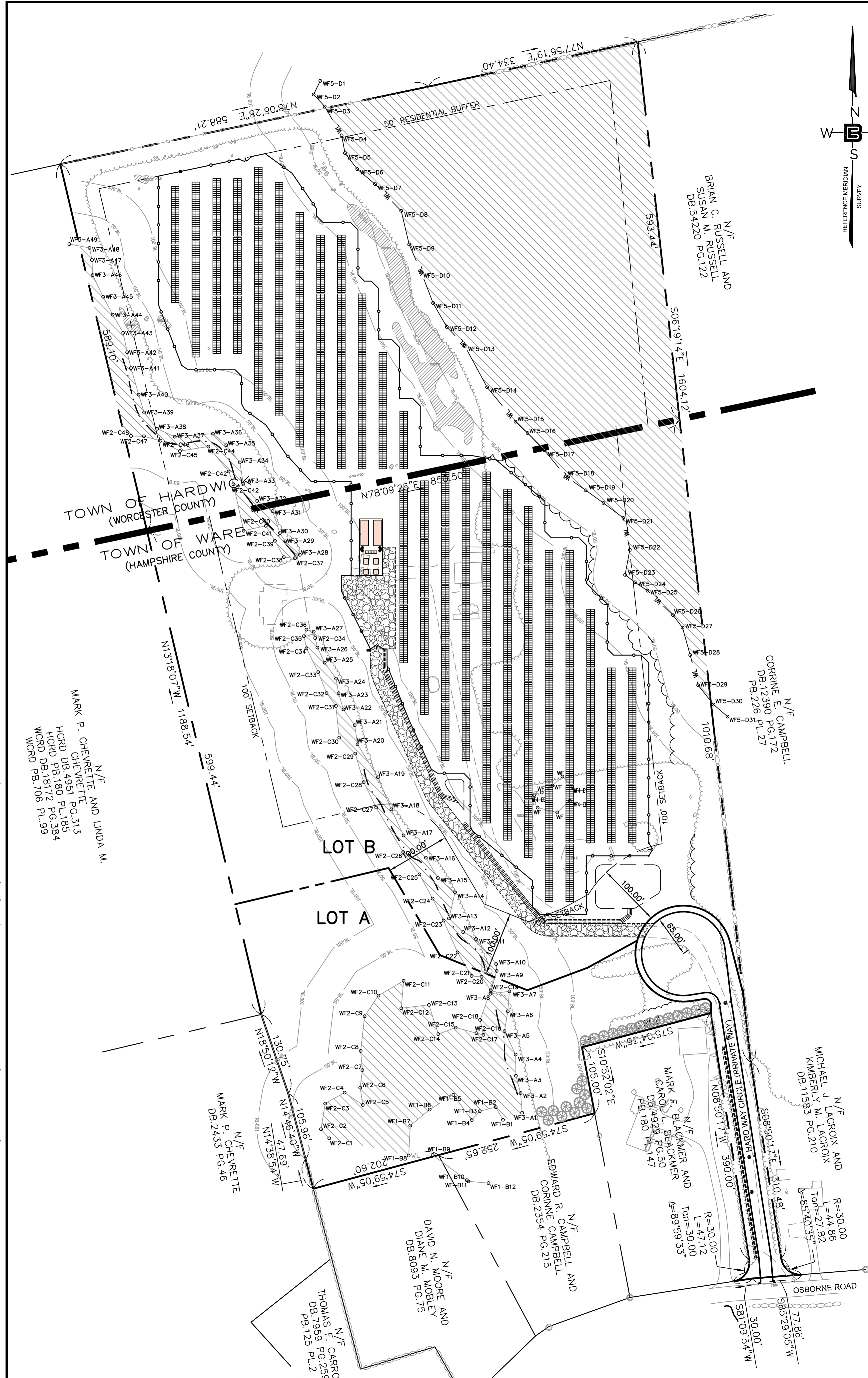
RESERVED FOR USE BY THE REGISTRY OF DEEDS	THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEEDS REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF THE PROPERTY SHOWN.
	<p>I HEREBY CERTIFY THAT THIS IS A TRUE PLAN BASED ON FIELD SURVEYS AND THE LATEST DEEDS AND PLANS OF RECORD AND THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS.</p> <p>_____</p> <p>BRUCE A. FITZBACK</p> <p>_____</p> <p>DATE _____ P.L.S. #37731</p>

39 ELM STREET SOUTHBRIDGE, MA 01550 P 508/765/0195 F 508/765/0193 <a href="http://www.bertinengineering.com">www.bertinengineering.com</a>					
<div>BERTIN ENGINEERING</div> <div>CIVIL • SURVEYING • TRAFFIC • STRUCTURAL • ENVIRONMENTAL • MECHANICAL • LANDSCAPE</div>					
THIS DRAWING IS THE PROPERTY OF THE CLIENT AND BERTIN ENGINEERING ASSOCIATES INC. AND WAS PREPARED FOR THE EXCLUSIVE USE BY THE CLIENT. REUSE FOR ANY OTHER PURPOSE, WITHOUT AUTHORIZATION BY WRITTEN CONSENT BY THE CLIENT AND BERTIN ENGINEERING ASSOCIATES INC. IS PROHIBITED.					
CALISTO J. BERTIN, P.E. PROFESSIONAL ENGINEER					
CT LIC. NO. 12950		NJ LIC. NO. 28845			
MA LIC. NO. 40595		NV LIC. NO. 60022			
NH LIC. NO. 9368		RI LIC. NO. 6694			
BRUCE A. FITZBACK, P.L.S. PROFESSIONAL LAND SURVEYOR					
MA LIC. NO. 37731 CT LIC. NO. 16970					
<small>NOT VALID OUTSIDE MASSACHUSETTS</small>					
		E.O.		E.O.	
		REVISED DRAWING LIST			
1		12-12-20			
		REVISED DRAWING LIST			
1		12-12-20			
NO.		DATE		REVISION	
DRAWING TITLE					
COVER SHEET					
PROJECT					
LARGE SCALE SOLAR ARRAY					
27B OSBORNE ROAD PARCEL NUMBER 40-14-9 TOWN OF WARE, HAMPSHIRE COUNTY NK 51860-777, LOT 14 TOWN OF HARDWICK, WORCESTER COUNTY MASSACHUSETTS					
CLIENT					
WARE SOLAR II LLC 276 N. FOREST AVE. NE MARIETTA, GA 30060					
CERTIFICATE OF AUTHORIZATION 24GA28068900 / 21MH00002800					
DRAWN BY J.A.S.		CHECKED BY C.J.B.			
SCALE 1" = 100'		PROJECT NO. 18M-217			
DATE 07-31-20		REVISION NO. 2			
DRAWING NO.					
C-1					









ZONING DIMENSION SCHEDULE			
TOWN OF WARE			
ZONE: RR (RURAL RESIDENTIAL)			
	<u>REQUIRED</u>	<u>LOT A</u>	<u>LOT B</u>
AREA (SF)	60,000	165,939.2	594,512.1 (TOWN OF WARE) 1,117,089.5 (TOTAL)
FRONTAGE (FT)	150	262.2	348.1
<u>SETBACKS (ZONE RR):</u>			
FRONT (FT)	30	TO COMPLY	N/A
SIDE (FT)	30	TO COMPLY	N/A
REAR (FT)	40	TO COMPLY	N/A
<u>SETBACKS (SOLAR):</u>			
FRONT (FT)	100	N/A	129.9
SIDE (FT)	100	N/A	108.5
			102.6
REAR (FT)	100	N/A	0 (VARIANCE)

### GENERAL NOTES

1. ALL FEATURES ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.  
PROPOSED FEATURES AS SHOWN IN FULL TONE  
EXISTING FEATURES ARE SHOWN IN HALF TONE  
EXISTING FEATURES TO BE REMOVED ARE SHOWN AS DASHED, OR ARE NOTED.
2. LOCATION OF ALL UNDERGROUND UTILITIES IS APPROXIMATE AND SHOULD BE VERIFIED BEFORE EXCAVATION OR CONSTRUCTION BEGINS. CALL DIG SAFE SYSTEM, INC.: 811 OR 1-888-344-7233.
4. UNLESS OTHERWISE NOTED, MAINTAIN EXISTING YARD GRADES AND SLOPES.
5. ALL UTILITY CONNECTIONS ARE TO BE IN ACCORDANCE WITH LOCAL CODE.
6. THE SITE PLAN(S) SUPERSEDES ALL STANDARD DRAWINGS.
7. ALL WETLANDS DELINEATED BY ECOTEC INC., SEPTEMBER 2019.
8. THE FENCING WILL INCORPORATE A DESIGN OF THE EPC'S CHOOSING THAT WILL FACILITATE WILDLIFE MOVEMENT ACROSS THE PROPERTY.
9. ALL GATES TO BE INSTALLED WITH KNOX BOX AND SIGNAGE WITH EMERGENCY CONTACT INFORMATION SUBJECT TO NATIONAL GRID FINAL DESIGN AND CONSTRUCTION.  
KNOX BOX KEY TO BE GIVEN TO LOCAL FIRE DEPARTMENT.
10. NO PESTICIDES OR HERBISIDES ARE TO BE USED DURING CONSTRUCTION OR MAINTENANCE.

## PRELIMINARY SOLAR PANEL OUTPUT

ARRAY	TOTAL
TOTAL NUMBER OF RACKS	98
PANELS PER RACK	54
TOTAL NUMBER OF PANELS	94 x 54 = 5,076
OUTPUT PER PANEL	400W
TOTAL OUTPUT	400W x 5,076 = 2,030,400 W (2.03 MW)

PANEL COUNT AND ARRANGEMENT SUBJECT TO CHANGE BASED ON  
AVAILABILITY AND MANUFACTURER

[illegible][illegible]

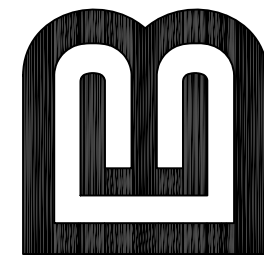
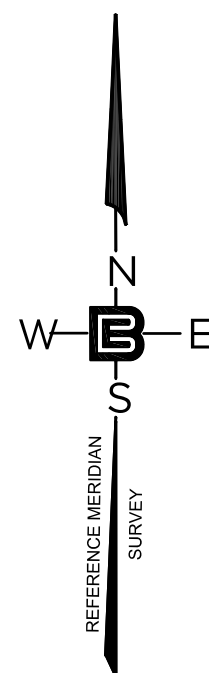
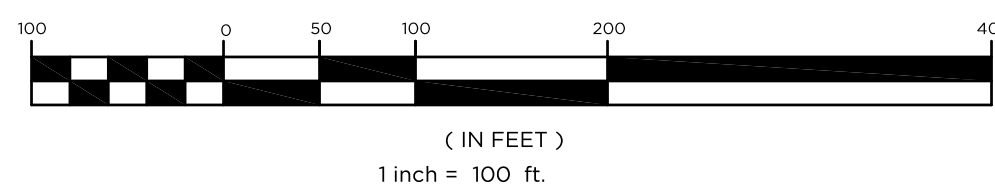
### FLOOD HAZARD NOTES

THIS SITE IS LOCATED WITHIN ZONE "C" AS PER  
THE FOLLOWING FLOOD INSURANCE RATE MAPS:

TOWN OF HARDWICK:  
COMMUNITY PANEL NO. 250307 0015 B. EFFECTIVE DATE SEPTEMBER 16, 1981.

TOWN OF WARE:  
COMMUNITY PANEL NO. 250172 0013 B, EFFECTIVE DATE AUGUST 17, 1981.

### GRAPHIC SCALE



CALISTO J. BERTIN, P.E.  
PROFESSIONAL ENGINEER

LIC. NO. 12950	NJ LIC. NO. 28845
LIC. NO. 40595	NY LIC. NO. 60022
LIC. NO. 9368	RI LIC. NO. 6694

BRUCE A. FITZBACK, P.L.S.

