

SITE PLAN APPROVAL/SPECIAL PERMIT PLANS

FOR A

SOLAR ENERGY FACILITY

125 STILL RIVER ROAD

ROUTES 117 AND 110

BOLTON, MASSACHUSETTS

RECORD OWNER:

MAP 006.A-0000-0004.0
 DAVIS FARMS TRUST
 P.O. BOX 305
 BOLTON, MA 01740

RECORD APPLICANT:

SYNCARPHA SOLAR, LLC
 645 MADISON AVENUE, 14TH FLOOR
 NEW YORK, NY 10022

 RENEWABLE ENERGY MASSACHUSETTS LLC
 17 ARLINGTON STREET
 CAMBRIDGE, MA 02140

LAND PLANNERS-CIVIL ENGINEERS:

BEALS ASSOCIATES, INC.
 2 THIRTEENTH STREET
 CHARLESTOWN, MA 02129

PV - SOLAR ELECTRICAL ENGINEERS:

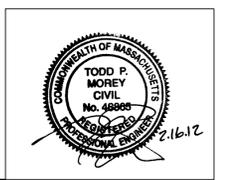
DSC
 DEUTSCHE SOLAR CONSTRUCTION
 OFFICE MONTEREY
 43 SIERRA VISTA DRIVE
 MONTEREY, CA 93940



LOCUS MAP
 SCALE: 1" = 500'

INDEX

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C-763

DATE:
 FEBRUARY 16, 2011

SCALE:
 N.T.S.

REVISIONS:	DATE:

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GENERAL NOTES:

- NO DRAWINGS ISSUED ELECTRONICALLY SHALL BE USED FOR CONSTRUCTION PURPOSES. ALL ELECTRONIC MEDIA IS PROVIDED OUT OF COURTESY ONLY AND MAY NOT BE USED FOR PUBLICATION, DISTRIBUTION OR ADAPTATION WITHOUT EXPRESS WRITTEN CONSENT FROM BEALS ASSOCIATES, INC.
- THESE PLANS AND SPECIFICATIONS ARE INTENDED TO BE EXPLANATORY OF THE WORK TO BE COMPLETED AND OF EACH EACH OTHER. SHOULD ANY OMISSION, ERROR, OR DISCREPANCIES APPEAR, THEY SHALL BE SUBJECT TO CORRECTION AND INTERPRETATION BY THE DESIGN ENGINEER, THEREBY DEFINING AND FULFILLING THE INTENT OF THE PLANS.
- NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS, WORK THAT PROCEEDS WITHOUT NOTIFYING THE ENGINEER IS AT THE CONTRACTOR'S OWN RISK. COSTS OF ANY CHANGES REQUIRED BY THE ENGINEER OF SAID WORK SHALL BE SOLELY BORNE BY THE CONTRACTOR.
- WHERE THE EXISTING UTILITIES ARE FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- ALL CONSTRUCTION SHALL CONFORM TO ALL CODES AND REGULATIONS HAVING JURISDICTION OVER THIS PROJECT, INCLUDING BUT NOT LIMITED TO THE COMMONWEALTH OF MASSACHUSETTS BUILDING CODE, ADA, ETC.
- ALL EXISTING UTILITIES SHOWN ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION ACTIVITIES.
- ALL WORK SHALL BE PERFORMED WITH THE HIGHEST STANDARDS OF THE INDUSTRY.
- THE CONTRACTOR SHALL DISPOSE OF HAZARDOUS MATERIALS AND CONSTRUCTION BY-PRODUCTS IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL LAWS.
- THE CONTRACTOR SHALL AT ALL TIMES KEEP THE SITE CLEAR OF ACCUMULATED WASTE MATERIALS OR RUBBISH GENERATED BY THEIR ACTIVITIES. UPON COMPLETION OF WORK, ALL DEBRIS, SUPPLIES, AND EQUIPMENT SHALL BE REMOVED.
- THE CONTRACTOR SHALL VISIT THE SITE AND DETERMINE ALL BASE BUILDING CONDITIONS PRIOR TO COMMENCING WORK.
- PRIOR TO CONSTRUCTION, CONTRACTORS SHALL SUBMIT A JOB SCHEDULE TO BE DISCUSSED AND PERFORMED IN ACCORDANCE WITH TARGET DATES PROVIDED AND SUBJECT TO OWNER APPROVAL.
- UNLESS OTHERWISE NOTED, WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
- LATERAL DISTANCE TO ALL BUFFER ZONES AND CRITICAL AREAS TO BE VERIFIED PRIOR TO CONSTRUCTION ACTIVITIES.
- AT THE PERIMETER OF NEW CONSTRUCTION ACTIVITIES, THE PROPOSED CONDITION SHALL MEET WITH THE EXISTING CONDITIONS UNLESS OTHERWISE NOTED.
- AREAS OUTSIDE OF THE LIMIT OF WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- PROPOSED UTILITIES INSTALLED BY PRIVATE UTILITY COMPANIES, SUCH AS GAS, ELECTRIC AND TELEPHONE, SHALL BE SUBJECT TO ALTERATION AND ADJUSTMENT. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION COORDINATION WITH THE INSTALLERS.
- UNLESS OTHERWISE NOTED, LOAM AND SEED ALL DISTURBED AREAS.
- SEDIMENT DEPOSITED IN ANY DRAINAGE SYSTEM SHALL BE REMOVED BY THE CONTRACTOR UPON COMPLETION OF CONSTRUCTION ACTIVITIES.
- EROSION AND SEDIMENTATION CONTROL DEVICES TO BE INSTALLED DOWNGRADIENT OF THE LIMIT OF WORK AND/OR AS SHOWN ON THE PLANS AS NECESSARY.
- ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION. EROSION CONTROL SHALL DENOTE THE LIMIT OF WORK UNLESS OTHERWISE NOTED.
- ALL PROPOSED WORK AND MATERIALS LOCATED WITHIN THE PUBLIC RIGHT OF WAY SHALL CONFORM TO THE CITY/TOWN STANDARDS AND REGULATIONS. A STREET OPENING PERMIT SHALL BE OBTAINED FOR ALL SUCH WORK AS NECESSARY.
- ANY DISCREPANCIES IN EXISTING CONDITIONS WILL BE REPORTED BY THE CONTRACTOR TO THE DESIGN ENGINEER PRIOR TO ADDITIONAL CONSTRUCTION ACTIVITIES.
- TOPOGRAPHY SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION.

