



September 21, 2023

Mr. Gregory Rondeau, Chairman
Franklin Planning Board
355 East Central Street
Franklin, MA 02038

**Re: Maplegate South Solar Array
Site Plan Peer Review**

Dear Mr. Rondeau:

BETA Group, Inc. is pleased to continue our engineering peer review services for the proposed project entitled **Maplegate Solar Project South** in Franklin, Massachusetts. This letter is provided to outline findings, comments, and recommendations.

BASIS OF REVIEW

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

- Site Plan Review Application Package, prepared by Bohler, Inc., Bedford, NH including the following:
 - Cover letter for Site plan Application, prepared by Bohler, dated July 20, 2023
 - Application for Approval of a Site Plan (Form P)
 - Certificate of Ownership
 - Certified Abutters List & Map
 - Copy of Fee Check
- Plans (39 sheets) entitled: **Proposed Site Plan Documents for Maple Street Solar, LLC** dated July 20, 2023, prepared by Bohler, stamped by John Kucich, PE No. 41530.
- Existing Conditions Survey (8 Sheets), dated July 13, 2023, prepared by Feldman Geospatial of Boston, MA.
- **Drainage Report – for Maple Street Solar LLC**, dated July 20, 2023, prepared by Bohler, Stamped by John Kucich, PE #41530.

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

- **Zoning Chapter 185 From the Code of the Town of Franklin**, current through March 01, 2016
- **Zoning Map of the Town of Franklin, Massachusetts**, amended July 13, 2016
- **Stormwater Management Chapter 153 From the Code of the Town of Franklin**, Adopted May 02, 2007
- **Wetlands Protection Chapter 181 From the Code of the Town of Franklin**, current through August 20, 1997
- **Subdivision Regulations Chapter 300 From the Code of the Town of Franklin**, current through January 01, 2016
- MassDEP Wetlands Program Policy 17-1: Photovoltaic System Solar Array Review, dated September 23, 2017

INTRODUCTION

The project site is the former Maplegate Country Club which is a total lot area of 144.6± acres. Access to the site will come from the existing driveway to the golf course clubhouse from Maple Street in Bellingham. The site development associated with this proposal will be limited to Parcel 3 which is approximately 61.4± acres. The proposed development is a 5,000-kW (AC) ground mounted Photovoltaic Power System. The limit of work for this system will be approximately 44.1 acres within parcel 3. The existing site improvements within the limits of the development include golf greens, cart paths, landscaping, resource areas, and wooded areas. The site is located west of Mine Brook, Route 495 to the south, and a solar field, and Maple Street to the west. Drainage patterns at the site vary but generally flow to the south towards Mine Brook. The site is located within the Industrial Zoning District. The land west, north and south of the parcel are all within the same Industrial District. The parcels east of Mine Brook are located within the Single-Family III zone.

The project is partially within Water Resource District (MassDEP Zone II) along the eastern border adjacent to Mine Brook. The site is not in proximity to estimated habitat of rare or endangered species but there are Potential Vernal Pools located throughout the site.

The project proposes to construct approximately 37.8 acres of ground mounted solar modules, 2 separate equipment areas composed of inverters, cabinets and transformers, security fencing, and 2' wide gravel access driveway with circular turnaround areas. The access driveway will connect to an existing access drive located in the southwestern portion of the Site, associated with a series of overhead power lines, which crosses two adjacent parcels and connects to Maple Street. Additionally, the access driveway will connect to the driveway associated with Parcel 1, to be constructed under a separate permit, which connects to an existing paved driveway off Maple Street.

The proposed solar array will generally be located within areas previously used for the existing golf course. Existing impervious cart paths will be removed. New impervious areas are limited to equipment pads and the gravel driveway. No stormwater management features are proposed. The project as currently depicted will disturb in excess of one acre of land and is required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and file a Notice of Intent with EPA. As currently shown, the project area will be located within the limits of the buffers to the existing wetland resource areas on site. A Notice of Intent has been filed with the Franklin Conservation Commission.

FINDINGS, COMMENTS, AND RECOMMENDATIONS

GENERAL

- G1. There is a note on the demolition plans that indicates that the fairways will be removed. an explanation should be provided which indicates what is being removed?
- G2. The proposed grading at the wetland crossing does not agree with the detail provided and should be corrected.

ZONING

The Site is located within the industrial (I) Zoning District. The proposed use is a Large-Scale Ground-Mounted Solar Energy System, which is permitted within this district following Planning Board Site Plan Review.