PROFESSIONAL LAND SURVEYOR  
MA LIC. NO. 37731  
CT LIC. NO. 16970

2	06-11-21	ADDITION OF ROADWAY NAME.	E.O.
1	12-10-20	REVISED ROADWAY & CALLOUTS TO REFERENCE SQUARE PLAN.	E.O.
NO	DATE	REVISION	

DRAWING TITLE

OVERALL  
SITE &  
SUBDIVISION  
PLAN

## PROJECT

# LARGE SCALE SOLAR ARRAY

278 OSBORNE ROAD  
PARCEL NUMBER 40-14-9  
TOWN OF WARE, HAMPSHIRE COUNTY  
NK 51160-177, LOT 14  
TOWN OF HARDWICK, WORCESTER COUNTY  
MASSACHUSETTS

CLIENT  
WARE SOLAR II LLC  
276 N. FOREST AVE. NE  
MARIETA, GA 30060

CERTIFICATE OF AUTHORIZATION  
216A00060000 / 21M10000000000

24GA28068900 / 21MH00002800	
DRAWN BY	CHECKED BY

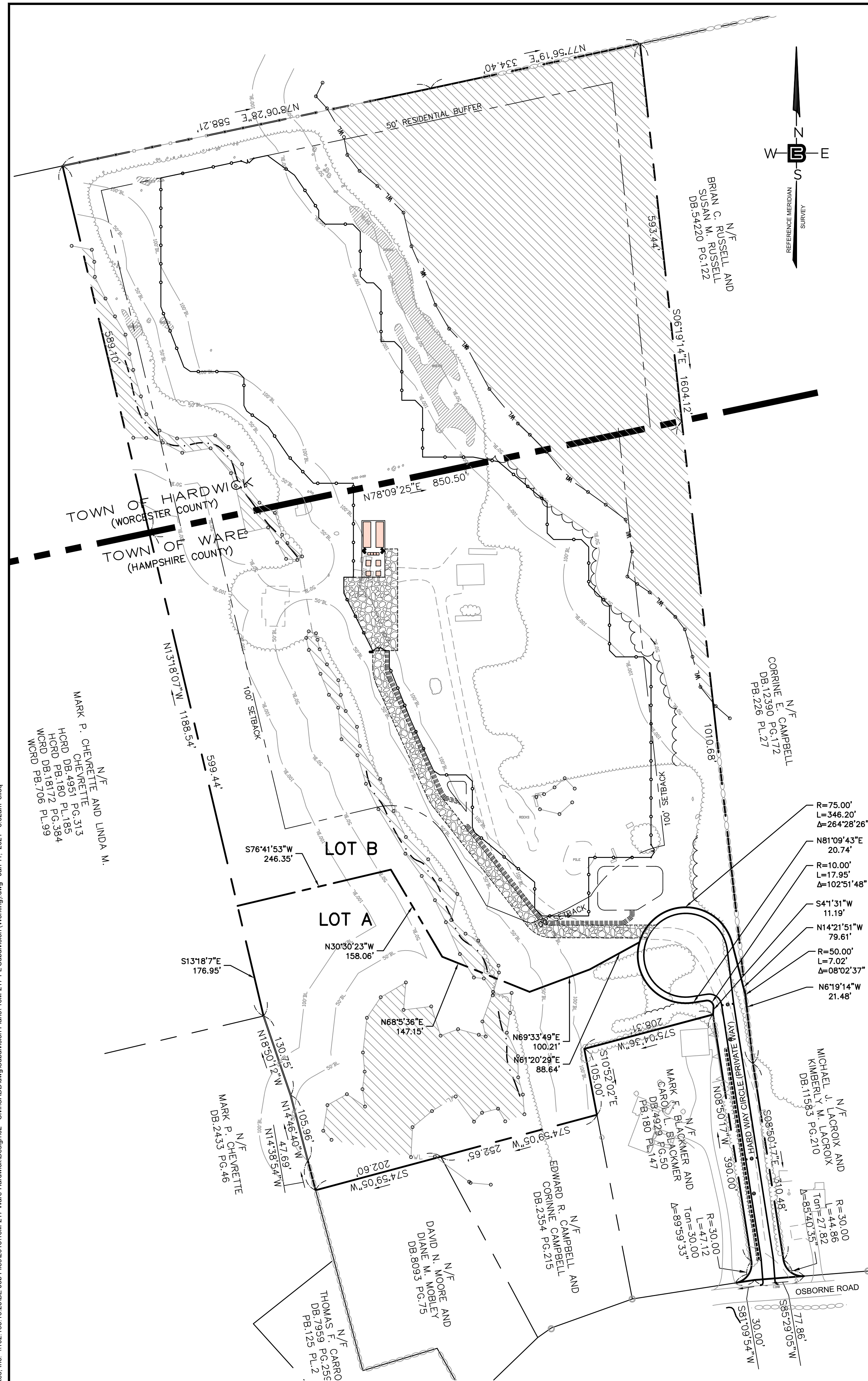
E.Q.	C.J.B.
SCALE	PROJECT NO.

1" = 100'	18M-217
DATE	REVISION NO.

DATE	07-31-20	REVISION NO.	2
------	----------	--------------	---

DRAWING NO. **C 3**

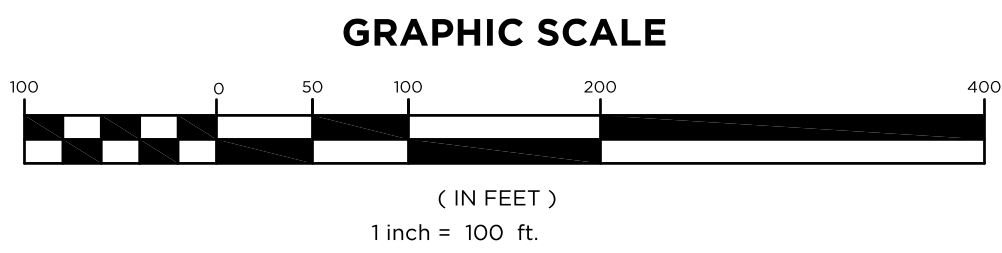
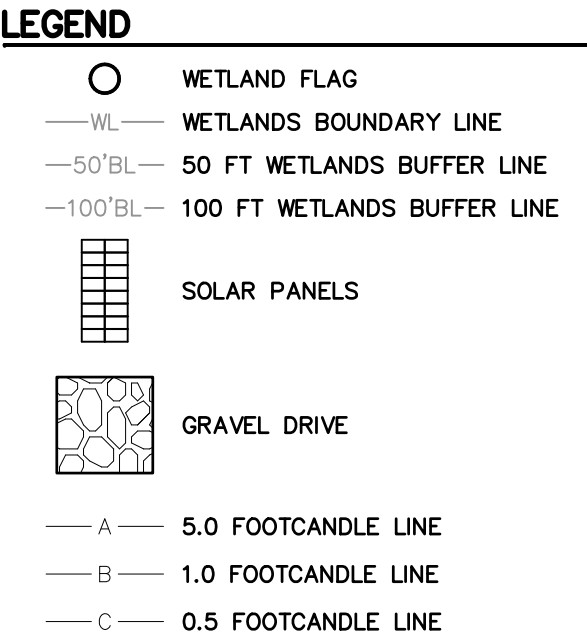


[illegible]

THE UNDERSIGNED AGREE TO COMPLY WITH ALL RULES AND REGULATIONS FOR THE SUBDIVISION OF LAND IN THE TOWN OF WARE AS ADOPTED BY THE TOWN AND THE PLANNING BOARD AND ALL FURTHER AMENDMENTS OR ADDITIONS THERETO.

DATE: \_\_\_\_\_

RESERVED FOR USE BY THE REGISTRY OF DEEDS	<p>THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEEDS REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF THE PROPERTY SHOWN.</p> <p>I HEREBY CERTIFY THAT THIS IS A TRUE PLAN BASED ON FIELD SURVEYS AND THE LATEST DEEDS AND PLANS OF RECORD AND THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS.</p>
	<p>_____ BRUCE A. FITZBACK</p> <p>_____ DATE</p> <p>_____ P.L.S. #57731</p>

[illegible]



## ROAD PLAN

## ROAD PROFILE

**TOWN OF WARE PLANNING BOARD**

---



---



---



---



---



---



---



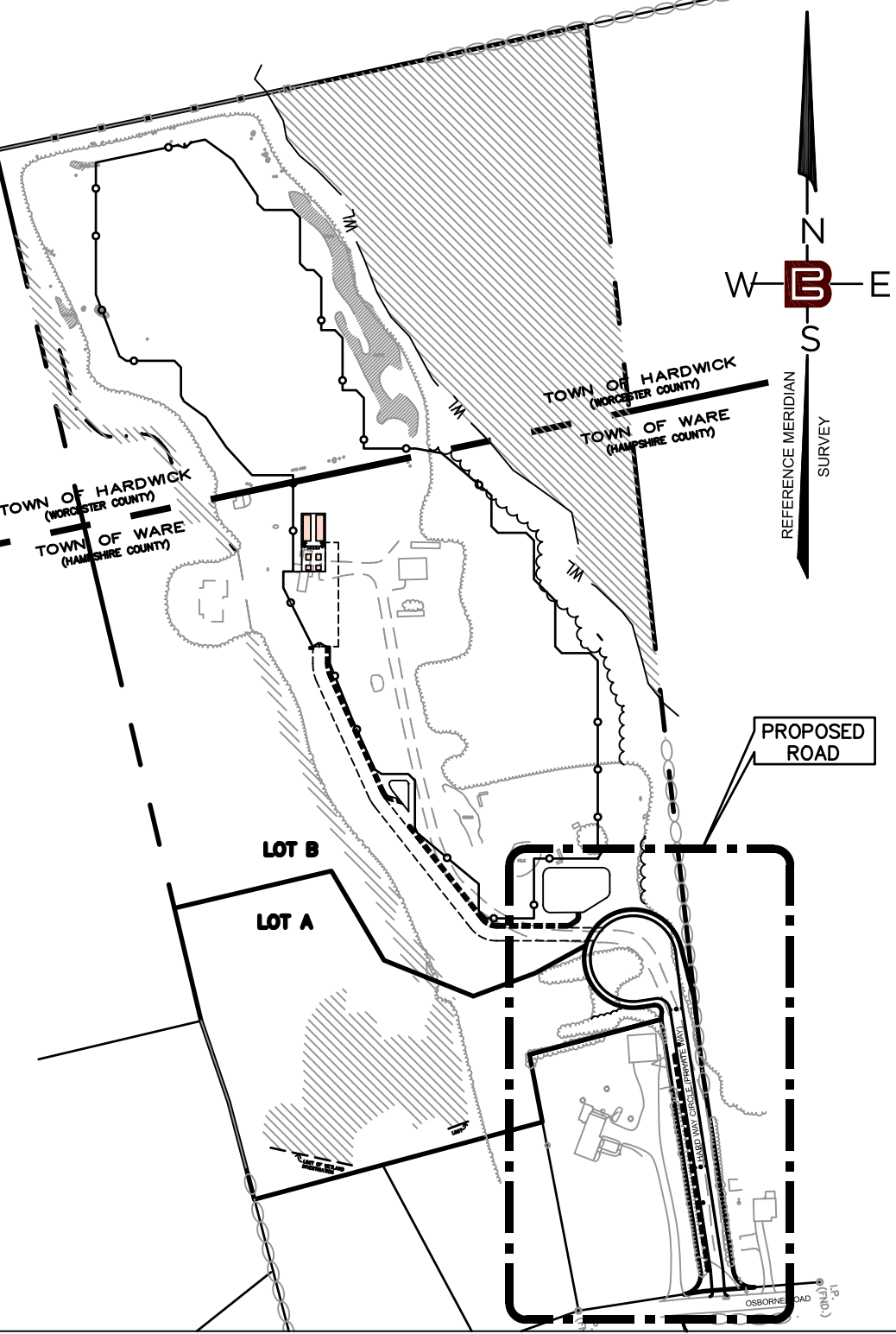
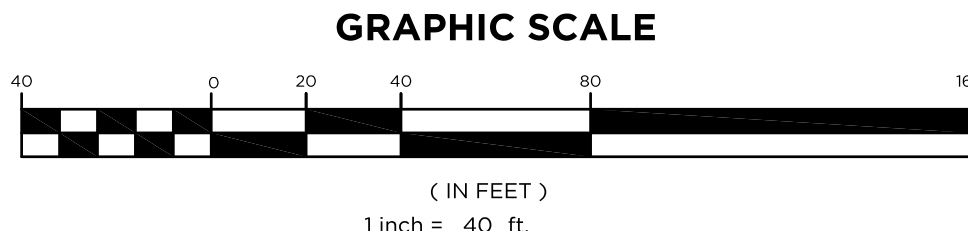
---



---



---



### LOCATION KEY

## TEST PIT DATA

TEST PITS PERFORMED BY JTC INC. ON SEPTEMBER 27, 2019 & DECEMBER 4, 2020

**2-2**  
OBSERVED GROUNDWATER: 13 FEET  
ESTIMATED SEASONAL LOW GROUNDWATER  
EXTURES:  
OPSOIL: 0-4 INCHES; MEDIUM TO FINE SAND, SOME SILT, WITH ROOTS: 0-2 FEET;  
COARSE TO FINE SAND, SILT TRACES, GRAVEL TRACES, OCCASIONAL COBBLES AND  
BOULDERS, VERY DENSE, DRY: 2-4 FEET;  
GLACIAL TILL: 5-12 FEET

**2-3**  
OBSERVED GROUNDWATER: N/A  
EXTURES:  
COARSE TO FINE SAND, LITTLE GRAVEL, SILT TRACES, OCCASIONAL TO FREQUENT  
BOULDERS AND BOULDERS, MEDIUM TO VERY DENSE, DRY, GLACIAL TILL: 0-4  
FEET;  
REFUSAL AT 5 FT.

CALISTO J. BERTIN, P.E.

CT LIC. NO. 12950	NJ LIC. NO. 28845
MA LIC. NO. 40595	NY LIC. NO. 60022
NH LIC. NO. 9368	RI LIC. NO. 6694

BRUCE A. FITZBACK, P.L.S.

