



January 5, 2024

Ms. Breeka Lí Goodlander, Agent
Town of Franklin Conservation Commission
355 East Central Street
Franklin, MA 02038

**Re: 160 Maple Street – Maplegate Solar South
MassDEP File No. Not Yet Issued
Notice of Intent Peer Review**

Dear Ms. Goodlander:

BETA Group, Inc. (BETA) is pleased to provide peer review services for the Notice of Intent (NOI) submitted for a proposed solar array (the Project) at **160 Maple Street** in Franklin, Massachusetts (the Site). This letter is provided to present BETA's findings, comments, and recommendations.

BASIS OF REVIEW

The following documents were received by BETA and will form the basis of the review:

- Notice of Intent entitled **Notice of Intent Application Proposed Solar Array – Parcel 3**; prepared by LEC Environmental Consultants, Inc., dated November 14, 2023. Attachments include:
 - Application Forms;
 - Local Filling Fees;
 - Certified Abutters List & Notification to Abutters;
 - Site evaluation & Wetland Delineation;
 - Affidavit of Service & Property Access Signature Form;
 - Miscellaneous Figures (USGS topo, Site Locus and FEMA);
 - Delineation Field Data Forms; and
 - Stream Stats Analysis.
- Plans (39 Sheet) entitled **Proposed Site Plan Documents**, dated October 4, 2023, prepared by Bohler; stamped and signed by John A. Kucich MA PE No. 41530.
- Drainage Report entitled **Drainage Report for Maple Street Solar LLC**, dated July 20, 2023; prepared by Bohler; Stamped and Signed by John A Kucich MA PE No. 41530.
- Plans (1 Sheet) entitled **Alternative Layout Plan**, dated October 4, 2023, prepared by Bohler; stamped and signed by John A Kucich MA PE No. 41530.
- Plans (1 Sheet) entitled **Tree Removal Exhibit**, dated May 26, 2023, prepared by Bohler; stamped and signed by John A Kucich MA PE No. 41530.

Review by BETA included the above items along with the following, as applicable:

- Site visit on January 2, 2024
- **Massachusetts Wetlands Protection Act 310 CMR 10.00** effective October 24, 2014
- **Wetlands Protection Chapter 181 From the Code of the Town of Franklin**, dated August 20, 1997
- **Conservation Commission Bylaws Chapter 271 From the Code of the Town of Franklin**, dated July 11, 2019

- ***Town of Franklin Conservation Commission Regulations***, dated October 3, 2019
- ***Town of Franklin Best Development Practices Guidebook***, dated September 2016

SITE AND PROJECT DESCRIPTION

The Site includes 3 lots with a total area of approximately 102 acres¹ at 160 Maple Street in Franklin, Massachusetts, further identified by the Franklin Assessor's Office as Assessor's Parcel 255-001, 254-009, and 239-010. The Site is bounded to the east by undeveloped woodlands, to the south by Interstate 495, to the north by the Maplegate Country Club golf course, and to the west by Maple Street and the Franklin/Bellingham municipal boundary. Existing improvements at the Site include an 18-hole golf course with associated turf areas, wooded areas, bituminous concrete cart paths, sand bunkers, wooden bridge stream crossings, and signage.

According to the Applicant, Resource Areas Subject to Protection under the Massachusetts Wetlands Protection Act (M.G.L. ch.131 s.40) and its implementing regulations at 310 CMR 10.00 (collectively "the Act"), as well as the Town of Franklin Wetlands Protection Bylaw (Chapter 181) and its associated regulations (collectively "the Bylaw") present at the Site include Bordering Vegetated Wetland (BVW), Bank, Isolated Land Subject to Flooding (ILSF), Vernal Pool, and the Buffer Zone Resource Area.

