

MAJOR SITE PLAN & SPECIAL PERMIT
LARGE SCALE SOLAR ARRAY

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

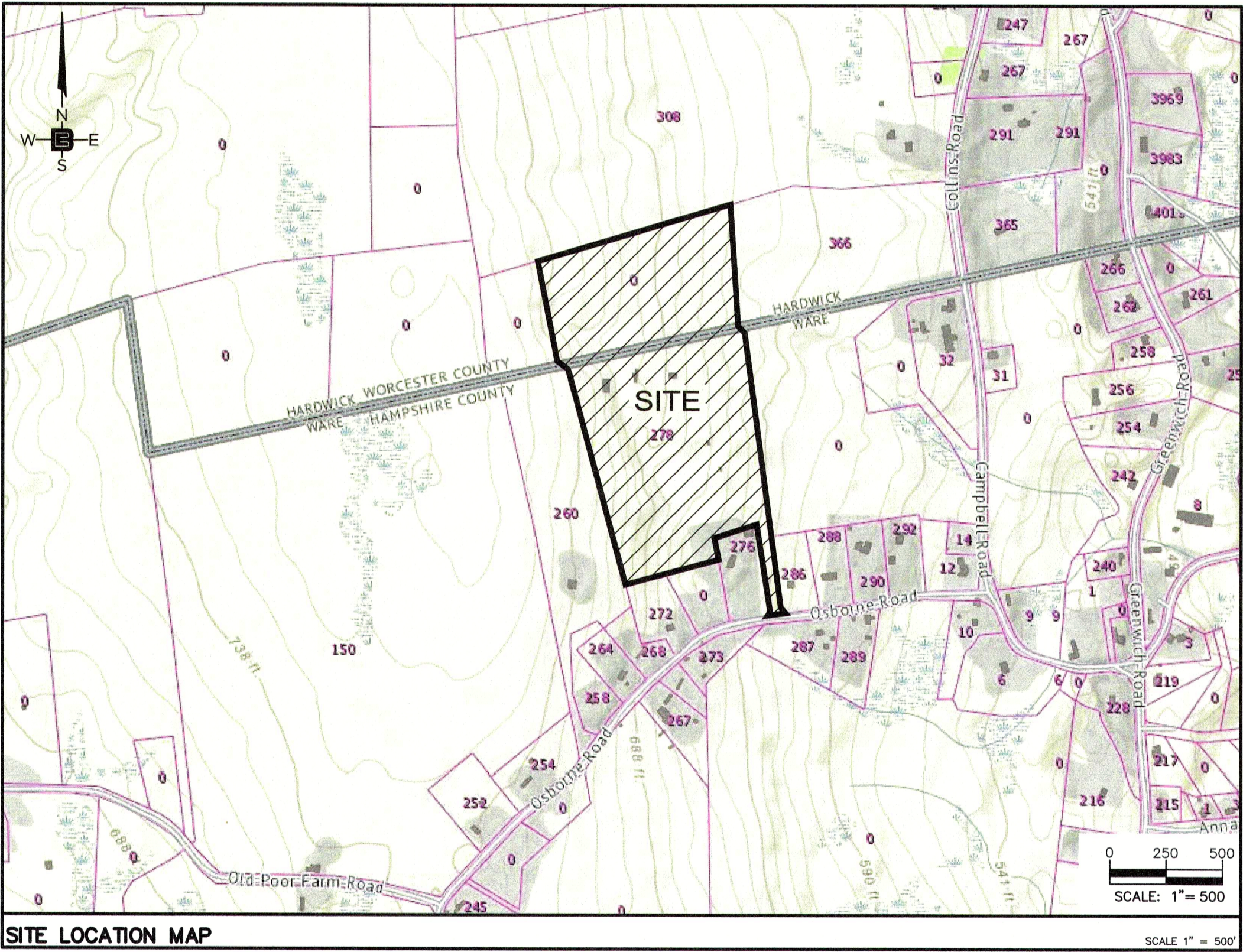
TOWN OF HARDWICK
ZONE - AR-60
AREA - 60,000 S.F.
FRONTAGE - 200'
FRONT - 35 FT.
SIDE - 40 FT.
REAR - 20 FT.
50 FT. MIN BUFFER TO RESIDENTIAL USE

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. #
C1.1	COVER SHEET	2-22-21	3
C1.2	EXISTING CONDITIONS PLAN	2-22-21	2
C1.3	OVERALL SITE PLAN	2-22-21	4
C2.1	SOIL EROSION & SEDIMENT CONTROL PLAN	2-22-21	3
C2.2	SITE PLAN (SECTION 1)	2-22-21	3
C2.3	SITE PLAN (SECTION 2)	2-22-21	2
C2.4	GRADING PLAN & DRAINAGE PLAN (SECTION 1)	2-22-21	3
C2.5	GRADING PLAN & DRAINAGE PLAN (SECTION 2)	7-31-20	2
C2.6	VEHICLE CIRCULATION PLAN	2-22-21	3
C2.7	ROAD PLAN & PROFILE	2-22-21	1
C3.1	SITE DETAILS	2-22-21	2
C3.2	SITE DETAILS - 2	10-21-19	0
C3.3	SOIL EROSION & SEDIMENT CONTROL AND LANDSCAPE DETAILS	2-22-21	2
C3.4	DRAINAGE DETAILS	2-22-21	1

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MA LIC. NO. 40895 CNY. 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

NO.		DATE	REVISION
3	2-22-21	REVISED DRAWING LIST	E.G.
2	7-31-20	REVISED DRAWING LIST	E.G.
1	10-21-19	REVISED DRAWING LIST	E.G.

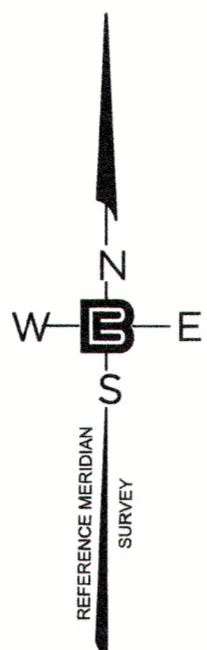
DRAWING TITLE
COVER SHEET

PROJECT
**LARGE SCALE
SOLAR ARRAY**
278 OSBORNE ROAD
PARCEL NUMBER 40-14-9
TOWN OF WARE, HAMPSHIRE COUNTY
BK 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 J.A.S.	CHECKED BY C.J.B.
SCALE 1" = 100'	PROJECT NO. 18M-217
DATE 10-21-19	REVISION NO. 3

DRAWING NO.
C1.1



1. BOUNDARIES SHOWN ARE THE RESULTS OF AN ACTUAL FIELD SURVEY JANUARY 2 THRU JANUARY 22, 2019. SURVEY BASED ON AVAILABLE MAPS, DEEDS OF RECORD AND PHYSICAL EVIDENCE, BUT ARE SUBJECT TO ALL EASEMENTS, RIGHT OF WAYS, AGREEMENTS, AND RIGHTS AND ENCUMBRANCES OF RECORD THAT AN ACCURATE AND THOROUGH TITLE SEARCH MAY DISCLOSE.

3. HORIZONTAL DATUM BASED ON NAD 83 MA11, VIA GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS).

4. VERTICAL DATUM BASED ON NAVD 88, GEOID 12B, VIA GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS).

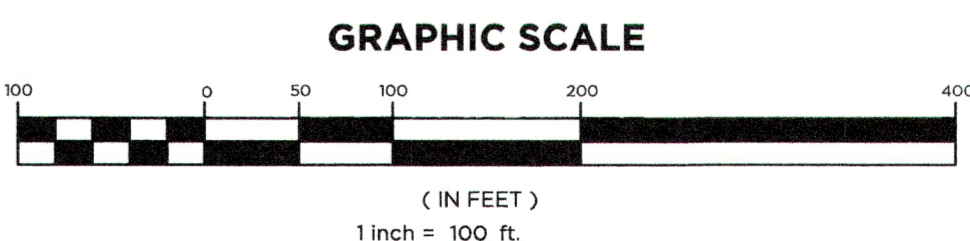
5. WETLANDS DELINIATED BY ECOTEC, INC IN OCTOBER 2019.

6. TOPOGRAPHICS PROVIDED FROM EASTERN TOPOGRAPHICS WITH A PHOTO DATE OF JANUARY 7, 2019 AND COMPILATION DATE OF OCTOBER 11, 2019 WITH A SCALE OF 1"=40' AND A CONTOUR INTERVAL OF 2FT.

7. ABUTTERS NAMES ARE IN RESPECT TO THE LATEST ASSESSORS RECORDS AVAILABLE.

CB	CATCH BASIN		IRON PIPE
UP	UTILITY POLE		DRILL HOLE
IR	REBAR		REBAR SET
DH	DRILL HOLE		BOUND SYMBOL
IP	IRON PIPE		UTILITY POLE
FND	FOUND		STONE WALL
BND	BOUND		WELL
AP:	ASSESSORS PARCEL		BENCH MARK
HYD.	HYDRANT		HYDRANT
GUY	GUY WIRE		GUY WIRE
	STUMP WITH WIRE		TREE WITH WIRE

 WETLAND FLAG
 WETLANDS BOUNDARY LINE
 50 FT WETLANDS BUFFER LINE
 100 FT WETLANDS BUFFER LINE



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

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

A circular blue ink seal for a Professional Land Surveyor. The outer ring contains the text "STATE OF TEXAS" at the top and "PROFESSIONAL LAND SURVEYOR" at the bottom. The center of the seal contains the name "BRUCE A. FITZBACK", the number "NO. 37731", and the word "SEAL". A signature in blue ink is written across the seal.

DRAWING TITLE

EXISTING CONDITIONS PLAN

SUBJECT

ARGE SCALE OLAR ARRAY

8 OSBORNE ROAD
RCEL NUMBER 40-14-9
WN OF WARE, HAMPSHIRE COUNTY
51160-177, LOT 14
WN OF HARDWICK, WORCESTER COUNTY
SSACHUSETTS

WARE SOLAR II LLC
6 N. FOREST AVE. NE
ARIETTA, GA 30060

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH000028

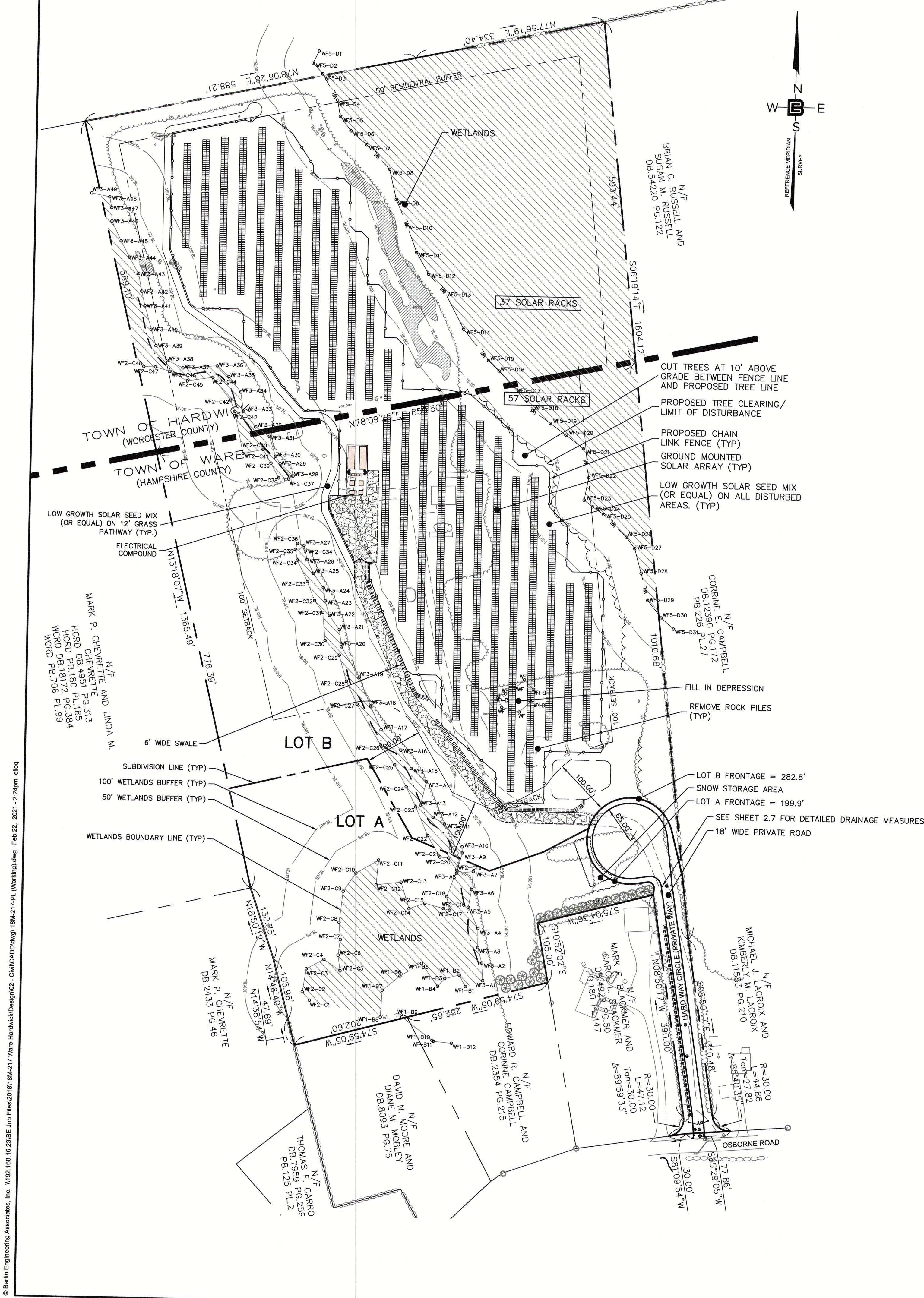
DRAWN BY E.Q.	CHECKED BY C.J.B.
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SCALE 1" = 100'	PROJECT NO. 18M-23
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DATE	REVISION NO.
10-21-19	2

AWING NO

C1.2



TOWN OF HARDWICK PLANNING BOARD

DATE: _____

TOWN OF WARE PLANNING BOARD

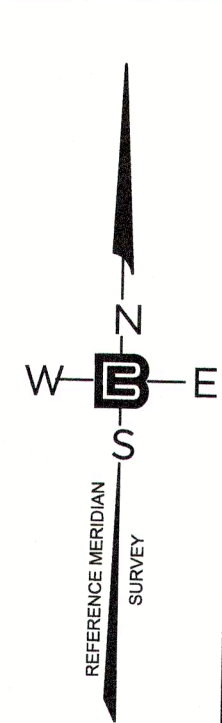
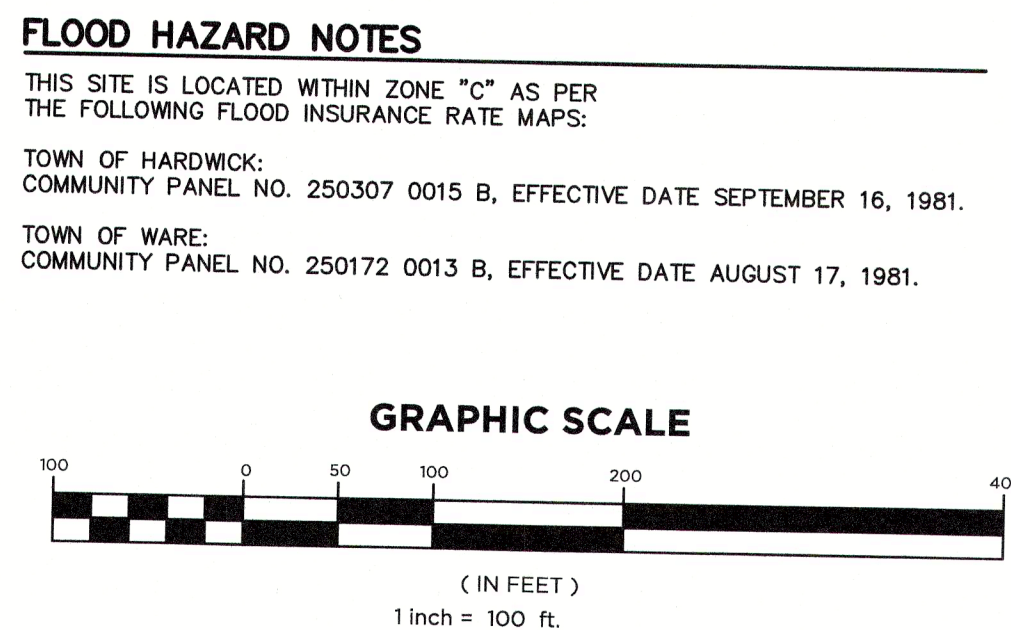
DATE: _____

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

ZONING DIMENSION SCHEDULE			
TOWN OF WARE			
ZONE: RR (RURAL RESIDENTIAL)			
AREA (SF)	REQUIRED 60,000	LOT A 189,336.2	LOT B 620,956.2 (TOWN OF WARE) 1,143,533.6 (TOTAL) 282.8
FRONTAGE (FT)	150	199.9	
SEIBACKS (ZONE RR):			
FRONT (FT)	30	TO COMPLY	N/A
SIDE (FT)	30	TO COMPLY	N/A
REAR (FT)	40	TO COMPLY	N/A
SEIBACKS (SOLAR):			
FRONT (FT)	100	N/A	113.4
SIDE (FT)	100	N/A	110.5
REAR (FT)	100	N/A	0 (VARIANCE)

- GENERAL NOTES**
- 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.
 - 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.
 - UNLESS OTHERWISE NOTED, MAINTAIN EXISTING YARD GRADES AND SLOPES.
 - ALL UTILITY CONNECTIONS ARE TO BE IN ACCORDANCE WITH LOCAL CODE.
 - THE SITE PLAN(S) SUPERSEDES ALL STANDARD DRAWINGS.
 - ALL WETLANDS DELINEATED BY ECOTEC INC., SEPTEMBER 2019.
 - THE FENCING WILL INCORPORATE A DESIGN OF THE EPC'S CHOOSING THAT WILL FACILITATE WILDLIFE MOVEMENT ACROSS THE PROPERTY.
 - 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.
 - NO PESTICIDES OR HERBISIDES ARE TO BE USED DURING CONSTRUCTION OR MAINTENANCE.



