ADDENDUM 3 OF 37 TO MASTER SOLAR CANOPY LAND LEASE AND AGREEMENT

This is Addendum 3 of 37 to the Master Solar Canopy Land Lease and Agreement ("Agreement"), dated as of November 1, 2016 (the "Effective Date"), as amended, by and between **TGC III MA Portfolio Operating, LLC**, a Delaware limited liability company, with a usual place of business at 315 Post Road West, Westport, Connecticut, 06880, as successor-in-interest to **Omni-Navitas – MAP-ES MA, LLC** (hereinafter the "Grantee"), and the **Massachusetts Bay Transportation Authority**, a body politic and corporate and a political subdivision of the Commonwealth of Massachusetts established and existing pursuant to Chapter 161A of the Massachusetts General Laws with a usual place of business at Ten Park Plaza, Boston, Massachusetts 02116 ("Grantor" or "MBTA") (each a "Party"; collectively, the "Parties").

1) **PREMISES ADDRESS**: 190 Summer Street, Hingham, Massachusetts (hereinafter "Site 3"), as more particularly shown on attached *Exhibit 1* marked "Plan of Premises for Site 3".

   In connection with Site 3, Grantee has certain rights as described in the Agreement for the installation, commissioning, operation, maintenance, alteration, and removal of the System.

2) **POWER/ELECTRICAL CONNECTION, USAGE, AND BILLING FOR SITE 3**: Pursuant to Section 8(d) of the Agreement, Grantee shall not have the right to access any of Grantor's utilities. Notwithstanding the foregoing, Grantee hereby acknowledges and agrees that Grantee shall be permitted to connect to and use Grantor's electricity, following MBTA's prior review and written approval of Grantee's plans and specifications (electrical or otherwise) for Site 3, such approval to be at Grantor's sole discretion, provided that Grantee shall be solely responsible for any and all costs and expenses, and shall reimburse MBTA where applicable, for the electrical equipment, including, but not limited to, meters/sub-meters and labor, as well as for the use of any MBTA utilities/power during the installation, commissioning, operation, maintenance, alteration, and removal of the System at Site 3. Grantee shall reimburse MBTA for any and all electricity drawn in connection with any illumination/lighting used to light the areas under and around the System at Site 3.

   [__] Grantee **REQUIRES** access to MBTA utilities to power the System.
   - Grantee submitted all plans and specifications (electrical or otherwise) to MBTA and received MBTA approval to connect to MBTA utilities/power at Site 3.
   - Grantee acknowledges and agrees that it is solely responsible for all costs and expenses for all review and approvals necessary to tie into MBTA utilities/power. Grantee shall also be responsible for all costs and expenses, including for all MBTA approved equipment and labor (MBTA or otherwise), required to tie into MBTA utilities/power, and the ongoing maintenance thereof (pursuant to the terms and conditions of the Agreement).
   - Based off the meter reading at the Site, Grantee shall coordinate electrical billing with MBTA Environmental Affairs Department and shall be responsible for all costs.

[X] Grantee **DOES NOT REQUIRE** access to MBTA utilities to power the System.

3) **CONSTRUCTION PLANS, SPECIFICATIONS, AND DESCRIPTIONS OF SYSTEM FOR SITE 3**: See attached *Exhibit 2* marked "Construction Plans, Specifications, and Description of System for Site 3".

4) **ACCESS PLAN FOR SITE 3**: See attached *Exhibit 3* marked "Access Plan for Site 3".

5) **RENT FOR SITE 3:** Per Exhibit B "Rent Schedule and Security Deposits", $ 16,000.00 Year One (1) Rent, with annual Rent escalations of 7% every five (5) years.

6) **SECURITY DEPOSIT FOR SITE 3:** $1,333.33.

7) **RENT COMMENCEMENT DATE FOR SITE 3**: The payment of rent shall commence upon the earlier of the date which is 180 days from May 7, 2018 or upon the commercial completion date (estimated to be August 15, 2018).

8) **TERM COMMENCEMENT DATE FOR SITE 3**: November 1, 2016.

9) **TERM EXPIRATION DATE FOR SITE 3**: October 31, 2038.

10) **PERFORMANCE BOND FOR SITE 3:** Pursuant to Section 5(d) of the Agreement, Grantee shall provide Grantor a payment, performance bond, and lien bond for Site 3 in the amount of Five Hundred Ninety Thousand Eight Hundred Eleven Dollars and Eighty One Cents ($590,811.11)

11) **DATE DECOMMISSIONING BOND IS DUE FOR SITE 3**: Pursuant to Section 5(e) of the Agreement, Grantee shall provide Grantor a payment, performance, and lien bond for the amount of the demolition, dismantling, or alteration of the System at Site 3 on or before the 15th anniversary of the Rent Commencement Date.

12) **PERMITTED ENCUMBRANCES FOR SITE 3**: See attached *Exhibit 4* marked "Permitted Encumbrances for Site 3".

13) **MBTA CRANE REQUIREMENTS DURING CONSTRUCTION**: See attached *Exhibit 5* marked "MBTA Crane Requirements".

14) **ELECTRICAL METALLIC TUBING CONDUIT "EMT" ACKNOWLEDGEMENT**: See attached *Exhibit 6* marked "Electrical Metallic Tubing Conduit Acknowledgement Letter".

[Signatures follow on next page]

IN WITNESS THEREOF, the Parties hereto have caused this Addendum to be executed by their duly authorized representatives as of the 11TH day of MAY, 2018.

GRANTOR;
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

By: _____
Name: PAUL BRADLEY
Title: CFO

Approved as to form:

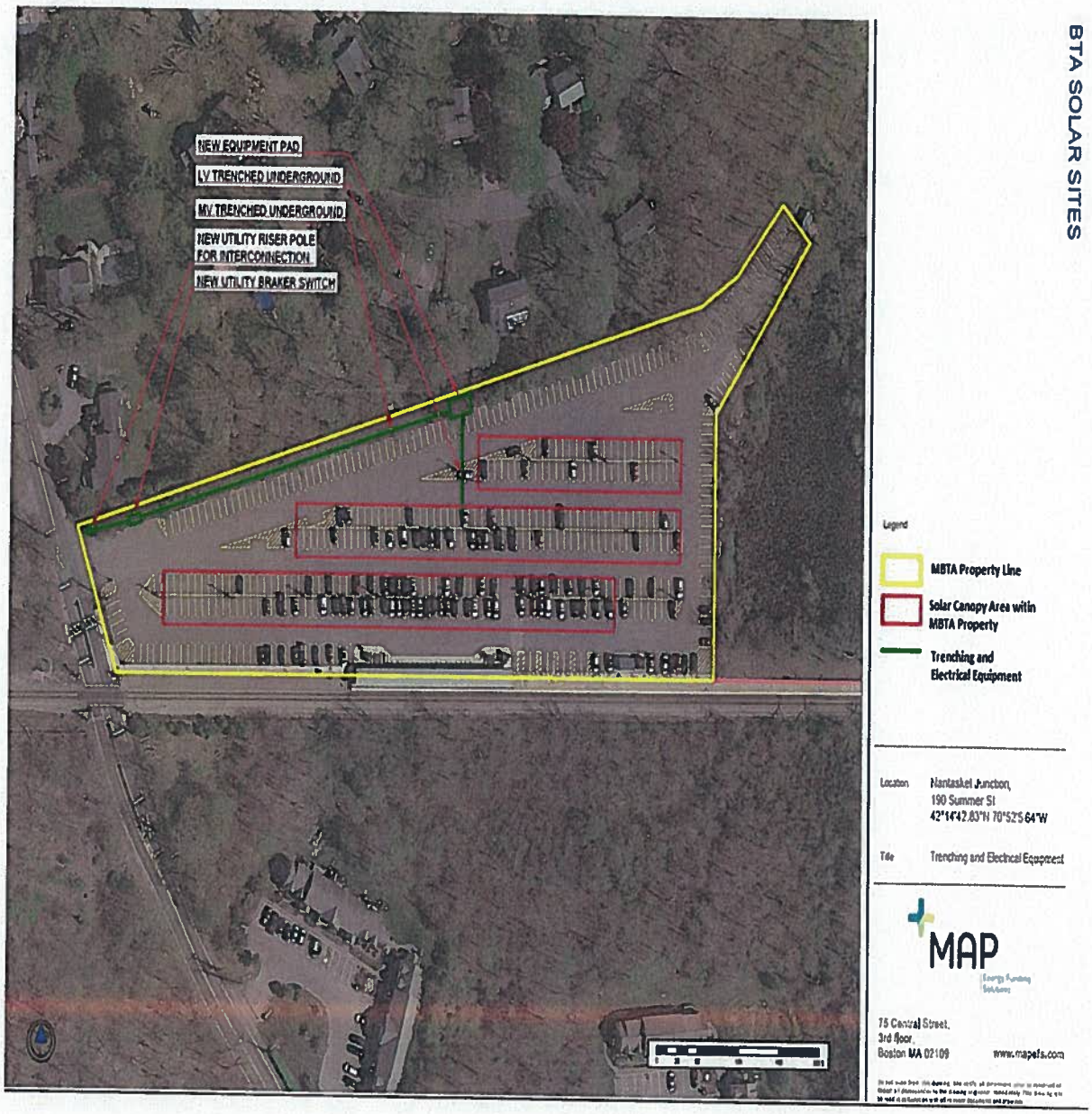
By: _____
Lauren D. Armstrong
Deputy General Counsel, MassDOT and MBTA

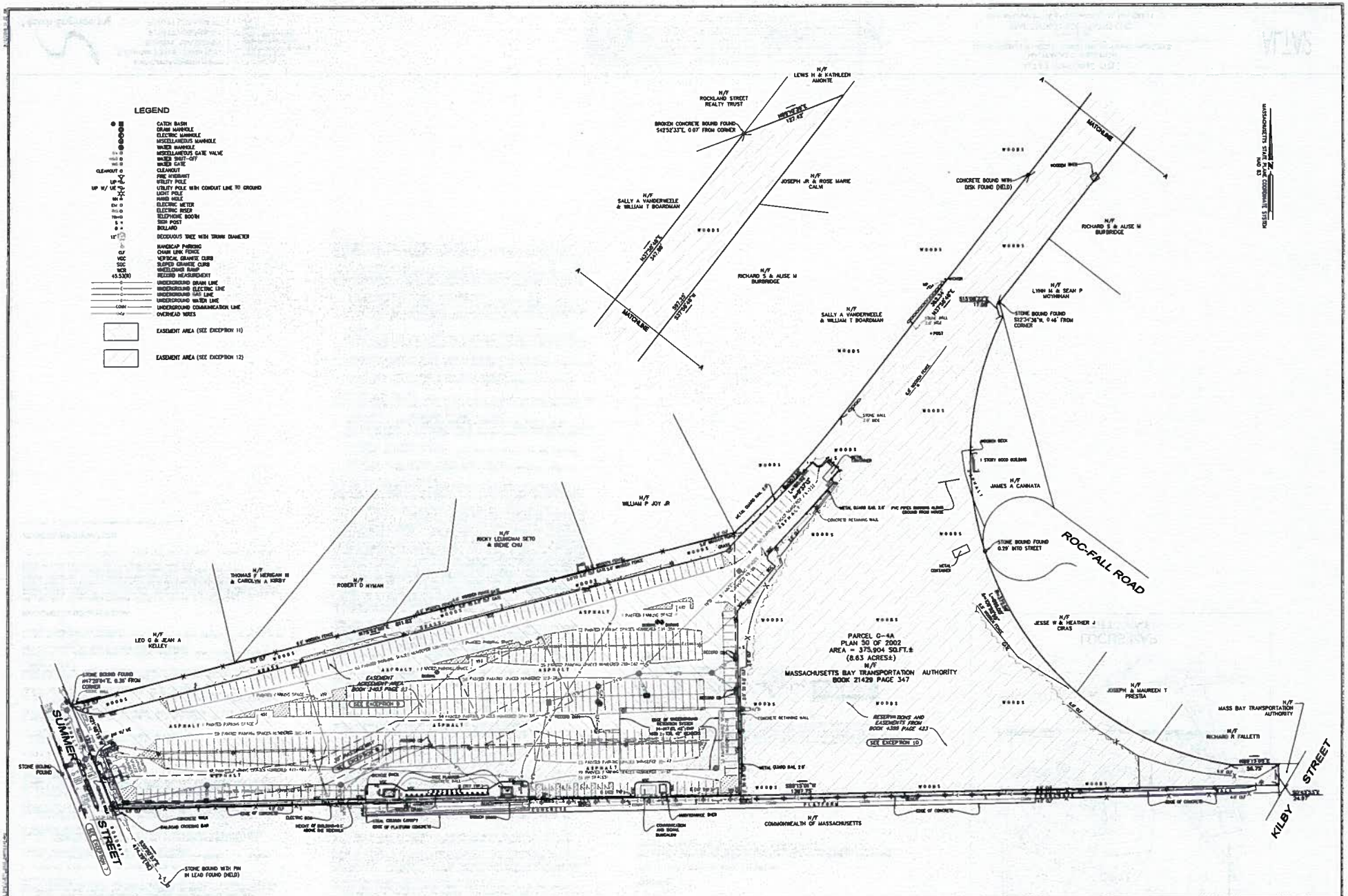
GRANTEE;
TGC III MA PORTFOLIO OPERATING, LLC