PLAN NOTES

- PROPERTY LINE DATA COMPILED FROM MULTIPLE SOURCES INCLUDING, BUT NOT LIMITED TO WORCESTER COUNTY REGISTRY OF DEEDS, TOWN OF BOLTON ASSESSOR'S DATA AND PLANS OBTAINED FROM DAVID E. ROSS ASSOCIATES PREPARED FOR THE CURRENT OWNER. FOR ADDITIONAL INFORMATION, REFER TO PLAN OF LAND, APPROVAL NOT REQUIRED PLAN, PREPARED BY DAVID E. ROSS ASSOCIATES, SUBMITTED UNDER SEPARATE COVER.
- TOPOGRAPHIC INFORMATION OBTAINED FROM STATE OF MASSACHUSETTS GIS DATA, GOOGLE EARTH DATA, DAVID E. ROSS ASSOCIATES SURVEY DATA AND OTHER SOURCES FROM THE WORCESTER COUNTY REGISTRY OF DEEDS AND IS NOT THE RESULT OF A COMPREHENSIVE ON THE GROUND TOPOGRAPHIC SURVEY.
- BENCHMARK TO BE ESTABLISHED IN THE FIELD PRIOR TO CONSTRUCTION.
- THE PROJECT SITE DOES NOT APPEAR TO BE WITHIN ANY REGULATED NATURAL RESOURCE AREAS OR THEIR BUFFERS BASED ON MASSACHUSETTS GIS DATA AND FIELD REVIEWS CONDUCTED DURING DECEMBER, 2011 BY BEALS ASSOCIATES, INC. STAFF.
- THE PROJECT SITE IS NOT WITHIN NATURAL HERITAGE ESTIMATED OR PRIORITY HABITAT AREAS BASED ON THE CURRENT NATURAL HERITAGE MAPPING.
- THE PROPERTY IS NOT LOCATED WITHIN MAPPED FLOOD ZONES BASED ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP FOR WORCESTER COUNTY, MASSACHUSETTS, PANEL 459 OF 1075, MAP NUMBER 2502700459E EFFECTIVE JULY 4, 2011.
- UNDERGROUND UTILITIES WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE SHOWN IN AN APPROXIMATE WAY ONLY. UTILITIES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. SOME DATA MAY BE CONFLICTING AND CAN ONLY BE VERIFIED BY EXCAVATION, BEFORE DESIGN AND CONSTRUCTION CALL "DIG SAFE" AT 1-800-322-4844.
- ANY DISCREPANCIES IN EXISTING CONDITIONS SHALL BE REPORTED TO BY THE CONTRACTOR TO THE DESIGN ENGINEER PRIOR TO ADDITIONAL CONSTRUCTION ACTIVITIES.
- UPON CONCLUSION OF THE OPERATION OF THE SOLAR ENERGY FACILITY ALL SURFACE AND SUBSURFACE UTILITIES AND IMPROVEMENTS SHALL BE REMOVED. SITE CONDITIONS SHALL BE RESTORED TO PREDEVELOPMENT CONDITIONS, INCLUDING RESTORATION OF THE LAND TO AGRICULTURAL CONDITIONS.

ZONING NOTES:

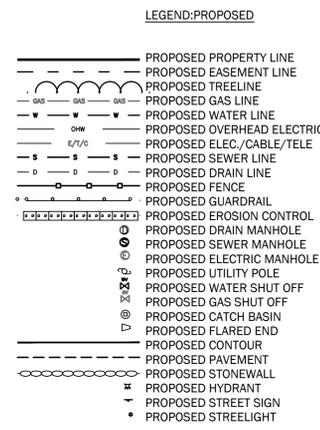
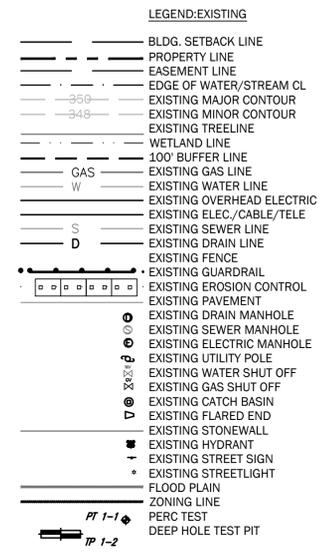
THE SUBJECT PROPERTY IS LOCATED IN A RESIDENTIAL ZONE WHICH IS ALSO SUBJECT TO MGL CHAPTER 40A, SECTION 3 RELATING TO THE SITING OF SOLAR ENERGY SYSTEMS. CONSISTENT WITH THAT MGL, SOLAR GENERATION FACILITIES ARE NOT A PROHIBITED USE IN BOLTON. AT THE TIME THESE PLANS ARE BEING PREPARED, IT IS NOTED THAT THE TOWN OF BOLTON IS IN THE PROCESS OF DEVELOPING AND IMPLEMENTING A LARGE SCALE SOLAR ZONING BY-LAW WHICH WILL BE VOTED UPON BY THE TOWN ON MAY 7, 2012. THE PLANS AND PERMIT APPLICATIONS HAVE BEEN PREPARED IN ANTICIPATION THAT THE ZONING BY-LAW WILL BE SIMILAR IN CONTENT TO THE STATE OF MASSACHUSETTS EXAMPLE THAT HAS BEEN UNDER REVIEW BY THE TOWN OF BOLTON PLANNING BOARD.

EXISTING BOLTON SPACE AND BULK REQUIREMENTS:

MINIMUM LOT AREA: 1.5 ACRES
 MINIMUM LOT FRONTAGE: 200 FEET
 MINIMUM LOT WIDTH AT 100 FEET BACK FROM STREET LINE: 150 FEET
 LOT SHAPE: N/A FOR LOTS > 4.5 ACRES
 MINIMUM FRONT YARD: 150 FEET
 MINIMUM SIDE YARD: 50 FEET
 MINIMUM REAR YARD: 50 FEET
 MAXIMUM LOT COVERAGE: 8% AND THE SUM OF ALL IMPERMEABLE SURFACES SHALL NOT EXCEED 50% OF THE TOTAL LOT AREA WITHIN THE ZONE OF PROPOSED USE.