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NO.	DATE	REVISION
1	11-19	REVISED SOLAR PANEL LAYOUT, FENCELINE, AND ELECTRICAL COMPOUND LOCATION
2	3-11-20	REVISED SOLAR PANEL LAYOUT, FENCELINE, LOT LINES AND ROADWAYS
3	7-31-20	REVISED SOLAR PANEL LAYOUT, FENCELINE, LOT LINES AND ROADWAYS
4	2-22-21	REVISED PRIVATE ROADWAY ALIGNMENT, WITH ADJUSTMENT OF ROADWAY AND GRASS PATHWAY, ROADWAY NAME AND ZONING DIMENSION SCHEDULE UPDATE

OVERALL SITE & SUBDIVISION PLAN

LARGE SCALE SOLAR ARRAY

278 OSBORNE ROAD
PARCEL NUMBER 40-14-9
TOWN OF WARE, HAMPSHIRE COUNTY
NK 3160-17, LOT 14
TOWN OF HARDWICK, WORCESTER COUNTY
MASSACHUSETTS

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

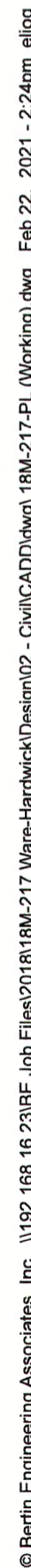
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24GA28068900 / 21WH000002800

DRAWN BY: E.Q. CHECKED BY: C.J.B.

SCALE: 1" = 100' PROJECT NO.: 18M-217

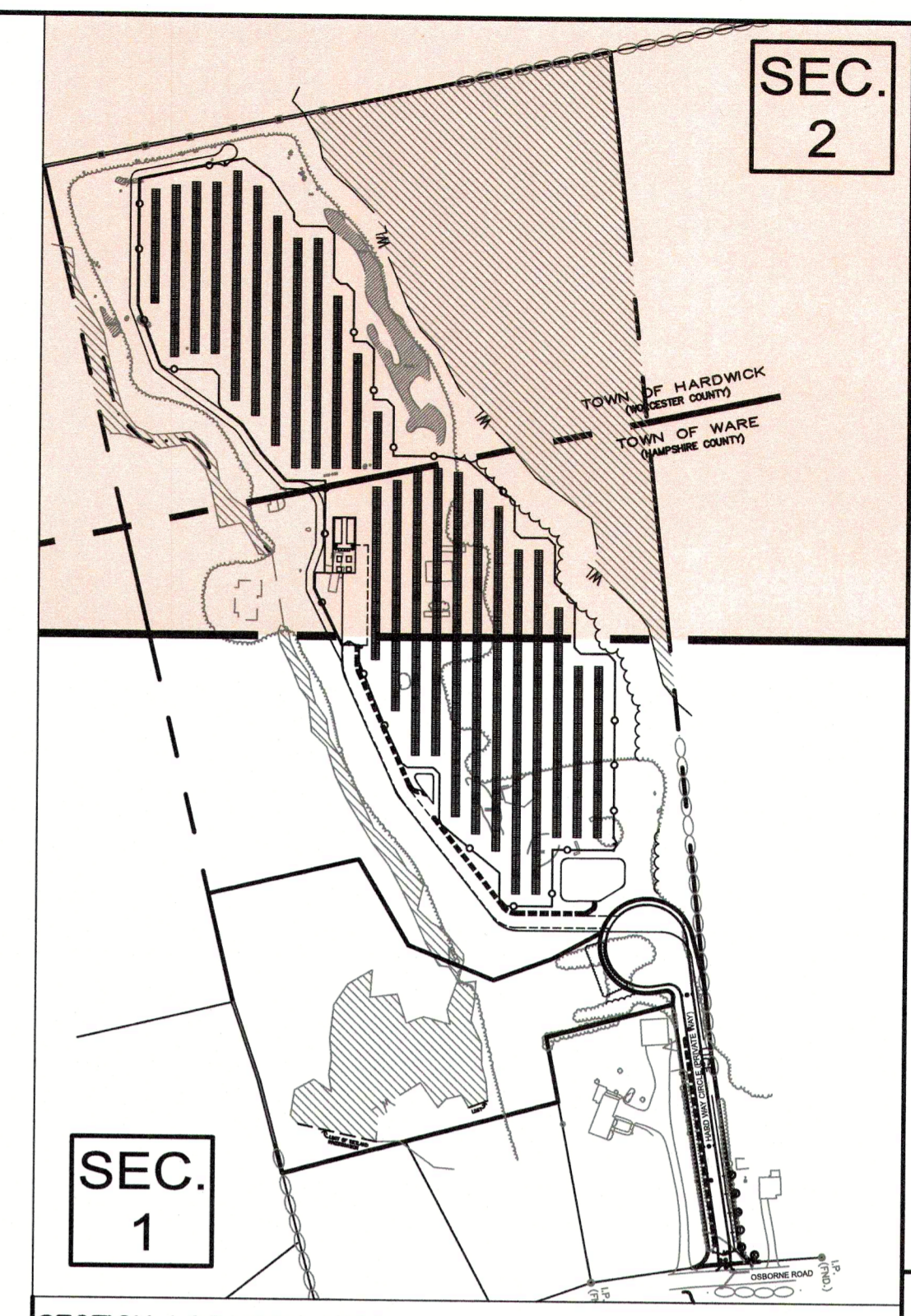
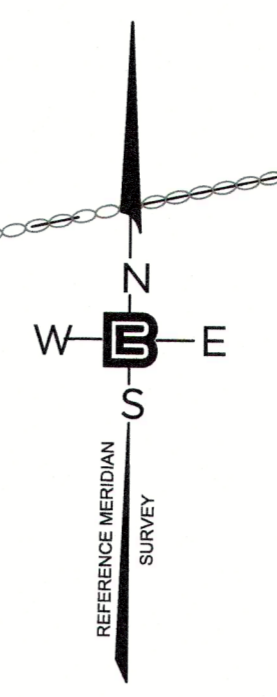
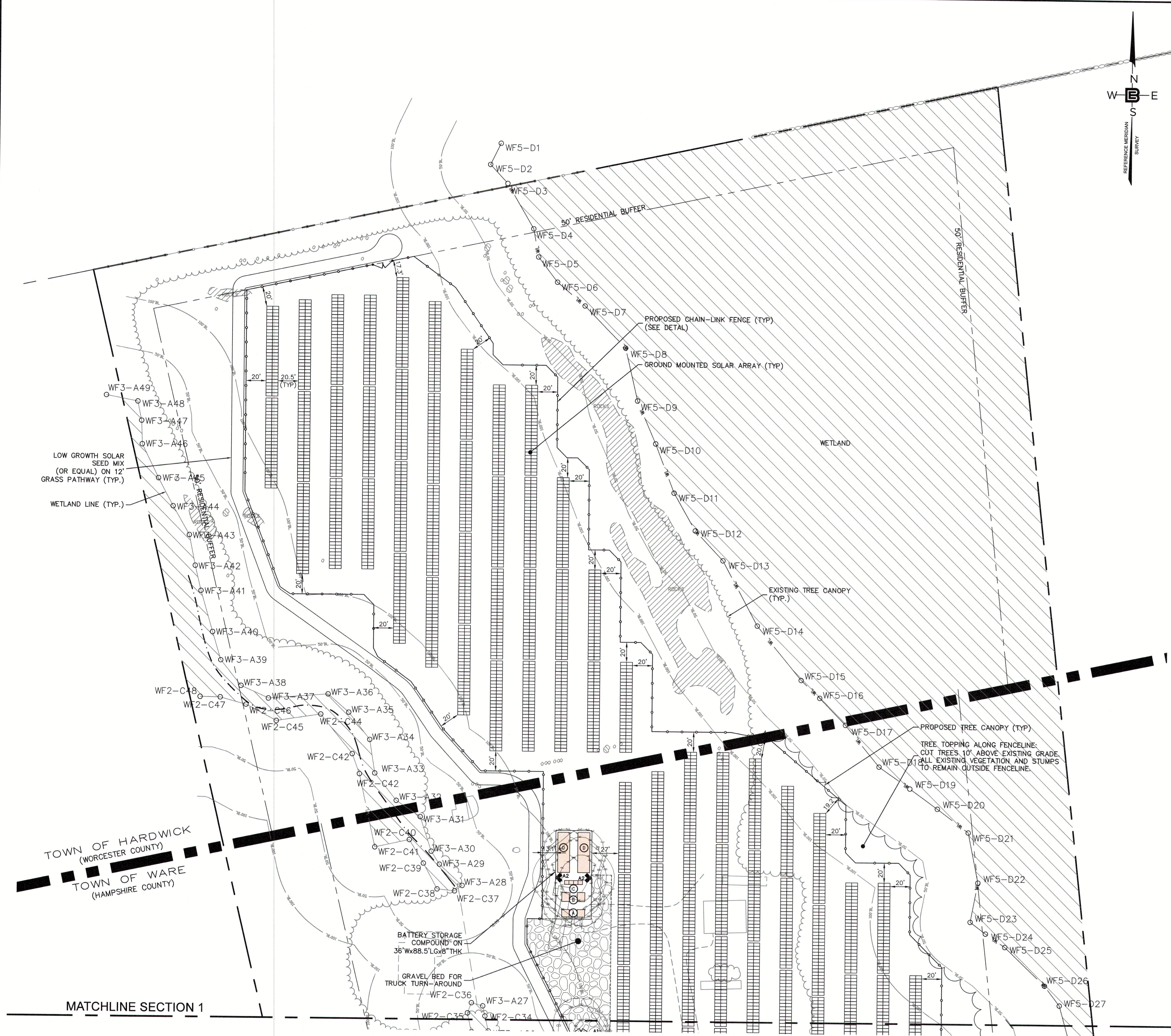
DATE: 10-21-19 REVISION NO.: 4

DRAWING NO.: **C1.3**



C2.1

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SECTION LOCATION KEY

SOLAR FIELD SEED MIX

30%	BEACON HARD FESCUE	7-9"
30%	CHAROIT HARD FESCUE	7-9"
20%	MATTERHORN HARD FESCUE	7-9"
10%	HIGHLAND COLONIAL BENTGRASS	6-8"
10%	SHARK CREEPING BENTGRASS	6-8"

SEEDING RATE 150 LBS PER ACRE
HEIGHT 6-9"

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

LIGHTING SCHEDULE

TYPE	SYMBOL	DESCRIPTION	LAMP	LUMENS	MOUNTING/BALLAST	ULF	QTY
AZ		1st INDUSTRY	(2) LED	13314	12' F.T. 4000K Neutral White LEDs Forward Throw Distribution with House Side Shields	0.85	2

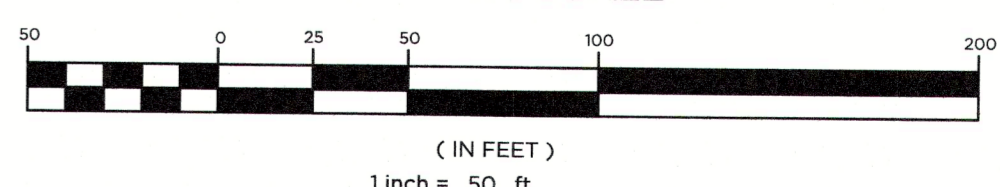
TOWN OF HARDWICK PLANNING BOARD

TOWN OF WARE PLANNING BOARD

DATE:

DATE:

GRAPHIC SCALE



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

DRAWING TITLE
SITE 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

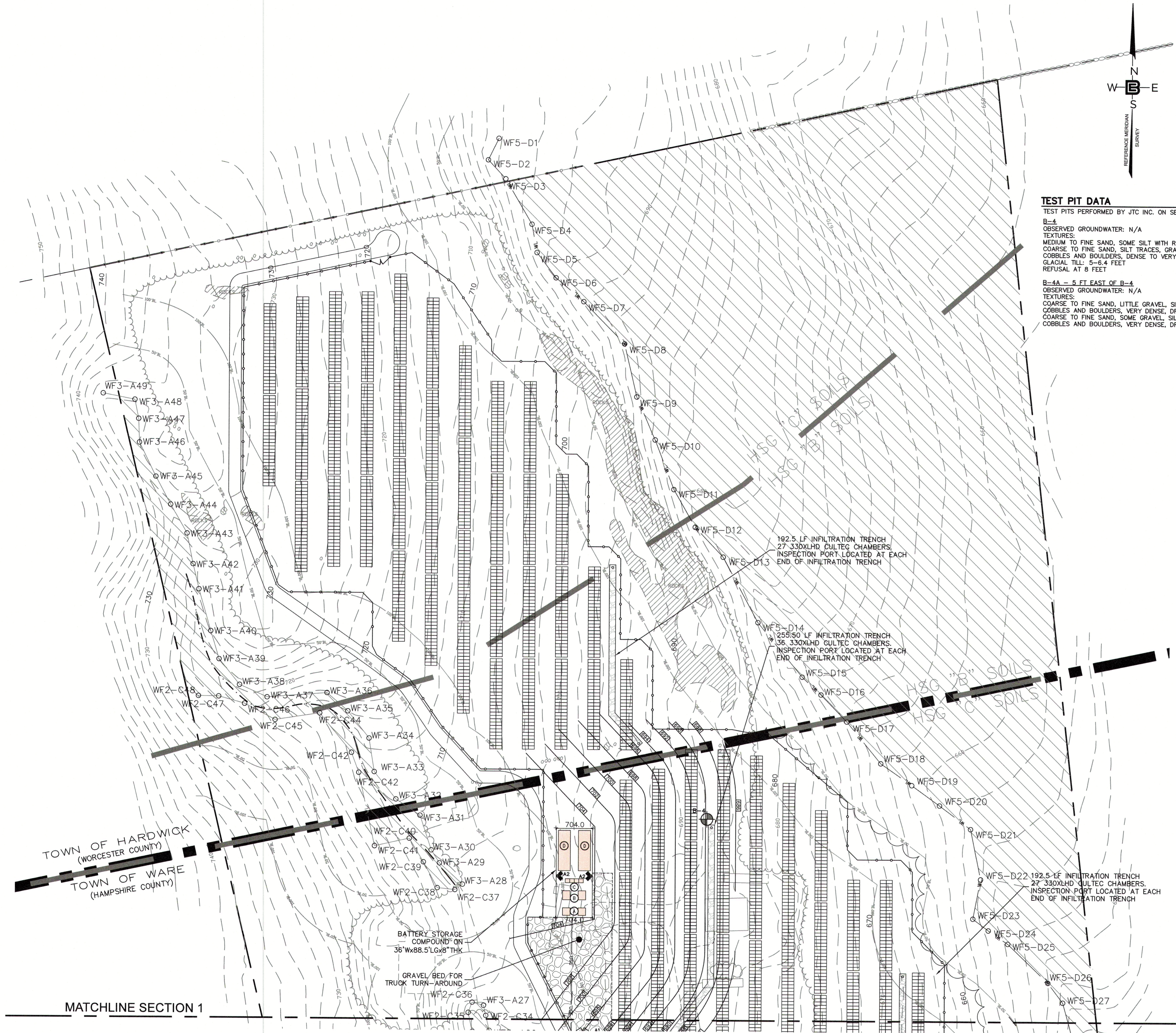
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SCALE 1" = 50'	PROJECT NO. 18M-217
DATE 10-21-19	REVISION NO. 2

