



**WATERSHED RESOURCE CONSULTANTS, LLC**  
NATURAL RESOURCE AND SOIL SCIENCE CONSULTING

February 14, 2024

Heather Stukas  
Maine Project Office  
442 Civic Center Drive, Suite 350  
Augusta, Maine 04330

**RE: USACE SVNF for Allen Solar, LLC – Roosevelt Trail, Raymond, Maine**

Dear Heather,

Watershed Resource Consultants, LLC and Acheron Engineering is assisting Mainely Solar, LLC with a US Army Corps of Engineers (Corps) Self-Verification Notification Form (SVFN) Permit application for the proposed Allen Solar, LLC solar project on Roosevelt Trail in Raymond, ME, shown as Lots 68 and 68A on Map 4 of the Town of Raymond tax maps. The applicant is applying for a permit to construct a commercial solar development.

The applicant proposes to construct a 4.6-acre commercial solar development. The development will require filling a small, isolated wetland to construct the entrance road, disturbing approximately 325 sqft of forested wetland. Other wetlands on the property contain vernal pools, and the road has been designed to avoid these protected natural resources. No other natural resource will be altered due to this project. The activity will adhere to the standards and conditions under Sections 8 and 13 of the Corps Maine General Permit.

Please find attached the SVFN application and associated attachments. Please contact us if you require any further information.

Sincerely,

Roger St. Amand, CSS, LSE, LPF, PWS, CPESC  
**Principal | Watershed Resource Consultants, LLC**  
*rstamand@wrcmaine.com*

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[WWW.WRCMAINE.COM](http://WWW.WRCMAINE.COM)

BAR HARBOR OFFICE: 1366 STATE HIGHWAY 102, #6 | BAR HARBOR, ME 04609 | (207) 944-7288  
ORRINGTON OFFICE: P.O. BOX 145 | ORRINGTON, ME 04474 | (207) 385-6056



**Section VI: Self-Verification Notification Form**  
(for all tidal and non-tidal projects in Maine subject to Corps jurisdiction)

**US Army Corps  
of Engineers®**  
New England District

At least two weeks before work commences, complete all fields (write "none" if applicable) below or use the fillable form found at [www.nac.usace.army.mil/Missions/Regulatory/State-General-Permits/Maine-General-Permit/](http://www.nac.usace.army.mil/Missions/Regulatory/State-General-Permits/Maine-General-Permit/) The two-week lead time is not required for emergency situations. Send this form, an Official Species List, and project plans to the following email address: [cenac-r-me@usace.army.mil](mailto:cenac-r-me@usace.army.mil)

Maine Project Office  
U.S. Army Corps of Engineers  
442 Civic Center Drive, Suite 350  
Augusta, Maine 04330

State Permit #: \_\_\_\_\_  
Date of State Permit: \_\_\_\_\_  
State Project Manager: \_\_\_\_\_

Permittee: DAVID FOWLER, ALLEN SOLAR, LLC

Address, City, State, Zip: 143 HIGHLAND SHORE ROAD, CASCO, ME, 04015

Email, Phone: 207-615-6850

Agent: KIRK BALL, ACHERON ENGINEERING SERVICES

Address, City, State, Zip: 153 MAIN STREET, NEWPORT, ME 04953

Email, Phone: kball@acheronengineering.com, 207-368-5700

Contractor: TBD

Address, City, State, Zip: \_\_\_\_\_

Email, Phone: \_\_\_\_\_

Project Name: ALLEN SOLAR, LLC

Address, City, State, Zip: 1565 ROOSEVELT TRAIL (US-302), RAYMOND, ME 04701

Lat °N, Long °W: 43.910359, -70.502907

Tax Map/Lot: 004/68 & 68B

Waterway Name: UNNAMED FORESTED WETLAND

Description of Work: BUILD ACCESS ROAD THROUGH LOT TO ACCESS ADJACENT LOT FOR THE DEVELOPMENT OF A COMMERCIAL SOLAR INSTALLATION

Proposed Starting Date: 3/1/2024

Proposed Finish Date: 4/15/2025

Area of wetland impact (SF): Permanent: 325 Temporary: 0

Area of waterway impact (SF): Permanent: 0 Temporary: 0

Work will be done under the following Section V General Permits (circle all that apply):

I. Inland Waters and wetlands: 1 2 3 4 5 6 7 8 9 10 11 12 ☒ 13 14 15 16 17 18 19 20 21 22 23

II. Navigable Waters: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Have MHPC and all five federally-recognized tribes in Maine been notified of the proposed work? ☒ Yes ☐ No

*Your signature below, as permittee, indicates that you accept and agree to comply with the terms, eligibility criteria, and general conditions for Self-Verification under the Maine General Permit.*

Permittee Signature: \_\_\_\_\_

Date: \_\_\_\_\_

02/16/2024

ALLEN SOLAR, LLC  
143 Highland Shores Road  
Casco, Maine 04015

September 5, 2023

RE: Agent Authorization for Application Submission(s)

To Whom it May Concern:

The undersigned, being a duly authorized Manager of Allen Solar, LLC (the “Company” or the “Applicant”), do hereby appoint and name Kirk Ball of Acheron Engineering Services to act as an Agent of the Company and to represent and bind the Company before the following agencies/authorities concerning the proposed solar development project located on Roosevelt Trail (Route 302) in the Town of Raymond, Maine (hereinafter, the “Allen Solar Project”);

1. Before all departments, agencies, and bureaus of the State of Maine, including without limitation, the Department of Environmental Protection for matters related to the application and approval of the Allen Solar Project;
2. Before the United State Army Corps of Engineers for matters related to the application and approval of the Allen Solar Project; and
3. Before all departments of the Town of Raymond, including without limitation, the Town of Raymond Planning Board for matters related to the application and approval of the Allen Solar Project.

Thank you.

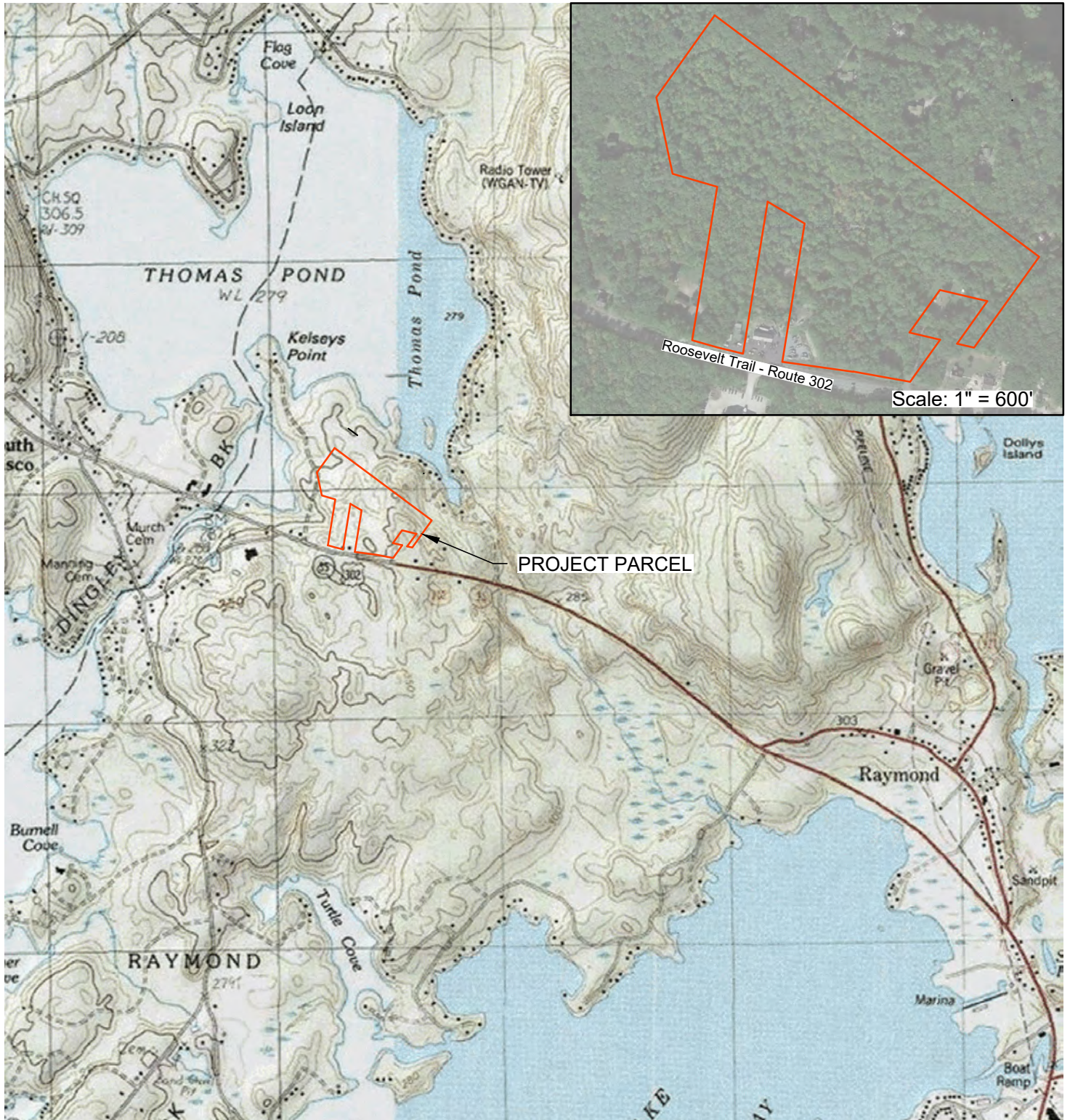
Allen Solar, LLC

By: 

Name: David Fowler

Title: Manager





0 2000' 4000' 6000'



Scale: 1" = 2,000'

Do Not Use for Construction  
For Regulatory Review Only

### Site Location Map

Mainely Solar, LLC.  
143 Highland Shores Road  
Casco, Maine

Job No.: MS001

Scale: As Noted

Date: 8/24/2023

Sheet: 1



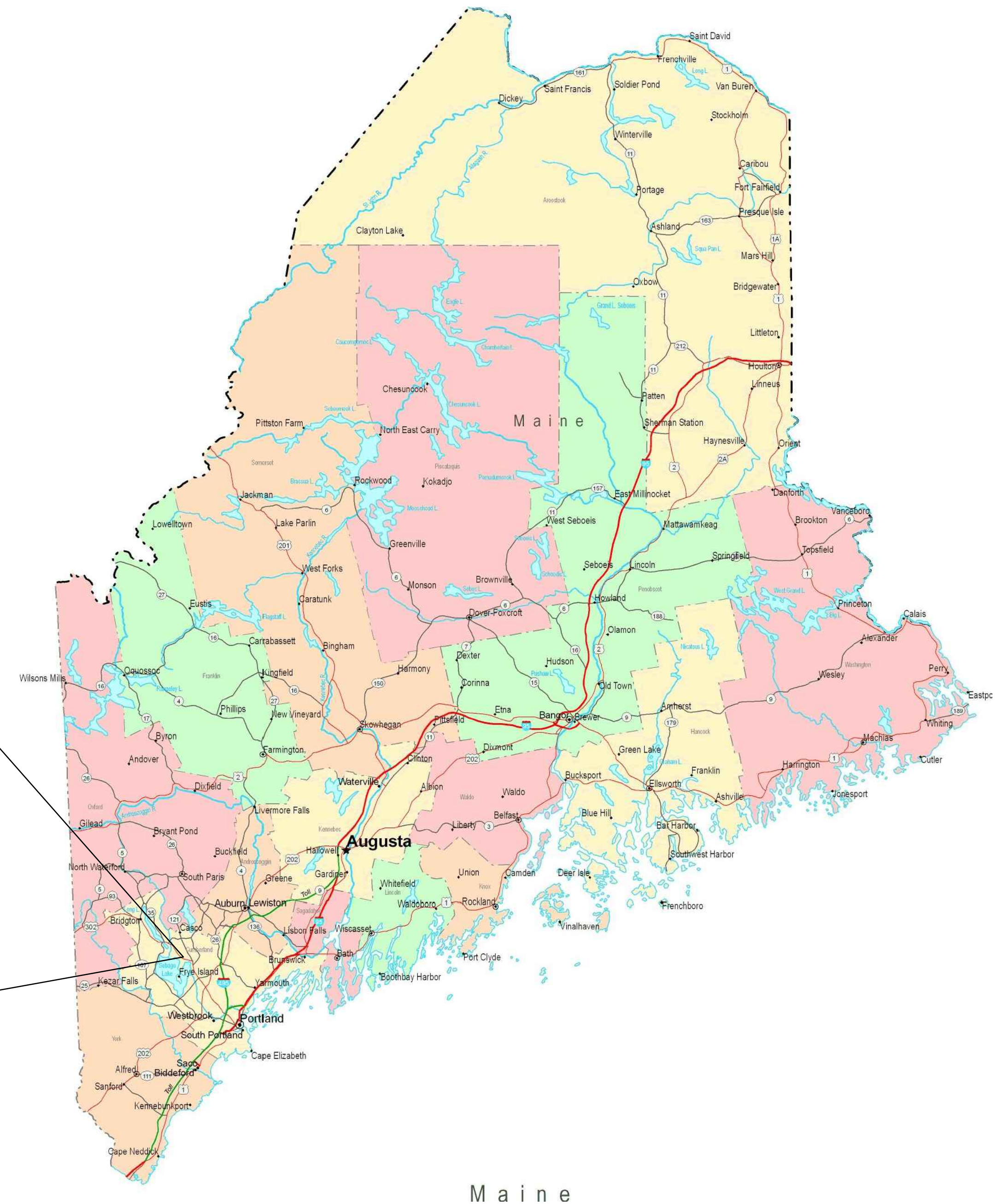
Owner:  
Allen Solar Power, LLC  
143 Highland Shores Road  
Casco, Maine 04015  
207-615-6850  
207-461-0666

Engineer of Record:  
Kirk Ball, PE  
Acheron Engineering Services  
153 Main Street  
Newport, Maine 04953  
207-368-5700

Surveyor:  
Plisga & Day Land Surveyors  
72 Main Street  
Bangor, Maine 04401  
207-947-0019

Code Enforcement: Raymond  
Alex Sirois  
401 Webbs Mill Road  
Raymond, Maine 04071  
207-655-4742 Ext. 161

# Allen Solar Power, LLC. Roosevelt Trail Raymond, Maine



*Acheron Engineering, LLC.*  
*Engineering & Environmental Consultants*

[www.AcheronEngineering.com](http://www.AcheronEngineering.com)  
153 Main St. 113 Winter East  
Newport, ME. 04953 Williamsburg, VA 23188  
(207)-368-5700 (207) 341-2590



GENERAL NOTES:

1. ACHERON ENGINEERING HAS USED A REASONABLE STANDARD OF CARE TO TRY TO LOCATE UNDERGROUND FACILITIES IN THE VICINITY OF THIS PROJECT. LOCATIONS OF UNDERGROUND FACILITIES DEPICTED ON THESE DRAWINGS ARE APPROXIMATE. EXCAVATORS MUST COMPLY WITH ALL REQUIREMENTS OF TITLE 23 SECTION 3360, PROTECTION OF UNDERGROUND FACILITIES, BEFORE COMMENCING OPERATIONS.
2. SPILL PREVENTION: CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES: STORAGE PRACTICES TO MINIMIZE EXPOSURE OF MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP AND IMPLEMENT, AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT AND RESPONSE PLANNING MEASURES.
3. ANY SPILL OR RELEASE OF TOXIC OR HAZARDOUS SUBSTANCES MUST BE REPORTED TO THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION. FOR OIL SPILLS, CALL 1-800-482-0777 WHICH IS AVAILABLE 24 HOURS A DAY. FOR SPILLS OF TOXIC OR HAZARDOUS MATERIAL, CALL 1-800-482-4664 WHICH IS AVAILABLE 24 HOURS A DAY. FOR MORE INFORMATION VISIT THE MEDEP WEBSITE AT: WWW.MAINE.GOV/DEP/SPILLS/EMERGENCYPILLRESP/
4. GROUNDWATER PROTECTION: DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE AND CONSEQUENT FLOODING AND DESTABILIZATION. NOTE: LACK OF APPROPRIATE POLLUTANT REMOVAL BEST MANAGEMENT PRACTICES (BMPs) MAY RESULT IN VIOLATIONS OF THE GROUNDWATER QUALITY STANDARD ESTABLISHED BY M.R.S.A. §465-C (1).
5. DEBRIS AND OTHER MATERIALS: MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIAL TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE. NOTE: TO PREVENT THESE MATERIALS FROM BECOMING A SOURCE OF POLLUTANTS, CONSTRUCTION AND POST CONSTRUCTION ACTIVITIES RELATED TO A PROJECT MAY BE REQUIRED TO COMPLY WITH APPLICABLE PROVISIONS OF RULES RELATED TO SOLID, UNIVERSAL AND HAZARDOUS WASTES, INCLUDING BUT NOT LIMITED TO, THE MAINE SOLID WASTE MANAGEMENT RULES, MAINE HAZARDOUS WASTE RULES, MAINE OIL CONVEYANCE AND STORAGE RULES AND MAINE PESTICIDE REQUIREMENTS.
6. AUTHORIZED NON-STORMWATER DISCHARGES: IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE: DISCHARGES FROM FIREFIGHTING ACTIVITY, FIRE HYDRANT FLUSHING, VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED), DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS, ROUTINE EXTERNAL BUILDING WASHDOWN (NOT INCLUDING PAINT REMOVAL, NO DETERGENTS), PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED, NO DETERGENTS), UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE, UNCONTAMINATED GROUNDWATER OR SPRING WATER, FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED, UNCONTAMINATED EXCAVATION DEWATERING, POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHING AND LANDSCAPE IRRIGATION.
7. UNAUTHORIZED NON-STORMWATER DISCHARGES: THE MAINE DEP'S APPROVAL DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, OTHER THAN THOSE MENTIONED IN GENERAL NOTE 7 SPECIFICALLY. THE MAINE DEP'S APPROVAL DOES NOT AUTHORIZE DISCHARGE OF THE FOLLOWING: WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OIL, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS; FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; SOAPS, SOLVENTS OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR RELEASE.