THE PROPOSED PROJECT WILL REQUIRE THE FOLLOWING PERMITS FROM THE TOWN OF BOLTON, MASSACHUSETTS:

- SITE PLAN APPROVAL FROM BOARD OF SELECTMEN
- SPECIAL PERMIT APPROVAL FROM PLANNING BOARD
- BUILDING PERMIT FROM BUILDING INSPECTOR



**Construction Sequence - Solar Energy Facility
125 Still River Road
Bolton, MA**

Construction of the proposed project will proceed as follows:

- The limit of work line shown on the approved plans will be clearly marked with flags and stakes.
- Install construction entrance and erosion control measures prior to operating heavy equipment on the site.
- Any and all materials associated with the construction of the solar energy facility shall be stockpiled on the site.
- Remove vegetation as necessary along the perimeter of the southerly and westerly boundaries of the construction area to allow maximum solar gain. Remove windbreak vegetation in the center of the site.
- Scarify existing fields and over-sow cover crop of low-growing vegetation (i.e. alfalfa, red clover, white clover, crown vetch, hairy vetch, buckwheat, and birdsfoot trefoil).
- Install construction and maintenance drives as shown on plans.
- Install 6 foot chain link fence (or equal) at limit of work.
- Install supports for photovoltaic panels.
- Install photovoltaic panels.
- Construct electrical conduit connecting panel arrays.
- Construct infra-structure for the collection of electricity generated by the photovoltaic panels (i.e. inverters and transfer station).
- No pesticides, herbicides or fertilizers will be used during the construction or future operation and maintenance of the facility.
- Upon abandonment or discontinued use of the Solar Energy Facility, all surface and subsurface utilities and improvements shall be removed. Site conditions shall be restored to predevelopment conditions, including agricultural conditions.

PREPARED FOR:

Syncarpha Solar, LLC
 645 Madison Avenue
 14th Floor
 New York, NY 10022
 and
 Renewable Energy
 Massachusetts LLC
 17 Arlington Street
 Cambridge, MA 02140

BEALS ASSOCIATES Inc.
 2 THIRTEENTH STREET CHARLESTOWN, MA 02129
 PHONE: 617-242-1120 FAX: 617-242-1190



NO.	REVISION/ISSUE	DATE

GENERAL NOTES AND LEGEND

SITE PLAN APPROVAL/SPECIAL PERMIT PLANS

SOLAR ENERGY FACILITY
 125 STILL RIVER ROAD
 BOLTON, MASSACHUSETTS

PROJECT C-763	DESIGN TPM	SHEET 2 OF 7
DATE February 16, 2012	CHECKED TPM	
SCALE AS NOTED	REVISED TPM	

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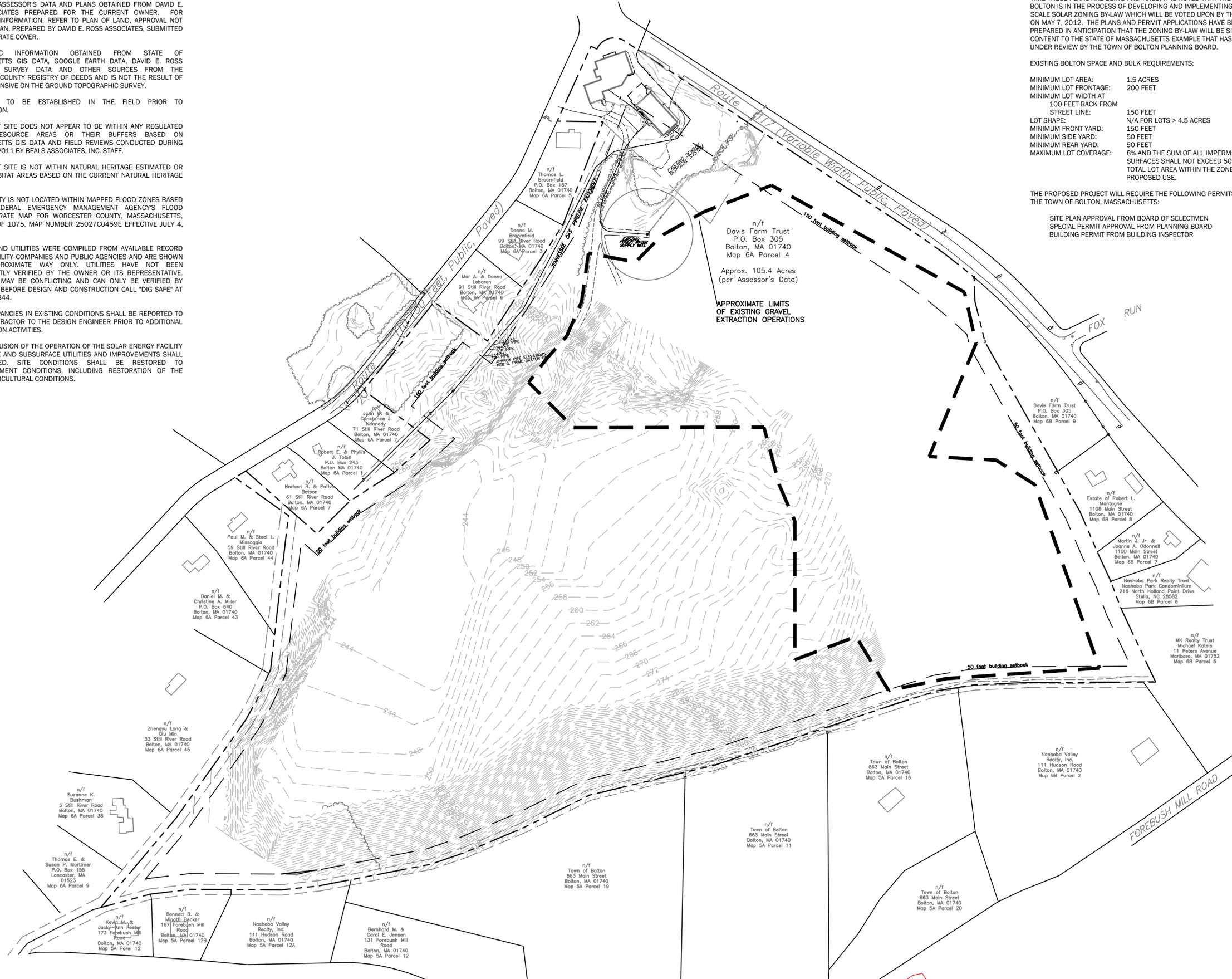
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 MINIMUM FRONT YARD: 150 FEET
 MINIMUM SIDE YARD: 50 FEET
 MINIMUM REAR YARD: 50 FEET
 MAXIMUM LOT COVERAGE: 3% AND THE SUM OF ALL IMPERMEABLE SURFACES SHALL NOT EXCEED 50% OF TOTAL LOT AREA WITHIN THE ZONE OF PROPOSED USE.

