



# Major Land Development Master Plan Narrative Comolli Solar

0 Chase Hill Road  
Assessor's Plat 2 Lot 73, Unit #2

**PREPARED FOR:**

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## **1.0 BACKGROUND**

The proposed project was initially presented to the Planning Board on September 2, 2020 for an advisory opinion to the Town Council regarding a request for comprehensive plan/zoning map amendments. On November 2, 2020, the Town Council adopted an amendment to the zoning ordinance changing the zoning of land condominium unit 2 from Residential RFR-80 to Commercial, with several restrictions and conditions. In addition, the amendment permits the applicant to expand lot coverage beyond 3% or 3 acres with the condition that the fenced area does not exceed 9.07 acres. The proposed solar array is now a permitted use.

The proposed project was last presented to the Planning Board for Pre-Application on January 6, 2021. This Master Plan Narrative addresses applicable requirements of the Land Development and Subdivision Regulations Master Plan Checklist (8.5).

## **2.0 EXISTING CONDITIONS**

The proposed project will be located on Land Condominium Unit 2 of Assessor Plat 2 Lot 73. The 38.9± acre Site is located on the southern side of Chase Hill Road and is accessed by an existing gravel road that passes through Unit 1. The Site was historically used as an automobile junkyard for approximately 50 years and is currently operated as a granite quarry.

There are numerous areas of jurisdictional freshwater wetlands located on the Property. The largest area of wetlands is located on the western side of the Property and extends to the southern side adjacent to Pawcatuck River. There is a smaller portion of wetlands located in the center of the Property that extends to the east. These wetlands include a swamp, associated 50-foot perimeter wetland, a special aquatic site, an intermittent stream, and 100-foot riverbank wetland. The Site is mapped by Natural Resources Conservation Service (NRCS) as Canton- Charlton Rock Outcrop Complex, Canton and Charlton fine sandy loams, Paxton fine sandy loam, Ridgebury, Leicester, and Whitman soils, Sutton fine sandy loams, and Swansea Muck.

### **2.1 Natural Heritage Areas (RIDEM) and Zoning Overlay Districts**

The Site is not located within a mapped Natural Heritage Area (NHA) or Wellhead Protection Area according to the Rhode Island Department of Environmental Management (RIDEM) Environmental Resource Map. It is located within a Primary Protection Zone per Hopkinton GIS "Map 3 Groundwater and Wellhead Protection Areas, Hopkinton, RI."

### **2.2 Base Flood Elevation Data from FEMA maps**

The proposed project area is located within flood zone "X" per FIRM Map 44009C0144J. Flood zone "X" refers to areas of minimal flood hazard above the 500-year flood level.

## **3.0 CONCEPTUAL PROJECT**

The Applicant proposes to construct a 3.46± MW direct current (DC) ground-mounted Photovoltaic Solar Energy System (PSES) occupying 7.83± acres, associated electrical equipment and 9± new utility poles. The array will be accessed via an existing gravel road to be widened and improved as necessary. The northern portion of the access road as well as approximately 7 of the utility poles will be located on Unit 1. A 7-foot high chain link fence encompassing 9.07± acres will surround the solar array and one proposed stormwater detention basin. The area within the fence will be cleared, grubbed, loamed and seeded. Shade



trees within the limits of disturbance and outside the fence will be cut. Stumps and existing ground cover will remain in this area.

The proposed array is located at least 989± feet south of Chase Hill Road, is no closer than 666± feet to the nearest residence, and is surrounded by substantial woods and wetlands. The existing topography will obstruct view of the array from Chase Hill Road and the Polly Coon Bridge.

### **3.1 Increased Setback Assessment**

During the January 6, 2021 pre-application meeting, the planning board requested further evaluation of the eastern property line setback. The proposed array is set back approximately 44 to 620 feet from the eastern property line; further than the 25-foot side yard setback required by Section 6 of the Hopkinton Zoning Ordinance. However, the board expressed concern that while the residence on the abutting lot (AP 2 Lot 71) is located 1,100 feet from the proposed array, the owner may desire to clear existing vegetation in the rear of that lot thereby decreasing the existing visual buffer. ESS has evaluated the value and feasibility of increasing the eastern buffer as requested.