EROSION CONTROL NOTES:

1. DURING CONSTRUCTION USE PRECAUTION TO AVOID ANY EROSION AND TO PREVENT SILTING OF OCEANS, RIVERS, STREAMS, LAKES, RESERVOIRS, IMPOUNDMENTS, AND DRAINAGE DITCHES AND SWALES.
2. CONSTRUCTION SEQUENCE
  - INSTALL TEMPORARY EROSION CONTROL MEASURES.
  - DE-STUMP AND REMOVE BOULDERS.
  - SEED ANY DISTURBED AREAS.
  - CONSTRUCT STORMWATER MANAGEMENT FACILITIES.
  - INSTALL SOLAR PANELS, SUBSTATION AND EQUIPMENT.
  - INSTALL COLLECTOR LINES, REGRADE AND REVEGETATE ROADS.
  - FINAL GRADING AND RESEEDING OF DISTURBED AREAS.
  - REMOVE EROSION CONTROL DEVICES PENDING SUFFICIENT GROWTH IN SEEDED AREAS.
3. ALL CONSTRUCTION ACTIVITIES SHOULD FOLLOW GUIDANCE AS PRESENTED IN "MAINE EROSION AND SEDIMENT CONTROL PRACTICES, FIELD GUIDE FOR CONTRACTORS" PUBLISHED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION IN 2014.
4. MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE CONTRACTOR WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY BE NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR EROSION AND SEDIMENTATION CONTROL AND MAINTENANCE.
5. LOCATE AND MARK ALL PROJECT BOUNDARIES PRIOR TO CONSTRUCTION.
6. LIMIT THE AMOUNT OF SOIL DISTURBANCE TO NO MORE THAN 2 ACRES AT ONE TIME OR NO LARGER AREA THAN CAN BE MULCHED IN ONE DAY.
7. MARK ALL SOIL DISTURBANCE LIMITS AND INSTALL SEDIMENT BARRIERS PRIOR TO DISTURBING SOILS.
8. MULCH EXPOSED SOIL AS SOON AS POSSIBLE, AND REVEGETATE AS SOON AS FINAL GRADE IS ATTAINED.
9. INSPECT AND REPAIR EROSION CONTROL AND SEDIMENT TRAPPING MEASURES WEEKLY AND AFTER EVERY STORM EVENT.
10. REMOVE TEMPORARY EROSION CONTROLS WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED. PERMANENT STABILIZATION CONSISTS OF AT LEAST 90% VEGETATION, PAVEMENT, GRAVEL BASE OR RIP-RAP.
11. STABILIZE DITCHES WITHIN 24 HOURS OF FINAL GRADE.
12. ALL FILL MATERIAL MUST BE FREE OF FROZEN SOIL, ROCKS OVER 6-INCHES, SOD, BRUSH, STUMPS, TREE ROOTS, WOOD OR OTHER PERISHABLE MATERIALS.
13. INSTALL SEDIMENT BARRIERS DOWN SLOPE OF SOIL STOCK PILES.
14. DO NOT SITE SOIL STOCK PILE IN AREAS OF CONCENTRATED STORMWATER FLOW OR AREAS OF POTENTIAL FLOODING.
15. THE DURATION OF EXPOSURE OF UNCOMPLETED CUT SLOPES, EMBANKMENTS, TRENCH EXCAVATIONS, AND SITE GRADED AREAS SHALL BE MINIMIZED. INITIATE SEEDING AND OTHER EROSION CONTROL MEASURES ON EACH SEGMENT AS SOON AS REASONABLY POSSIBLE.
16. SHOULD IT BECOME NECESSARY TO SUSPEND CONSTRUCTION FOR MORE THAN 7 DAYS, SHAPE AND STABILIZE ALL EXCAVATED AND GRADED AREAS. PROVIDE AND MAINTAIN TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, SUCH AS BERMS, DIKES, SLOPE DRAINS, SILT STOPS, AND SEDIMENTATION BASINS, UNTIL PERMANENT DRAINAGE FACILITIES OR EROSION CONTROL FEATURES HAVE BEEN COMPLETED AND ARE OPERATIVE. IF DISTURBED AREAS ARE WITHIN 75 FEET OF A WETLAND OR WATERBODY, STABILIZE DISTURBANCE WITHIN 48 HOURS OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST.
17. FINE MATERIAL PLACED OR EXPOSED DURING THE WORK SHALL BE HANDLED AND TREATED AS TO MINIMIZE THE POSSIBILITY OF IT REACHING ANY SURFACE WATERS. USE DIVERSION CHANNELS, DIKES, SEDIMENT TRAPS, OR ANY OTHER EFFECTIVE AND APPROVED CONTROL MEASURES.
18. PROVIDE SILT STOPS WHEREVER EROSION CONTROL MEASURES MAY NOT BE TOTALLY CAPABLE OF CONTROLLING EROSION, SUCH AS IN DRAINAGE CHANNELS AND WHERE STEEP SLOPES MAY EXIST.
19. BEFORE WATER IS ALLOWED TO FLOW IN ANY DITCH, SWALE, OR CHANNEL, INSTALL THE PERMANENT EROSION CONTROL MEASURES IN THE WATERWAY SO THAT THE WATERWAY WILL BE SAFE AGAINST EROSION.
20. TAKE SPECIAL PRECAUTIONS IN THE USE OF CONSTRUCTION EQUIPMENT TO MINIMIZE EROSION. DO NOT LEAVE WHEEL TRACKS WHERE EROSION MIGHT BEGIN.
21. MULCHING SHALL FOLLOW THE SEEDING OPERATION BY NOT MORE THAN 24 HOURS.
22. SHOULD ANY PROTECTIVE MEASURES EMPLOYED INDICATE ANY DEFICIENCIES OR EROSION TAKING PLACE, IMMEDIATELY PROVIDE ADDITIONAL MATERIALS OR EMPLOY DIFFERENT TECHNIQUES TO CORRECT THE SITUATION AND TO PREVENT SUBSEQUENT EROSION.
23. DISTURBANCE WITHIN 30 FEET OF ANY PROTECTED NATURAL RESOURCE WILL REQUIRE DOUBLING THE PERIMETER EROSION CONTROLS AND DISTURBED AREAS MUST BE STABILIZED WITHIN 7 DAYS.
24. CONTINUE EROSION CONTROL MEASURES UNTIL THE PERMANENT MEASURES HAVE BEEN SUFFICIENTLY ESTABLISHED AND ARE CAPABLE OF CONTROLLING EROSION ON THEIR OWN.
25. REMOVE ALL TEMPORARY CONTROL MEASURES WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED.
26. COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS SET FORTH IN THE BEST MANAGEMENT PRACTICES OF MAINE AS PREPARED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
27. AREAS CONTAINING EXPOSED SOILS MUST BE STABILIZED WITHIN 7 DAYS OF CESSATION OF AN ACTIVITY.
28. BEGIN PERMANENT STABILIZATION WITHIN 7 DAYS OF OBTAINING FINAL GRADE.

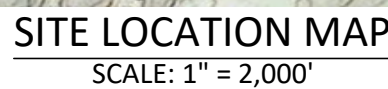
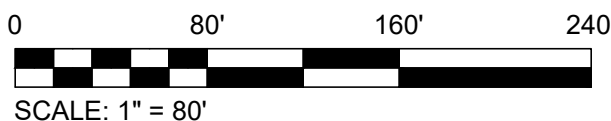
WINTERIZATION SCHEDULE

- ALL STONE LINED DITCHES AND CHANNELS SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH.
- ALL STONE COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH.
- ALL DISTURBED SLOPES HAVING A SLOPE LESS THAN 15% TO BE SEEDED AND MULCHED BY SEPTEMBER 15TH.
- ALL VEGETATED SLOPE GREATER THAN 15% TO BE SEED AND MULCHED BY SEPTEMBER 1ST.
- ALL VEGETATED DITCHES AND CHANNELS TO BE SEEDED AND MULCHED BY SEPTEMBER 1ST.

SITE WINTERIZATION

- IF THE SEPTEMBER 1ST DEADLINE CANNOT BE MET FOR VEGETATED SLOPES, THEN BY OCTOBER 1ST THE SLOPE SHALL BE SEEDED WITH WINTER RYE AT THE RATE OF 3 POUNDS PER 1000 SQUARE FEET AND COVERED WITH EROSION CONTROL MATS OR ANCHORED MULCH. IF RYE FAILS TO GROW 3 INCHES BY NOVEMBER 1ST THE SLOPE SHALL BE COVERED WITH AN EROSION CONTROL MIX OR COVERED WITH STONE RIPRAP.
  - IF THE SEPTEMBER 1ST DEADLINE CANNOT BE MET FOR DISTURBED LINED DITCHES, THEN A SOD OR STONE LINING SHALL BE INSTALLED.
  - IF THE SEPTEMBER 15TH DEADLINE CANNOT BE MET FOR GRASSED AREAS WITH A SLOPE LESS THAN 15%, THEN BY NOVEMBER 15TH MULCH AREAS AT A RATE OF 150 POUNDS PER 1000 SQUARE FEET SUCH THAT NO SOIL IS VISIBLE THROUGH MULCH.
31. WINTER CONSTRUCTION
  - WINTER CONSTRUCTION IS CONSTRUCTION ACTIVITY PERFORMED BETWEEN NOVEMBER 1ST AND APRIL 15TH.
  - IF AN AREA IS NOT STABILIZED IN ACCORDANCE WITH THE ABOVE SCHEDULE OR PERMANENTLY STABILIZED THAN ADDITIONAL STABILIZATION MEASURES MUST BE EMPLOYED.
  - PERMANENT STABILIZATION CONSISTS OF AT LEAST 90% VEGETATION, PAVEMENT, GRAVEL BASE OR RIPRAP.
  - APPLY HAY MULCH AT 150 POUNDS PER 1000 SQUARE FEET SUCH THAT NO SOIL IS VISIBLE THROUGH MULCH.
  - USE MULCH AND NETTING OR AN EROSION CONTROL BLANKET OR MIX ON ALL SLOPES GRATER THAT 8 PERCENT.
  - INSTALL AN EROSION CONTROL BLANKET IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3 PERCENT.
  - WINTER EXCAVATION AND EARTH WORK SHALL NOT EXPOSE MORE THAN 1 ACRE OF THE SITE WITHOUT STABILIZATION AT ANY ONE TIME.
  - IN AN AREA WITHIN 75 FEET OF A NATURAL PROTECTED RESOURCE, DOUBLE ROW SEDIMENT BARRIERS SHALL BE INSTALLED.
  - TEMPORARY MULCH MUST BE APPLIED WITHIN 7 DAYS OF SOIL EXPOSURE OR PRIOR TO ANY STORM EVENT, BUT AFTER EVERY WORKING DAY IN AREAS WITHIN 75 FEET OF A NATURAL PROTECTED RESOURCE.
  - AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE SHALL BE MULCHED THE SAME DAY.
  - NO MULCH SHALL BE SPREAD OVER SNOW. SNOW SHALL BE REMOVED WITHIN ONE QUARTER INCH PRIOR TO MULCHING.
  - LOAM SHALL BE FREE OF FROZEN CLUMPS BEFORE BEING APPLIED.
  - INSPECT WEEKLY AND AFTER EACH STORM TO CHECK FOR EROSION AND REPAIR IMMEDIATELY.
  - IN SPRING, REMOVE ANY EXCESS MULCH, SEED AND MONITOR FOR EROSION AND PLANT GROWTH.
32. EXCAVATION DE-WATERING: EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFERDAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN OR DIRTBAG GEOTEXTILE SEDIMENT FILTER. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE MAINE DEP. NOTE: DEWATERING CONTROLS ARE DISCUSSED IN THE "MAINE EROSION AND SEDIMENT" CONTROL BMPs, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION."
33. A DEWATERING PLAN IS NEEDED TO ADDRESS EXCAVATION DE-WATERING FOLLOWING HEAVY RAINFALL OR WHERE THE EXCAVATION MY INTERCEPT THE GROUNDWATER TABLE DURING CONSTRUCTION. PRIOR TO ANY DEWATERING ACTIVITIES SUBMIT A DEWATERING PLAN TO OWNER AND ENGINEER FOR APPROVAL.
34. FUGITIVE SEDIMENT AND DUST: ACTION MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEEP IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE PER WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.
35. IN LIEU OF SILT FENCE, EROSION CONTROL MIX CAN BE USED IF THE FOLLOWING CONDITIONS ARE MET.
  - FOLLOW GUIDELINE IN THE MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE, 2014.
  - THE EROSION CONTROL MIX BERM SHOULD BE MINIMUM OF 12" HIGH AND A MINIMUM OF 2' WIDE. ON STEEPER SLOPES, THE BERM WILL NEED TO BE WIDER AND HIGHER. BERMS COMPOSED OF EROSION CONTROL MIX CAN BE SHAPED WHEN NECESSARY.
  - THE EROSION CONTROL MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO ROCKS LARGER THAN 4" OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING; THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR PROCESSES WOOD PRODUCTS).
36. SEEDING:
  - COMPLETE SEEDING WITHIN 7 DAYS OF FINAL GRADING.
  - BROADCAST SEED OVER ENTIRE DITCH AND SURFACE AND RAKE INTO SOIL.
  - APPLY HAY MULCH TO ALL SEEDED AREAS.
  - SUMMER SEEDING DATES ARE FROM APRIL 1 TO SEPTEMBER 15.
  - PERMANENT SEEDING SHOULD BE DONE 45 DAYS BEFORE A KILLING FROST.
  - NORTHEAST SOLAR POLLINATOR 3' MIX, BY ERNST SEEDS OR APPROVED EQUAL.
  - SEEDING RATE:
    - SEED AT 40 LB/ACRE WITH 30 LBS/ACRE OF A COVER CROP.
    - FOR A COVER CROP USE EITHER GRAIN OATS (1 JAN TO 31 JUL) OR GRAIN RYE (1 AUG TO 31DEC).
  - MIX COMPOSITION:
    - 94.9% FESTUCA OVINA, (SHEEP FESCUE)
    - 2.5% ASCLEPIAS TUBEROSA (BUTTERFLY MILKWEED)
    - 2.0% CHAMAECRISTA FASCICULATA, PA ECOTYPE (PARTRIDGE PEA, PA ECOTYPE)
    - 0.3% OENOTHERA FRUTICOSA VAR. FRUTICOSA (SUNDROPS)
    - 0.3% TRADESCANTIA VIRGINIANA, SOUTHEASTERN PAN/NORTHERN VA BLEND (VIRGINIA SPIDERWORT, SOUTHEASTERN PAN/NORTHERN VA BLEND)
  - PROVIDE 4" OF LOAM PRIOR TO SEEDING IN AREAS THAT ARE WITHIN THE SOLAR FIELD THAT ARE TO BE GRADED, TO ESTABLISH A MEADOW CONDITION.
37. MULCHING:
  - APPLY TEMPORARY MULCH ON DISTURBED AREAS WITHIN 7 DAYS OF INITIAL DISTURBANCE OR PRIOR TO ANY STORM.
  - DO NOT APPLY EROSION CONTROL MIX OR HAY MULCH IN CONCENTRATED WATER FLOWS.
  - DO NOT USE EROSION CONTROL MIX OR HAY MULCH FOR SLOPES STEEP THAN 2:1.
  - USE HAY MULCH AS A TEMPORARY MEASURE TO PROTECT BARE SOILS OR TO COVER NEWLY SEEDED AREAS.
  - APPLY AT A RATE OF TWO SQUARE BALES (70-90 POUNDS) PER 1,000 SQUARE FEET.
38. INSPECTION TABLE:
- | EROSION AND SEDIMENT CONTROL MEASURES AND ACTIVITY  | INSPECTION FREQUENCY |                          |                    |
|---|----------------------|--------------------------|--------------------|
|   | Weekly               | Before and After a Storm | After Construction |
| <b>SEDIMENT BARRIERS</b>  |                      |                          |                    |
| Sediment barriers are installed prior to soil disturbances  | X                    | X                        |                    |
| Silt fences are keyed in and tight  | X                    | X                        |                    |
| Barriers are repaired and replaced as necessary   | X                    | X                        |                    |
| Barriers are removed when the site is stabilized - Silt fence should be cut at the ground surface       |                      |                          | X                  |
| <b>TEMPORARY STABILIZATION</b>  |                      |                          |                    |
| Areas are stabilized if able for 14 days or more  | X                    | X                        |                    |
| Daily stabilization within 100 ft of a natural resource   | X                    | X                        |                    |
| <b>MULCH</b>  |                      |                          |                    |
| Seed and mulch within 7 days of final grading. Ground is not visible                                    | X                    | X                        |                    |
| Erosion control mix is 4-6 inch thick   | X                    | X                        |                    |
| Erosion control blankets or hay mulch are anchored  | X                    | X                        |                    |
| <b>VEGETATION</b>   |                      |                          |                    |
| Vegetation provides 90% soil cover  | X                    |                          | X                  |
| Loam or soil amendment were provided  | X                    |                          | X                  |
| New seeded areas are mulched and protected from vehicle, foot traffic and runoff                        | X                    | X                        | X                  |
| Areas that will remain unworked for more than 1 year are vegetated with grass                           | X                    |                          |                    |
| <b>SLOPES AND EMBANKMENTS</b>   |                      |                          |                    |
| Final graded slopes and embankments are stabilized  | X                    | X                        | X                  |
| Diversions are provided for areas with rill erosion   | X                    | X                        | X                  |
| Areas steeper than 2:1 are rippaped   | X                    |                          |                    |
| Stones are angular, durable and various in size   | X                    |                          |                    |
| Riprap is underlain with a gravel layer or filter fabric  | X                    |                          |                    |
| <b>STORMWATER CHANNELS AND CULVERTS</b>   |                      |                          |                    |
| Ditches and swales are permanently stabilized--channels that will be rippaped have been over- excavated | X                    | X                        | X                  |
| Ditches are clear of obstructions, accumulated sediments or debris                                      | X                    | X                        | X                  |
| Ditch lining/bottoms are free of erosion  | X                    | X                        | X                  |
| Check dams are spaced correctly to slow flow velocity   | X                    |                          |                    |
| Underlying filter fabric or gravel is not visible   | X                    | X                        | X                  |
| Culvert aprons and plunge pools are sized for expected flows  | X                    |                          |                    |
| Stones are angular, durable and various in size   | X                    |                          |                    |
| Culverts are sized to avoid upgradient flooding   | X                    | X                        |                    |
| Culvert protection extends to the maximum flow elevation within the ditch                               | X                    | X                        | X                  |
| Culvert is embedded, not hanging  | X                    | X                        | X                  |
- | ROADWAYS AND PARKING SURFACES  |       |   |   |
|--|-------|---|---|
| The gravel pad at the construction entrance is clear from sediments  | X     | X |   |
| Roads are crowned  |       | X | X |
| Cross drainage (culvert) is provided   | X     |   |   |
| False ditches (from winter sand) are graded  | X     | X | X |
| <b>BUFFERS</b>   |       |   |   |
| Buffers are free of erosion or concentrated flows  |       | X | X |
| The downgradient of spreaders and turnouts is stable   |       | X | X |
| Level spreaders are on the contour   |       | X | X |
| The number of spreaders and ditch turnouts is adequate for flow distribution   |       | X | X |
| Any sediment accumulation is removed from within spreader or turnouts  |       | X | X |
| <b>STORMWATER BASINS AND TRAPS</b>   |       |   |   |
| Embankments are free of settlement, slope erosion, internal piping, and downstream swamping  |       | X | X |
| All flow control structure or orifices are operational and clear of debris or sediments  |       | X | X |
| Any pre-treatment structure that collects sediment or hydrocarbons is clean or maintained  |       | X | X |
| Vegetated filters and infiltration basins have adequate grass growth   |       |   | X |
| Any impoundment or forebay is free of sediment   |       | X | X |
| <b>WINTER CONSTRUCTION (November 1<sup>st</sup>-April 15<sup>th</sup>)</b>   |       |   |   |
| Final graded areas are mulched daily at twice the normal rate with hay, and anchor (not on snow)   | Daily |   |   |
| A double row of sediment barrier is provided for all areas within 100 ft of a sensitive resource (use erosion control mix on frozen ground)  | Daily |   |   |
| Newly constructed ditches are rippaped   | Daily |   |   |
| Slopes greater than 5% are covered with an erosion control blanket or a 4-inch layer of erosion control mix  | Daily |   |   |
| <b>HOUSEKEEPING PUNCH LIST</b>   |       |   |   |
| All disturbed areas are permanently stabilized, and plantings are established (grass seeds have germinated with 90% vegetative cover)  |       |   | X |
| All trash, sediments, debris or any solid waste have been removed from stormwater channels, catch basins, detention structures, discharge points, etc.   |       |   | X |
| All ESC devices have been removed: (silt fence and posts, diversions and sediment structures, etc.)  |       |   | X |
| All deliverables (certifications, survey information, as- built plans, reports, notice of termination (NOT), etc.) in accordance with all permit requirements have been submitted to town, Maine DEP, association, owner, etc. |       |   | X |
- | INDEX |  |
|-------|--|
| #     | SHEET TITLE  |
| -     | COVER SHEET  |
| I     | GENERAL NOTES & INDEX  |
| C-1   | SITE PLAN EXISTING CONDITIONS  |
| C-2   | PROPOSED CONDITIONS SITE PLAN & EROSION / SEDIMENTATION CONTROL PLAN |
| C-3   | ACCESS ROAD PLAN AND PROFILE   |
| C-4   | FIRE PROTECTION SITE PLAN AND DETAILS                                |
| D-1   | CONSTRUCTION DETAILS   |
| D-2   | DETAILS  |
| SW-1  | PRE-CONSTRUCTION STORM WATER PLAN                                    |
| SW-2  | POST-CONSTRUCTION STORM WATER PLAN                                   |
- |  |                      |          |          |       |
|--|----------------------|----------|----------|-------|
|  | 8/29/23              | 11/07/23 | 01/09/24 | Date  |
|  | KJB                  | KJB      | KJB      | Chk'd |
|  | BFG                  | BFG      | KJB      | Drwn  |
| Project perimeter fence and tree line adjusted to minimize impact to Shore Land Zone.<br>Modifications to access road and solar array regarding the components for fire protection.<br>Modifications solar array layout, stormwater, fence type & cells to address fire dept comments. |                      |          |          |       |
| A  |                      |          |          |       |
| B  |                      |          |          |       |
| C  |                      |          |          |       |
| No.  | Revision Description |          |          |       |
- Drwn By: BG  
Desg By: BG / KJB  
Chkd By: KJB  
Aprvd By: KJB  
Date: 8/14/2023
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Williamsburg, VA 23188  
(207) 341-2590
- Allen Solar Power, LLC  
Raymond, Maine  
General Notes & Index
- Mainely Solar, LLC  
143 Highland Shores Road  
Casco, Maine
- Job Number:  
MS001
- Drawing No:
- i
- Sheet 1 of 9
-





