STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

In re: Petition of Energy Storage	**:**	
Resources, LLC for a Jurisdictional	**:**	**Docket No. SB-2019-02**
Determination Pursuant to	**:**	
R.I. Gen. Laws § 42-35-8	**:**	

ENERGY STORAGE RESOURCES, LLC RESPONSE TO THE ENERGY FACILITY SITING BOARD'S FIRST SET OF DATA REQUESTS

EFSB DATA REQUEST NO. 1-1:

Identify the "state's utility" referred to on page 8 of the Petition.

RESPONSE NO. 1-1:

The reference was to The Narragansett Electric Company d/b/a National Grid.

Response prepared by or under the supervision of
Alex Fraenkel

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EFSB DATA REQUEST NO. 1-2:

Support the statement that "the RIPUC presumably concluded that energy storage facilities are not generation facilities." Also provide documentation verifying this as a conclusion of the RIPUC.

RESPONSE NO. 1-2:

In Docket Nos. 4770 and 4780 the RIPUC approved a comprehensive agreement regarding National Grid's Power Sector Transformation Vision and Implementation Plan. (See Article II.C.17(d) Clean Energy Programs, a copy of which is attached hereto as Attachment 1-2(A)). Therein, National Grid agreed to implement an Energy Storage Demonstration program in which it will own and operate at least one energy storage system. As explained in the Petition, because state law prohibits National Grid, as the state's utility, from owning and operating a generation facility, R.I.G.L. § 39-1-27(d),[1] the approval of this settlement agreement (and of the energy storage facility therein proposed) indicates that the RIPUC presumably concluded that energy storage facilities are not generation facilities. Absent the RIPUC having made this conclusion, it would have essentially authorized a settlement agreement that was contrary to state law.

[1] State law specifically prohibiting electric distribution companies "from . . . owning, operating, or controlling generating facilities." R.I.G.L. § 39-1-27(d).

Response prepared by or under the supervision of
Alex Fraenkel

The Narragansett Electric Company
d/b/a National Grid

Amended Settlement Agreement
Docket Nos. 4770 and 4780
~~June 6,~~August __, 2018

Submitted to:
Rhode Island Public Utilities Commission

Submitted by:

nationalgrid

~~transportation outreach and education in the electric transportation initiative and oil dealer training in the electric heat initiative ($0.2 million in Rate Year 1; $0.2 million in Rate Year 2; and $0.3 million in Rate Year 3). Narragansett Electric will work with the Division and the PST Advisory Group, or relevant subcommittee, on the goals for the strategic electrification marketing fund and use of the fund during the MRP.~~c. *Strategic Electrification Education Fund*. The Settling P~~p~~arties acknowledge that the ongoing electrification of transportation in Rhode Island has the potential to significantly reduce greenhouse gas emissions and to provide significant distribution system benefits. At the same time, the Settling P~~p~~arties acknowledge that electric transportation, if not optimally integrated, has the potential to increase peak electric demand with negative consequences for system cost, system efficiency and emissions. To support the electric transportation initiatives discussed above, Narragansett Electric will create a Strategic Electrification Education Fund. The fund shall be administered consistent with R.I. Gen. Laws ~~RIGL~~ § 39-2-1.2. The revenue requirement shall include the following amounts for the fund: $7,500 in Rate Year 1 to inform customers of the availability of the off-peak charging rate; $11,250 in Rate Year 2 to inform customers of the availability of the off-peak charging rate; and $18,750 in Rate Year 3 to inform customers of the availability of the off-peak charging rate. The Settling P~~p~~arties also agree that, prior to the beginning of Rate Year 2, the Company may submit, in consultation with the Division, OER, and the members of the PST Advisory Group, a revised proposal to the PUC for funding the Strategic Electrification Education Fund, consistent with R.I. Gen. Laws § 39-2-1.2. ~~,~~The Settling P~~p~~arties agree that this provision may be severed from the remainder of this Settlement A~~a~~greement without affecting the validity of the overall settlement if the PUC~~Commission~~ deems this provision inconsistent with its motions.

d. *Energy Storage Demonstration*. The Settling Parties agree that energy

storage is critical for achieving a clean energy future as it provides the ability to optimize system performance over time and allows intermittent renewable resources, such as wind and solar, to make a larger contribution to overall generation. The Settling Parties also recognize the Company has a role to effectively integrate storage. To this end, Narragansett Electric will demonstrate two energy storage solutions: (i) one behind-the-meter storage system co-located with a DCFC site, which will consist of an approximate 250 kW two hour energy storage system, supporting approximately two to six DCFC ports, and (ii) one front-of-the-meter storage system, which will consist of an approximate 500 kW three hour energy storage system for the primary purpose of realizing distribution system value, with the exact storage size and capacity to be determined by system need and location. The revenue requirement for this initiative will include $0.1 million in Rate Year 1, $0.2 million in Rate Year 2, and $0.4 million in Rate Year 3. The costs of this initiative shall be subject to a deferral mechanism, as described in Section 20, below.

Narragansett Electric will procure each storage solution through a competitive RFP process, which will set forth the technical requirements, and will request proposals for both a third party-owned system with a service agreement, and an Engineering Procurement and Construction delivered ~~systems~~system owned by the utility, which will explore alternative ownership models on a like-for-like basis, and benefits associated with each model. Narragansett Electric will share the draft RFP with stakeholders, via the PST Advisory Group, for feedback. The Company will file each draft RFP with the PUC no fewer than 30 days before it is issued to ensure that the PUC understands the barriers the pilot demonstration is designed to overcome and the learnings the Company intends to obtain from the project. The proposal(s) that have the best value and that ~~are~~ also are compliant with the RFP will be selected. The

Company will work with the Division and OER to ensure the procurement process and selection process has been done in an independent, transparent, and fair manner. The costs included in the revenue requirement for this initiative are based on a Company ownership model. -The Company will prepare a cost/benefit analysis at the conclusion of each pilot/demonstration using the Docket 4600 Benefit-Cost Framework.

e. *Engagement and guidance in support of PST Programs*. The Company and the Settling Parties recognize that the initiatives included in this section are new in nature, with a higher level of uncertainty about the performance and results and that delivery of these programs over the period of the MRP will benefit from broad stakeholder engagement, review, and guidance. To formalize engagement of stakeholders that will be additional to the regular engagement of the Company with the Division and OER, the Company proposes the following:

- Establishment of a "PST Advisory Group," to be chaired by the Company and whose members shall include the Division, OER, and representatives of the following interests: environment, clean energy industry or businesses, low income, NPP, community groups, and additional members as the Company, the Division, and OER may agree. The mission of the PST Advisory Group shall be to review at a high level progress on the delivery of all PST components of the MRP (Grid Modernization, AMF, time-varying rates, Electric Transportation, ~~Electric Heat,~~ Storage, and Performance Incentive Mechanisms) and to provide guidance, and prioritization to support successful delivery of the components as a holistic suite. The Advisory Group shall also serve as a connection with other relevant programs / proceedings outside the MRP, for example, the Energy Efficiency Resource Management Council

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ENERGY STORAGE RESOURCES, LLC RESPONSE TO THE ENERGY FACILITY SITING BOARD'S FIRST SET OF DATA REQUESTS

EFSB DATA REQUEST NO. 1-3:

Support the statement that "the state's utility" will "own and operate an energy storage facility" as referred to on page 8 of the Petition.

RESPONSE NO. 1-3:

In the RIPUC approved comprehensive agreement regarding National Grid's Power Sector Transformation Vision and Implementation Plan, National Grid agreed to implement an Energy Storage Demonstration program in which it will own and operate at least one energy storage system in Rhode Island. (See Attachment 1-2(A)).

Response prepared by or under the supervision of
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ENERGY STORAGE RESOURCES, LLC RESPONSE TO THE ENERGY FACILITY SITING BOARD'S FIRST SET OF DATA REQUESTS

EFSB DATA REQUEST NO. 1-4:

Describe the energy storage facility that "the state's utility" will own and operate referred to on page 8 of the Petition and compare that/those facilities to the one proposed.

RESPONSE NO. 1-4:

The only information Energy Storage Resources, LLC has regarding National Grid's energy storage facility is what is contained in the settlement agreement. (See Attachment 1-2(A)). The relevant portion of the agreement provides the following:

> Energy Storage Demonstration. The Settling Parties agree that energy storage is critical for achieving a clean energy future as it provides the ability to optimize system performance over time and allows intermittent renewable resources, such as wind and solar, to make a larger contribution to overall generation. The Settling Parties also recognize the Company has a role to effectively integrate storage. To this end, Narragansett Electric will demonstrate two energy storage solutions: (i) one behind-the-meter storage system co-located with a DCFC site, which will consist of an approximate 250 kW two hour energy storage system, supporting approximately two to six DCFC ports, and (ii) one front-of-the-meter storage system, which will consist of an approximate 500 kW three hour energy storage system for the primary purpose of realizing distribution system value, with the exact storage size and capacity to be determined by system need and location. The revenue requirement for this initiative will include $0.1 million in Rate Year 1, $0.2 million in Rate Year 2, and $0.4 million in Rate Year 3. The costs of this initiative shall be subject to a deferral mechanism, as described in Section 20, below.

The agreement then outlines the RFP process National Grid must undergo to procure each storage solution.

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The Narragansett Energy Storage Project will be a front-of-the-meter storage project that is substantially larger in capacity than the energy storage solution projects referenced above. The Narragansett Energy Storage Project will be a 180 MW / 360 MWh two hour energy storage system.

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R.I. Gen. Laws § 42-35-8	**:**	

ENERGY STORAGE RESOURCES, LLC RESPONSE TO THE ENERGY FACILITY SITING BOARD'S FIRST SET OF DATA REQUESTS

EFSB DATA REQUEST NO. 1-5:

Explain why the Rhode Island Energy Facility Siting Board should not treat energy storage as a generating facility when both ISO-NE currently models energy storage as a generator asset and FERC recently included energy storage as a generating facility.

RESPONSE NO. 1-5:

On October 10, 2018, ISO-NE, joined by the New England Power Pool ("NEPOOL") Participants Committee, filed revisions to the ISO-NE Transmission, Markets and Services Tariff to codify a new design that enables electric storage resources to more fully participate in ISO-NE's markets. On February 25, 2019, FERC accepted the proposed revisions, to be effective April 1, 2019, as requested by ISO-NE (Docket No. ER19-84-000). In its proposal, ISO-NE states that "the battery storage resources in the ISO-NE interconnection queue can transition nearly instantaneously between charging and discharging and have the ability to operate continuously between their maximum consumption level and their maximum output level." Additionally, ISO-NE clearly distinguishes energy storage resources from traditional generation technologies, and it even distinguishes ESS from pumped hydroelectric storage because of the ability for ESS to nearly instantaneously transition between charging and discharging.

ISO-NE's treatment of storage as distinct from generation reinforces that energy storage and generation are separate functions. Such treatment is consistent with FERC Order 841 which requires Regional Transmission Organizations and Independent System Operators to develop market rules for energy storage participation in the wholesale energy, capacity and ancillary services markets, marking a distinction between generation and storage. FERC noted that market rules designed for traditional generation resources can create barriers to entry for emerging technologies such as electric storage resources. FERC's February 2018 Order[2] (and recent May

[2] https://www.ferc.gov/media/news-releases/2018/2018-1/02-15-18-E-1.asp#.XQfTcxZKhEY

Response prepared by or under the supervision of
Alex Fraenkel

2019 clarification[3]) helps remove these barriers by requiring each regional grid operator to revise its tariff to establish a participation model for electric storage resources that consist of market rules that properly recognize the physical and operational characteristics of electric storage resources.

Moreover, irrespective of ISO-NE's rules, the Siting Board's treatment of energy storage systems is dictated by the provisions of state law, particularly Title 48, Chapter 42 of the Rhode Island General Laws, while ISO-NE's policies and pronouncements are governed by federal law, such as the Federal Power Act and related implementation policies and procedures developed and implemented by the FERC.

Moreover, the technical characteristics of an ESS are distinguishable from generation in energy markets because:

- An ESS has nearly instantaneous ability to charge or discharge whereas generation can only inject electricity and cannot act as a load, and, depending upon the facility, requires time to ramp-up power production;
- ESSs are able to provide capacity and reserve from an idle state while fossil-fuel generation requires active spinning of the generator, and the attendant costs and environmental impacts;
- ESS facilities rely only upon the availability of electricity from the grid to recharge, while generation must rely upon the availability of fuel in the necessary form (coal, oil, natural gas, solar, wind, etc.);
- The variable cost of an ESS is based on the cost of charged energy and its conversion losses, while generation costs are derived from the cost of other forms of generation in the market and fuel requirements; and
- An ESS consumes and stores energy already generated by another means, in contrast to generating facilities, which create and then provide electricity to the grid.

Based upon the above, energy storage requires a different approach to its dispatching that makes it very different from generation and this has been recognized in the industry.