PROFESSIONAL LAND SURVEYOR  
MA LIC. NO. 37731  
CT LIC. NO. 16970

					E.Q.
					E.Q.

# ROAD PLAN & PROFILE

PROJECT

**LARGE SCALE  
SOLAR ARRAY**

278 OSBORNE ROAD  
PARCEL NUMBER 40-14-9  
TOWN OF WARE, HAMPSHIRE COUNTY  
NK 51160-177, LOT 14  
TOWN OF HARDWICK, WORCESTER COUNTY  
MASSACHUSETTS

CLIENT  
WARE SOLAR II LLC  
276 N. FOREST AVE. NE  
MARIETTA, GA 30060

CERTIFICATE OF AUTHORIZATION  
24GA28068900 / 21MH00002800

DRAWN BY EQ	CHECKED BY CIB
----------------	-------------------

E.Q.	C.S.B.
SCALE	PROJECT NO.

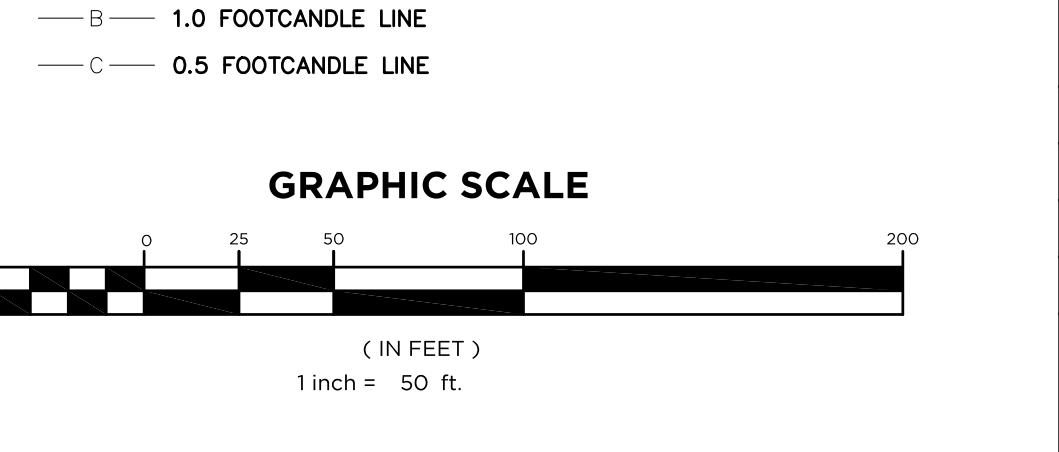
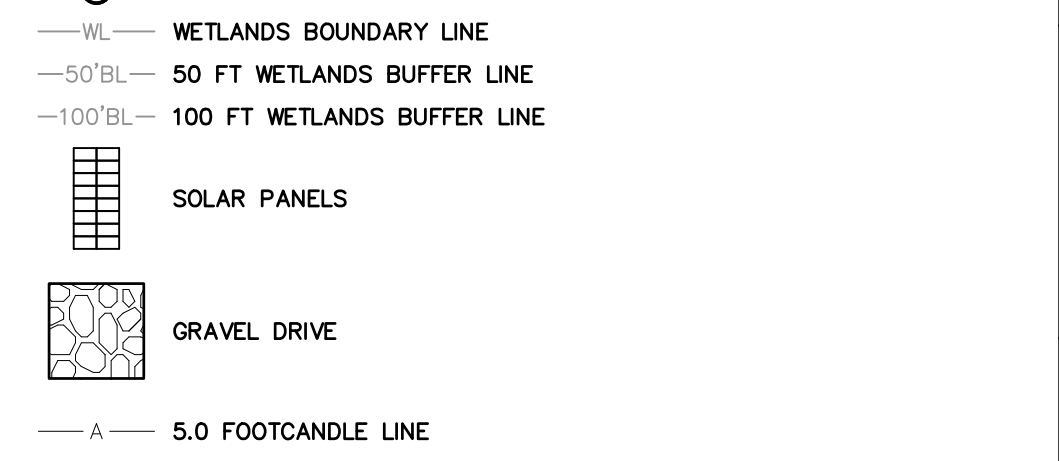
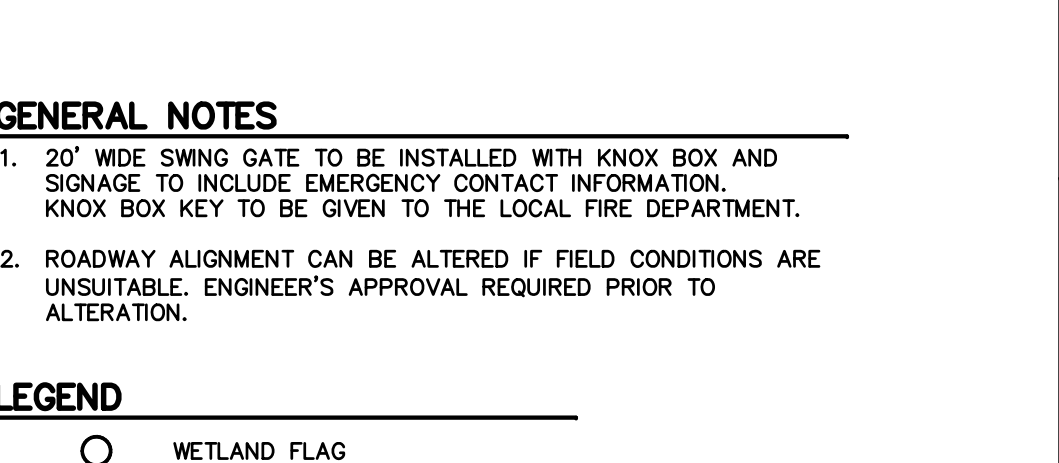
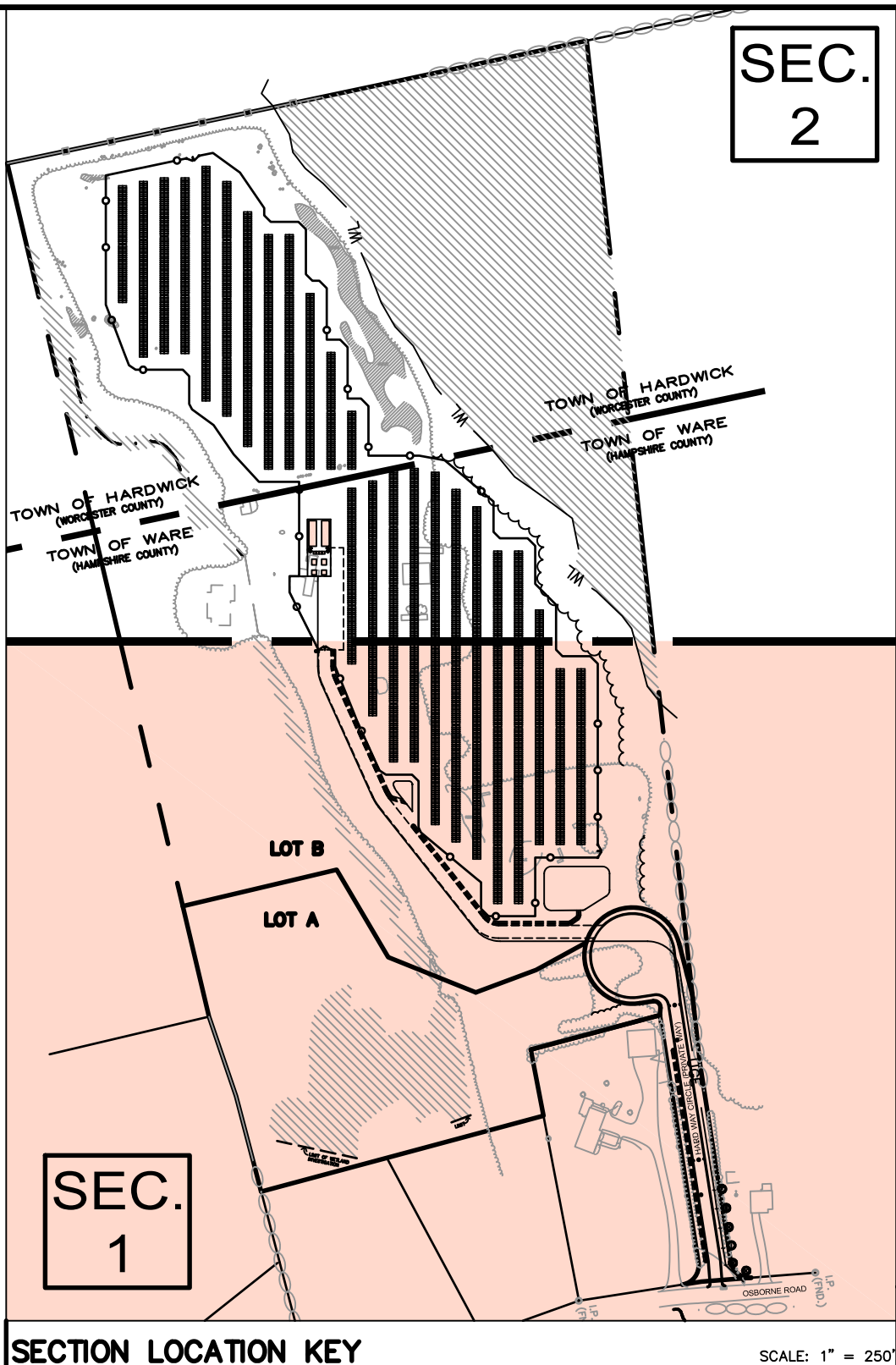
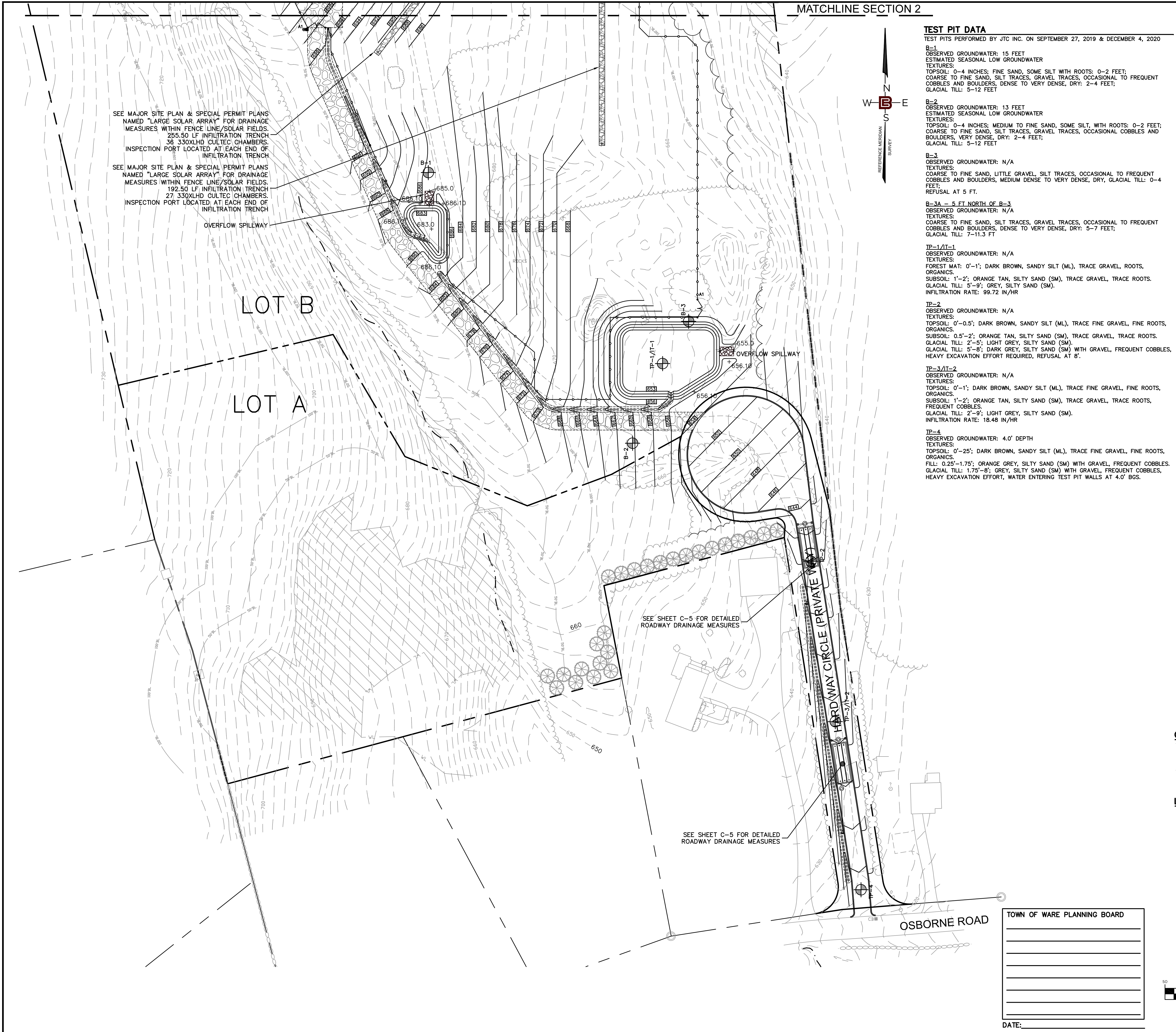
1" = 40'	18M-217
DATE	REVISION NO.