DRAWING NO.
C2.3

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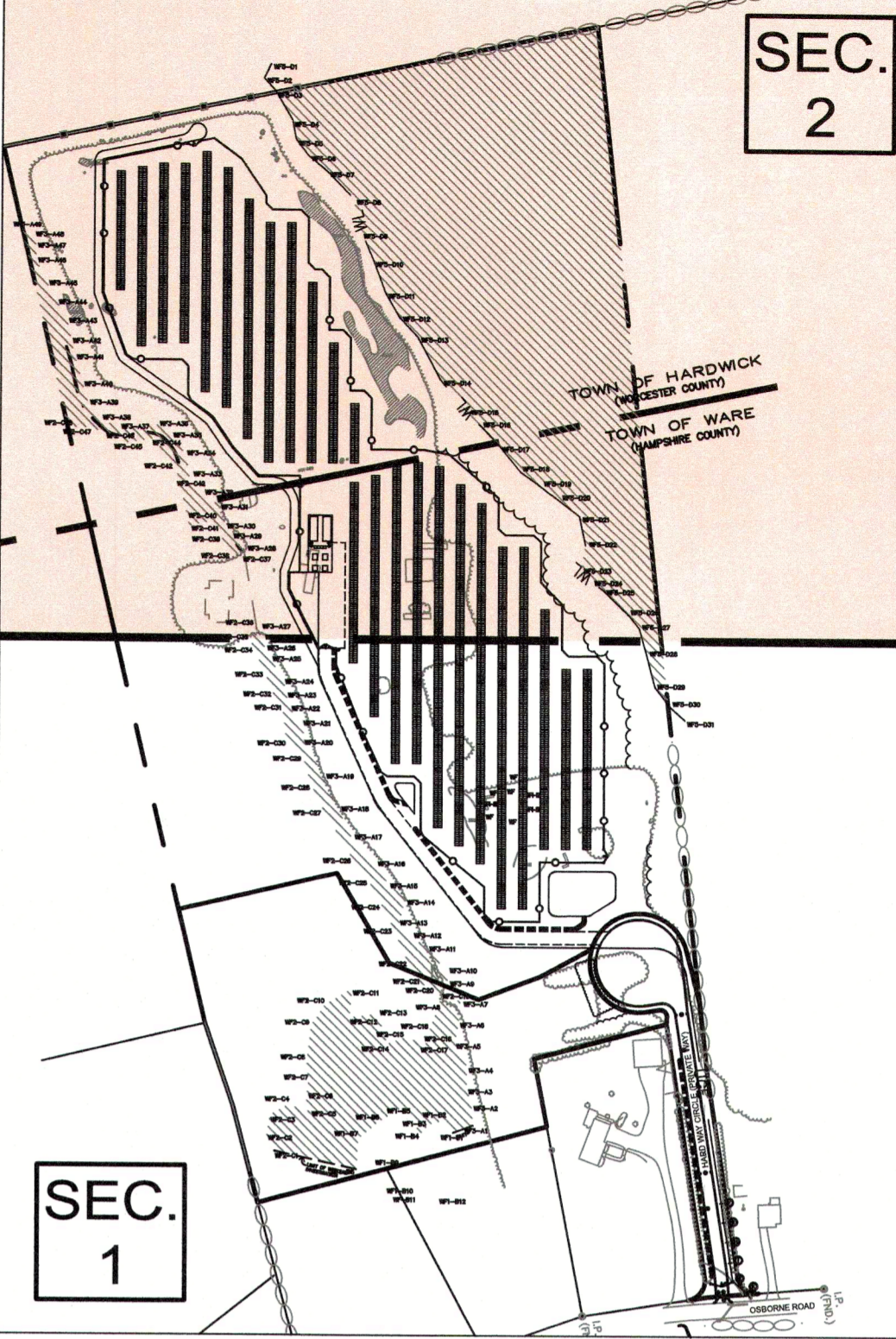
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TEST PIT DATA
TEST PITS PERFORMED BY JTC INC. ON SEPTEMBER 20, 2019

B-4
OBSERVED GROUNDWATER: N/A
TEXTURES:
MEDIUM TO FINE SAND, SOME SILT WITH ROOTS; 0-2 FEET;
COARSE TO FINE SAND, SILT TRACES, GRAVEL TRACES, OCCASIONAL TO FREQUENT COBBLES AND BOULDERS, VERY DENSE, DRY; 10-11.5 FEET;
GLACIAL TILL: 5-6.4 FEET
REFUSAL AT 8 FEET

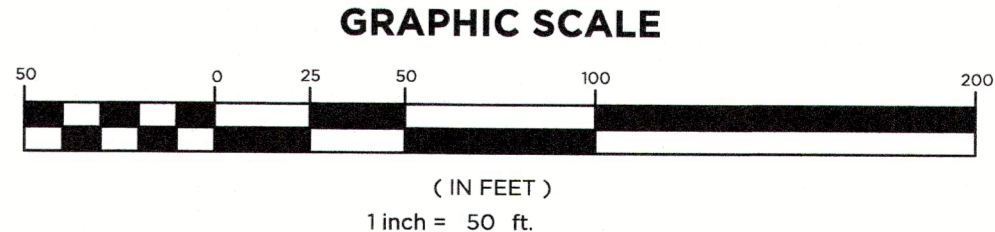
B-4A - 5 FT EAST OF B-4
OBSERVED GROUNDWATER: N/A
TEXTURES:
COARSE TO FINE SAND, LITTLE GRAVEL, SILT TRACES, OCCASIONAL TO FREQUENT COBBLES AND BOULDERS, VERY DENSE, DRY; 10-11.5 FEET;
COARSE TO FINE SAND, SOME GRAVEL, SILT TRACES, OCCASIONAL TO FREQUENT COBBLES AND BOULDERS, VERY DENSE, DRY; 15-15.8 FEET



- 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
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TOWN OF WARE PLANNING BOARD	TOWN OF HARDWICK PLANNING BOARD
DATE: _____	DATE: _____



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CT LIC. NO. 16970

NO.	DATE	REVISION
2	7-31-20	ADDITION OF INFILTRATION TRENCH AND GRADING REVISION
1	11-19-19	UPDATE PLAN PER REVISED SITE LAYOUT

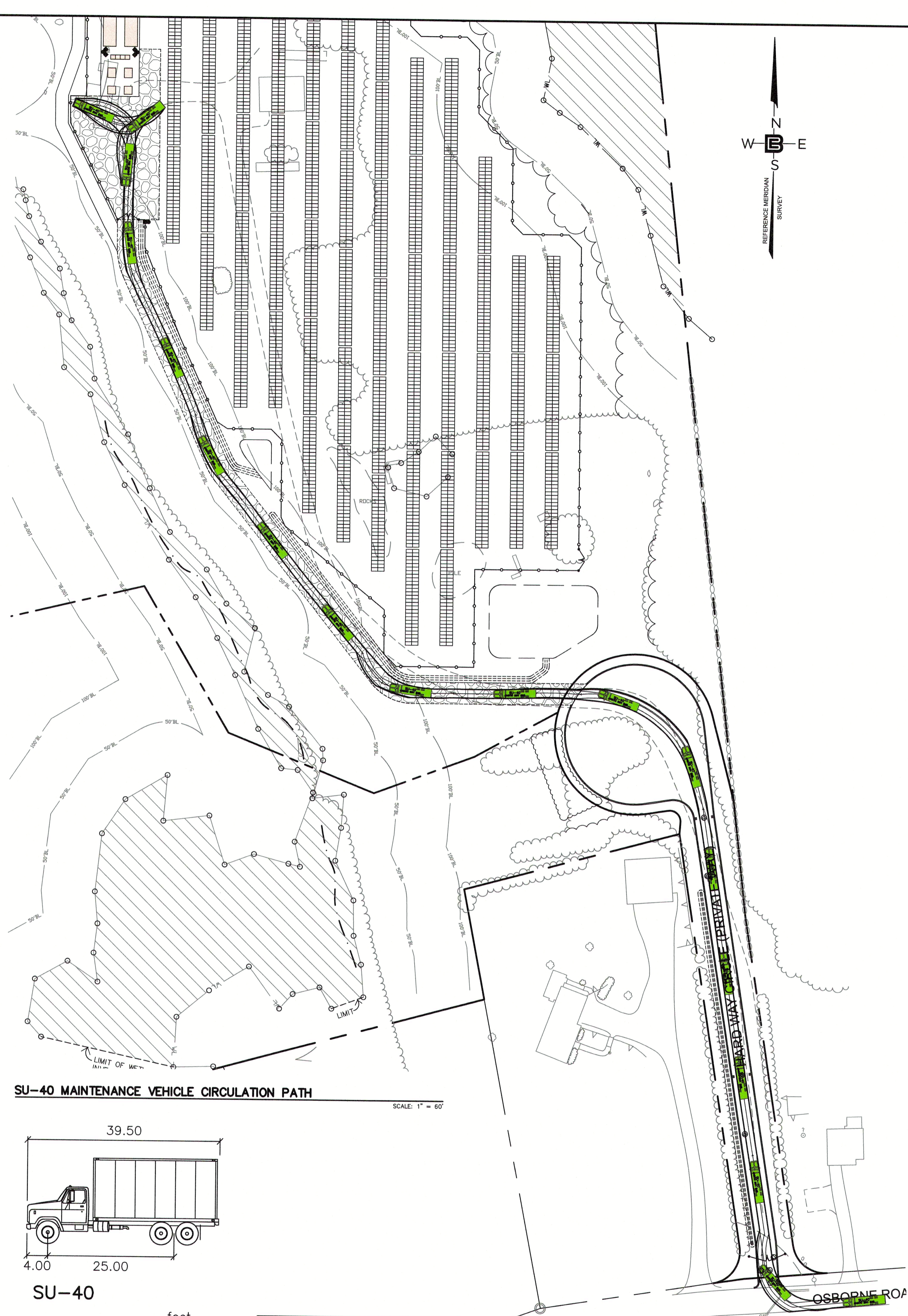
GRADING & DRAINAGE PLAN (SECTION 2)

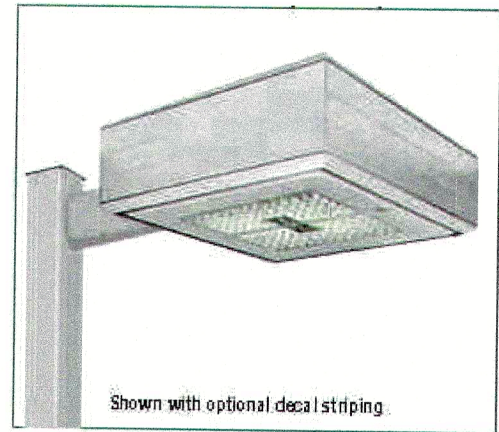
PROJECT
LARGE SCALE SOLAR ARRAY
278 OSBORNE ROAD
PARCEL NUMBER 40-14-9
TOWN OF WARE, HAMPSHIRE COUNTY
NK 51560-177, LOT 14
TOWN OF HARDWICK, WORCESTER COUNTY MASSACHUSETTS

CLIENT
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276 N. FOREST AVE. NE
MARIETTA, GA 30060

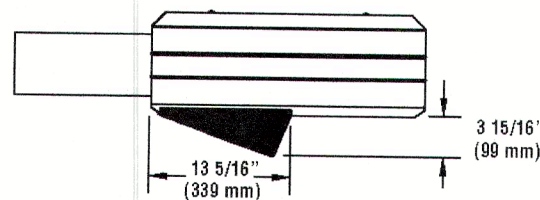
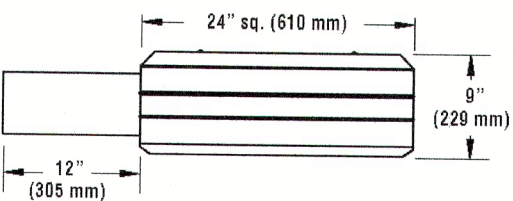
CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800
DRAWN BY: E.Q. CHECKED BY: C.J.B.
SCALE: 1" = 50' PROJECT NO.: 18M-217
DATE: 10-21-19 REVISION NO.: 2
DRAWING NO.: **C2.5**

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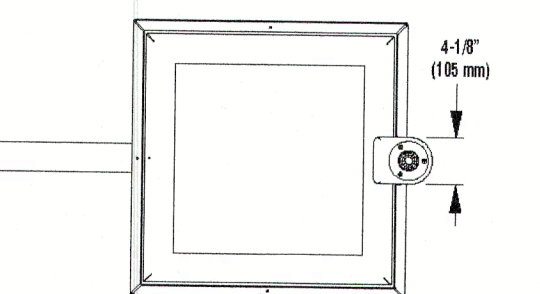




LED AREA LIGHT (XGBM) WITH OPTIONAL INTEGRAL MOTION SENSOR (IMS), MANUFACTURED BY LSI INDUSTRIES. SEE LIGHTING SCHEDULE FOR MOUNTING HEIGHT(S), LED COLOR TEMPERATURE(S), LIGHTING DISTRIBUTION(S), AND LUMENS.

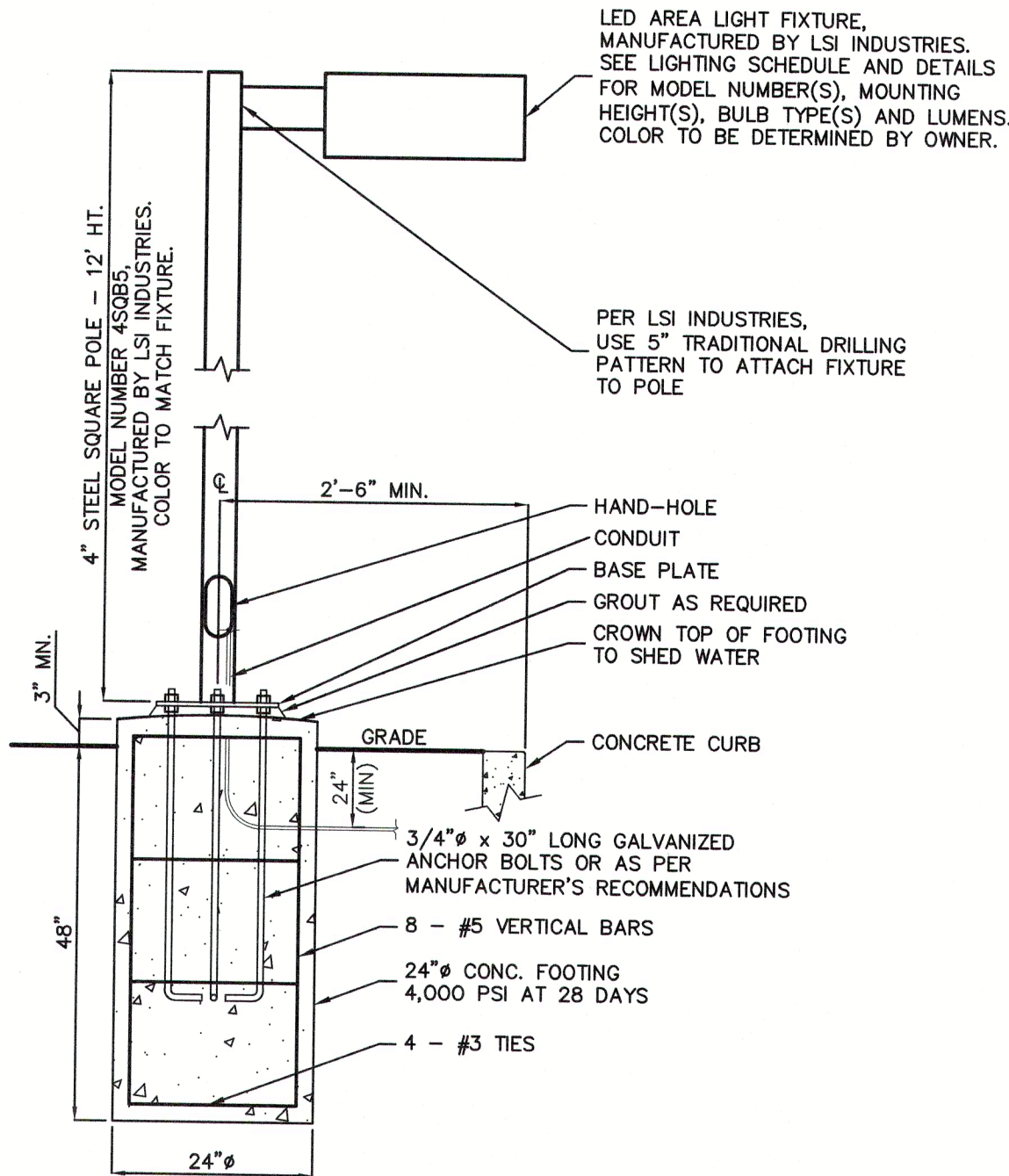


House Side Shield (4820028LK)