[3] https://www.ferc.gov/whats-new/comm-meet/2019/051619/E-1.pdf

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EFSB DATA REQUEST NO. 1-6:

Explain how the energy does not change between the time that it enters storage and is dispatched onto the grid.

RESPONSE NO. 1-6:

Energy Storage Resources, LLC is not aware of any known means of storing electrical energy in a pure form that requires no mechanical, chemical or physical process to reclaim that energy as electricity.

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EFSB DATA REQUEST NO. 1-7:

How is/will the proposed unit be modeled by ISO-NE?

RESPONSE NO. 1-7:

As noted in the Response to Data Request No. 5, on October 10, 2018, ISO-NE, joined by the New England Power Pool ("NEPOOL") Participants Committee, filed revisions to the ISO-NE Transmission, Markets and Services Tariff to codify a new design that enables electric storage resources to more fully participate in ISO-NE's markets. On February 25, 2019, FERC accepted the proposed revisions, to be effective April 1, 2019, as requested by ISO-NE (Docket No. ER19-84-000). In its proposal, ISO-NE states that "the battery storage resources in the ISO-NE interconnection queue can transition nearly instantaneously between charging and discharging and have the ability to operate continuously between their maximum consumption level and their maximum output level." Additionally, ISO-NE clearly distinguishes energy storage resources from traditional generation technologies, and it even distinguishes ESS from pumped hydroelectric storage because of the ability for ESS to nearly instantaneously transition between charging and discharging.

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[4] https://www.ferc.gov/media/news-releases/2018/2018-1/02-15-18-E-1.asp#.XQfTcxZKhEY

2019 clarification[5]) helps remove these barriers by requiring each regional grid operator to revise its tariff to establish a participation model for electric storage resources that consist of market rules that properly recognize the physical and operational characteristics of electric storage resources.

[5] https://www.ferc.gov/whats-new/comm-meet/2019/051619/E-1.pdf

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EFSB DATA REQUEST NO. 1-8:

Provide all materials on the facility including site plans and buffers.

RESPONSE NO. 1-8:

Attachment 1-8(A) is a summary of the facility which includes the site plans for the proposed Narragansett Energy Storage Project.

Response prepared by or under the supervision of
Alex Fraenkel

NARRAGANSETT ENERGY STORAGE PROJECT

PLUS POWER

MARCH 29, 2019

Developer: Plus Power LLC
Applicant: Energy Storage Resources, LLC / Narragansett Energy Storage LLC

Photo from narragansettri.gov

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Narragansett Energy Storage

General Project Description

Plus Power LLC ("Plus Power") is in early stage development of the Narragansett Energy Storage Project ("Project") in West Kingston, Rhode Island. The Project is a battery energy storage facility located at 521 and 551 Liberty Lane, West Kingston, RI 02892. The two parcels are owned by South County Post & Beam, Inc (Josh Bouvier) & Kenneth S. Bouvier and Susan D. Bouvier. The Assessor's Plat and Lots of Parcels are Plat 21-3 and Lots 19 and 21. Energy Storage Resources, LLC has signed a Lease Option Agreement with South County Post & Beam, Inc. and Kenneth S. Bouvier and Susan D. Bouvier for a 6.31-acre parcel and 1.14-acre parcel, respectively, for battery storage development purposes. The property use is currently designated as Industrial one (IND-1) per the Town of South Kingstown Zoning Ordinance. The 7.44-acre project area is primarily wooded and currently used by South County Post & Beam, Inc. The property is surrounded by other industrial uses to the south, east and west.

This Development Plan Review ("DPR") is subject to an administrative subdivision combining of Lots 19 and 21 (Plat 21-3).

Exhibit C, attached hereto, is a Site Layout Plan of the proposed Project and includes a site design for a 180-megawatt (MW) project, the location of facilities, existing overhead lines, easement boundaries and property ownership. The capacity of the Project will be up to 180 MW.

Company Description

Plus Power LLC, the developer of the Narragansett Energy Storage Project, is an energy storage development company engaged in site acquisition, permitting, development, and financing associated with battery energy storage projects across the United States. Energy Storage Resources, LLC is a development fund managed by Plus Power.

The investor in the fund is Enel Green Power North America. Enel Green Power North America ("Enel") is Plus Power's primary investor, as well as our partner for long-term project ownership and operation. Enel is a global electric power company with generation, transmission, and distribution holdings across 5 continents and more than 30 countries. As of March 2019, Enel operates a total installed generation capacity of over 89 Gigawatts (GW), including over 37 GW of renewable energy assets (hydro, wind, geothermal, solar, biomass, and cogeneration facilities). In the United States, Enel operates over 100 renewable energy power plants totaling 4200 MW of installed capacity. Enel has over 2000 employees in Massachusetts and their U.S. headquarters are in Andover, Massachusetts.

Under Plus Power's funding agreement, Plus Power intends to sell the development assets or project entity (Narragansett Energy Storage LLC) to Enel as the owner and operator.

Project Team

Alex Fraenkel, Plus Power | Developer | afraenkel@plusenergystorage.com

Allyson Sand, Plus Power | Developer | asand@plusenergystorage.com

John Kenyon, Esq., Kenyon Law Associates, LLP | Permitting Counsel | jfk@kenyonlawyers.com

David Russo (PE), DiPrete Engineering | Site Engineer | drusso@diprete-eng.com

Project Interconnection Description

The proposed Project is expected to interconnect directly to the transmission owner's existing West Kingstown-Kent Co. 115 kV transmission line, which is west of the Project. The Project's substation will be located within the site boundaries and as close as possible to the West Kingstown-Kent Co. 115 kV transmission line. The transmission owner's substation may also be located within the site boundaries. A short underground or overhead gen-tie line will connect the Project substation to the existing transmission line. The transmission owner's substation will either be located adjacent to the existing transmission line or inside the site boundaries; the location will be determined by mutual agreement between the transmission owner and Plus Power during the interconnection study process with the independent system operator of the region (ISO-NE). Per utility standards, the proposed Project substation will be enclosed by fencing.

Project Facilities Description

The project area will consist of approximately 7.44 acres, which will be surfaced with an approximate 24-inch thick crushed stone blanket. The total enclosed fence area is approximately 5.6 Acres and within this area the only impervious area will be the paved 20-ft.-wide roadway for emergency access and maintenance of the facility. The Project will include transformers (one for each battery container) and bi-directional inverters. The battery container, bi-directional inverter, and transformer strings will either be supported by concrete pads or steel piles. One battery container ("Container"), one transformer ("Transformer") and one bi-directional inverter ("Inverter") comprise one battery string ("String"). In addition to these facilities, the Project will include an electrical substation and low voltage/medium voltage equipment. These substation facilities will be supported by concrete pads.

The Strings will be placed in rows (see Exhibit C) and the space between Strings will be approximately 10 feet. Each transformer will be placed six (6) feet from each Container. Each String will be placed a minimum of twenty (20) feet from the fence line. A twenty (20) foot-wide perimeter will be maintained around the Containers and in between parallel Strings of Containers. The Containers within the Project will be located at least forty (40) feet from the electrical substation equipment. The project will include approximately 60 to 80 strings.

Each String will include two Containers – one installed on top of the other Container. Inside each Container is a racking system, which holds racks of battery modules. Sets of batteries are located inside of the modules, which are connected in series. Each

Container will be an International Organization of Standardization (ISO) 40-foot shipping container. The dimensions of these structures are as follows:

Length: Forty (40) feet
Width: Eight (8) feet
Door Opening: Seven (7) feet, Eight point Two Five (8.25) inches

See Exhibit C, which displays the site design, and Exhibit G for a depiction of a standard 40-foot shipping Container.

The facilities of the Project will be enclosed by the installation of a chain-link fence, or a fence of similar type, for security purposes. One or more security cameras will also be installed at the Project and will be monitored.

Project Setbacks

The Project facilities, within the fencing, will be located no less than 40 feet from the nearest road (Liberty Lane and Fairgrounds Road) for Road Frontage purposes and 30 feet to any side setback. The Project will comply with the South Kingstown Zoning Ordinance dimensional requirements for Industrial One (IND-1) Districts:

TABLE 1: IND-1 DISTRICT DIMENSIONSAL REQUIREMENTS

Minimum Front Setback	40 Feet
Minimum Corner Side Setback	40 Feet
Minimum Side Setback	30 Feet
Minimum Rear Setback	30 Feet
Maximum Principal Building Height	40 Feet

Battery Technology

The final selection of battery storage technology has not yet been determined because the Project is in an early stage of development. The Project plans to use battery technology from LG, Samsung, Tesla, Panasonic, or a similar technology. Regardless of the battery manufacturer, 40-foot ISO containers - or similar purpose-built enclosures - will be used to store the batteries. Similarly, the ancillary equipment in each string will include a bi-directional inverter and transformer, regardless of manufacturer.

The expected life of the Project is twenty (20) years. At the end of the Project's useful life, the plan would be to update/replace the battery technology to continue operations.

State Permitting

In addition to a Development Plan Review for the Town of South Kingstown, the Project plans to submit a Preliminary Determination application to the Rhode Island Department of Environmental Management. The site will be engineered to meet State and Local regulations for stormwater and sediment control standards. Additionally, the Applicant is submitting a Petition for a Declaratory Order to the Rhode Island Energy Facility Siting Board ("EFSB") to resolve whether a battery energy storage facility is jurisdictional.

Fire Suppression + Protection

Fire protection will be addressed proactively through the installation of a monitoring system that works 24 hours a day, seven (7) days a week. The monitoring system will monitor temperature, voltage and amperage of the individual battery cells within each Container. If individual battery cells deviate from the normal operating range of temperature, voltage, or amperage, or if any communication link between the remote operations center and the Project is lost, the battery cells will shut down immediately and automatically. This shut-down scheme is the first level of safety management and starts at the battery cell level, turning off specific cells that are out of normal operating range first. If the temperature, voltage or amperage levels continue to rise outside of an individual battery cell, to other battery cells, or across the battery storage rack, all battery cells in the rack cease operating.

If the temperature, voltage or amperage levels in adjacent racks are out of normal operating range, the entire Container will shut down. If necessary, all Containers may shut down before any further heat propagation occurs.

In addition to this shut-down arrangement, maintenance personnel are dispatched to the Project to troubleshoot and correct the situation if the first level of technical parameters deviate from normal ranges. The use of containerized battery storage systems has an important benefit of acting as a fire break and limits a fire's ability to spread.

In the unlikely event of a fire, the Project will send a call out directly to the Union Fire District indicating an emergency response is required. The Project will be designed with 20-ft.-wide fire lanes around the perimeter of the facilities. To facilitate entry, a gate will be located on the south side of the site with a Knox lock for emergency access.

Plus Power will work directly with the Union Fire District to create an emergency response plan in preparation for any fire or emergency event. The applicant will coordinate with the Union Fire District to ensure their staff is adequately trained in the emergency response plan for the Project.

Plus Power has reached out to the Union Fire District regarding the Narragansett Energy Storage Project and will continue to work with the Union Fire District team as the project progresses.

South Kingstown Zoning Ordinance Compliance

South Kingstown's Zoning Ordinance contains general performance standards with which all development proposals submitted for approval pursuant to the ordinance must

comply. The general standards within the ordinance are listed below along with brief explanations regarding applicability and the Applicant's plans or best practices.

The Project is located in a Groundwater Protection Overlay District (GPOD), an area that is further described in Section 602 of South Kingstown's Zoning Ordinance. A Zoning Certificate application was filed on February 27, 2019 to the Building Official, Wayne Pimental, to clarify that a battery energy storage project is considered a permitted use within an industrially-zoned property. The Zoning Certificate was granted on March 15, 2019 with the request to provide written opinions of the Rhode Island Department of Environmental Management (DEM) Division of Air and Hazardous Materials and the Rhode Island DEM Division of Agriculture to the Building Official. The Applicant will provide communication to the Planning Department and Wayne Pimental as progress is made with the DEM regarding these opinions.

Development Plan Review Checklist

(A) Every plan sheet submitted pursuant to Sections (B) and (C), below, shall contain the following information:

1. Name of the proposed land development project **(Sheets 1-5)**
2. Name and address of the applicant **(Sheets 1-5)**
3. Name and address of the property owner **(Sheets 1-5)**
4. Name, address and telephone number of the entity who prepared the plan **(Sheets 1-5)**
5. Date of plan preparation, with all revision date(s), if any **(Sheets 1-5)**

6. Graphic scale **(Sheets 1-4)**
7. True north arrow **(Sheets 1-4)**
8. Plat and lot number(s) of the land being developed **(Sheets 1-5)**
9. Perimeter boundary lines of the development, drawn so as to distinguish them from other property lines **(Sheets 1-4)**
10. Location, width and names of existing public and private streets within and immediately adjacent to the development parcel(s) **(Sheets 1-4)**
11. Perimeters of wetland areas on the development parcel(s), if any, as flagged by a certified wetlands biologist and verified by RIDEM, and associated wetland buffers as defined by RIDEM **(Sheets 3-4)**
12. Buffer areas, as defined by RIDEM, for any wetlands located on adjacent parcels which extend into the development parcel(s) **(Sheets 3-4)**
13. Coastal features adjacent to the development parcel(s), if any, as identified or flagged by a certified wetlands biologist and verified by RI CRMC, and associated wetland buffers as defined by RI CRMC **(N/A)**
14. Boundaries and notation of the FEMA Flood Zones within and immediately adjacent to the development, including base flood elevation data for applicable zones **(Sheets 3-4)**

(B) Existing Conditions Plan(s)

The applicant shall submit an Existing Conditions Plan(s), which shall accurately depict the following information, in addition to the information listed in (A), above. Any notations required may be located on any sheet of the plan set.