- ## NOTES
1. THE PROTECTED NATURAL RESOURCES FIELD DELINEATION SERVICES WERE CONDUCTED BY WATERSHED RESOURCE CONSULTANTS, LLC. PROTECTED NATURAL RESOURCES FIELD DELINEATION SERVICES WERE CONDUCTED ON MAY 2022, AND APRIL & MAY 2023. RESOURCE FEATURES WERE LOCATED BY WATERSHED RESOURCE CONSULTANTS, LLC USING A MAPPING GRADE GPS RECEIVER (SUBMETER ACCURACY AS PER MANUFACTURER).
  2. 2 FT CONTOURS WERE DEVELOPED FROM MEGIS LIDAR DOWNLOADED FROM USGS NATIONAL MAP.
  3. PLAN REFERENCE: "SURVEY PLAN PROPERTY OF SCOTT ALLEN" DATED MAY 8, 2023, PROVIDED BY PLUSGA & DAY LAND SURVEYORS. CAD FILE: 23084 to Acheron 20230508.dwg.
  4. ZONING DISTRICTS: RURAL RESIDENTIAL (RR), APPROXIMATELY 5.8 ACRES WITHIN LRR1 SHORELAND ZONE.
  5. EXISTING IMPERVIOUS AREA ON LOT: 17,602 SF
  6. SOILS: HhB - HERMON SANDY LOAM, 0 - 8% SLOPES, VERY STONY AND HSG A  
HhC - HERMON SANDY LOAM, 8 - 15% SLOPES, VERY STONY AND HSG A  
WvB - WOODBRIDGE VERY STONY FINE SANDY LOAM, 0 - 8% SLOPES AND HSG C

- PROJECT PARCEL
- MDEP CLASSIFIED "WETLANDS NOT OF SPECIAL SIGNIFICANCE" (PRELIMINARY CLASSIFICATION)
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- CRITICAL TERRESTRIAL HABITAT (CTH)
- PREVIOUSLY IMPACTED CTH AREA
- Ø - UTILITY POLE
- PAVEMENT
- TREELINE
- 2 FT CONTOURS
- NRCS SOILS BOUNDARY
- NRCS SOILS LABEL

Drawn By: BG  
 Desg By: BG / KJB  
 Chkd By: KJB  
 Aprvd By: KJB  
 Date: 8/14/2023

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## Site Plan Existing Conditions

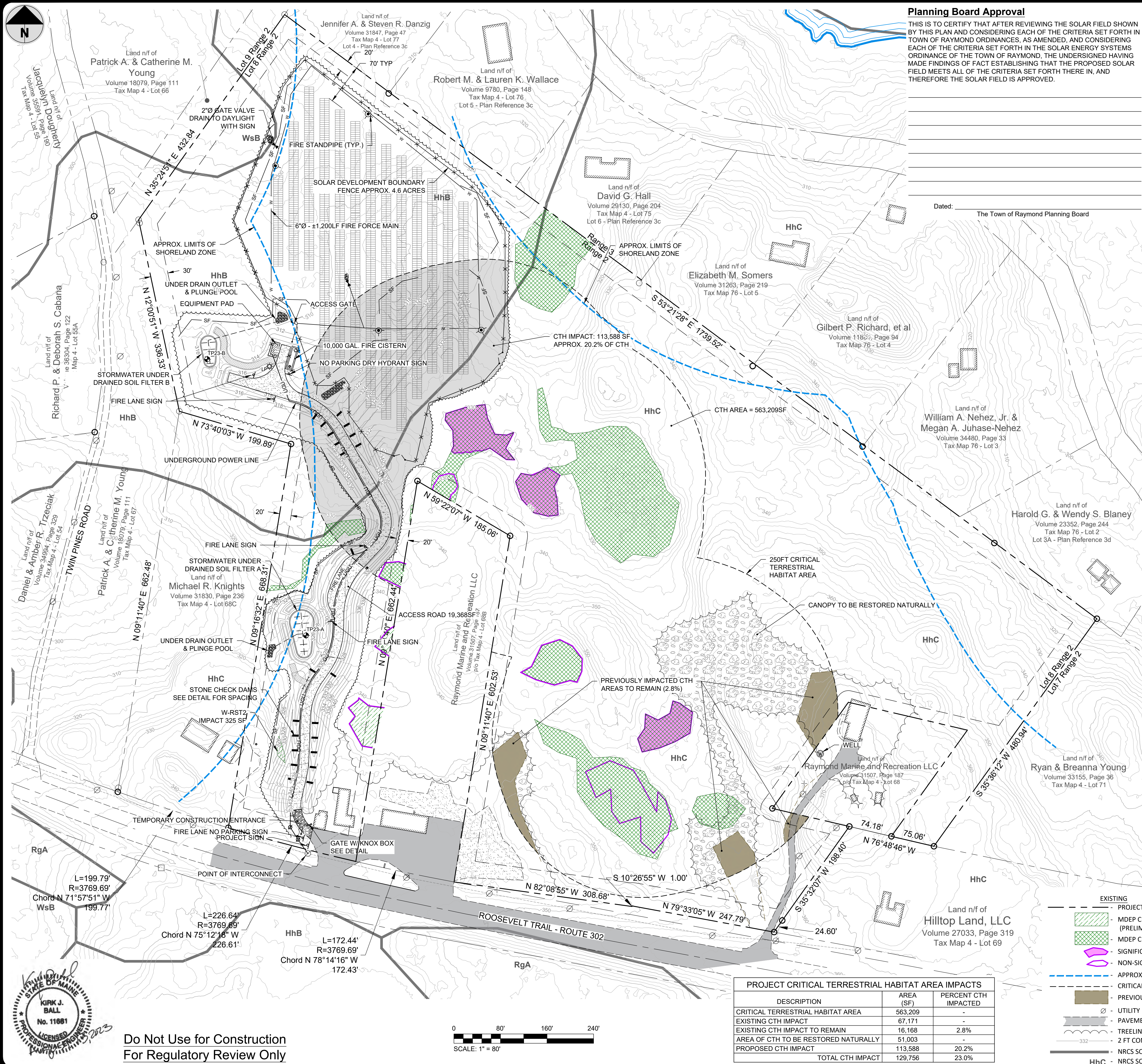
*Mainely Solar, LLC.  
143 Highland Shores Road  
Casco, Maine*

Job Number:  
MS001

Drawing No:  
C-1

Sheet 2 of 8





### Planning Board Approval

THIS IS TO CERTIFY THAT AFTER REVIEWING THE SOLAR FIELD SHOWN BY THIS PLAN AND CONSIDERING EACH OF THE CRITERIA SET FORTH IN TOWN OF RAYMOND ORDINANCES, AS AMENDED, AND CONSIDERING EACH OF THE CRITERIA SET FORTH IN THE SOLAR ENERGY SYSTEMS ORDINANCE OF THE TOWN OF RAYMOND, THE UNDERSIGNED HAVING MADE FINDINGS OF FACT ESTABLISHING THAT THE PROPOSED SOLAR FIELD MEETS ALL OF THE CRITERIA SET FORTH THERE IN, AND THEREFORE THE SOLAR FIELD IS APPROVED.

**NOTES:**

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4. ZONING DISTRICTS: RURAL RESIDENTIAL (RR), APPROXIMATELY 5.8 ACRES WITHIN LRR1 SHORELAND ZONE
5. EXISTING IMPERVIOUS AREA ON LOT: 17,602 SF
6. PROPOSED IMPERVIOUS AREA: 19,538 SF
7. LOT COVERAGE: EXISTING = 1.3%, PROPOSED = 1.5%, TOTAL = 2.8%
8. 100-YEAR FLOODPLAIN IS NOT WITHIN 300 FEET OF THE PROJECT PARCEL.
9. ALL EXISTING STRUCTURES WITHIN THE PARCEL BOUNDARY TO REMAIN.
10. ALL BUILDINGS WITHIN 100 FEET OF PARCEL BOUNDARY LOCATED USING AERIAL IMAGERY.
11. THE CLOSEST FIRE HYDRANT IS NOT LOCATED WITHIN 200 FEET.
12. MORE THAN 78.6% OF CTH TO BE MAINTAINED AS UNFRAGMENTED FORESTED CANOPY.
13. PROPOSED WETLAND FILL: 325 SF
14. SOILS: HNB - HERMISTON SANDY SOAM, 0 - 8% SLOPES, VERY STONY AND HSG A  
H9C - HERMISTON SANDY LOAM, 8 - 15% SLOPES, VERY STONY AND HSG A  
W5B - WOODBRIDGE VERY STONY FINE SANDY LOAM, 0 - 8% SLOPES AND HSG C
15. PV TOTAL SYSTEM SUMMARY:
  - 2,570 PV MODULES TOTAL
  - 590W PV MODULES
  - 1,516 KW DC TOTAL
  - 996 KW PV AC TOTAL
  - 19-20 MODULES PER STRING (TYP.)
  - 144 STRINGS TOTAL
  - 24 STRINGS PER INVERTER
  - 6 X 166 KW INVERTERS
  - 1 X 1000 KVA TRANSFORMER
16. INSTALLATION, COMMISSIONING AND INTERCONNECTION TO THE ELECTRIC UTILITY CIRCUIT TO BE PERFORMED BY LICENSED ELECTRICIAN.
17. APPROXIMATE AREA OF LOTS WITHIN LRR1 SHORELAND ZONE = 256,018 SF. CLEARING REQUIRED WITHIN LRR1 REQUIRED = 60,817 SF OR 24% OF LOT AREA WITHIN LRR1.

**FIRE PROTECTION:**

1. ACCESS ROAD, BYPASS LANE SHALL BE CONSTRUCTED AND MAINTAINED TO SUPPORT A 75,000 GVWR FIRE APPARATUS.
2. THE ENTRANCE GATE AREA, BYPASS AND HAMMERHEAD ARE DESIGNATED FIRE LANES.
3. ALL FIRE LANES SHALL BE MARKED WITH SIGNS THAT READ: "FIRE LANE", "NO PARKING", "VEHICLES TOWED AT OWNER'S EXPENSE". ALL VEHICLES SHALL BE TO BE APPROVED BY RAYMOND FIRE DEPARTMENT.
4. THE ACCESS ROAD SHALL BE CONSTRUCTED AND MAINTAINED TO PROVIDE A MINIMUM OF 13'-6" OF UNOBSTRUCTED VERTICAL CLEARANCE.
5. MAXIMUM ANGLE OF APPROACH: 8 DEGREES.
6. MAXIMUM DEPARTURE ANGLE: 9 DEGREES.
7. MAXIMUM BREAKOVER ANGLE: 13 DEGREES.
8. MAXIMUM ROAD GRADE: 10 DEGREES.
9. ALL ENTRANCE GATES SHALL HAVE A MINIMUM OPEN CLEARANCE OF 20 FEET.
10. ALL GATES SHALL HAVE A RAYMOND FIRE & RESCUE DEPARTMENT KNOX BOX THAT INCLUDE ALL KEYS OR KEY CARDS, AND CURRENT SITE EMERGENCY CONTACT INFORMATION.
11. THE FIRE STANDPIPE SYSTEM SHOWN ON THE PLAN IS IN LIEU OF PROVIDING FIRE LANE ACCESS AROUND THE ENTIRE SITE TO MEET NFPA REQUIREMENTS.
12. THE OPERATIONAL READINESS OF THE FIRE CISTERN, COMPONENTS, AND STANDPIPE SYSTEM INCLUDING REPAIRS AND REPLACEMENT, IS THE RESPONSIBILITY OF THE OWNER OF THE SOLAR FACILITY.
13. THE FIRE CISTERN SHALL BE INSTALLED, INSPECTED, AND APPROVED BY THE RAYMOND FIRE & RESCUE DEPARTMENT PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
14. AN EASEMENT SHALL BE GRANTED TO THE TOWN OF RAYMOND FIRE & RESCUE DEPARTMENT TO ACCESS TO THE FACILITY FOR FIRE AND TESTING AND TRAINING.
15. A RAYMOND FIRE & RESCUE DEPARTMENT FIRE PERMIT FOR THE FIRE CISTERN/DRY HYDRANT SHALL BE OBTAINED BY THE APPLICANT PRIOR TO ITS INSTALLATION.
16. THE FACILITY STREET ADDRESS SHALL BE INSTALLED ON EACH BUILDING OR DWELLING UNIT ON ROOSEVELT TRAIL IN THE IMMEDIATE AREA OF THE FACILITY ENTRANCE AND ON A FACILITY SIGN(S) AT THE FACILITY ENTRANCE.
17. THE FACILITY E-911 ADDRESS SHALL BE VISIBLE FROM BOTH APPROACH DIRECTIONS ON ROOSEVELT TRAIL, AND LOCATED TO BE CLEARLY IDENTIFIABLE TO THE RAYMOND FIRE & RESCUE DEPARTMENT.
18. THE STREET ADDRESS LETTERING SHALL BE NO LESS THAN 6" IN HEIGHT, SHALL BE OF A CONTRASTING COLOR TO THE SIGN BACKGROUND, AND PREFERABLY THE LETTERS SHOULD BE REFLECTIVE FOR NIGHT OR REDUCED LIGHT CONDITIONS. THE PLACEMENT OF STREET ADDRESS SIGNS SHALL BE APPROVED BY THE RAYMOND FIRE RESCUE DEPARTMENT AND E-911 COORDINATOR.
19. DURING THE CONSTRUCTION, A TEMPORARY E-911 STREET ADDRESS SIGN SHALL BE POSTED AT THE ENTRANCE AND VISIBLE FROM ROOSEVELT TRAIL.
20. THE PROJECT SHALL FOLLOW THE NEPA SOLAR PHOTOVOLTAIC AND FIRE SAFETY STANDARDS SUCH AS, BUT NOT LIMITED TO; NFPA 70, NFPA 70B, NFPA 70E, UL1471, NFPA 855, AND NFPA 1.
21. ALL REQUIRED RAYMOND FIRE & RESCUE FIRE PERMITS FOR EMERGENCY VEHICLE ACCESS OR FIRE PROTECTION SYSTEMS SHALL BE SUBMITTED AND APPROVED BY THE RAYMOND FIRE RESCUE DEPARTMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
22. PRIOR TO SCHEDULING ANY FIRE PERMIT INSPECTIONS, INCLUDING THE RAYMOND FIRE & RESCUE DEPARTMENT CERTIFICATE OF OCCUPANCY INSPECTION, THE APPLICANT SHALL PROVIDE PROOF TO THE THAT THE FIRE PERMIT FEE PAYMENTS HAVE BEEN RECEIVED AT THE TOWN CLERKS OFFICE. RE-INSPECTION APPOINTMENTS ARE SUBJECT TO A RE-INSPECTION FEE, PAYABLE PRIOR TO SCHEDULING ANY RE-INSPECTION. ALL INSPECTIONS WITH THE RFRD MUST BE SATISFACTORILY COMPLETED AND APPROVED PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE FACILITY.
23. RAYMOND BUILDING, ELECTRICAL AND FIRE PERMIT APPLICATIONS SHALL INCLUDE: A MAP OR DIAGRAM OF THE PROPOSED PV SYSTEM DESIGN THAT INCLUDES LOCATIONS OF ALL PV GROUND PLEANS, AC & DC ELECTRICAL DISCONNECTS REMOTE EMERGENCY DISCONNECTS, AND ANY SYSTEM PANS, CONDUIT, COMBINER BOXES, OR INVERTERS. THE MAP OR DIAGRAM SHALL NOTE THE LOCATIONS OF GROUND FAULT, SURGE PROTECTION, LIGHTNING PROTECTION SYSTEMS, ARC FAULT PROTECTION OR DETECTION DEVICES, GROUND FAULT OR PV ARRAY ISOLATION SENSORS, AND OTHER DEVICES, INCLUDING "SMART" DEVICES, "SMART" VEHICLES, AUTOMATED PERFORMANCE MONITORING, INSTRUMENTATION, AND DIFFERENTIAL CURRENT SENSORS OR RESIDUAL CURRENT DETECTORS. DATA SHEETS THAT DETAIL THE EQUIPMENT LISTINGS AND CERTIFICATIONS AND CERTIFICATIONS FOR WIND AND HAIL RESISTANCE AND ANY ADDITIONAL SYSTEM INFORMATION SHOULD BE NOTED ON THE MAP OR DIAGRAM. WRITTEN PLAN FOR SITE MAINTENANCE OF VEGETATION AND DEBRIS CONTROL IN AND AROUND THE SOLAR PV ARRAYS, COMBINER BOXES, TRANSFORMERS, AND INVERTERS.
24. THE RAYMOND FIRE PERMIT SHALL BE SUBMITTED TO THE RAYMOND FIRE & RESCUE DEPARTMENT WHEN FILING FOR A RAYMOND FIRE PERMIT.
25. PARKING: THERE SHALL BE NO ON-STREET PARKING ON ("E-911 ASSIGNED STREET NAME-TBD") IN THE IMMEDIATE AREA AND BOTH SIDES OF THE ENTRANCE GATE, FIRE APPARATUS TURNAROUND AND BY-PASS LANE AREAS. NO UNATTENDED VEHICLES, EQUIPMENT, ETC. SHALL BE LEFT IN SUCH A MANNER AS TO IMPEDE THE PASSAGE OF TRAFFIC OR TO IMPAIR ACCESS TO THE ENTRANCE OR FIRE APPARATUS TURNAROUNDS/BY-PASS AREAS. THE FACILITY OWNER OR PROJECT DIRECTORS MAY TAKE ALL ACTIONS NECESSARY TO ENFORCE ALL PARKING AND VEHICLE USE REGULATIONS, INCLUDING BUT NOT LIMITED TO REMOVAL OF VEHICLES OR EQUIPMENT IN VIOLATION OF ANY SUCH REGULATIONS. FURTHER, ANY VEHICLE PARKED IN A FIRE LANE WILL BE TOWED AT THE OWNER'S EXPENSE WITHOUT ANY PRIOR NOTICE TO THE OWNER. THE FACILITY OWNER OR PROJECT DIRECTORS WILL ESTABLISH WRITTEN AUTHORIZATIONS WITH ONE OR MORE TOWING COMPANIES FOR THE PURPOSE OF TOWING ANY VEHICLE OR EQUIPMENT PARKED IN A MANNER WHICH VIOLATES APPLICABLE PARKING RULES OR REGULATIONS, OR OTHERWISE INTERFERES WITH EMERGENCY ACCESS.
26. VEGETATION WITHIN AND AROUND THE SOLAR PROJECT PERIMETER SHALL UTILIZE FIRE RESISTANT PLANTS AS LISTED IN THE MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY WEB SITE THAT ARE ACCEPTABLE FOR SOLAR FACILITIES.
27. KNOX BOXES AND SITE MAPS AT ALL GATES AND SHALL CONTAIN KEYS OR KEY CARDS, EMERGENCY CONTACT INFORMATION SHALL BE LOCATED AT THE FACILITY ENTRANCE. THE MAP SHALL BE WEATHER PROOF, SHOW LAYOUT AND FEATURES AND ALL INFORMATION FOR EMERGENCY SHUT-DOWN OF EQUIPMENT LOCATIONS.
28. ANY DESIGN CHANGES TO THE FIRE & RESCUE DEPARTMENT ACCESS OR FIRE PROTECTION SHALL BE APPROVED BY THE RAYMOND FIRE & RESCUE DEPARTMENT.

