

COPY



PLANNING DEPARTMENT

TOWN OF GRAFTON
GRAFTON MEMORIAL MUNICIPAL CENTER
30 PROVIDENCE ROAD
GRAFTON, MASSACHUSETTS 01519
(508) 839-5335 ext 1120 • FAX (508) 839-4602
planningdept@grafton-ma.gov
www.grafton-ma.gov

RECEIVED TOWN CLERK
GRAFTON, MA
2019 APR 30 PH 2:27

10

APPLICATION FOR SPECIAL PERMIT

Application No. SP2019-7/SPA

APPLICANT & PROPERTY OWNER INFORMATION

NAME Industria Engineering, Inc.
STREET 91 Cedar Street, Suite 2 CITY/TOWN Milford
STATE MA ZIP 01757 TELEPHONE 774-270-0834
NAME OF PROPERTY OWNER (if different from Applicant) James W and Nancy A Padula
Deed recorded in the Worcester District Registry of Deeds Book 6986 Page 24

SITE INFORMATION:

STREET AND NUMBER 155 George Hill Road, 23 Rear Leland Street, and 29 Rear Leland Street
ZONING DISTRICT _____ ASSESSOR'S MAP Map 110 for all 3 lots. LOT #(S) 102.0-0000-0030.0; 103.0-0000-0002.0, and 103.0-0000-0004.0
LOT SIZE 94.95 FRONTAGE _____
CURRENT USE Vacant Lot

PROJECT/PLAN INFORMATION:

PLAN TITLE _____
PREPARED BY (name/address of PE/Architect) _____
DATES _____

Use for which Special Permit is sought: (refer to § 3.2.3.1 of the Zoning Bylaw - Use Regulation Table):

Solar Energy Generation Facility

Cite all appropriate sections of the Zoning By-Law which pertain to this Application, Use and Site:

TO THE GRAFTON PLANNING BOARD:

The undersigned, being the APPLICANT named above, hereby applies for a SPECIAL PERMIT to be granted by the Planning Board and certifies that, to the best of APPLICANT'S knowledge and belief, the information contained herein is correct and complete.

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Applicant's Signature [Signature]
Property Owner's Signature (if not Applicant) [Signature]

Date: 4/23/19
Date: 4/23/19

APR 24 2019

PLANNING BOARD
GRAFTON, MA

EXHIBIT *1a.*

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PLANNING DEPARTMENT

TOWN OF GRAFTON RECEIVED TOWN CLERK
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2019 APR 30 PH 2:27

12

APPLICATION FOR SITE PLAN APPROVAL

Application No. SP 2019-7/SPA

APPLICANT NAME: Industria Engineering, Inc.

STREET 91 Cedar Street, Suite 2 CITY/TOWN Milford
STATE MA ZIP 01757 TELEPHONE 774-270-0834

PROPERTY OWNER NAME: James W and Nancy A Padula

STREET 7 Browns Road CITY/TOWN Grafton
STATE MA ZIP 01519-1316 TELEPHONE _____

Deed recorded in the Worcester District Registry of Deeds Book 6986 Page 2

CONTACT PERSON'S NAME: Michael Lotti, Industria Engineering, Inc.

TELEPHONE 774-270-0834

SITE INFORMATION:

STREET AND NUMBER 155 George Hill Road, 23 Rear Leland Street, and 29 Rear Leland Street

ZONING DISTRICT Agricultural ASSESSOR'S MAP 110 LOT #(S) 102.0-0000-0030.0; 103.0-0000-0002.0, and 103.0-0000-0004.0

LOT SIZE 94.95 FRONTAGE _____

CURRENT USE Vacant Lot

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PLAN INFORMATION:

APR 24 2019

PLAN TITLE _____

PREPARED BY _____ PLANNING BOARD
GRAFTON, MA

DATE PREPARED _____ REVISION DATE _____

Describe proposed changes / additions: Installation of Solar Energy Generation and Energy Storage System

TO THE GRAFTON PLANNING BOARD:

The undersigned, being the APPLICANT named above, hereby applies for approval of the above entitled SITE PLAN by the Planning Board and certifies that, to the best of APPLICANT'S knowledge and belief, the information contained herein is correct and complete and that said PLAN conforms with the requirements of the Zoning By-Law of the Town of Grafton.