1. Area of the development parcel(s) **(Sheet 3)**

2. Dimensions of perimeter boundary lines of the development **(Sheets 3-4)**
3. Existing easements and rights-of-way within or adjacent to the development parcel(s), with a notation of the Book and Page of the South Kingstown Land Evidence Records at which the legal documentation is located **(Sheets 3-4)**
4. Plat and lot numbers of all abutting property and property immediately across any adjacent public or private streets **(Sheets 3-4)**
5. Names of abutting property owners and property owners immediately across any adjacent public or private streets **(Sheets 3-4)**
6. Notation of existing ground cover with depiction of any existing wooded areas **(Sheet 3)**
7. Boundaries and notation of the soil types classifications for the entire area of the development parcel(s), as identified by the most recent USDA RI Soil Survey **(Sheet 3)**
8. Identification of areas containing prime agricultural soils and farmland soils of statewide importance, or, if no such soils are present on the site, a notation indicating such **(Sheet 3)**
9. Depiction of areas of existing, active agricultural use, or if no such use is present on the site, a notation indicating such **(Sheet 3)**
10. Existing contours at intervals of two (2) feet **(Sheet 3)**
11. Location and approximate coverage of any existing streets, driveways, farm roads, woods roads, and/or trails that have been in public use (pedestrian, equestrian, bicycle, etc.) **(N/A)**
12. Accurate location, footprint/size, and use/type of existing buildings or significant aboveground structures on the development parcel(s) **(Sheet 3)**

13. Approximate location and footprint/size of existing buildings or significant above-ground structures on parcels immediately adjacent to the development parcel(s) **(Sheets 3-4)**
14. Accurate location, size, and type of all existing above and below ground utilities and infrastructure, including wastewater, water, gas, electric, stormwater drainage, communications and telecommunications infrastructure, as may be present on the site or within the right-of-way along the property frontage **(Sheet 3)**
15. Location and assumed perimeter of historic cemeteries on or immediately adjacent to the development parcel(s), or, if no historic cemeteries are present on the site, a notation indicating such **(Sheet 3)**
16. Location of any unique historic features present on the site, including but not limited to stone walls, or if none, a notation indicating such **(Sheet 3)**
17. Location of any unique natural features present on the site, or if none, a notation indicating such **(Sheet 3)**
18. Notation indicating that the development parcel(s) are located or not located within the following areas of special concern: **(Sheet 3)**
    a. Natural Heritage Areas, as defined by RIDEM;
    b. The area under the jurisdiction of the Narrow River Special Area Management Plan, as defined by RI CRMC;
    c. The area under the jurisdiction of the Salt Ponds Region Special Area Management
       Plan, as defined by RI CRMC;
    d. The Town of South Kingstown Groundwater Protection Overlay District;

e. Areas within a TMDL watershed, as identified by RIDEM and the Town of South Kingstown;
f. An OWTS Critical Resource Area, as defined by RIDEM; and
g. A Drinking Water Supply Watershed, as defined by RIDEM.

19. Notation indicating that the development parcel(s) or any buildings(s) within the parcel is or is not listed on the National Register of Historic Places **(Sheet 3)**
20. Notation of the source(s) of all depicted existing conditions information **(Sheet 3)**
21. Certification by a RI Registered Land Surveyor that a Boundary Survey of the land being developed or disturbed has been performed and meets the measurement standards set by the State Board of Registration for Professional Land Surveyors; the Boundary Survey must depict all information necessary to accurately represent the extent and proximity of the proposed development relative to existing property lines and must clearly show/describe which portions of the plan were compiled using only a Data Accumulation Survey **(After Development Plan review and approval, the Applicant will complete a Class 1 survey of the property and will submit to the Town with the final submission package.)**

(C) Proposed Conditions Plan(s)

The applicant shall submit a Proposed Conditions Plan(s). Any utility, monumentation, or other physical improvement details shown within the Plan(s) shall conform to the standards found within the Subdivision and Land Development Regulations. The

Proposed Conditions Plan(s) shall accurately depict the following information, in addition to the information listed in (A), above:

1. Zoning district(s) of the land being developed; if more than one district, zoning boundary lines must be shown **(Sheet 4)**
2. Location, footprint/size, height, dimensions, and use/type of proposed buildings and structures **(Sheet 4)**
3. Any proposed on- and/or off-site improvements, including access drives, loading areas, parking areas, sidewalks, and bicycle paths **(Sheet 4)**
4. Proposed easements and rights-of-way within the development parcel(s), or those to be acquired adjacent to the development parcel(s) as may be necessary **(N/A)**
5. Proposed location, size, and type of all above ground and underground utilities servicing the property, including wastewater, water, gas, electric, stormwater drainage and communications or telecommunications infrastructure, as may be required for site development **(The plans show the best available information for this checklist item. Additional detail will be provided following a survey of the property and additional engineering necessary for final engineering plans.)**
6. If proposed, plan and profile design information for any extension of public or private utility infrastructure **(N/A)**
7. Location, dimension, and proposed use of any area of land proposed to be set aside as open space **(N/A)**
8. The locations and design details of any On-Site Wastewater Treatment System(s) (OWTS) proposed for use within the development **(N/A)**
9. The locations of any private or community wells proposed for use within the development **(N/A)**

10. Limits of disturbance/work relative to on- and off-site improvements and infrastructure installation **(Sheet 4)**
11. Grading plan(s), to show proposed contours at 2-foot intervals for all grading proposed for on- and off-site improvements **(Grading to be shown on final engineering plans.)**
12. Landscape plan(s), to show all significant proposed clearing of land, removal of existing vegetation, re-vegetation, landscaping on street rights-of-way, within and adjacent to proposed parking areas, and within common areas, and landscape installation details and related notation **(Sheets 1-1 and 1-2)**
13. Stormwater management plan(s), to show accurate designs and details of proposed stormwater management infrastructure, including type, location, and configuration, prepared by a RI Registered Professional Engineer **(Sheet 4)**
14. Soil erosion, run-off and sedimentation control plan(s) **(Sheet 4)**
15. All utility and site improvement related details, including those related to the installation of streets, sidewalks, drainage systems, and utility infrastructure, both on- and off-site, as applicable **(Conceptual utility and site improvement details are shown. After Development Plan review and approval, additional engineering detail will be provided on the final engineering plans.)**
16. Proposed phasing, if any, including depiction of which on- and off-site improvements are to be installed in which phase **(Sheet 4)**
17. Certification by a RI Registered Professional Engineer that the proposed conditions drawings are correct **(Sheets 1-5)**

(D) Supporting Materials

The following supporting materials must be submitted at the time of application:

1. 10 copies of an aerial photograph of the development parcel(s) (**Sheet 2)**
2. For developments proposing an increase to lot building coverage and/or total impervious surface within the development parcels, 2 copies of drainage calculations, associated explanatory narrative, and all supporting documentation, including an Operations and Maintenance manual for the system (**Conceptual Drainage shown. Additional detail to be provided for Town Engineer review following Development Plan Review.)**
3. If no freshwater wetlands and/or wetland buffers are depicted within the plan set and the development parcel contains existing naturally vegetated areas, 2 copies of an affidavit signed by a qualified professional stating that there are no freshwater wetlands and/or buffer areas (**Wetland locations are shown and have been flagged and located by a professional wetland biologist. This wetland area will be further reviewed with the required application to RIDEM for a Preliminary Determination.)**
4. For developments with coastal features and/or buffer areas adjacent to or within the subdivision parcel(s), 2 copies of a coastal feature verification from the Coastal Resources Management Council **(N/A)**
5. For developments proposing service by public water, 2 copies of a written statement from the appropriate water company or district confirming that water service is available **(N/A)**
6. For developments proposing service by public sewer, 2 copies of a written statement from the Town of South Kingstown Department of Public Services confirming that sewer service is available **(N/A)**
7. For developments proposing service by an existing OWTS(s), 2 copies of a System Suitability statement issued by RIDEM **(N/A)**

8. For developments proposing new structures, 2 copies of written confirmation that the applicable Fire District has reviewed the proposed plan(s) and approves the proposed design relative to emergency vehicle access and fire suppression requirements **(Conversations with the Union Fire District regarding their review of the Project have begun.)**
9. For parcels with any previous remediation activity, 2 copies of all pertinent State and/or Federal documentation **(N/A)**

Exhibits

EXHIBIT A (Sheet 2): USGS & Aerial Half Mile Radius

EXHIBIT B (Sheet 3): Existing Conditions Plan

EXHIBIT C (Sheet 4): Site Layout Plan

EXHIBIT D (Sheet 5): Detail Sheet

EXHIBIT E (Sheet 6): Landscape Plan

EXHIBIT F (Sheet 7): Landscape Notes & Details

EXHIBIT G: Containerized Battery System Prototype

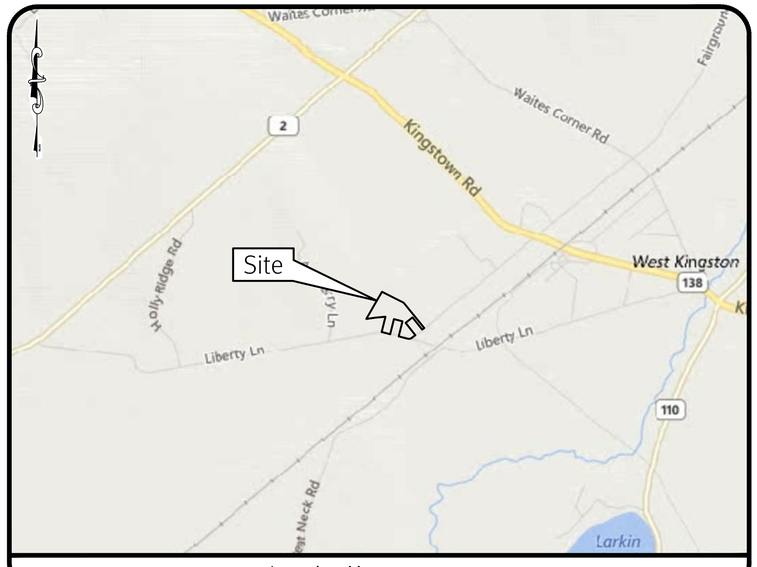
Development Plan Review Submission

Energy Storage Resources, LLC
Narragansett Energy Storage LLC

Liberty Lane

South Kingstown, RI

Assessor's Plat 21-3 Lots 19 & 21



Location Map Not to Scale

Sheet Index

1. Cover Sheet
2. Aerial Half Mile Radius
3. Existing Conditions Plan
4. Site Plan
5. Detail Sheet

1-1. Landscape Plan

1-2. Landscape Detail Sheet

DiPrete Engineering

Two Stafford Court Cranston, RI 02920

tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

Boston • Providence • Newport

No.	Date	Description	By:
0	3-29-19	Development Plan Review Submission	K.E.D.

Drawn By: K.E.D. Design By: D.A.R.

Cover Sheet

Liberty Lane

A.P. 21-3 Lots 19 & 21
South Kingstown, Rhode Island

Applicant
Energy Storage Resources, LLC and Narragansett Energy Storage LLC
1237 9th Avenue
San Francisco, CA 94122

Owner
Kenneth S. Bouvier and Susan D. Bouvier and South County Post & Beam Inc.
521 Liberty Lane
West Kingston, RI 02892

SHEET 1 OF 5

z:\domain\projects\2709-001 plus energy storage\autocad drawings\2709-001-plan.dwg Plotted: 3/29/2019

USGS Map Scale: 1"=1000'

Photo Obtained from Nearmap on 3/20/2019.

Scale: 1"=500'

0 250' 500' 1000'

Exhibit A: USGS & Aerial Half Mile Radius

USGS & Aerial Half Mile Radius

Liberty Lane

A.P. 21-3 Lots 19 & 21
South Kingstown, Rhode Island

Applicant
Ascend Storage Resources, LLC and Narragansett Energy Storage LLC
1237 9th Avenue
San Francisco, CA 94122

Owner
Kenneth S. Bouvier and Susan D. Bouvier and South County Pest & Beam Inc.
521 Liberty Lane
West Kingston, RI 02892

SHEET 2 OF 5

This regulatory submission set shall not be used for construction purposes unless stamped "Issued for Construction" and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
0	3-29-19	Development Plan Review Submission	K.E.D.
		Drawn By: K.E.D.	Design By: D.A.R.