A	Project perimeter fence and tree line adjusted to minimize impact to Shore Land Zone.	BFG	KJB	8/29/23
B	Modifications to access road and solar array regarding the components for the protection,	BFG	KJB	11/07/23
C	Modifications solar array layout, stormwater, fence type, edits to address fire dept comments & revised CTH impact area.	KJB	KJB	01/08/24
No.	Revision Description	Drawn	Checked	Date

Drawn By: BC  
 Desg By: BC / KJB  
 Chkd By: KJB  
 Aprvd By: KJB  
 Date: 8/14/2023

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## Proposed Condition Site Plan

*Mainely Solar, LLC.  
143 Highland Shores Road  
Casco, Maine*

Job Number:  
MS001

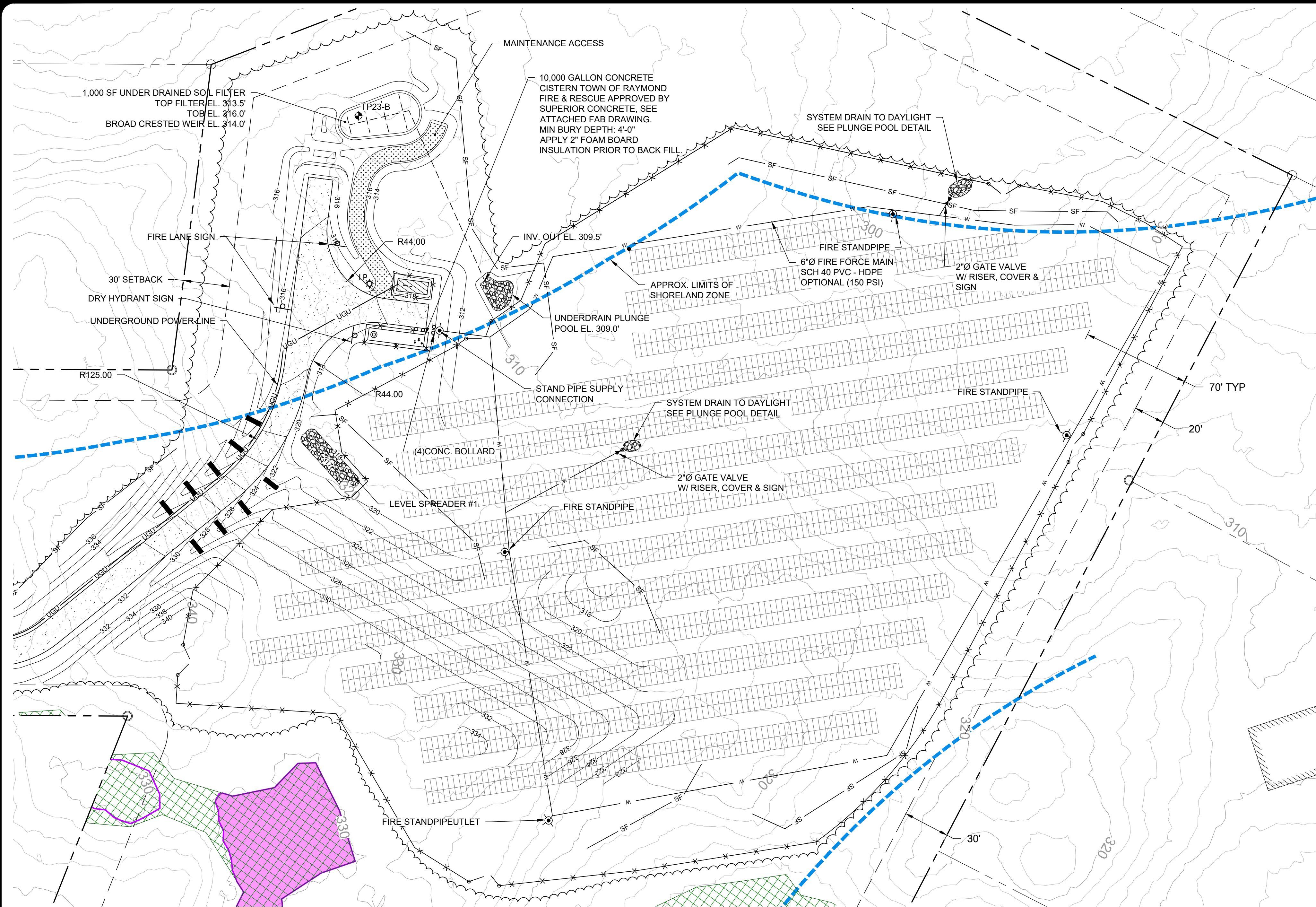
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C-2