Applicant's Signature [Signature] Date: 4/23/19

Property Owner's Signature (if not Applicant) [Signature] Date: 4/23/19

EXHIBIT 1 b.

COPY



TOWN OF GRAFTON
GRAFTON MEMORIAL MUNICIPAL CENTER
30 PROVIDENCE ROAD
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www.grafton-ma.gov

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TREASURER / COLLECTOR

PLANNING BOARD
GRAFTON, MA

Certificate of Good Standing

Applicants seeking permits with the Town of Grafton must submit this completed form at the time of application. When all obligations are paid to date, you must attach this "Certificate of Good Standing," with your application. Delinquent bills must be paid in full before the appropriate department accepts your application. Please make arrangements to pay these outstanding bills at the Collector's Office.

Please note: it can take up to three (3) business days to process each request.

Please check all that apply and indicate if permit(s) have been issued.

	Permit Issued?			Permit Issued?	
	Yes	No		Yes	No
<input type="checkbox"/> Building - Inspection(s)	_____	_____	<input type="checkbox"/> Septic System	_____	_____
<input type="checkbox"/> Building - Electric	_____	_____	<input type="checkbox"/> Conservation	_____	_____
<input type="checkbox"/> Building - Plumbing	_____	_____	<input type="checkbox"/> Planning	_____	_____
<input type="checkbox"/> Board of Health	_____	_____	<input type="checkbox"/> Other	_____	_____

Other Permit: Special Permit/Site Plan Reveiw and Scenic Road Permit

Industria Engineering, Inc.-Michael Lotti

Petitioner Name

91 Cedar Street, Suite 2

Petitioner Address

Milford, MA 01757

City, State, Zip

774-270-0834

Phone

James & Nancy Padula

Property Owner / Company Name

155 George Hill Rd
23 Rear and 29 Rear Leland

Property Address

Grafton, MA

City, State, Zip

Date:	Current	Delinquent	N/A
Real Estate	✓		
Personal Property			✓
Motor Vehicle Excise			✓
Disposal			✓
General Billing			✓

Beth Schrottman
Treasurer / Collector Name (please print)

Beth Schrottman
Treasurer / Collector Signature

4/23/19
Date

EXHIBIT 1c.