By: _____
Name: BLAKE WEGAND
Title: AUTHORIZED OFFICER

[Exhibits start on the following page]

EXHIBIT 1: PLAN OF PREMISES FOR SITE 3





Nitsch Engineering
www.nitscheng.com
2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
F: (617) 338-6472
- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- GIS

PROJECT #	13871
FILE:	13871_ALTA1_Nantasket.dwg
SCALE:	1"=40'
SHEET:	BOUNDING
PROJECT MANAGER:	DAS
FIELD BOOK:	688 - 701
DRAFTED BY:	MSH/DC
CHECKED BY:	

0	NEW COMMITMENT	9/5/2019
A	CERTIFICATION	9/13/2019
REV.	COMMENTS	DATE

REVISIONS

ALTA / NSPS LAND TITLE
NANTASKET JUNCTION
180 SUMMER STREET, HINGHAM, MASSACHUSETTS

PREPARED FOR:
MAP ENERGY SOLUTIONS LLC.
745 ATLANTIC AVENUE, BOSTON, MA 02111

SHEET: ALTA1
OF 4 REV. 0

EXHIBIT 2

CONSTRUCTION PLANS, SPECIFICATIONS, AND DESCRIPTION OF SYSTEM FOR SITE 3

(See attached separate documents)

SOLAR CANOPY

FOR

MAP-EFS

AT

NANTASKET JUNCTION
HINGHAM, MA 02043

SYMBOLS LEGEND

GOVERNING CODE

MA STATE BUILDING CODE 9TH EDITION

CONSTRUCTION TYPE: IIB

RISK CATEGORY:

1 BUILDING CATEGORY II
2 OCCUPANCY CATEGORY II

DESIGN LOADS:

1 DEAD LOADS
- STRUCTURE 5.0 PSF
- GLAZING 2.0 PSF
- Σ= 0.0 PSF

2 ROOF LIVE LOAD = 0 PSF

3 SNOW LOAD
- P_g = 35 PSF (GROUND SNOW)
- P_f = 30 PSF (ROOF SNOW)
- C_e = 0.9
- C_t = 1.2
- I = 1.00

4 WIND LOAD (governing FORCE RESISTING SYSTEM)
- V = 121mph
- I_w = 1.00
- EXPOSURE B

5 SEISMIC (LOADS PARALLEL AND PERPENDICULAR TO CANOPY FRAMES)
- S_s = 0.21
- S_1 = 0.062
- S_{ds} = 0.224
- S_{d1} = 0.157
- I_e = 1.00
- SITE CLASS D
- SEISMIC DESIGN CATEGORY B
- SEISMIC FORCE RESISTING SYSTEM = CANTILEVERED COLUMN SYSTEM
- DESIGN BASE SHEAR V = 2.68S
  C_s = 0.123
  R = 1.25
- EQUIVALENT LATERAL FORCE ANALYSIS

SOLAR CANOPY SYSTEM SPECIFICATIONS

PV MODULE TYPE	ASTRONERGY	ACTIVE PV MODULES	3723
MODULE MODEL #	CHSM72M-HC/325W	SPARE PV MODULES	0
ARRAY TYPE	FIXED TILT	TOTAL PV MODULES	3723
ARRAY TILT	7 DEGREES	TOTAL WATTS	999.975 kW DC

SITE PLAN OVERLAY

NOTE: GOOGLE EARTH© IMAGE IS FOR REFERENCE ONLY.

DRAWING INDEX

DWG NO	DRAWING DESCRIPTION	DWG NO	DRAWING DESCRIPTION
G-001	COVER SHEET		
G-002	GENERAL NOTES MODULE SPECIFICATION SHEETS		
S-101	SITE PLAN		
S-102	FOUNDATION & COLUMN PLAN		
S-103	COMPONENT PLAN		
S-201	CANOPY SECTION		
S-401	FOUNDATION DETAILS		
S-501	COMPONENT DETAILS		

RESPONSIBILITY SCHEDULE

ITEM/DESCRIPTION	N/A	RBI SOLAR		CUSTOMER		REMARKS
		PERFORM	INSPECT	PERFORM	INSPECT	
GEOTECHNICAL REPORT				●		
SITE SURVEY				●		EXISTING CONDITIONS
CONSTRUCTION SURVEY		●				VERIFY COLUMN LOCATIONS
EXCAVATION ANALYSIS	●					
LOCATE UNDERGROUND UTILITIES/STRUCTURES				●		
SITE GRADING	●					
SPOILS REMOVAL		●				
FENCING				●		
TEMPORARY ELECTRIC				●		
PORTABLE TOILET				●		
MATERIAL UNLOADING		●				
MATERIAL STAGING		●				
SITE/STRUCTURE REMOVAL				●		
BOLLARDS	●					
CONCRETE PIER FOUNDATIONS		●	●			
BRACING	●					
GUTTERS & DOWNSPOUTS	●					
ENGINEERING			●			
PV MODULES				●	●	
PV MODULE MOUNTING HDW		●			●	
WIRE MANAGEMENT				●	●	
MODULE GROUNDING		●			●	
CANOPY GROUNDING				●	●	
SITE CLEAN-UP		●				
INSPECTIONS				●		
FOUNDATION EXCAVATION				●	●	

RBI SOLAR
5513 VINE STREET
CINCINNATI, OH 45217
513.242.2251
FAX: 513.242.6916

PROFESSIONAL SEAL

SOLAR CANOPY FOR MAP-EFS

RELEASE RECORD

NO	DATE	DESCRIPTION
5	1-8-18	CODE REVISION
4	12-6-17	
3	10-3-17	
2	9-22-17	
1	9-20-17	

PROJECT INFORMATION

TITLE & ADDRESS: NANTASKET JUNCTION
HINGHAM, MA 02043

RBI SOLAR PROJECT No.: 177028

DRAWN BY: ABB | REVIEWED BY: LMJB

SHEET TITLE: COVER SHEET

SHEET No.: G-001

RBI SOLAR
SOLAR CANOPY
FOR
MAP-EFS
PROFESSIONAL SEAL
RELEASE RECORD
PROJECT INFORMATION
TITLE & ADDRESS
MASTERSKEY JUNCTION
HINGHAM, MA 02043
SHEET TITLE
SITE PLAN
S-101
Site Plan

BRIDGING SCHEDULE			
MARK	DESCRIPTION	LENGTH	QTY
BC1	12GA FORMED ANGLE	157'-3"	178
BC2	12GA FORMED ANGLE	116'-7"	178

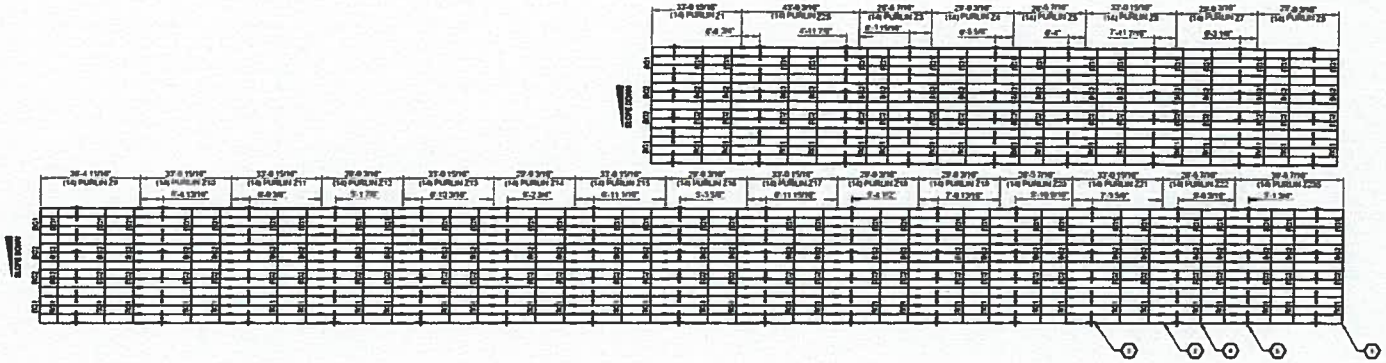
BRIDGING SETTING NOTES
1. ALL BRIDGING DIMENSIONS SHOWN ARE END TO END
2. LAYOUT IS SUBJECT TO CHANGE PER REDWEST AND/OR EXISTING CONDITIONS IN THE FIELD
3. REFERENCE SHEET S-501 FOR ADDITIONAL BRIDGING CONNECTION INFORMATION

KEY NOTES

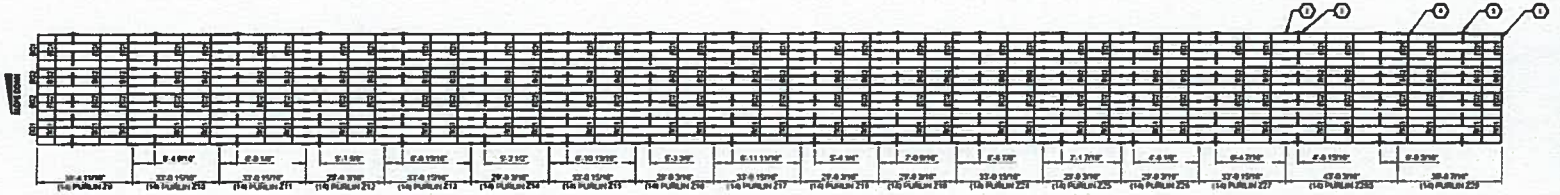
1. PURLIN BRIDGING REQUIRED AT END OF THE CANOPY REFER TO DETAIL 4/S9 ON SHEET S-501
2. PURLIN SPLICE REFER TO DETAIL A2 ON SHEET S-501
7. TOP BEAM FLANGE BRACE REFER TO DETAIL C5 ON SHEET S-501
8. PURLIN BRIDGING REQUIRED AT ALL BAYS REFER TO DETAIL A6 ON SHEET S-501 BRIDGING SPLICE AS SHOWN REFER TO DETAIL A6 ON SHEET S-501
9. STEEL TOP BEAM/BEAM

PURLIN SETTING NOTES
1. ALL PURLIN DIMENSIONS SHOWN ARE END TO END
2. LAYOUT IS SUBJECT TO CHANGE PER REDWEST AND/OR EXISTING CONDITIONS IN THE FIELD
3. REFERENCE SHEET S-501 FOR ADDITIONAL PURLIN CONNECTION INFORMATION
4. PURLIN LABELS ENDING WITH "P" REFER TO STARTER PURLIES AND ARE INTENDED TO BE INSTALLED FIRST WITHIN EAST CANOPY

TOP BEAM SETTING NOTES
1. ALL TOP BEAM DIMENSIONS SHOWN ARE END TO END
2. LAYOUT IS SUBJECT TO CHANGE PER REDWEST AND/OR EXISTING CONDITIONS IN THE FIELD
3. REFERENCE SHEET S-501 FOR ADDITIONAL TOP BEAM CONNECTION INFORMATION



