January 4, 2016

Town of Ashland Planning Board
101 Main Street, 2nd Floor
Ashland, MA 01721

Re: Application for Site Plan Review and Special Permit
102 Howe Street, Ashland Landfill

Dear Members of the Planning Board:

On behalf of Ameresco, Inc. (d/b/a Ashland Howe Street Solar LLC [Ameresco]), AMEC Massachusetts, Inc. (AMEC) is submitting this document and associated attachments to the Town of Ashland Planning Board for Site Plan Review and a Special Permit for the Ashland Landfill 907 kilowatt (kW) Solar Photovoltaic (PV) Installation Project (the Project) (see Figures 1 and 2 for the site location). The application for Site plan Review is included as Appendix A.

The Project consists of the construction and installation of a 907 kW solar array on the Town of Ashland landfill located at 102 Howe Street (the Site). The Site consists of approximately 9.2 acres of Town owned land which includes the existing closed landfill, forested areas and wetlands.

The Project will occupy approximately 3.1 acres of the approximately 9.2 acre property. The solar array will consist of approximately 2,964 PV modules. The modules will be mounted on racks which will be supported by concrete ballast foundation blocks that will be placed on gravel on the landfill surface in order to prevent damage to the landfill geomembrane capping system. The solar panels will extend approximately 8 feet above the existing ground surface. The solar PV array will be connected through a single AC combiner panel and transformer pad. The purpose of the transformer is to step up the voltage to match and allow for interconnection with the Eversource utility grid. Medium voltage power from the transformer will run in approximately 210 feet of ground-surface mounted medium voltage line and approximately 45 feet of overhead medium voltage line. Three (3) utility poles will be installed on the landfill (one customer pole and two Eversource poles) to allow for connection to the existing Eversource utility line with approximately 45 feet of overhead line. For security purposes, an approximate 1,600 linear foot chain link fence will be installed around the solar array. Additionally, a soil berm with plantings and vegetation will be constructed along Howe Street for screening purposes.

The Project plans included in Appendix B were prepared in accordance with the Town of Ashland Zoning Bylaws Chapter 282, Section 8.3 Photovoltaic Installations Overlay District (PIOD) and Section 9.4 Site Plan Review. Information required in the Bylaws is included in the attached application (see Appendix A), this narrative, and the attached drawings and supporting documentation (see Appendices B through J).

AMEC Massachusetts, Inc.
271 Mill Road, 3rd Floor
Chelmsford, MA 01824
+1 978-692-9090
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Chapter 282 Section 8.3 – Photovoltaic Installations Overlay District (PIOD)

Section 8.3.6 Site Plan Review

1) Section 8.3.6.1: General. All plans and maps shall be prepared, stamped and signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts. *The Project plans included in Appendix B have been prepared, stamped and signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts.*

2) Section 8.3.6.2: Required Documents. Not in lieu of but in addition to the requirements under Section 9.4 of this Zoning Bylaw, a project proponent shall provide the following documents to the Planning Board:

   (a) A site plan showing:

   i. Property lines and physical features, including roads, for the project site; *The property lines and physical features of the Project Site are shown on the site plan included in Appendix B.*

   ii. Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures; *Grading associated with the Project will be limited to the temporary gravel access road that will be used during construction, the two permanent access roads, and the area along Howe Street where the soil berm will be located (see Appendices B and C). Additionally, approximately 6 inches of grass/topsoil will be excavated in the area of each ballast foundation block. This material will be replaced with imported gravel and each concrete ballast foundation block placed on top of the gravel. The topsoil will be reused to the extent practicable on-site for the construction of the soil berm. Clearing of existing vegetation will be limited to what is necessary for the construction, operation and maintenance of the facility and will result from rack ballast installations, the concrete pad for the transformer, and construction of the access roads. Tree removal will be limited to the existing small trees along Howe Street, which will be replaced with a soil berm and plantings and vegetation. The Landscape Architectural Plan designed by Beals and Thomas, Inc. for the Project is included in the Site Plan drawing package (Appendix B) and includes the soil berm and proposed vegetative screening. The proposed transformer will be installed at ground level which will be screened by the array and the vegetative screening proposed in the Landscape architectural Plan. No lighting or other structures are proposed.*

   iii. Blueprints or drawings of the Large-scale Ground-mounted Solar Photovoltaic Installation signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts showing the proposed layout of the system and any potential shading from nearby structures. *The proposed solar array layout and potential shading from nearby structures is shown on the site plan. The Project plans included in Appendix B have been prepared, stamped and signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts.*

   iv. One or three line electrical diagram detailing the Large-scale Ground-mounted Solar Photovoltaic Installation, associated components and electrical

interconnection methods, with all National Electrical Code compliant disconnects and overcurrent devices; *The electrical line diagram for the Project is included in the Project plans in Appendix J.*

v. Documentation of the major system components to be used, including the PV panels, mounting system and inverter; *Documentation of the major system components to be used are included in Appendix D.*

vi. Name, address and contact information for the proposed system installer. *The name, address and contact information for the installer is included on the site plan and is as follows:*

Ameresco, Inc. (d/b/a Ashland Howe Street Solar LLC)
111 Speen Street, Suite 410
Framingham, Massachusetts 01701
(508) 661-2200

vii. Name, address, phone number and signature of the project proponent, as well as all co-proponents or property owners, if any; *The contact information for the project proponent and property owner are included on the site plan and are as follows:*