Sheet 3 of 9

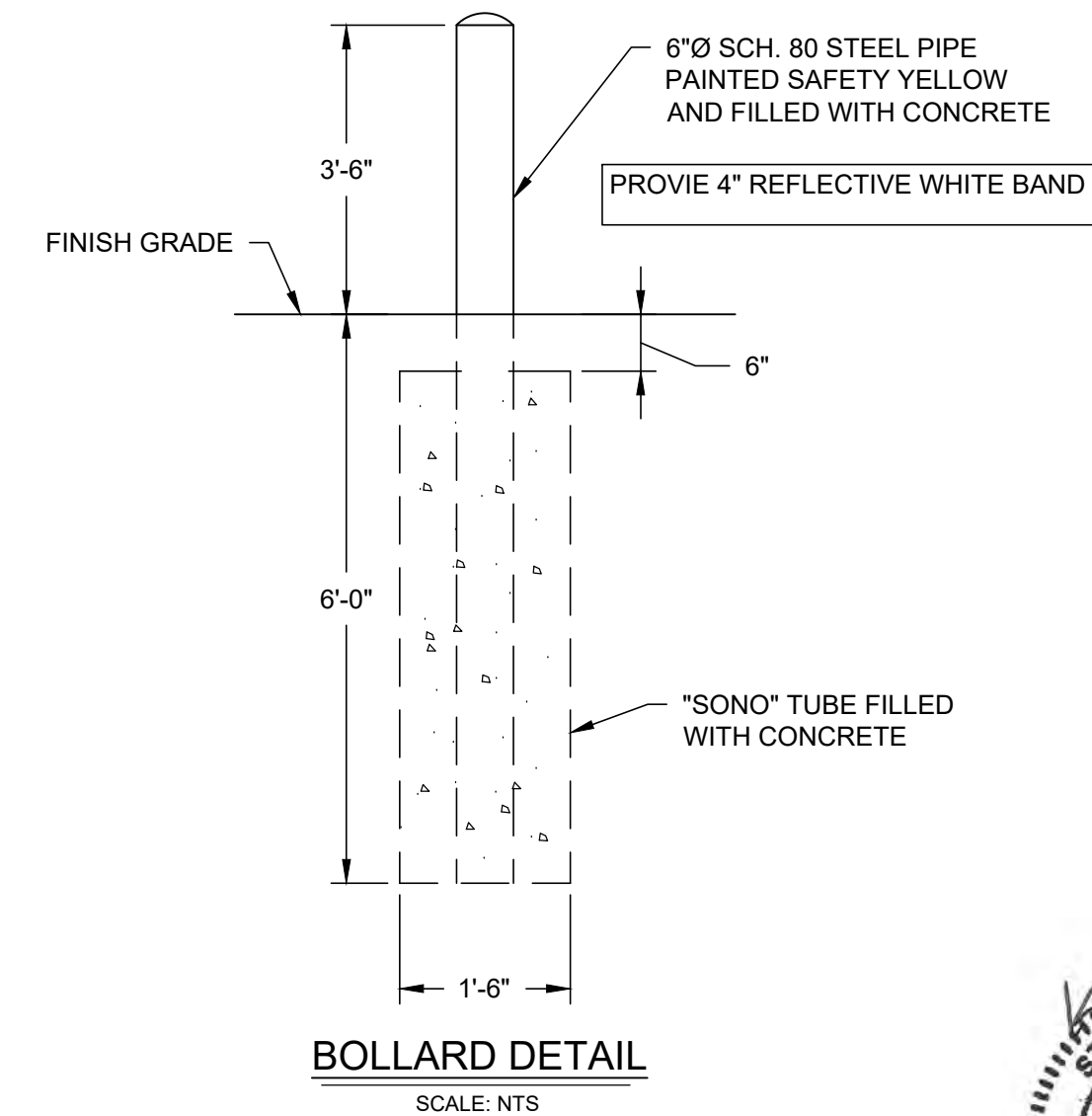
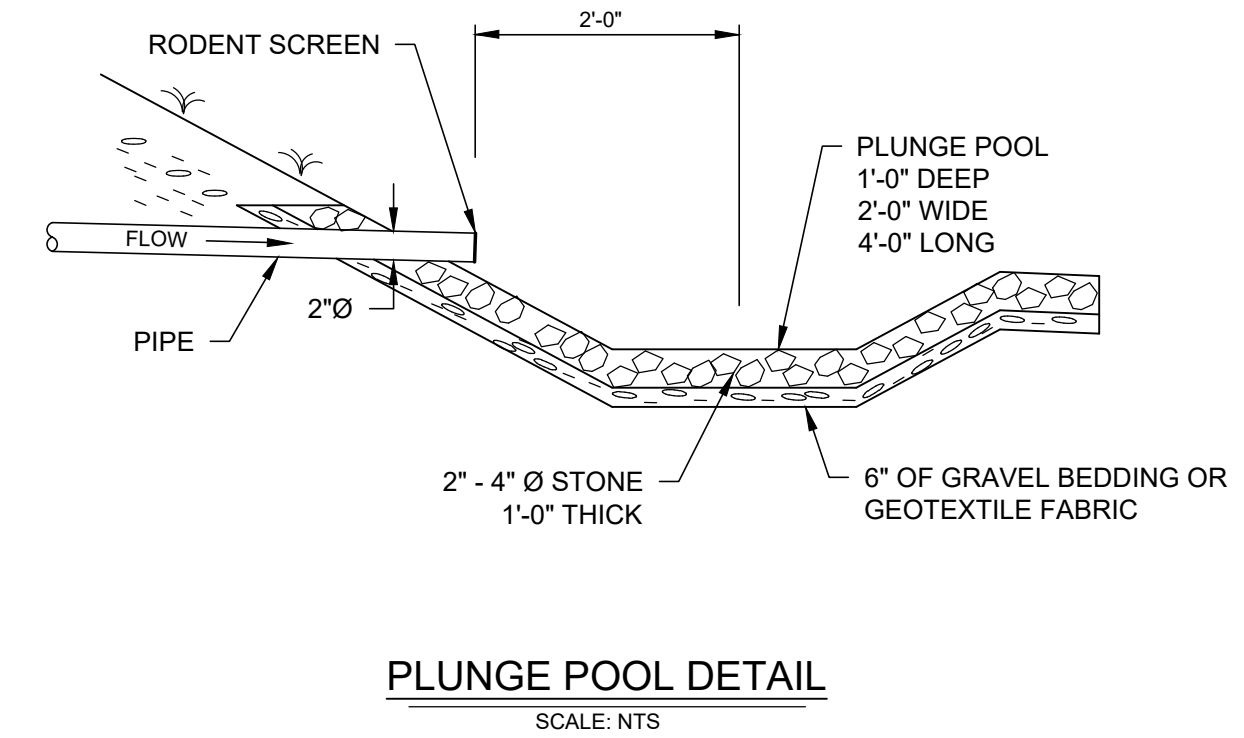
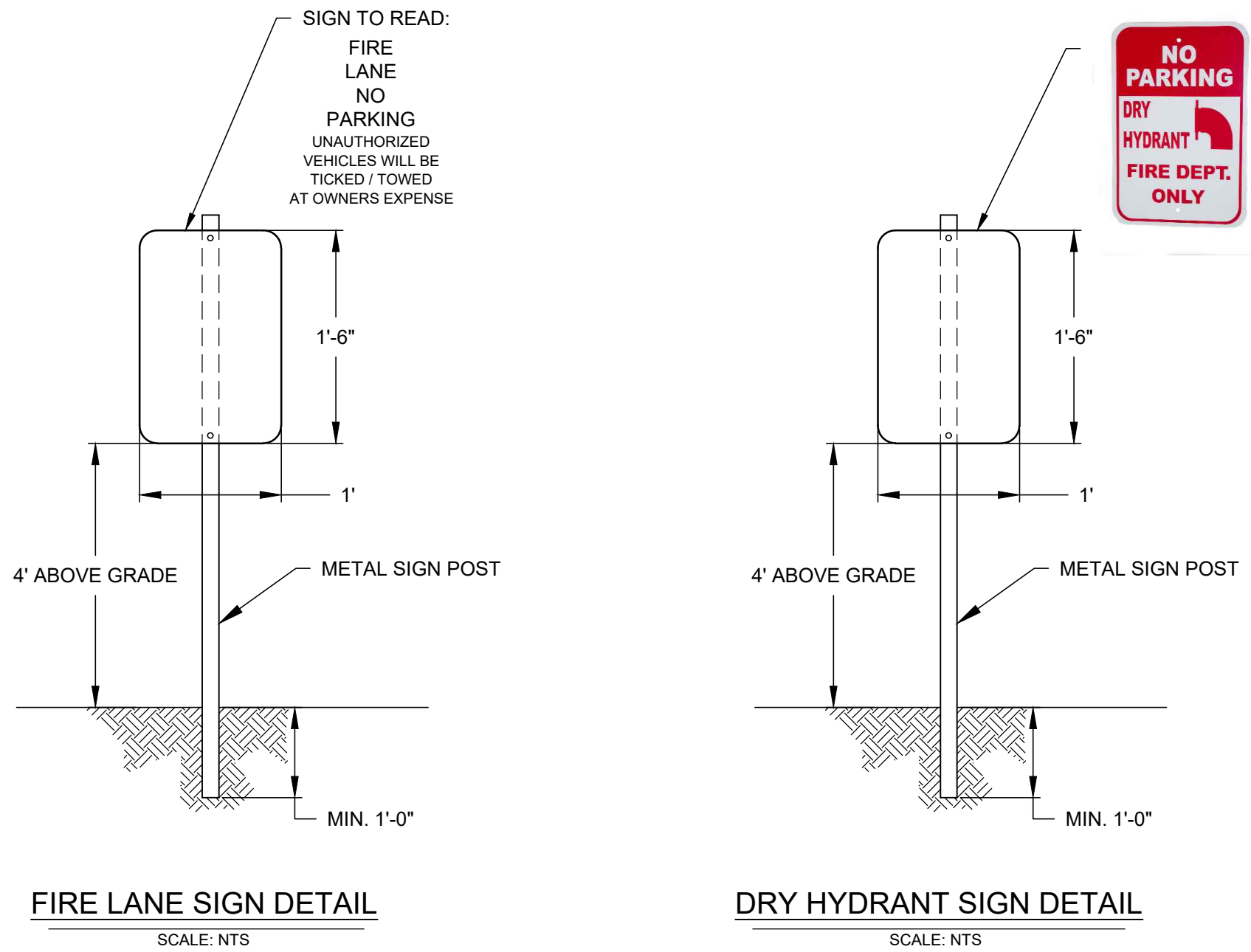
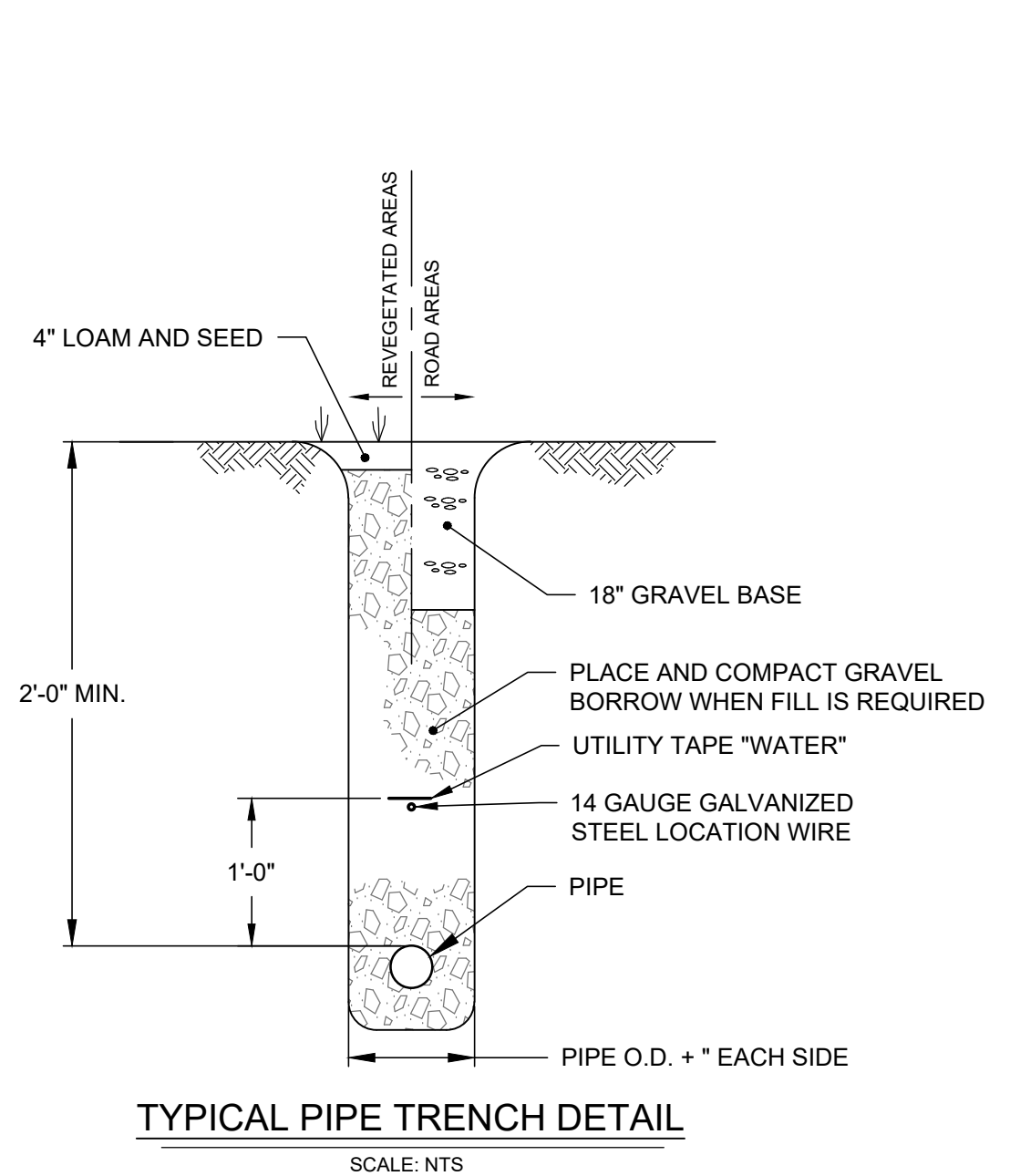
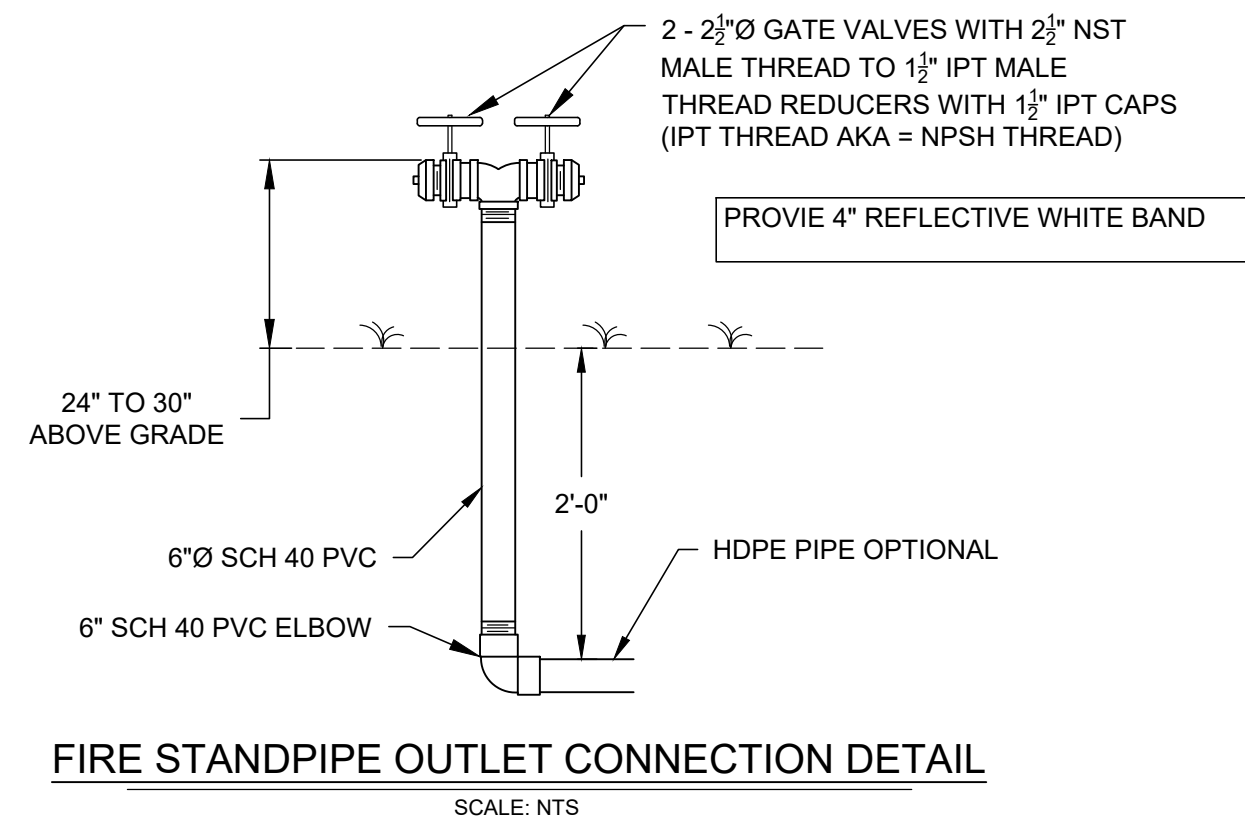
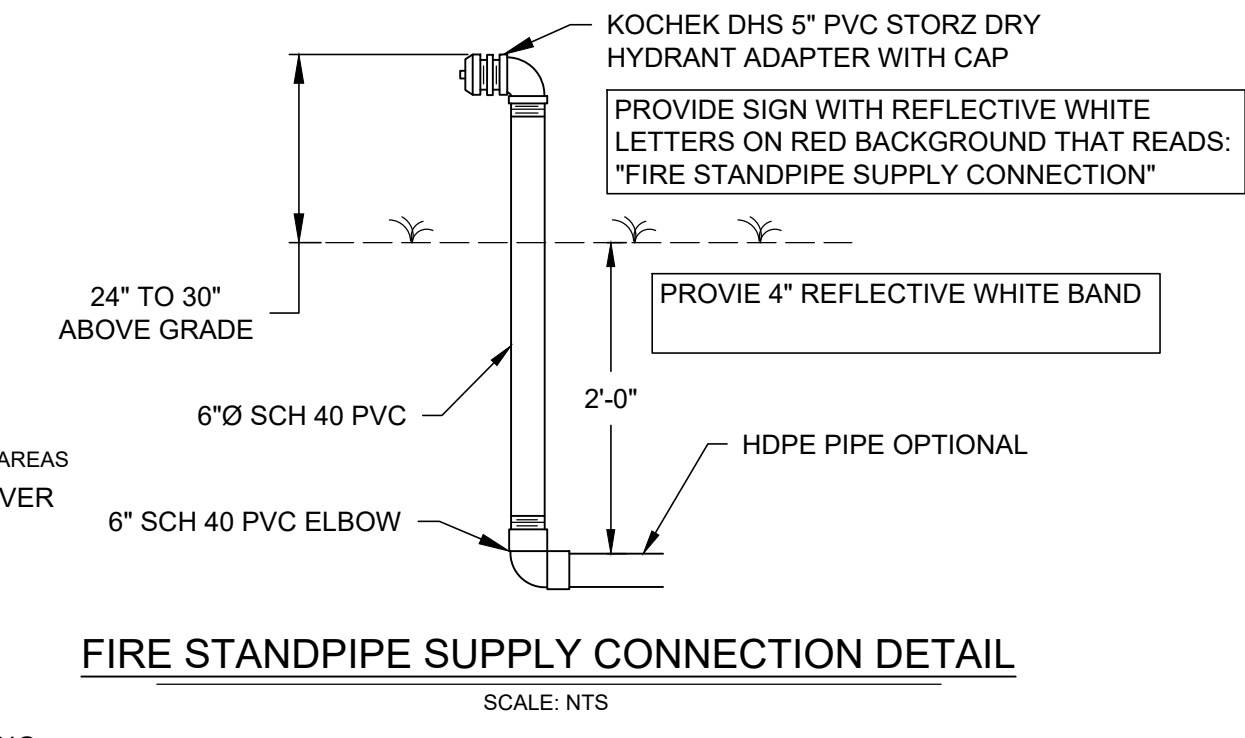
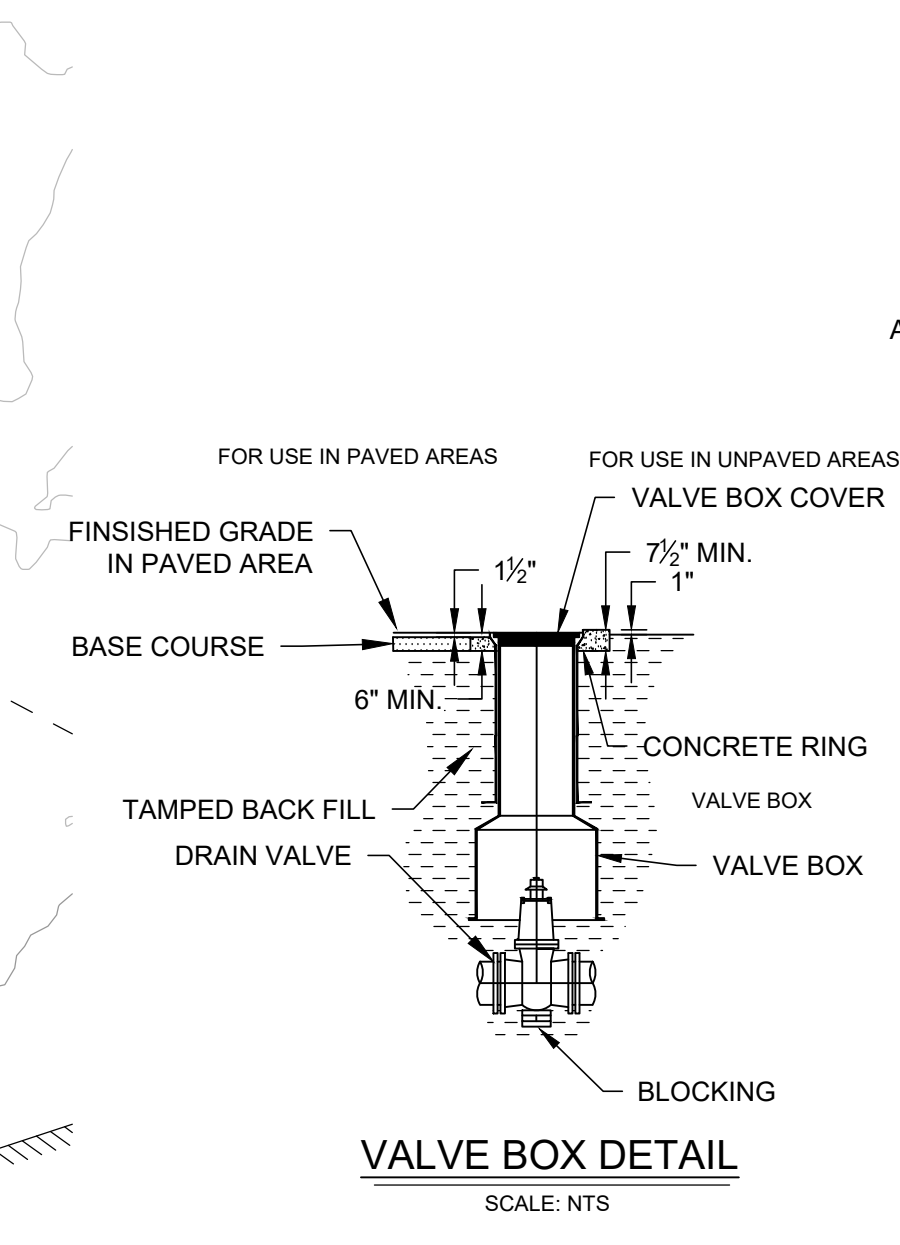




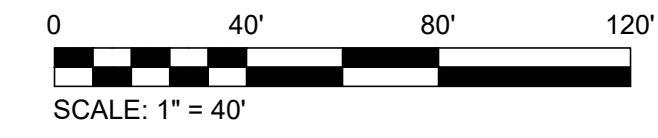




- EXISTING**
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  - MDEP CLASSIFIED "WETLANDS NOT OF SPECIAL SIGNIFICANCE" (PRELIMINARY CLASSIFICATION)
  - MDEP CLASSIFIED "WETLANDS OF SPECIAL SIGNIFICANCE"
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  - PAVEMENT
  - TREELINE
  - 2 FT CONTOURS
  - NRCS SOILS BOUNDARY
  - NRCS SOILS LABEL
- PROPOSED**
- EQUIPMENT PAD
  - UNDERGROUND UTILITY
  - 6"Ø FIRE FORCE MAIN
  - UTILITY POLE
  - TREELINE
  - SOLAR ARRAY
  - WILDLIFE PERMEABLE FENCE
  - 2 FT CONTOURS
  - SILT FENCE
  - STONE CHECK DAM
  - TEST PITS
  - SIGNS
  - LIGHT POLE
  - FIRE STANDPIPE