SCHEDULE OF LOT, AREA, FRONTAGE, YARD, AND HEIGHT REQUIREMENTS (§185 ATTACHMENT 9)

As shown on the schedule on the Zoning table on Sheet C-301 of the set, the Site meets the requirements for lot area, depth, frontage, width, yard widths, building height, and impervious area coverage.

PARKING, LOADING AND DRIVEWAY REQUIREMENTS (§185-21)

Access to the project will come from Maple Street through the proposed solar development on Parcel 1. Gravel driveways will connect the northerly panel farm to this development. 3 cul de sacs will be provided at the end of the driveways to turn around. The gravel driveway at the westerly edge of the development will connect with the existing paved drive beneath the electric utility easement that connects to Maple Street.

The project does not propose a residential or nonresidential building; therefore, no parking is required. BETA anticipates that there is adequate space along at turnaround areas for maintenance vehicles to temporarily park without disrupting access.

- P1. BETA defers to the Town regarding the extent of the proposed access road. BETA recommends the Applicant consult with the Town of Franklin Fire Department to determine required driveway widths and the potential need for driveways around the array perimeter.
- P2. The detail for the access gravel road on sheet C-901 indicates that for the width see plans. There are no dimensions on the plan which identify the proposed gravel roadway width. These dimensions should be provided.
- P3. There is a proposed easement identified on the plans for access through the New England Power Company to access the existing paved driveway. BETA recommends a copy of the easement be provided to the Board.
- P4. Additional details should be provided to document that the existing cart paths to the isolated panel array system in the middle of the development will be adequate.

INDUSTRIAL DISTRICT PERFORMANCE CONTROLS (§185-22)

The project is located within an Industrial District and therefore must conform to these requirements. Given the nature of the project, BETA does not anticipate vibration, odor, or flashing related impacts. Based upon the proximity of the equipment to Route 495, there should be no noise issues either.

EARTH REMOVAL REGULATIONS (§185-23)

The project includes significant disturbance which may result in earth removal greater than 15 cubic yards.

- E1. Indicate approximate earth removal volume to determine compliance with this section.

FLOODPLAIN DISTRICT (§185-24)

A FEMA-mapped 100-year floodzone (Zone AE) is located along the eastern limits of the Site. No work is proposed within this area, and all proposed grading is well above the flood elevation.

SIDEWALKS (§185-28) AND CURBING (§185-29)

No sidewalks or curbing are proposed under this project. As a solar facility, pedestrian access to the Site is not required. The project proposes to retain the existing driveway entrance, located in the Town of Bellingham, rather than utilize the existing frontage along Maple Street associated with Parcel 3.

SITE PLAN AND DESIGN REVIEW (§185-31)

The project has been submitted for Site Plan Review and is required to conform to the requirements of this section. The submitted plan set appears to be in compliance with all drawing requirements and review criteria.

WATER RESOURCES DISTRICT (§185-40)

The Site is partially located within the Town of Franklin Water Resources District and a Zone II Wellhead Protection Area. The proposed work in this area is limited to a small area (1,150± sq. ft.) along the southerly edge of the limit of work at the cul de sac which includes tree clearing, grading, and fencing. The project does not include any use that would be prohibited in this district. No impervious surfaces are proposed within this area.

STORMWATER MANAGEMENT

There are no stormwater management design features proposed for this array. As previously noted, nearly all the existing cart paths will be removed. Overall, the impervious surface area will be reduced from 2.275 acres to 0.108 acres. There are at least 4 vernal pools in this area and a new wetland crossing over the intermittent stream that transects the site from north to south.

STORMWATER MANAGEMENT REGULATIONS (CHAPTER 153)

The project proposes to disturb land in excess of one acre within the Town of Franklin. It is therefore subject to the Stormwater Management Regulations. The project is also required to comply with the Town of Franklin Best Development Practices Guidebook (BDPG). Compliance with these regulations is outlined below and throughout the following sections.

- SW1. BETA recommends that the area of cart paths which will remain be shaded to identify their location and determine their runoff characteristics.
- SW2. Although there is a reduction in the impervious surfaces on site, compliance with the by laws regarding redevelopment should be documented.

MASSDEP STORMWATER STANDARDS

The project is subject to the Massachusetts Stormwater Standards as outlined by MassDEP. Compliance with these standards is outlined below:

NO UNTREATED STORMWATER (STANDARD NUMBER 1): *No new stormwater conveyances (e.g., outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.* The project proposes no new outfalls.