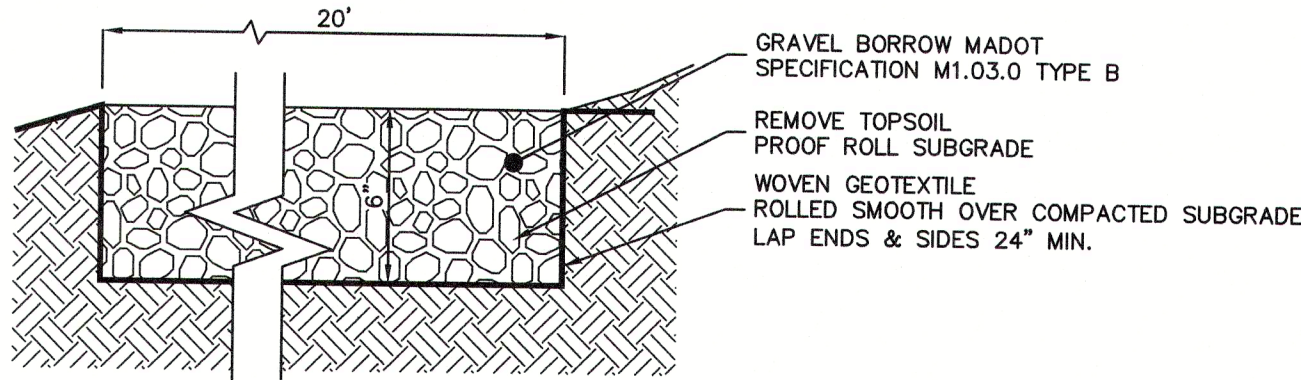
AREA LIGHT FIXTURE DETAIL

NOT TO SCALE



AREA LIGHT & FOOTING DETAIL

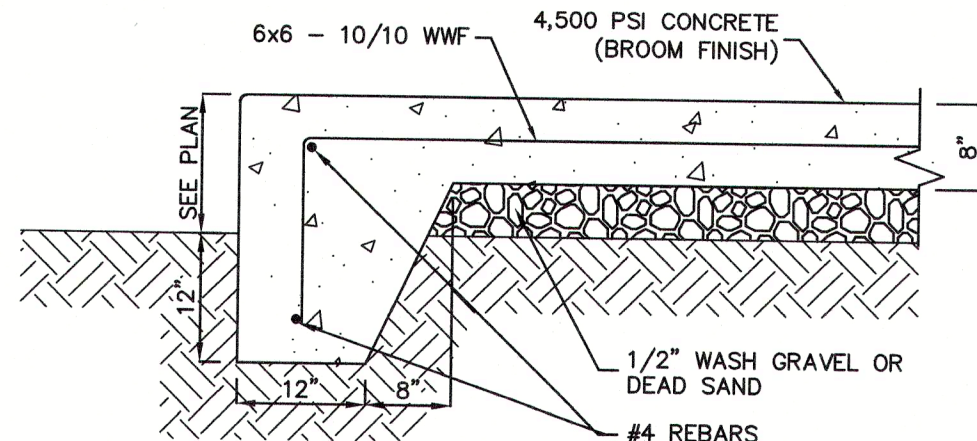
NOT TO SCALE



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

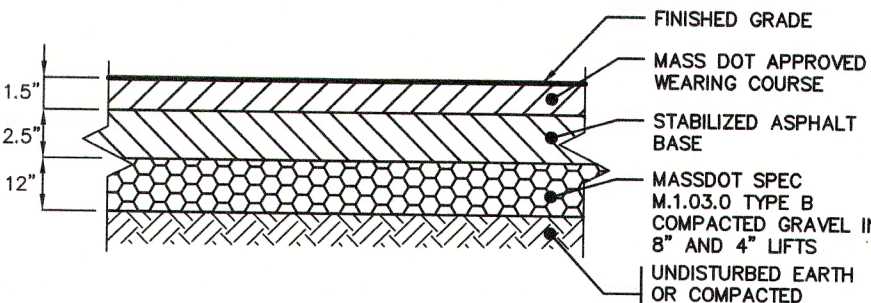
GRAVEL DRIVEWAY DETAIL

NOT TO SCALE



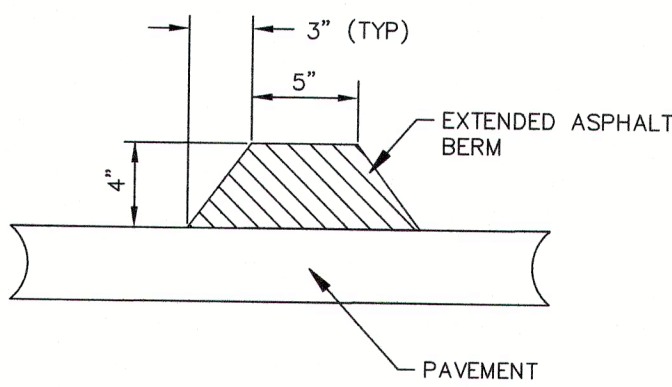
RAISED CONCRETE DETAIL

NOT TO SCALE



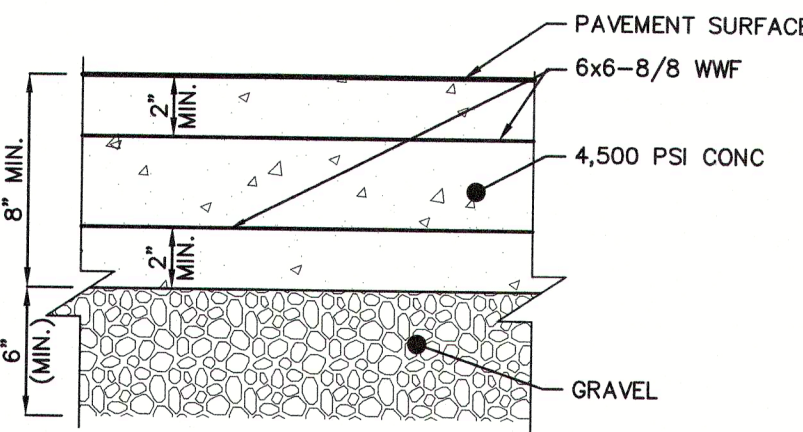
ASPHALT PAVEMENT DETAIL

NOT TO SCALE



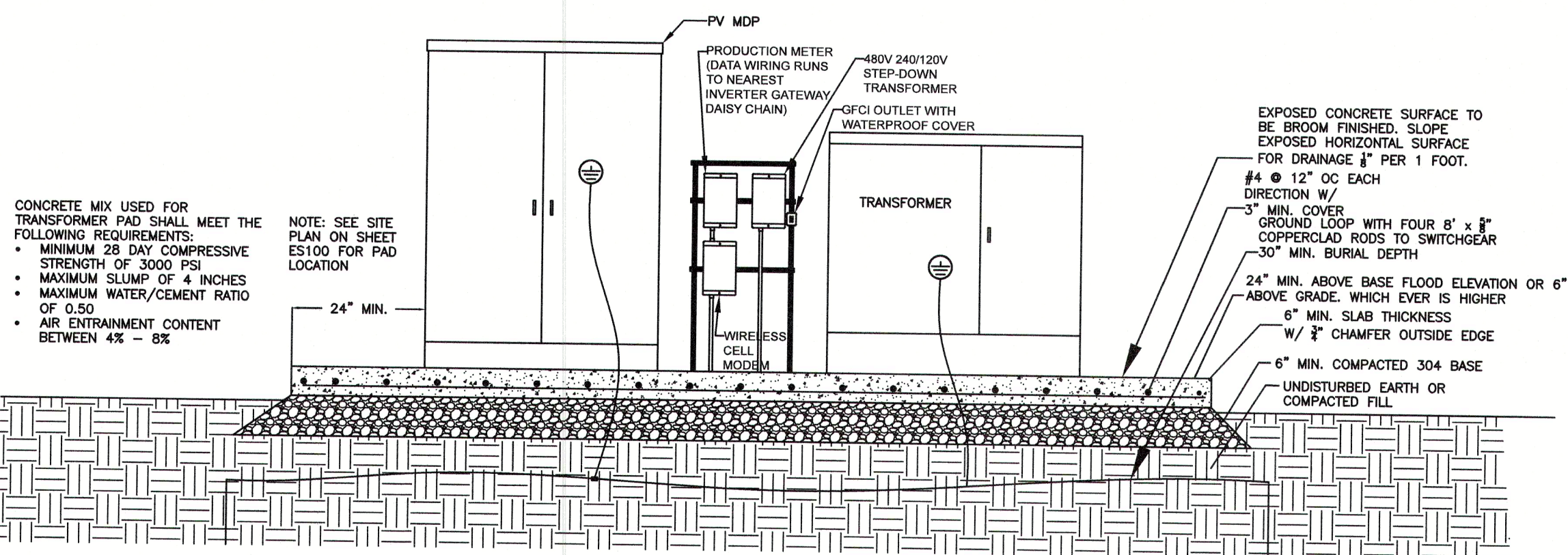
ASPHALT BERM

NOT TO SCALE



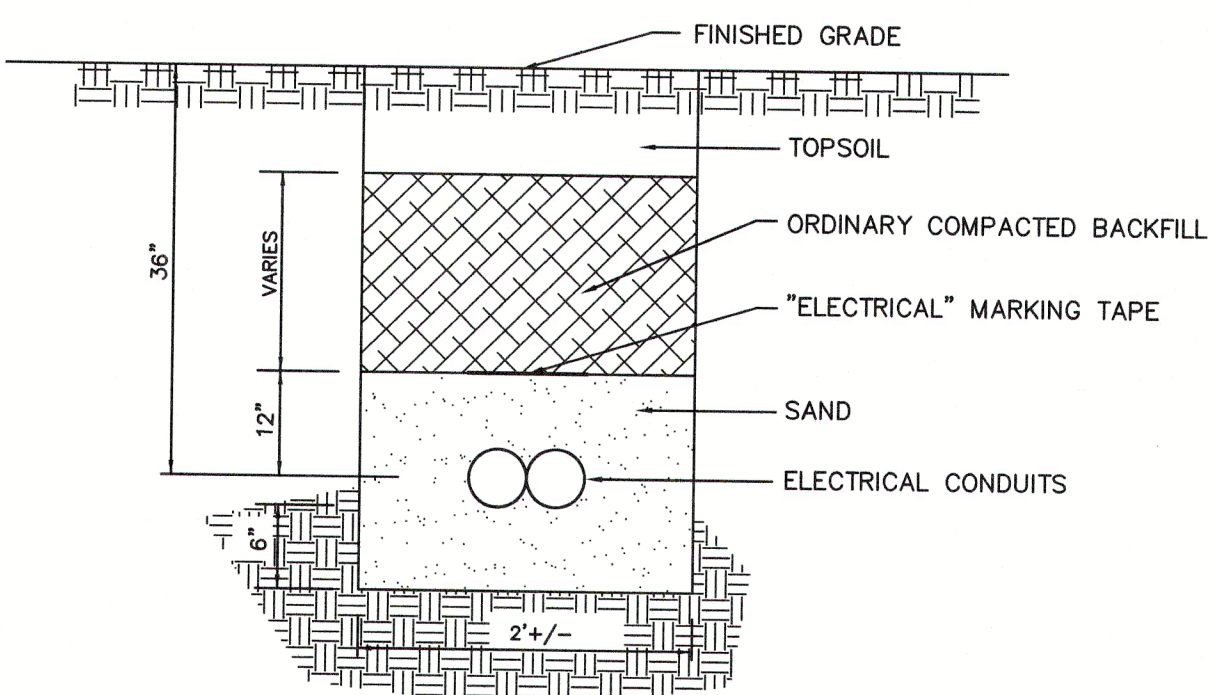
CONCRETE PAVEMENT DETAIL

NOT TO SCALE



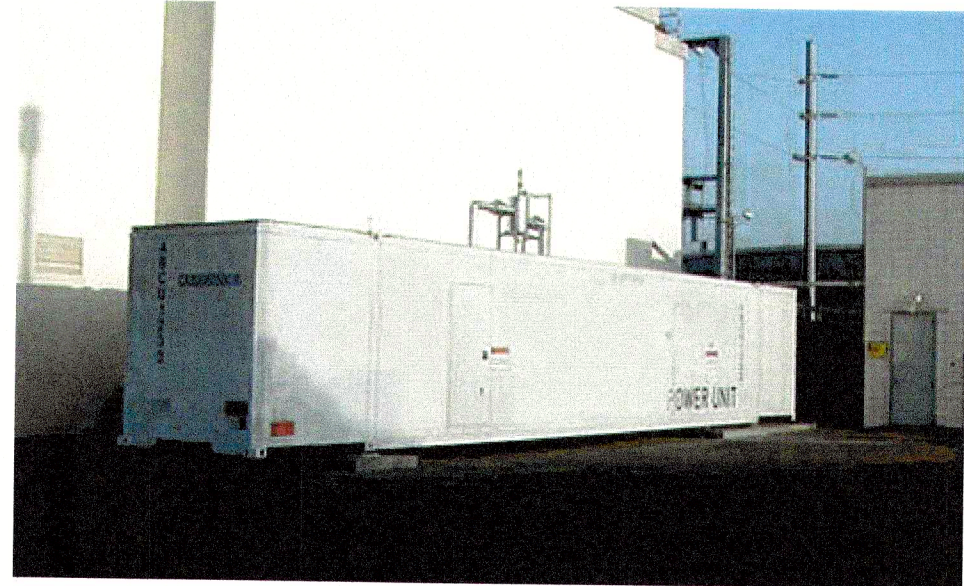
MAIN DISTRIBUTION PANEL AND TRANSFORMER PAD MOUNT DETAIL