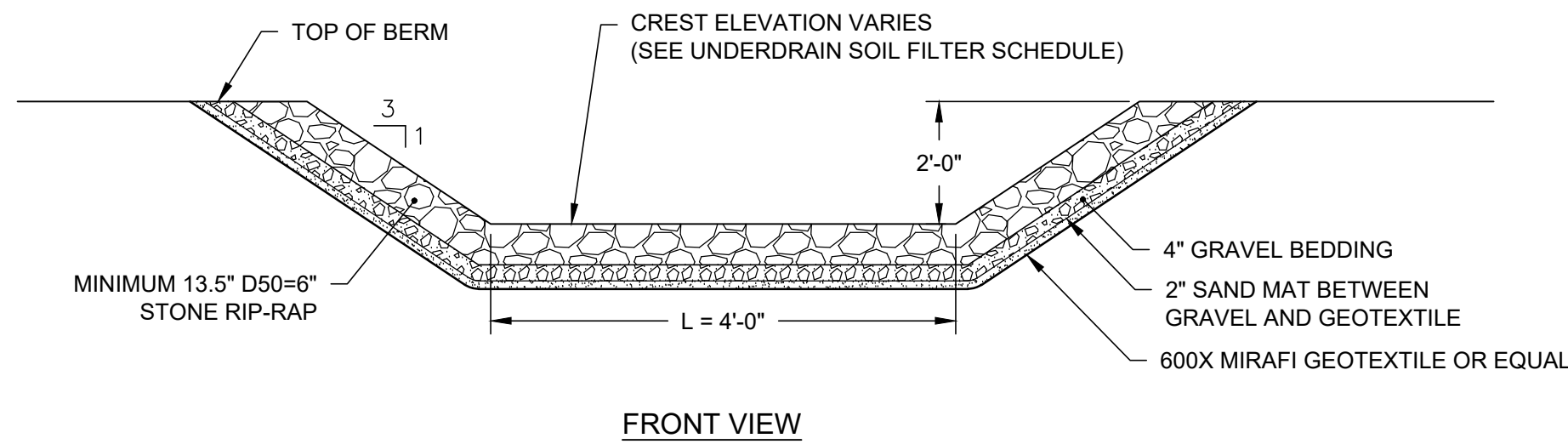
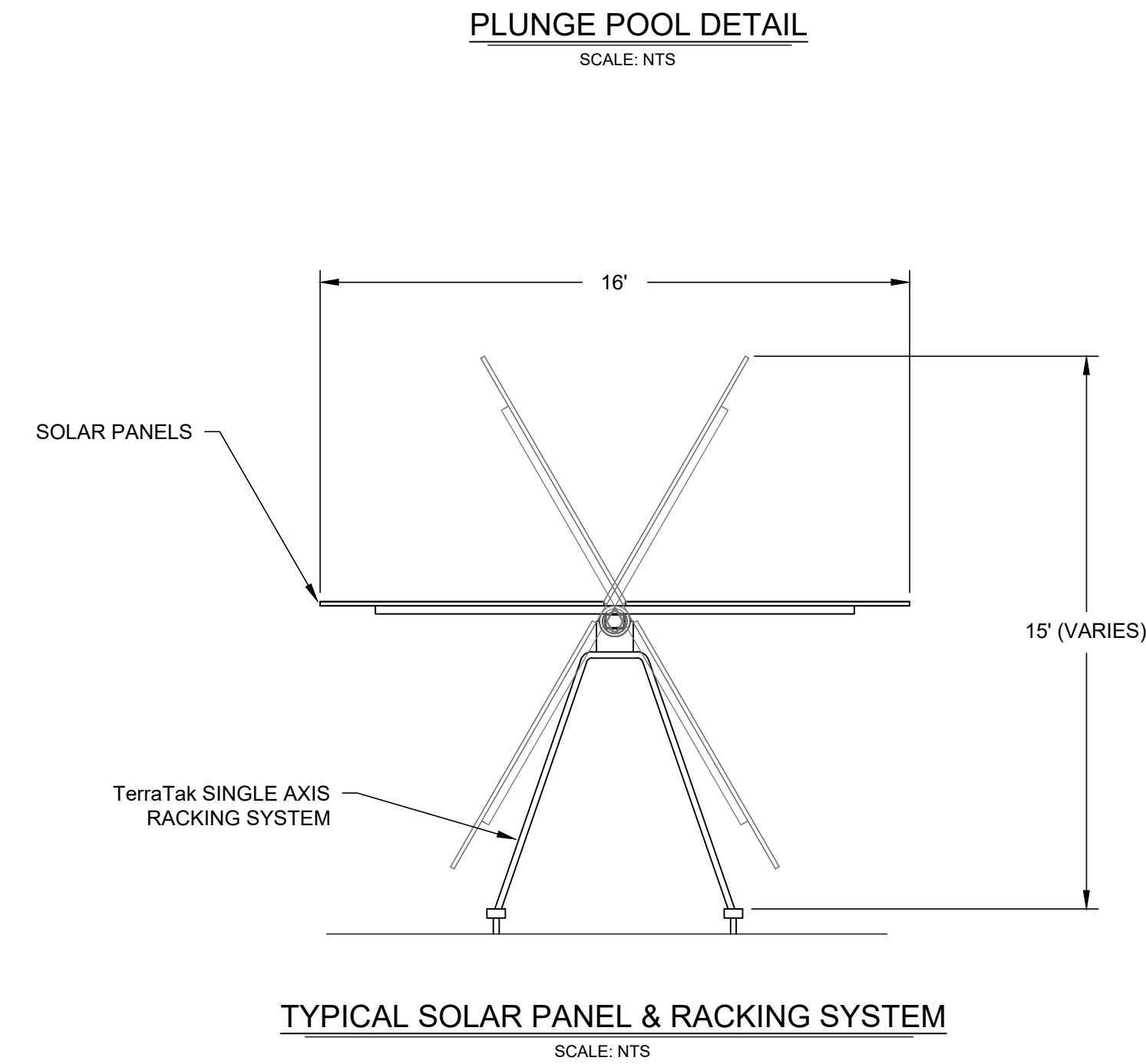
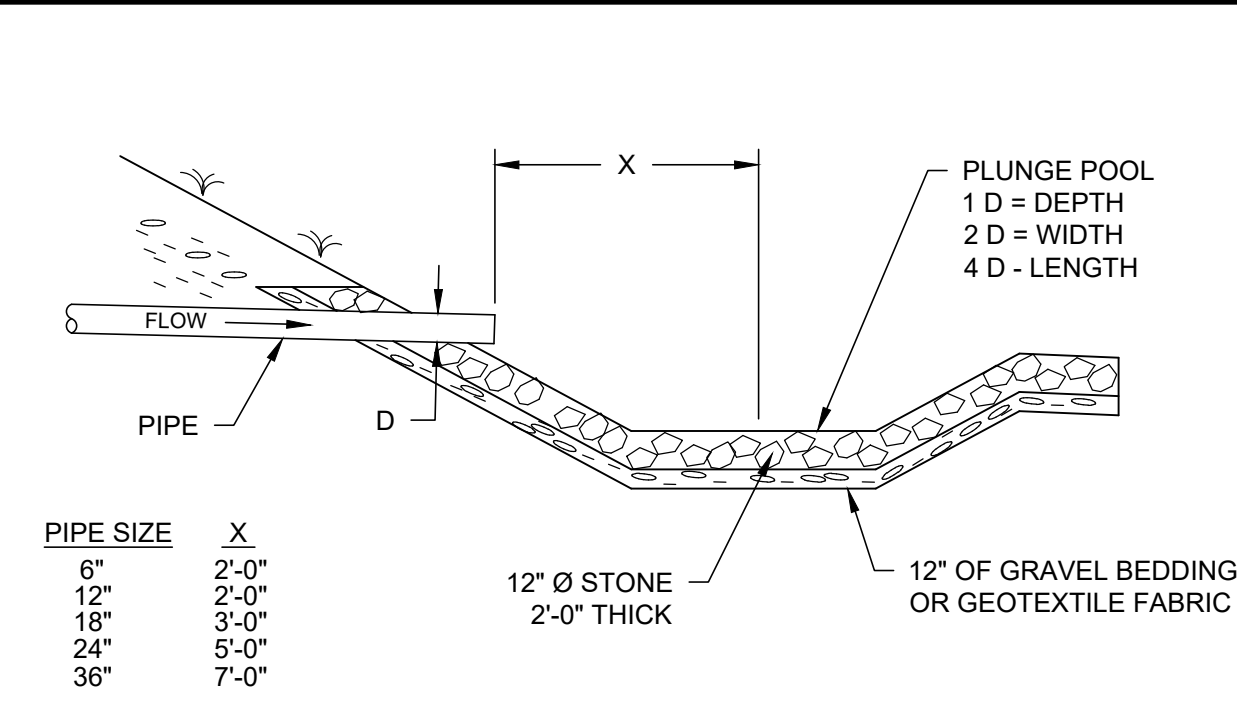


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A		B		C	
Project perimeter fence and tree line adjusted to minimize impact to Shore Land Zone.	Modifications to access road and solar array regarding the components for fire protection.	Modifications solar array layout, stormwater, fence type & calls to address fire dept. comments.	9/29/23	11/07/23	01/09/24
KJB	BFG	KJB	KJB	KJB	Chkd
Revision Description			Date		
Drwn By: BG / KJB			Date: 8/14/2023		
Desg By: BG / KJB			Chkd By: KJB		
Apprd By: KJB			Date: 8/14/2023		
<b>Acheron Engineering, LLC.</b> Engineering & Environmental Consultants www.AcheronEngineering.com 113 Winter East Newport, ME 04953 (207) 341-2390					
<b>Fire Protection Site Plan &amp; Details</b> Mainely Solar, LLC 143 Highland Shores Road Casco, Maine					
Job Number: MS001					
Drawing No: C-4					
Sheet 5 of 9					





UNDERDRAIN TYPE B	
SIEVE SIZE	% BY WEIGHT
1"	90 - 100
1/2"	75 - 100
#4	50 - 100
#20	15 - 80
#50	0 - 15
#200	0 - 5

SOURCE: TABLE 7.1.1 MAINE  
DOT SPECIFICATIONS  
SECTION 703.22

- GENERAL NOTES FOR UNDERDRAIN FILTER BASINS:
1. CONSTRUCTION SEQUENCE:
    - \* THE SOIL FILTER MEDIA AND VEGETATION MUST NOT BE INSTALLED UNTIL THE AREA THAT DRAINS TO THE FILTER HAS BEEN PERMANENTLY STABILIZED WITH, 90% VEGETATION COVER, OR OTHER PERMANENT STABILIZATION OR UNLESS THE RUNOFF FROM THE CONTRIBUTING AREA IS DIVERTED AROUND THE FILTER INTO A TEMPORARY BASIN FOR SEDIMENT REMOVAL UNTIL STABILIZATION IS COMPLETED.
  2. COMPACTION OF SOIL FILTER:
    - \* FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED TO BETWEEN 90% AND 92% STANDARD PROCTOR, THE BED SHOULD BE INSTALLED IN AT LEAST TWO LIFTS OF 9 INCHES TO PREVENT POCKETS OF LOOSE MEDIA.
  3. CONSTRUCTION OVERSIGHT:
    - \* AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED (NOT BACKFILLED).
    - \* AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA.
    - \* AFTER THE FILTER MEDIA HAS BEEN INSTALLED AND SEEDED.
    - \* AFTER ONE YEAR TO INSPECT VEGETATION AND MAKE CORRECTIONS.
  4. TESTING AND SUBMITTALS:
    - \* IDENTIFY THE LOCATION AND SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE ENGINEER.
    - \* SOURCE: SAMPLES OF EACH TYPE OF MATERIAL SHOULD BE BLENDED FOR THE MIXED FILTER MEDIA AND UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM STOCKPILE.
    - \* SIEVE ANALYSIS: PERFORM SIEVE ANALYSIS CONFORMING TO ASTM C136 ON EACH TYPE OF MATERIAL.
    - \* PERMEABILITY TESTING: PERFORM PERMEABILITY TESTS ON THE SOIL FILTER MEDIA MIXTURE WITH THE MIXTURE AT A MEASURED BULK DRY DENSITY OF 90-92% BASED ON ASTM D698.
  5. OUTLET:
    - \* ONCE VEGETATION HAS REACHED 90% COVER OVER THE SOIL FILTER, FLOOD THE BASIN TO THE DESIGNED ELEVATION WITH CLEAN WATER AND ADJUST THE VALVE SO THAT THE BASIN DRAINS BETWEEN 24 & 48 HOURS.

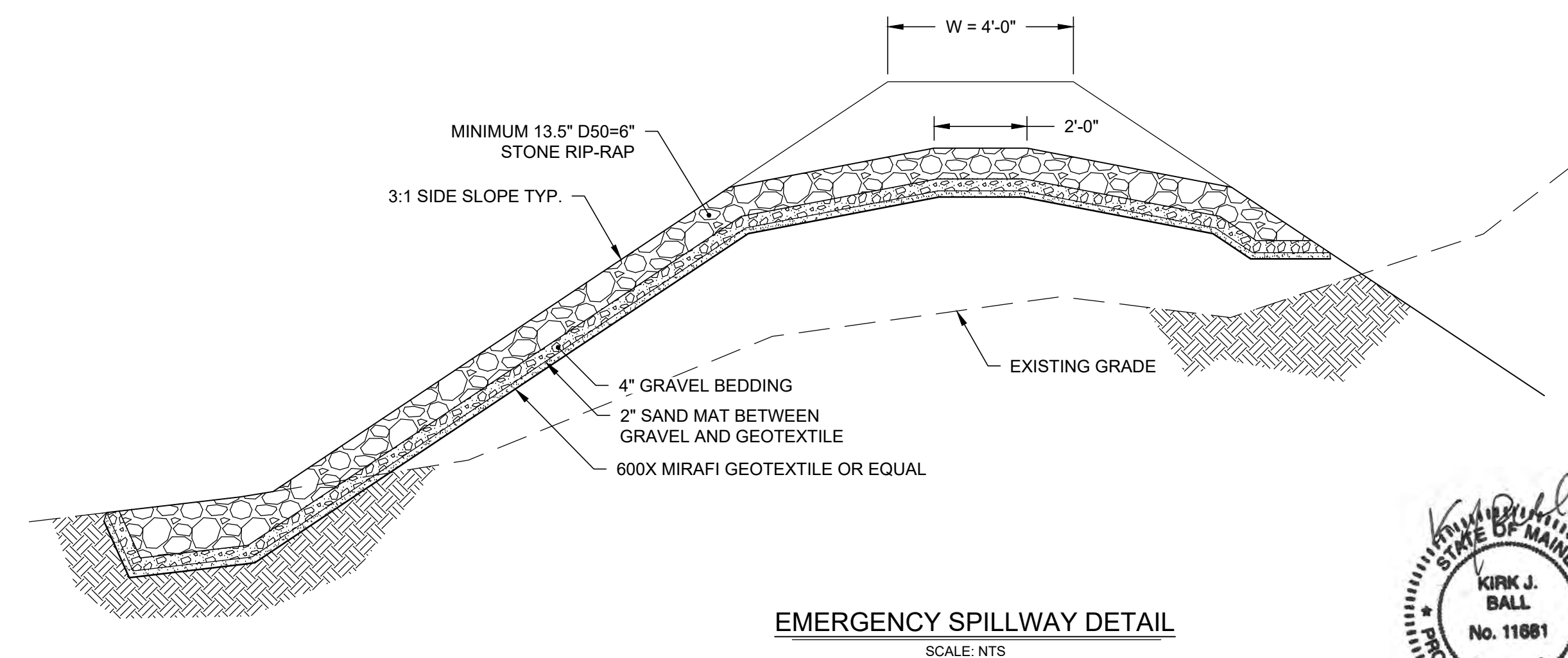
TYPICAL UNDERDRAIN SOIL FILTER

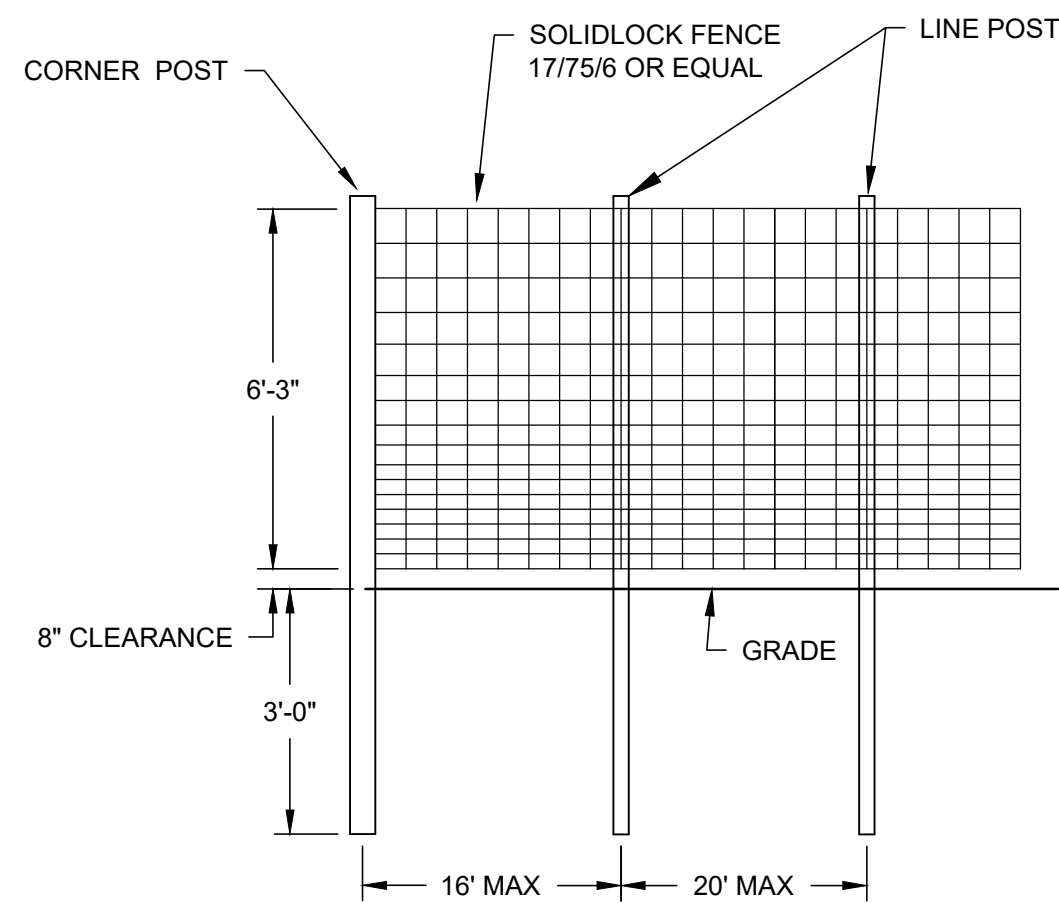
SCALE: NTS



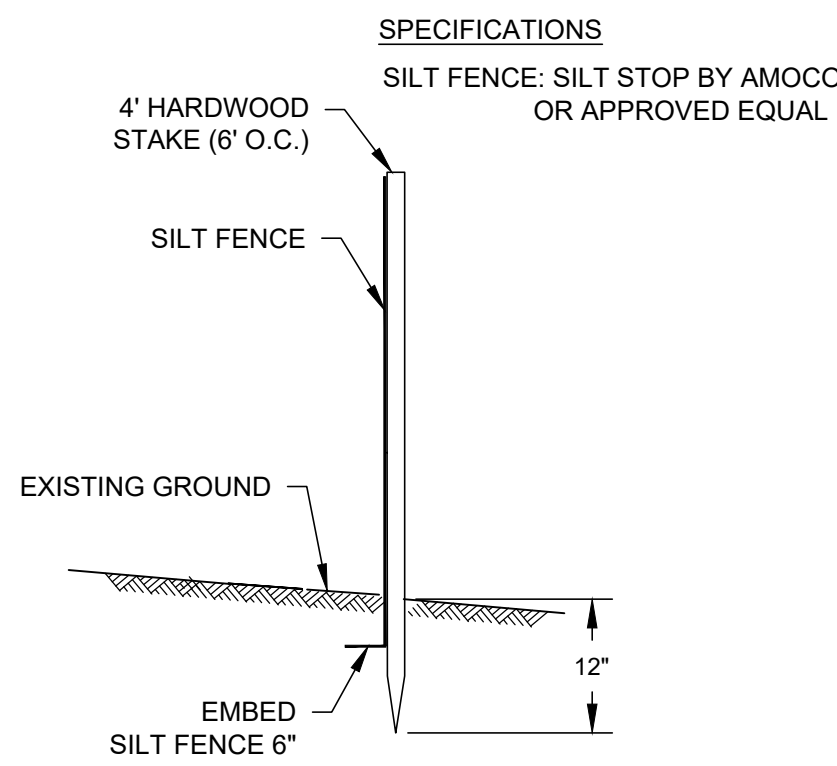
NOTE:  
INSPECTIONS BY A PROFESSIONAL ENGINEER SHALL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT EACH LEVEL SPREADERS CONSTRUCTION, STONE BERM MATERIAL AND PLACEMENT, SETTLING BASIN FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE LEVEL SPREADER.