The Site is not located within a Zone I or Interim Wellhead Protection Area but is partially within a Zone II Wellhead Protection Area. There are no Surface Water Protection Areas (Zone A, B, or C) or Outstanding Resource Waters (ORWs) at the Site. There are no Areas of Critical Environmental Concern (ACEC) present, and the most recent Natural Heritage and Endangered Species Program (NHESP) mapping does not depict any Priority Habitat of Rare Species or Estimated Habitat of Rare Wildlife at the Site. No NHESP-mapped Potential Vernal Pools or Certified Vernal Pools are located within 100 feet of the Site. According to the FEMA Flood Insurance Rate Map (FIRM) community panel number 25021C0302E, dated July 17, 2012, the Site is not located within the 100-year floodplain (i.e., Bordering Land Subject to Flooding).

Natural Resource Conservation Service (NRCS) soil maps of the Site indicate the presence of Ridgebury fine sandy loam with a Hydrological Soil Group (HSG) rating of D, Charlton-Hollis-Rock outcrop complex with an HSG rating of B/D, Montauk fine sandy loam with an HSG rating of C, Scituate fine sandy loam with an HSG rating of C, Scituate fine sandy loam, extremely stony with an HSG rating of C and Udorthents with an HSG rating of A.

The Applicant seeks approval for a solar development within both Buffer Zone and Act/Bylaw-jurisdictional Resource Areas. Proposed work includes the following activities (collectively referred to as the "Project"):

- Installation of a stabilized construction entrance/exit, erosion control barriers (straw bales and silt fence), and inlet protection within roadway catch basins;
- Selective demolition of structures, pavement, and amenities;
- Clearing and grubbing;
- Installation of temporary stormwater swales and sediment basins;
- Earthwork and excavation/filling as necessary;
- Construction of gravel roadways;

¹ This Site area reflects only the parcels subject to the current phase of work. Parcels to the north were subject to review under a previous filing.

- Installation of utilities, including an underground electrical conduit through a wetland from Maple Street in Bellingham;
- Installation of solar panels and equipment pads;
- Permanent stabilization of areas under panels with a native seed mixture;
- Construction of a box culvert stream crossing at the location of an existing wooden bridge crossing;
- Construction of a wetland replication area; and
- Selective restoration of historically disturbed areas within Buffer Zone.

The Project will result in temporary and permanent impacts to BVW and Buffer Zone. Work proposed within Buffer Zone includes vegetative clearing and grubbing, selective demolition of existing features, installation of utilities, installation of erosion controls, installation of photovoltaic panels, and construction of gravel roadways. Work proposed within BVW and Bank includes the construction of a stream crossing replacement and the installation of erosion controls.

ADMINISTRATIVE AND PLAN COMMENTS

The plan set (as identified above) is missing information and requires additional information for clarity.

Table 1. NOI Plan

NOI Plan Requirements	Yes	No
Scale of 40'=1" or larger	✓	
North Arrow (with reference)		✓ (Comment A2)
Topographic contours (2' intervals)	✓	
Existing Conditions Topography (with source and date of survey)		✓ (Comment A3)
Proposed Topography	✓	
Existing and Proposed Vegetation	✓	
Existing Structures and Improvements	✓	
Resource Areas and Buffer Zones labeled	✓	
Location of Erosion Controls	✓	
Details of Proposed Structures	✓	
Construction Sequence and Schedule	✓ (Comment W19)	
Registered PLS Stamp (Existing Condition Plans Only)		✓ (Comment A3)
Assessors' Reference	✓	
Abutting Property Assessors' Reference	✓	
Survey Benchmark		✓ (Comment A5)
Accurate Plan Scale	✓	

PLAN AND GENERAL COMMENTS

- A1. MassDEP has not issued a file number as of this writing.
- A2. A north arrow reference should be provided on the plans per Bylaw Regulations Section 7.18.1.3.
- A3. Existing conditions plans are referenced on the cover sheet of the plan set but were not provided. An existing conditions plan stamped by a Professional Land Surveyor registered in the state of Massachusetts should be submitted.