A desktop wetland assessment was completed to evaluate the feasibility of future development of the southern portion of Lot 71. The assessment finds that access to the southern portion of Lot 71 is restricted by wetlands. It concludes that it is not likely feasible to permit a wetland crossing that would be required to enable clearing or development of the southern portion of the lot.

ESS also evaluated the feasibility of increasing the eastern side yard setback. Increasing the eastern side yard setback would require expanding the array elsewhere to maintain the 9.07 acres permitted by the Town Council decision. The array cannot be expanded further north, south, or west due to the presence of wetlands. Therefore, it would need to expand within the far eastern portion of the Site, closer to the Pawcatuck River and Polly Coon Bridge. This alternative would be similar to the original concept previously proposed. That concept was specifically rejected by the Town Council and would not comply with the conditions of the Town Council's decision. Given the Town Council's decision on the zone change based on the plans currently before the Planning Board, the Applicant cannot now revisit the original plan where panels were located in the eastern portion of the land, closer to these features. Importantly, increasing the setback would not preserve any additional woods as the area in question is currently a grass field and not a forested buffer.

Based on this evaluation, ESS finds:

1. Wetlands and associated regulatory restrictions likely prevent development of the southern portion of Lot 71, adjacent to the proposed array. Therefore, the existing vegetation will provide sufficient screening to the abutting residence located over 1,000 feet from the proposed array.
2. The ground beneath the proposed array in the vicinity of Lot 71 is currently a grass field. Increasing the eastern side yard setback will not preserve additional woods.
3. Due to site restrictions, the proposed array layout can not be significantly modified while meeting the conditions of the Town Council decision.

Therefore, it is ESS's opinion that increasing the eastern side yard setback is neither beneficial nor feasible.



### **3.2 Provisions for collecting and discharging stormwater**

A detailed stormwater design will be provided with the Preliminary Plan application. It is anticipated that one detention basin will be required in the northeastern portion of the project. This basin will attenuate peak stormwater runoff rates prior to discharging overland towards the adjacent wetland. Additional stormwater controls are not anticipated at this time.

### **3.3 Proposed Construction Schedule**

The construction schedule will comply with the condition of the Town Council approval. Construction will be performed only between 8 am and 5 pm Monday through Friday.

### **3.4 Compliance with Design Guidelines and Standards**

The proposed use is allowed by the Non-Residential Photovoltaic Solar Energy Systems Ordinance (PSES) (Code of Ordinances-chapter 246). The conceptual layout has been designed in accordance with the requirements of the PSES Ordinance including:

1. The conceptual layout exceeds the minimum yard setbacks.
2. All electrical connection and distribution lines within the system (after the equipment pad) will be underground.
3. A seven-foot high security fence surrounding the perimeter of each array is proposed. The bottom will be elevated 6 inches above ground to permit the passage of small animals.
4. Exterior lighting is not proposed.
5. The maximum panel height will not exceed twelve feet above the ground surface.
6. The fenced area will not exceed 9.07 acres as permitted by the Town Council.
7. The PSES will not yield a noise level that exceeds 40 dBA at the property line.
8. The PSES will be designed to minimize grading and preserve the natural ground contours to the greatest extent practical.
9. No clearing within the yard setbacks is proposed.
10. Emergency access will be provided via a crushed stone driveway. The gate will be locked with a Knox Lock to provide emergency access.