COPY

Ken O'Brien
 Ken O'Brien, MAA
 Grafton Data Collector

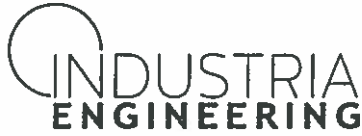
ID	Site Address	Owner Name	Co-Owner Name	Owner Address	Owner City	State	Zip	Book	Page
110/094.0-0000-0009.0	146 GEORGE HILL RC	MAZZA GREGORY E JR	DOHERTY JANET L	146 GEORGE HILL ROAD	GRAFTON	MA	01519	45436	336
110/094.0-0000-0010.0	142 GEORGE HILL RC	CLARK SHARON L	CLARK JOHN R JR	142 GEORGE HILL ROAD	GRAFTON	MA	01519	29350	132
110/094.0-0000-0017.0	141 GEORGE HILL RC	LEMIEUX MAUREEN E TRUS	MAUREEN L LEMIEUX REVOC.	141 GEORGE HILL ROAD	GRAFTON	MA	01519	19241	231
110/094.0-0000-0017.A	141 REAR GEORGE H	MAZZA GREGORY E	MAZZA ANNA R	251 UPTON STREET	GRAFTON	MA	01519	3233	67
110/094.0-0000-0017.B	139 GEORGE HILL RC	BOURASSA CARLA M		139 GEORGE HILL ROAD	GRAFTON	MA	01519	21838	144
110/094.0-0000-0100.0	247 REAR UPTON ST	GRAFTON TOWN OF	CONSERVATION COMMISSIO	30 PROVIDENCE ROAD	GRAFTON	MA	01519	26365	109
110/102.0-0000-0023.0	150 GEORGE HILL RC	BIANCO RICHARD A	BIANCO SANDRA L	150 GEORGE HILL ROAD	GRAFTON	MA	01519	5303	215
110/102.0-0000-0025.0	15 LELAND STREET	TAFT GEORGE A	TRINDER-TAFT PAULA A	13 LELAND STREET	GRAFTON	MA	01519	12424	389
110/102.0-0000-0026.0	17 LELAND STREET	PITTS STEVEN M	MAMAYEK LAURA C	17 LELAND STREET	GRAFTON	MA	01519	51241	153
110/102.0-0000-0027.0	158 GEORGE HILL RC	LEMAY STEVEN		158 GEORGE HILL ROAD	GRAFTON	MA	01519	22903	018
110/102.0-0000-0028.0	156 GEORGE HILL RC	LEWELLIN GAVIN D	LEWELLIN MARSHA J	75 HIGHLANDER ST	Torquay, Vic	Australia	03228	42184	170
110/102.0-0000-0029.0	152 GEORGE HILL RC	BORGERSON HENRY	BORGERSON ANNE	152 GEORGE HILL ROAD	GRAFTON	MA	01519	5118	212
110/102.0-0000-0030.0	155 GEORGE HILL RC	PADULA JAMES W	PADULA NANCY A	7 BROWNS ROAD	GRAFTON	MA	01519	6986	24
110/102.0-0000-0031.0	157 GEORGE HILL RC	PUTNAM RICHARD D JR		20 STOWE ROAD	GRAFTON	MA	01519	45177	75
110/102.0-0000-0032.0	161 GEORGE HILL RC	PADULA JAMES W	PADULA NANCY A	7 BROWNS ROAD	GRAFTON	MA	01519	7168	106
110/102.0-0000-0032.A	159 GEORGE HILL RC	BELLEVILLE SUSAN M TRUST	GEORGE HILL ROAD 2006 RE	159 GEORGE HILL ROAD	GRAFTON	MA	01519	39503	192
110/103.0-0000-0001.0	23 LELAND STREET	TRIPP RALPH E & MARIE E - L	TRIPP PAULA J	23 LELAND STREET	GRAFTON	MA	01519	25343	275
110/103.0-0000-0002.0	23 REAR LELAND ST	PADULA JAMES W	PADULA NANCY A	7 BROWNS ROAD	GRAFTON	MA	01519	6986	25
110/103.0-0000-0002.A	155 REAR GEORGE H	MAZZA GREGORY E	MAZZA ANNA R	251 UPTON STREET	GRAFTON	MA	01519	3233	69
110/103.0-0000-0003.0	29 LELAND STREET	STRATTON STEVEN R	STRATTON HELEN R	29 LELAND STREET	GRAFTON	MA	01519	22763	130
110/103.0-0000-0004.0	29 REAR LELAND ST	PADULA JAMES W	PADULA NANCY A	7 BROWNS ROAD	GRAFTON	MA	01519	8239	200
110/103.0-0000-0004.A	29 REAR LELAND ST	WHIPPLE SHIRLEY A		57 HARRIET AVENUE	BURLINGTON	MA	01803	58263	119
110/103.0-0000-0005.0	33 LELAND STREET	NEW ENGLAND POWER COM	PROPERTY TAX DEPARTMEN	40 SYLVAN ROAD	WALTHAM	MA	02451	44598	437
110/111.0-0000-0004.G	47 LELAND STREET	WILSON CRAIG	WILSON NICOLE M	47 LELAND STREET	GRAFTON	MA	01519	36464	128
110/111.0-0000-0004.H	55 LELAND STREET	CHANDLER JOHN W III		55 LELAND STREET	GRAFTON	MA	01519	54270	300
110/111.0-0000-0006.0	53 LELAND STREET	GRAHAM ANNE I		53 LELAND STREET	GRAFTON	MA	01519	42660	378
110/111.0-0000-0009.0	61 LELAND STREET	FRITCHEY GRANT	GRONDIN MICHELLE	61 LELAND STREET	GRAFTON	MA	01519	17513	185

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EXHIBIT *Id.*

**PLANNING BOARD
 GRAFTON, MA**



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April 24, 2019

APR 24 2019

PLANNING BOARD
GRAFTON, MA

Town of Grafton
Planning Board
Grafton Memorial Municipal Center
30 Providence Road
Grafton, MA 01519

EXHIBIT 1 e.