- A4. Provide a note stating who performed the wetland delineation and when it occurred.
- A5. Provide a note indicating the date(s) and method(s) of the record survey. The datums used and a representative benchmark should also be provided.
- A6. Existing woody plants to be removed within Buffer Zone that are larger than 1 inch in diameter should be depicted on the plans per Bylaw Regulations Section 7.18.1.5. The Tree Removal Exhibit provides areas of tree clearing (totaling 10.59 acres); however, individual trees are not depicted. BETA defers to the Conservation Commission on whether this exhibit meets the intent of this Bylaw requirement.

WETLAND RESOURCE AREAS AND REGULATORY REVIEW

BETA conducted an onsite review and completed a regulatory review of the submitted documents and plans, focusing on compliance with Resource Area definitions and Performance Standards set forth in the Act and the Bylaw. The Project is subject to the MassDEP Stormwater Standards and a review of compliance with these Standards is being completed by BETA as part of the Planning Board review process.

The NOI application includes narrative information on the proposed work and compliance with the relevant Performance Standards for BVW and Bank associated with the wetland/stream crossing. BETA has identified aspects of the crossing and associated mitigation that should be further assessed by the Applicant to ensure that the Project is constructable and that the relevant Performance Standards are met. Specifically, consideration should be given to the development of a water control/dewatering plan for the culvert construction and relocation of the wetland replication area outside of historically disturbed BVW. The Applicant should also provide additional details to support other aspects of mitigation, including the proposed wetland restoration and establishment of wildflower/meadow habitat. In addition, certain Bylaw filing requirements are missing from the NOI application and should be submitted including an Alternatives Analysis, a calculation of proposed impervious area within jurisdictional areas, and a Project-specific Construction Schedule and Sequence. Prior to addressing the design and regulatory comments in this letter, it is recommended that the Applicant address the comments provided herein regarding the Resource Area boundary delineations.

Additional information is required to describe the effects of the work on the interests of the Act and the Bylaw.

RESOURCE AREA AND BOUNDARY COMMENTS

BETA conducted a Site visit on January 2, 2024 to assess existing conditions and to review Resource Area delineations, focusing on the definitions and methodologies referenced under the Act and the Bylaw. No snow cover was present and ground conditions allowed for assessment of soils using a Dutch-style handheld auger. Review of Resource Area delineations was limited to locations where the delineated boundary was within, or may be within, 100 feet of the Limit of Work (LOW) and boundaries located within the subject Site. Portions of Resource Area boundaries within the Town of Bellingham were not evaluated.

The Applicant identified the following Resource Areas at the Site within the Town of Franklin:

Table 3—Bordering Vegetated Wetlands

Flag Series	Act	Bylaw
<i>WF 5d to 14d</i>	✓	✓
<i>WF 17c to 20c</i>	✓	✓
<i>WF LL1 to LL18</i>	✓	✓
<i>WF L1 through L20*</i>	✓	✓
<i>WF B1 through B11</i>	✓	✓
<i>WF LLL1 through LLL20</i>	✓	✓
<i>WF 375 through 565</i>	✓	✓
<i>WF I1 through I24</i>	✓	✓
<i>WF J1 through J28</i>	✓	✓
<i>WF 601 through 630</i>	✓	✓

*Wetland Series *L1* through *L20* is identified as a “BVW/Vernal Pool”

Table 4—Isolated Land Subject to Flooding

Flag Series	Act	Bylaw
<i>WF K1 through K18</i>	✓	✓
<i>WF I1 through I24</i>	✓	✓
<i>H1 through H24*</i>	✓	✓

*Isolated Land Subject to Flooding Series *H1* through *H24* is identified as a “ILSF/Vernal Pool”