Project Proponent:
Ameresco, Inc. (d/b/a Ashland Howe Street Solar LLC)
111 Speen Street, Suite 410
Framingham, Massachusetts 01701
(508) 661-2200

Property Owner:
Town of Ashland
101 Main Street
Ashland, Massachusetts 01721
(508) 881-0100

viii. The name, contact information and signature of any agent(s) representing the project proponent. *The contact information for the agent representing the project proponent is included on the site plan and is as follows:*

AMEC Massachusetts, Inc.
271 Mill Road
Chelmsford, Massachusetts 01824
(978) 692-9090

(b) Documentation of actual or prospective access and control of the project site; *See Section 8.3.6.3, below;*

(c) An operation and maintenance plan; *See Section 8.3.6.4, below;*

(d) Zoning district designation for the parcel(s) of land comprising the project site, via submission of a copy of the Town's Zoning Map with the parcel(s) identified thereon; *The Project Site is located at 102 Howe Street (Map 12, Parcel 0223) and is zoned Residential*

A. The Site is also part of an established Photovoltaic Installation Overlay District (PIOD). Copies of the Town's Zoning Maps are enclosed in Appendix E.

(e) Proof of liability insurance. *A copy of liability insurance is enclosed in Appendix F.*

(f) Description of financial surety; *See Section 8.3.11.3, below.*

3) Section 8.3.6.3: Site Control. The project proponent shall submit documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed Large-scale Ground-mounted Solar Photovoltaic Installation. *Appendix I contains a copy of the agreement with the Town of Ashland for access and use of the Site.*

4) Section 8.3.6.4: Operation and Maintenance Plan. The project proponent shall submit a plan for the operation and maintenance of the Large-scale Ground-mounted Solar Photovoltaic Installation, which shall include measures for maintaining safe access to the installation, stormwater controls and general procedures for operational maintenance of the installation. *An Operation and Maintenance Plan for the Solar PV Array is enclosed in Appendix G.*

5) Section 8.3.6.5: Utility Notification. Evidence shall be provided by the project proponent that the utility company operating the electrical grid where the Large-scale Ground-mounted Solar Photovoltaic Installation is to be located has been informed of the installation owner or operator's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from said requirement. *Documentation of the correspondence with Eversource is enclosed in Appendix H.*

<u>Section 8.3.7 Dimensional and Density Requirements</u>

1.) Section 8.3.7(1): Setbacks. For Large-scale Ground-mounted Solar Photovoltaic Installations, front, side and rear setbacks shall be as follows: [Amended 5-7-2014 ATM, Art. 26]

a. Front yard: the front yard depth shall be at least 10 feet; provided, however, that where the lot abuts or lies within a residential district, the front yard shall not be less than 50 feet. *The Project Site is located in a Residential District A. Therefore, a minimum front yard setback of 50 feet is applicable to the Project. As shown on the Project site plan included in Appendix B, the Project has a 50 foot front yard setback. As such, the Project complies with the front yard setback requirement.*

b. Side yard: each side yard shall have a depth at least 15 feet; provided, however, that where the lot abuts or lies within a residential district, the side yard shall not be less than 50 feet. *The Project Site is located in a Residential District A. Therefore, a minimum side yard setback of 50 feet is applicable to the Project. As shown on the Project site plan included in Appendix B, the Project has been designed with 50 foot side yard setbacks. As such, the Project complies with the side yard setback requirement.*

c. Rear yard: the rear yard depth shall be at least 25 feet; provided, however, that where the lot abuts or lies within a residential district, the rear yard shall not be less than 50 feet. *As noted above, the Project Site is located in a Residential District A. As such, the minimum rear yard setback of 50 feet is applicable to the Project. As shown on the Project*

site plan included in Appendix B, the Project has a 50 foot rear yard setback. As such, the Project complies with the rear yard setback requirement.

2.) Section 8.3.7(2): Appurtenant Structures. All appurtenant structures to Large-scale Ground-mounted Solar Photovoltaic Installations shall be subject to reasonable regulations concerning the bulk and height of structures, lot area, setbacks, open space, parking and building coverage requirements. All such appurtenant structures, including but not limited to equipment shelters, storage facilities, transformers and substations, shall be architecturally compatible with each other. Whenever reasonable, structures should be shaded from view by vegetation and/or joined or clustered to avoid adverse visual impacts. *With the exception of during construction, the Project does not include any outdoor storage. The proposed transformer will be installed at ground level which will be screened by the array and landscape architecture. No other appurtenant structures are proposed. As such, the Project will comply with the requirements for appurtenant structures.*

Section 8.3.8 Design Standards

1) Section 8.3.8(1): Lighting. *There is no proposed lighting.*

2) Section 8.3.8(2): Signage. *The proposed signage for the Project is included in the Project plans included in Appendix B. The proposed sign meets the requirements of Section 5.3 and identifies the owner of the Project and 24 hour emergency contact phone number.*

3) Section 8.3.8(3): Utility Connections. *The utility connection between the PV system and the existing electric infrastructure will be made with medium voltage power from the transformer transferring through approximately 210 feet of surface mounted medium voltage line and approximately 45 feet of overhead medium voltage line. All reasonable efforts have been made to place utilities underground; however, given the nature of the site, a closed landfill, the utility connections cannot be placed underground.*

