

AUG 13 2018



100 GROVE ST. | WORCESTER, MA 01605

August 10, 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 508-856-0357  
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:

We received the following documents on August 9, 2018:

- Correspondence from Meridian Associates to the Grafton Town Planner and the Grafton Conservation Agent dated August 8, 2018 re: "Special Permit, Site Plan, Stormwater Management Regulations, and Wetland Regulations Review, 43 Estabrook Avenue [Pilot Project], Grafton, MA."
- Full-size and reduced-size plan set entitled Knowlton Farms Solar Development, 43 Estabrook Avenue [Pilot Project] dated June 26, 2018 and revised August 8, 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 August 8, 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. As part of our initial review GEI visited the site on July 18, 2018.

This letter is a follow-up to our previous review letter dated August 7, 2018. For clarity, comments from our previous letter are *italicized* and our comments to the design engineer's responses are depicted in **bold**. Previous comment numbering has been maintained.

**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*

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*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)*

**Acknowledged. The Locus Context Map on Sheet 1 now clearly identifies the proposed solar array location, and the text is now clear to read.**

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)*

**Acknowledged. Sheet 3 now includes the zoning district's dimensional requirements.**

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)*

**Acknowledged. On Sheet 3, a note was added to not permit employee parking on Estabrook Avenue during the construction phase of the project. Additionally, Sheet 3 now includes a proposed location for employee parking at the northwest corner of the solar array.**

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. (§1.3.3.3.d)*

**No further comment required.**

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)*

**No further comment required.**

#### **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)*

**Acknowledged. The hydrology computations have been revised using precipitation amounts from the NRCC Cornell data for a 24-hour storm event.**

7. *The plans do not show the locations for construction-phase parking. (§7.B.2.f)*

**Acknowledged. On Sheet 3, a note was added to not permit employee parking on Estabrook Avenue during the construction phase of the project. Additionally, Sheet 3 now includes a proposed location for employee parking at the northwest corner of the solar array.**

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)*

**Acknowledged. On Sheet 3, notes were added to address debris and litter removal from BMPs and the storage of construction-phase waste materials.**

#### **Hydrology & MassDEP Stormwater Management**

9. *GEI reviewed the hydrology computations and found them to be in order except as noted in the following comment.*

**The revised hydrology computations are in order.**

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.*

**Acknowledged. The hydrology model and Stormwater Analysis & Calculations Report have been revised and are in order.**

11. *Compliance with the MassDEP Stormwater Standards and Stormwater Handbook is reasonable.*

**No further comment required.**

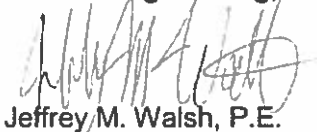
#### **General Comments**

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.*

**No further comment required.**

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