Table 5—Bank

Flag Series	Act	Bylaw
<i>WF TB1 to TB4</i> <i>WF TB101 to 106</i>	✓	✓

- W1. BETA concurs with the TB Series Bank boundary as delineated by the Applicant at the location of the proposed crossing; however, the Bank boundaries should be extended to the north to the extent of proposed work.
- W2. BETA concurs with the Applicant’s delineation of ILSF associated with the K, I, and H Series flagging.
- W3. BETA concurs with the Applicant’s delineation of the extent of the Vernal Pool within the L Series BVW and the H Series ILSF; however, similar impoundments (i.e., the K and I Series ILSF) with sufficient standing water to sustain Vernal Pool species breeding habitat were observed. The

Applicant should provide documentation of their Vernal Pool assessment performed during the breeding season to confirm that additional Vernal Pools are not present at the Site.

W4. BETA generally agrees with the Applicant's delineation of BVW at the Site, subject to the following comments:

- a. Due to their distance from the proposed work, flags WF 375 to WF 425 were not reviewed in the field; however, BETA confirmed that no additional Resource Areas are present upgradient of these flags within 100 feet of the proposed work. In addition, BETA noted additional Resource Areas present at the Site (e.g., intermittent streams within BVWs) that were not delineated by the Applicant. It is recommended that the Commission note the presence of these Resource Areas and that their boundaries are not approved in the Order of Conditions.
- b. The Applicant has identified several areas upgradient of the flagged BVWs on the plans where "Wetland Restoration Plantings within 25', 50', and 100' Buffers" are proposed. BETA generally observed hydric soil indicators within these areas including, but not limited to, sandy soils with depleted matrices and the Redox Dark Surface (F6) indicator. The extents of these hydric soil indicators were observed to approximately correlate with the limits of proposed restoration at the following locations:
 - Southeast of WF LLL6 through LLL9;
 - West of WF 554 through 560;
 - East of WF 446 through 455; and
 - East of WF 470 through 473, including within the wetland replication area.

In accordance with MassDEP and U.S. Army Corps of Engineers (USACE) wetland delineation guidance, documentation of hydric soils can be sufficient to establish a wetland boundary within previously disturbed areas where vegetation cannot be used as a reliable indicator. BETA recommends that the flagging be revised in these areas to encompass the hydric soil indicators referenced above and that Buffer Zones be revised accordingly.

CONSTRUCTION COMMENTS

W5. Material storage and laydown areas should be depicted on the Project plans and located outside of jurisdictional areas to the extent feasible.

W6. Proposed erosion controls include use of silt fence and straw bales. Silt fence and straw bales are not permitted erosion control measures in the Town of Franklin (Pg. 13 of Town of Franklin Best Development Practices Guidebook). The Applicant should coordinate with the Conservation Commission to determine the appropriate erosion control measures for the Site. Twelve (12)-inch diameter compost filter tubes may be an appropriate option commensurate with the scope of the Project.

W7. The Project as currently depicted will disturb more than (1) one acre of land which will require preparation of a Stormwater Pollution Prevention Plan (SWPPP) and filing of a Notice of Intent with the EPA.

- W8. Erosion controls should be installed around the jack and bore receiving pit associated with the installation of the subsurface electrical utility line near the Franklin/Bellingham municipal boundary.
- W9. The Applicant should confirm if the use of slurry is anticipated with the above-referenced jack and bore work. BETA recommends that the Applicant be required to follow best management practices under the direction of a Geotechnical Engineer to ensure that drillings spoils and slurry do not result in discharges to the adjacent Resource Areas. The Commission could consider including this as a Special Condition.
- W10. The Applicant should provide a surface and ground water control plan for the installation of the box culvert crossing. It is recommended that a site-specific erosion, sediment, and water control plan and construction sequence be developed for this crossing, including flow bypass (if necessary). Based on the location of the limits of work in this area, it appears that temporary/permanent impacts to Bank and Land Under Water (LUW) have not been quantified, and that BVW impacts do not appear to be accurate (i.e., BVW impacts are shown within the stream). The Applicant should reevaluate/quantify all temporary and permanent impacts and revise the hatching on Sheet C-206.
- W11. The red shading on the grading plans that indicate where extended array stand posts are required should be removed from areas where arrays are not proposed.