A1 Canopy 1 & 2 Foundation Plan



A1 Canopy 3 Foundation Plan

RBI SOLAR
3543 YEME STREET
CINCINNATI, OH 45217
513.242.2001
FAX 513.242.8896

PROFESSIONAL SEAL

SOLAR CANOPY FOR MAP-EFS

RELEASE RECORD

MARK	DATE	DESCRIPTION
A	2-8-18	CODE REVISION
4	12-6-17	CONSTR SET
3	10-5-17	PERMIT SET
2	9-22-17	90% REVIEW
1	9-13-17	90% REVIEW

PROJECT INFORMATION

TITLE & ADDRESS
NANTASKET JUNCTION

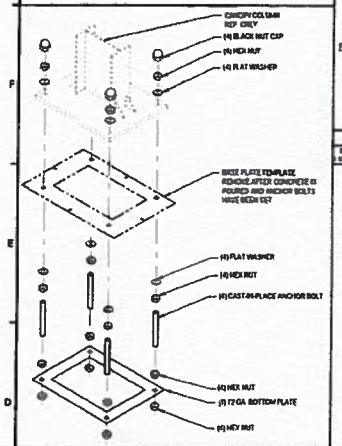
HINGHAM, MA 02043

RBI SOLAR PROJECT No.
177028

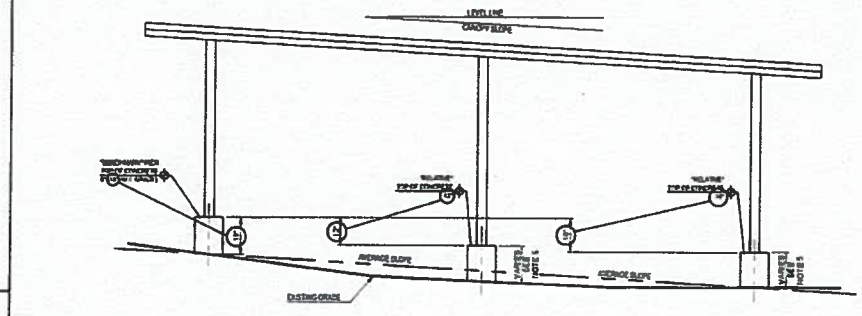
DRAWN BY: ABB
REVIEWED BY: LMJB

SHEET TITLE
COMPONENT PLAN

SHEET No.
S-103



D1 Anchor Connection Exploded View

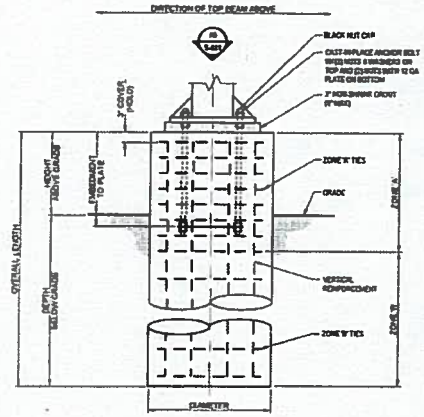


F3 AVERAGE SLOPE LAYOUT KEY

FOUNDATION SCHEDULE

TYPE	SIZE: DIAMETER	SIZE: TOP OF FOUNDATION	SIZE: DEPTH BELOW GRADE	SIZE: APPROX. OVERALL LENGTH	REINFORCEMENT: VERTICAL REINFORCEMENT	REINFORCEMENT: ZONE 'A' REINFORCEMENT TIES	REINFORCEMENT: ZONE 'B' REINFORCEMENT TIES
A	30"	EMBED	12'-6"	12'-3"	(12) #8 BARS	#4 BARS @ 5" O.C. FOR 30"	#4 BARS @ 10" O.C. FOR REMAINDER

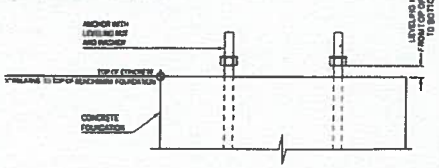
NOTE
1 ALL REINFORCING TO HAVE 3" MINIMUM COVER



NOTE: REINFORCING SHOWN HAS NOT REPRESENT THE ACTUAL REINFORCING REQUIRED
SEE CONCRETE PIER SCHEDULE FOR REQUIRED REINFORCING AND DIMENSIONS
PROVIDE MINIMUM 3" COVER FOR ALL REINFORCEMENT

D9 Typical Pier Side View

NOTE
1 REFER TO COLUMN SCHEDULE FOR FOUNDATION HEIGHTS AND LEVELING NUT HEIGHTS
2 FIELD VERIFY ALL FOUNDATION HEIGHTS
3 IF ACTUAL FOUNDATION HEIGHT IS DIFFERENT FROM DESIGNED VALUE WITHIN THIS CONSTRUCTION SET, THEN ADJUST LEVELING NUT HEIGHT AS REQUIRED TO MAKE UP DISCREPANCY IN FOUNDATION HEIGHT
4 LEVELING NUT HEIGHT NOT TO EXCEED 2 3/8". CONTACT AN RBI SOLAR REPRESENTATIVE FOR APPROVAL IF ADDITIONAL HEIGHT IS REQUIRED

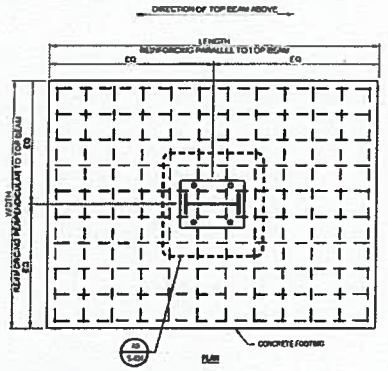


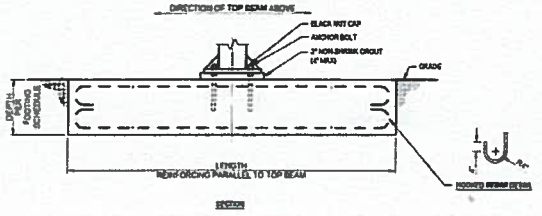
D6 Leveling Nut Detail Side View

ALTERNATE FOUNDATION SCHEDULE

TYPE	LENGTH x WIDTH	DEPTH	REINFORCING PARALLEL TO TOP BEAM	REINFORCING PERPENDICULAR TO TOP BEAM	COMMENTS
A	10'-0" x 5'-0"	48"	(4) #4 BARS TIED HOOKED ENDS	(12) #4 BARS TIED HOOKED ENDS	

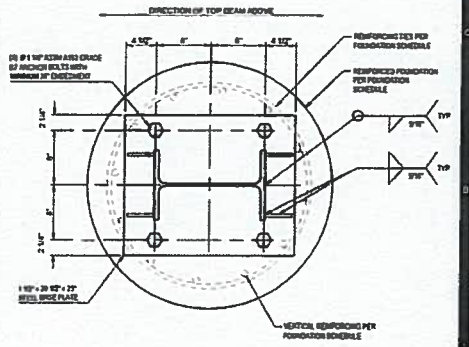
NOTE ALL REINFORCING TO HAVE 3" MINIMUM COVER





NOTE
REINFORCING SHOWN HAS NOT REPRESENT THE ACTUAL REINFORCING REQUIRED
SEE ALTERNATE FOOTING SCHEDULE FOR REQUIRED REINFORCING
PROVIDE MINIMUM 3" COVER FOR ALL REINFORCEMENT

A1 Alternate Foundation Detail



A9 Base Plate Detail

RBI SOLAR
Wind Solar Battery Storage • Automation
Installation • Parts • Repair Services
5613 VINE STREET
CINCINNATI, OH 45217
513.242.3551
FAX 513.242.6840

PROFESSIONAL SEAL

SOLAR CANOPY FOR MAP-EFS

RELEASE RECORD

NUM	DATE	DESCRIPTION
4	1-8-18	CODE REVISION
3	12-8-17	CONSTR SET
2	10-3-17	PERMIT SET
1	9-27-17	90% REVIEW
0	9-25-17	90% REVIEW

PROJECT INFORMATION

TITLE & ADDRESS
HANTASKET JUNCTION
HINGHAM, MA 02043

RBI SOLAR PROJECT No
177029

DRAWN BY: ASB
REVIEWED BY: LWJD

SHEET TITLE
FOUNDATION DETAILS

SHEET No.
S-401

FOR CONSTRUCTION

SCOPE OF WORK

SYSTEM RATING

kW DC STC
kW DC PTC
kW CEC-AC

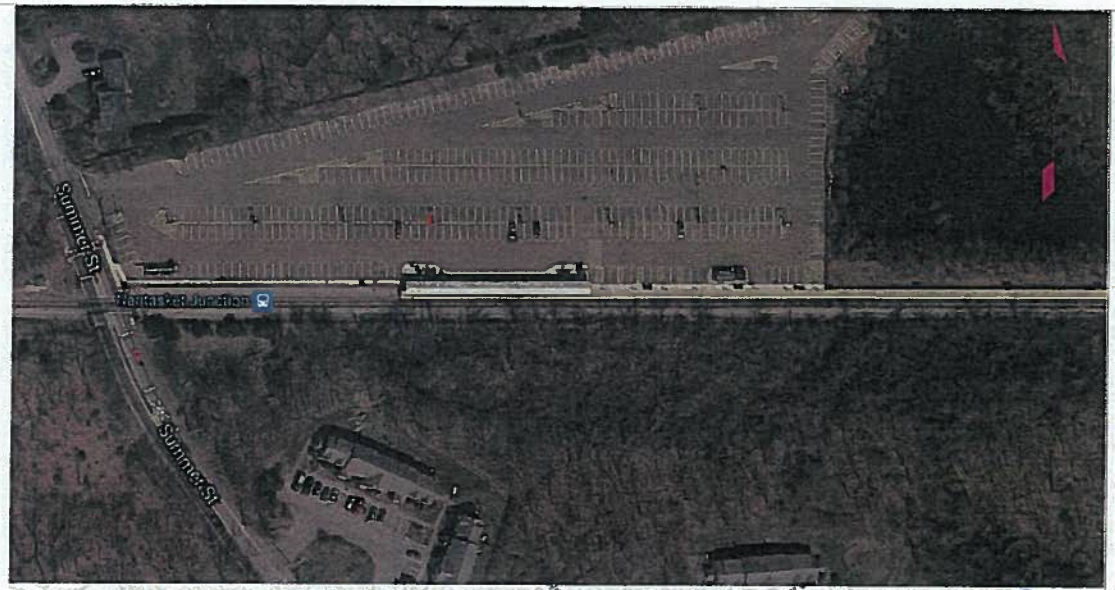
EQUIPMENT SUMMARY

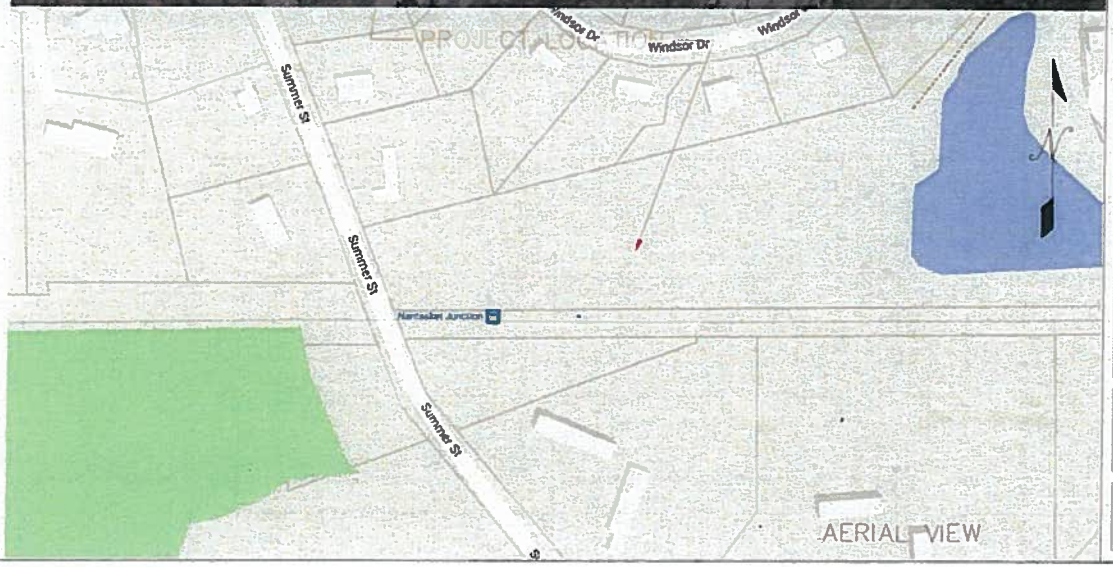
SHEET INDEX

PV-1.1 COVER
PV-1.2 GENERAL NOTES
PV-1.3 GENERAL NOTES CONTD.
PV-2.1 MEDIUM VOLTAGE EQUIPMENT LAYOUT
PV-2.2 EQUIPMENT LAYOUT
PV-2.3 SITE PLAN
PV-2.4 STAGING AND SAFETY
PV-3 PV STRING DIAGRAM
PV-4 PV STRING CONFIGURATION
PV-5 CONDUIT RUNS
PV-6.1 PAD LAYOUT AND CONDUIT PLANS
PV-6.2 TRENCH DETAILS
PV-7 STRUCTURAL MEMBERS DETAILS
PV-8 COMPONENTS DETAILS
PV-9 COMPONENTS DETAILS
PV-10 GROUNDING DETAILS
PV-11 WIRE MANAGMENT
E-1 ELECTRICAL OVERVIEW
E-2 1-LINE DIAGRAM
E-3 INVERTER 3-LINE
E-4 MEDIUM VOLTAGE 3-LINE
E-5 DATA ACQUISITION SYSTEM
E-6.1 WARNING LABELS
E-6.2 WARNING LABELS
L-1 LIGHTING SITE PLAN
L-2 LIGHTING EQUIPMENT OVERVIEW
L-3 LIGHTING ELECTRICAL