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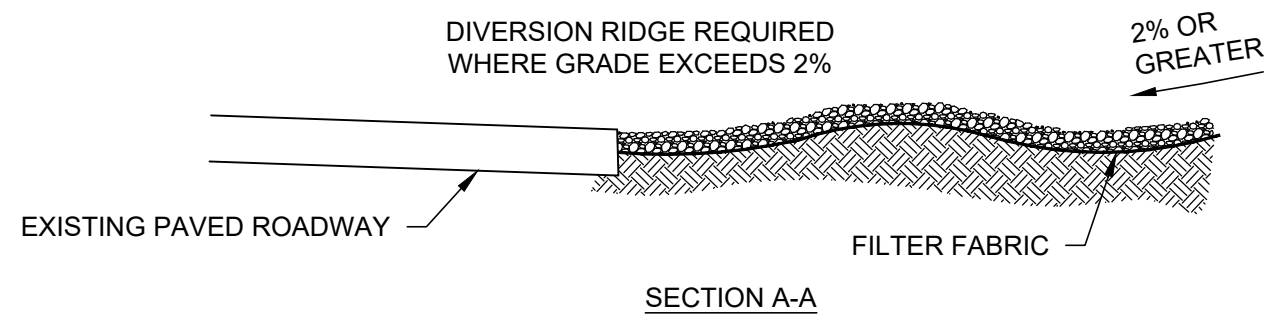




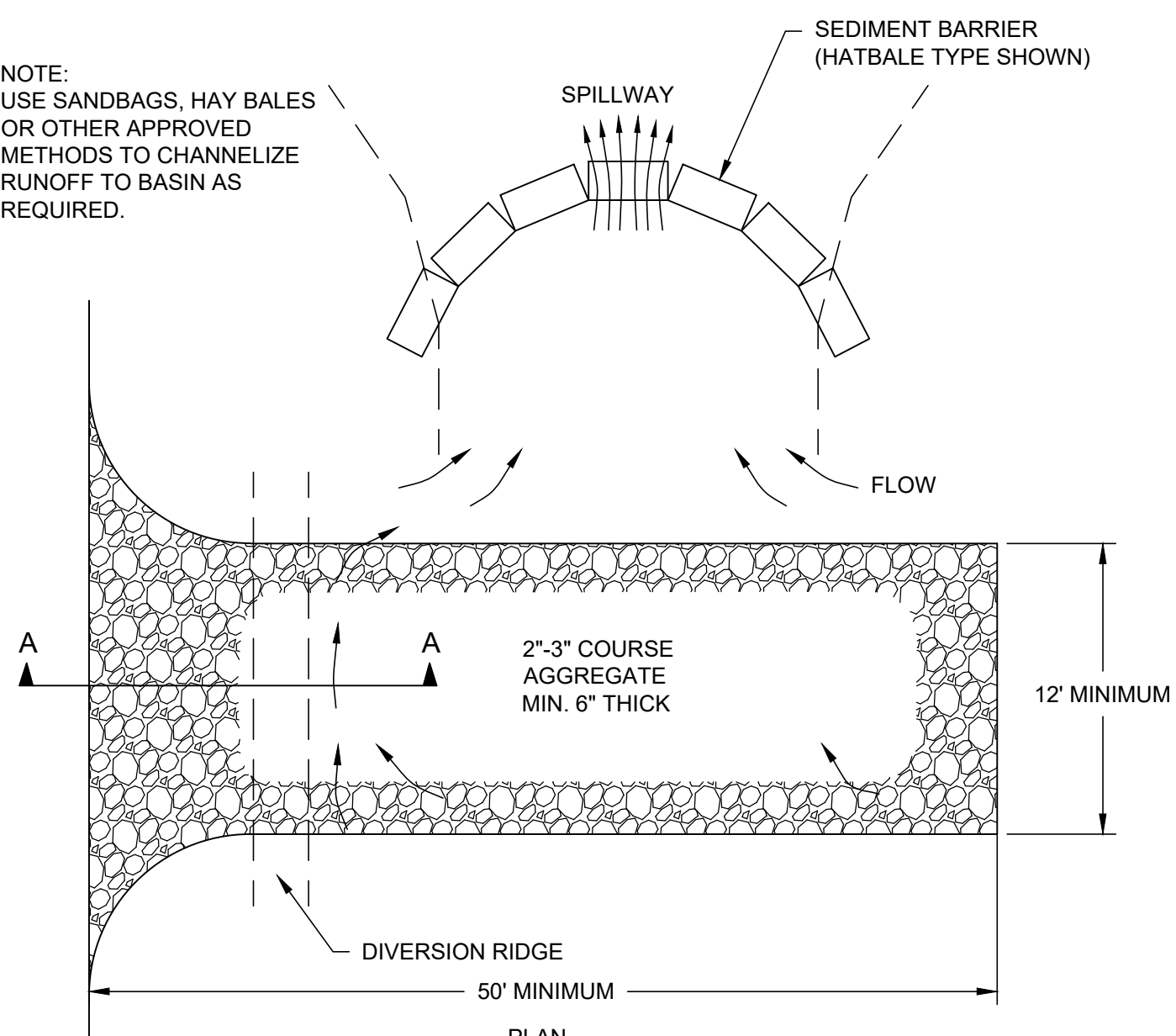
**TYPICAL FENCE DETAIL**  
SCALE: NTS



**SILT FENCE DETAIL**  
NOT TO SCALE

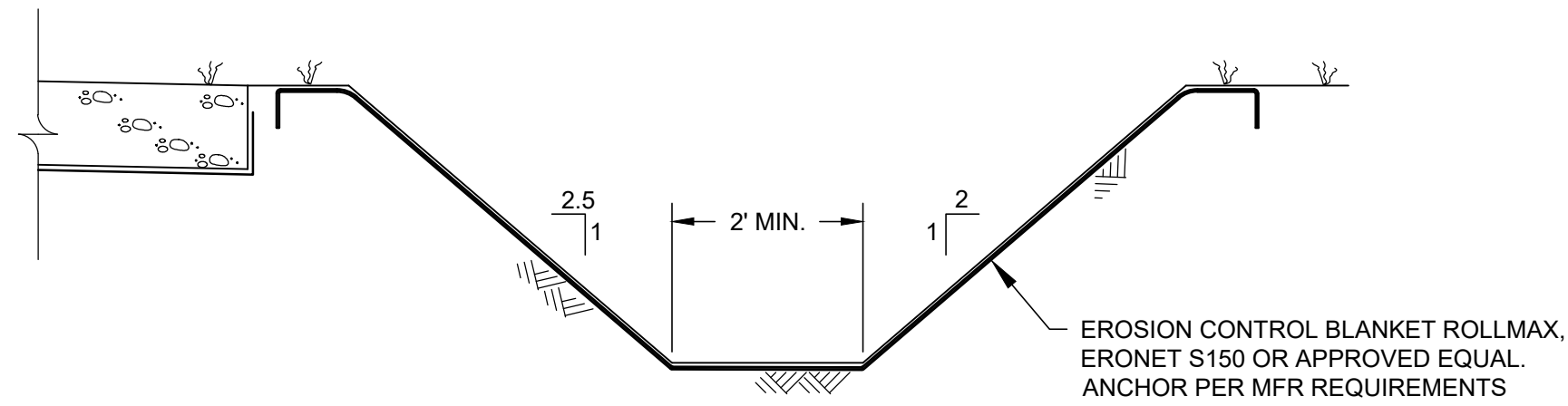


NOTE:  
USE SANDBAGS, HAY BALES OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN AS REQUIRED.

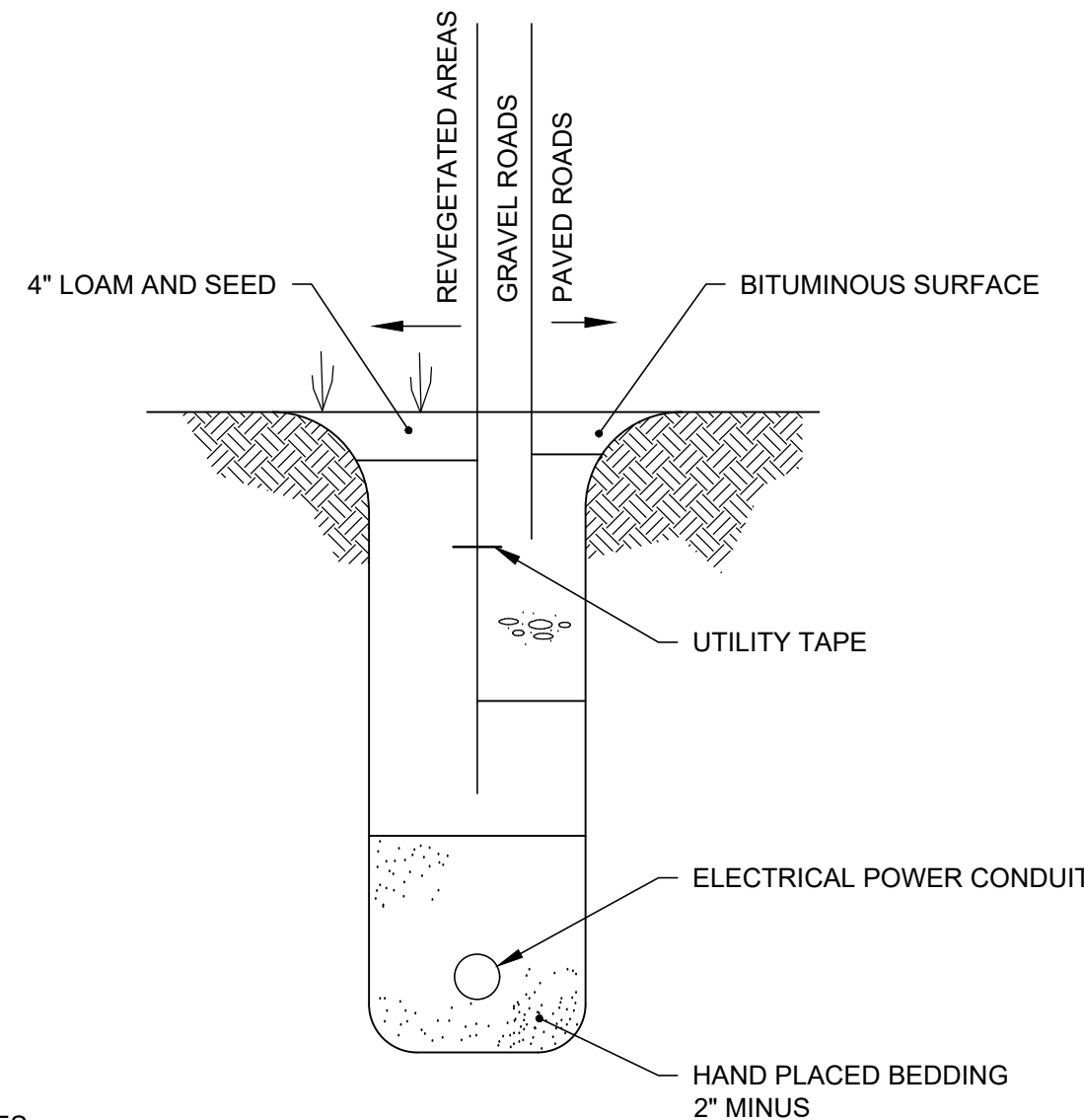


**TEMPORARY CONSTRUCTION ENTRANCE DETAIL**  
NOT TO SCALE

- NOTE:
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
  - WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
  - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
  - PROVIDE 6-INCH TEMPORARY SIGN WITH E911 ADDRESS. SHALE BE VISABLE FROM ROOSEVELT TRAIL.

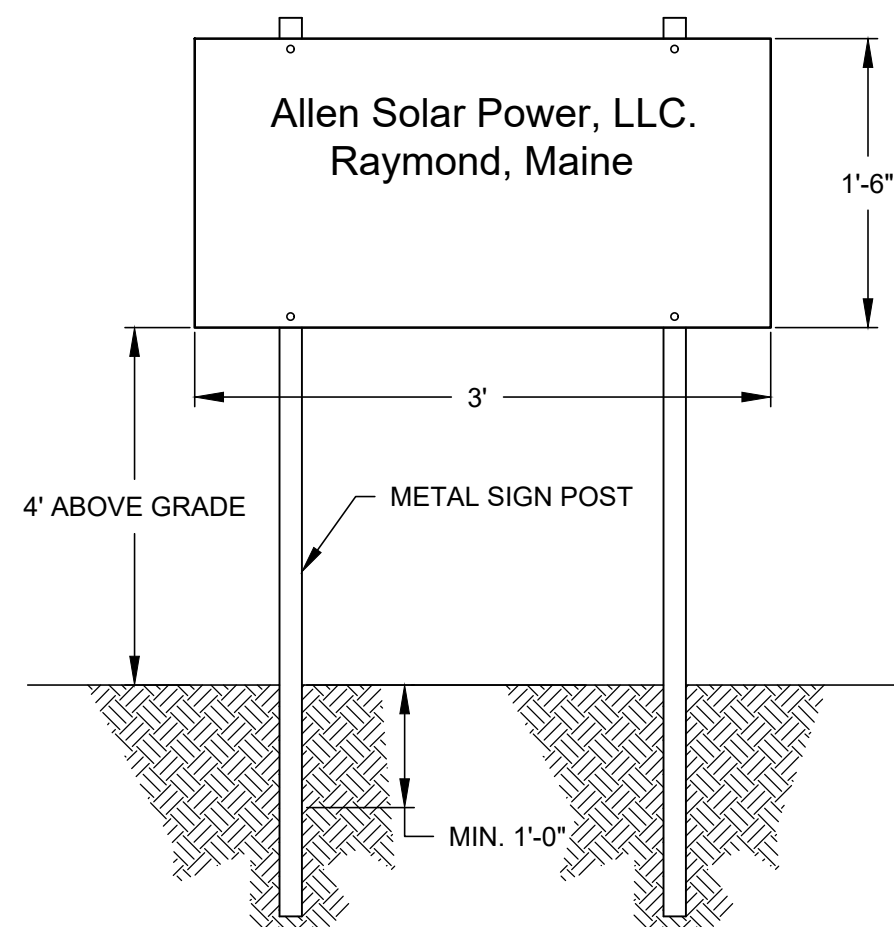


**COLLECTION DITCH DETAIL**  
NOT TO SCALE

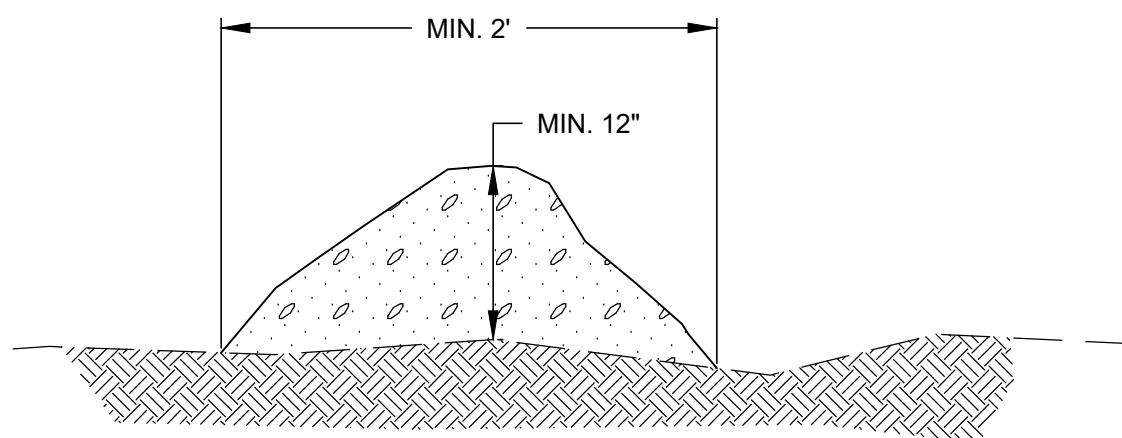


- NOTES:
- INSTALL WIRING PER MAINE ELECTRICAL CODE & CMP REQUIREMENTS.
  - CONTRACTOR TO INSTALL CABLES PER CODE AND UTILITY SPECIFICATIONS. MATERIAL TO BE SUPPLIED BY OWNER. COORDINATE INSTALLATION WITH LOCAL UTILITIES.