MITIGATION COMMENTS

The Applicant proposes an approximately 1,756-square foot wetland replication area to mitigate for approximately 854 square feet of wetland fill associated with the stream crossing. In addition, the Applicant proposes approximately 47,067 square feet of restoration within Buffer Zone to mitigate for approximately 86,640 square feet of Buffer Zone alteration.

- W12. The documentation provided for the proposed wetland replication does not meet the requirements of Bylaw Regulations Section 7.14.1. The Applicant should submit the following:
- a. A replication plan that includes cross sections of the altered area and replication area; and
 - b. A protocol and schedule for wetland replication work.

BETA recommends that a wetland-tolerant seed mix be included on the wetland replication plans. The New England Conservation/Wildlife Seed Mix proposed under the array panels is not appropriate for use in the replication area. BETA also recommends that the Applicant determine whether reuse of soils from the wetland impact area is feasible within the replication area. If not, it is recommended that the Applicant specify that backfill must consist of at least 50% organic material by volume on the plans.

- W13. The Applicant should clarify the callouts on the plan that identify “Wetland Restoration Plantings within 25’, 50’, and 100’ Buffers”. It is unclear whether the intention is to revert these areas to naturalized BVW or to establish them as a vegetated upland Buffer Zone. These areas appear to be historically disturbed BVW (Comment W.4.b.) rather than Buffer Zone and should be restored accordingly. A typical restoration detail and sequencing (including grading, soil amendments, and use of a wetland-tolerant seed mixture) should be provided. The Applicant should also develop a species list, including quantities, for proposed plantings within these areas.

- W14. The Applicant should prepare an invasive species control plan for review and approval by the Commission. This plan should specifically identify potential measures to be taken if invasive species become established within the wetland replication area and/or wetland restoration areas, as well as preventative measures that will be used to avoid introduction of new invasive species to the Site.
- W15. The Applicant should clarify whether the cart path south of the LLL Series BVW is proposed to remain. BETA recommends that the Applicant consider extending the adjacent restoration activities to include the removal and restoration of this cart path and reestablish a contiguous wetland between the LLL and B Series BVWs. This area appears to be historically altered, and a 4-inch plastic pipe conveying hydrology between the wetlands is present at flag LLL11.
- W16. Additional details should be provided for the proposed establishment of a wildflower/meadow habitat under the panels. It is recommended that consideration be given to the following:
- a. Stabilization with the native seed mixture should be phased in order to provide stabilization in areas prior to the Project being completed.
 - b. In order to ensure successful establishment of the seed mix, provisions should be included to either remove areas of turf grass or provide sufficient coverage of compost/topsoil.
 - c. It is recommended that mowing of the wildflower/meadow areas be limited to once per year, approximately between October 31st and November 31st.

WPA PERFORMANCE STANDARDS COMMENTS

The Project proposes work within Resource Areas Subject to Protection under the Act and therefore requires compliance with the relevant Performance Standards. BETA notes the following:

- W17. It is recommended that the Applicant provide the additional wetland replication area information noted above. In addition, as noted in Comment W.4.b., the wetland replication area appears to be located within historically disturbed BVW and should be relocated to an upland area along the same overall wetland complex. Wetland restoration in lieu of replication does not comply with the BVW Performance Standards.
- W18. BETA concurs with the Applicant's assessment that the proposed stream crossing will meet the Performance Standards for Bank and exceeds the Massachusetts Stream Crossing Standards requirements. However, a summary of compliance with the LUW Performance Standards (if temporary impacts are required for water control and dewatering) should be provided.