GOVERNING CODES

2017 NATIONAL ELECTRICAL CODE
2015 INTERNATIONAL BUILDING CODE
UNDERWRITERS LABORATORIES (UL) STANDARDS
OSHA 29 CFR 1910.269





DESIGN & DRAFTING BY:

REVISIONS		
DESCRIPTION	DATE	REV
ORIGINAL		A
REVISION		

CONTRACTOR

PROJECT NAME

SHEET NAME
COVER

SHEET SIZE
ANSI B
11"x17"

SHEET NUMBER
PV-1.1

DESIGN & DRAFTING BY:
RICHARD VOLKIN
MA ENG. #22282

REVISIONS

DESCRIPTION	DATE	REV
ORIGINAL	[illegible]	A

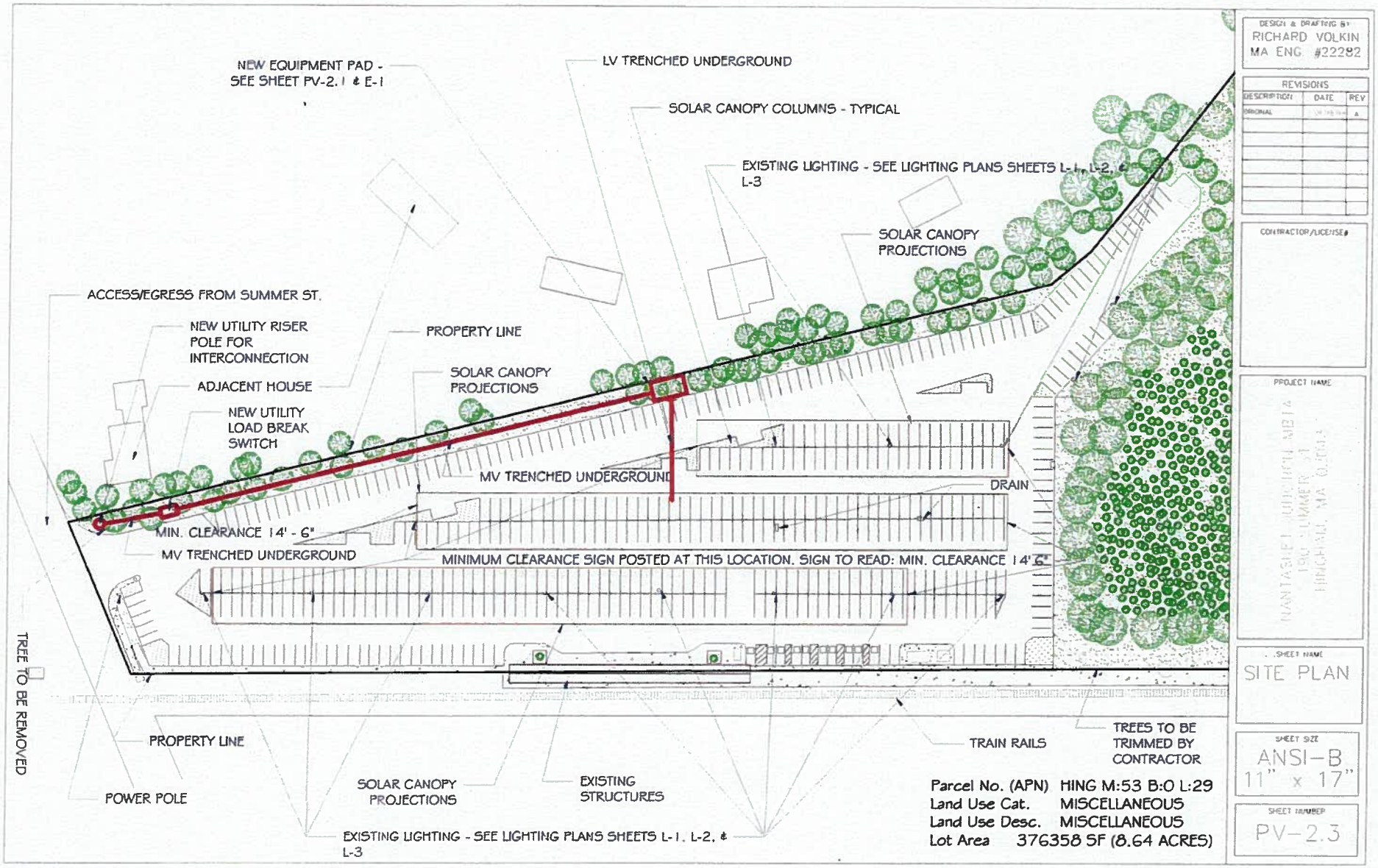
CONTRACTOR/LICENSE#

PROJECT NAME
NANTASKET JUNCTION MBTA
190 SUMMER ST
HINGHAM, MA 02043

SHEET NAME
SITE PLAN
MEDIUM
VOLTAGE

SHEET SIZE
ANSI-B
11" x 17"

SHEET NUMBER
PV-2.1



DESIGN & DRAFTING BY
RICHARD VOLKIN
MA ENG. #22282

REVISIONS

DESCRIPTION	DATE	REV
ORIGINAL		A

CONTRACTOR/LICENSE#

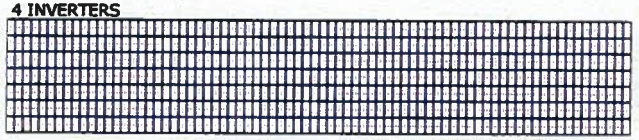
PROJECT NAME

SHEET NAME
SITE PLAN

SHEET SIZE
ANSI-B
11" x 17"

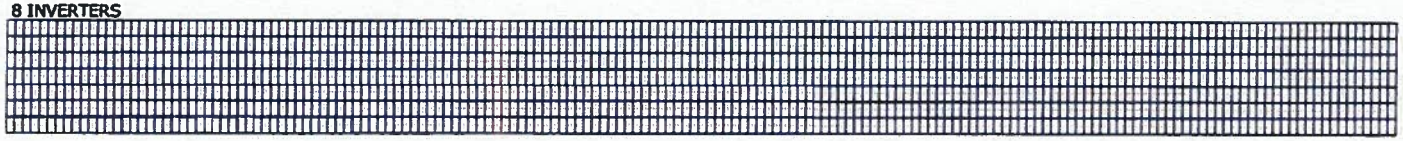
SHEET NUMBER
PV-2.3

CANOPY 3:
532 MODULES
4 INVERTERS



CANOPY 2:
1008 MODULES
7 INVERTERS

CANOPY 1:
1183 MODULES
8 INVERTERS



2723 Modules (STAVE 320W MONO)
DC Output: 514.80 kW (DC)
RBI: 5 Degree Tilt
Inter-Row Spacing: 1.00"
Inter-Column Spacing: 1.00"

DESIGN & DRAFTING BY

REVISIONS

DESCRIPTION	DATE	REV
ORIGINAL		A
REVISION		

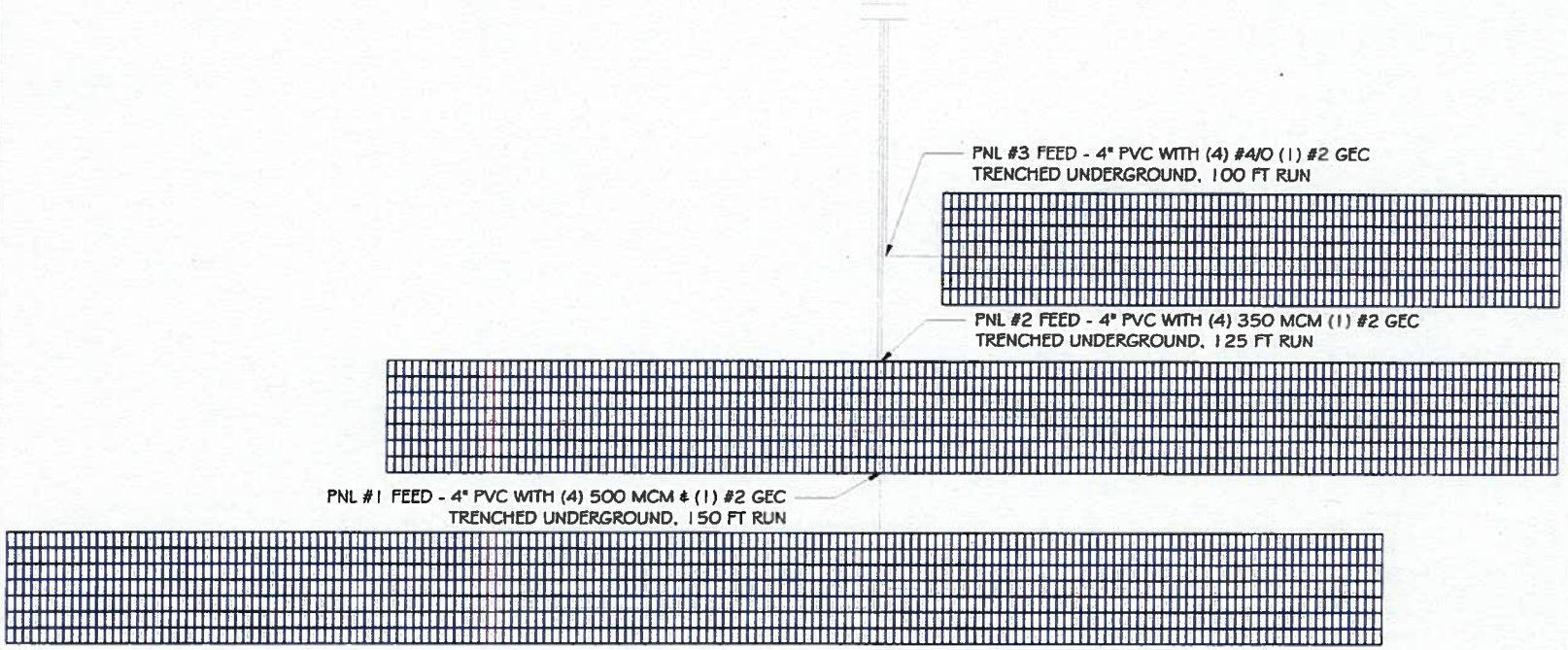
CONTRACTOR

PROJECT NAME

SHEET NAME

SHEET SIZE
ANSI B
11"x17"