07-31-20	2
----------	---

DRAWING NO.

**C-5**





39 ELM STREET  
SOUTHBRIDGE, MA 01550  
P 508.765.0195  
F 508.765.0195  
www.bertingineering.com

B

BERTIN  
ENGINEERING

CIVIL • SURVEYING • TRAFFIC • STRUCTURAL • ENVIRONMENTAL • MECHANICAL • LANDSCAPE

CALISTO J. BERTIN, P.E.  
PROFESSIONAL ENGINEER  
CT LIC. NO. 12950 NJ LIC. NO. 28845  
MA LIC. NO. 40595 NY LIC. NO. 60022  
NH LIC. NO. 9368 RI LIC. NO. 6694

BRUCE A. FITZBACK, P.L.S.  
PROFESSIONAL LAND SURVEYOR  
MA LIC. NO. 37731  
CT LIC. NO. 16970

NOT VALID UNTIL 2025

NO.	DATE	REVISION
1	01-11-21	ADDITION OF ROADWAY NAME

DRAWING TITLE

GRADING & DRAINAGE PLAN  
(SECTION 1)

PROJECT

LARGE SCALE  
SOLAR ARRAY  
278 OSBORNE ROAD  
PARCEL NUMBER 40-14-9  
TOWN OF WARE, HAMPSHIRE COUNTY  
NK 5160-177, LOT 14  
TOWN OF HARDWICK, WORCESTER COUNTY  
MASSACHUSETTS

CLIENT

WARE SOLAR II LLC  
276 N. FOREST AVE NE  
MARIETTA, GA 30060

CERTIFICATE OF AUTHORIZATION  
24GA28068900 / 21MH00002800

DRAWN BY  
E.Q.

CHECKED BY  
C.J.B.

SCALE  
1" = 40'

PROJECT NO.  
18M-217

DATE  
12-10-20

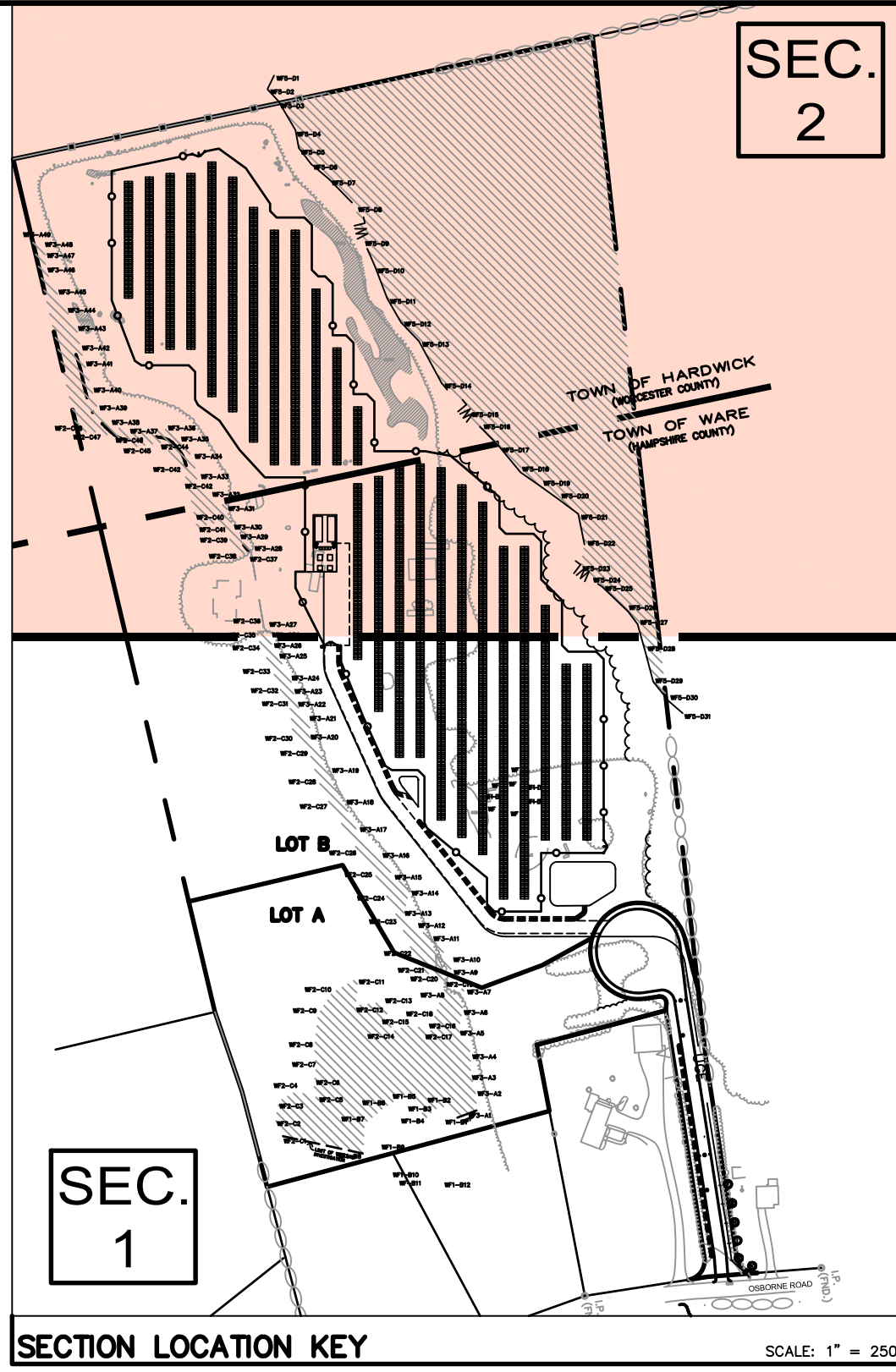
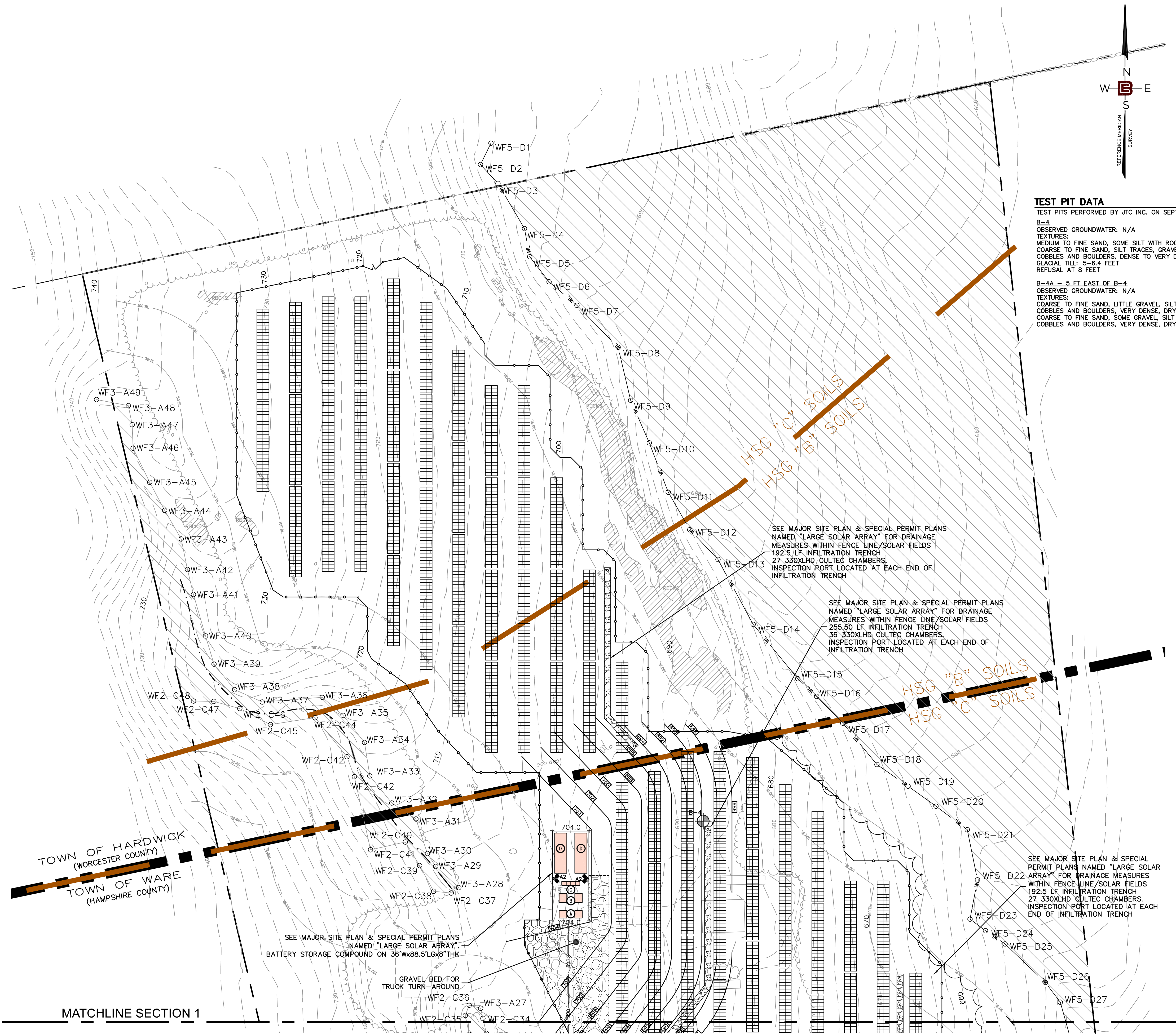
REVISION NO.  
1

DRAWING NO.

C-5.1



© Bertin Engineering Associates, Inc. 11/19/2018 16:23:06 Job File:201818M-217 Ware-HardwickDesign02 - Civil/CADD/Design/217 Ware-HardwickDesign02.dwg Dec 10, 2020 7:40am ellcq



- GENERAL NOTES**
- 20' WIDE SWING GATE TO BE INSTALLED WITH KNOX BOX AND SIGNAGE TO INCLUDE EMERGENCY CONTACT INFORMATION. KNOX BOX KEY TO BE GIVEN TO THE LOCAL FIRE DEPARTMENT.
  - ROADWAY ALIGNMENT CAN BE ALTERED IF FIELD CONDITIONS ARE UNSUITABLE. ENGINEER'S APPROVAL REQUIRED PRIOR TO ALTERATION.

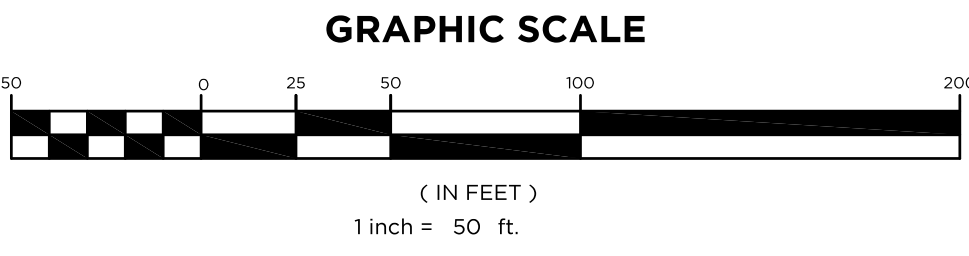
- LEGEND**
- WETLAND FLAG
  - WETLANDS BOUNDARY LINE
  - 50' BL 50 FT WETLANDS BUFFER LINE
  - 100' BL 100 FT WETLANDS BUFFER LINE
  - SOLAR PANELS
  - GRAVEL DRIVE
  - A 5.0 FOOTCANDLE LINE
  - B 1.0 FOOTCANDLE LINE
  - C 0.5 FOOTCANDLE LINE

TOWN OF WARE PLANNING BOARD


DATE: \_\_\_\_\_

TOWN OF HARDWICK PLANNING BOARD


DATE: \_\_\_\_\_



**BERTIN ENGINEERING**

39 ELM STREET  
SOUTHBRIDGE, MA 01550  
P 508/765-0195  
F 508/765-0195  
www.bertinengineering.com

CIVIL • SURVEYING • TRAFFIC • STRUCTURAL • ENVIRONMENTAL • MECHANICAL • LANDSCAPE

CALISTO J. BERTIN, P.E.  
PROFESSIONAL ENGINEER  
CT LIC. NO. 12950 NJ LIC. NO. 28845  
MA LIC. NO. 40595 NY LIC. NO. 60022  
NH LIC. NO. 9368 RI LIC. NO. 6694