POST-DEVELOPMENT PEAK DISCHARGE RATES (STANDARD NUMBER 2): *Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.* The project proposes changes to site hydrology and ground cover which will impact stormwater flow to the one analyzed design point. Stormwater runoff will be mitigated via a net decrease in impervious area. Calculations indicate a decrease in peak discharge rate and runoff volume to the design point.

- SW3. Depict existing treeline to remain and proposed limits of clearing on the post-development watershed plan.
- SW4. Revise the Tc calculations in both existing and proposed conditions. The flow path shown on the watershed plans is incorrect and should not be limited to the intermittent stream alone.

- SW5. Revise cover type for gravel driveways to be “Gravel Surface” with CN 96. The “Gravel Roads” cover type assumes a grassed shoulder is included in the contributing area.
- SW6. The flow to the vernal pools should each be analyzed separately for both existing and proposed conditions.
- SW7. The use of HSG D soil conditions should be limited to the wetland areas alone. The NRCS WSS for the Ridgebury soils are within HSG C and not HSG D as noted in the drainage report. The CN values should be corrected.
- SW8. There are no design calculations for the proposed wetland crossing which should be provided.

RECHARGE TO GROUNDWATER (STANDARD NUMBER 3): *Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to maximum extent practicable.* NRCS soil maps indicate the soils at the site are primarily Hydrologic Soil Group (HSG) C (low infiltration potential.) with some HSG B soil conditions closer to Mine Brook.

Soil testing has not been conducted at the Site.

The project proposes a net decrease in impervious area; therefore, post-development annual recharge is anticipated to be an improvement compared to existing conditions.

- SW9. Compliance with the bylaw for 0.8” of infiltration is required for redevelopment and needs to be documented.

TOTAL SUSPENDED SOLIDS (STANDARD NUMBER 4): *For new development, stormwater management systems must be designed to remove 80% (90% per Town Bylaw) of the annual load of Total Suspended Solids (TSS).* No stormwater BMPs have been proposed with the capability of TSS removal.

The project is required to treat the 0.8-inch water quality volume per Town Bylaws. No infiltration or treatment BMPs are proposed to meet this requirement.

- SW10. For a redevelopment Site, meet one of the following criteria (§153-16.B(2))

- a. Retain the volume of runoff equivalent to, or greater than, 0.8 inch multiplied by the total post-construction impervious surface area on the Site; and/or
- b. Remove 80% of the average annual post-construction load of TSS and 50% of the average annual load of total phosphorus.

HIGHER POTENTIAL POLLUTANT LOADS (STANDARD NUMBER 5): *Stormwater discharges from Land Uses with Higher Potential Pollutant Loads (LUHPPLs) require the use of specific stormwater management BMPs.* The project is not considered a LUHPPL – **not applicable.**

CRITICAL AREAS (STANDARD NUMBER 6): *Stormwater discharges to critical areas must utilize certain stormwater management BMPs approved for critical areas.* The project is located within an area where there are several vernal pools. These areas are considered a critical area. The report should indicate that the site is in a critical area.

REDEVELOPMENT (STANDARD NUMBER 7): *Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable.* The project is considered a redevelopment under the definition of “Development, rehabilitation, expansion, and phased projects on previously developed sites, provided the redevelopment results in no net increase in impervious area.” Existing cart paths and driveways will be removed to result in a net decrease in impervious area. As such, the project need only meet certain standards to the maximum extent practicable.

Mr. Gregory Rondeau, Chairman

September 21, 2023

Page 6 of 7

SW11. BETA recommends the Applicant complete the redevelopment checklist found in Volume 3 of the MA Stormwater Handbook to document which standards are being met only to the maximum extent practicable.

EROSION AND SEDIMENT CONTROLS (STANDARD NUMBER 8): *Erosion and sediment controls must be implemented to prevent impacts during construction or land disturbance activities. As the project proposes to disturb greater than one acre of land, it will be required to file a Notice of Intent with EPA and develop a Stormwater Pollution Prevention Plan (SWPPP). Erosion control measures are depicted on the plans include compost sock, silt fence, hay bales, inlet protection, stabilized construction entrance, dust control, erosion control blankets, filter bags for dewatering, and stockpile controls. A construction sequencing plan is included on Sheet C-608.*

SW12. Provide expected date clearing will begin and estimate duration of exposure of cleared areas (§153-12.M).

SW13. The grading at the proposed wetland crossing is shown outside the limit of work on the plans. Either correct the grading or move the proposed erosion control to include all disturbed areas.

