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August 18, 2022

Ms. Karen Sherman  
Town Planner  
Town of Holliston  
703 Washington Street  
Holliston, MA 01746

**Re: Stormwater Design Engineering Peer Review #1  
“Large – Scale Solar Power Generation System” 0 Bartzak Drive, Holliston, MA  
CMG ID 2022-220**

Dear Karen,

CMG is providing this letter report detailing our engineering peer review of the stormwater management system design for the “Bartzak Drive Solar Project” in Holliston, MA. The project is located on an approximately 2.90 +/- Acre currently undeveloped parcel identified as 0 Bartzak Drive (the “Site”). The project Applicant, *Bartzak PVI, LLC* is proposing to construct a large-scale solar power generation system within an Agricultural – Residential B and Industrial Zoning Districts.

CMG is in receipt of the following documents:

- Site Plans entitled “Plans to Accompany Permit Documents – Large-Scale Solar Power Generation System, 0 Bartzak Drive, Holliston MA 01746” prepared by Beals Associates, date 7/27/2022.
- “Stormwater Management Report – 0 Bartzak Drive, Holliston, MA”, prepared by Beals Associates, date July 2022.
- “Stormwater Operation and Maintenance Control Plan – 0 Bartzak Drive, Holliston, MA”, prepared by Beals Associates, date July 2022.
- “Planning Board Application – Site Plan Review, Special Permit, and Stormwater & Land Disturbance Permit, 0 Bartzak Drive, Holliston, MA”

CMG provides the following technical comments for the Board’s consideration:

**General Engineering & Drainage Design Comments**

1. The submitted ALTA/NSPS Land Title Survey is not stamped by a Licensed Massachusetts Professional Land Surveyor.
2. Sheet C111 Section j. “Timing and Sequence of the Erosion Control Measures” contains information associated with another project. In particular, the sequence references demolition of building pads, installation of binder pavement, etc. CMG recommends the applicant revise the construction sequence to include only information associated with the proposed solar project.
3. Site Plan set does not depict Local Conservation Commission regulatory buffer zones.

4. CMG recommends the Applicant's engineer provide information whether additional erosion control measures are necessary along the solar array drip edges (i.e. gravel strips, erosion matting) to prevent long term erosion issues.
5. CMG recommends the Concrete Pad Detail (Sheet C200) be revised to show filter fabric only on the sides and top of the gravel infiltration trench and not on the bottom.

**Stormwater Standard 1:** *No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or water of the Commonwealth.*

6. The proposed 22' wide x 60' length gravel access roadway area must have adequate treatment in accordance with MA-DEP Stormwater Management Standards. Gravel trenches are prone to clogging over time and during winter conditions and may not function properly without pre-treatment. This could result in silt and sediment runoff onto Bartzak Drive. Therefore, CMG recommends the engineer evaluate the use of a water quality swale or surface forebay to channel surface flow from the gravel driveway and Subcatchment 1S to a shallow surface infiltration basin located at the northwest corner of the Site. It appears there is adequate room in this area to accommodate these stormwater best management practices.
7. Calculations should be provided to ensure swale and cover types are adequate to withstand the appropriate design flow and velocities.

**Stormwater Standard 2:** *Stormwater management systems shall be designed so that post development peak discharge rates do not exceed pre-development peak discharge rates.*

8. Hydrographs for the 100-year storm event are not included in the Stormwater Report for the subcatchments and analysis points.

**Stormwater Standard 3:** *Loss of annual recharge of groundwater shall be eliminated or minimized.*

9. The proposed application appears to not meet the full criteria of a de minimis stormwater discharge based on CMG's review of de minimis stormwater discharge definition in Volume 3 Chapter 1 of the Massachusetts Stormwater Handbook. Therefore, the project must comply with Standard 3
10. Recharge volume calculations do not account for loss of recharge associated with the gravel access road. Compact gravel roads are considered impervious with a CN value = 96.
11. CMG recommends soil test pit data be provided documenting subsurface soil conditions, infiltration rates, and estimated seasonal high groundwater for all proposed infiltration structures.

**Stormwater Standard 4:** *Stormwater management systems shall be designed to remove 80% of the average annual post construction load of Total Suspended Solids (TSS).*

12. Water quality volume (WQV) calculations are not provided for the proposed gravel access road area.
13. CMG recommends a TSS removal calculation worksheet be provided to document the proposed treatment train for each outfall which receives runoff from the proposed project's gravel access road to document 80% TSS Removal.

**Stormwater Standard 5:** *Land uses with higher potential pollutant loads (LUHPPL), source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable.*

Not applicable – Site is not a LUHPPL.

**Stormwater Standard 6:** *Stormwater discharges within a Zone II or Interim Wellhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area.*

Not applicable – Site does not discharge to ACEC

**Stormwater Standard 7:** *Redevelopment Projects*

Not Applicable – Site is not a redevelopment project.

**Stormwater Standard 8:** *Construction period erosion and sedimentation control*

14. The Site is > 1 Acre therefore an EPA NPDES Construction General Permit (CGP) registration and SWPPP is required to be submitted prior to construction. CMG recommends the Planning Board make this a condition of approval.
15. CMG recommends properly sized temporary sediment basins be provided and shown on the “Erosion and Sediment Control Plan”. Consideration should also be given to construction phasing to minimize the potential for erosion until grass areas are established.
16. Erosion control compost filter barrier limits should be shown on all relevant plan sheets (i.e. Proposed Clearing Plan, Grading and Drainage, and Site Plan).

**Stormwater Standard 9:** *Long term operation and maintenance plan*

17. CMG recommends the O & M Plan include the following required information:
  - Name and contact information for Responsible Party and Property Owners should be provided. The O&M Plan identifies *Bartzak PVI, LLC.* as Operator of the stormwater system and the plans note a different property owner *Bartzak Land, LLC.*
  - Plan showing location of all stormwater BMPs and maintenance access should be provided with the O&M Plan.
  - Snow removal operations should be included in O & M Plan.
  - Description of Public safety features (i.e. Site perimeter fencing, local Fire & Police contact phone numbers).
  - Maintenance and inspection log forms should be provided for the gravel roadway and any proposed additional stormwater best management practices.

**Stormwater Standard 10:** *Illicit discharges*

18. A signed Illicit Discharge Statement is included in the submitted stormwater report.

Please contact me or Rob Lussier at (774) 241-0901 with any questions or if you need additional information.

Sincerely,  
CMG



David T. Faist, PE  
Principal Engineer



Robert Lussier, E.I.T  
Project Engineer II