BRUCE A. FITZBACK, P.L.S.  
PROFESSIONAL LAND SURVEYOR  
MA LIC. NO. 37731  
CT LIC. NO. 16970

**GRADING & DRAINAGE PLAN (SECTION 2)**

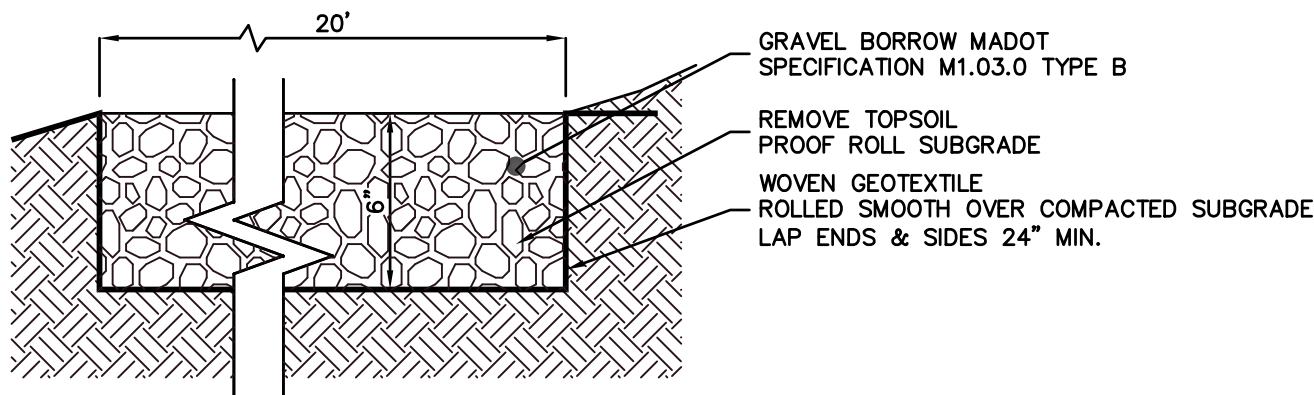
PROJECT  
**LARGE SCALE SOLAR ARRAY**  
278 OSBORNE ROAD  
PARCEL NUMBER 40-14-9  
TOWN OF WARE, HAMPSHIRE COUNTY  
NK 5160-177, LOT 14  
TOWN OF HARDWICK, WORCESTER COUNTY  
MASSACHUSETTS

CLIENT  
**WARE SOLAR II LLC**  
276 N. FOREST AVE. NE  
MARIETTA, GA 30060

CERTIFICATE OF AUTHORIZATION 24GA28068900 / 21MH00002800	
DRAWN BY E.Q.	CHECKED BY C.J.B.
SCALE 1" = 40'	PROJECT NO. 18M-217
DATE 12-10-20	REVISION NO. 0

**C-5.2**

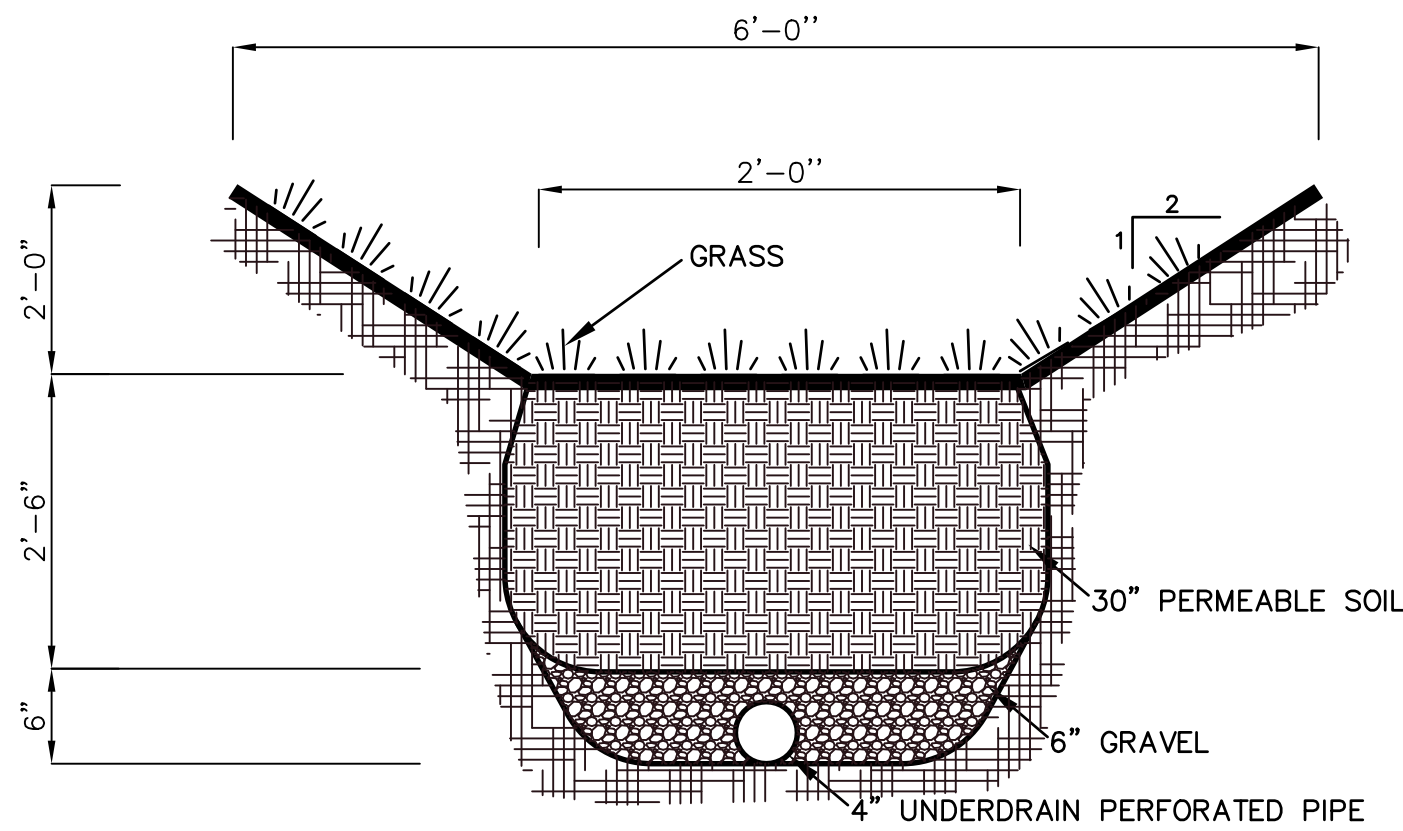




NOTE: CROSS SLOPE TO MATCH EXISTING SITE GRADING UNLESS OTHERWISE NOTED.

GRAVEL DRIVEWAY DETAIL

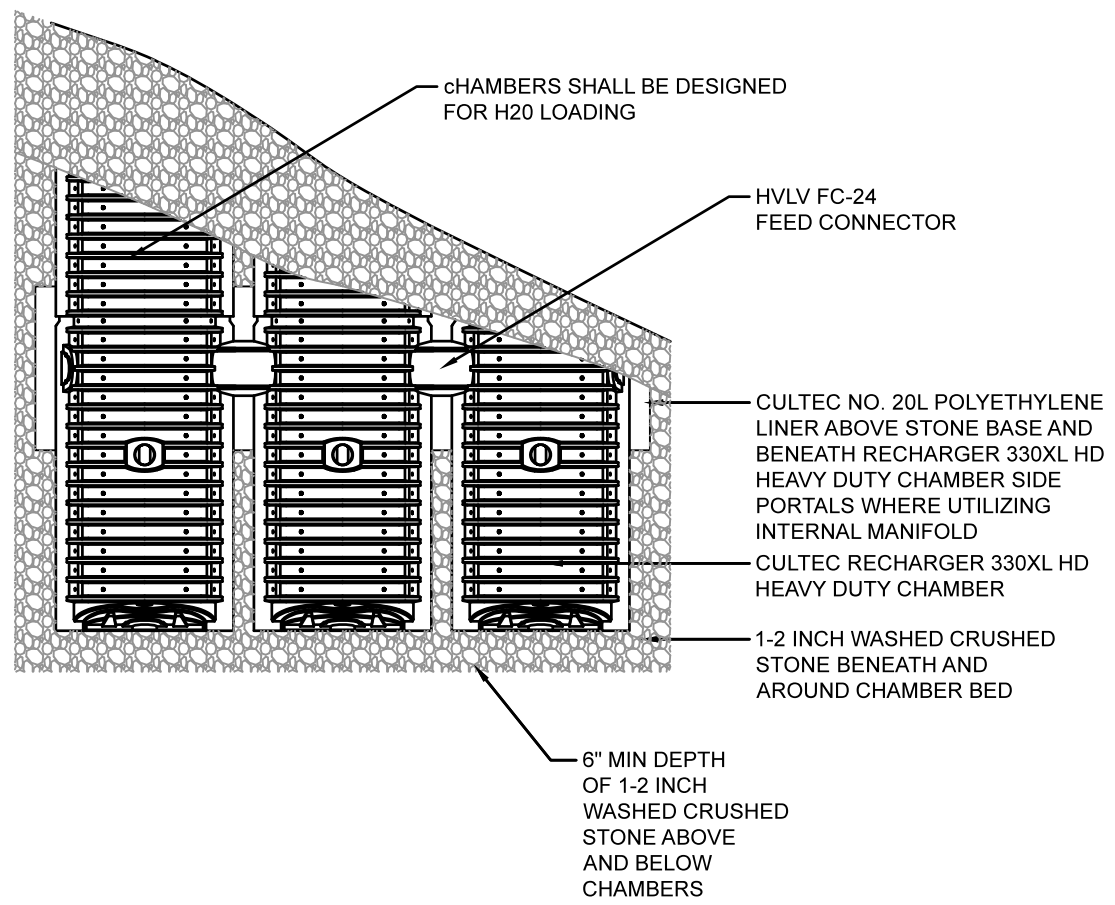
NOT TO SCALE



- NOTES:
1. STONE CHECK DAMS TO BE INSTALLED EVERY 25'
  2. SWALE TO BE MAINTAINED PER MAINTENANCE SCHEDULE.

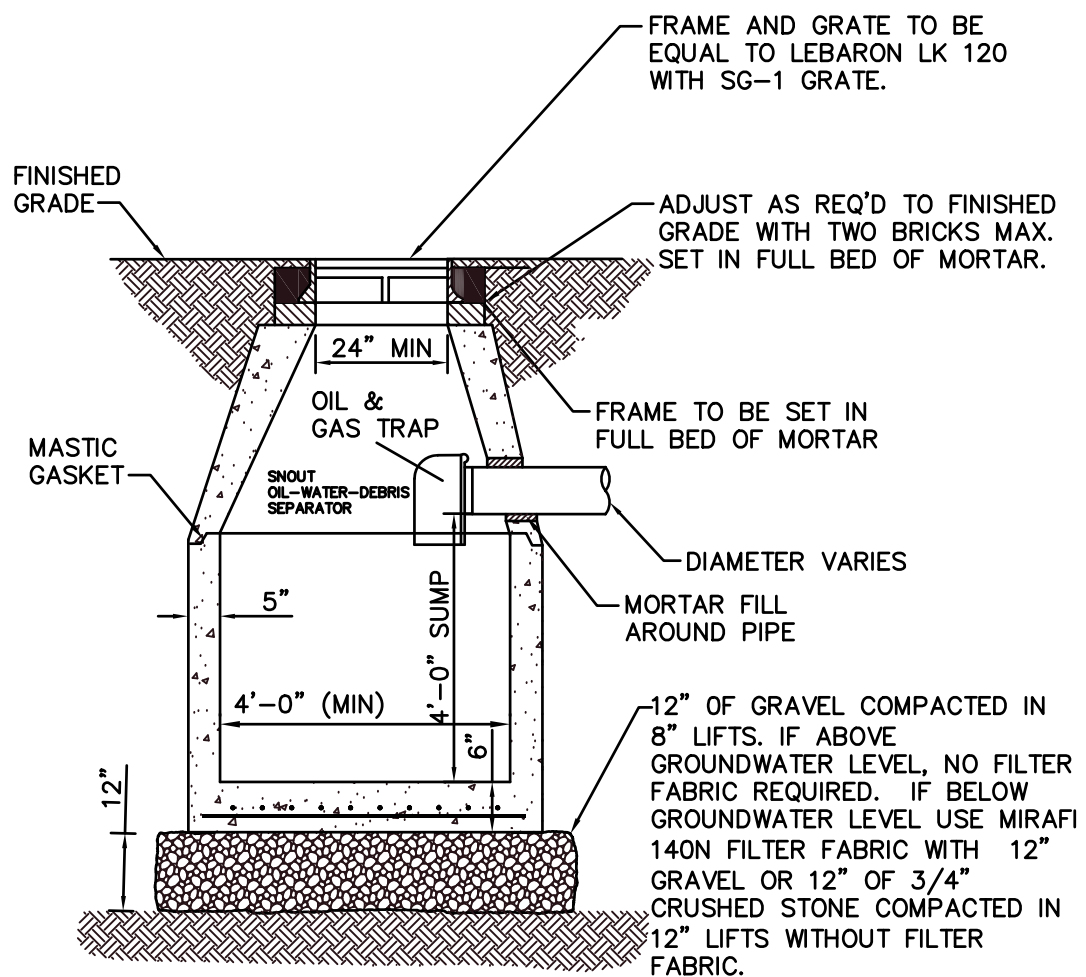
DRY SWALE

NOT TO SCALE



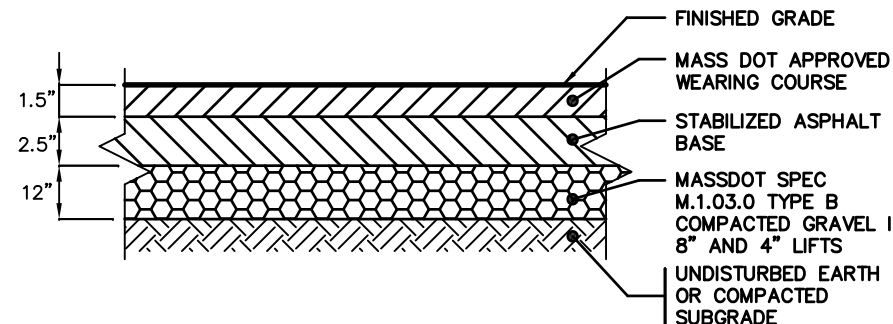
CULTEC RECHARGER 330XLHD HEAVY DUTY PLAN VIEW