Section 8.3.9 Safety and Environmental Standards

1. Emergency Services. The Large-scale Ground-mounted Solar Photovoltaic Installation owner or operator shall provide a copy of the project summary, electrical schematic and site plan to the Fire Chief. Upon request, the owner or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the Large-scale Ground-mounted Solar Photovoltaic Installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation. *This application for Site Plan Review and a Special Permit contains a summary of the Project, the electrical schematic for the Project (Appendix J) and site plan (see Appendix B). A copy of this application for Site Plan Special Permit is being filed with the Town of Ashland Fire Chief. Should an emergency response plan be requested, Ameresco will work with local emergency services in developing a plan. All means of shutting down the solar photovoltaic installation will be clearly marked. The individual responsible for public inquiries throughout the life of the installation is:*

Ameresco, Inc. (d/b/a Ashland Howe Street Solar LLC)
508-661-2200

2. Land Clearing. Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Large-scale Ground-mounted Solar Photovoltaic Installation or otherwise prescribed by applicable laws, bylaws and regulations. *Clearing of existing vegetation will be limited to what is necessary for the construction, operation and maintenance of the facility. Tree removal will be limited to the existing small trees along Howe Street, which will be replaced with a soil berm and plantings and vegetation (see landscape drawings in Appendix B).*

3. Landscape Architectural Plan. For any Large-scale Ground-mounted Solar Photovoltaic Installation that will be constructed in the Residence A, Residence B, or Residence Multifamily Zoning Districts, a stamped and signed landscape architectural plan indicating how the Installation will be sufficiently buffered from residential neighbors shall be produced. Such plan shall require a minimum of eight (8) foot tall vegetative screening from adjacent uses and shall include a maintenance plan lasting as long as the Photovoltaic Installation is in place, whether operating or not. Such plan shall be approved by the Planning Board prior to Installation construction. [Added 5-7-2014 ATM, Art. 26] *A signed and stamped Landscape Architectural Plan designed by Beals and Thomas, Inc. for the Project is included with the Site Plan drawings in Appendix B. The Landscape Architectural Plan includes vegetative screening with the minimum eight (8) foot tall vegetative screening requirement from adjacent uses and includes a maintenance plan. The proposed landscape maintenance plan will ensure that the vegetative screening is maintained and screens the photovoltaic array from adjacent uses for the life of the Project. The Landscape Architectural Plan included in Appendix B meets the requirements of this Section. Additionally, photosimulations are included in Appendix C.*

<u>Section 8.3.10 Monitoring and Maintenance</u>

1) Section 8.3.10(1): Condition of the Installation. The Large-scale Ground-mounted Solar Photovoltaic Installation owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs and integration of security measures. Site access shall be maintained to a level acceptable to the local Fire Chief and Emergency Medical Services. The owner or operator shall be responsible for the cost of maintaining the Solar Photovoltaic Installation and any access road(s), unless accepted as a public way. *Ameresco will monitor and maintain the facility to ensure that the facility is kept in good condition. The landfill will continue to be mowed in between and around the solar array. The gravel access road will be removed following construction and therefore will not require future maintenance. The two permanent access roads will; however, be maintained at a level acceptable to the Fire Chief and Emergency Medical Services. For security purposes, an approximate 1,600 linear foot chain link fence will be installed around the solar array.* Ameresco *will be responsible for the cost of maintaining the solar PV facility.*

2) Section 8.3.10(2): Modifications. All material modifications to a Large-scale Ground-mounted Solar Photovoltaic Installation made following site plan approval by the Planning Board shall require an amendment thereto. *No material modifications are anticipated; however, if modifications are required, a site plan amendment will be filed with the Planning Board.*

Section 8.3.11 Abandonment or Decommissioning

1) Section 8.3.11.1: Removal Requirements. Any Large-scale Ground-mounted Solar Photovoltaic Installation which has reached the end of its useful life or has been abandoned consistent with Section 8.3.11.2, below, shall be removed. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the Planning Board by certified mail of the proposed date of discontinued operations and plans for removal. Decommissioning shall consist of:

   a. Physical removal of all Large-scale Ground-mounted Solar Photovoltaic Installations, structures, equipment, security barriers and transmission lines from the site.

   b. Disposal of all solid and hazardous waste in accordance with local, state and federal waste disposal regulations.

   c. Stabilization or re-vegetation of the site as necessary to minimize erosion. The Planning Board may allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.

   Upon future abandonment of the solar PV array, Ameresco will comply with the removal requirements outlined above.

2) Section 8.3.11.2: Abandonment. Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, the Large-scale Ground-mounted Solar Photovoltaic Installation shall be considered abandoned when it fails to operate for more than one year without the written consent of the Planning Board. If the owner or operator of the Large-scale Ground-mounted Solar Photovoltaic Installation fails to remove the installation in accordance with the requirements of this Section 8.3.11 within 150 days of abandonment or the proposed date of decommissioning, the Town may enter the property and physically remove the installation at the expense of the Proponent. *Upon future abandonment of the solar PV array, Ameresco will comply with the requirements outlined above.*