**Subject: Application for Special Permit/Site Plan Approval and Scenic Road Permit
Photovoltaic Solar Energy Generation and Storage Facility
155 George Hill Road
Grafton, MA**

Dear Planning Board Members:

Enclosed please find the following:

- Project Description / Narrative and List of Waiver Requests (this letter)
- Application for Special Permit and Site Plan Approval
- Application for Hearing Under Scenic Road Bylaw (plus 2 Pages of Photos)
- Certificate of Good Standing
- Abutter Notification Materials (Assessor's List of Abutters 300 feet from properties, 2 sets of stamped envelopes, and Sets of Labels)
- \$250 Fee for Special Permit/Site Plan Approval; \$25 Fee for Scenic Road; and \$136 Legal Notice Fee (Check for \$411)
- Three Copies of the application materials
- 5 D size (24x36) and 10 B Size (11x17) Copies of the Pan Set
- 2 Copies of the Stormwater Report

We are proposing to install a ground mounted solar array on the parcels of land located at 155 George Hill Road, 23 Rear Leland Street, and 29 Rear Leland Street in Grafton, Massachusetts further identified as Map 110 /lot numbers 102.0-0000-0030.0; 103.0-0000-0002.0, and 103.0-0000-0004.0 (collectively the "George Hill Site"). The photovoltaic (PV) array will be installed for the purpose of generating renewable solar energy. The solar energy will be converted to renewable and emission free electricity and connected to the National Grid distribution system.

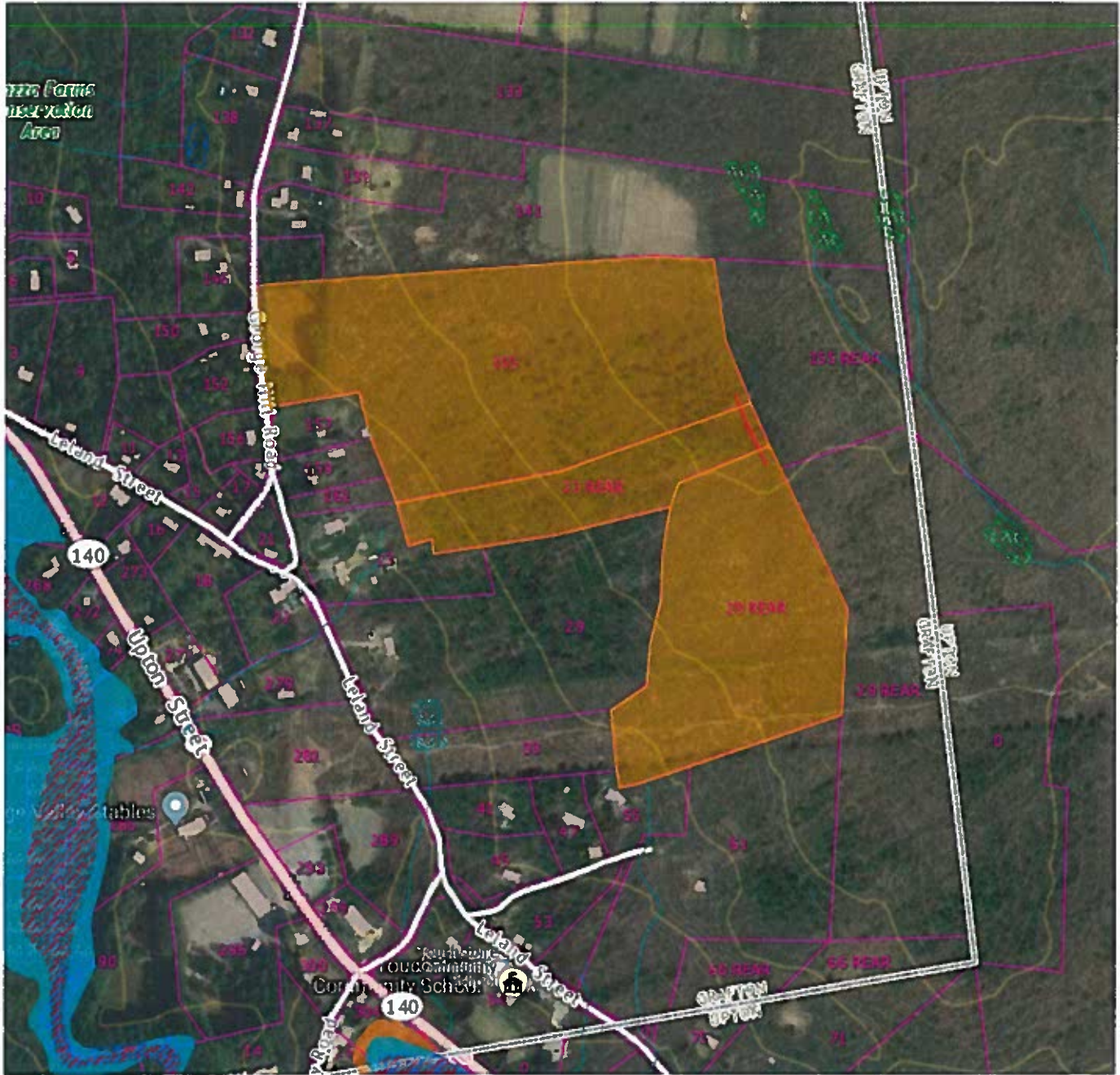
The proposed work will involve the installation of a solar generation array which will total 4.0 megawatts (MW) AC 4.0 MW dc and will consist of approximately 10,116 +/- modules along with a 3.5MW/8.6MWh energy storage system (ESS) located on site.