NOT TO SCALE



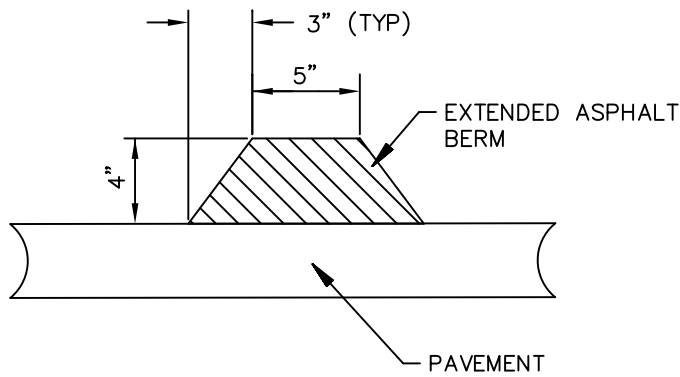
DEEP SUMP CATCH BASIN DETAIL

NOT TO SCALE



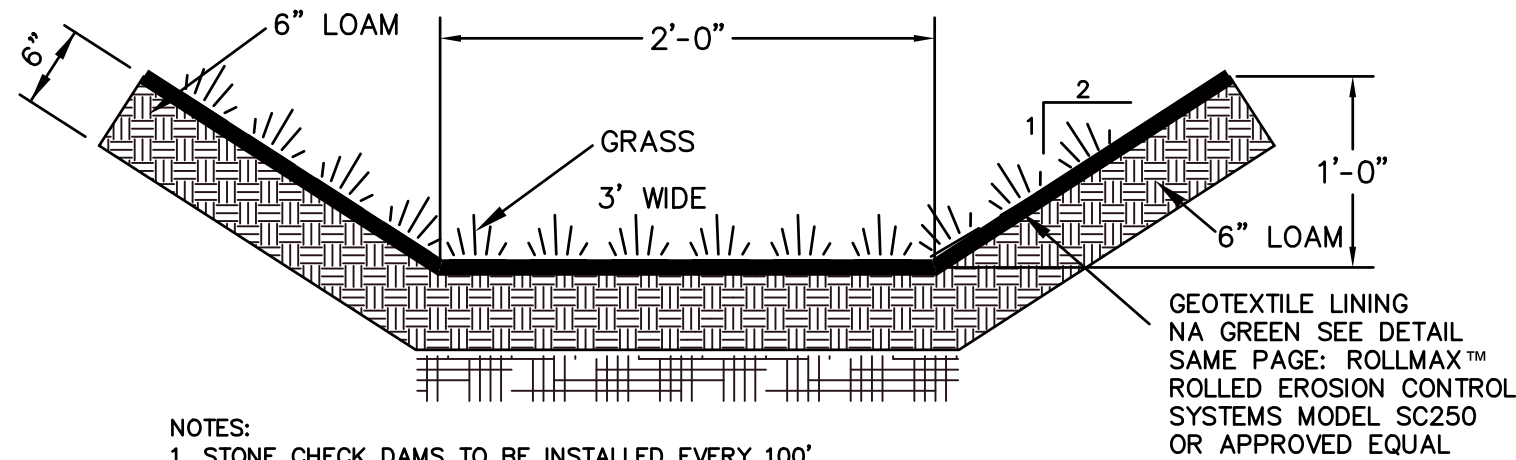
ASPHALT PAVEMENT DETAIL

NOT TO SCALE



ASPHALT BERM

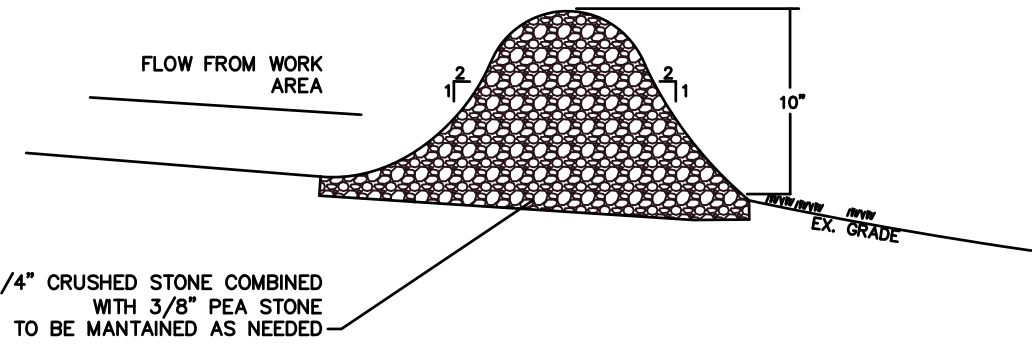
NOT TO SCALE



- NOTES:
1. STONE CHECK DAMS TO BE INSTALLED EVERY 100'
  2. SWALE TO BE MAINTAINED PER MAINTENANCE SCHEDULE.

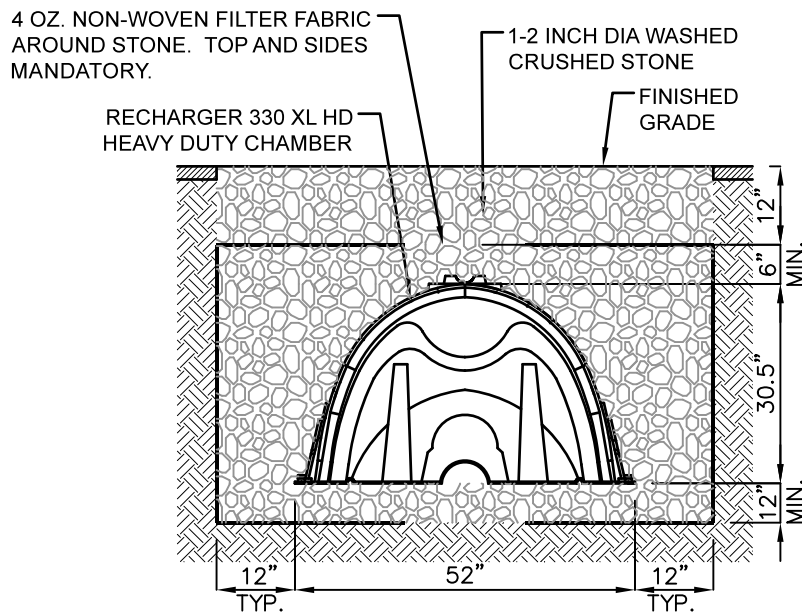
GRASS SWALE

NOT TO SCALE



STONE CHECK DAM DETAIL

NOT TO SCALE

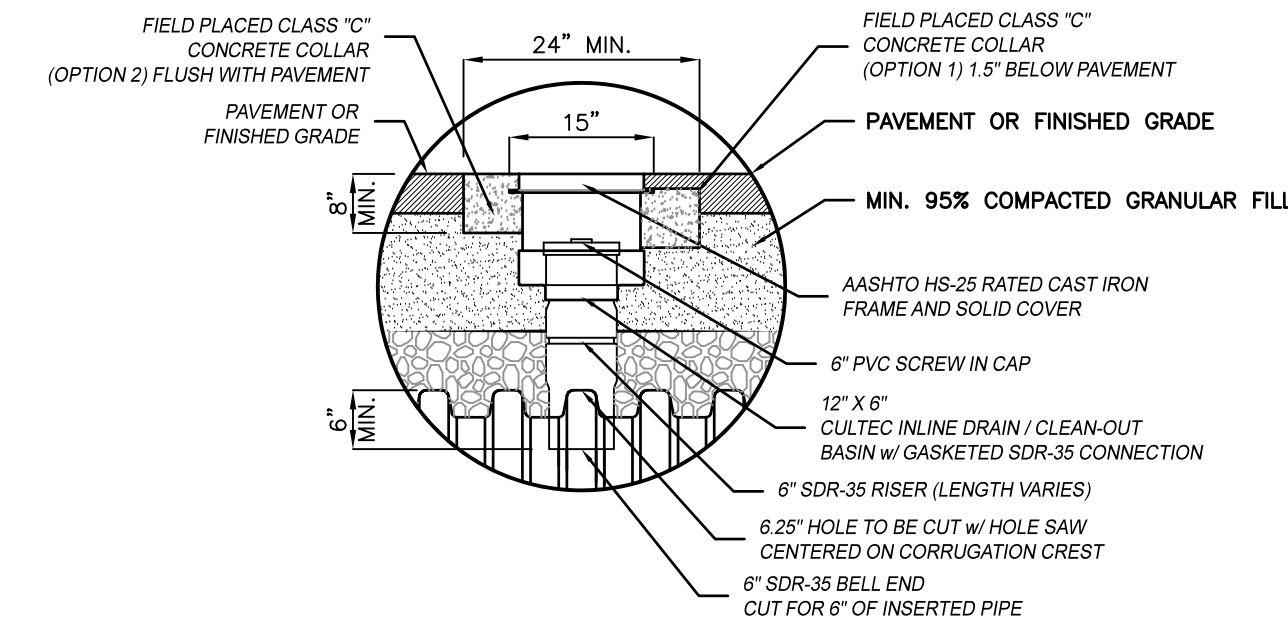


GENERAL NOTES  
RECHARGER 330XL HD BY CULTEC, INC. OF BROOKFIELD, CT.  
STORAGE PROVIDED = 11.32 CF/FT PER DESIGN UNIT.  
REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.  
USE RECHARGER 330XL HD HEAVY DUTY FOR TRAFFIC AND/OR H-25 APPLICATIONS.

ALL RECHARGER 330XL HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER.  
ALL RECHARGER 330XL HD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

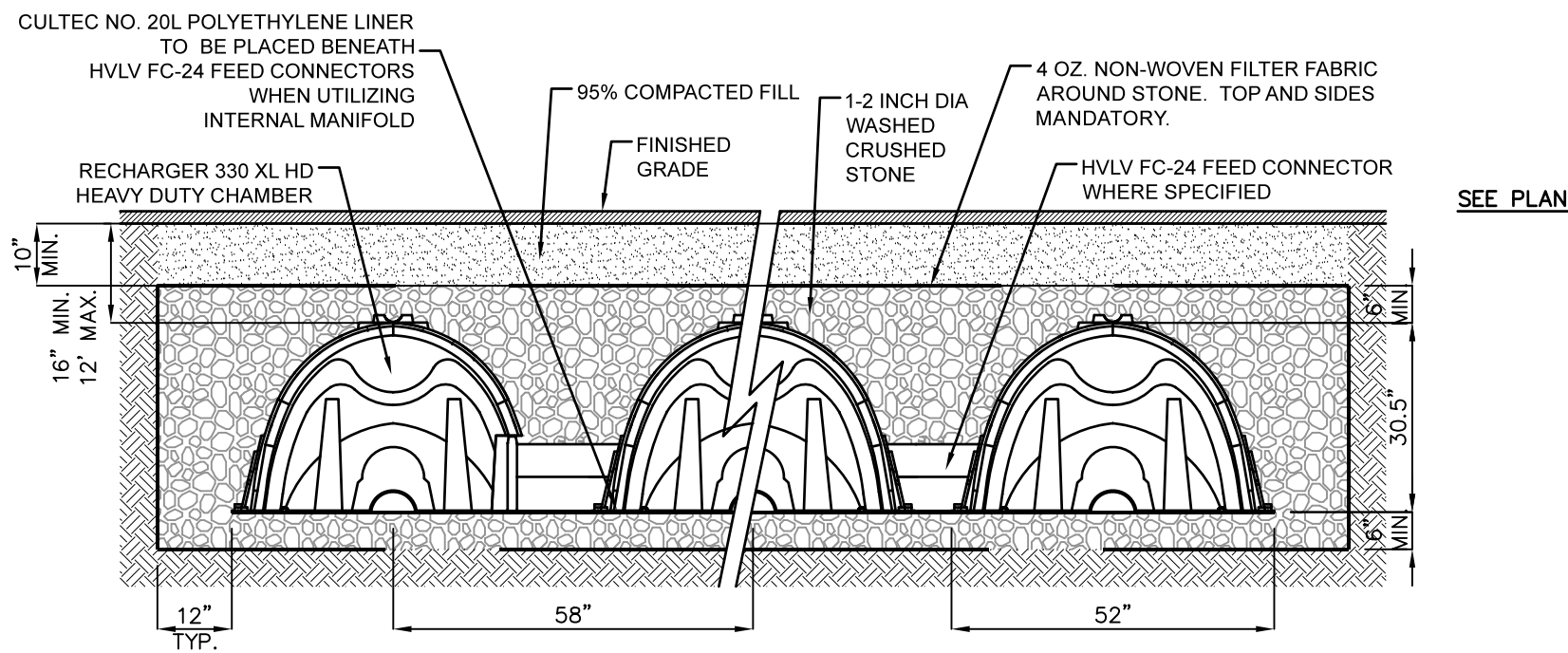
INFILTRATION TRENCH CROSS SECTION

NOT TO SCALE



INSPECTION PORT DETAIL

NOT TO SCALE



GENERAL NOTES  
RECHARGER 330XL HD BY CULTEC, INC. OF BROOKFIELD, CT.  
STORAGE PROVIDED = 11.32 CF/FT PER DESIGN UNIT.  
REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.  
USE RECHARGER 330XL HD HEAVY DUTY FOR TRAFFIC AND/OR H-25 APPLICATIONS.