BYLAW REGULATORY COMMENTS

The Project proposes work within Resource Areas Subject to Protection under the Bylaw and therefore requires compliance with the relevant administrative and technical requirements. BETA notes the following:

- W19. The Construction Schedule and Sequence provided on Sheet C-607² of the Project plans appears to be for a development involving buildings. A Project-specific Construction Schedule and Sequence should be provided per Section 7.15 of the Bylaw Regulations. It is recommended that mitigation work be conducted early in the Project schedule.

² Two (2) sheets are labeled C-607; this comment refers to the second sheet.

- W20. As noted in Bylaw Regulations Section 7.14.2, the Applicant should provide a Functions & Values Assessment for the proposed fill of BVW and the associated wetland replication area.
- W21. A Variance request as required under Section 5 of the Bylaw Regulations should be submitted for work within Resource Areas and the 25-foot No Disturb Zone.
- W22. An Alternatives Analysis is required under the Bylaw for both the Variance request and the filling of wetlands up to 5,000 square feet. The alternative layout provided in the submission is not sufficient to meet this requirement. It is recommended that the Applicant provide an Alternatives Analysis that assesses an iteration of the Project with no wetland fill. In addition, alternatives for the jack and bore installation of an electrical conduit under the wetlands along Maple Street should be provided. Although the majority of this utility work will occur within Bellingham, the receiving pit would be located within the 25-foot No Disturb Zone in Franklin.
- W23. Portions of the array panels are proposed within the 25-50-foot Buffer Zone. BETA defers to the Commission regarding classification of the array panels as structures/impervious areas per Section 4.3.1 of the Bylaw Regulations and the requirement of an associated Variance request.
- Should the Commission find that the array panels are structures/impervious areas, the Applicant should provide documentation that the areas noted as “disturbed” per the Bylaw within the 25-50-foot Buffer Zone were permitted under a previous Order of Conditions.³
- W24. The Applicant notes that less than 30% of the 50 to 100-foot Buffer Zone will be impervious under proposed conditions per Section 4.4 of the Bylaw Regulations. The Applicant should provide a calculation for the total proposed impervious area at the Site. BETA defers to the Commission on whether the solar panels would be considered impervious under the Bylaw.

STORMWATER MANAGEMENT

The Applicant has stated that stormwater management is being provided in accordance with the Massachusetts Stormwater Management Standards (the Standards) and the MassDEP Wetlands Program Policy 17-1 Photovoltaic System Solar Array Review. No structural BMPs appear to be proposed as part of the Project, and the Applicant notes that existing grades and drainage patterns will be retained to the extent feasible.

A review of the Project’s compliance with the Massachusetts Stormwater Management Regulations and Standards is currently ongoing through the Planning Board Site Plan Review process. BETA’s review letter issued on September 21, 2023 requests revisions to stormwater calculations and states that additional information is required to confirm compliance with the Standards. Stormwater best management practices (BMPs) should be incorporated into the design to provide the requisite total suspended solids (TSS) removal and treatment of the required water quality volume (WQv).

³ Per Section 4.3.2 of the Bylaw Regulations, structures/impervious areas are permitted within the 25-50-foot Buffer Zone when disturbances that occurred prior to June 29, 2006 under a valid Order of Conditions are present.

Ms. Breeka Lí Goodlander, Agent

January 5, 2024

Page 10 of 10

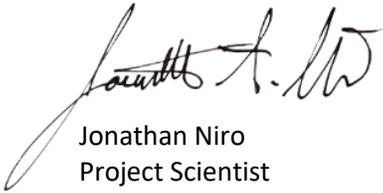
REVIEW SUMMARY

Based on our review of the NOI submittal and Project plans, the Applicant is required to provide the Conservation Commission with additional information to describe the Site, the work, and the effect of the work on the interests identified in the Act and the Bylaw.

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,

BETA Group, Inc.



Jonathan Niro
Project Scientist



Laura Krause
Project Manager

cc: Amy Love, Town Planner

Bryan Taberner, AICP, Director of Planning & Community Development

Matt Crowley, P.E., BETA