NOT TO SCALE



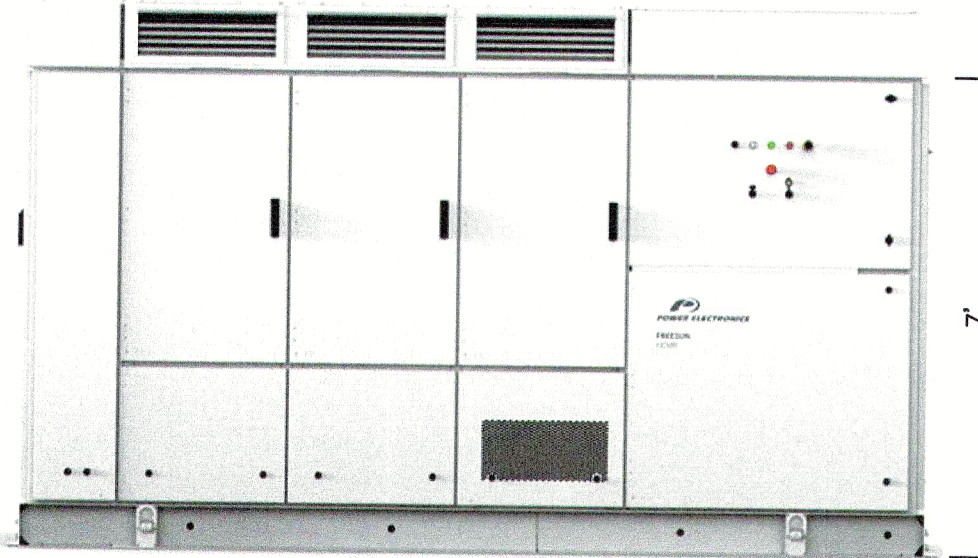
TYPICAL ELECTRICAL TRENCH DETAIL

NOT TO SCALE



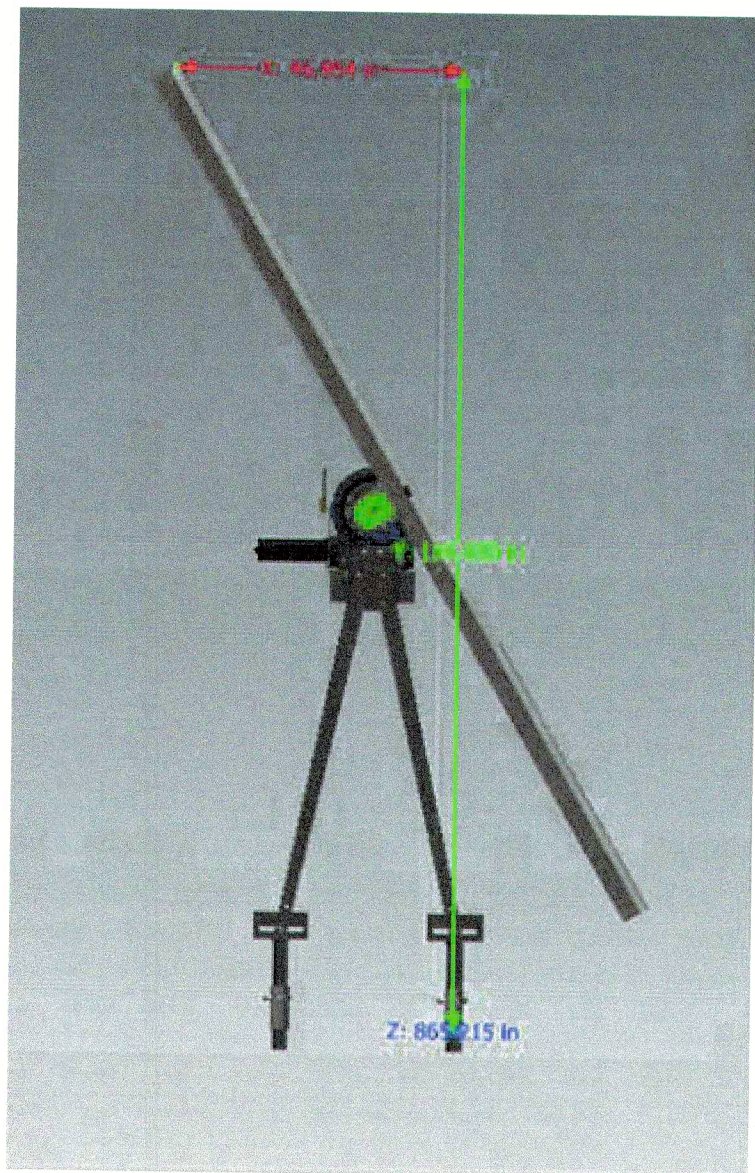
BATTERY STORAGE CONTAINER

NOT TO SCALE



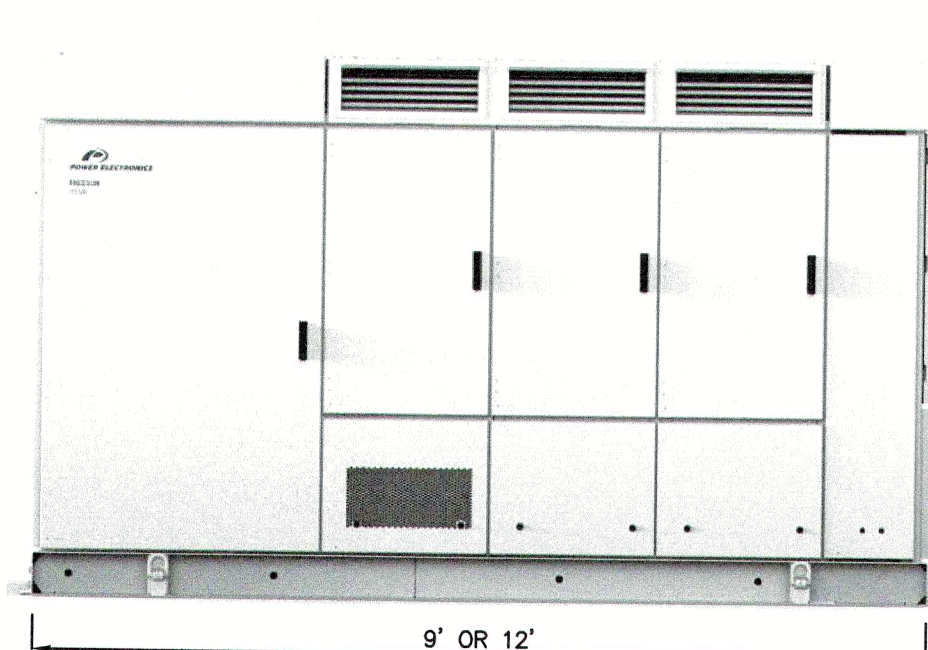
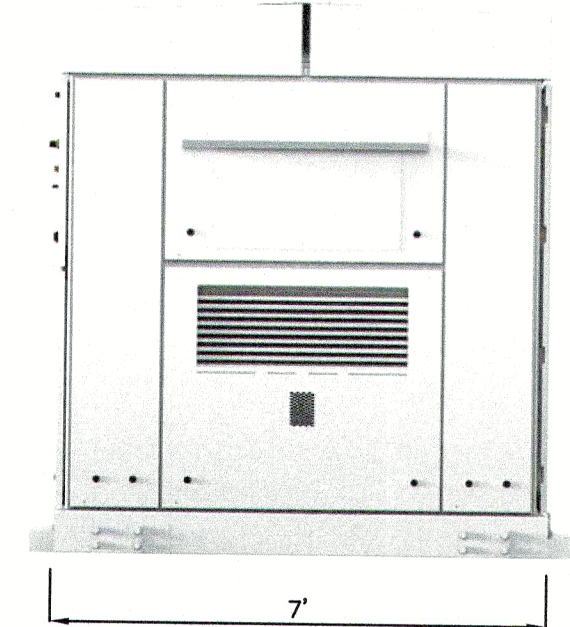
STRING INVERTER

NOT TO SCALE



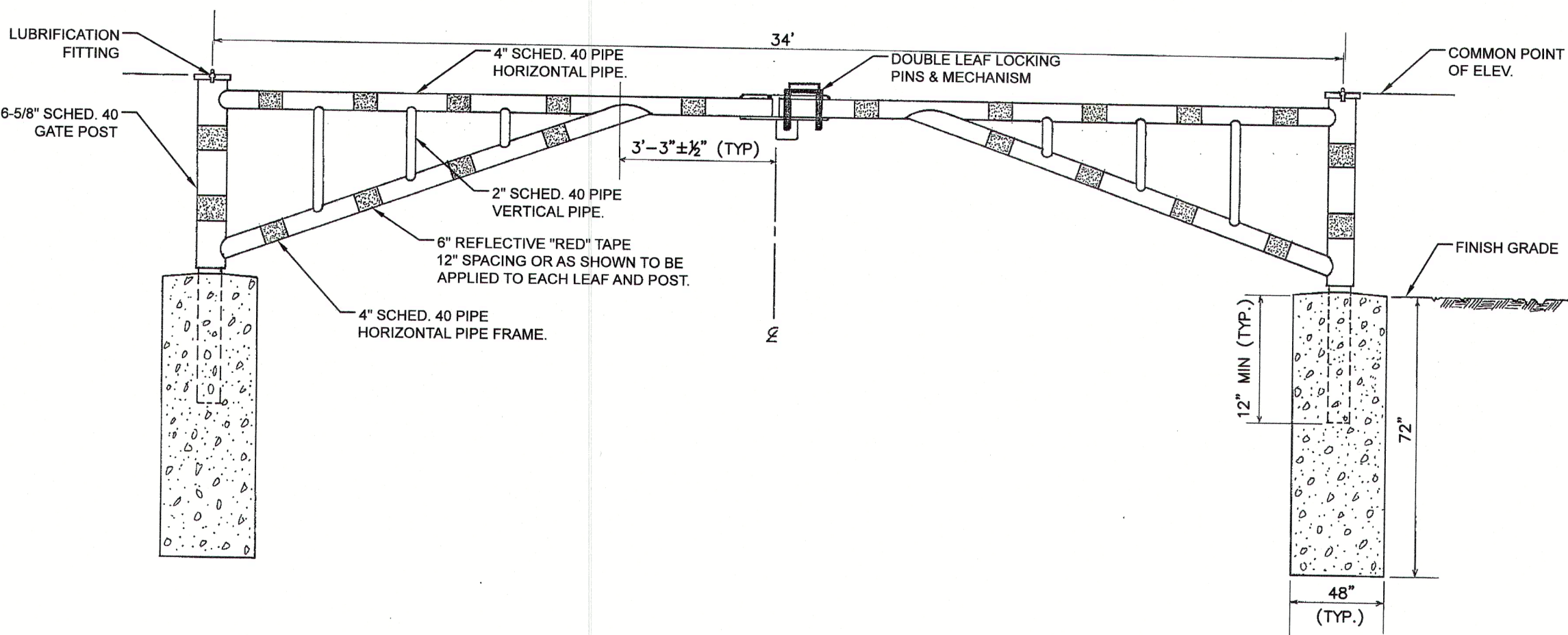
SOLAR PANEL & RACK SYSTEM

NOT TO SCALE



STRING INVERTER

NOT TO SCALE



DOUBLE LEAF GATE

NOT TO SCALE

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NH LIC. NO. 9368

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

NO. DATE		REVISION	
1	7-31-20	REVISED SHEET NAME AND REMOVAL OF DRAINAGE DETAILS	E.O.
2	2-22-21	ADDITION OF DOUBLE LEAF GATE DETAIL	E.O.

DRAWING TITLE
SITE DETAILS

PROJECT
LARGE SCALE SOLAR ARRAY
279 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 10-21-19	REVISION NO. 2

C3.1

FIGURE 1

Diagram illustrating the layout of a perimeter security system, showing various security items and their placement relative to dimensions and access points.

Key components and dimensions shown:

- Chart-1 Item 1** (Top Left and Top Right)
- Chart-2 Item 3** (Top Left, Top Right, Middle Left, Middle Right, and Bottom Left)
- Chart-2 Item 1** (Middle Left)
- Chart-2 Items 1 & 2** (Bottom Left)
- Dimensions:** 25 FT. MAX., 50 FT. MAX., 25 FT. MAX., 50 FT. MAX., 1 FT., 50 FT. MAX.
- Access Points:** VEHICLE GATES, PERSONNEL GATE
- Note:** 911 SIGN REQUIRED FOR ACCESS ROAD (IF SUBSTATION IS NOT EASILY VISIBLE FROM ROAD OR IS GREATER THAN 100 YDS OFF THE PUBLIC ROAD)

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.

NOT TO SCALE

1 Bunker Road
Nantucket, MA
Bunker Wood 113E Substation
1-800-322-3223
nationalgrid

NO TRESPASSING

24"

12"

48"

5' 0" or 60"

7' 0" or 84"

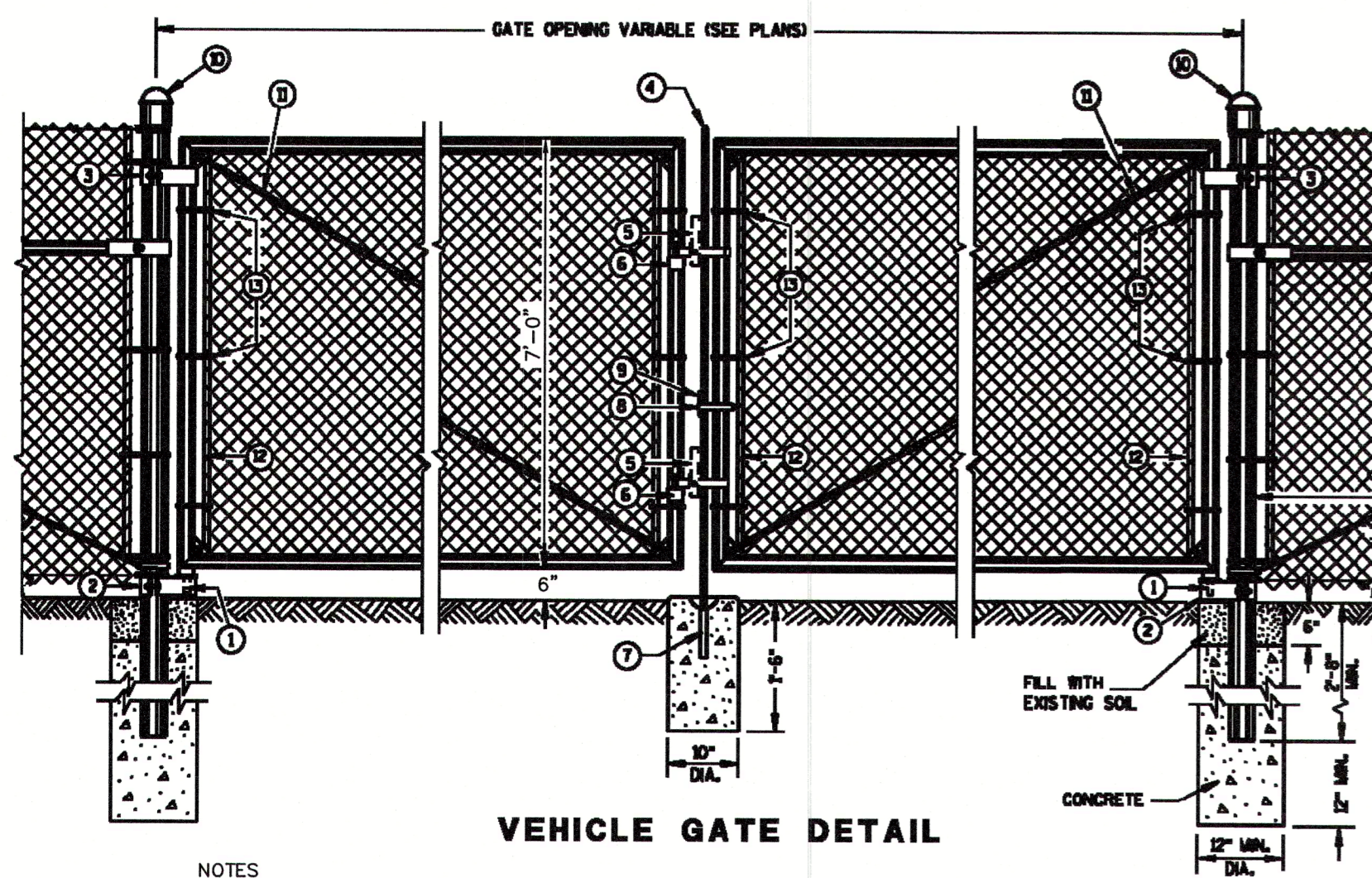
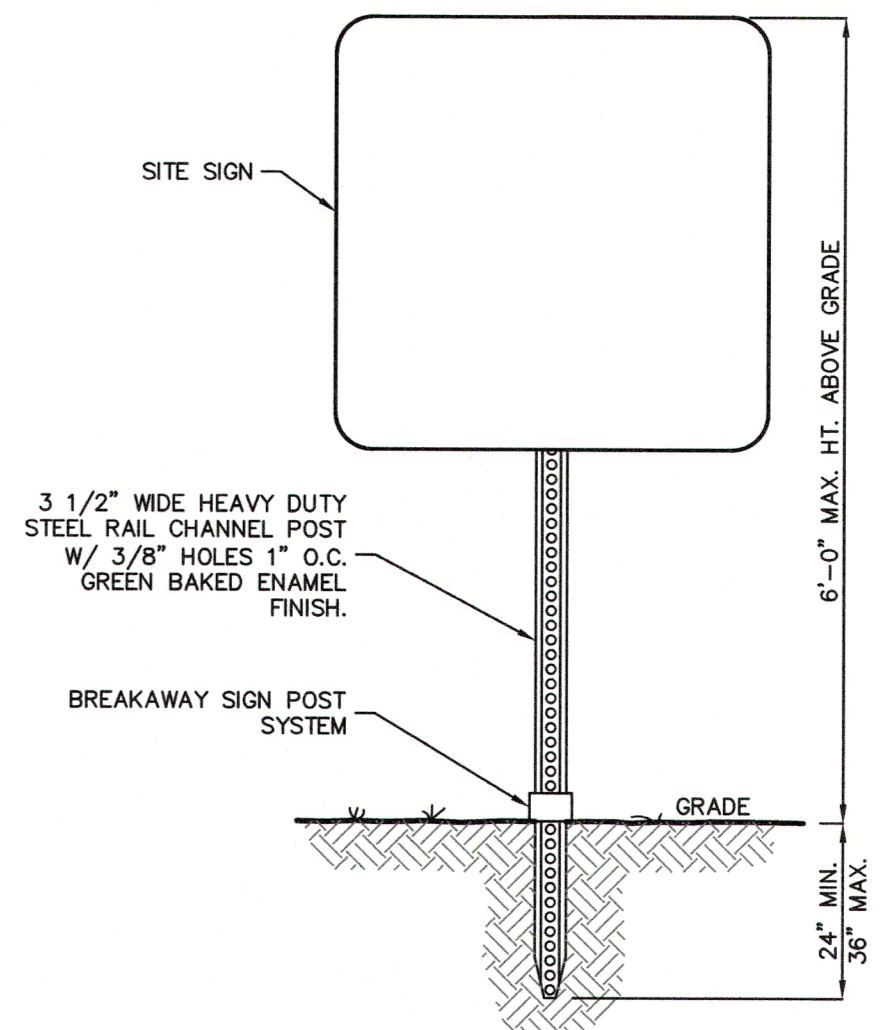
20"

56"

5' 0" or 60"

SITE SIGN DETAIL

NOT TO SCALE



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.