SW14. Recommend including a note or callout prohibiting the placement of stockpiles within wetland buffer zones.

SW15. The applicant is reminded that a Stormwater permit from the Franklin DPW is required based upon the size of the disturbance.

OPERATIONS/MAINTENANCE PLAN (STANDARD NUMBER 9): *A Long-Term Operation and Maintenance Plan shall be developed and implemented to ensure that stormwater management systems function as designed. A Stormwater Operation and Maintenance Manual was provided with the Stormwater Management Report.*

SW20. Provide location map of culverts to be maintained.

ILLICIT DISCHARGES (STANDARD NUMBER 10): *All illicit discharges to the stormwater management system are prohibited. A signed Illicit Discharge Compliance Statement was provided with the submission.*

WETLANDS PROTECTION

The Project proposes work within Areas Subject to Protection and Jurisdiction of the Franklin Conservation Commission, including the 100-foot Buffer Zones to a vegetated wetland, isolated land subject to flooding and vernal pools. Work within these areas includes portions of the solar array, fencing, gravel access drives, grading, tree clearing. The activities associated with the work inside the vernal pool buffers and the wetland crossing will be reviewed in greater detail. Therefore, the Applicant is required to submit an NOI to the Town of Franklin Conservation Commission and must obtain an Order of Conditions to complete the proposed work.

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

Very truly yours,

BETA Group, Inc.



Mr. Gregory Rondeau, Chairman

September 21, 2023

Page 7 of 7

A handwritten signature in blue ink, appearing to read "Gary D. James". The signature is fluid and cursive, with the first name "Gary" being the most prominent part.

Gary D. James, P.E.

Senior Project Engineer

cc: Amy Love, Town Planner



TOWN OF FRANKLIN

DEPARTMENT OF PUBLIC WORKS

Franklin Municipal Building
257 Fisher Street
Franklin, MA 02038-3026

September 21, 2023

Mr. Greg Rondeau, Chairman
Members of the Franklin Planning Board
355 East Central Street
Franklin, MA 02038

RE: Site Plan – Maplegate South Solar

Dear Mr. Chairman and Members:

We have reviewed the submitted materials for the subject project and offer the following comments:

1. Permit applications that may need to be filed with the Franklin Department of Public Works include (but are not necessarily limited to) a Soil Erosion and Sediment Control Plan Certification Permit and a Trench Permit.
2. This project application is for Maplegate Solar Project South and the plans reference the North Solar Project as well. For Clarity, we recommend distinguishing the two sets of plans by incorporating North or South into the Title on the respective cover sheets.
3. Also, will construction of these two projects be concurrent or phased? Please provide a sequencing schedule relative to the two projects as access to the South project will be through the North project.
4. There is currently access to the site via an easement through the existing solar farm now or formerly owned by LMP Properties, LLC. Although this access will connect directly to the North Solar project, it also provides potential access to the South project and Parcel 2. Is access through easement being proposed for either the North or South projects, or access to Parcel 2? If not will it be fenced off?
5. Sheet C-305 shows a proposed 30 foot wide access easement from New England Power Company. If this will be a means of access for the project, the Applicant should provide a copy of the executed easement to the Board prior to approval.
6. The stormwater report should indicate how the project will meet the requirements of the Town's Stormwater Bylaw 153-16.

Should you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'M Maglio', written in a cursive style.

Michael Maglio, P.E.
Town Engineer

Town of Franklin

355 East Central Street
Franklin, Massachusetts 02038-1352



Phone: (508) 520-4907
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DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

DATE: May 2, 2023
TO: Franklin Planning Board
FROM: Department of Planning and Community Development
RE: Maplegate Solar South
Site Plan

The DPCD has reviewed the above referenced Site Plan Modification application for the Monday, September 25, 2023 Planning Board meeting and offers the following commentary:

General:

1. The site is accessed through Bellingham at 160 Maple St, and located in the Industrial Zoning District.
2. The Planning Board approved an 81-P ANR plan on January 9, 2023, combining the lots indicated on the application, into one single lot.
3. The proposed project includes the construction solar panels, along with drainage.
4. The Applicant has filed a NOI with the Conservation Commission.
5. DPCD refers to BETA and Town Engineer for stormwater management comments.

Special Conditions:

1. Applicant shall enter into a monetary agreement (PILOT) at the sole discretion of Administration and the Town of Franklin prior to commencement of construction.
2. A Surety bond in the amount of \$46,768.00 shall be issued by a surety company acceptable to the Town of Franklin prior to commencement of construction.