THE PROPOSED PROJECT WILL REQUIRE THE FOLLOWING PERMITS FROM THE TOWN OF BOLTON, MASSACHUSETTS:

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PREPARED FOR:

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 New York, NY 10022
 and
 Renewable Energy
 Massachusetts LLC
 17 Arlington Street
 Cambridge, MA 02140

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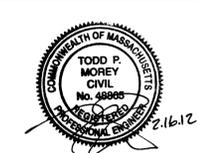
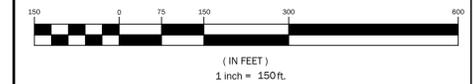
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GRAPHIC SCALE



NO.	REVISION/ISSUE	DATE

EXISTING CONDITIONS PLAN
SITE PLAN APPROVAL/SPECIAL PERMIT PLANS
SOLAR ENERGY FACILITY
125 STILL RIVER ROAD
BOLTON, MASSACHUSETTS

PROJECT	DESIGN	SHEET
C-763	TPM	3 OF 7
DATE	CHECKED	
February 16, 2012	TPM	
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ZONING NOTES:

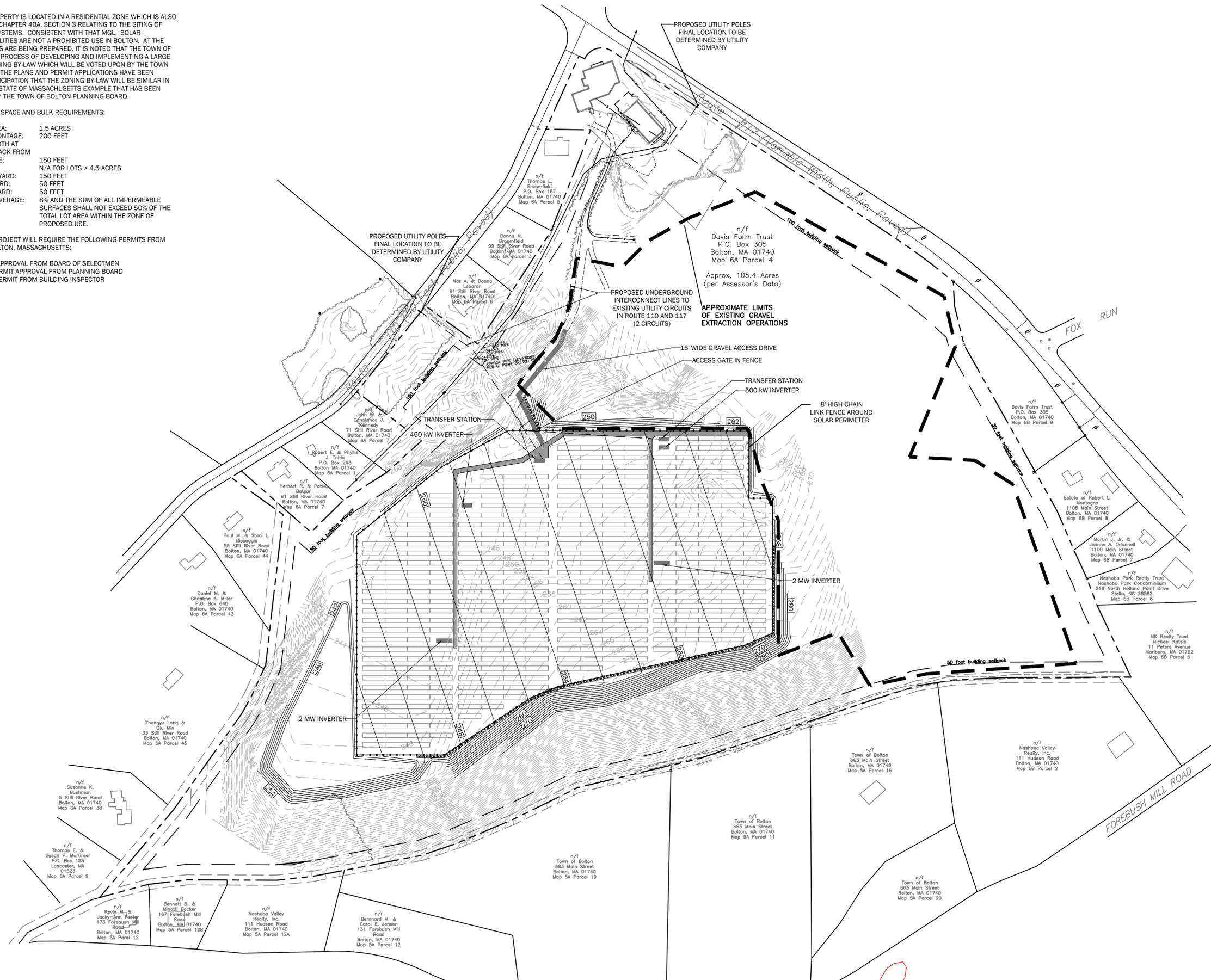
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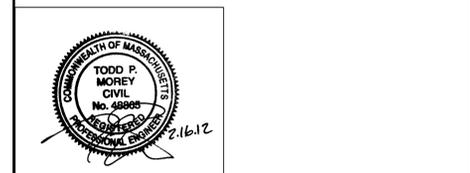
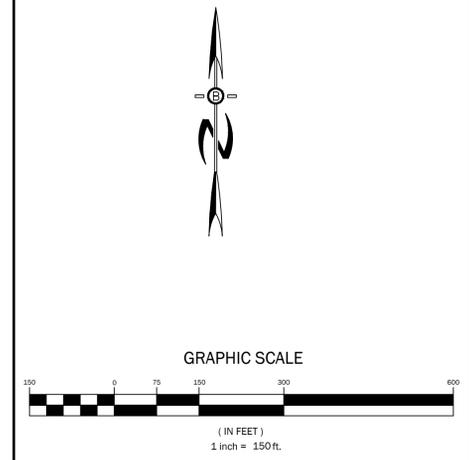
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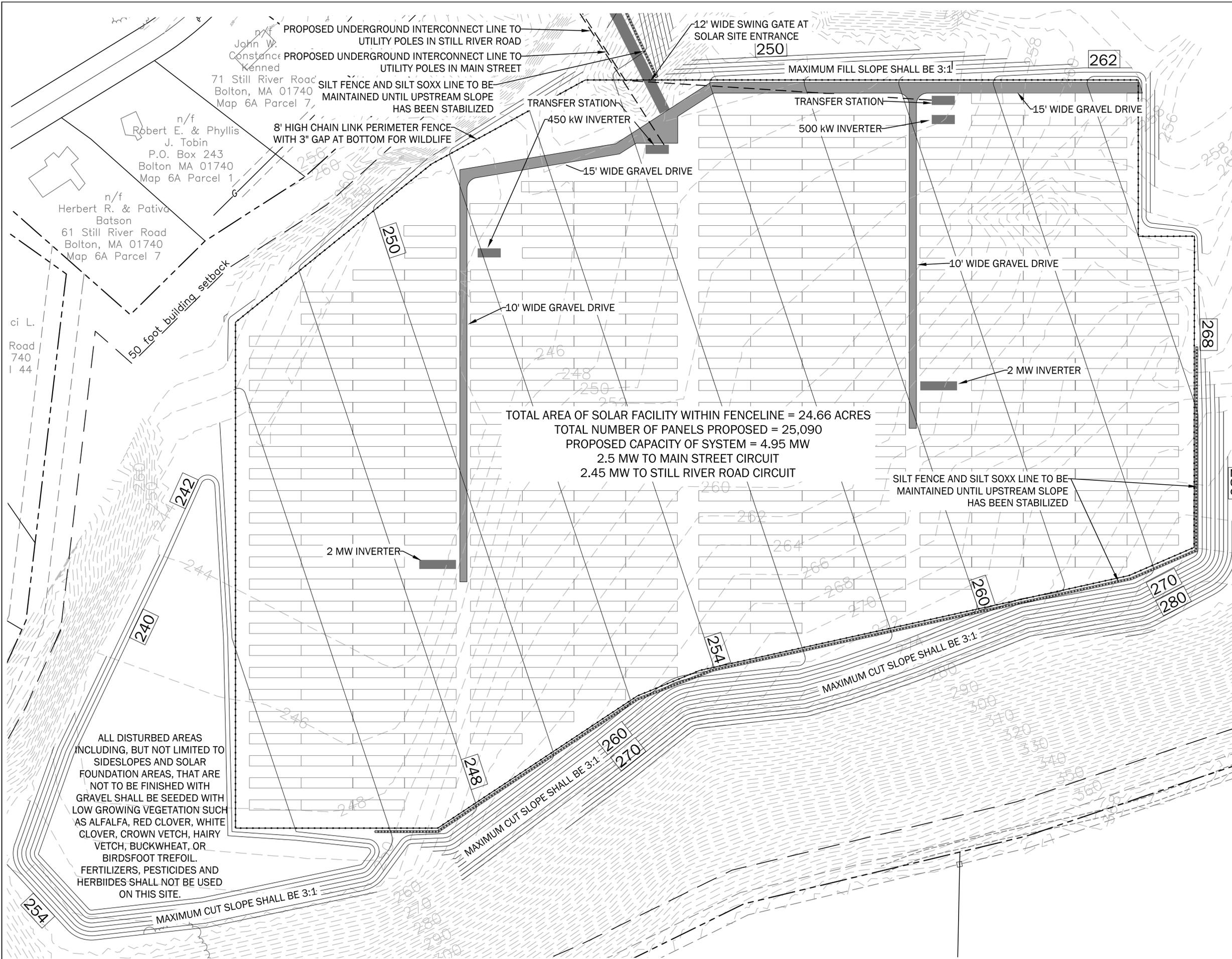
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OVERALL SITE PLAN
SITE PLAN APPROVAL/SPECIAL PERMIT PLANS
SOLAR ENERGY FACILITY
125 STILL RIVER ROAD
BOLTON, MASSACHUSETTS