SHEET NUMBER
PV-4.1



LEGEND

INVERTER TO SUBPANEL FEED BRANCH

SUBPANEL TO MAIN PANEL FEED BRANCH

INVERTER TO PANEL BOARD CONDUIT SPECIFICATION

INVERTER #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
WIRE SIZE	#3 AWG	#3 AWG	#4 AWG	#4 AWG	#6 AWG	#6 AWG	#4 AWG	#4 AWG	#4 AWG	#6 AWG	#6 AWG	#6 AWG	#6 AWG	#4 AWG	#3 AWG	#6 AWG	#6 AWG	#4 AWG	#4 AWG	NOTE: SINGLE CONDUCTORS (3) HOT, (1) NTRL, (1) ECG, EMT TYPE CONDUIT
CONDUIT SIZE	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	
LENGTH (FT)	300	250	175	125	50	50	125	175	150	100	50	50	75	150	250	50	50	125	175	

DESIGN & DRAFTING BY:

REVISIONS

DESCRIPTION	DATE	REV
ORIGINAL		A
REVISION		

CONTRACTOR

PROJECT NAME

SHEET NAME
CONDUIT RUNS

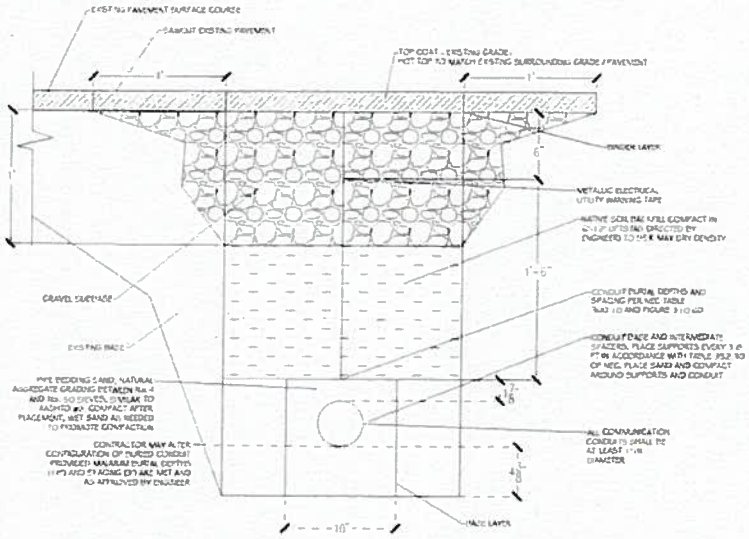
SHEET SIZE
ANSI B
11"x17"

SHEET NUMBER
PV-5

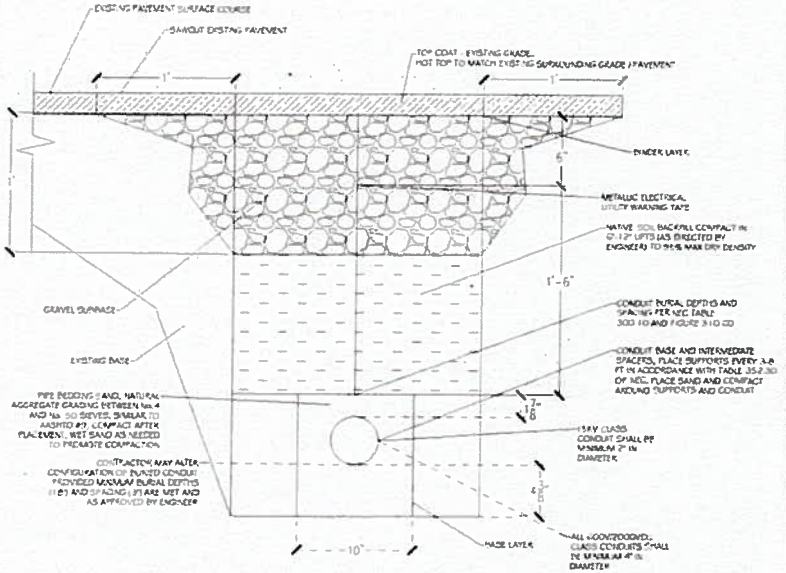
MBTA STANDARD SPECIFICATIONS.

1. PAVEMENT REPLACEMENT AT UTILITY TRENCHES SHALL EXTEND 1FT BEYOND BOTH SIDES OF THE TRENCH AND INCLUDE A BINDER LAYER THAT MATCHES THE THICKNESS OF THE EXISTING BINDER (TYPICALLY 2.5") AN A TOP COURSE (TYPICALLY 1.5"). PAVEMENT SHALL ALSO RECEIVE A 12" GRAVEL SUB-BASE
2. JOINTS WITH EXISTING PAVEMENT SHALL BE SAW-CUT AND TREATED WITH A FULL COVERAGE OF TACK COAT.
3. RECONSTRUCTED SIDE WALKS SHALL BE 4" THICK REINFORCED CONCRETE (4000psi min), SHALL RECEIVE A HEAVY BROOM FINISH, AND SHALL RECEIVE A 12" GRAVEL SUB-BASE. JOINTS SHALL BE SAW CUT AND RECEIVE A PREFORMED JOINT FILLER (AASHTO M153) AND JOINT SEALER (AASHTO M173). CONTRACTION JOINTS SHALL BE PLACED AT NO GREATER THAN 6' SPACING AND BE ¼ OF THE TOTAL THICKNESS DEPTH.
4. GRAVEL SUB-ASE SHALL BE NATURALLY-OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED SHONE, AND NATURAL OR CRUSTED SAND; ASTM D2940; WITH AT LAST 90% PASSING A 1-1/2" SIEVE AND NOT MORE THAN 12% PASSING A NO. 200 SIEVE.
5. ALL PAVEMENT MARKINGS SHALL BE 4" WIDE YELLOW ACRYLIC.
6. ALL IMPORTED OR NATIVE SOIL BACKFILL REQUIRE SAMPLING AND TESTING PERFORMED BY MBTA MATERIALS AND HANDLING LAB. FOR EACH DIFFERENT SOURCE BACKFILL, 20LBS OF SAMPLE MUST GO THROUGH GRAIN SIZE ANALYSIS, MOISTURE DENSITY CURVE (ATSM D422), AND COMPACTION TEST (ASTM D1557).

REFERENCES: SECTION 02513T-0311-A (BITUMINIOUS CONCRETE PAVEMENT), 02577T-0907-A (PAVEMENT MARKING), 03300T-0311-A (CAST IN PLACE CONCRETE), 01209T-0510-A (TEMPORARY PEDESTRIAN FACILITIES), 02282P-0913-A (HANDELING TRANSPORTATION AND DISPOSAL OF EXCAVATED MATERIALS), 02300T-0311-A (EARTHWORK) AND 02650T-0907-A (EXISTING SITE UTILITIES)



COMMUNICATION CONDUIT TRENCH DETAILS
FULL DEPTH RECONSTRUCTION WITH BASE, BINDER, AND TOP COAT WITH TREATED JOINTS PER MBTA SPECIFICATIONS



600V/2000VDC CLASS TRENCH DETAILS
FULL DEPTH RECONSTRUCTION WITH BASE, BINDER, AND TOP COAT WITH TREATED JOINTS PER MBTA SPECIFICATIONS

DESIGN & DRAFTING BY
[illegible]
PROFESSIONAL ENGINEER-MASS.

REVISIONS

DESCRIPTION	DATE	REV
ORIGINAL	[illegible]	▲
REVISION		

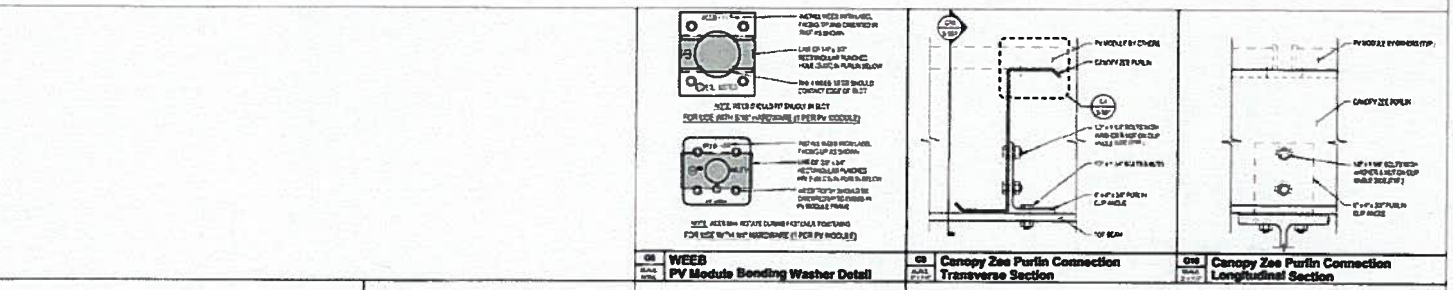
CONTRACTOR

PROJECT NAME

SHEET NAME
TRENCH DETAILS

SHEET SIZE
ANSI B
11"x17"