Site Description

The subject parcels are listed 155 George Hill Road (32.5 acres), 23 Rear Leland Street (7.95 acres), and 29 Rear Leland Street (22 acres) for a total of 64.5 Acres. The site is comprised of three large parcels owned by James and Nancy Padula and zoned for Agricultural use. The property is mostly wooded with small open field near George Hill Road. A National Grid Transmission Line runs along the southern portion of the 29 Rear Leland Street Parcel.

There is currently 507 feet of frontage on George Hill Road with a small entrance to the farmed field existing in the stone wall that runs much of the length of the frontage.

There are two small wetlands on the George Hill Site, however, all proposed disturbance is greater than 100 feet from the mapped wetlands. As part of the land survey work for the project we had wetland areas flagged and locations surveyed. Goddard Consulting of Northborough, MA performed the field work for delineation. The project Site are not listed by the Natural Heritage and Endangered Species Program (NHESP) as being within Priority Habitat or an Estimated Habitat as indicated by the Massachusetts Natural Heritage Atlas (14th edition).



According to the Massachusetts Department of Conservation and Recreation (DCR), the site is located in an Area of Critical Environmental Concern (ACEC). The ACEC is called the "Miscoe, Warren and Whitehall Watersheds ACEC" and is comprised of 8,700 acres of land of which 3,010 are in Grafton. The area is described as follows on the mass.gov website ("<https://www.mass.gov/service-details/miscoe-warren-and-whitehall-watersheds-acec>"):

"The resources of the Miscoe, Warren and Whitehall Watersheds ACEC are located in portions of five sub-watersheds. They include Miscoe Brook, located principally in Grafton; Warren Brook, located principally in Upton; a small portion of a sub-watershed, located principally in Hopkinton, which flows to Whitehall Reservoir; and portions of two other small sub-watersheds. The distinguishing characteristics of these sub-

watersheds are that they are located at the headwaters of their respective watersheds; provide crucial inputs of high-quality surface water to downstream waters and communities; and share a large expanse of unfragmented and diverse wildlife habitat and public and private open space extending across drainage divides and municipal borders.