PROJECT C-763	DESIGN TPM	SHEET 4 OF 7
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PROPOSED UNDERGROUND INTERCONNECT LINE TO UTILITY POLES IN STILL RIVER ROAD
 PROPOSED UNDERGROUND INTERCONNECT LINE TO UTILITY POLES IN MAIN STREET
 71 Still River Road
 Bolton, MA 01740
 Map 6A Parcel 7

n/f Robert E. & Phyllis J. Tobin
 P.O. Box 243
 Bolton MA 01740
 Map 6A Parcel 1

n/f Herbert R. & Pativa Batson
 61 Still River Road
 Bolton, MA 01740
 Map 6A Parcel 7

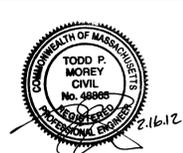
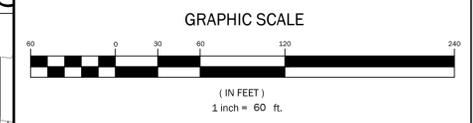
TOTAL AREA OF SOLAR FACILITY WITHIN FENCELINE = 24.66 ACRES
 TOTAL NUMBER OF PANELS PROPOSED = 25,090
 PROPOSED CAPACITY OF SYSTEM = 4.95 MW
 2.5 MW TO MAIN STREET CIRCUIT
 2.45 MW TO STILL RIVER ROAD CIRCUIT

ALL DISTURBED AREAS INCLUDING, BUT NOT LIMITED TO SIDESLOPES AND SOLAR FOUNDATION AREAS, THAT ARE NOT TO BE FINISHED WITH GRAVEL SHALL BE SEEDED WITH LOW GROWING VEGETATION SUCH AS ALFALFA, RED CLOVER, WHITE CLOVER, CROWN VETCH, HAIRY VETCH, BUCKWHEAT, OR BIRDSFOOT TREFOIL. FERTILIZERS, PESTICIDES AND HERBICIDES SHALL NOT BE USED ON THIS SITE.