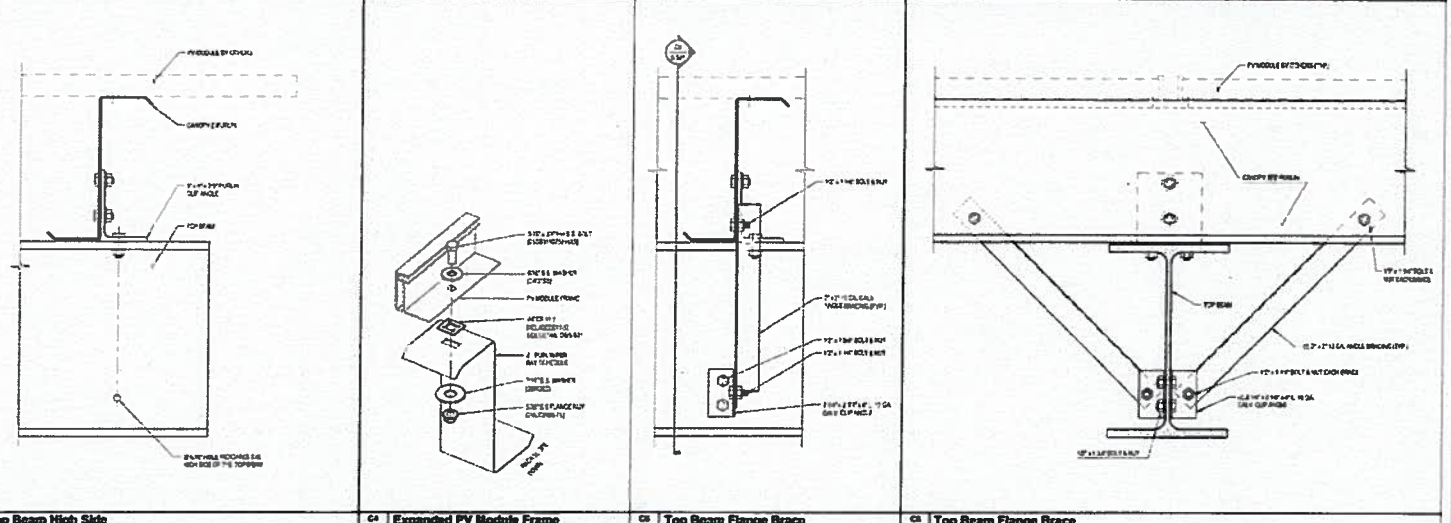
SHEET NUMBER
PV-6.2



WEEB
PV Module Bonding Washer Detail

Canopy Zee Purlin Connection
Transverse Section

Canopy Zee Purlin Connection
Longitudinal Section

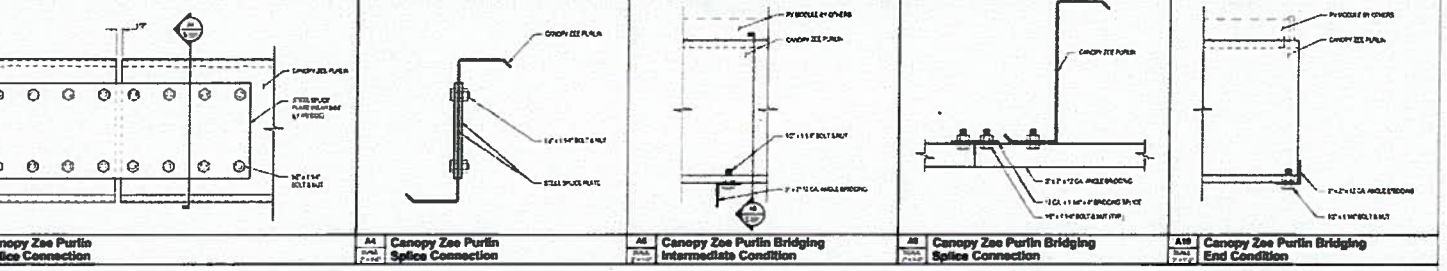


C1 Top Beam High Side
Indicator Hole

C4 Expanded PV Module Frame
to Canopy Zee Purlin Connection Detail

C5 Top Beam Flange Brace
Connection Section

C6 Top Beam Flange Brace
Connection Section



A1 Canopy Zee Purlin
Splice Connection

A4 Canopy Zee Purlin
Splice Connection

A6 Canopy Zee Purlin Bridging
Intermediate Condition

A8 Canopy Zee Purlin Bridging
Splice Connection

A10 Canopy Zee Purlin Bridging
End Condition

DESIGN & DRAFTING BY:
RICHARD VICARY
PROFESSIONAL ENGINEER
MA#32292

REVISIONS

DESCRIPTION	DATE	REV
ORIGINAL		A
REVISION		

CONTRACTOR

PROJECT NAME
NANTASKET JUNCTION MBTA
180 SUMMER ST.
HINGHAM, MA 02043

SHEET NAME
COMPONENTS
DETAILS

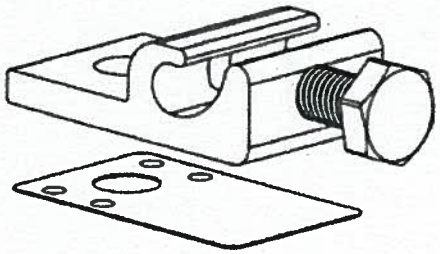
SHEET SIZE
ANSI B
11"x17"

SHEET NUMBER
PV-8

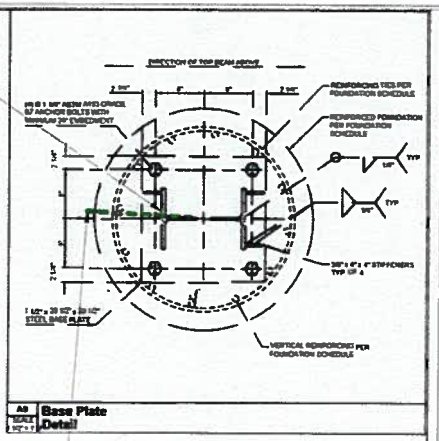
GROUNDING OF RACKING – NOTES

1) ATTACH AND BOND GROUNDING FOOT-LUG TO I-BEAM
2) USE #4 STRANDED BARE COPPER EGC
3) ATTACH EGC TO REBAR USING DIRECT BURIAL RATED GROUND CLAMP PRIOR TO POURING OF CONCRETE
4) ENCASE ALL GROUNDING CONDUCTORS AND BONDING BELOW GRADE WITH CONCRETE
5) ALL ABOVE GRADE GROUNDING CONDUCTORS AND BONDING SHALL BE FREE AIR EXPOSED
6) GROUND AT MINIMUM, 2 I-BEAM'S

FOOT LUG GROUNDING CLAMP
FOR ABOVE GRADE ONLY
SEE NOTES 1.) AND 2.)



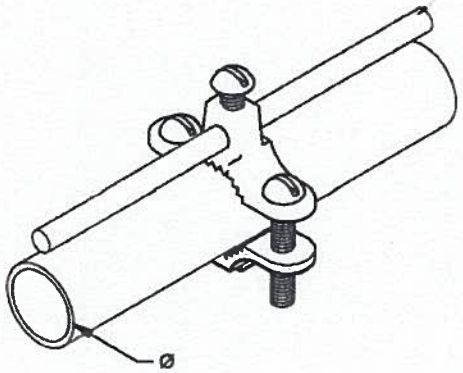
SEE NOTE 1.)



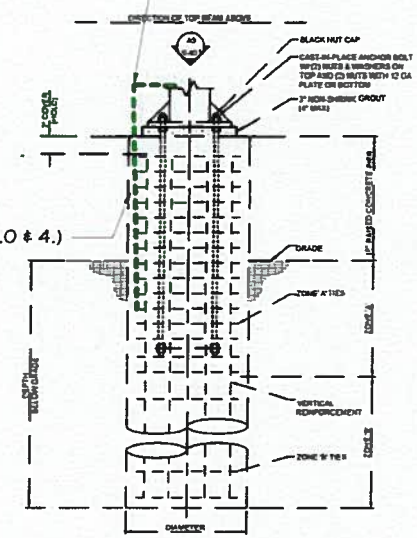
A0 Base Plate Detail

SEE NOTE 2.)

CONCRETE ENCASE DIRECT BURIAL GROUND CLAMP
SEE NOTE 3.)



SEE NOTE 3.0 & 4.)



DESIGN & DRAFTING BY

REVISIONS

DESCRIPTION	DATE	REV
ORIGINAL		A
REVISION		

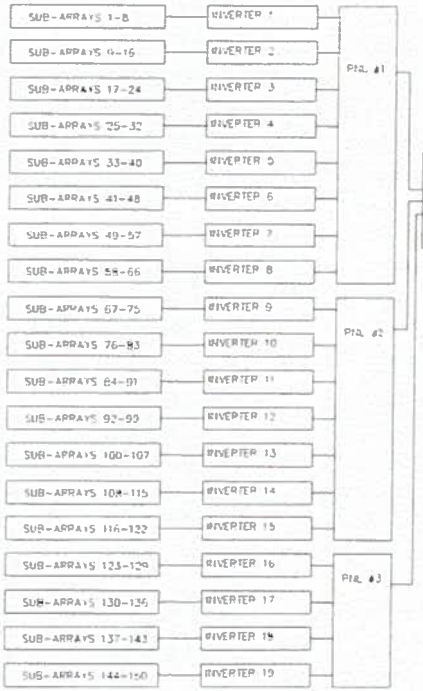
CONTRACTOR

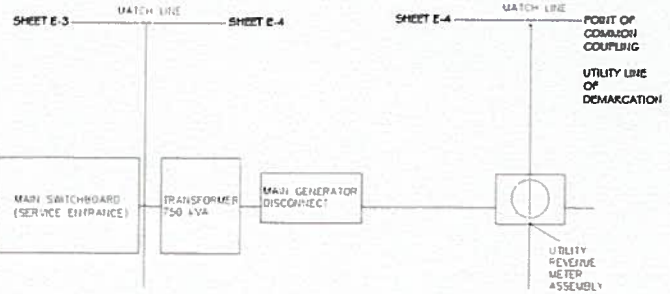
PROJECT NAME

SHEET NAME
GROUNDING DETAILS

SHEET SIZE
ANSI B
11"x17"

SHEET NUMBER
PV-10





Schedule of Major Electrical Equipment

Components	Description	Manufacturer	Model Number	Qty
PV Modules	320W 72 Cell Polycrystalline silicon, model year 2017	STAVE	CHSM6612P	2723
String Inverter #1-19	36 OkW string inverters, Floating DC system, DC AFCI, GFDI, DC reverse polarity ID, Triple MPPT Zones, RS-485 NEMA 4	SOLECTRIA	PVI 36TL	1
Data Acquisition System (DAS)	Monitoring System - data logger (inverter level data), UPS, cellular Ethernet, communication equipment to integrate all inverters, meters, and sensors	TBD	Contact Vendor	1
	Weather Station - POA Pakarbox, LP02 pyranometer, ambient temp, BOM1 temp, no Apogee sensors allowed	TBD	Contact Vendor	1
	SREC Meter - Solar Log S2000	Solar Log	Contact Vendor	1
Redundant Relay	SEL-751 Feeder Relay, DC powered from UPS 4 batteries, DA-485 rear card w/ ethernet, (3) PT & (3) CT card with metering/protection plug card	Schweitzer Engineering Laboratories	SEL 751	1
Test Switch	4 voltage inputs & 3 current inputs with shorting	ABB	FT-1	1
Medium Voltage Transformer	750A VA Pad mounted 2 winding transformer, 480/277 wye-gnd, 13,800 VAC wye-gnd, Z=5.6 X/R=7, CLP 4 DFP lusing, 200A deadfront loop feed, 3 under oil load break switches, liquid level, thermometer, pressure gauges, spare fuses	Ermco	Contact Vendor	1
Entrance Equipment Switchboard	1200A, 480/277 VAC 3 phase, 4 wire 3E NEMA 3R switchboard with a 1200A frame main breaker 1, and 1200A trip plug. Trip unit to be LSIG to provide ground fault protection and adjustable trip knobs	Eaton	Pow-R-Line, Magnum SB, Digitrip 520M	1
Utility Revenue Meter Assembly	15kV gang mounted dead front metering enclosure with CTs and PTs with meter socket that incorporates test switches (voltage and current). Utility to provide the meter, CTs, and PTs	Federal Pacific	OMDP-315-RG 200	1
Main Generator Disconnect	15kV rated 3 phase gang operated load break switch, gang mounted with surge arresters 65k fuses, and aux. low voltage switch (Form C). Aux side of switch must be on the utility side.	S & C	PME 5	1
Lightning Arrestor	480 277 Volt AC 3 Phase Wye, 50kA per phase Power Surge Protector, UL 1449 Type 1 SPD, 3 pole, Ph-3Y 4w plus ground, (L1, L2, L3, N, G)	SPDwr	550A277V3Y1	1

PANELBOARDS

PNL Number	Description	Manufacturer	Model Number
PNL #1	500A 480/277 VAC, 3 phase, 4 wire, MLO, rated ground & strl, w/ (8) 60A 3 pole bolt on breakers	Eaton	Contact Vendor
PNL #2	400A 480/277 VAC, 3 phase, 4 wire, MLO, rated ground & strl, w/ (7) 60A 3 pole bolt on breakers	Eaton	Contact Vendor
PNL #3	250A 480/277 VAC, 3 phase, 4 wire, MLO, rated ground & strl, w/ (4) 60A 3 pole bolt on breaker	Eaton	Contact Vendor

DESIGN & DRAFTING BY:

REVISIONS		
DESCRIPTION	DATE	REV
ORIGINAL		A
REVISION		

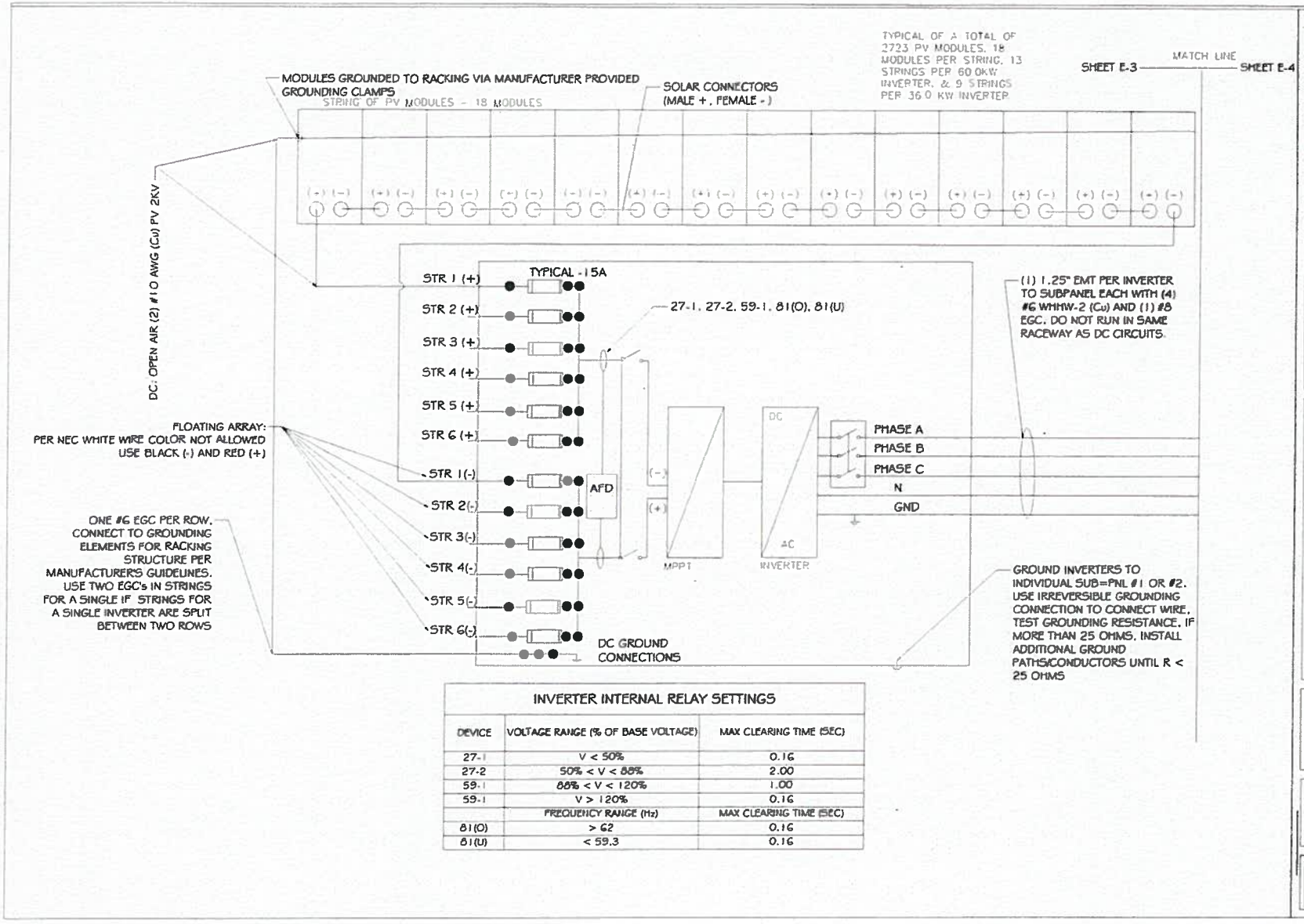
CONTRACTOR

PROJECT NAME

SHEET NAME
ELECTRICAL OVERVIEW

SHEET SIZE
ANSI B
11"x17"

SHEET NUMBER
E-1



INVERTER INTERNAL RELAY SETTINGS

DEVICE	VOLTAGE RANGE (% OF BASE VOLTAGE)	MAX CLEARING TIME (SEC)
27-1	V < 50%	0.16
27-2	50% < V < 88%	2.00
59-1	88% < V < 120%	1.00
59-1	V > 120%	0.16
	FREQUENCY RANGE (Hz)	MAX CLEARING TIME (SEC)
81(O)	> 62	0.16
81(U)	< 59.3	0.16

DESIGN & DRAFTING BY

REVISIONS

DESCRIPTION	DATE	REV
ORIGINAL		A
REVISION		

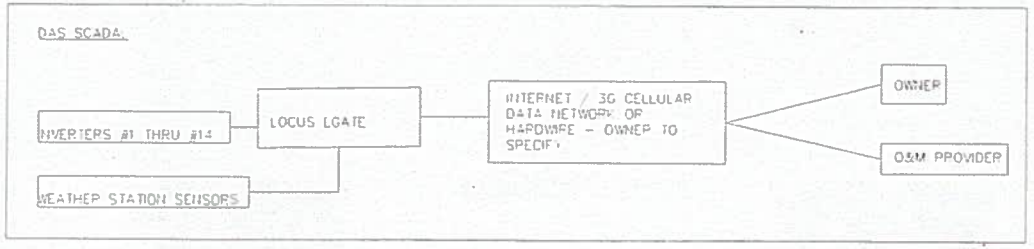
CONTRACTOR

PROJECT NAME

SHEET NAME: INVERTER 3-LINE

SHEET SIZE: ANSI B 11"x17"

SHEET NUMBER: E-3



FUNCTIONS:
- DEVICES COMMUNICATION HUB
- DATA BROADCAST VIA 3G

FUNCTIONS:
- PROVIDE 277V 1P POWER TO SOLAR-LOG S2000

MAIN SERVICEBOARD
480/277 V

LOCUS LGATE 360

LOCUS LGATE 360 DAS SYSTEM WITH FOLLOWING COMPONENTS AND FUNCTIONS

1.) INVERTER DIRECT MONITORING - CONNECT VIA RS485 IN PARALLEL TO ALL 14 INVERTERS
MONITORING OF INVERTER LEVEL PRODUCTION FOR O&M AND OWNER
REDUNDANT SREC REPORTING WITHIN 2% DEVIATION IN ACCURACY
2.) PRODUCTION REPORTING - CONNECT VIA AWG #12 TO VERRIS INDUSTRIES CTs
REVENUE GRADE PRODUCTION REPORTING - FOR SREC REPORTING & OVERALL PRODUCTION
COMBINER LEVEL REVENUE GRADE REPORTING
3.) SENSOR BOX - CONNECT VIA RS485
SUPPORTS WEATHER STATION
4.) SENSORS:
A.)AMBIENT TEMPERATURE SENSOR
B.)WIND SPEED SENSOR
C.)IRRADIATION PROTECTION SENSOR
D.)PYRANOMETER SENSOR
E.)HUMIDITY AND AIR PRESSURE SENSOR
5.) 10 YEAR 3G DATA SUBSCRIPTION - OPTION TO INCLUDE 4G MOBILE HOT-SPOT OR HARDWIRED FIOS OR CABLE MODEM. OWNER TO SPECIFY PRIOR TO CONSTRUCTION

LOCUS LGATE

15A (3) 14kAIC

MAIN 3 1200A (3) 35kAIC

VERIS INDUSTRIES CT'S

FUNCTIONS:
- TOTAL PLANT REVENUE GRADE PRODUCTION MEASURING
- SREC PRODUCTION MEASUREMENT

TO TRANSFORMER

6kVA

MAIN 2 15A (2) 65kAIC

FUNCTIONS:
- PROVIDE POWER AND OVERCURRENT PROTECTION FOR WEATHER STATION DEVICES

30A (2) 35kAIC

208/120 PANEL

WEATHER STATION

(QTY 2) SINGLE POLE 10A BREAKER

FUNCTIONS:
- O&M MONITORING OF PRODUCTION
- REDUNDANT SREC REPORTING
- OWNER MONITORING

INVERTERS #1-#12

LEGEND

RS485

FUNCTIONS:
- AMBIENT TEMPERATURE
- WIND SPEED
- IRRANDIANCE
- HUMIDITY AND AIR PRESSURE

DESIGN & DRAFTING BY:

REVISIONS

DESCRIPTION	DATE	REV
ORIGINAL		A
REVISION		

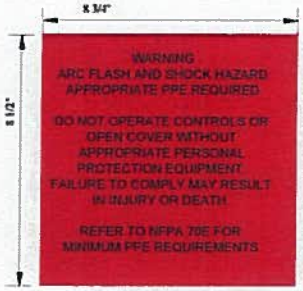
CONTRACTOR

PROJECT NAME

SHEET NAME
DATA ACQUISITION SYSTEM

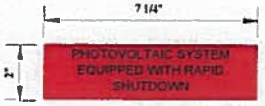
SHEET SIZE
ANSI B
11"x17"

SHEET NUMBER
E-5



REQ'D BY: NEC 110.16 [13]

APPLY TO:
SWITCHBOARDS, SWITCHGEAR, PANELBOARDS, OR
EQUIPMENT THAT IS LIKELY TO REQUIRE INSPECTION,
ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED



REQ'D BY: NEC 690.56(C) [14]

APPLY TO: MAIN SERVICE, PV SYSTEM BREAKER

SIGNAGE REQUIREMENTS

> RED BACKGROUND
> WHITE LETTERING
> MIN. 3/8" LETTER HEIGHT
> ALL CAPITAL LETTERS
> ARIAL OR SIMILAR FONT
> REFLECTIVE, WEATHER RESISTANT MATERIAL, UL 969

SCALE: 1" = 4"

DESIGN & DRAFTING BY:
[redacted]

REVISIONS

DESCRIPTION	DATE	REV
ORIGINAL	[redacted]	A
REVISION		

CONTRACTOR

[redacted]

PROJECT NAME

[redacted]

SHEET NAME

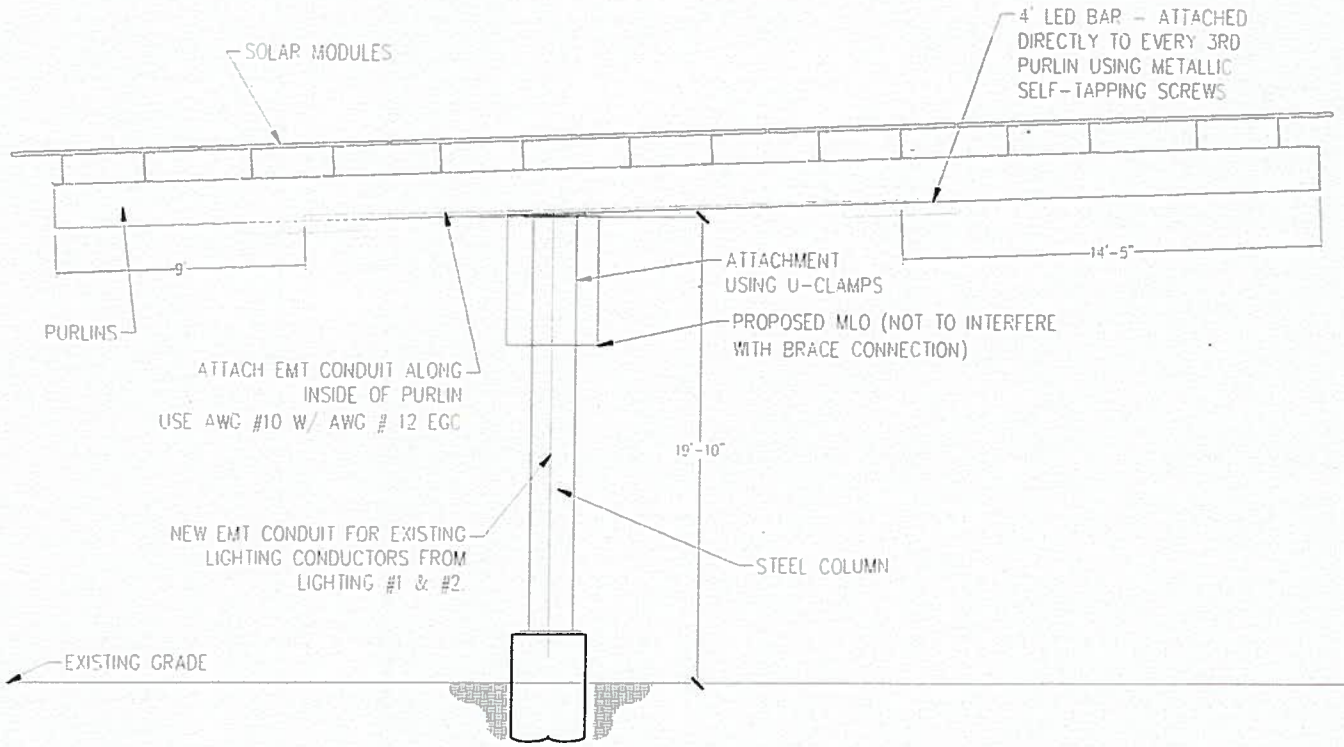
SYSTEM LABELING DETAIL

SHEET SIZE

ANSI B
11"x17"

SHEET NUMBER

E-6.2



FOR STRUCTURAL AND COMPONENT DETAILS, SEE SHEETS PV-7 THROUGH PV-9

DESIGN & DRAFTING BY

REVISIONS

DESCRIPTION	DATE	REV
ORIGINAL		A
REVISION		

CONTRACTOR

PROJECT NAME

SHEET NAME
LIGHTING EQUIPMENT OVERVIEW

SHEET SIZE
ANSI B
11"x17"

SHEET NUMBER
L-2

EXHIBIT 3

ACCESS PLAN FOR SITE 3

Greenbush Line:
Nantasket Junction Station
April 11, 2018

Project Scope

The construction of a 962.0 kW DC solar parking lot canopy at the Nantasket Junction MBTA Station. The construction consists of 3 cantilevered canopy structures, founded on 43 support columns, supporting 2,723 solar modules. All exiting parking lot light poles and their concrete foundations within the canopy footprint will be removed. New LED lights will replace the existing lighting and will be installed to the underside of the canopy structures.