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

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	5.400
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	26.580

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LB/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 5 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

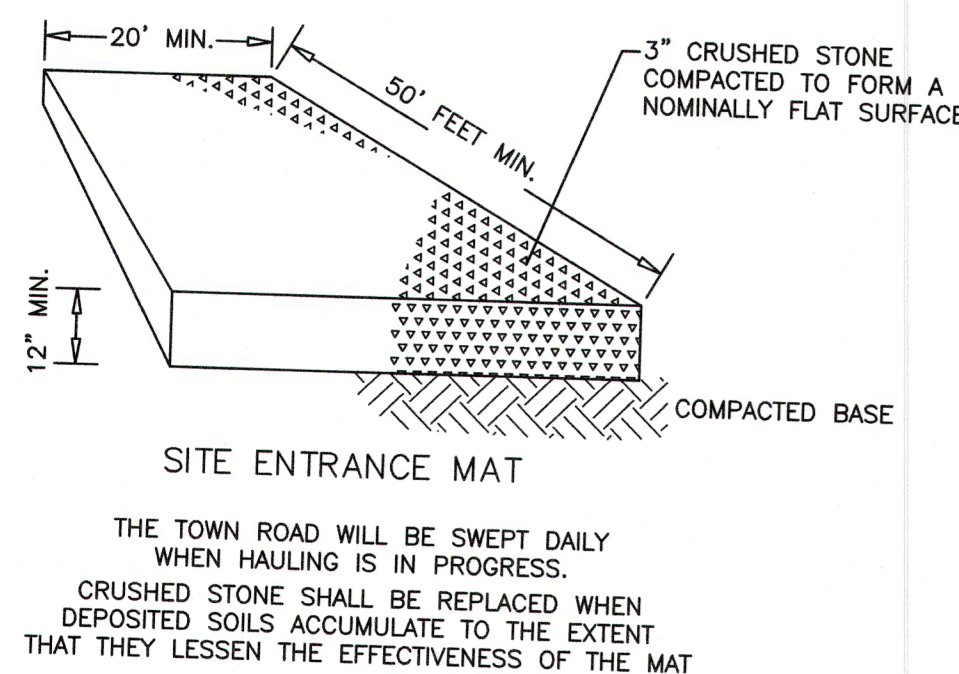
USE		TYPE
BRACE RAIL		SP1 OR FS1

**** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS**

NOT TO SCALE

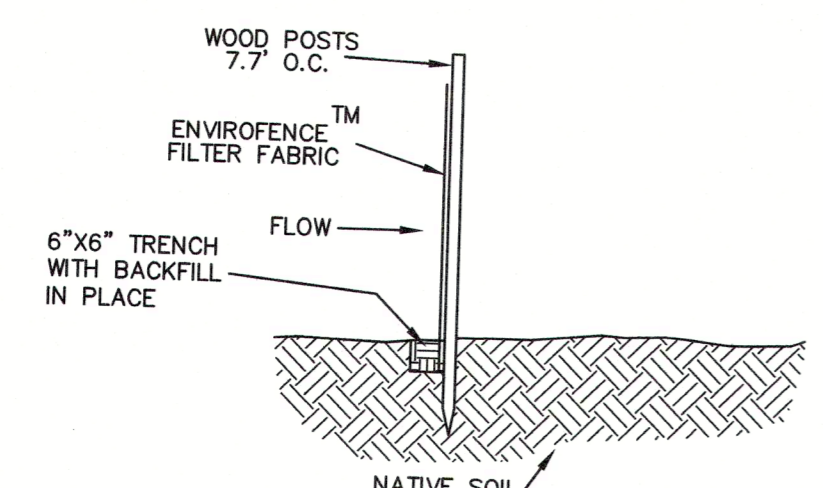
NOT TO SCALE

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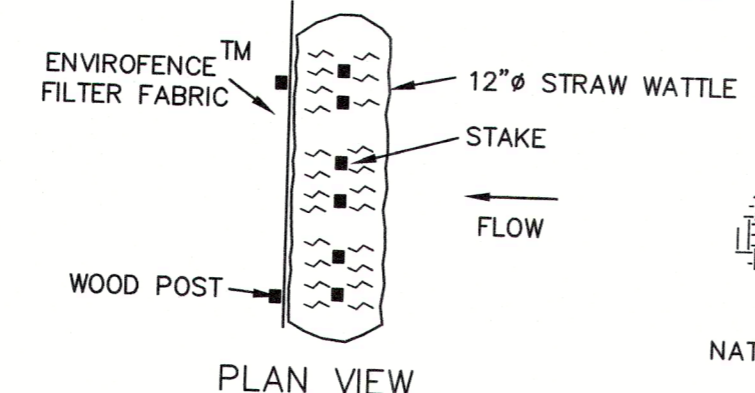
TRACKING PAD DETAIL

NOT TO SCALE



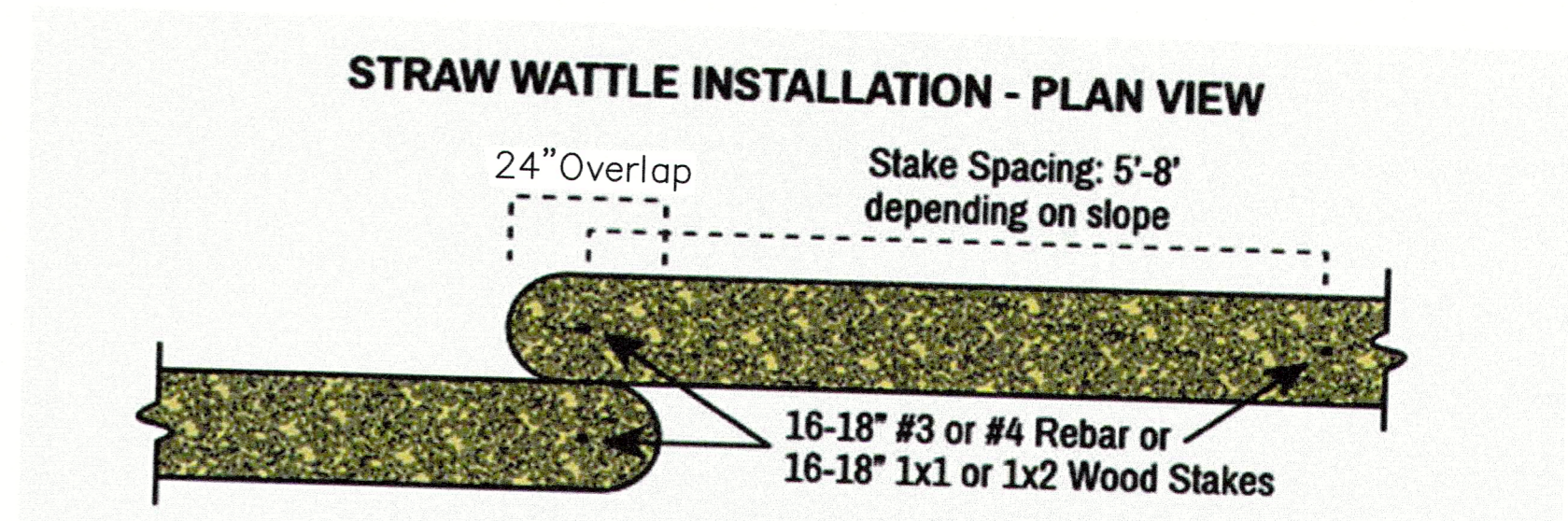
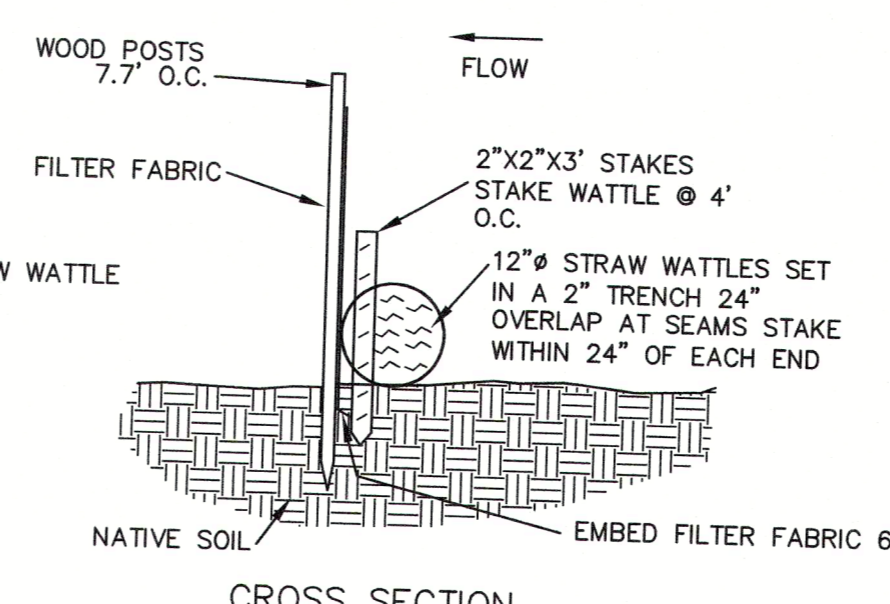
SILT FENCE DETAIL