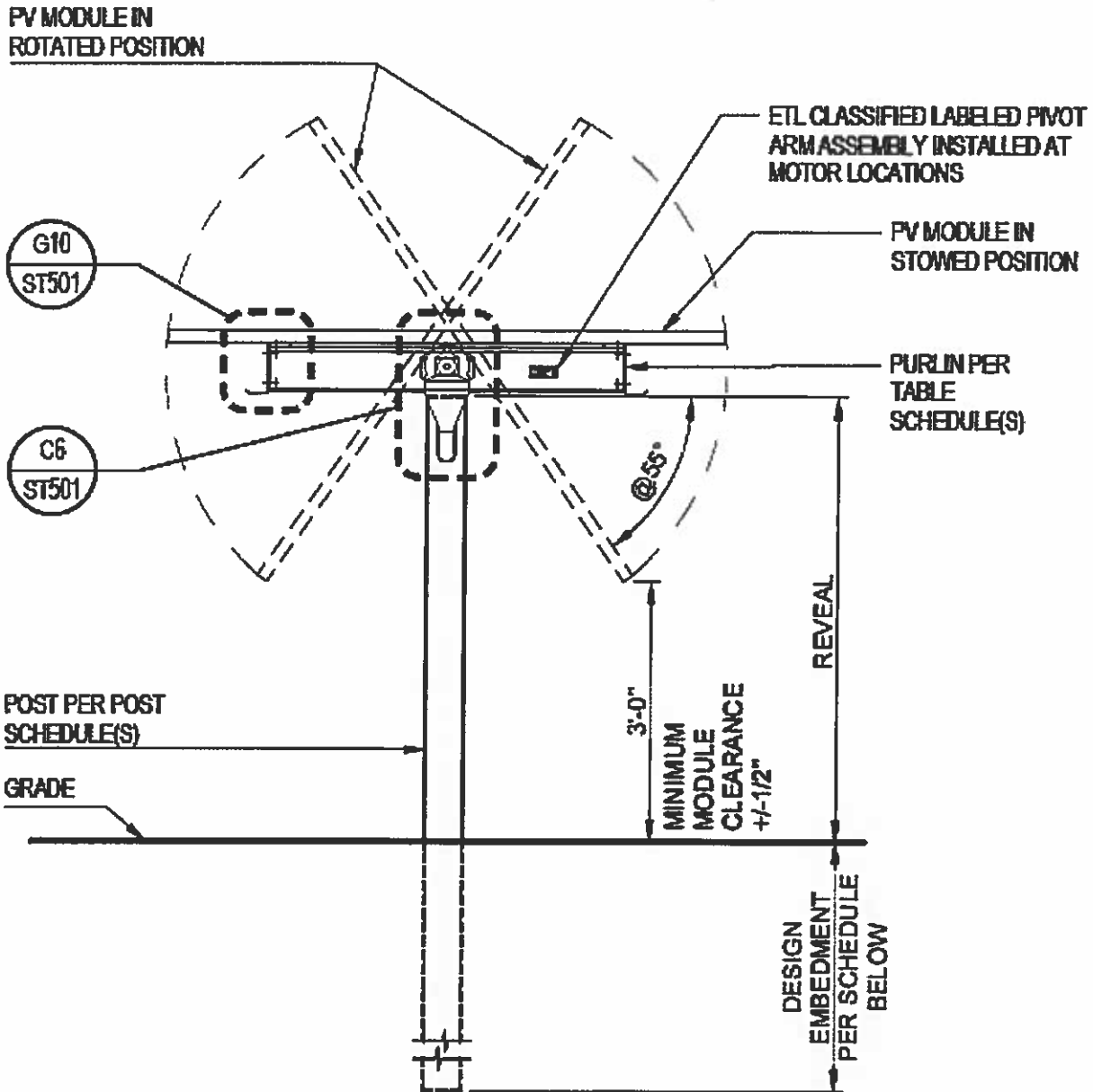
The area provides important surface water and ground water inputs to public drinking water supplies. Rare species habitats for five state-listed species are located throughout the ACEC. The Miscoe Brook watershed contains a large, unique and valuable wetlands complex, the Great Meadow system, and the water quality of both Miscoe and Warren Brooks supports prized native brook trout populations. Agriculture and forestry are important components of the overall resource complex.”

Since the proposed solar array does not include extensive impermeable areas, has no onsite septic system, wastewater or water use and will also include stormwater features, there will be no significant effect on the ACEC. The development area is a total of XX acres.

According to FEMA Flood Insurance Rate Maps there are no FEMA flood zone E (100-year Flood) associated with the portions of the property, however, none of the proposed work is located within the mapped flood areas.

Project Description

Work under this application involves the installation of approximately 4 MW of PV modules (10,116 modules @ 400W per module) ground-mounted in single-axis tracker rows, one module in landscape orientation. Each row of PV modules will be mounted on posts (I-Beams) that are driven in the ground and oriented north-south (N-S). The panels will track the sun over the duration of the day and then track back to starting position. The rows of modules are moved with a small electric drive motor. The panels are 3 feet off of the ground surface when fully facing east or west and are no more than 8 feet off of the ground at the highest point. Each N-S row will be separated by approximately 10 feet to eliminate shading of one row upon next. The following cross section show the typical tracker:



Prior to the installation of the rows of PV modules, tree trimming and clearing activities will be completed to create a shade free area to install the photovoltaic modules. There will also be grading of the existing terrain in order to manage stormwater flow from the cleared area. The following is a cross section of one the N-S rows:

As a security and safety measure, a new 7-foot high chain link fence will be installed around the solar installation.