3) Section 8.3.11.3: Financial Surety. Proponents of Large-scale Ground-mounted Solar Photovoltaic Installations shall provide a form of surety, either through an escrow account, bond or otherwise, to cover the cost of removal of the installation in the event that the Town must remove it and remediate the landscape. Said surety shall be in an amount and form determined to be reasonable by the Planning Board, but in no event shall exceed more than 125 percent of the cost of removal and compliance with the additional requirements set forth herein. Such surety will not be required for municipally- or state-owned installations. The project proponent shall submit a fully-inclusive estimate of the costs associated with removal, prepared by a qualified engineer. The amount shall include a mechanism for calculating increased removal costs due to inflation. *Ameresco assumed $75,000 in decommissioning costs for the Ashland Landfill Solar PV system at the end of the term of the Power Purchase Agreement, calculated as follows:*

   The removal cost is assumed to be a percentage of the project installation costs less salvage value. For the Ashland Landfill Solar PV Project, Ameresco assumed the removal cost would be 30% of the electrical installation plus 30% of the site preparation. Ameresco

also assumed 3% annual inflation. Salvage value is estimated at 20% of the straight-line equipment depreciation at termination, plus inflation.

Ameresco, Inc. will provide decommissioning assurance in the form of an annually renewing bond. The bond is purchased, provided and maintained by Ameresco, Inc. directly to the Town of Ashland. We respectfully request that the Planning Board accept a removal bond in the amount of $75,000 as the financial surety for decommissioning.

Chapter 282 Section 9.4 – Site Plan Review

Section 9.4.4 Required Site Plans and Design Plan Review Contents

Required Site Plans and Design Plan Review Contents. All site plans shall be prepared by a registered architect, landscape architect or professional engineer, unless this requirement is waived by the Planning Board because of unusually simple circumstances. The construction standards set forth in the Planning Board's Regulations Governing the Subdivision of Land, or the standards otherwise adopted by the Planning Board as part of its rules and regulations, shall govern all construction, unless waived by the Planning Board. The Planning Board may waive any information requirements it judges to be unnecessary to the review of a particular plan. All site plans shall be on standard twenty-four-by-twenty-six-inch sheets and shall be prepared at a minimum scale of one (1) equals forty (40) feet or as approved by the Planning Board or its agent and shall show:

1) Section 9.4.4(1): The location and boundaries of the lot and adjacent streets or ways and the location and owners' names of all adjacent properties. *The location and boundaries of the proposed lot and adjacent streets with the location and owners' names of the adjacent properties are shown on the site plan in Appendix B.*

2) Section 9.4.4(2): Existing and proposed topography, including contours, the location of the wetlands (as defined by the Massachusetts Wetlands Protection Act), streams, water bodies, drainage swales, areas subject to flooding and unique natural land features. *The existing topography, wetlands, 100 foot buffer to wetlands, streams, 200 foot riverfront area, waterbodies, and other drainage features are shown on the site plan included in Appendix B. The overall topography of the Project Site itself will not be altered significantly; therefore no post-development topography is shown. The Project Site is not mapped by* NHESP as either *Priority Habitat of Rare Species or Estimated Habitat of Rare Wildlife. The Project will not have any impact on the existing forested area within the Project Site. There are no other unique natural land features on the Project Site.*

3) Section 9.4.4(3): Existing and proposed structures, including dimensions and elevations. *There are no existing structures. The proposed PV system and transformer are shown on the site plan included in Appendix B.*

4) Section 9.4.4(4): The location of parking and loading areas, driveways, walkways, access and egress points, curb cuts, handicapped spaces and fire lanes. Such information shall be provided on a separate sheet which also depicts and assures accessibility and travel flow compatibility, using recognized standards (DOT), for all types of vehicles intended to utilize the proposed site. *The Project does not include any new parking, loading areas, driveways, walkways, access and egress points, curb cuts, handicapped spaces or fire lanes. The temporary access road and the two new access roads will provide two new*

points of access/egress off Howe Street (see Appendix B). Ameresco will work with the Town of Ashland to coordinate traffic access, flow, and parking within the Site during construction. Construction is estimated to take approximately 2 - 3 months and the maximum number of vehicles accessing the site during Project construction is estimated at 20 to 30 vehicles (6-9 truck trips and 14 – 20 construction workers). Following construction, maintenance traffic will be limited to a few vehicles, a few times per year. Any impacts on traffic associated with the Project will be temporary and short term in nature and will not have any significant impact on local roadways.

5) Section 9.4.4(5): The location and description of all proposed septic systems, water supply, storm drainage systems, utilities and refuse and other waste disposal methods, including compactors, dumpsters, and the equivalent. *Existing storm drainage systems and utilities are shown on the site plan. There are no proposed septic systems, water supply connections, or other waste disposal methods. Construction of the Project will result in the generation of limited amounts of solid waste. All solid waste generated as a result of the Project will be recycled to the extent practicable or disposed of at an approved facility(ies) in accordance with applicable federal, state and local laws, regulations and guidance. A licensed contractor will handle the transport, storage, treatment and disposal of solid wastes.*

6) Section 9.4.4(6): Proposed landscape features, including the location and description of screening, fencing and plantings. *A Landscape Architectural Plan and Details, designed by Beals and Thomas, Inc. for the Project is included in Appendix B and photosimulations are included in Appendix C. As shown on the site plan included in Appendix B, a chain link fence will be installed around the solar array.*

7) Section 9.4.4(7): The location, dimensions, height and characteristics of proposed signs. *The proposed signage for the Project is included in the Project plans included in Appendix B. The proposed sign meets the requirements of Section 5.3 and identifies the owner of the Project and 24 hour emergency contact phone number. The location of the sign will be determined in consultation with the Planning Board.*

