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November 6, 2015

Mr. Nathaniel Strosberg, Town Planner
101 Main Street
Town of Ashland
Ashland, MA 01721

RE: Centaurus Solar
175 Butterfield Drive

Dear Mr. Strosberg:

GCG Associates, Inc. has reviewed the following information for Centaurus Solar located at 175 Butterfield Drive in Ashland, MA.

Documents: Application for Approval of Site Plan Review, Form-SP, Prepared by: Design Consultants, Inc., Dated October 8, 2015, Applicant: Lodestar Energy LLC.

Stormwater Management Report for "Centaurus Solar" Photovoltaic Solar Array Project, 175 Butterfield Drive, Ashland, Massachusetts. Prepared for: Lodestar Energy, Prepared by: Design Consultants, Inc., Dated: September 14, 2015.

Plan References: "Centaurus Solar, Photovoltaic Solar Array Project for Lodestar Energy at 175 Butterfield Drive, Ashland, Massachusetts," Prepared by: Design Consultants, Inc., Dated: 9/14/15, Revised: 10/8/2015. Sheet index as follows:

C-0.0	Cover Sheet
C-1.0	Existing Conditions Plan I
C-1.1	Existing Conditions Plan II
C-2.0	Site Preparation Plan
C-3.0	Site, Grading & Drainage Plan II
C-3.1	Site, Grading & Drainage Plan II
C-4.0	Details I
C-4.1	Details II

The subject purpose for this Planning Board Application is a Site Plan Review as required by Ashland Zoning under Chapter 282-9.4. The application and plans are prepared and submitted by Design Consultants, Inc. on behalf of Lodestar Energy LLC.

The applicant, Lodestar Energy LLC, seeks to install a ground mounted photovoltaic array consisting of approximately 8,000 solar modules and associated utility infrastructure to be located at 175 Butterfield Drive (Tax Map 22/ Lot 44) in Ashland, MA. This lot is owned by Butterfield Drive LLC. The subject property is approximately 25.73 AC with frontage on the north side of Butterfield Drive and on the east side of Pond Street. The subject property is located in the Industrial District (I), the Highway Commerce District (CH) and is subject to two overlay districts: the Photovoltaic Installations Overlay District (PIOD) and the Pond Street Mixed Use Overlay District (PSMUOD). The western side of the property is within the Highway Commerce (CH) District with no activity proposed along this portion of the site. The perimeter of the proposed solar installation area is surrounded by bordering vegetative wetlands with an upland path out to Butterfield Drive which is approximately 50 feet wide on-site. A Notice of Intent has been filed with the Ashland Conservation Commission.

Based upon our review of the above information, we offer the following comments with respect to compliance with Town of Ashland Zoning Bylaws. The numerical section of the regulations is referenced at the beginning of each comment unless it is a general comment.

GENERAL COMMENTS:

Plan/ Application

1. The solar panel system footprint is essentially 8± acres with maximum dimensions 663'± x 810'± with an access roadway along the west side of the system. Maintenance and emergency access should be considered for the entire grid. Emergency vehicles (fire trucks) may not be able to maneuver in the site.
2. Proposed lighting should be considered for site access and maintenance purposes.
3. Dimensioning should be shown at the northern end of the proposed gravel access drive. Information shall be provided to the Planning Board which demonstrates sufficient dimensions of turnaround area for access of emergency and maintenance vehicles.

Stormwater

4. Flood zone 'A' is demarked on plan sheets. Has a flood elevation been determined? A drainage swale is shown along the north of the property which is depicted using the same linetype. It is unclear if this is part of the flood zone. FEMA map reference shall be updated to map 25017C0518F effective date 7/7/2014.
5. Three proposed rain gardens are shown on the site to the east of the gravel drive and a 4 foot wide drainage swale. Each of these three rain gardens indicates a bottom elevation which is lower than the ESHGW as indicated by the nearest test pit with logs shown on sheet C 4.0. Northernmost rain garden overlaps the depicted flood zone A.
6. The Stormwater Management Report models 3 raingardens, 1P through 3P, for swale collection detention purposes. These raingardens are modeled with broad crested weir outlet inverts equivalent to the pond invert elevations. Outlet (raingarden overflow) inverts shall be modeled at the rim of the ponds allowing for stormwater collection and analyzed peak elevation within the raingardens.

**Centaurus Solar
175 Butterfield Drive, Ashland, MA
GCG Job#1570**

7. Application for Stormwater Management Permit item 4 shall include PIOD.
8. Application for Stormwater Management Permit item 4 shall reference Map 22 Lot 44.
9. Application for Stormwater Management Permit item 5 a) shows development area as 33.23 ac. Total lot area is approximately 25.73 ac.

CHAPTER 282 – ZONING

Note: Zoning is reviewed with respect to sections 8.3 and 9.4.

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| 282-8.3.5.2 | Building permit is required. |
| 282-8.3.5.3 | Building permit fee is required. |
| 282-8.3.6.2 (a) iv | Site plans are required to show one or three line electrical diagram. Plans do include a ‘typical electric & communications trench.’ |
| 282-8.3.6.2 (c) | Operations and maintenance plan is required, see section 8.3.6.4 and 8.3.10.1. |
| 282-8.3.6.2 (d) | Site plans shall identify all Town zones present on subject parcel. Zoning includes Industrial, Commerce Highway, the Photovoltaic Installations Overlay District and the Pond Street Mixed Use Overlay District. |
| 282-8.3.6.4 | Operation and Maintenance Plan – An operation and maintenance plan shall be submitted for maintaining safe access, stormwater controls and general operations and maintenance procedures for system. |
| 282-8.3.6.5 | Utility Notification - Utility notification to be provided by the project proponent to utility company operating electrical grid. |
| 282-8.3.8 1 | Lighting - No proposed lighting is currently shown on plan. If lighting is proposed as part of this system for access and maintenance purposes, this shall be shown or specified on plans. Where feasible lighting shall be directed downward using full cut-off fixtures. |
| 282-8.3.9.1 | Emergency Services – A project summary, electrical schematic and full site plan shall be provided to the Ashland Fire Chief. |
| 282-8.3.10.1 | Condition of the Installation – The facility shall be maintained in good condition and an operations and maintenance plan shall be submitted. Per this section the facility monitoring and maintenance shall include painting, structural repairs and integration of security measures. The party responsible for the cost of maintaining the system shall be specifically stated. |

282-8.3.11.3

Financial Surety – Proponents of large-scale ground-mounted solar photovoltaic installations shall provide a form of financial surety for decommissioning of solar panels/system.

If you have any questions regarding this matter, please contact our office.

Respectfully Submitted,
GCG Associates

Michael J. Carter

Michael J. Carter, P.E.
Project Manager

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