NOT TO SCALE



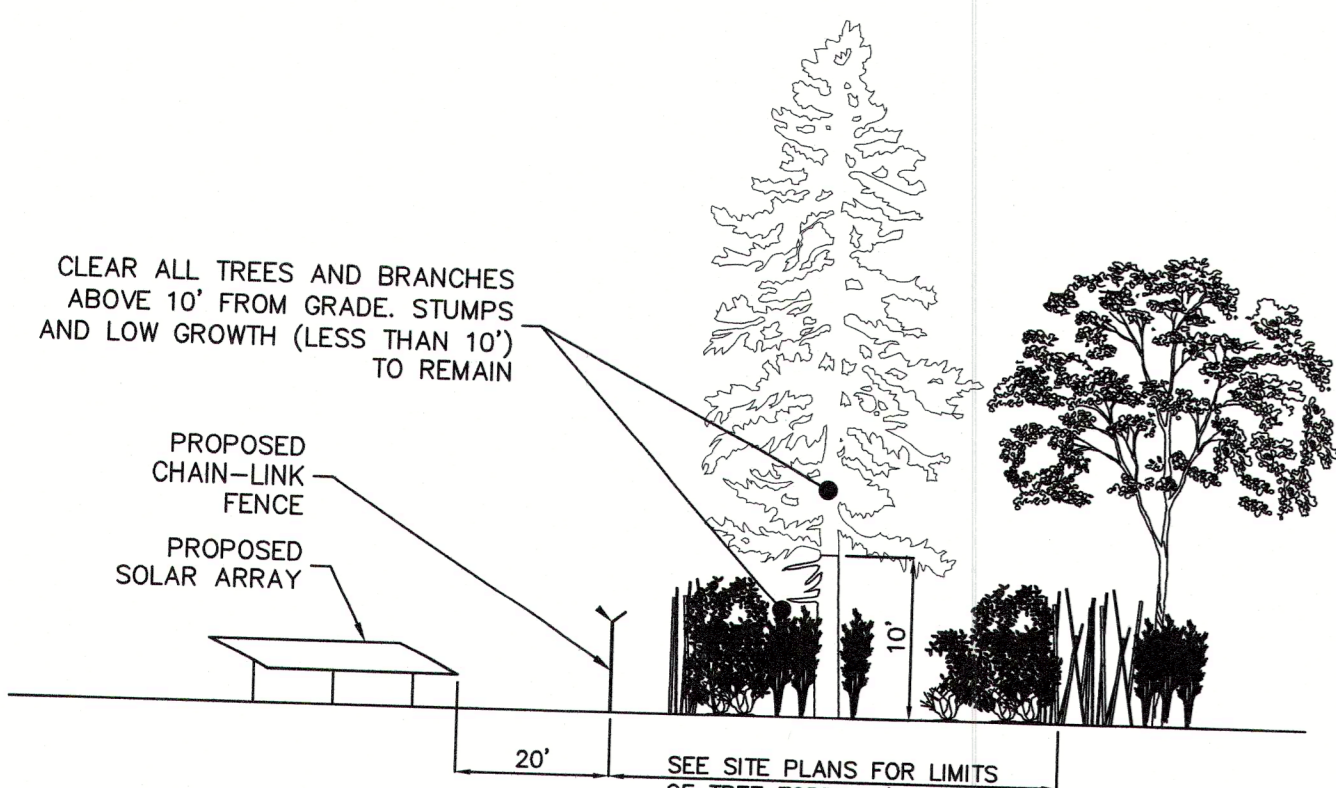
SILT FENCE AND STRAW WATTLE DETAIL

NOT TO SCALE



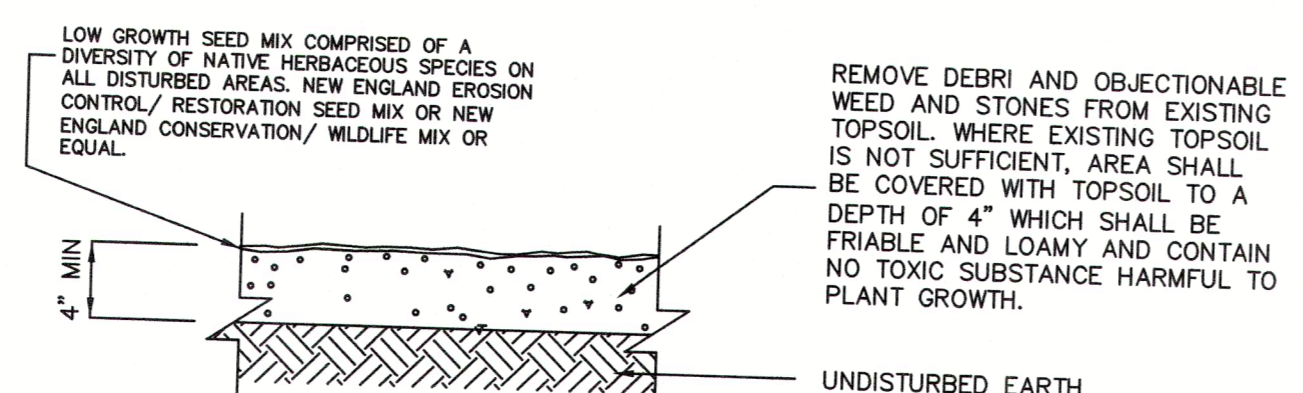
WATTLE INSTALLATION DETAIL

NOT TO SCALE



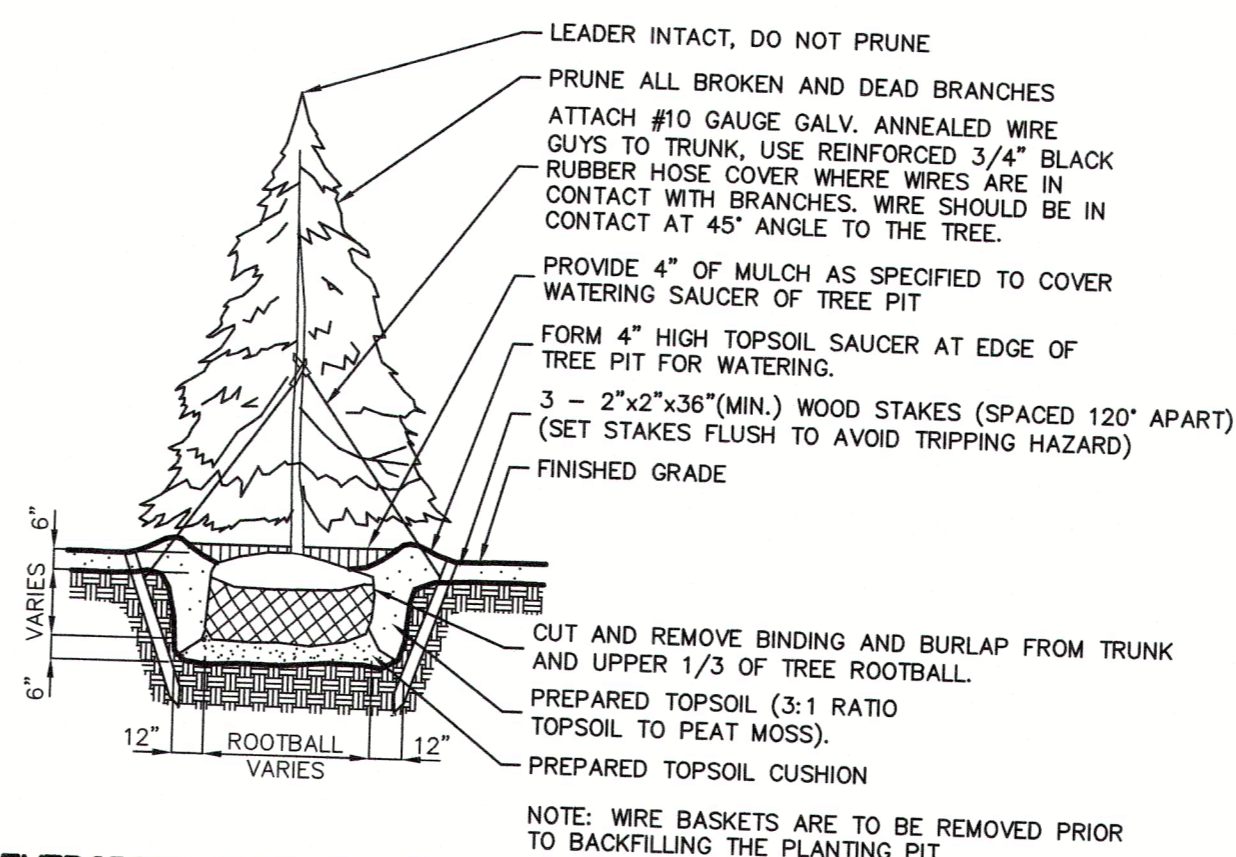
TREE CLEARING DETAIL

NOT TO SCALE



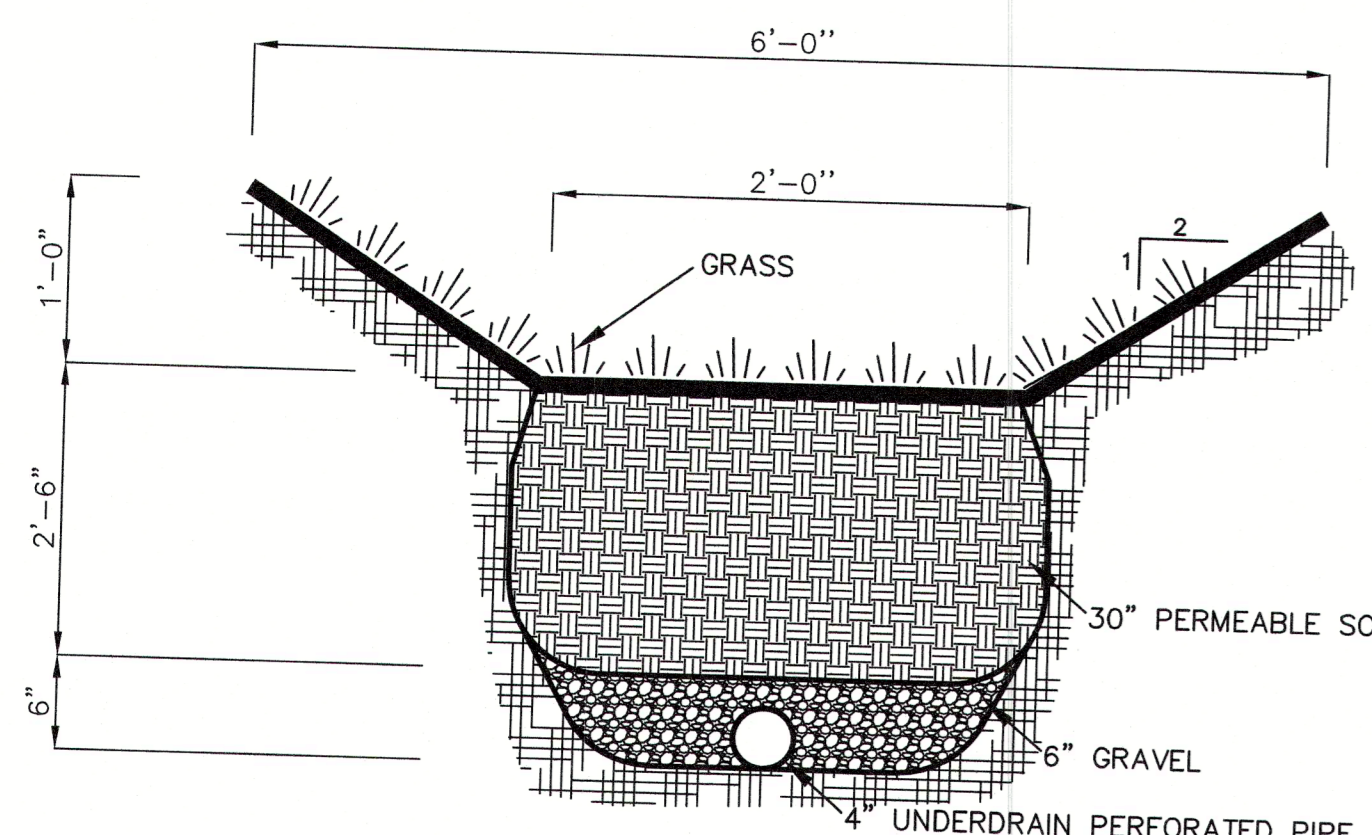
TOP SOIL & SEED DETAIL

NOT TO SCALE



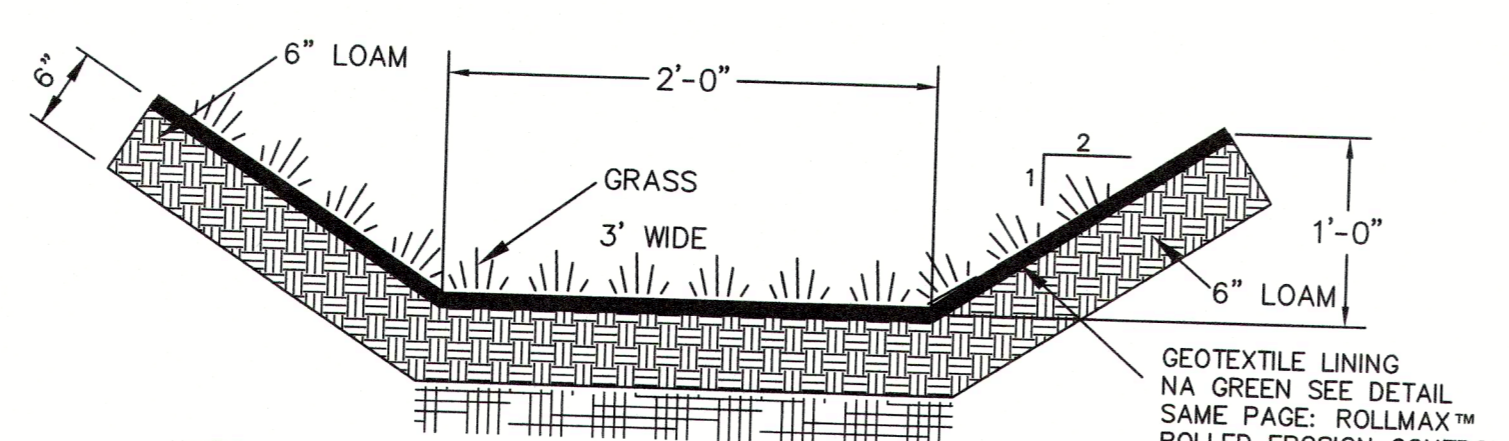
EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE



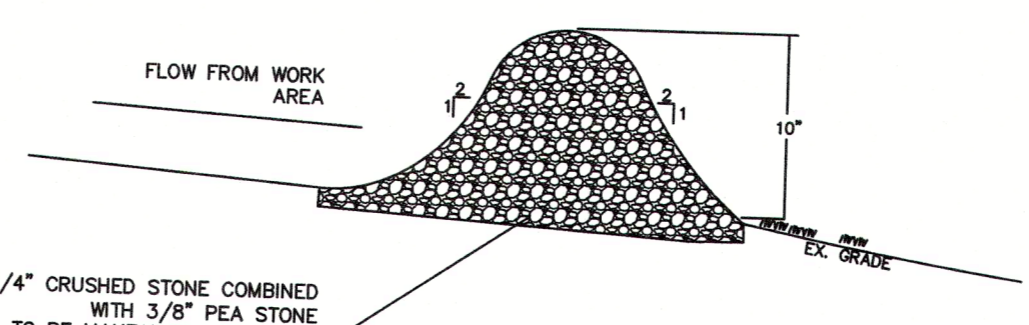
DRY SWALE

NOT TO SCALE



GRASS SWALE

NOT TO SCALE



STONE CHECK DAM DETAIL

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NH LIC. NO. 9358 IN LIC. NO. 6694

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PROFESSIONAL LAND SURVEYOR
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CT LIC. NO. 16970

NO.	DATE	REVISION
1	11-07-19	ADDITION OF GRASS SWALE DETAIL
2	2-25-21	REVISION OF WATTLE INSTALLATION DETAIL OVERLAP LENGTH

DRAWING TITLE
SOIL EROSION & SEDIMENT CONTROL AND LANDSCAPE 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

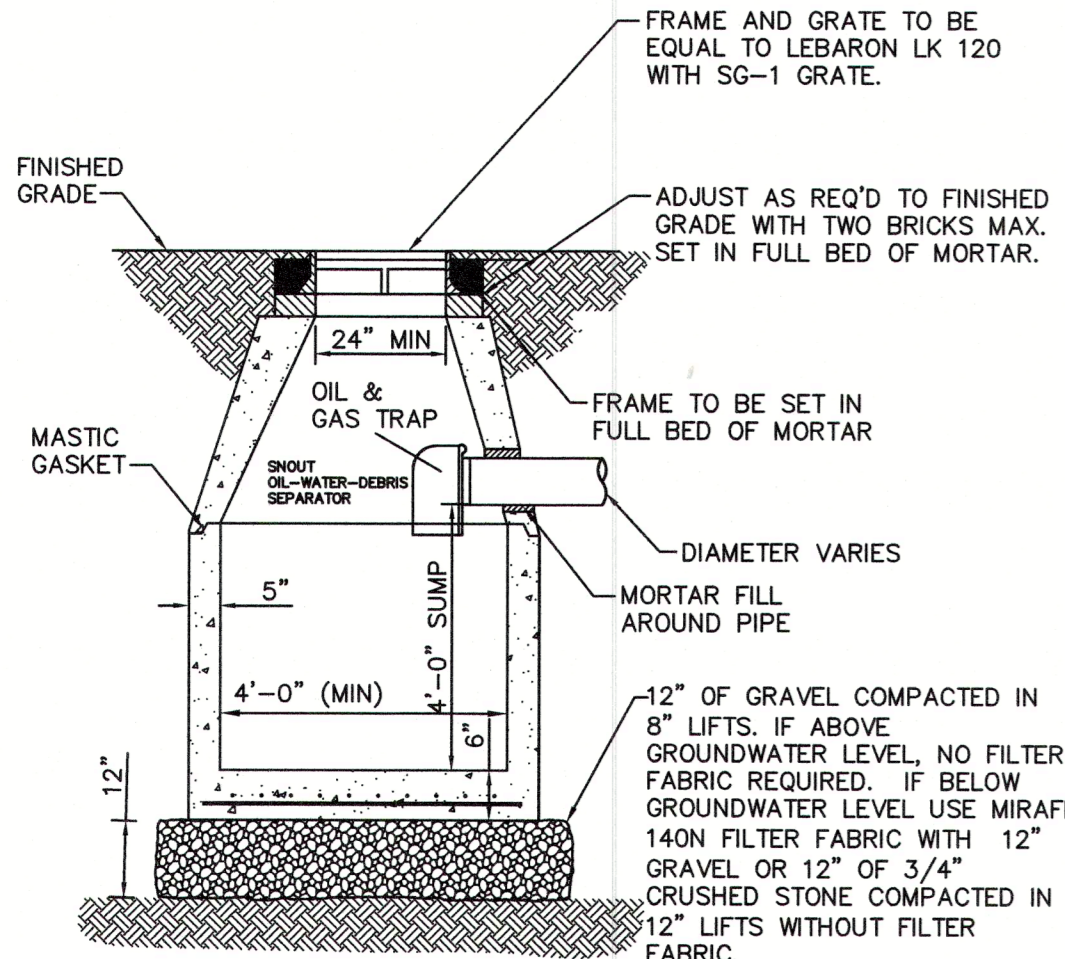
PROJECT NO.
18M-217

DATE
10-21-19

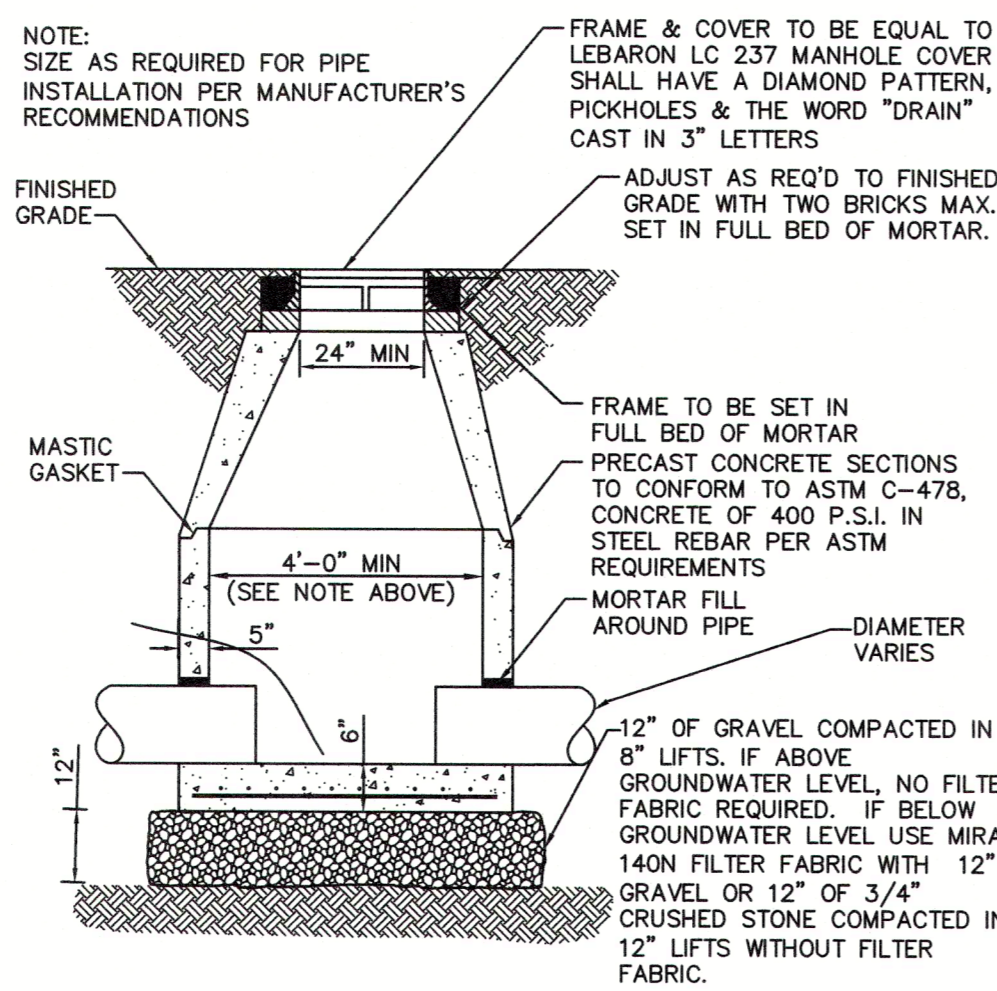
REVISION NO.
2

DRAWING NO.
C3.3

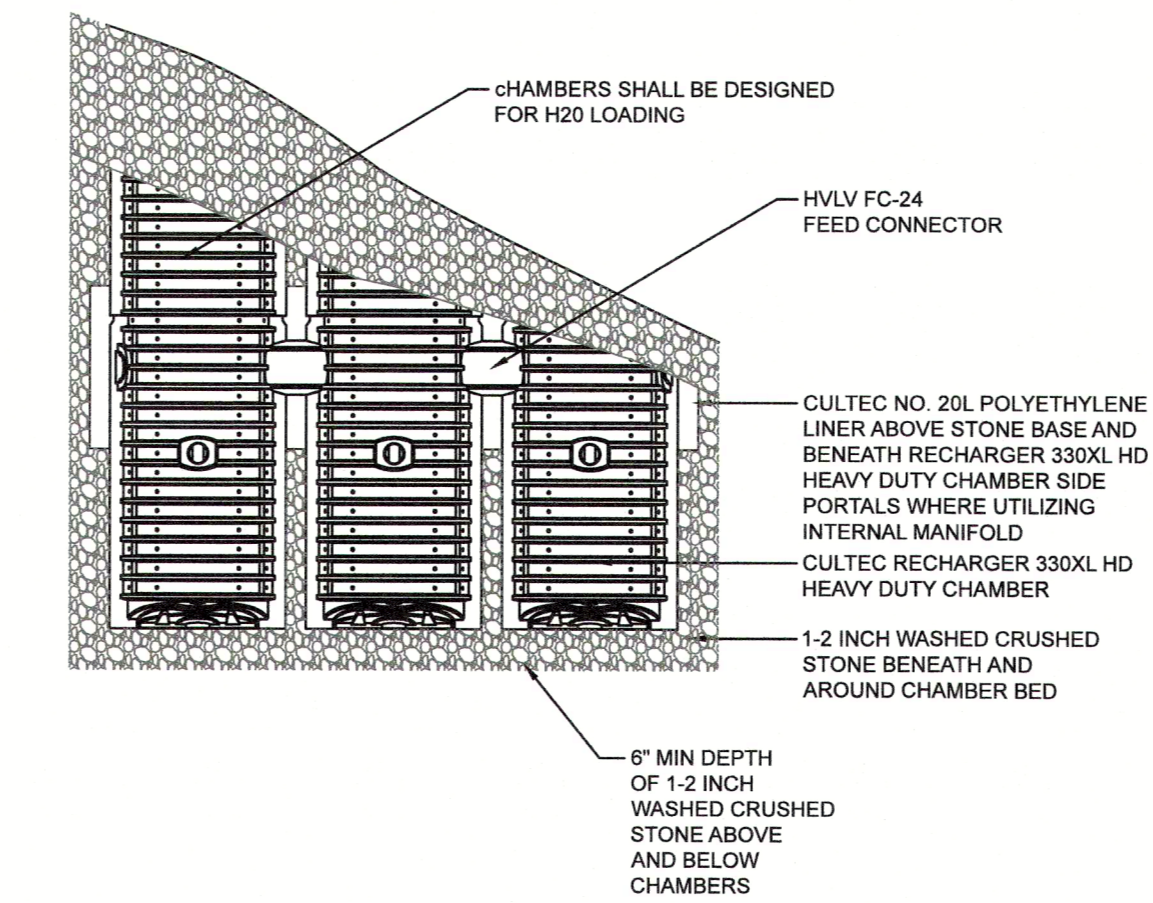
© Bertin Engineering Associates, Inc. 11/92, 168, 16, 23/0E, Job File: 201818M-217 Ware-Hardwick\Design\02_Civil\CD\Drawings 18M-217.DWG Feb 22, 2021 - 2:28pm elioq