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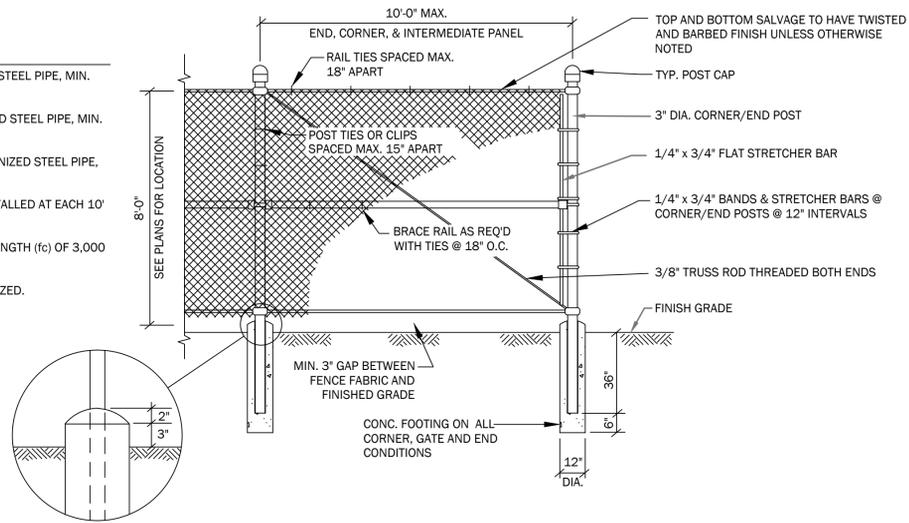


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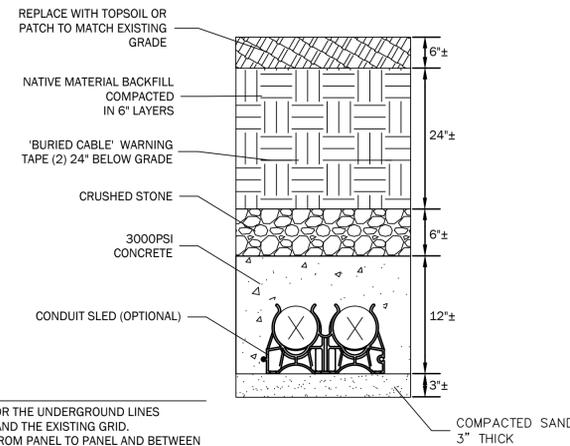
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SITE PLAN APPROVAL/SPECIAL PERMIT PLANS
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PROJECT C-763	DESIGN TPM	SHEET 5 OF 7
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- NOTES:**
- CORNER OR END POST: NOMINAL 3" O.D. GALVANIZED STEEL PIPE, MIN. 5.79 lbs./LF.
 - INTERMEDIATE POST: NOMINAL 2-3/8" O.D. GALVANIZED STEEL PIPE, MIN. 3.65 lbs./LF.
 - BRACES (TOP & BOTTOM): NOMINAL 1-5/8" O.D. GALVANIZED STEEL PIPE, MIN. 2.27 lbs./LF.
 - BRACE RAIL AND DIAGONAL BRACE ROD SHALL BE INSTALLED AT EACH 10' CORNER SECTION OF ENCLOSURE.
 - CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH (fc) OF 3,000 psi WITH 6% AIR ENTRAINMENT.
 - ALL FENCE MATERIALS SHALL BE HOT-DIPPED GALVANIZED.

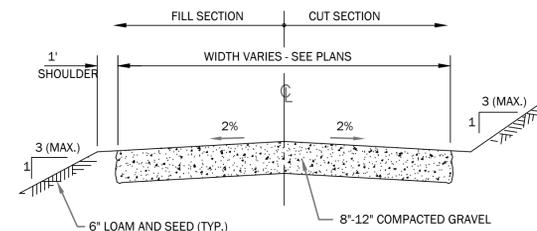


TYPICAL CHAIN LINK FENCE
NOT TO SCALE

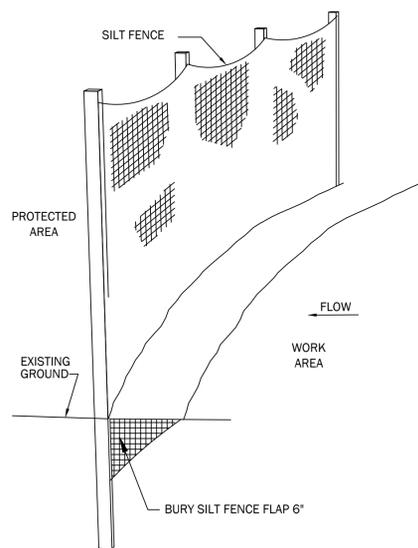


- NOTES:**
- THIS DETAIL SHALL BE USED ONLY FOR THE UNDERGROUND LINES BETWEEN THE TRANSFER STATIONS AND THE EXISTING GRID.
 - UNDERGROUND ELECTRICAL LINES FROM PANEL TO PANEL AND BETWEEN OTHER APPURTENANCES MAY BE INSTALLED IN CONDUIT THAT IS DIRECT BURIED WITHOUT CONCRETE.
 - IN ALL CIRCUMSTANCES, ALL UNDERGROUND ELECTRICAL CONDUIT SHALL FEATURE 'BURIED ABE' WARNING TAPE 24" BELOW GRADE.

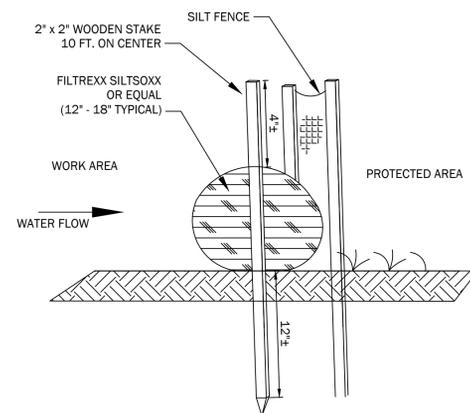
INTERCONNECT LINE ELECTRICAL CONDUIT DUCTBANK
NOT TO SCALE



GRAVEL MAINTENANCE DRIVE TYPICAL CROSS SECTION
NOT TO SCALE



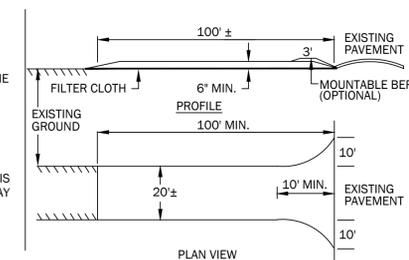
SILT FENCE INSTALLATION
NOT TO SCALE



- NOTES:**
- ALL MATERIALS TO MEET INSTALLER SPECIFICATIONS.
 - COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
 - LARGER SILT SOXX OR EQUAL TO BE PROVIDED FOR STEEP SLOPES AND HEAVY FLOW AREAS.
 - SILTISOXX OR EQUAL TO BE COMPOSTED AND DISPERSED AS PER CONSERVATION COMMISSION DIRECTION.