ALL RECHARGER 330XL HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER.  
ALL RECHARGER 330XL HD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

CULTEC RECHARGER 330XLHD HEAVY DUTY TYPICAL CROSS SECTION

NOT TO SCALE

39 ELM STREET  
SOUTHBURIDGE, MA 01550  
P 508.785.0195  
F 508.785.0193  
www.bertinengineering.com

**BERTIN**  
ENGINEERING

CIVIL • SURVEYING • TRAFFIC • STRUCTURAL • ENVIRONMENTAL • MECHANICAL • LANDSCAPE

CALISTO J. BERTIN, P.E.

PROFESSIONAL ENGINEER  
CT LIC. NO. 12950 NJ LIC. NO. 28845  
MA LIC. NO. 40595 NY LIC. NO. 60022  
NH LIC. NO. 9368 RI LIC. NO. 6694

BRUCE A. FITZBACK, P.L.S.

PROFESSIONAL LAND SURVEYOR  
MA LIC. NO. 37731  
CT LIC. NO. 16970

NOT TO SCALE

NO.	DATE	REVISION
1	12-01-20	REMOVED DETAILS THAT REFERENCE SOLAR SITE PLAN.

## SITE DETAILS

PROJECT  
**LARGE SCALE SOLAR ARRAY**  
278 OSBORNE ROAD  
PARCEL NUMBER 40-14-9  
TOWN OF WARE, HAMPSHIRE COUNTY  
NK 5160-177 LOT 14  
TOWN OF HARDWICK, WORCESTER COUNTY  
MASSACHUSETTS

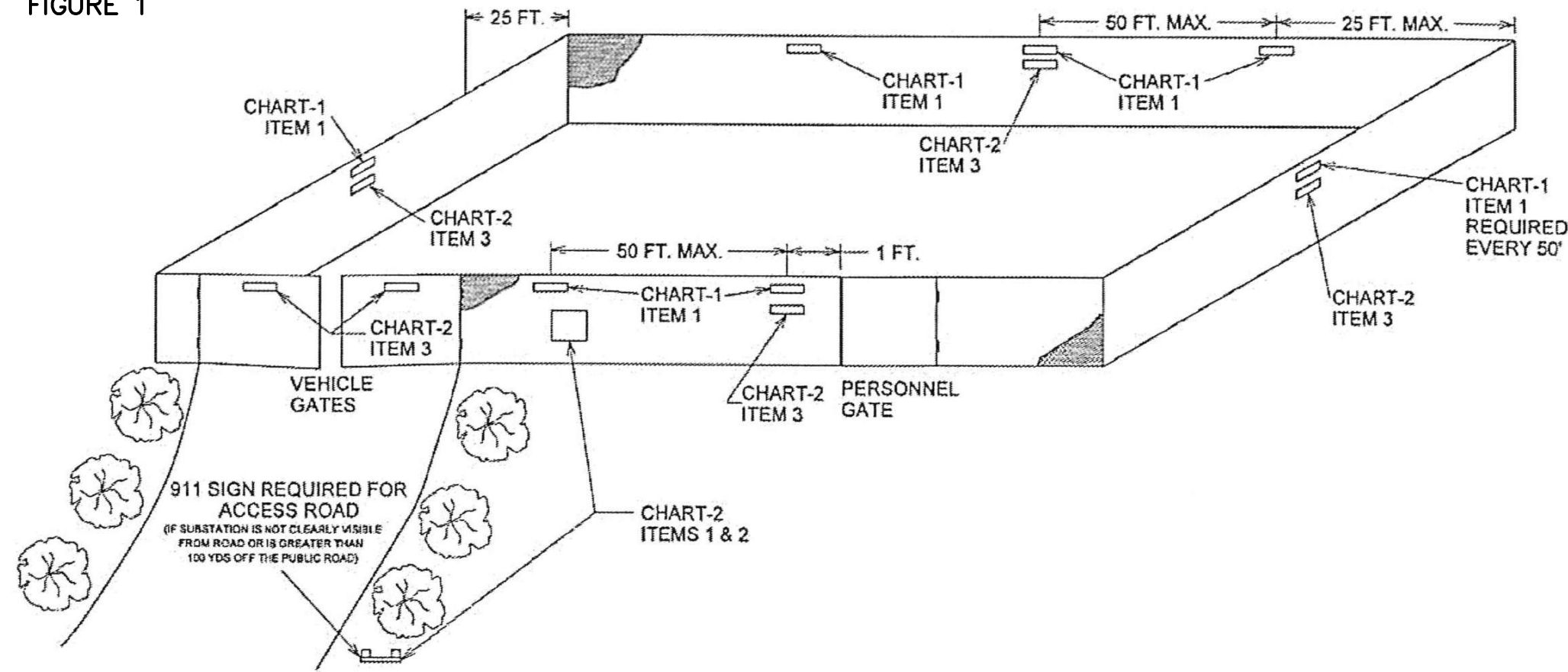
CLIENT  
**WARE SOLAR II LLC**  
276 N. FOREST AVE. NE  
MARIETTA, GA 30060

CERTIFICATE OF AUTHORIZATION 24GA28068900 / 21MH00002800	
DRAWN BY J.A.S.	CHECKED BY C.J.B.
SCALE AS SHOWN	PROJECT NO. 18M-217
DATE 07-31-20	REVISION NO. 1

DRAWING NO.  
**C-6**



FIGURE 1

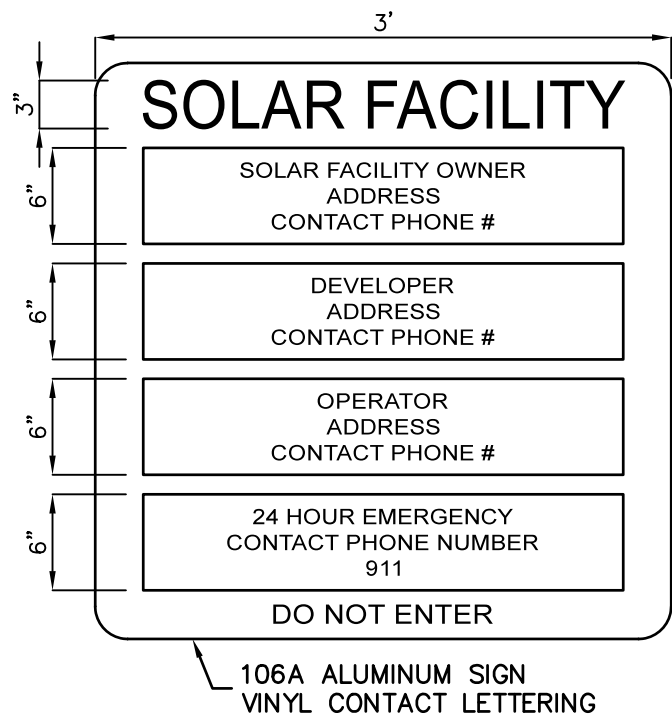
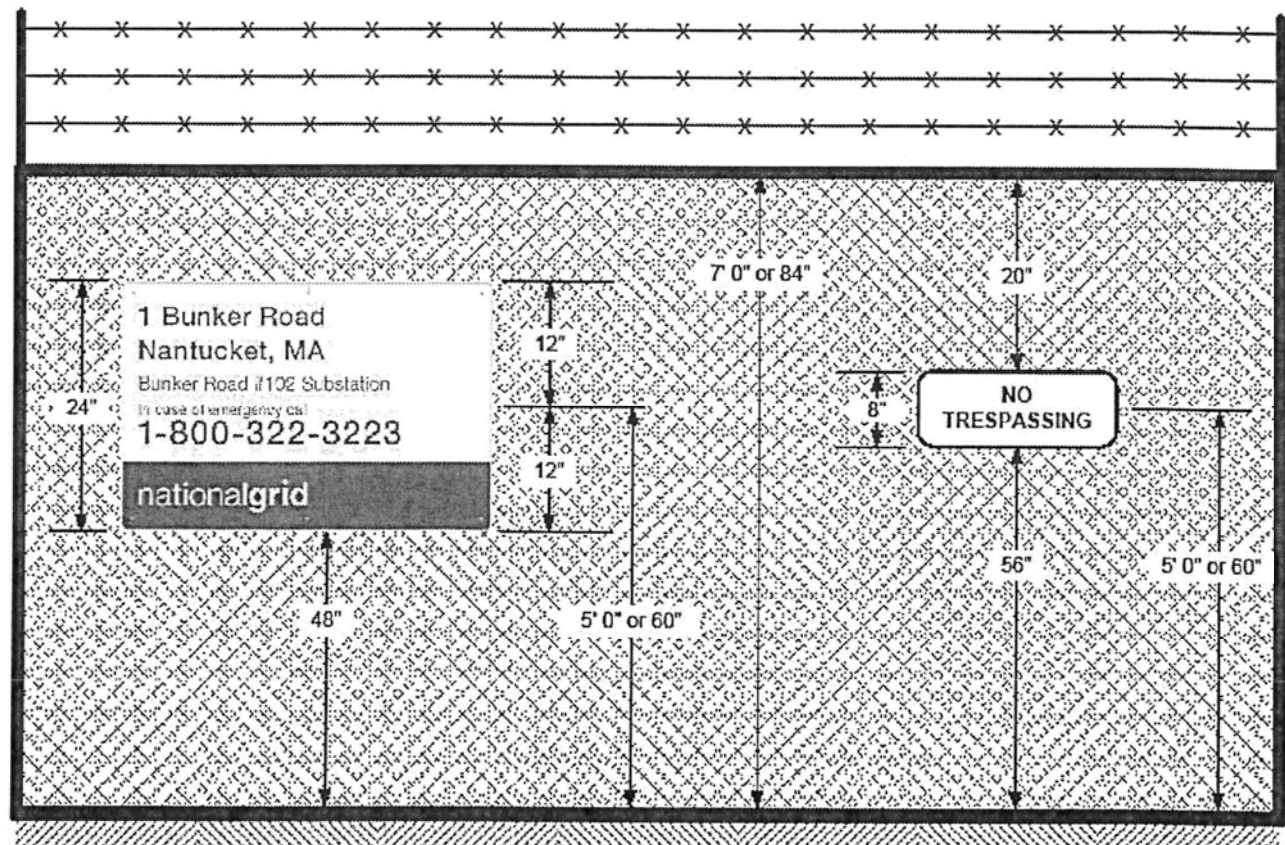


- NOTES:
1. SIGN CHAIN-LINK FENCES USING "DANGER" SIGN (CHART-1 ITEM 1).
  2. SIGN CHAIN-LINK FENCES USING "NO TRESPASSING" SIGN (CHART-2 ITEM 3).
  3. SIGN 4"x4" POSTS AT ACCESS ROAD AND CHAIN-LINK FENCES USING STATION "911" SIGN (CHART-2 ITEM 1 & 2).
  4. ALL SIGNS SHALL BE MOUNTED AS CLOSE TO A HEIGHT OF 60" (1525mm) ABOVE GRADE TO THE CENTERLINE OF THE SIGN AS POSSIBLE. ATTACH SIGNS AS LEVEL AS POSSIBLE.
  5. SIGN ALL GATES AT A HEIGHT OF 60" (1525mm) ABOVE GRADE TO THE CENTERLINE OF SIGN WITH SIGN AT GATE CENTER.
  6. FENCE SIDES THAT CONTAIN NO GATES SHOULD HAVE SYMMETRICAL SIGN PLACEMENT AS MUCH AS IS POSSIBLE.
  7. MAXIMUM DISTANCE BETWEEN SIGNS ALONG FENCE PERIMETER NOT TO EXCEED 50 FEET.
  8. REFER TO FIGURE 1 AND 2 FOR PLACEMENT DETAIL.
  9. SIGN UNHINGED SIDE OF SINGLE GATES AT A HEIGHT OF 60" (1525mm) ABOVE GRADE TO CENTERLINE OF SIGN ONE FOOT FROM GATE POST.
  10. ALL FIGURES AND NOTES TAKEN FROM "NATIONALGRID" ENGINEERING DOCUMENT #ST.03.06.001, PG 14 OF 22, VERSION 1.0 DATED 3-9-09.