8) Section 9.4.4(8): The location and description of all outdoor and street lighting, including methods of screening adjacent properties and public ways from glare. *There is no proposed lighting.*

9) Section 9.4.4(9): The location and description of proposed open space or recreation areas. *There are no proposed open space or recreation areas. The Project will result in the addition of a productive beneficial use on top of a closed landfill that has very few options for reuse.*

10) Section 9.4.4(10): In the case of commercial or industrial projects, information on the types of business that may be operating on the property, so as to plan accordingly for the needs of specific types of businesses. The case of projects where it is unclear what specific use will be involved, the applicant shall be required to provide information on the general characteristics to which uses on the site shall conform. *No businesses are proposed as part of the Project. The Project consists of the construction and installation of a 907 kW solar array on the existing closed landfill.*

11) Section 9.4.4(11): A construction timetable indicating estimated startup and completion dates. *Project construction is scheduled to commence at the end of the first quarter 2016,*

as soon as necessary permits and approvals are in place. Construction of the Project is anticipated to take 2- 3 months and will be constructed in the following general sequence:

- *Installation of erosion and sediment controls in accordance with the NPDES General Permit for Stormwater Discharges from Construction Activity and SWPPP or as directed by Project Plans;*
- *Construction of temporary gravel access road;*
- *Placement of concrete ballast foundation blocks;*
- *Installation of racks and PV modules;*
- *Electrical connection with Eversource;*
- *Removal of existing small trees along Howe Street and construction of soil berm and plantings and vegetation (Concurrent with installation of racks and PV modules, pending weather conditions. See Appendix G for ongoing monitoring and maintenance for the life of the Project);*
- *Permanent access roads (Concurrent with installation of racks and PV modules); and*
- *Final Site Stabilization and demobilization.*

Note that the 2 to 3 month estimated duration of construction is for substantial completion. An additional month may be required for startup and commissioning.

12) Section 9.4.4(12): An architectural rendering and/or cross-section of the development shall be submitted. *Renderings are included in Appendix C. A cross-section of a typical solar PV rack installation is included in Appendix B.*

Section 9.4.6 Site Plan Review Criteria and Design Plan Review; General Criteria.

The following criteria shall be considered by the aforementioned Boards in the review and evaluation of a site plan, consistent with a reasonable use of the site for the purposes permitted or permissible by the regulations of the district in which it is located. If the proposal also requires a special permit, it must conform to the special permit requirements set forth herein. The development shall be integrated into the existing terrain and surrounding landscape and shall be designed to protect abutting properties and community amenities. Before approval of a site plan, the Planning Board may request the applicant to make modifications in the proposed design of the project to ensure that these criteria are met. Site plans shall, to the extent feasible:

1. Minimize use of wetlands, steep slopes, floodplains and hilltops. *The Project does not use and will not have any adverse impacts on any wetlands, steep slopes, floodplains or hilltops.*

2. Minimize obstruction of scenic views. *As described in the Landscape Screening Management Plan by Beals and Thomas, Inc. included in Appendix C, vegetative screening surrounding the site will be maintained at a minimum height of eight (8) feet, which is approximately the same height as the PV modules. As such and as shown in the photosimulations of the Project included in Appendix C, the Project will largely be screened from view along Howe Street. The vegetated*

soil berm and plantings are designed to blend in with the existing forested areas which surround the Project area to the northeast, south and southwest.

3. Preserve unique natural or historical features. *The Project will not have any significant adverse impacts on unique natural or historical features. See also 9.3.2.4 and 9.3.2.5 below.*

4. Minimize tree, vegetation and soil removal and grade changes. *Clearing of existing vegetation will be limited to that which is necessary for the construction, operation and maintenance of the facility. Tree removal will be limited to the existing small trees along Howe Street, which will be replaced with a soil berm and plantings and vegetation. The Project includes limited grading that will not alter the overall topography of the Site. Grading associated with the Project includes the temporary gravel access road, the two permanent access roads, and the area along Howe Street where the soil berm will be located (see Appendix B). Additionally, approximately 6 inches of grass/topsoil will be excavated in the area of each ballast foundation block. This material will be replaced with imported gravel and each concrete ballast foundation block placed on top of the gravel. The topsoil will be reused to the extent practicable on-site for the construction of the soil berm.*

5. Maximize open space retention. *The Project will result in the installation of PV panels on an existing closed landfill. The Project will result in the beneficial reuse of a site with otherwise limited reuse potential.*

6. Screen objectionable features from neighboring properties and roadways. See 9.4.6.2 above.

7. Consideration shall be given to the impacts of the project on town services and infrastructure. *The Project will not impose a burden on town services or local infrastructure.*

8. Electric, telephone, cable television, gas, water, sewer, drainage and other such utilities shall be underground except in cases of extreme physical and environmental constraints. *All reasonable efforts have been made to place utilities underground; however, given the nature of the site, a closed landfill, the utility connections cannot be placed underground.*

9. Exposed storage areas, machinery, service areas, truck loading areas, utility buildings and structures and other unsightly uses shall be set back or screened to protect the neighbors and those using public ways from objectionable features. Such areas shall not impede the flow of traffic on public ways. *During construction, on-site areas for loading, unloading and storage will be set back from Howe Street to the extent practicable to protect the neighbors and those using public ways from objectionable features and prevent any potential impediment on the flow of traffic on Howe Street. With the exception of during construction, the Project does not include any outdoor storage.*