Construction Plan

The entire project will take 13 weeks to complete. The project is divided into four phases:

Phase 1 consists of drilling and installing foundations;
Phase 2 consists of erecting the canopies, steal work;
Phase 3 consists of putting the modules in place, electrical work and site work (including trenching);
Phase 4 consists of mechanical connection to the grid.

During all stages of construction the current means of access and egress to the Nantasket Junction MBTA Station from Summer Street will be open and unobstructed.

During the 13-week construction period, the area to the north-east corner of the parking lot, containing 25 parking spaces, will be needed as a laydown area (see purple shaded area on the attached – Construction Phasing Plan). This laydown area will be used for the storage of construction materials and will be unavailable to commuters throughout the entire 13-week construction period. In addition, 3 construction areas labeled as areas "A", "B", and "C" within the parking lot will be secured for installation activities at various construction stages and will not be available for parking customers. Throughout construction, sufficient parking spaces will be available to parking customers.

Phase 1 – Site preparation, Drilling and Foundations

The first activities to take place include securing the parking areas necessary for laydown space and the removal of the light fixtures, poles and bases from the center area of the lot. Temporary lighting will be provided upon removal of the existing lighting system.. Following completion of this site prep we will move on to the drilling and pouring of foundations. Approximately 3 to 4 foundations will be installed per day. Work will begin in the area marked "A" in the attached Construction Phasing Plan. In the first week, holes will be drilled and foundations will be installed

in that area. There are 52 parking spaces affected in Area A. Then, in the second week 2, holes will be drilled and foundations will be installed in the area marked "B", while concrete cures in area A. There are 108 parking spaces affected in Area B. In the following 2 weeks, holes will be drilled and foundations will be installed in the area marked "C". There are 125 parking spaces affected in Area C. Drilling and foundations should take 4-5 weeks depending on weather conditions

Phase 2 – Canopy Erection

The steel for the canopies will be erected over the course of 5 weeks. 2 bays will be erected per day. In Week 3 steel will be erected in Area A. In Week 4 & 5, steel will be erected in Area marked B. In Week 6 & 7, steel will be erected in Area C.

Phase 3 – Module Installation

Beginning Week 7, modules will be installed on the erected steel, starting in Area C. This work will follow behind the steel erection, and is expected to take 4 weeks. Several crews of electricians utilizing scissor lifts will complete the electrical installation. Upon completion of Phase 3 in area C, area B and C will be secured for about 2 weeks to complete Phase 3 for this site.

Phase 4 – Mechanical Completion/site clearance return to final operation

Mechanical completion will be made to the equipment pad, and should take about 3 weeks. All parking lot patching will be completed. This stage will occur in Weeks 11-13 and should require minimal interruption with the parking lot. Mechanical completion, as outlined above, is different than fully commissioned, which means final connection to the utility's grid. Utility (in this case Eversource) connection will take place several weeks after mechanical completion, and will not impede parking in any way.

Parking and Operations Plan

The Nantasket Junction MBTA Station parking lot contains 495 parking spaces. Data provided by the MBTA indicates that the lot utilization currently will reach up to 30% or 150 spaces during a weekday. Of the 495 spaces, no more than 258 spaces will be secured for construction leaving 237 spaces for parking customers.

Table 1 below identifies the anticipated number of secured parking spaces required during each phase of construction and the number of available spaces to parking customers.

Week	Phase				Area			Secured Parking Spaces Required for Construction	Parking Spaces Available
	1	2	3	4	A	B	C		
1	X				X			77	418
2	X				X	X		185	310
3	X	X			X		X	202	293
4	X	X				X	X	258	237
5		X				X	X	258	237
6		X					X	150	345
7		X	X				X	150	345
8			X				X	150	345
9			X		X	X		185	310
10			X		X	X		185	310
11				X				25	470
12				X				25	470
13				X				25	470

Table 1

Relocation of Parked Cars in Construction Area

1. Contractor (MAP) to notify MBTA Transit Police at least 2 business days prior to mobilization, providing the date/time and location of the site to be secured.
2. MBTA Transit Police reach out to local approved towing companies to verify that they can be available to support the work.
3. Contractor arrives on site and immediately reports to MBTA Transit Police if vehicles need to be relocated.
4. MBTA Transit Police arrive on site, run plates, and notify local approved towing company.
5. Towing company arrives and relocates vehicle within MBTA lot.
6. Towing company bills the contractor for their service.

Nantasket Junction – Construction Phasing Plan

EXHIBIT 4

PERMITTED ENCUMBRANCES FOR SITE 3

Nantasket Junction

I. Permitted Recorded Encumbrances

1) Easement between the New York, New Haven and Hartford Railroad Company, to Hingham Lumber Company, Inc., recorded with the Plymouth County Registry of Deeds in Book 2403, Page 88; thereafter terminated or otherwise affected by operation of an Order of Taking by MBTA, dated January 3, 2002, and recorded with the Plymouth County Registry of Deeds.

2) Easement between Hingham Lumber Company, Inc., and Florence G. Robinson, dated December 31, 1954, and recorded with the Plymouth County Registry of Deeds in Book 2403, Page 93; thereafter terminated or otherwise affected by operation of an Order of Taking by MBTA, dated January 3, 2002, and recorded with the Plymouth County Registry of Deeds.

3) Rights reserved as set forth in a Deed from Trustees of Penn Central Transportation Company to William R. Mcnulty, Jr., dated November 21, 1977, and recorded with the Plymouth County Registry of Deeds in Book 4388, Page 423; thereafter terminated or otherwise affected by operation of an Order of Taking by MBTA, dated January 3, 2002, and recorded with the Plymouth County Registry of Deeds.

4) Notice of Special Permit issued to Hingham Lumber Company for warehouse and retail building and an employee parking lot, dated November 6, 1998, and recorded with the Plymouth County Registry of Deeds in Book 19885, Page 62.

5) Order of Conditions issued by the Town of Hingham Conservation Commission, dated June 23, 1997, and recorded with the Plymouth County Registry of Deeds in Book 15411, Page 246.

II. Permitted Non-recorded Encumbrances

1) None.

MBTA reserves the right to supplement this Exhibit 4.

EXHIBIT 5

MBTA CRANE REQUIREMENTS

From: MBTA Safety Department

Re: Requirements for proposed work using any type of crane on or adjacent to MBTA property, or has the potential to foul a Right-of-Way ("ROW") (collectively, the "MBTA Crane Requirements").

At least two (2) days prior to the proposed crane work on or adjacent to property owned by MBTA (or crane work that otherwise has the potential to foul a ROW), the Grantee shall:

1) Submit the following documentation to the MBTA Safety Department for review:

   a. Scope of work – purpose of work, hours of operations, location, etc.;

   b. Pick plan – shows track(s) bridge(s), tunnel(s), water, outriggers, etc.;

   c. Specifications of crane – load charts, size counterweight, maximum expected boom radius, maximum expected boom length, maximum pick weight with factor of safety of 1.5;

   d. Copy of crane operator's valid driver's license;

   e. Copy of crane operator's valid Massachusetts hoisting license;

   f. Copy of crane operator's valid medical certificate; and

   g. Most recent annual third party inspection/certification (must be within the last twelve (12) calendar months).

2) Take the following actions:

   a. Notify the MBTA Safety Department prior to the crane being brought on site to allow for scheduling an onsite inspection to verify all submitted documents.

   b. Notify the appropriate MBTA operations departments (Bus Operations, Railroad Operations Department, Light Rail Operations Departments (i.e. Red Line, Blue Line, Green Line, Orange Line, as applicable) to coordinate flagging activities.

   c. Adhere to all federal, state, and local regulations.

If at any time the work is deemed unsafe by MBTA, the Grantee shall cease all work until conditions are corrected and may commence work only after approved by MBTA personnel.

The MBTA Safety Department reserves the right to amend and/or supplement the MBTA Crane Requirements, and to request additional/supplemental documentation from Grantee, its contractors, or consultants, as determined in MBTA's sole discretion, without prior written notice.

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MEMORANDUM

To: Patty Schuster
Director of Licensing

From: Steven V. Culp SVC
Director of Safety Engineering

Date: December 14, 2016

Subject: **Crane Requirements for Licenses**

MBTA Safety has researched prior documentation and construction specifications for the requirements that Massachusetts Realty Group should incorporate into easement licenses where the applicant is requesting to utilize any type of crane. The following wording should be used:

At a minimum of two (2) business days prior to the proposed crane work on or adjacent to MBTA Property, or has the potential to foul the Right-of-Way (ROW), the applicant shall:

1. Submit the following to MBTA Safety for review:
   - Scope of Work –Purpose of Work, Hours of Operations, Location, etc.
   - Pick Plan – Shows Track(s), Bridge(s), Tunnel(s), Water, Outriggers, etc.
   - Specifications of the Crane – Load Charts, Size Counterweight, Maximum Expected Boom Radius, Maximum Expected Boom Length, Maximum Expected Pick Weight with Factor of Safety of 1.5
   - Copy of Operator's Valid Driver's License
   - Copy of Operator's Valid Massachusetts' Hoisting License
   - Copy of Operator's Valid Medical Certificate
   - Most recent Annual Third Party Inspection/Certification, must be within the last 12 Calendar months

2. Take the following actions:
   - Notify MBTA Safety prior to the crane being brought on site to allow for scheduling of an onsite inspection to verify the submitted documents.
   - Notify the appropriate MBTA Bus, Subway, or Railroad Operations Departments to coordinate Flagging activities.
   - Adhere to all applicable Federal, State, and local regulations.

If at any time the work is deemed unsafe by MBTA, the applicant should cease all work until conditions can be corrected and approved by MBTA personnel.

If you have any questions or concerns, please feel free to contact me.

Cc: K. LoCurto

MAP
Energy Funding Solutions

MAP-MBTA Solar Canopies Hoisting Plan **3-6-2018**

For the construction of the proposed solar canopies at various MBTA property locations, MAP will require the use of a JCB Loadall 507-42, or similar, as well as appropriate rigging for the installation of foundation rebar cages and the erection of structural steel frames.

For all locations, MAP will safely position equipment so that it has no potential to foul the MBTA's railroad ROW and all hoisting operations will be performed under the inspection of a designated MBTA inspector provided by the MBTA's Capital Delivery Department.

MAP has been provided with the attached memorandum from the MBTA's Safety Department dated 12/14/2016 which itemizes all required documentation and protocols for the proper notification of MBTA Safety personnel. MAP will provide all documentation under separate cover for each location and piece of equipment used at a minimum of two (2) business days prior to the proposed hoisting work.

Should you have any questions, please contact Steve Cleveland at steve.cleveland@mapefs.com

MAP ENERGY FUNDING SOLUTIONS
745 ATLANTIC AVE, BOSTON, MA 02111
WWW.MAP-ES.COM

EXHIBIT 6

Electrical Metallic Tubing Conduit Acknowledgement

Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Stephanie Pollack, MassDOT Secretary & CEO
Luis Manuel Ramírez, General Manager & CEO

massDOT
Massachusetts Department of Transportation

March 6, 2018

Luis Manuel Ramírez
General Manager and CEO, the MBTA
10 Park Plaza
Boston, MA 02116

Re: Electrical Metallic Tubing Conduit Acknowledgement

To Whom It May Concern:

Rigid galvanized conduit ("RGC") shall be required on all parts of the solar canopy infrastructure where conduit is required from grade to eight (8) feet above grade. Electrical metallic tubing conduit ("EMT") shall be permitted to be used as an alternative to RGC in those portions of the solar canopy infrastructure situated above eight (8) feet from grade where conduit is required. The use of these types of conduit shall apply to solar canopies that will be implemented pursuant to the *Master Solar Canopy Land Lease and Agreement*, dated November 1, 2016, as amended.

Luis Manuel Ramírez
General Manager and CEO, the MBTA