FILTRIX SILTISOXX TYPICAL INSTALLATION
NOT TO SCALE

- NOTES:**
- STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
 - THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
 - THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
 - THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.
 - GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENCE LOT.
 - ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.



STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE

PREPARED FOR:
Syncarpha Solar, LLC
645 Madison Avenue
14th Floor
New York, NY 10022
and
Renewable Energy
Massachusetts LLC
17 Arlington Street
Cambridge, MA 02140

BEALS ASSOCIATES INC.

2 THIRTEENTH STREET CHARLESTOWN, MA 02129
PHONE: 617-242-1120 FAX: 617-242-1190



NO.	REVISION/ISSUE	DATE

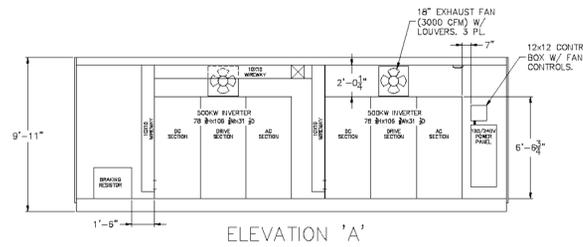
DETAIL SHEET 1

SITE PLAN APPROVAL/SPECIAL PERMIT PLANS
SOLAR ENERGY FACILITY
125 STILL RIVER ROAD
BOLTON, MASSACHUSETTS

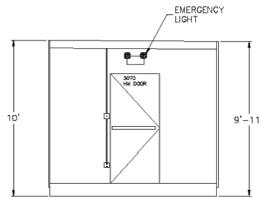
PROJECT	DESIGN	SHEET
C-763	TPM	6 OF 7
DATE	CHECKED	
February 16, 2012	TPM	
SCALE	REVISED	
AS NOTED	TPM	

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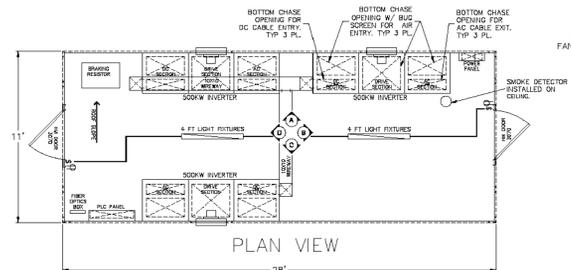


- Enclosure Options:
1. Stucco Embossed Aluminum Siding - Pueblo Tan
 2. Painted 3/4" Fire Resistant Plywood Floors
 3. Purchased Metal Doors.
 4. Membrane Roof - White
 5. Insulated Walls & Ceiling (R4.2)

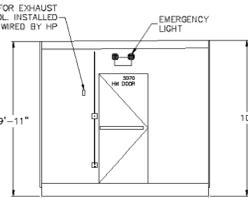


ELEVATION 'D'

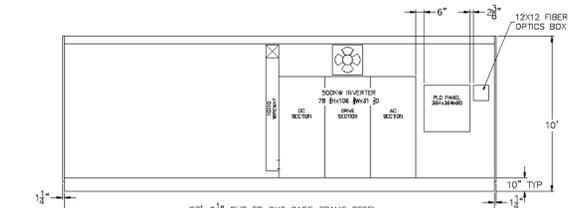
APPROX WGT: 27,000 LBS.



PLAN VIEW



ELEVATION 'B'

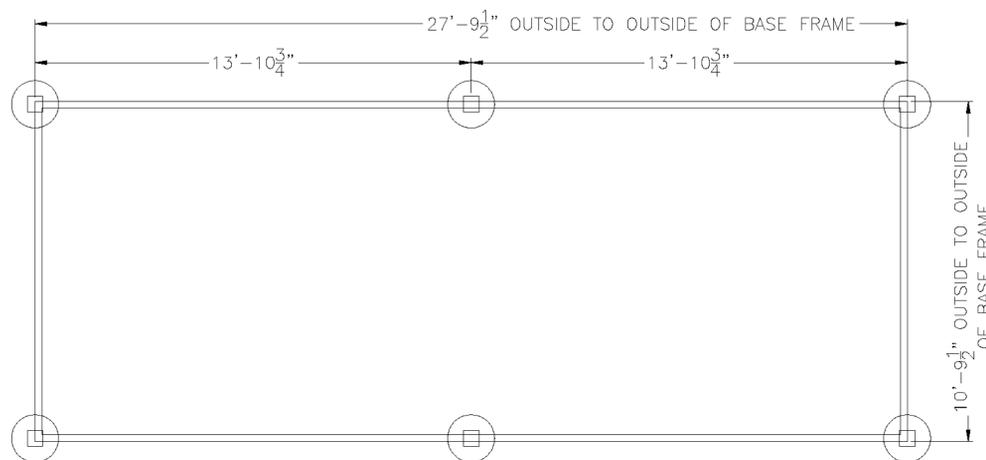


ELEVATION 'C'

SOLAR INVERTER

FOR ILLUSTRATIVE PURPOSES ONLY
NOT FOR CONSTRUCTION

REVISION RECORD				SIEMENS PV ANYWHERE, USA	
REV	DATE	BY	DESCRIPTION	DATE	BY
1	01/20/10	IC	RELEASED FOR PROP	01/20/10	IC

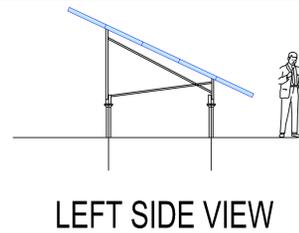


SUPPORT PIER LAYOUT

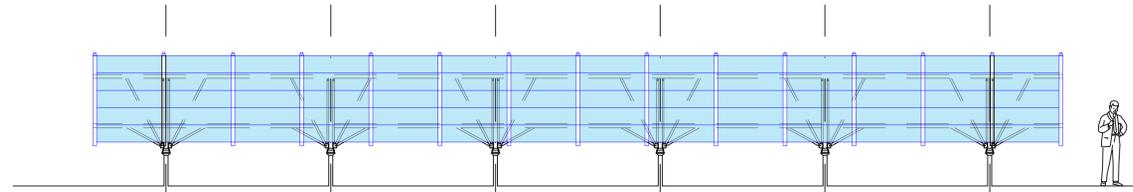
FOR ILLUSTRATIVE PURPOSES ONLY
NOT FOR CONSTRUCTION

SUPPORT PIER SPACING

REVISION RECORD				SIEMENS PV ANYWHERE, USA	
REV	DATE	BY	DESCRIPTION	DATE	BY
1	01/20/10	IC	RELEASED FOR PROP	01/20/10	IC



LEFT SIDE VIEW



FRONT VIEW

CS6P
230/235/240/245/250P

On-grid Module

CS6P is a robust solar module with 60 solar cells. These modules can be used for on-grid solar applications. Our meticulous design and production techniques ensure a high-yield, long-term performance for every module produced. Our rigorous quality control and in-house testing facilities guarantee Canadian Solar's modules meet the highest quality standards possible.

Key Features

- Top ranked PVUSA (PTC) rating in California for higher energy production
- Industry first comprehensive warranty insurance by AM Best rated leading insurance companies in the world
- Industry leading plus only power tolerance: 0 - +5W
- Strong framed module, passing mechanical load test of 5400Pa to withstand heavier snowload
- The 1st manufacturer in the PV industry certified for ISO 7516948 (The automotive quality management system) in module production since 2003
- ISO 17025 qualified manufacturer owned testing lab, fully complying to IEC, TUV, UL testing standards
- Backed By Our New 10/25 Linear Power Warranty Plus our added 25 year insurance coverage

Applications

- On-grid residential roof-tops
- On-grid commercial/industrial roof-tops
- Solar power stations
- Other on-grid applications

Quality Certificates

- IEC 61215, IEC 61730, UL1703, CE/CListed, CE and MCS
- ISO9001:2008, Standards for quality management systems
- ISO/TS16949:2009, The automotive quality management system

Environmental Certificates

- ISO 14001:2004, Standards for Environmental management systems
- QC080000 HSPM, The Certification for Hazardous Substances Regulations

Environmental Certifications

- ISO 14001:2004, Standards for Environmental management systems
- QC080000 HSPM, The Certification for Hazardous Substances Regulations

Temperature Characteristics

Temperature Coefficient: Pmax: -0.43%/°C, Voc: -0.34%/°C, Isc: -0.031%/°C

Normal Operating Cell Temperature: 45±2°C

Performance at Low Irradiance

Industry leading performance at low irradiation environment, +95.5% module efficiency under an irradiance of 100W/m² to 200W/m² (AM 1.5, 25°C)

Engineering Drawings

Electrical Data

STC	CS6P-230P	CS6P-235P	CS6P-240P	CS6P-245P	CS6P-250P
Rated Maximum Power (Pmax)	230W	235W	240W	245W	250W
Optimum Operating Voltage (Vmp)	29.8V	29.8V	29.9V	30.0V	30.1V
Optimum Operating Current (Imp)	7.76A	7.89A	8.02A	8.17A	8.30A
Open Circuit Voltage (Voc)	38.9V	38.9V	37.9V	37.9V	37.9V
Short Circuit Current (Isc)	8.34A	8.48A	8.59A	8.74A	8.87A
Module Efficiency	14.30%	14.81%	14.92%	15.23%	15.46%

Mechanical Data

Cell Type	Polycrystalline 156x156mm, 2cr 3 Busters
Cell Arrangement	60 (6x10)
Dimensions	1638 x 982 x 45mm (64.5 x 38.7 x 1.77in)
Weight	20kg (44.1 lbs)
Front Cover	3.2mm Tempered glass
Frame Material	Anodized aluminum alloy
J-Box	IP65, 3-socket
Cable	4mm²(IEC)/12AWG(UL), 1100mm
Connectors	MCA or MCA Compatible
Standard Packaging (Modules per Pallet)	2400
Module Pitches per pallet (40' R. Container)	873pcs (40'HQ)

I-V Curves (CS6P-250P)

About Canadian Solar

Canadian Solar Inc. is one of the world's largest solar manufacturers of ingots, wafers, cells, solar modules and solar systems. Canadian Solar delivers solar power products of uncompromising quality to worldwide customers. Canadian Solar's world class team of professionals works closely with our customers to provide them with solutions for all their solar needs.

Canadian Solar was founded in Canada in 2001 and was successfully listed on NASDAQ Exchange (symbol: CSIQ) in November 2006. Canadian Solar has already expanded its manufacturing capacity to 2,950W and cell manufacturing capacity to 1.3GW in 2011.

Headquarters | 550 Riverbend Drive, Suite B
Kingston, Ontario | Canada K2K 3S2
Tel: +1-613-864-2057
Fax: +1-613-878-2087
www.canadasolar.com

SYSTEM DETAILS

SECTION	450kWp	500kWp	2 Sections of 2000kWp each Totals Below
# OF FRAMES	36 p	38 p	312 p
# OF MODULS	2,340 p	2,470 p	20,280 p
# MODULS/FRAME	60 p	60 p	60 p
# MODULS/STRING	13 p	13 p	13 p
POWER MODUL	235Wp	235Wp	235Wp
POWER DC	549.9 kWp	580.45 kWp	4766 kWp
POWER AC	450 kWp	500 kWp	4,000 kWp
AZIMUTH	180°	180°	180°
PITCH	27°	27°	27°
MOUNT	Fixed	Fixed	Fixed
INVERTERS	2 x 100kW PVP 1 x 250kW PVP	1 x 500kW Stat.	1 x 2.00 MW Stat.

PREPARED FOR:

Syncarpha Solar, LLC
645 Madison Avenue
14th Floor
New York, NY 10022
and
Renewable Energy
Massachusetts LLC
17 Arlington Street
Cambridge, MA 02140

BEALS ASSOCIATES INC.
2 THIRTEENTH STREET CHARLESTOWN, MA 02129
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DETAIL SHEET 2

SITE PLAN APPROVAL/SPECIAL PERMIT PLANS
SOLAR ENERGY FACILITY
125 STILL RIVER ROAD
BOLTON, MASSACHUSETTS

PROJECT	DESIGN	SHEET
C-763	TPM	7 OF 7
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February 16, 2012	TPM	
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