The conceptual layout has also been designed in accordance with the applicable general guidelines of design review listed in Article XVI, section 16.3.2, as follows:

1. Height: The height of the panels will not exceed 12 feet.
2. Proportions of Windows and Doors: Not Applicable, no buildings are proposed
3. Relations of Building Masses and Spaces: Not Applicable, no buildings are proposed
4. Roof Shape: Not Applicable, no buildings are proposed
5. Scale: Not Applicable, no buildings are proposed
6. Façade Line, Shape and Profile: Not Applicable, no buildings are proposed



7. Architectural Details: Not Applicable, no buildings are proposed
8. Advertising Features: Not Applicable, no advertising features are proposed.
9. Heritage – Historical/Cultural Impact: The proposed project will not have a Historical/Cultural Impact as the Site is already used commercially.
10. Energy Efficiency: The purpose of the proposed project is to provide renewable energy resources.
11. Landscape: Visibility of the proposed project will be limited by existing vegetation and the topography of the Site and surrounding area.
12. Lighting and Controls: Not applicable, no lighting is proposed.
13. Vehicular and Pedestrian Circulation: No traffic or pedestrians will be permitted within the array. A hammerhead at the end of the access road will permit vehicles to turn around. A proposed grass trail east of the proposed array will provide access to unit 3.
14. Environmental Impact: An Environmental Impact Statement will be prepared as required and submitted at the preliminary plan stage.

Additional design details and studies will be provided with the Preliminary Plan application, including:

1. Grading and Drainage design
2. Soil Erosion and Sediment Control plans
3. Noise Study
4. Environmental Impact Statement
5. Operation and Maintenance Plan
6. Decommissioning estimate

#### **4.0 FISCAL IMPACT STATEMENT**

Solar facilities are a revenue positive use. They place no demand on public services including, schools, police, or public works. The proposed project is 3.46± MW DC/ 2.7 MW AC. Therefore, at the RI Tangible Tax rate of \$5,000/MW AC the project will provide an additional \$13,500 in tax revenue per year for a total benefit to the Town of \$270,000 over 20 years.

#### **5.0 CHECKLIST ITEMS MARKED N/A**

The following statements explain the Master Plan Checklist (8.5) items marked N/A.

##### ***B. SITE CONTEXT MAP / EXISTING RESOURCES AND SITE ANALYSIS MAP***

20. No public dedications are proposed.
21. No construction phasing is proposed.
24. No areas of active agricultural use are located on-site.
25. No unfragmented forest tracts are located on-site.
30. The proposed project does not require water, sanitary sewer, or OWTS.



36. There are no boat launches, stream access locations and water trails on the Site.
37. There are no play fields or playgrounds adjacent to the site.
41. A residential cluster development is not proposed
42. No land is proposed to be set aside as open space, or conveyed to the Town of Hopkinton, for stormwater drainage purposes.
44. There are no proceedings or decisions of the Zoning Board of Review that pertain to the application or the Site.
45. No streets are proposed.
50. No parking spaces are proposed.
51. No impervious lot coverage is proposed.
52. The project will not generate traffic once operational.
54. Proposed contours will be provided with the permit level design to be submitted with the preliminary plan application.
55. No sidewalks are proposed.
56. No wellhead protection areas are located within 200 feet of the Site.
58. No solid waste facilities are proposed.
59. No hazardous material storage is proposed.
60. No external lighting is proposed.
61. No signage is proposed, with the exception of appropriate warning signs to be posted on the fence.

#### *C. SKETCH PLAN OVERLAY SHEET*

6. A subdivision is not proposed

#### *D. SUPPLEMENTARY INFORMATION*

1. The proposed project does not require water, sanitary sewer, or OWTS.
5. No test holes have been excavated.
6. No phasing is proposed.
7. With the exception of the Hopkinton Land Trust conservation easement, no open space use plan is proposed.
8. A yield plan is not applicable to a solar development.
9. No buildings are proposed.

#### *E. SUPPORTING MATERIALS*

2. A project review fee has not been assessed.



6. A subdivision is not proposed.
7. A subdivision is not proposed.
9. No phasing is proposed.
13. No buildings are proposed.
14. No buildings are proposed.
16. Once operational, it is anticipate the site will be visited approximately twice per year. A traffic analysis is not warranted.
17. No impervious surfaces intended for public improvement are proposed.
18. A water source is not required or proposed.
19. Permit Level design plans will be submitted to the RIDEM prior to the Preliminary Plan stage. No permits are required from the RIDOT or US ACE.
22. Water service is not required.



## Appendix A

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### Reduced Size Drawings