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

General Notes:

1. THE SITE IS LOCATED ON THE TOWN OF SOUTH KINGSTOWN ASSESSOR'S PLAT 21-3 LOTS 19 & 21.
2. THE SITE IS APPROXIMATELY 7.44± ACRES AND IS ZONED IND-1.
3. THE OWNER OF AP 21-3 LOT 19 IS: KENNETH & SUSAN BOUVIER
   48 HERON WAY
   WAKEFIELD, RI 02879
   THE OWNER OF AP 21-3 LOT 21 IS: SOUTH COUNTY POST & BEAM INC
   521 LIBERTY LANE
   WEST KINGSTON, RI 02892
4. THIS SITE IS LOCATED IN FEMA FLOOD ZONE X. REFERENCE FEMA FLOOD INSURANCE RATE MAP 44009C0180H, MAP REVISED OCTOBER 19, 2010.

   ZONE X – THIS SITE IS LOCATED IN FEMA FLOOD ZONE X. ZONE X ARE AREAS OF 0.2% ANNUAL CHANCE OF FLOOD; AREAS OF 1% ANNUAL CHANCE OF FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.
5. THIS PLAN IS SUBSTANTIALLY CORRECT IN ACCORDANCE WITH A CLASS IV STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS. THIS COMPILATION PLAN HAS BEEN PREPARED FROM SOURCES OF INFORMATION AND DATA WHOSE POSITIONAL ACCURACY AND RELIABILITY HAS NOT BEEN VERIFIED. THE PROPERTY LINES DEPICTED HEREIN DO NOT REPRESENT A BOUNDARY OPINION, AND OTHER INFORMATION DEPICTED IS SUBJECT TO SUCH CHANGES AS AN AUTHORITATIVE FIELD SURVEY MAY DISCLOSE
6. THE SITE IS WITHIN A:
   NATURAL HERITAGE AREA (RIDEM)
   NON-COMMUNITY WELLHEAD PROTECTION AREA (TOWN)
   THE SITE IS NOT WITHIN A:
   NARROW RIVER SPECIAL AREA MANAGEMENT PLAN (RICRMC)
   SALT PONDS REGION SPECIAL AREA MANAGEMENT PLAN (RICRMC)
   TMDL WATERSHED (RIDEM)
   OWTS CRITICAL RESOURCE AREA (RIDEM)
   DRINKING WATER SUPPLY WATERSHED (RIDEM)
7. WETLAND EDGES WERE OBTAINED FROM RIGIS AND ARE APPROXIMATE ONLY.
8. AERIAL IMAGE OBTAINED FROM NEARMAP ON 3/20/2019.
9. THERE ARE NO AREAS OF EXISTING, ACTIVE AGRICULTURAL USE ON OR ADJACENT TO THE PROJECT SITE.
10. TO THE BEST OF OUR KNOWLEDGE, THE SITE DOES NOT CONTAIN ANY HISTORICALLY SIGNIFICANT SITES OR STRUCTURES, STATE OR LOCAL HISTORIC SITES, DISTRICTS, CEMETERIES, STONE WALLS, ARCHAEOLOGICALLY SIGNIFICANT SITES, OR STATE DESIGNATED SCENIC AREAS. THIS WAS DETERMINED THROUGH FILE REVIEW.

Soil Information:

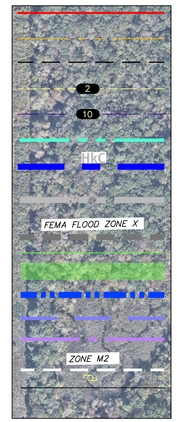
(REFERENCE: USDA NATURAL RESOURCES CONSERVATION SERVICE)

SOIL NAME	DESCRIPTION
EfA*	ENFIELD SILT LOAM, 0 TO 3 PERCENT SLOPES
EfB**	ENFIELD SILT LOAM, 3 TO 8 PERCENT SLOPES

* – PRIME AGRICULTURAL SOIL
** – FARMLAND OF STATEWIDE IMPORTANCE

Existing Legend

NOT ALL ITEMS SHOWN WILL APPEAR ON PLANS



PROPERTY LINE
ASSESSOR LINE
SETBACK
MINOR CONTOUR LINE
MAJOR CONTOUR LINE
100' RIVERBANK WETLAND
STREAM
SOIL BOUNDARY LINE
FEMA BOUNDARY
APROXIMATE WETLAND EDGE
APPROXIMATE WETLAND HATCH
50' PERIMETER WETLAND
NATURAL HERITAGE AREA
NON-COMMUNITY WELLHEAD PROTECTION AREA
ZONING LINE
SEWER LINE
UTILITY POLE

DiPrete Engineering
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No.	Date	Description	By:
0	3-29-19	Development Plan Review Submission	K.E.D.

Drawn By: K.E.D. Design By: D.A.R.

Exhibit B: Existing Conditions Plan

Existing Conditions Plan

Liberty Lane

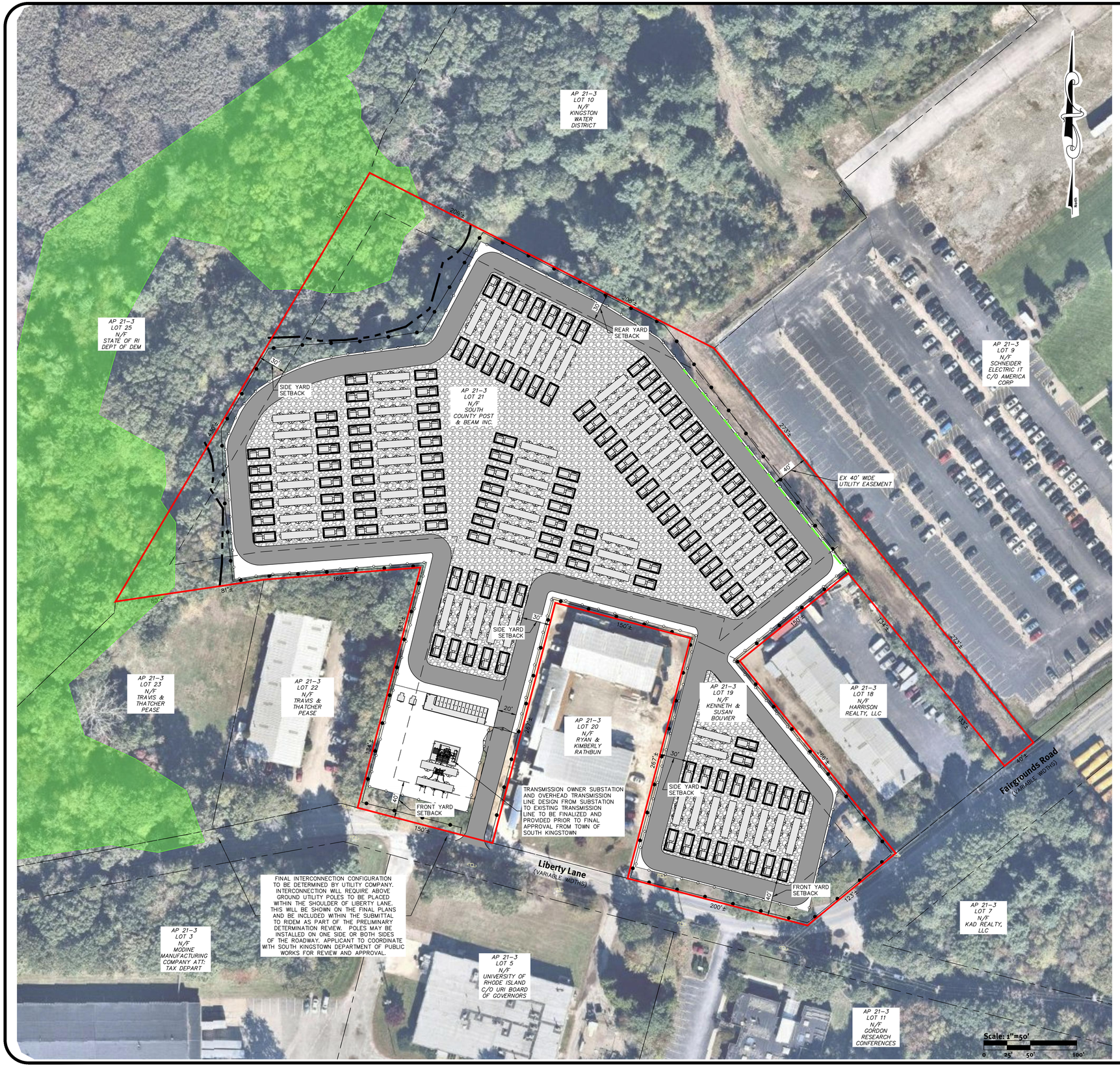
A.P. 21-3 Lots 19 & 21
South Kingstown, Rhode Island

Applicant
Aeronaut Storage Resources, LLC and Narragansett Energy Storage LLC
1237 9th Avenue
San Francisco, CA 94122

Owner
Kenneth S. Bouvier and Susan D. Bouvier and South County Post & Beam Inc.
521 Liberty Lane
West Kingston, RI 02892

SHEET 3 OF 5

z:\denali\projects\2709.001 plus energy storage\autocad drawings\2709.001-plan.dwg Plotted: 3/29/2019



General Notes:

1. THE SITE IS PROPOSED TO BE BUILT IN 1 PHASE. CONSTRUCTION TO COMMENCE FALL 2022 OR UPON RECEIPT OF ALL NECESSARY APPROVALS.
2. DETAILED SOIL EROSION AND SEDIMENT CONTROL MEASURES TO BE INCORPORATED AT THE PRELIMINARY DESIGN STAGE AND WILL CONFORM TO RIDEM BEST MANAGEMENT PRACTICES
3. THE DRAINAGE SYSTEM IS CONCEPTUALLY DESIGNED AND WILL MEET THE SOUTH KINGSTOWN SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WITH THE USE OF AN 8" CRUSHED STONE BASE THROUGHOUT THE SITE. THE STORMWATER MANAGEMENT SYSTEM MEETS THE RIDEM BEST MANAGEMENT PRACTICES.
4. PROPOSED ACCESS ROAD TO BE 20' WIDE PAVEMENT.
5. THE SITE IS NOT TO BE SERVICED BY PUBLIC WATER, PUBLIC SEWER, PRIVATE WELL PUBLIC WELL, NOR PRIVATE OWTS.
6. ANY PROPRIETARY PRODUCTS REFERENCED IN THIS PLAN SET ARE REPRESENTATIVE OF THE MINIMUM DESIGN REQUIREMENTS FOR THE PURPOSE IT PROPOSES TO SERVE. ALTERNATIVES TO ANY PROPRIETARY PRODUCT MAY BE SUBMITTED TO THE ENGINEER OF RECORD FOR CONSIDERATION, WHICH MUST BE ACCOMPANIED BY APPROPRIATE SPECIFICATION SHEETS/ DESIGN CALCULATIONS THAT DEMONSTRATE THE ALTERNATIVE(S) MEET THE MINIMUM DESIGN PARAMETERS OF THE PRODUCT SHOWN ON THE PLANS. NO ALTERNATIVES MAY BE USED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.

Dimensional Regulations:

CURRENT ZONING:	IND-1 REQUIRED	PROVIDED
MINIMUM LOT AREA:	40,000 SF	325,800 SF
MINIMUM FRONTAGE AND LOT WIDTH:	150'	454'
MINIMUM FRONT AND CORNER SIDE YARD:	40'	40'
MINIMUM SIDE YARD:	30'	30'
MINIMUM REAR YARD:	30'	30'
MAXIMUM STRUCTURE HEIGHT:	40'	40'
MAXIMUM LOT COVERAGE:	80%	76%

SITE= 7.44± ACRES
LAND UNSUITABLE (WETLANDS, 50' BUFFERS, EASEMENTS) −1.20± ACRES
BUILDABLE LAND = 6.24± ACRES

PROPOSED DISTURBED AREA = 5.96± ACRES
PROPOSED ENCLOSED ENERGY STORAGE INSTILLATION AREA = 5.64± ACRES

Existing Legend

NOT ALL ITEMS SHOWN WILL APPEAR ON PLANS

- PROPERTY LINE
- ASSESSOR LINE
- SETBACK
- 2 MINOR CONTOUR LINE
- 10 MAJOR CONTOUR LINE
- BUILDING
- HkC SOIL BOUNDARY LINE
- WETLAND EDGE
- WETLAND HATCH
- 50' PERIMETER WETLAND
- SEWER LINE
- UTILITY POLE

Proposed Legend

NOT ALL ITEMS SHOWN WILL APPEAR ON PLANS

- CHAINLINK FENCE
- 308 MINOR CONTOUR LINE
- 310 MAJOR CONTOUR LINE
- +312 SPOT ELEVATION
- EDGE OF PAVEMENT
- BUILDING FOOTPRINT
- ASPHALT PAVEMENT
- 8" OF CRUSHED STONE
- OHW OVERHEAD WIRE ELECTRIC, TELEPHONE, CABLE LINE
- LIMIT OF DISTURBANCE/ LIMIT OF CLEARING
- SEDIMENTATION BARRIER, SILT FENCE (RIDOT STD 9.2.0), COMPOST SOCK OR APPROVED EQUAL

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
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No.	Date	Description	By
0	3/29/19	Development Plan Review Submission	K.E.D.

Drawn By: K.E.D. Design By: D.A.R.

Exhibit C: Site Layout Plan

Site Layout Plan

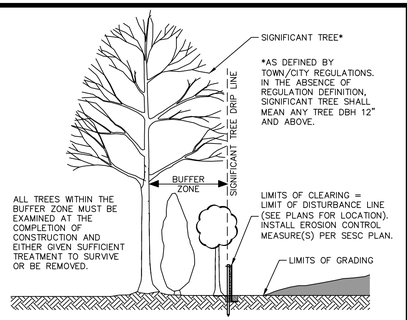
Liberty Lane

A.P. 21-3 Lots 19 & 21
South Kingstown, Rhode Island

Applicant
Kingstown Storage Resources, LLC and Narragansett Energy Storage LLC
1237 9th Avenue
San Francisco, CA 94122

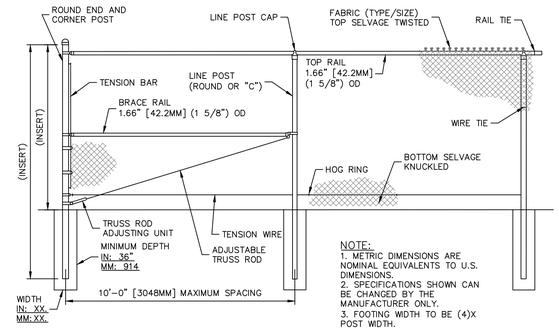
Owner
Kenneth S. Bouvier and Susan D. Bouvier and South County Post & Beam Inc.
521 Liberty Lane
West Kingston, RI 02892

SHEET 4 OF 5



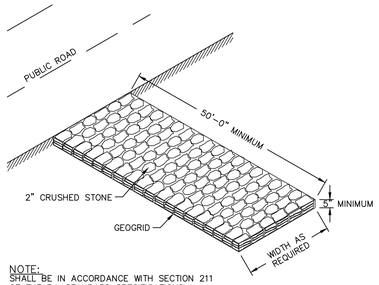
Limit of Disturbance at Vegetation

NOT TO SCALE



Typical Fence Section

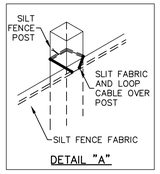
NOT TO SCALE

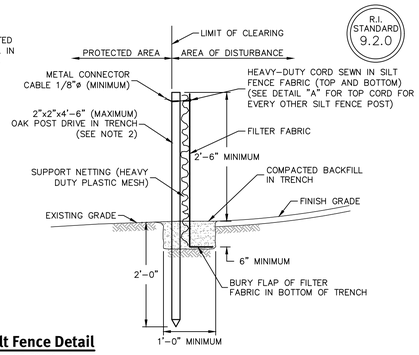


Construction Access

NOT TO SCALE

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2"x2"x4'-6" (MAXIMUM) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAXIMUM) O.C. IN WETLAND AREAS AND 4'-0" (MAXIMUM) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4'-6"(MINIMUM) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.





Silt Fence Detail

NOT TO SCALE

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6046 www.diprete-eng.com
Boston • Providence • Newport

No.	Date	Description	By
0	3/29/19	Development Plan Review Submission	K.E.D.

Drawn By: K.E.D. | Design By: D.A.R.

Detail Sheet

Liberty Lane

A.P. 21-3 Lots 19 & 21
South Kingstown, Rhode Island

Applicant
Energy Storage Resources, LLC and Narragansett Energy Storage LLC
1237 9th Avenue
San Francisco, CA 94122

Owner
Kenneth S. Bouvier and Susan D. Bouvier and South County Post & Beam Inc.
521 Liberty Lane
West Kingston, RI 02892

SHEET 5 OF 5

AP 21-3
LOT 10
N/F
KINGSTON
WATER
DISTRICT

AP 21-3
LOT 25
N/F
STATE OF RI
DEPT OF DEM

30'
SIDE YARD
SETBACK

50'
REAR YARD
SETBACK

AP 21-3
LOT 21
N/F
SOUTH
COUNTY POST
& BEAM INC.

40'
EX 40' WIDE
UTILITY EASEMENT

30'
SIDE YARD
SETBACK

AP 21-3
LOT 23
N/F
TRAVIS &
THATCHER
PEASE

AP 21-3
LOT 22
N/F
TRAVIS &
THATCHER
PEASE

20'

AP 21-3
LOT 20
N/F
RYAN &
KIMBERLY
RATHBUN

30'
SIDE YARD
SETBACK

AP 21-3
LOT 19
N/F
KENNETH &
SUSAN
BOUVIER

AP 21-3
LOT 18
N/F
HARRISON
REALTY, LLC

FRONT YARD
SETBACK

2 PG
5 JB
1 AC
1 PG
2 AR
9 RM

Liberty Lane
(VARIABLE WIDTHS)

Fairgrounds Road
(VARIABLE WIDTHS)

3 PG
3 JB
3 AC
3 RM
1 ARO

LOAM &
SEED

6 RM
1 ARO
4 AC
1 PG
4 JB

FRONT YARD
SETBACK

40'

EXISTING TREES TO REMAIN &
PROTECTED DURING DURATION
OF CONSTRUCTION

AP 21-3
LOT 3
N/F
MODINE
MANUFACTURING
COMPANY ATT:
TAX DEPART

AP 21-3
LOT 5
N/F
UNIVERSITY OF
RHODE ISLAND
C/O URI BOARD
OF GOVERNORS

LOAM & SEED DISTURBED AREAS
BETWEEN NEW PLANTINGS AS
WELL AS BETWEEN FENCE AND
LIMIT OF DISTURBANCE ALONG
FRONT PROPERTY LINE TO MATCH
EXISTING (TYPICAL)

AP 21-3
LOT 7
N/F
KAD REALTY,
LLC

Scale: 1"=40'
0 20' 40' 80'

Planting Notes:

1. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS BY NOTIFYING DIG-SAFE (811) AND ANY/OR ALL LOCAL UTILITY COMPANIES AS REQUIRED AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION OR SITE PREPARATION.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH TOWN OF SOUTH KINGSTOWN REGULATIONS AS WELL AS STATE AND FEDERAL REGULATIONS BY THE CONTRACTOR. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR THIS PROJECT PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO PROVIDE A TWO (2) YEAR GUARANTEE FOR ALL MATERIALS. CONTRACTOR GUARANTEES THAT PLANTS WILL REMAIN HEALTHY FOR TWO (2) GROWING SEASONS. CONTRACTOR TO MAINTAIN ALL PLANTING AND LAWNS UNTIL FINAL PROJECT ACCEPTANCE. GUARANTEE PERIOD TO COMMENCE AT FINAL ACCEPTANCE. ANY REPLACEMENT PLANTS SHALL BE OF THE SAME SIZE AND SPECIES AS SPECIFIED WITH NEW GUARANTEE COMMENCING ON THE DATE OF REPLACEMENT.
4. ALL PLANT MATERIAL SHALL CONFORM, IN ALL RESPECTS, TO THE GUIDELINES OF "THE AMERICAN STANDARD FOR NURSERY STOCK," LATEST EDITION, PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION, INC. ALL PLANTS SHALL BE NURSERY GROWN AND SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS.
5. EXISTING PLANTINGS ON SITE MAY BE USED TO FULFILL THE TOWN OF SOUTH KINGSTOWN'S LANDSCAPE REGULATIONS IF THE PLANTINGS CONFORM TO THE TOWN OF SOUTH KINGSTOWN LANDSCAPE REQUIREMENTS. ANY PLANT SUBSTITUTION SELECTION MUST BE APPROVED BY LANDSCAPE ARCHITECT AND THE SOUTH KINGSTOWN ADMINISTRATOR OFFICER PRIOR TO INSTALLATION.
6. ALL PLANTS TO BE PLANTED SO THAT AFTER SETTLEMENT THEY BEAR THE SAME RELATION TO THE SURROUNDING GROUND AS TO THEIR ORIGINAL GRADE BEFORE DIGGING.
7. CREATE SAUCER AROUND INDIVIDUAL PLANTS CAPABLE OF HOLDING WATER. ALL PLANTS TO BE FLOODED WITH CLEAN WATER TWICE WITHIN THE FIRST 24 HOURS OF PLANTING. ADDITIONAL WATERING SHALL BE MADE AS REQUIRED TO KEEP PLANTS FROM WILTING AND DRYING OUT UNTIL FINAL ACCEPTANCE.
8. ALL PLANTS TO RECEIVE A MAXIMUM OF THREE (3) INCHES OF HARDWOOD MULCH AND SHALL COVER PLANTING BEDS WITHIN 72 HOURS AFTER PLANTING AS SHOWN ON DRAWINGS.
9. TRIM BROKEN AND DEAD BRANCHES FROM TREES AND SHRUBS AFTER PLANTING. NEVER CUT A LEADER.
10. RECOMMENDED DATES FOR PLANTING ARE MARCH 15 TO JUNE 15 AND SEPTEMBER 15 TO NOVEMBER 15.
11. ALL LANDSCAPED AREAS SHALL BE KEPT FREE OF WEEDS AND DEBRIS. ALL VEGETATION WITHIN SAID AREAS SHALL BE MAINTAINED FREE OF PHYSICAL DAMAGE CAUSED BY CHEMICALS, INSECTS, DISEASES, LACK OF WATER OR OTHER CAUSES. DAMAGED PLANTS SHALL BE REPLACED WITH THE SAME OR SIMILAR VEGETATION ON AN ANNUAL BASIS.
12. ANY DISTURBED AREA OUTSIDE OF PAVEMENT AND BUILDING TO BE LOAMED AND SEEDED. LOAM MOVED ON SITE TO BE STOCKPILED AND RETAINED AND TO BE USED AS REQUIRED FOR THE LANDSCAPE DESIGN. LOAM SHALL NOT BE MIXED WITH ANY UNSUITABLE MATERIALS OR SUBSOIL. EXCESS LOAM TO REMAIN ON THE OWNER'S PROPERTY AND ONLY REMOVED WITH THE OWNERS PERMISSION. NEW LOAM SHALL BE FRIABLE, FERTILE, MEDIUM TEXTURED SANDY LOAM THAT IS FREE OF TOXIC MATERIALS TO HEALTHY PLANT GROWTH AND SURVIVAL. LOAM SHALL BE FREE OF MATTER 1" OR GREATER IN DIAMETER AND WHEN TESTED SHALL HAVE A PH BETWEEN 5.5 AND 7.5. CONTRACTOR TO PROVIDE 8 INCHES OF GOOD QUALITY, LOAM AND/OR REUSE EXISTING LOAM TO PROVIDE A MINIMUM 6 INCH DEPTH. CONTRACTOR TO LOAM AND SEED ALL DISTURBED AREAS USING THE ENDOPHYTE ENHANCED MIX AT A RATE OF 5-7 LBS. PER 1,000 SF (AVAILABLE AT ALLENS SEED IN EXETER, RI) OR AS DIRECTED BY TOWN. CONTRACTOR SHALL SOD WITH SOD CONTAINING CLOVER OR OVERSEED ANY AREAS NOT COVERED SUBSTANTIALLY WITH GRASS AFTER ONE YEAR FROM PLANTING.
13. THESE PLANS ARE FOR LANDSCAPE PLANTING ONLY.

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Two Stafford Court Cranston, RI 02920
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Boston • Providence • Newport

No.	Date	Description	By:
0	2-20-19	Development Plan Review Submission	K.E.D.

Drawn By: K.E.D. Design By: D.A.R.

Landscape Plan

Liberty Lane

A.P. 21-3 Lots 19 & 21
South Kingstown, Rhode Island

Applicant
Liberty Storage Resources, LLC and Narragansett Energy Storage LLC
1237 9th Avenue
San Francisco, CA 94122

Owner
Kenneth S. Bouvier and Susan D. Bouvier and South County Post & Beam Inc.
521 Liberty Lane
West Kingston, RI 02892

SHEET 1 OF 2

Town of South Kingstown
Subdivision & Land Development Regulations
SECTION IV. SPECIAL REQUIREMENTS
G. LANDSCAPING – GENERAL STANDARDS & SPECIFICATIONS

1. PLANT MATERIALS – STANDARDS
PLANT MATERIALS SHALL CONFORM TO THE REQUIREMENTS DESCRIBED IN THE LATEST EDITION OF AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. PLANT MATERIALS SHALL BE SELECTED FROM THE PUBLICATION ENTITLED SUSTAINABLE TREES AND SHRUBS FOR SOUTHERN NEW ENGLAND, UNIVERSITY OF RHODE ISLAND AND UNIVERSITY OF MASSACHUSETTS COOPERATIVE EXTENSION SYSTEMS, 2ND EDITION, 1995, OR LATEST AMENDMENT. AL TIME OF PLANTING, PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED BELOW:

A) STREET TREES AND SHADE TREES SHALL MEET THE REQUIREMENTS OF ARTICLE XIII, SECTION 13 OF THESE REGULATIONS.
B) MINIMUM SIZE FOR SMALL EVERGREEN TREES OR LARGE SHRUBS SHALL BE SIX TO EIGHT (6–8) FEET IN HEIGHT.
C) MINIMUM SIZE FOR LOW SHRUBS SHALL BE FOUR (4) FT. IN HEIGHT.
D) SPACING OF SHRUBS AND OTHER PLANT MATERIALS WHICH ARE INTENDED TO PROVIDE A VISUAL AND/OR AUDIO SCREEN SHALL BE DETERMINED BY THE ANTICIPATED HEIGHT AND SPREAD OF THE PLANT AT MATURITY, BUT SHALL BE PLANTED IN STAGGERED ROWS SO AS LO ACHIEVE A DENSE APPEARANCE WITHIN ONE YEAR OF PLANTING. IN ADDITION TO PLANT MATERIALS, THE PLANNING BOARD MAY REQUIRE THE PLACEMENT OF A SIX–FOOT–HIGH OPAQUE FENCE OR OTHER BARRIER IF THE BOARD DETERMINES THAT THE INITIAL PLANTING WILL NOT ACHIEVE THE INTENDED SCREENING EFFECT WITHIN ONE YEAR OF PLANTING.
E) ALL PLANTINGS SHALL BE MAINTAINED AND GUARANTEED A PERIOD OF ONE YEAR.

2. STREET LANDSCAPING
WHENEVER A PARKING OR LOADING AREA ADJOINS A PUBLIC STREET RIGHT–OF–WAY, OR THE RIGHT–OF–WAY OF A PRIVATE STREET WHICH IS OR MAY BE CUSTOMARILY USED BY THE PUBLIC AS ACCESS TO THE PARKING OR LOADING FACILITY, A LANDSCAPED STRIP OF LAND SHALL BE CONSTRUCTED OR MAINTAINED ALONG THE ENTIRE STREET FRONTAGE, EXCEPT FOR ANY NECESSARY DRIVEWAYS, AS PROVIDED HEREIN. THERE ARE FIVE (5) BASIC OPTIONS FOR A LANDSCAPED STRIP ALONG A STREET AS SHOWN IN THE ILLUSTRATIONS ON THE FOLLOWING PAGES. FOR THE PURPOSE OF THESE REGULATIONS, THE DESIGN AND LAYOUT OF SITE FEATURES SHOWN ARE INTENDED TO BE ILLUSTRATIVE DESIGN GUIDELINES. THE PLANNING BOARD MAY MODIFY THE SPECIFIC DESIGN DURING DEVELOPMENT PLAN REVIEW WHERE NECESSARY TO ACHIEVE THE PURPOSES AND GOALS OF THIS SECTION.

A) A STRIP OF LAND OF MINIMUM 10 FOOT WIDTH BETWEEN THE RIGHT–OF–WAY AND THE PARKING/LOADING FACILITY PLANTED AS A PARTIAL LANDSCAPE SCREEN. (SEE FIGURE 1).
B) AN EARTH BERM OF MINIMUM 8 FOOT WIDTH THAT IS AT LEAST 2.5 FEET HIGHER THAN THE FINISHED ELEVATION OF THE PARKING LOT AND PLANTED AS A PARTIAL LANDSCAPE SCREEN. (SEE FIGURE 2).
C) A STRIP OF LAND OF MINIMUM 6 FOOT WIDTH WITH A MINIMUM 3–FOOT GRADE DROP FROM THE RIGHT–OF–WAY TO THE PARKING LOT AND PLANTED AS A PARTIAL LANDSCAPE SCREEN. (SEE FIGURE 3).
D) A STRIP OF LAND OF MINIMUM 4 FOOT WIDTH TO PROVIDE A STONE WALL, BRICK OR OTHER MASONRY WALL HAVING A MINIMUM HEIGHT OF 3 FEET AND PLANTED AS A PARTIAL LANDSCAPE SCREEN. (SEE FIGURE 4).
E) A WOODED BUFFER STRIP OF LAND OF MINIMUM 25 FOOT WIDTH OF EXISTING WOODLANDS OR OTHER NATURAL FEATURES SUCH AS WETLANDS, HILLSIDES, OR ROCK OUTCROPS SUFFICIENT TO SCREEN ADJACENT RIGHTS–OF–WAY. (SEE FIGURE 5).

THE PROPOSED USE OF THE SITE IS AS A STORAGE FACILITY. PLANTINGS ARE PROPOSED ALONG THE RIGHT–OF–WAY WHERE FEASIBLE.

3. PERIMETER LANDSCAPING – PARKING LOTS AND LOADING FACILITIES
THE PERIMETER OF THE PARKING LOT AND LOADING FACILITY SHALL BE SURROUNDED BY A LANDSCAPED STRIP AS ILLUSTRATED IN FIGURE 7. THE WIDTH OF THE PERIMETER LANDSCAPING STRIP SHALL BE AS FOLLOWS:
NO LESS THAN TEN (10) FEET IN WIDTH WHERE THE PARKING AREA CONTAINS FIVE (5) SPACES OR MORE OR WHICH EXCEEDS 2500 SQ. FT OF PAVED AREA; AND,
NO LESS THAN FIVE (5) FEET IN WIDTH WHERE THE PARKING AREA CONTAINS LESS THAN FIVE (5) SPACES OR WHICH HAS LESS THAN 2,500 SQ. FT. OF PAVED PARKING AREA.
LANDSCAPING OF THE PERIMETER OF A PARKING LOT SHALL INCLUDE AT LEAST ONE TREE PLUS THREE (3) LOW SHRUBS OR GROUNDCOVER PLANTS FOR EVERY THIRTY–FIVE (35) LINEAR FEET OF PERIMETER.

THE PROPOSED USE OF THE SITE IS AS A STORAGE FACILITY. A CHAIN LINK FENCE PROPOSED AROUND THE PERIMETER OF THE SITE.

4. INTERIOR LANDSCAPING
THE INTERIOR AREAS OF PARKING LOTS (EXCLUSIVE OF LOADING AREAS) SHALL ALSO BE LANDSCAPED. THE MINIMUM AMOUNT OF INTERIOR PARKING LOT LANDSCAPING SHALL BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING TABLE:

TOTAL AREA OF PARKING LOT	MINIMUM PERCENT OF THE TOTAL PARKING LOT AREA THAT MUST BE AN INTERIOR LANDSCAPING AREA
< 2,500 SQ. FT.	NO REQUIREMENT
2,500 TO 20,000 SQ. FT.	5%
20,001 TO 50,000 SQ. FT.	8%
>50,000 SQ. FT.	10%

SUCH INTERIOR LANDSCAPING SHALL BE PROVIDED AS A COMBINATION OF ANY OF THE WAYS PROVIDED BELOW. REFER TO FIGURE 8.

A) 9–FOOT WIDE X 18' INTERMEDIATE ISLANDS: AT LEAST 1 TREE, PLUS AT LEAST 3 LOW SHRUBS OR GROUND COVER PLANTS AND/OR TURF GRASS;
B) 18' X 18' CORNER ISLANDS: AT LEAST 1 TREE, PLUS AT LEAST 6 LOW SHRUBS OR GROUND COVER PLANTS AND/OR TURF GRASS;
C) 9–FOOT WIDE CENTER AND DRIVE ISLANDS: AT LEAST 3 TREES PER 100 LINEAR FEET, PLUS AT LEAST 6 LOW SHRUBS OR GROUND COVER PLANTS PER 100 LINEAR FEET AND/OR TURF GRASS;
D) 9–FOOT WIDE X 18' HALF END ISLANDS: AT LEAST 1 TREE, PLUS AT LEAST 3 LOW SHRUBS OR GROUND COVER PLANTS AND/OR TURF GRASS;
E) 9–FOOT WIDE X 36' FULL END ISLANDS: AT LEAST 2 TREES, PLUS AT LEAST 6 LOW SHRUBS OR GROUND COVER PLANTS AND/OR TURF GRASS;
F) COMMON LANDSCAPED AREAS USED TO DIRECT VEHICULAR OR PEDESTRIAN TRAFFIC, TO DELINEATE PARKING OR TO PRESERVE EXISTING NATURAL FEATURES: AT LEAST 1 TREE PER 300 SQ. FT. AREA PLUS AL LEAST 6 LOW SHRUBS OR GROUND COVER PLANTS AND/OR TURF GRASS.
LOW SHRUBS OR TURF MAY BE SUBSTITUTED FOR TREES WITHIN THE INTERIOR OF PARKING AREAS WHERE EXISTING TREE COVER IS PRESENT OR IS BEING PROVIDED AS PART OF REQUIRED PERIMETER OR STREET RIG HI–OF–WAY LANDSCAPING OR IS ADJACENT TO THE PARKING AREA AND IS OF SUFFICIENT HEIGHT AND DENSITY TO ACHIEVE THE GOALS AND PURPOSES OF THIS SECTION. INTERIOR LANDSCAPED AREAS SHALL BE DISTRIBUTED THROUGHOUT THE PARKING LOT AS MUCH AS POSSIBLE IN ORDER TO AVOID LARGE EXPANSES OF PAVEMENT, OR AS DETERMINED BY THE PLANNING BOARD AT THE TIME OF DEVELOPMENT PLAN REVIEW. LANDSCAPED STRIPS ALONG THE STREET OR PERIMETER LANDSCAPING SHALL NOT BE COUNTED TO MEET THESE INTERIOR LANDSCAPING REQUIREMENTS.

NOT APPLICABLE.

5. BUILDING LANDSCAPING
PAVEMENT FOR PARKING AREAS, EXCLUSIVE OF LOADING AREAS AND DRIVEWAYS, SHALL NOT DIRECTLY ABUT THE WALL OF ANY PRINCIPAL BUILDING FACING ANY PUBLIC STREET WHICH PROVIDES LOT FRONTAGE. THERE SHALL BE A LANDSCAPED AREA BETWEEN THE PARKING SURFACE AND BUILDING WALL OF AT LEAST THREE (3) FEET IN WIDTH. LANDSCAPING SHALL BE PROVIDED IN SAID AREA TO INCLUDE SHRUBS, ORNAMENTAL TREES, GROUND COVER PLANTS OR TURF GRASS. THIS REQUIREMENT SHALL NOT BE CONSTRUED SO AS TO PROHIBIT THE CONSTRUCTION OF PERMITTED DECKS, PORCHES, SIGNS, LIGHTING, WALKS OR RAISED PLANTERS ALONG SAID BUILDING WALL, PROVIDED THAT LANDSCAPING AND PLANT MATERIALS ARE INCORPORATED INTO THE DESIGN. IN THE CASE OF CORNER LOTS, EACH BUILDING WALL FACING ADJACENT STREETS SHALL BE SO LANDSCAPED. THE REQUIREMENTS FOR BUILDING LANDSCAPING IN THIS SUBSECTION SHALL NOT APPLY TO CD ZONING DISTRICTS.

NOT APPLICABLE.

6. LOCATION OF LOADING SPACES
OFF–STREET LOADING SPACES SHALL BE LOCATED UPON THE LOT IN SUCH A MANNER SO AS TO BE HIDDEN FROM DIRECT VIEW FROM ADJACENT PUBLIC OR PRIVATE STREETS. IN COMMERCIAL AND MANUFACTURING ZONING DISTRICTS, AND IN ANY SPECIAL MANAGEMENT DISTRICT, LOADING FACILITIES SHALL NOT BE LOCATED IN THE AREA BETWEEN THE PRINCIPAL BUILDING AND THE STREET LINE. LOADING FACILITIES SHALL BE LOCATED TOWARD THE REAR OF THE BUILDING IN SUCH A MANNER AS TO BE EFFECTIVELY SCREENED FROM ADJACENT STREETS. IF CONDITIONS DO NOT PERMIT SUCH A LOCATION, LOADING SPACES MAY BE LOCATED ON THE SIDE OF THE BUILDING PROVIDED THAT, TO THE MAXIMUM EXTENT POSSIBLE, THEY ARE SCREENED FROM ADJACENT STREETS OR ABUTTING RESIDENTIAL USES OR ZONING DISTRICTS. MINIMUM SCREENING FOR LOADING SPACES IN SIDE YARDS SHALL BE AS PROVIDED IN FIGURE 6 FOR ANY OF THE OPTIONS FOR A FULL LANDSCAPE SCREEN.

NOT APPLICABLE.

7. TRANSITION YARD LANDSCAPING STANDARDS
TRANSITION YARD LANDSCAPING IS REQUIRED WHENEVER A BUFFER BETWEEN ADJACENT INCOMPATIBLE LAND USES IS NECESSARY IN ORDER TO PHYSICALLY SEPARATE AND VISUALLY SCREEN SUCH ADJACENT LAND USES. TRANSITION YARDS ARE REQUIRED IN THE FOLLOWING SITUATIONS AND ARE REQUIRED TO PROVIDE THE FOLLOWING LANDSCAPING AND BUFFERING:

A) INDUSTRIAL USES OR ZONING DISTRICTS ABUTTING RESIDENTIAL ZONING DISTRICTS – IN ANY ZONING DISTRICT, A LOT WHICH CONTAINS ANY INDUSTRIAL USE, AND A LOT IN ANY INDUSTRIAL ZONING DISTRICT WHICH ABUTS ANY RESIDENTIAL ZONING DISTRICT SHALL PROVIDE A SIDE YARD AND A REAR YARD AT LEAST EQUAL TO TWICE THE SIDE OR REAR YARD REQUIREMENT OF THE ADJOINING RESIDENTIAL DISTRICT. WHERE MORE THAN ONE RESIDENTIAL DISTRICT ABUTS, THE DISTRICT IMPOSING THE HIGHER STANDARD SHALL APPLY. SIDE AND REAR YARDS IN THE INDUSTRIAL DISTRICT SHALL BE BUFFERED IN ANY OF THE FOLLOWING WAYS:
- 50–FOOT WOODED BUFFER; OR,
- 20–FOOT PARTIAL LANDSCAPE SCREEN; OR,
- 10–FOOT FULL LANDSCAPE SCREEN.

B) COMMERCIAL ZONING DISTRICTS ABUTTING RESIDENTIAL ZONING DISTRICTS – LOTS IN ANY COMMERCIAL ZONING DISTRICT WHICH ABUT ANY RESIDENTIAL ZONING DISTRICT SHALL PROVIDE A SIDE YARD AND A REAR YARD AT LEAST EQUAL TO THE SIDE OR REAR YARD REQUIREMENT OF THE ADJOINING RESIDENTIAL DISTRICT; EXCEPT THAT CORNER SIDE YARD REQUIREMENTS FOR SUCH LOTS MAY BE PROVIDED AS REQUIRED IN THE COMMERCIAL DISTRICT. WHERE MORE THAN ONE RESIDENTIAL DISTRICT ABUTS, THE DISTRICT IMPOSING THE HIGHER STANDARD SHALL APPLY: SIDE AND REAR YARDS IN THE COMMERCIAL DISTRICT SHALL BE BUFFERED IN ANY OF THE FOLLOWING WAYS:
- 50–FOOT WOODED BUFFER; OR,
- 20–FOOT PARTIAL LANDSCAPE SCREEN; OR,
- 10–FOOT FULL LANDSCAPE SCREEN.

NOT APPLICABLE.

8. 8. LANDSCAPED STREET YARDS
WITHIN ANY ZONING DISTRICT WITHIN THE KINGSTOWN ROAD SPECIAL MANAGEMENT DISTRICT, ANY LOT HAVING DIRECT FRONTAGE ON KINGSTOWN ROAD, SAUGATUCKET ROAD OR CURTIS CORNER ROAD SHALL PROVIDE LANDSCAPED STREET YARDS AS PROVIDED IN SECTION 604 OF THE ZONING ORDINANCE. THE DELINEATION OF THE LANDSCAPED STREET YARD IS ILLUSTRATED BY FIGURE 9.

NOT APPLICABLE.

9. ALTERNATIVE METHODS OF COMPLIANCE
WHERE LANDSCAPING REQUIRED BY THIS SECTION IS NOT PRACTICAL FOR REASONS OF AVAILABLE LAND AREA, CONFLICT WITH OVERHEAD WIRES OR OTHER PHYSICAL CONDITIONS, THE PLANNING BOARD MAY PERMIT ALTERNATIVE LANDSCAPING OR MAY WAIVE, REDUCE OR OTHERWISE MODIFY THE REQUIREMENTS FOR SUCH LANDSCAPING. IN APPLYING FOR SUCH WAIVER THE APPLICANT SHALL PROPOSE ALTERNATIVE METHODS OF PROVIDING LANDSCAPING, SCREENING OR BUFFERING IN ORDER TO MEET THE GOALS AND PURPOSES OF THIS SECTION.

NEW PLANTING IS PROPOSED TO FULFILL LANDSCAPE REQUIREMENTS WHERE FEASIBLE.

SECTION XIII. DESIGN & PUBLIC IMPROVEMENT STANDARDS
B. STREET DESIGN STANDARDS

13. STREET TREES
WHERE NATURAL TREE GROWTH IS DETERMINED BY THE PLANNING BOARD TO BE INSUFFICIENT, THE PLANNING BOARD SHALL REQUIRE THE SUBDIVIDER TO PLANT STREET TREES APPROPRIATE FOR THE TERRAIN, SOIL AND CLIMATIC CONDITIONS ENCOUNTERED IN THE SUBDIVISION, AND IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
a. LOCATION – STREET TREES SHALL BE LOCATED AS SHOWN IN FIGURE 3 OR ON THE PORTION OF BUILDING LOTS WITHIN 10 FEET OF THE STREET RIGHT–OF–WAY LINE, IF ASSURANCE CAN BE GIVEN BY THE SUBDIVIDER THAT THE TREES WILL NOT BE DISTURBED BY BUILDING ACTIVITIES. IN EITHER CASE, NO STREET TREES SHALL BE LOCATED SO AS TO INTERFERE WITH OVERHEAD OR UNDERGROUND UTILITY LINES.
TREES SHALL BE SPACED APPROXIMATELY 30 FEET TO 50 FEET ON CENTER, DEPENDING ON ANTICIPATED ULTIMATE SIZE.
b. TYPE – THE SPECIES SELECTED ARE TO BE SUITABLE FOR ZONE 6 HARDINESS AND SHALL BE SELECTED FROM THE PUBLICATION ENTITLED 'SUSTAINABLE TREES AND SHRUBS FOR SOUTHERN NEW ENGLAND," (UNIVERSITY OF RHODE ISLAND AND UNIVERSITY OF MASSACHUSETTS COOPERATIVE EXTENSION SYSTEMS, 1995) AND SHALL BE SELECTED FOR SUITABILITY FOR THE LOCATION. WHERE MULTIPLE TREES ARE TO BE PLANTED, MONOCULTURE PLANTING SHOULD BE AVOIDED,
c. SIZE –SPECIES SHALL BE 1 1/2 TO 2 INCHES CALIPER, MEASURED ONE–FOOT FROM GROUND LEVEL IN PLACE, AND 6 FEEL LO 8 FEET OF HEIGHT IN PLACE.
d. QUALITY – STREET TREES SHALL BE BALLED AND BURLAPPED WITH GOOD ROOT DEVELOPMENT AND BRANCHING CHARACTERISTICS. TREES SHALL HAVE A WELL–DEFINED CENTRAL LEADER. ALL TREES SHALL BE OF LICENSED NURSERY STOCK. NATIVE SPECIES SHOULD BE USED WHENEVER POSSIBLE. DEAD AND BROKEN BRANCHES SHALL BE REMOVED. NO MORE THAN 25% OF BRANCHES SHALL BE REMOVED AL TIME OF PLANTING.
e. PLANTING – THE SUBDIVIDER SHALL ENGAGE A RHODE ISLAND LICENSED ARBORIST TO BE ON SITE DURING PLANTING TO ENSURE THAT THE FOLLOWING STANDARDS AND PROCEDURES ARE OBSERVED DURING PLANTING:
- THE TOP 50% OF BURLAP AND WIRE BASKET SHALL BE REMOVED.
- ENOUGH SOIL FROM THE TOP OF THE ROOT BALL SHALL BE REMOVED TO EXPOSE TRUNK/ROOT FLARE.
- TORN OR RAGGED ROOTS SHALL BE PRUNED LO MAKE A CLEAN TERMINATION.
- TREES SHALL BE PLANTED IN BOWL–SHAPED PLA THREE (3) LIMES THE WIDTH OF THE ROOT BALL.
- THE SOIL AL THE BOTTOM OF THE HOLE SHALL BE COMPACTED LO RESIST SETTLING OF THE TREE.
- SOIL THAT IS NUTRIENT DEFICIENT SHALL BE AMENDED BY THE ADDITION OF COMPOST PRIOR TO BACKFILLING THE HOLE.
- TREES SHALL BE PLANTED AL A DEPTH THAT ALLOWS FULL EXPOSURE OF TRUNK/ROOT FLARE.
- TREES SHALL BE STAKED AND GUYED, USING ARBOR TAPE THAT IS NOT PULLED TAUT.
- SAL FROM THE PLANTING HOLE SHALL BE BUILT UP ALONG THE PERIMETER, TO ACT AS A DAM TO RETAIN WATER.
- TREES SHALL BE MULCHED WITH 2 (TWO) TO 3 (THREE) INCHES OF MULCH, KEEPING MULCH 3 (THREE) INCHES AWAY FROM TRUNK.

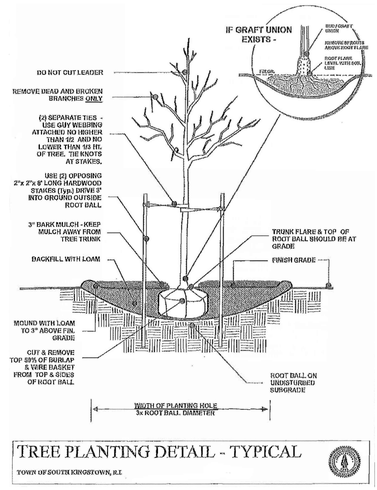
TREES, SHRUB PLANTINGS AND LOAM AND SEED ARE PROPOSED ALONG THE STREET RIGHT–OF–WAY WHERE FEASIBLE. THE SPECIES SELECTED ARE TO BE SUITABLE FOR ZONE 6 HARDINESS AND SHALL BE SELECTED FROM THE PUBLICATION ENTITLED 'SUSTAINABLE TREES AND SHRUBS FOR SOUTHERN NEW ENGLAND," (UNIVERSITY OF RHODE ISLAND AND UNIVERSITY OF MASSACHUSETTS COOPERATIVE EXTENSION SYSTEMS, 1995). TREE SPECIES PROPOSED ARE 1 1/2 TO 2 INCHES CALIPER.

Town of South Kingstown
Zoning Regulations
ARTICLE 6. OVERLAY ZONES, SPECIAL ZONES & SPECIAL MANAGEMENT DISTRICTS
SECTION 602 GROUNDWATER PROTECTION OVERLAY DISTRICT
602.6 SITE DESIGN STANDARDS
H. AT LEAST 20% OF THE AREA OF EACH LOT SHALL BE COVERED WITH EXISTING OR INTRODUCED VEGETATION.

REQUIRED VEGETATED COVERAGE: 20%
PROPOSED VEGETATION AREA: 1.49 AC±
TOTAL SITE AREA: 7.44 AC±
PROPOSED VEGETATED COVERAGE: 20%

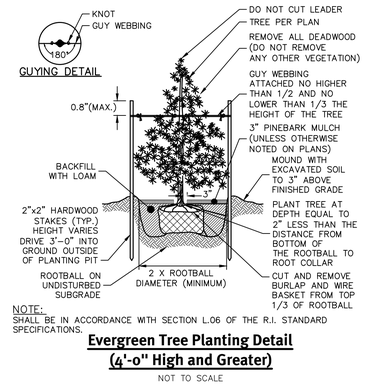
SEC. 706. – REQUIRED TRASH AREAS.
ALL COMMERCIAL, INDUSTRIAL AND MULTI–HOUSEHOLD RESIDENTIAL USES THAT PROVIDE TRASH AND/OR GARBAGE COLLECTION AREAS SHALL ENCLOSE SUCH AREAS ON AT LEAST THREE SIDES BY A SOLID WALL, OPAQUE FENCE OR COMPACT PLANTING SCREEN OF AT LEAST FIVE FEET IN HEIGHT IF SUCH AREA IS NOT WITHIN AN ENCLOSED BUILDING OR STRUCTURE. IF TRASH COMPACTORS ARE USED, HOLDING TANKS FOR COMPACTED WASTE MUST BE PROVIDED. PROVISIONS FOR ADEQUATE VEHICULAR ACCESS TO AND FROM SUCH AREA OR AREAS FOR COLLECTION OF TRASH AND/OR GARBAGE SHALL BE REQUIRED.

NOT APPLICABLE.