10. When applicable, the site plan shall show measures to reduce and abate noise generated from the site that will impact surrounding properties. *Noise will be generated during construction of the Project when construction equipment and vehicles are operating. It is important to note that equipment is not generally operated continuously, nor is equipment always operated simultaneously. Noise impacts associated with construction of the facility will be temporary and short term in nature (2-3 months). The Project will not result in any permanent noise impacts at the property line.*

11. The site plan shall comply with all zoning requirements for parking, loading, signage, dimensions and environmental performance standards and all other provisions of this By-law. *This narrative and the Project plans included in Appendix B meet the zoning requirements for parking, loading, signage, dimensions and environmental performance standards and all other provisions of this By-law.*

12. The site plan shall be consistent with the objectives of the Comprehensive Plan and other applicable specific plans adopted by the Planning Board. *It is Ameresco's understanding that the Town is currently working on updating its Comprehensive Plan; however, for the purposes of this application, the most current Town of Ashland Comprehensive Plan dated 2003 (the Plan) was reviewed. Based on review of the Plan, the Project is not inconsistent with the objectives of the 2003 Town of Ashland Comprehensive Plan. While it is clear that one of the Plan's focus is Open Space and Recreation, Figure 3.2 included in the Plan does not include the Project Site as an area marked as Major Open Space. Additionally, Open Space and Recreation Goal (OSR) – 7 calls for an investigation of the feasibility of the old landfill on Howe Street for recreational purposes.*

The Project will result in the installation of PV panels on the existing closed landfill. The Project will result in the beneficial reuse of a site with otherwise limited reuse potential. Additionally, the Project will provide a reliable source of renewable energy to the local energy infrastructure at a predicted energy cost. Other environmental benefits include reduced reliance on fossil fuels and reduced carbon footprint.

Further, consistent with the 2003 Town of Ashland Comprehensive Plan, the Project will not have any significant adverse impacts on environmental resources including, but not limited to ground water, surface water, storm water, water recharge, wetlands, cultural and historical resources, or threatened and endangered species. Finally, the Project will only occupy approximately 2.92 acres of the 9.15 acre property and tree removal will be limited to the existing small trees along Howe Street, which will be replaced with a soil berm and plantings and vegetation, leaving the forested areas untouched.

Based on readily available information, no other applicable specific plans have been adopted by the Planning Board.

Section 9.4.7 Building Design *There are no proposed buildings.*

Section 9.4.8 Traffic

The plan shall maximize the convenience and safety of vehicular and pedestrian movement within the site, in relation to abutting properties and in relation to adjacent ways. On-site areas for loading, unloading and storage shall not impede the flow of traffic on streets. In cases where the Planning Board deems it necessary to have a professional traffic analysis, such analysis shall describe estimated average daily and peak hour vehicle trips to be generated by the site and traffic flow patterns for vehicles and pedestrians showing adequate access to and from the site and adequate circulation within the site. An analysis of traffic data (as is reasonably available from public agencies and departments) or all relevant intersections shall also be provided by the applicant. Plans shall demonstrate efforts to minimize the number of curb cuts. Parking plans shall maximize the extent to which employee parking is provided by the applicant so as not to

overburden public parking facilities. *Construction is estimated to take approximately 2- 3 months and the maximum number of vehicles accessing the site during Project construction is estimated at 20 to 30 vehicles (6-9 truck trips and 14 – 20 construction workers). Ameresco will work with the Town of Ashland to coordinate site access. A temporary gravel access road will be constructed on the landfill, with two points of ingress/egress on Howe Street to allow for and facilitate construction of the array. The temporary gravel access road will be removed following construction. During construction, on-site areas for loading, unloading and storage will be located so as not to impede the flow of traffic on Howe Street. Additionally, all parking for construction vehicles and workers will be on-site and will not have any impacts on public parking facilities or Howe Street. Following construction, maintenance traffic will be limited to a few vehicles, a few times per year. Any impacts on traffic associated with the Project will be temporary and short term in nature and will not have any significant impact on local roadways.*

Section 9.4.9 Water

The site plan shall show adequate measures to prevent pollution of surface or ground water, to minimize erosion and sedimentation and to prevent changes in groundwater levels, increased volume and rate of runoff and potential for flooding. Drainage shall be designed so that runoff shall not be increased in rate or volume, groundwater recharge is maximized and neighboring properties will not be adversely affected. *Proposed erosion and sediment controls are shown on the site plan included in Appendix B. A stormwater management permit application is being filed concurrently with the Conservation Commission for the Project in accordance with the Town of Ashland Bylaws Chapters 247 and 343, Stormwater Management, which includes a full drainage analysis. The results of the drainage analysis indicate that the Project will not result in any change in runoff patterns, or increase in peak runoff rates, between existing and proposed conditions. Additionally, the Project Site is a landfill and there is currently no groundwater infiltration.*

Section 9.4.10 Landscaping

Landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soil removal, and any grade changes shall be in keeping with the general appearance of neighboring developed areas and shall be related harmoniously to the terrain and to the use.

1) Section 9.4.10(1): Site shall be developed in a coordinated manner to complement adjacent structures through placement, architecture, colors, and size/mass.

2) Section 9.4.10(2): Whenever possible, buildings on the same site should be clustered and incorporate plazas, courtyards, pocket parks, and other pedestrian use areas.