SIGN PLACEMENT ON PERIMETER GATES & FENCES

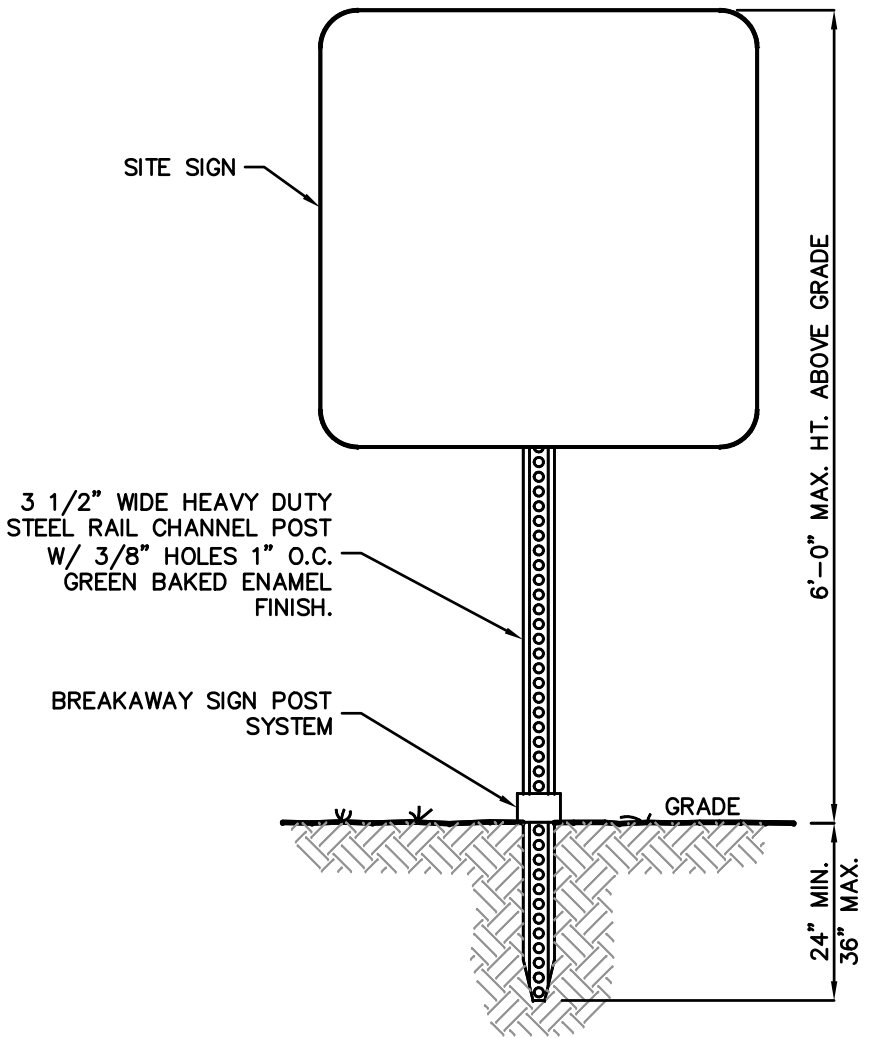
NOT TO SCALE

FIGURE 2 Substation Sign Placement Details



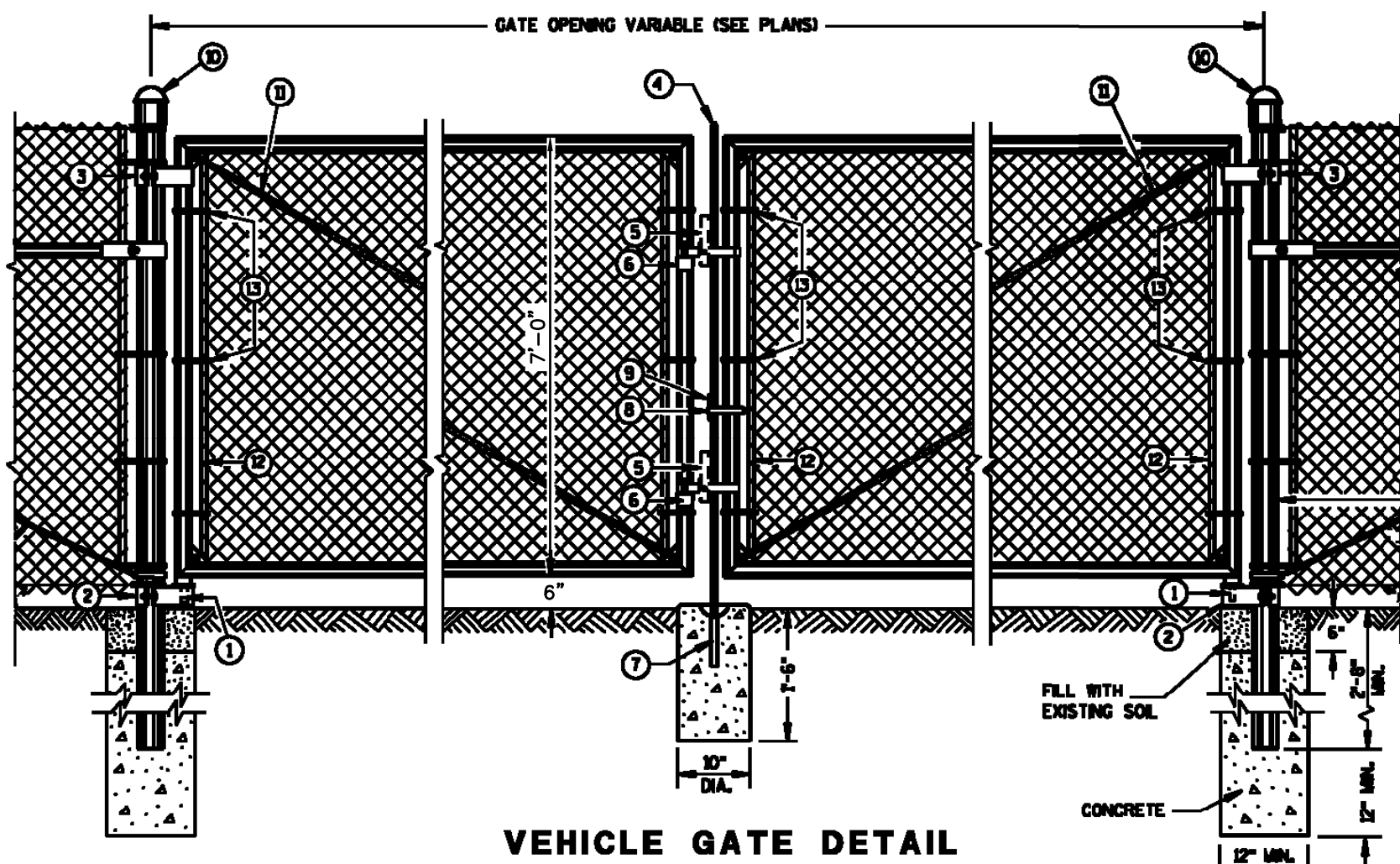
SITE SIGN DETAIL

NOT TO SCALE



SITE SIGN INSTALLATION DETAIL

NOT TO SCALE



- NOTES
1. FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.
  2. FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.
  3. MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

CHAIN LINK FENCE GATE DETAIL

NOT TO SCALE

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2*
	GREATER THAN OR EQUAL TO 8 FT.	FS3

ROUND STEEL FENCE POST (1.6 OZ./SQ. FT. COATING)

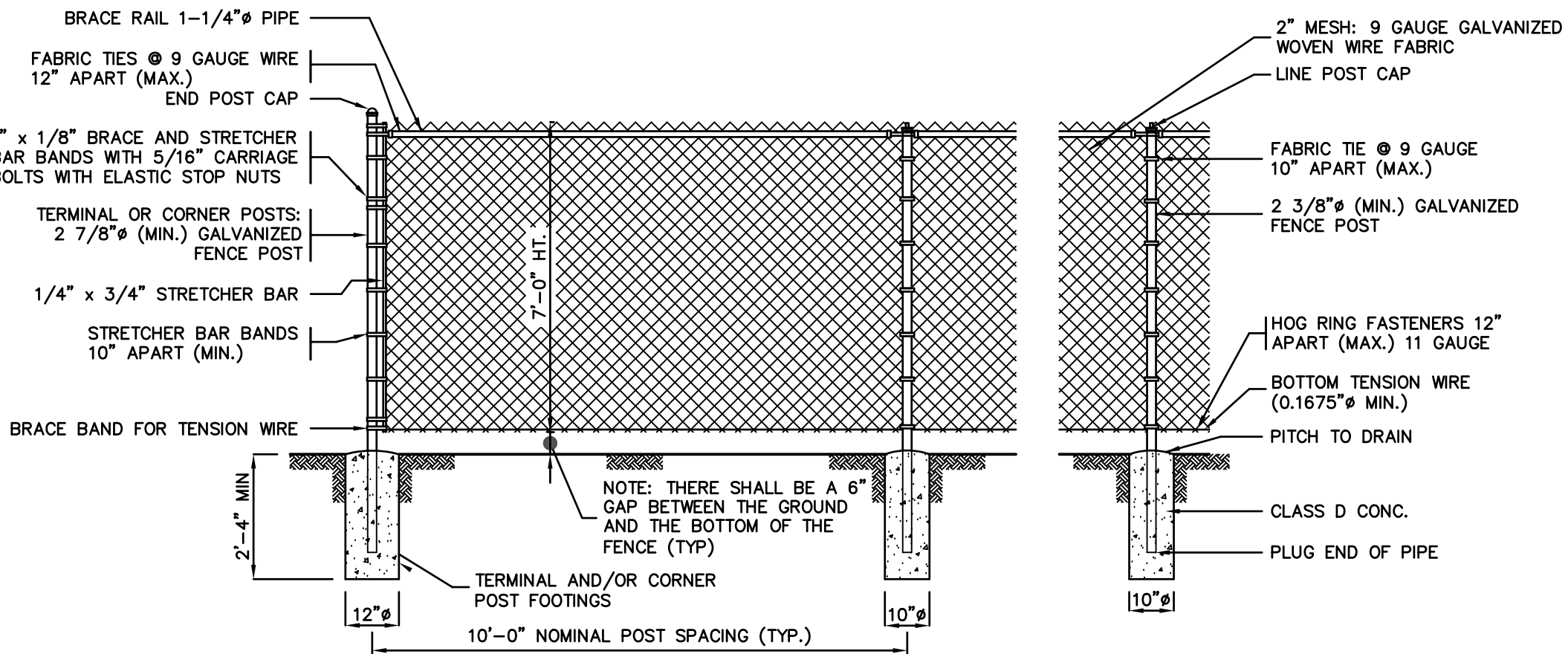
POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2*	1.875	1.625	1.850
FS2	1.875	1.625	2.480
FS3	2.250	1.700	2.780

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7



- NOTES
1. ALL TIES, HOG RINGS AND CLIPS SHALL BE GALVANIZED.
  2. FABRIC SHALL BE GALVANIZED WIRE, ALL PIPE TO CONFORM TO CURRENT ASTM DESIGNATION F 1083, SCHEDULE 40, PLAIN END.
  3. BRACE RAIL AND ROD AT CORNER AND END SECTION ONLY.
  4. ALL REFERENCES TO PIPE DIAMETER ARE ASTM NOMINAL SIZE.
  5. WITH THE APPROVAL OF THE ENGINEER, IN SOFT MARSHY GROUND, POSTS MAY BE DRIVEN, THE CONCRETE FOOTING DELETED AND APPROVED DRIVE ANCHORS USED.

CHAIN LINK FENCE DETAIL

NOT TO SCALE

39 ELM STREET  
SOUTHBURIDGE, MA 01550  
P 508.765.0195  
F 508.765.0193  
www.bertinengineering.com

**BERTIN**  
ENGINEERING

CIVIL • SURVEYING • TRAFFIC • STRUCTURAL • ENVIRONMENTAL • MECHANICAL • LANDSCAPE

CALISTO J. BERTIN, P.E.  
PROFESSIONAL ENGINEER

CT LIC. NO. 12950 NJ LIC. NO. 28845  
MA LIC. NO. 40595 NY LIC. NO. 60022  
NH LIC. NO. 9368 RI LIC. NO. 6694

BRUCE A. FITZBACK, P.L.S.  
PROFESSIONAL LAND SURVEYOR  
MA LIC. NO. 37731  
CT LIC. NO. 16970

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE