

COPY

RECEIVED

AUG 7 2018



100 GROVE ST. | WORCESTER, MA 01605

August 7, 2018

Joseph Laydon
Town Planner
Grafton Municipal Center
30 Providence Road
Grafton, MA 01519

**PLANNING BOARD
GRAFTON, MA**

Maria Mast
Conservation Agent
Grafton Municipal Center
30 Providence Road
Grafton, MA 01519

T 508-856-0321
F 503-856-0357
gravesengineering.com

**Subject: Knowlton Farms Solar Development (Pilot Project)
43 Estabrook Avenue
Special Permit, Site Plan, Stormwater Management Regulations, and
Wetland Regulations Review**

Dear Joe and Maria:

EXHIBIT 7

We received the following documents on June 29, 2018:

- Correspondence from Meridian Associates to Grafton Planning Board dated June 26, 2018 re: "Special Permit and Site Plan Approval Application, 43 Estabrook Avenue [Pilot Project], Grafton, MA."
- Plan set entitled Knowlton Farms Solar Development, 43 Estabrook Avenue [Pilot Project] dated June 26, 2018, prepared by Meridian Associates, Inc. for BlueWave Capital, LLC. (5 sheets)
- Bound document entitled Applications for Special Permit and Site Plan Approval, 43 Estabrook Avenue (Pilot Solar Development) dated June 26, 2018, prepared by Meridian Associates, Inc. for BlueWave Capital, LLC.
- Bound document entitled Stormwater Analysis & Calculations Report, 43 Estabrook Avenue, Grafton, Massachusetts (Pilot Solar Development) dated June 26, 2018, prepared by Meridian Associates, Inc. for BlueWave Capital, LLC.

We also received the following documents on July 16, 2018:

- Correspondence from Meridian Associates to Grafton Planning Board dated June 26, 2018 re: "Special Permit and Site Plan Approval Application, 43 Estabrook Avenue [Pilot Project], Grafton, MA."
- Plan set entitled Knowlton Farms Solar Development, 43 Estabrook Avenue [Pilot Project] dated June 26, 2018, prepared by Meridian Associates, Inc. for BlueWave Capital, LLC. (5 sheets)
- Bound document entitled Applications for Special Permit and Site Plan Approval, 43 Estabrook Avenue (Pilot Solar Development) dated June 26, 2018, prepared by Meridian Associates, Inc. for BlueWave Capital, LLC.
- Bound document entitled Stormwater Analysis & Calculations Report, 43 Estabrook Avenue, Grafton, Massachusetts (Pilot Solar Development) dated June 26, 2018, prepared by Meridian Associates, Inc. for BlueWave Capital, LLC.

x:\shared\projects\graffonpb\knowltonsolar\estabrook43\1080718ea43.ltr.doc

We also received the following documents on July 26, 2018:

- Correspondence from Meridian Associates to Grafton Conservation Commission dated June 26, 2018 re: Application for Permit Grafton Stormwater Management By-Law, 43 Estabrook Avenue (Pilot Solar Development), with attachments.
- Plan set entitled Knowlton Farms Solar Development, 43 Estabrook Avenue [Pilot Project] dated June 26, 2018 and revised July 19, 2018, prepared by Meridian Associates, Inc. for BlueWave Capital, LLC. (5 sheets)
- Bound document entitled Stormwater Analysis & Calculations Report, 43 -Estabrook Avenue, Grafton, Massachusetts (Pilot Solar Development) dated June 26, 2018, prepared by Meridian Associates, Inc. for BlueWave Capital, LLC.

Graves Engineering, Inc. (GEI) has been requested to review and comment on the plans' conformance with applicable "Grafton Zoning By-Law" amended through May 14, 2018; Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook and standard engineering practices on behalf of the Planning Board. GEI has also been requested to review and comment on the documents' conformance with applicable Conservation Commission "Regulations Governing Stormwater Management" dated May 2013 on behalf of the Conservation Commission. GEI was authorized to proceed on July 16, 2018. As part of this review GEI visited the site on July 18, 2018.

Our comments follow:

Zoning By-Law

1. The Locus Context Map on the title sheet does not clearly identify the proposed project's location; the proposed project needs to be identified and differentiated from the existing solar projects. Also, on Sheet 1 the text on the Locus Context Map is small and difficult to read. (§1.3.3.d.5) (§1.3.3.d.8)
2. The zoning district of the proposed project and the zoning district's dimensional requirements need to be provided on the plans. (§1.3.3.d.7)
3. The Board may wish to inquire about the applicant's intentions for employee parking during the construction phase of the project. Estabrook Avenue is a narrow road; on-street parking could affect vehicular traffic, especially for larger vehicles such as emergency vehicles. No vehicle parking should occur along Estabrook Avenue. (§1.3.3.1)
4. Sheet 2 of the plans was prepared at a scale of 1" = 60' instead of 1" = 40'. The plans were legible, and we were able to read them and have no issue with the plan scale. However, we defer to the Planning Board if the scale of 1" = 60' is acceptable to the Board. (§1.3.3.d)
5. No landscape buffering is proposed for views from Estabrook Avenue or from the abutting property at 55 Estabrook Avenue. Existing vegetation exists but there are gaps between the trees along Estabrook Avenue. GEI defers to the Planning Board and its staff whether plantings for visual buffering are required. (§1.3.3.d.21)

Regulations Governing Stormwater Management

6. The hydrology computations must be prepared using precipitation amounts from the NRCC Cornell data for a 24-hour storm event (24 consecutive hours). The calculations were prepared using NRCC Cornell data for a one-day storm event; (rainfall reporting to NRCC Cornell on a calendar day basis). Likewise, the narrative in the Stormwater Analysis & Calculations Report will need to be updated to reflect the NRCC Cornell data source. (§6.B.3.b)
7. The plans do not show the locations for construction-phase parking. (§7.B.2.f)
8. The plans don't address the storage of construction-phase waste materials. Of particular concern is the storage of waste packaging material and the potential for windblown trash. (§7.B.2.j)

Hydrology & MassDEP Stormwater Management


9. GEI reviewed the hydrology computations and found them to be in order except as noted in the following comment.
10. In the post-development conditions, the infiltration trench was modeled as being 170 feet long with an infiltration rate of 1.02 inches per hour. However, the plans show the trench to be 100 feet long and the soils information shows the site consists of hydrologic soils group "C" soils (maximum infiltration rate is 0.27 inches per hour per MassDEP). The hydrology model needs to be revised accordingly.
11. Compliance with the MassDEP Stormwater Standards and Stormwater Handbook is reasonable.

General Comments

12. More than one acre of land will be disturbed. Per the National Pollutant Discharge Elimination System (NPDES) Phase II administered by the Environmental Protection Agency (EPA), preparation of a Storm Water Pollution Prevention Plan (SWPPP) and filing of a Notice of Intent (NOI) with the EPA (different than a MADEP Wetlands Protection Act NOI) will be required prior to the start of construction.

We trust this letter addresses your review requirements. Feel free to contact this office if you have any questions or comments.

Very truly yours,
Graves Engineering, Inc.



Jeffrey M. Walsh, P.E.
Vice President

cc: David Kelley, P.E.; Meridian Associates