3) Section 9.4.10(3): Provide unity of design through repetition of plans and coordination with adjacent developments.

4) Section 9.4.10(4): Landscape materials should be hardy species that are adaptable to local conditions, easily maintained and drought tolerant. Use of native plants is strongly encouraged.

5) Section 9.4.10(5): Landscape treatment should be provided to enhance the building design and other site improvements.

The Project does not include any buildings. The Project includes limited grading that will not alter the overall topography of the Site. Grading associated with the Project includes the temporary gravel access road, the two permanent access roads, and the area along Howe Street where the soil berm will be located (see Appendix B). Additionally, approximately 6 inches of grass/topsoil will be excavated in the area of each ballast foundation block. This material will be replaced with imported gravel and each concrete ballast foundation block placed on top of the gravel. The topsoil will be reused to the extent practicable on-site for the construction of the soil berm. Clearing of existing vegetation will be limited to what is necessary for the construction, operation and maintenance of the facility. Tree removal will be limited to the existing small trees along Howe Street, which will be replaced with a soil berm and plantings and vegetation. The Landscape Architectural Plan designed by Beals and Thomas, Inc. is included in Appendix B and photosimulations are included in Appendix C.

Section 9.4.11 Buildings *There are no proposed buildings.*

Section 9.3 Special Permits

9.3.2 Criteria. Special permits shall be granted by the Special Permit Granting Authority, unless otherwise specified herein, only upon its written determination that the adverse effects of the proposed use will not outweigh its beneficial impacts to the town or the neighborhood, in view of the particular characteristics of the site, and of the proposal in relation to that site. In addition to any specific factors that may be set forth in this By-Law, the determination shall include consideration of each of the following:

1. Community needs served by the proposal; *As discussed in the sections above, the Project will result in the beneficial reuse of the existing closed landfill. The Project will provide a reliable source of renewable energy to the local energy infrastructure at a predicted energy cost.*

2. Traffic flow and safety, including parking and loading; *Following construction, maintenance traffic will be limited to a few vehicles, a few times per year. Any impacts on traffic associated with construction of the Project will be temporary and short term in nature. Ameresco will work with the Town of Ashland to coordinate loading, unloading and storage areas during construction as well as traffic access, flow, and parking within the Site.*

3. Adequacy of utilities and other public services; *The Project will interconnect to the Eversource utility grid. The Project will not have any impacts on any public services (schools, fire or police) or infrastructure other than the existing Eversource utility grid.*

4. Neighborhood character and social structures; *In the Project area, land uses largely define the neighborhood character. Land uses at and surrounding the Site include the Town owned closed landfill, residential homes, and forested areas. There will be no changes to existing land use as the landfill will remain after construction of the Project; however, an additional land use, the PV facility, will be installed on the site. The Project will result in the beneficial reuse of a site with otherwise limited reuse potential. No alteration of existing residential or forested areas will occur from the Project. Based on review of the Massachusetts Cultural Resources Information System (MACRIS), no historic or archaeological properties are known to exist within the project's area of potential impact. The Project will not impose a burden on local infrastructure or alter growth patterns in the local neighborhood. Traffic and noise impacts associated with construction of the facility*

will be temporary and short term in nature (2-3 months). As described in the Landscape Screening Management Plan included in Appendix C, vegetative screening surrounding the site will be maintained at a minimum height of eight (8) feet, which is approximately the same height as the PV modules. As such and as shown in the photosimulations, the Project will largely be screened from view along Howe Street. The vegetated soil berm and plantings are designed to blend in with the existing forested areas which surround the Project area to the northeast, south and southwest.

The Project Site is zoned residential with an established Photovoltaic Installations Overlay District (PIOD). As defined in Section 8.3.1 of the Zoning By-laws of the Town of Ashland, Massachusetts,

> *The purpose of the Photovoltaic Installations Overlay District (PIOD) is to promote the creation of new Large-scale Ground-mounted Solar Photovoltaic Installations in appropriate locations within the Town of Ashland and to provide standards for the placement, design, construction, operation, monitoring, modification and removal of such installations that address public safety, minimize impacts on scenic, natural and historic resources and provide adequate financial assurance for the eventual decommissioning of such installations.*

As outlined in this application, the Project meets the standards for the placement, design, construction, operation, and monitoring while addressing public safety, minimizing impacts on scenic, natural and historic resources and providing adequate financial assurance. As such, the proposed Project is consistent with the intent of the PIOD.

5. Impacts on the natural environment; and *The Project will not have any significant adverse impacts on the natural environment or existing infrastructure or services. Specifically, no work is proposed within any wetland resources or buffer zones (100 foot buffer zone to wetland or 200 foot riverfront). Clearing of existing vegetation will be limited to that which is necessary for the construction, operation and maintenance of the facility. Tree removal will be limited to the existing small trees along Howe Street, which will be replaced with a soil berm and plantings and vegetation. The Project will not have any impacts on surface waters, groundwater, stormwater or wastewater. The Project Site is not mapped by* NHESP as either *Priority Habitat of Rare Species or Estimated Habitat of Rare Wildlife. The Project will not have any impact on existing forested areas on the Project Site or surrounding area. The Project will result in the addition of a productive beneficial use on top of an existing closed landfill that has very few options for reuse.*

6. Potential fiscal impact, including impact on town services, tax base and employment. *The Project will result in the beneficial reuse of the existing closed landfill and will provide a reliable source of renewable energy to the local energy infrastructure at a predicted energy cost. The Project will not have any impacts on any utilities or other public services other than the existing Eversource system. The Project, once installed, will tie into the existing Eversource system and will provide a source of renewable energy to local energy customers. The Project will not have any impacts on local services including schools, fire or police.*

Should you have any questions regarding this application, please do not hesitate to contact us at (978) 392-5307; rob.bukowski@amecfw.com or (978) 692-9090; tricia.foster@amecfw.com.