The basic construction sequence for the project will be as follows:

1. Site Mobilization
 - a. Install erosion control barriers;
 - b. Set up site office/sanitary facilities;

- c. Construct site access roads and lay down area;
2. Site Preparation
 - a. Cut and Clear Trees in Project Area
 - b. Trim trees in shade areas.
3. Ground Structure Installation
 - a. Lay out locations of solar array foundations
 - b. Set foundations (Drive piles or ground screws) for racking support;
 - c. Install pre-fabricated solar module mounting racks on support posts.
4. PV Module Installation
 - a. Receive/unload/stage PV modules in advance of installation;
 - b. Prepare PV modules and attach to mounting racks;
 - c. Connect module together in "strings" in preparation of connection to inverter.
5. Pad Installation
 - a. Excavate and form foundation for the switchgear and transformer
 - b. Install equipment on concrete pad.
6. Connection to Electric Grid
 - a. Coordinate with Utility on location;
 - b. Install transformer/poles as necessary
7. Demobilization/Restoration
 - a. Removal of temporary office trailers/facilities;
 - b. Seeding of disturbed areas with slow/low growth seed mix
 - c. Complete installation of safety/security fencing; and
 - d. Removal of erosion controls once site deemed stabilize

Design Standards

The following information is provided as required by the Zoning Bylaws (specifically Section 1.3.3.3) and is presented in *italics*, followed by Industria's response:

A written description of the proposed use, signed by the applicant(s) and owner(s) of the property, which provides, at a minimum, the following details:

- *the specific nature of the operations/activities that are proposed on the property;*

The proposed work will involve the installation of a solar generation array which will total 4.0 MW AC/4.0 MW dc and will consist of approximately 10,116 +/- modules along with a 3.5MW/8.6MWh ESS located on site

- *a description of all existing use(s) of the property, and an indication of whether or not such uses will continue with the proposed use(s);*

The property is currently a vacant mostly wooded lot

- *hours of operation of the proposed use(s) or activity;*

There are no hours of operation proposed. The solar array will only be active when it is sunny out

- *the maximum number of employees on the largest shift;*

There will be no permanent employees on site, following construction, the facility will be monitored remotely and visited, on average, once per month for operation and maintenance.

- *shipping/receiving activity (including types of delivery vehicles, number/frequency of deliveries);*

During construction there will be shipping and receiving of material and 20 to 40 workers on site at any one time. The construction will be completed within 4 months after which time there will be operational and maintenance visits on average once per month. There will be no personnel assigned or working daily at the site.

- *use of any hazardous materials or substances in the operation of the proposed use;*

There will be transformers on site that contain mineral-oil di-electric fluid and the battery storage equipment includes lithium-ion battery packs. The transformers are sealed and on a concrete pad. The battery packs are self-contained and inside NEMA 3R storage cabinets on concrete pads. Neither material is hazardous while stored on site or under normal operating conditions.

- *any potential for future changes to the building or use(s), such as increases in: the square footage of the building; the hours of operation and/or deliveries; the maximum number of employees; or any other significant changes to the proposed use(s) as presented by the current application;*

There are no plans for increasing the size of the proposed solar array. In order to connect to t National Grid's distribution network, the size and equipment must be specified and an increase in size is not allowed without reapplication to National Grid.

- *any other information or details that may not be specified herein or required to be shown on the plans, but, as determined by the Planning Board, is relevant due to the specific nature of the proposed use(s) or activity; and a*

There is presently no other information requested. If more information is necessary, we can provide

- *list of any requested waivers from the requirements of Sections 1.3.3.3(d)-(f), including a detailed explanation/justification of the reason(s) for such request.*

We are requesting waivers for parking and traffic studies as there will be no daily traffic to the site once construction is complete. We are also requesting a waiver for volume calculations for earth work. Once the site is cleared and stumped, there will only be grading to smooth the land, install the stormwater basins, and grade the access road. There will be no earth material removed from the site.

Should you have any questions or require additional information or further explanation of the project, please contact me by telephone at (774) 270-0834, or by email at mlotti@industriaeng.com.

Very truly yours,

INDUSTRIA ENGINEERING, INC.



Michael S. Lotti, LSP
Vice President

Cc: James and Nancy Padula (Land Owner), 7 Browns Road, Grafton MA 01519
Tyler Krupa, National Grid (System Owner once constructed), 40 Sylvan Road, Waltham, MA 02451

Enclosures