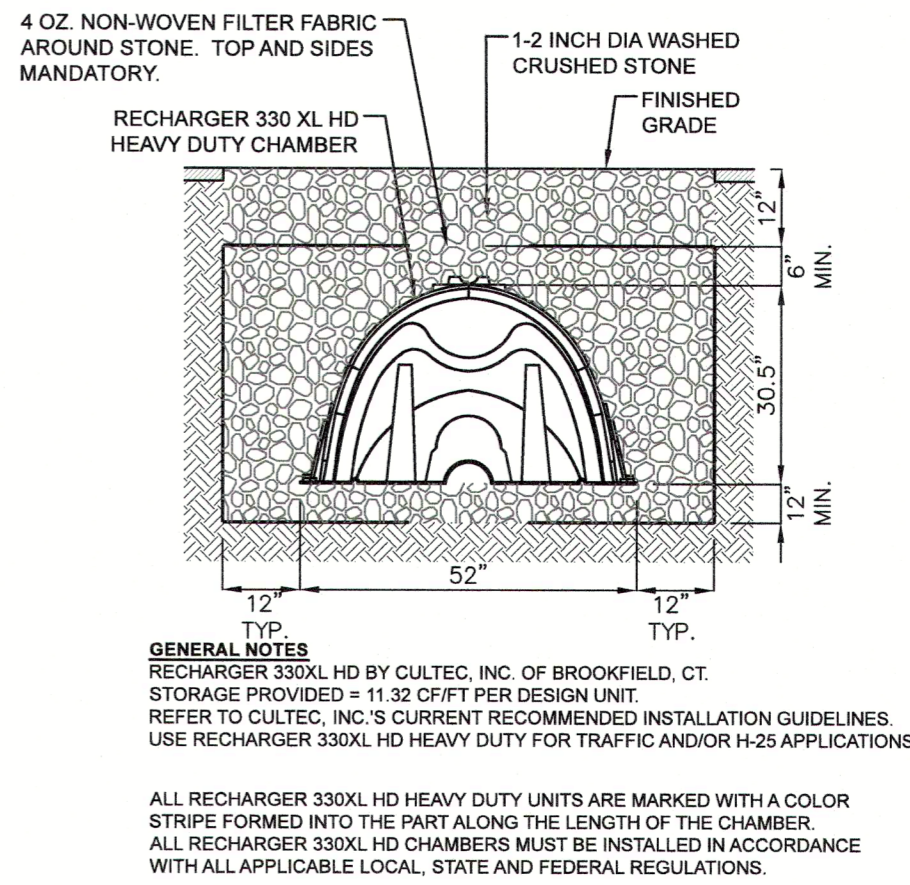
DEEP SUMP CATCH BASIN DETAIL
NOT TO SCALE



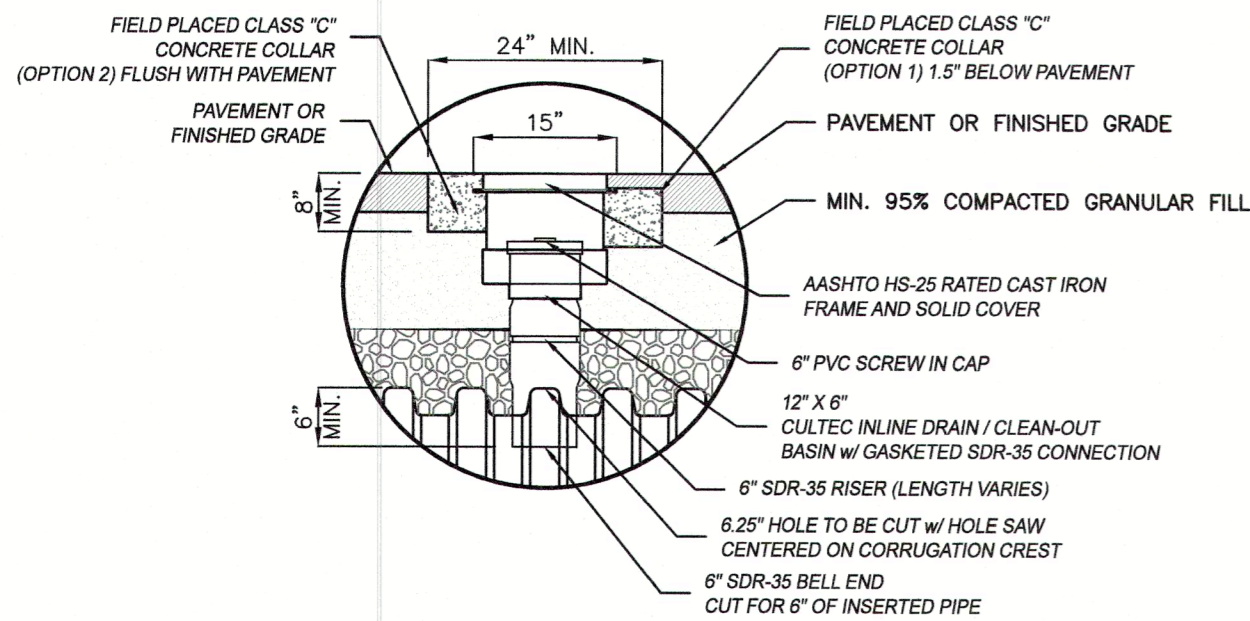
STANDARD DRAIN MANHOLE DETAIL
NOT TO SCALE



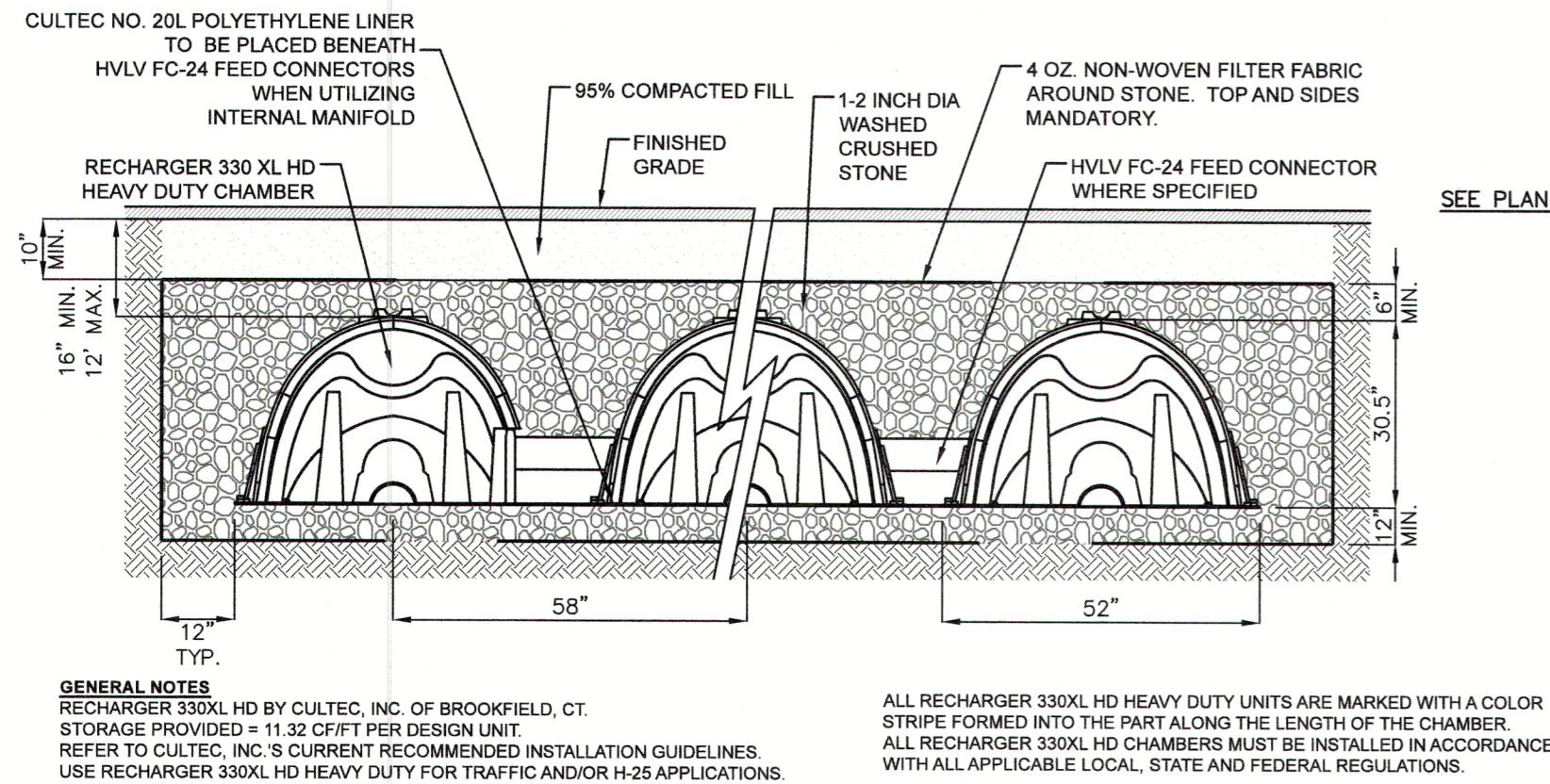
CULTEC RECHARGER 330XLHD HEAVY DUTY PLAN VIEW
NOT TO SCALE



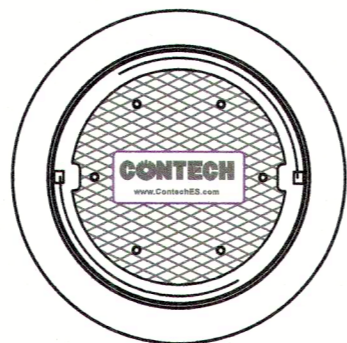
INFILTRATION TRENCH CROSS SECTION
NOT TO SCALE



INSPECTION PORT DETAIL
NOT TO SCALE



CULTEC RECHARGER 330XLHD HEAVY DUTY TYPICAL CROSS SECTION
NOT TO SCALE

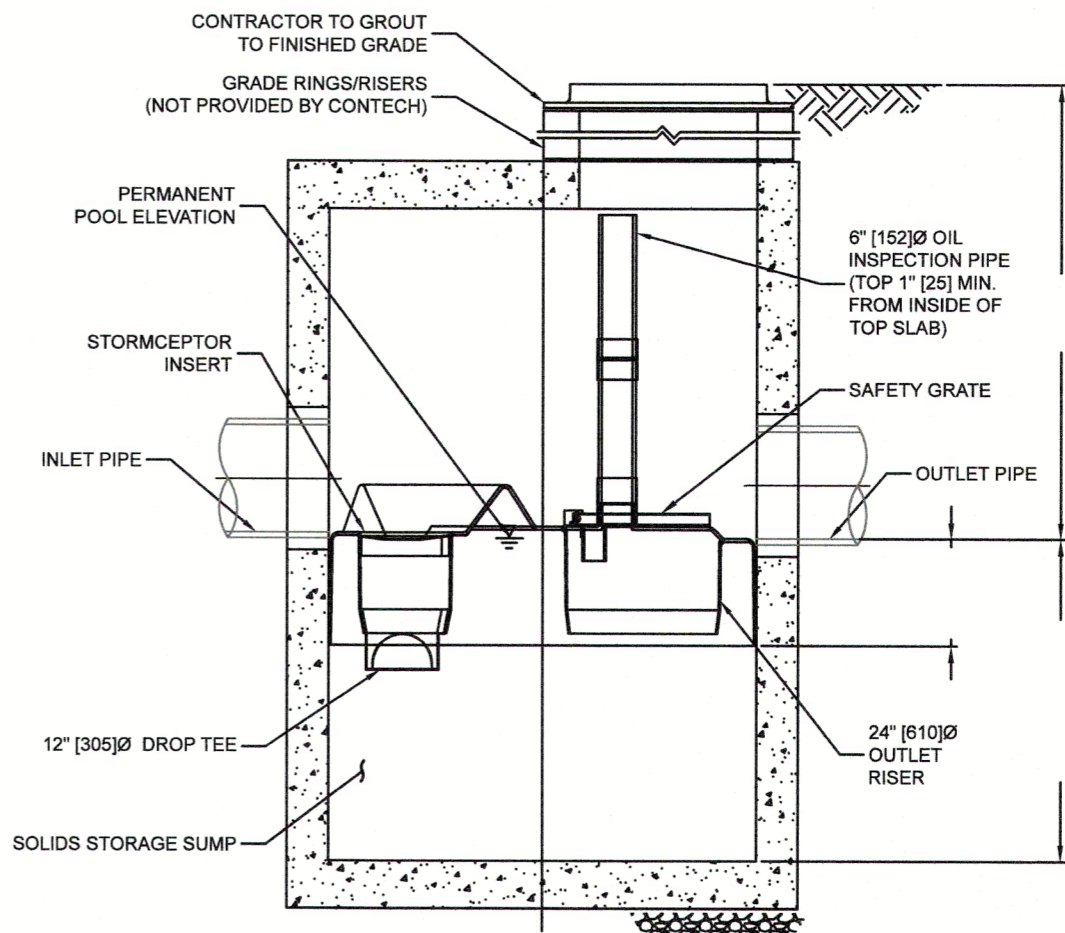
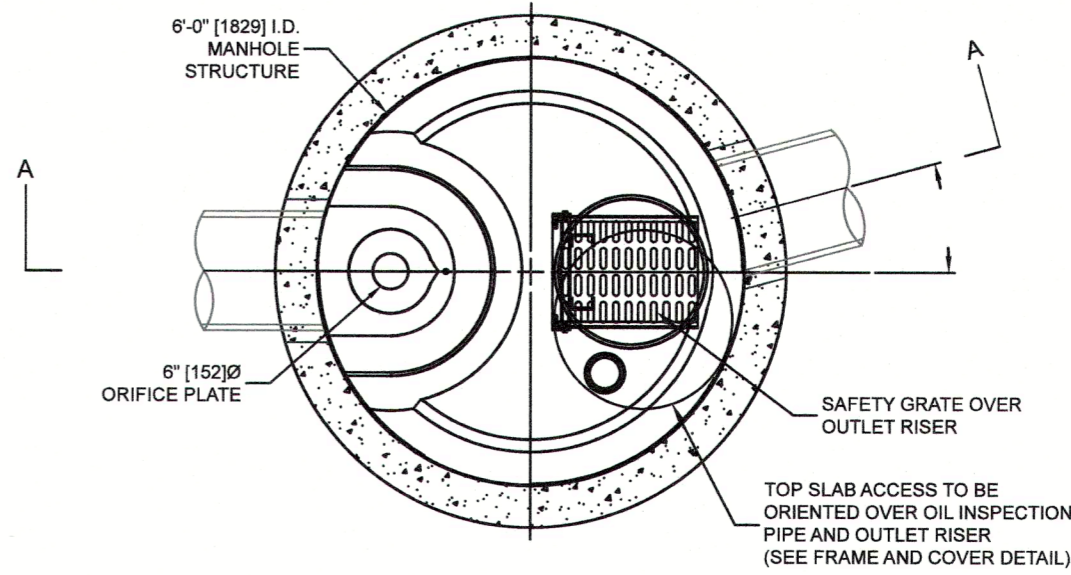


FRAME AND COVER
(MAY VARY)
NOT TO SCALE

SITE SPECIFIC DATA REQUIREMENTS			
STRUCTURE ID	STC900		
WATER QUALITY FLOW RATE (cfs [L/s])	0.198 cfs		
PEAK FLOW RATE (cfs [L/s])	0.534 cfs		
RETURN PERIOD OF PEAK FLOW (yr)	25		
RIM ELEVATION	622.74'		
PIPE DATA:			
INLET PIPE 1	18.61	HDPE	12"
INLET PIPE 2	18.61	HDPE	12"
OUTLET PIPE	18.61	HDPE	12"
NOTES / SPECIAL REQUIREMENTS:			

- GENERAL NOTES
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 - FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
 - STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
 - STORMCEPTOR STRUCTURE SHALL MEET AASHTO H20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' (610) AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
 - STORMCEPTOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
 - ALTERNATE UNITS ARE SHOWN IN MILLIMETERS (mm).
- INSTALLATION NOTES
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
 - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMCEPTOR MANHOLE STRUCTURE.
 - CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
 - CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
 - CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

STANDARD STC900 DETAIL



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NH LIC. NO. 9368 RI LIC. NO. 6694

[Signature]

BRUCE A. FITZBACK, P.L.S.

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

NOT VALID UNTIL 2020

DRAINAGE
DETAILS

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 E.G.	CHECKED BY C.J.B.
SCALE AS SHOWN	PROJECT NO. 18M-217
DATE 7-31-20	REVISION NO. 1

DRAWING NO.

C3.4