Sincerely,

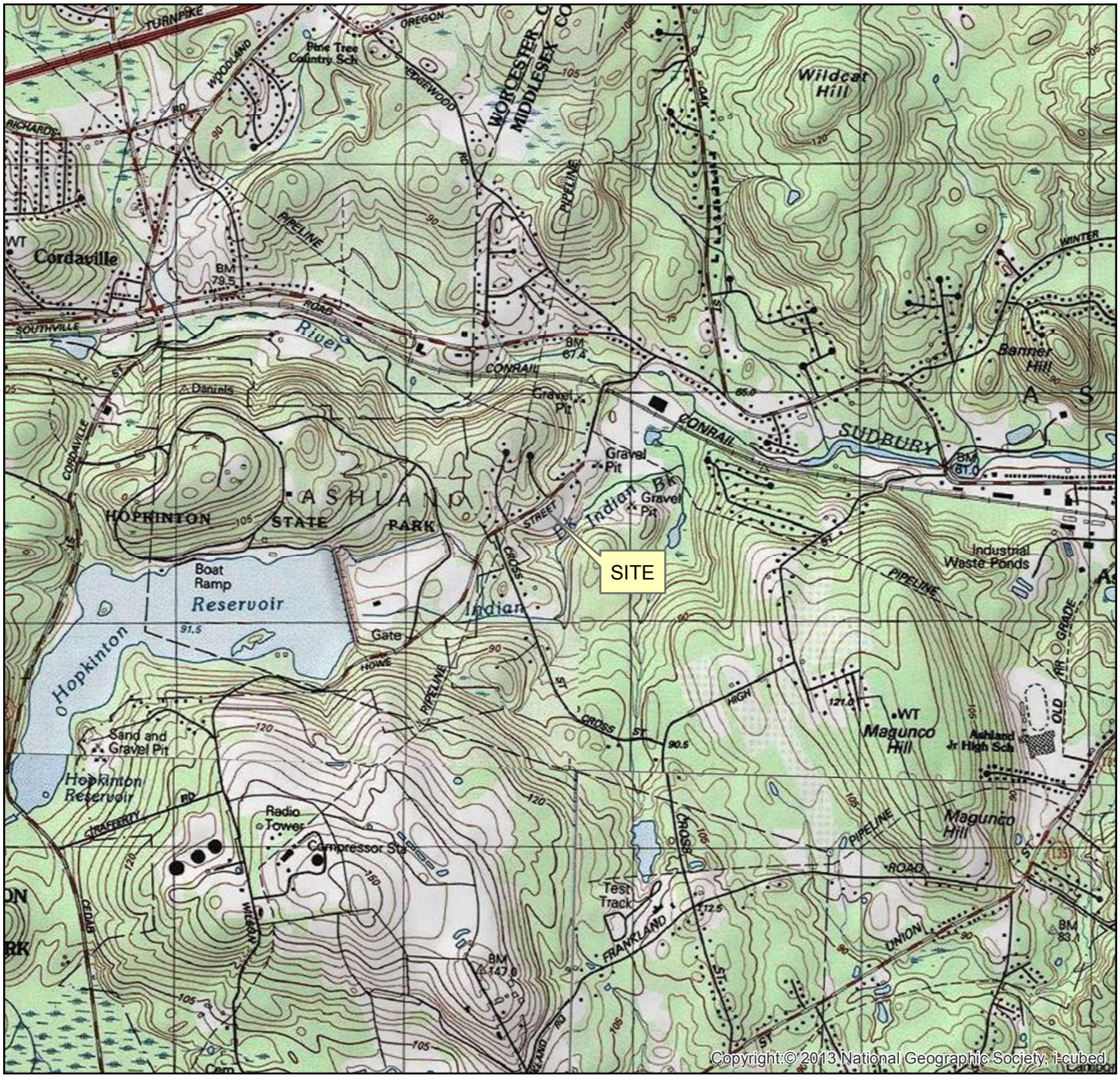
Robert J. Bukowski, P.E.
Project Manager

Patricia E. Foster
Senior 2 Planner

Attachments

cc: Town of Ashland Fire Chief
M. Zimmer, Ameresco, Inc.

Figure 1 – Site Location Map



Location of Site

SITE LOCATION MAP

Ashland Landfill
Solar Project

102 Howe Street
Ashland, Massachusetts

Notes & Sources

0 2,000 Feet

N

FIGURE
1

amec foster wheeler
AMEC Massachusetts, Inc.
271 Mill Road
Chelmsford, MA 01824
(978) 692-9090

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Figure 2 – Aerial Map

Location of Site

SITE LOCATION MAP

Ashland Landfill
Solar Project

102 Howe Street
Ashland, Massachusetts

Notes & Sources

0 400 Feet

N

amec foster wheeler

AMEC Massachusetts, Inc.
271 Mill Road
Chelmsford, MA 01824
(978) 692-9090

FIGURE
2

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