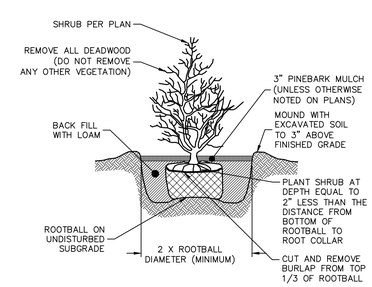
TREE PLANTING DETAIL - TYPICAL
TOWN OF SOUTH KINGSTOWN, R.I.

PLANT SCHEDULE							
TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	
+	AR	2	Acer rubrum `Franksred`	Red Sunset Swamp Maple	B & B	1.5/2" CAL	
+	ARO	2	Acer rubrum `October Glory` TM	October Glory Maple	B & B	1.5/2" CAL	
+	AC	8	Amelanchier canadensis	Canadian Serviceberry	B & B	1.5/2" CAL	
+	PG	6	Picea glauca	White Spruce	7/8` HT		
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	FIELD2	
	JB	12	Juniperus virginiana `Burkii`	Burk Red Cedar	5/6` HT		
	RM	18	Rhododendron maximum	Rose Bay	4/5` HT		



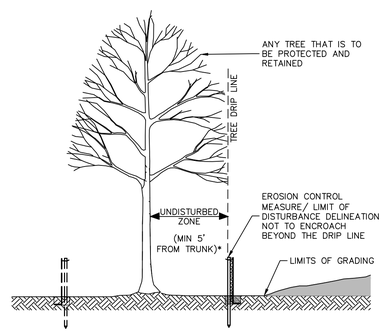
NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

Evergreen Tree Planting Detail (4'-0" High and Greater)
NOT TO SCALE



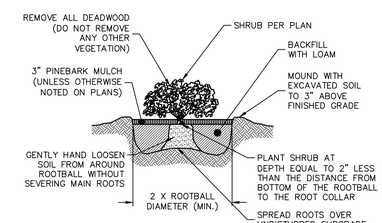
NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

Ball and Burlap Shrub Planting Detail
NOT TO SCALE



*LIMIT OF DISTURBANCE IS AT THE DRIP LINE OF OUTERMOST BRANCH OR 5' FROM TRUNK, WHICHEVER IS GREATER.

Tree Protection Detail
NOT TO SCALE



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

Container Grown Shrub Planting Detail
NOT TO SCALE

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Design By: D.A.R.
Drawn By: K.E.D.

Landscape Notes & Details

Liberty Lane

A.P. 21-3 Lots 19 & 21
South Kingstown, Rhode Island

Applicant
Energy Storage Resources, LLC and Narragansett Energy Storage LLC
1237 9th Avenue
San Francisco, CA 94122

Owner
Kenneth S. Bouvier and Susan D. Bouvier and South County Post & Beam Inc.
521 Liberty Lane
West Kingston, RI 02892

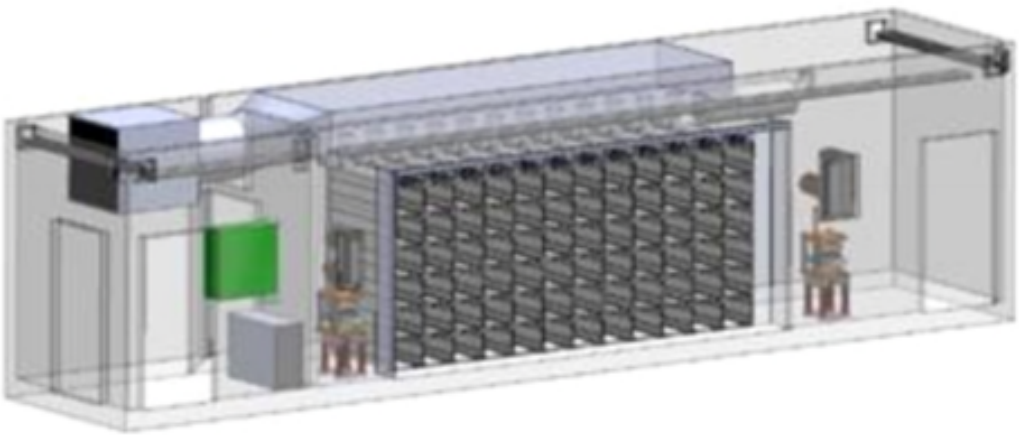
SHEET 2 OF 2

z:\domain\projects\2709-001 plus energy storage\autocad drawings\2709-001-larc.dwg Plotted: 3/29/2019

Exhibit G

Containerized Battery System Prototype

Container-Based System – Exterior



Container-Based System – Interior Cutaway

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

In re: Petition of Energy Storage	**:**	
Resources, LLC for a Jurisdictional	**:**	**Docket No. SB-2019-02**
Determination Pursuant to	**:**	
R.I. Gen. Laws § 42-35-8	**:**	

ENERGY STORAGE RESOURCES, LLC RESPONSE TO THE ENERGY FACILITY SITING BOARD'S FIRST SET OF DATA REQUESTS

EFSB DATA REQUEST NO. 1-9:

Identify training and safety materials and plans that will be provided to the Town and provide copies of the same.

RESPONSE NO. 1-9:

Energy Storage Resources, LLC ("ESR") will work directly with the Union Fire District to create an emergency response plan in preparation for any fire or emergency event. Below is an excerpt from the Development Plan Review that was submitted to South Kingstown.

> Fire protection will be addressed proactively through the installation of a monitoring system that works 24 hours a day, seven (7) days a week. The monitoring system will monitor temperature, voltage and amperage of the individual battery cells within each Container. If individual battery cells deviate from the normal operating range of temperature, voltage, or amperage, or if any communication link between the remote operations center and the Project is lost, the battery cells will shut down immediately and automatically. This shut-down scheme is the first level of safety management and starts at the battery cell level, turning off specific cells that are out of normal operating range first. If the temperature, voltage or amperage levels continue to rise outside of an individual battery cell, to other battery cells, or across the battery storage rack, all battery cells in the rack cease operating.
>
> If the temperature, voltage or amperage levels in adjacent racks are out of normal operating range, the entire Container will shut down. If necessary, all Containers may shut down before any further heat propagation occurs.
>
> In addition to this shut-down arrangement, maintenance personnel are dispatched to the Project to troubleshoot and correct the situation if the first level of technical parameters

deviate from normal ranges. The use of containerized battery storage systems has an important benefit of acting as a fire break and limits a fire's ability to spread.

In the unlikely event of a fire, the Project will send a call out directly to the Union Fire District indicating an emergency response is required. The Project will be designed with 20-ft.-wide fire lanes around the perimeter of the facilities. To facilitate entry, a gate will be located on the south side of the site with a Knox lock for emergency access.

[ESR] will work directly with the Union Fire District to create an emergency response plan in preparation for any fire or emergency event. The applicant will coordinate with the Union Fire District to ensure their staff is adequately trained in the emergency response plan for the Project.

[ESR] has reached out to the Union Fire District regarding the Narragansett Energy Storage Project and will continue to work with the Union Fire District team as the project progresses.

Response prepared by or under the supervision of
Alex Fraenkel

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EFSB DATA REQUEST NO. 1-10:

Will the eventual owner of the project facility meet any of the following definitions in R.I. Gen. Laws § 39-1-2:

a. **Electric distribution company:**

b. **Electric transmission company:**

c. **Nonregulated power producer:**

RESPONSE NO. 1-10:

a. No.

b. No.

c. Yes.

The proposed facility will not meet the definition of an electric distribution company or an electric transmission company pursuant to Rhode Island law. However, the facility may constitute a nonregulated power producer as defined § 39-1-2(19).

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EFSB DATA REQUEST NO. 1-11:

Will the value of the electrical energy sold when the storage facility is producing energy be the same as the value of the energy sold when the storage facility is taking or holding energy?

RESPONSE NO. 1-11:

The typical charge and discharge profile of the energy storage system will be a pattern of charging the battery at lower priced real-time energy market time intervals, and discharging (dispatching) at higher priced real-time energy market time intervals. The energy storage project will also charge during high priced intervals if it is anticipated that there will be market volatility at the node such that at a following interval it will be more profitable to discharge. The energy storage project will also hold energy and discharge during certain periods because operating reserve pricing and demand is such that it is more profitable to participate in that market instead of the real-time energy market.

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EFSB DATA REQUEST NO. 1-12:

How will the characteristics of the facility, including environmental characteristics, be treated and tracked by NEPOOL Generation Information System?

RESPONSE NO. 1-12:

Per NEPOOL, "The New England Power Pool Generation Information System (NEPOOL GIS) issues and tracks certificates for all MWh of generation and load produced in the ISO New England control area, as well as imported MWh from adjacent control areas. In addition to the generation, the NEPOOL GIS provides emissions labeling for the New England load-serving entities by tracking the emissions attributes for generators in the region. In recent years the NEPOOL GIS has adapted to the various state RPS laws to track combined heat and power, demand response and conservation and load management certificates."

NEPOOL GIS has a fuel type called "Energy Storage" that can be used for battery storage facilities. To the extent that the storage facility is also registered as a load asset in ISO-NE, then the facility will also be assigned a Certificates Obligation in the GIS and will either have to acquire Certificates to match that Certificates Obligation or have Residual Mix Certificates assigned to that Certificates Obligation.

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EFSB DATA REQUEST NO. 1-13:

Explain if the applicant's understanding is that the term "megawatt" is a unit describing a rate of electric power transfer rather than a unit describing an amount of electrical energy.

RESPONSE NO. 1-13:

No, the term megawatt is a unit of electric power transfer. Megawatt-hour describes an amount of electrical energy. A battery has both Megawatts (power transfer) and Megawatt-hours (storage).

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EFSB DATA REQUEST NO. 1-14:

Is the facility capable of bringing into existence a rate of electric power transfer equal to or greater than forty megawatts?

RESPONSE NO. 1-14:

Yes, the unit of electric power transfer is 180 Megawatts.

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EFSB DATA REQUEST NO. 1-15:

What is the maximum possible charging rate of the facility in units of megawatts? What is the highest actual or design charging rate?

RESPONSE NO. 1-15:

The maximum charging rate is 180MW. The highest actual or design charging rate is 180MW at a 1.0 Power Factor.

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ENERGY STORAGE RESOURCES, LLC RESPONSE TO THE ENERGY FACILITY SITING BOARD'S FIRST SET OF DATA REQUESTS

EFSB DATA REQUEST NO. 1-16(a):

Explain how the storage units operate? Specifically include an explanation of the following:

a. Will the units discharge energy and power to the grid through a chemical reaction, such as an oxidation-reduction reaction?

RESPONSE NO. 1-16(a):

A lithium-ion battery is an electrochemical cell, wherein a reduction and oxidation reaction simultaneously occur on opposite sides of the cell (the anode and cathode). During dis-charge of the battery, this reaction results in the generation of electrons, and the associated electrical energy. When the battery is charging, the reaction converts excess electrons into chemical compounds that can be safely stored and later be dis-charge to once again create electrical energy. All of this chemical reaction occurs within the controlled environment of the lithium-ion cell which is temperature controlled, mechanically enclosed, and protected from the external environment.

(Some of the information provided herein was obtained from the Australian Academy of Science website, https://www.science.org.au/curious/technology-future/lithium-ion-batteries)

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EFSB DATA REQUEST NO. 1-16(b):

Explain how the storage units operate? Specifically include an explanation of the following:

b. Will the units store energy through a chemical reaction, such as an oxidation-reduction reaction?

RESPONSE NO. 1-16(b):

Yes. As the battery is charged, an oxidation reaction occurs at the cathode, meaning that it loses some negatively charged electrons. To maintain the charge balance in the cathode, an equal number of some of the positively charged intercalated lithium ions are dissolved into the electrolyte of the battery cell. These positively charged ions travel over to the anode, where they are intercalated within the graphite. This intercalation reaction deposits electrons into the graphite anode, to store the lithium ions for later discharge (and conversion to positively charged electrons).

(Some of the information provided herein was obtained from the Australian Academy of Science website, https://www.science.org.au/curious/technology-future/lithium-ion-batteries)

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EFSB DATA REQUEST NO. 1-16(c):

Explain how the storage units operate? Specifically include an explanation of the following:

c. Will energy and power be delivered to the units through a chemical reaction, or is the energy and power flow on the grid an electromagnetic phenomenon?

RESPONSE NO. 1-16(c):

There will be no chemical reaction occurring anywhere in the system except the interior of the battery cells. The cells themselves utilize the oxidation-reduction reaction described above to either generate or store electrical energy. Once the electrical energy exits the exterior of the cell, all components from then on are traditional electrical and power systems equipment. The interface with the local grid will be a "power conditioning system" (PCS) that utilizes power electronics to convert energy from direct current (DC, how it is stored in the battery) to alternating current (AC, how the grid operates). This PCS technology is used widely across many industries including telecom, renewable energy, data centers, etc. and utilizes commonly manufactured "power electronics" equipment (e.g. capacitors, transformers, etc.).

(Some of the information provided herein was obtained from the Australian Academy of Science website, https://www.science.org.au/curious/technology-future/lithium-ion-batteries)

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