**ELECTRIC TRENCH DETAIL**  
NOT TO SCALE



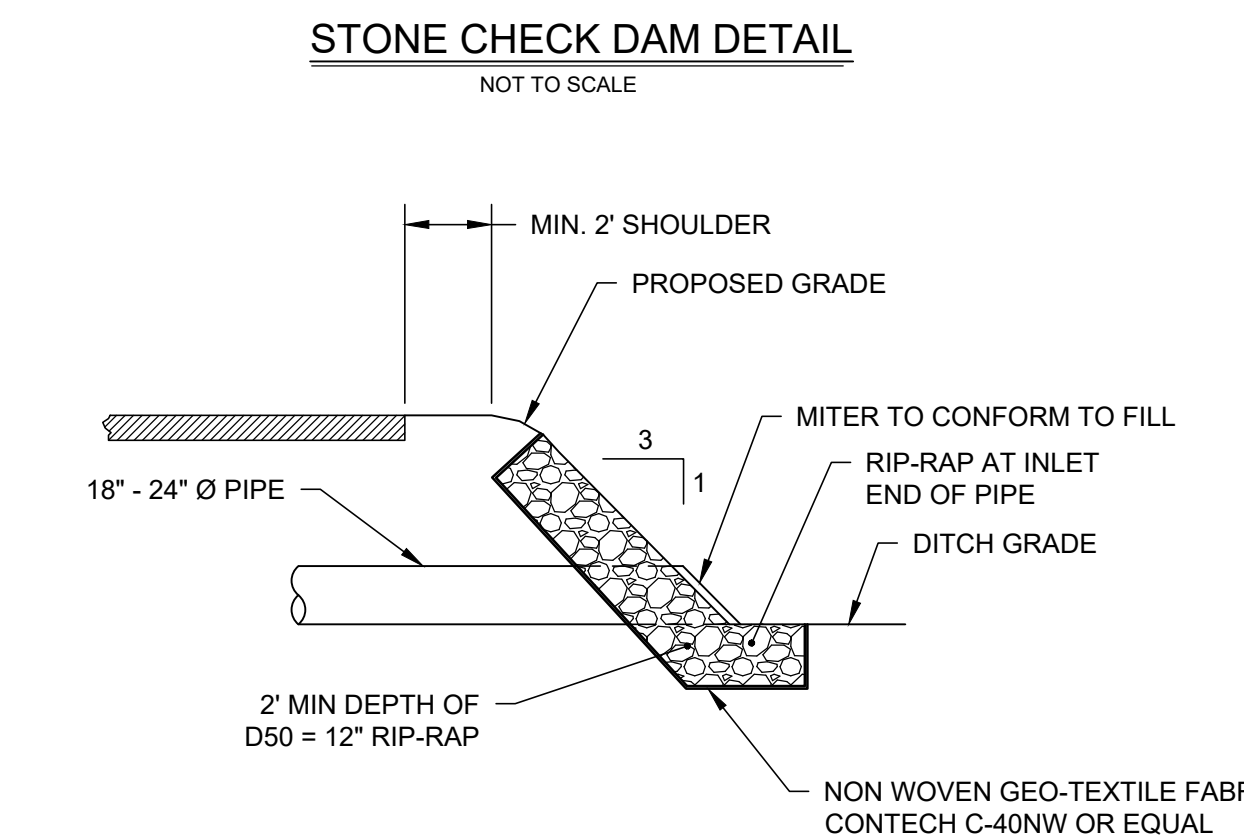
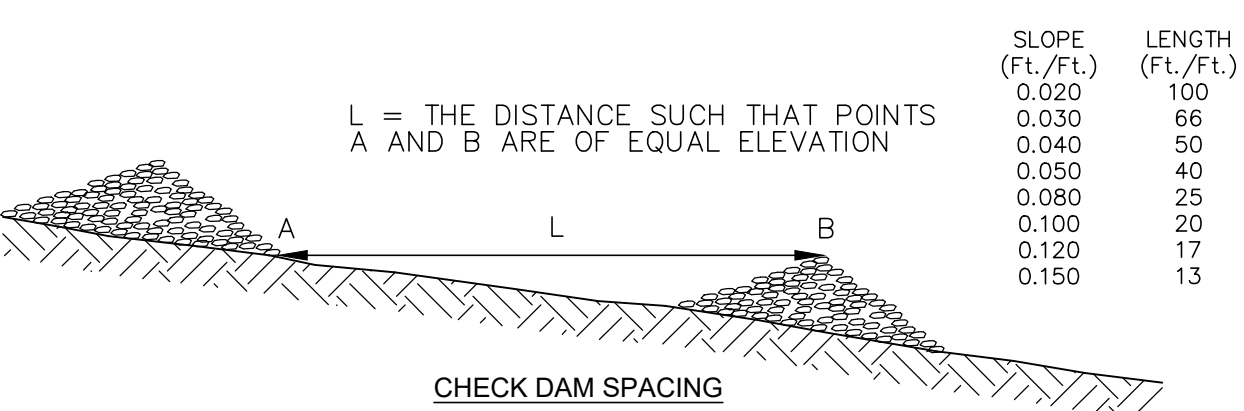
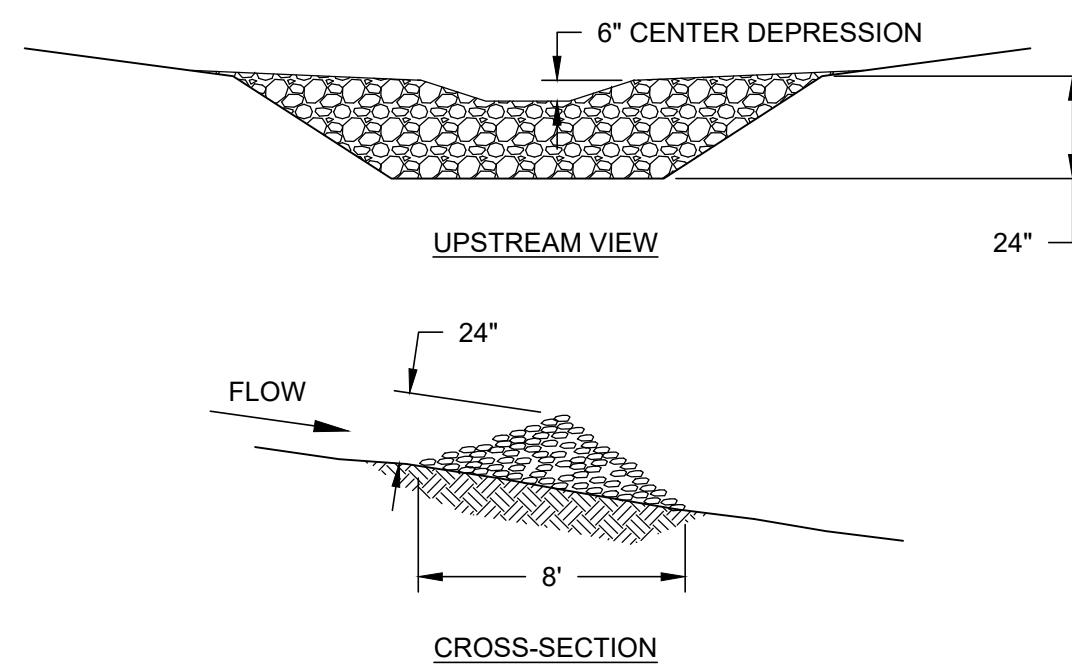
**PROJECT SIGN DETAIL**  
SCALE: NTS



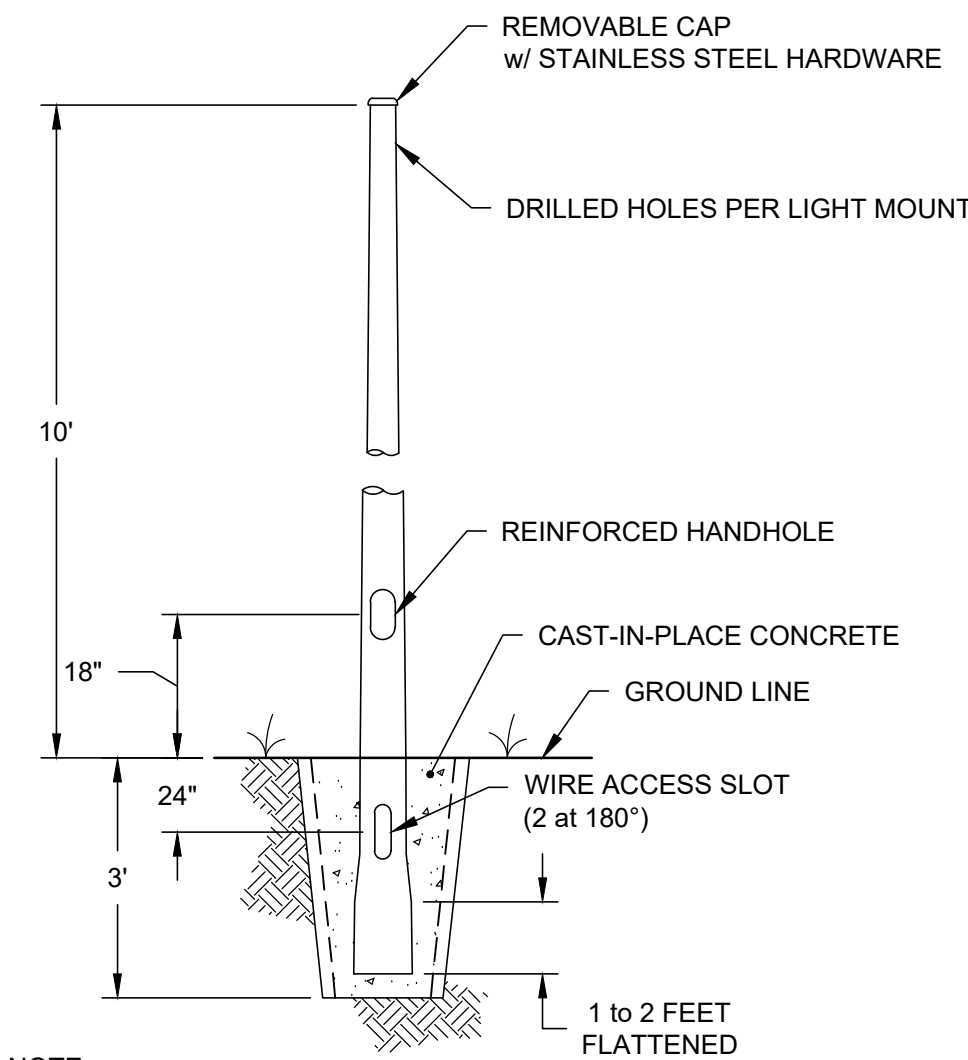
**EROSION CONTROL MIX BERM DETAIL**  
SCALE: NTS

NOTE:  
IN LIEU OF SILT FENCE EROSION CONTROL MIX CAN BE USED IF CONDITIONS BELOW ARE MET:  
FOLLOW MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES 2016.  
EROSION CONTROL MIX BERM:  
THE ECM BERM SHOULD BE A MINIMUM OF 12" HIGH AND A MINIMUM OF TWO FEET WIDE. ON LONGER OR STEEPER SLOPES, THE BERM WILL NEED TO BE WIDER AND HIGHER. BERMS COMPOSED OF ECM CAN BE RESHAPED WHEN NECESSARY.  
EROSION CONTROL MIX:  
THE MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>4") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING. THE MIX SHOULD BE FREE OF REFUSE MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS).

NOTE:  
KEY CHECK DAM INTO BANKS AND EXTEND 18" MINIMUM TO PREVENT BYPASS. SEE SHEET C-2

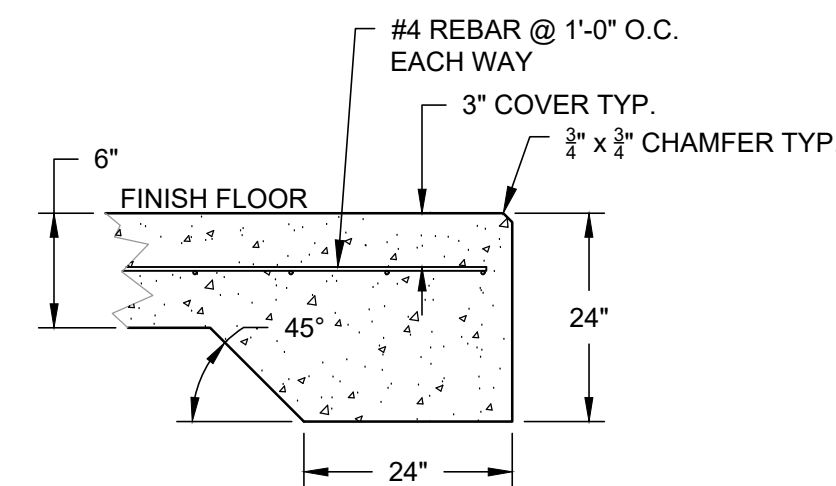


**CULVERT INLET DETAIL**  
NOT TO SCALE



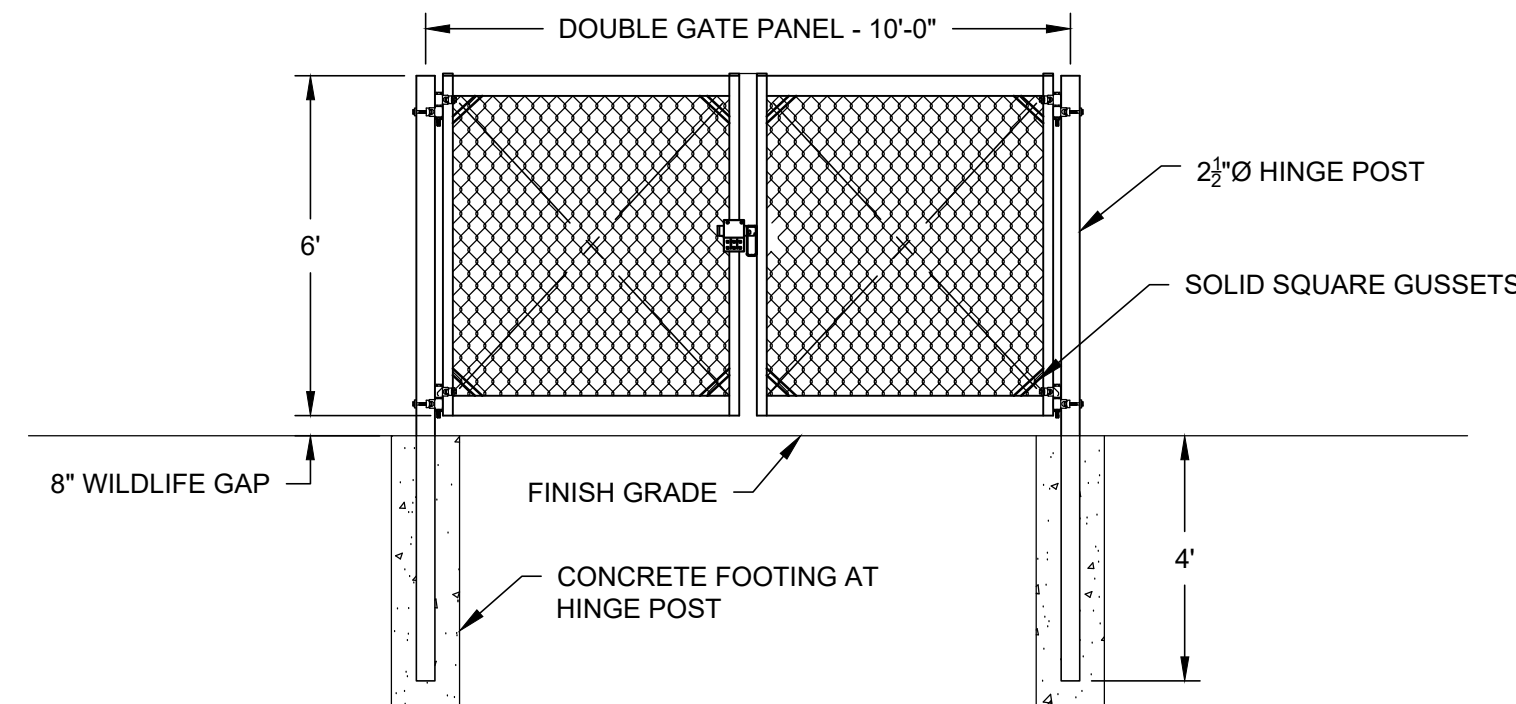
NOTE:  
ROUND TAPERED DIRECT BURIAL 6063 ALUMINUM LIGHT POLE, 10 FEET ABOVE GRADE, 5 INCH DIAMETER, 0.125 INCH WALL THICKNESS OR APPROVED EQUAL.  
HUBBELL OUTDOOR LIGHTING GEOPACK SERIES SIZE 1 LED LIGHT TRP1, TYPE III, ZERO UPLIGHT (UO) DARK SKY, NEIGHBOR FRIENDLY OR APPROVED EQUAL.

**OUTDOOR LIGHT POLE DETAIL**  
SCALE: NTS

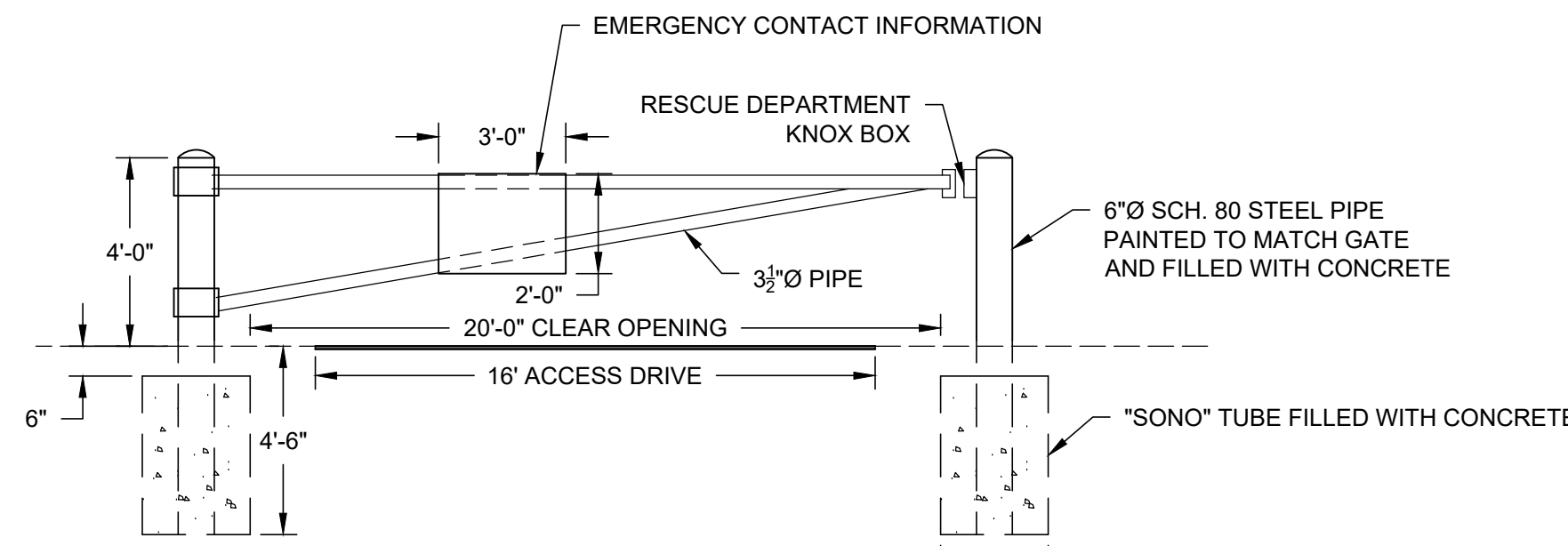


NOTES:  
EQUIPMENT PAD SUB-BASE SHALL BE 6" OF 3" CRUSHED STONE ON 1'-0" OF MDOT TYPE A GRAVEL THAT IS COMPACTED 95% STANDARD PROCTOR DENSITY.  
EQUIPMENT PAD 1 FINISH FLOOR ELEVATION: 298.5'  
EQUIPMENT PAD 2 FINISH FLOOR ELEVATION: 313.5'

**EQUIPMENT PAD DETAIL**  
SCALE: NTS



**FENCE GATE DETAIL**  
SCALE: NTS



NOTE:  
ALL ENTRANCE GATES SHALL HAVE A MINIMUM OPEN CLEARANCE OF 20 FEET.  
ALL GATES SHALL HAVE A RAYMOND FIRE AND RESCUE DEPARTMENT KNOX BOX THAT INCLUDE ALL KEYS OR KEY CARDS, AND CURRENT SITE EMERGENCY CONTACT INFORMATION.

**ENTRANCE GATE DETAIL**  
SCALE: NTS

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Rev	By	Date	Description
A	BFG	8/29/23	Project perimeter fence and tree line adjusted to minimize impact to Shore Land Zone.
B	BFG	11/07/23	Modifications to access road and solar array regarding the components for fire protection.
C	KJB	01/09/24	Modifications solar array layout, stormwater, fence type & calls to address fire dept comments.
No.	Drwn	Chkd	Date

Drwn By:	BG
Desg By:	BG / KJB
Chkd By:	KJB
Aprvd By:	KJB
Date:	8/14/2023

**Acheron Engineering, LLC.**  
Engineering & Environmental Consultants

www.AcheronEngineering.com  
113 Winter East  
Newport, ME 04953  
(207) 341-2390

Details

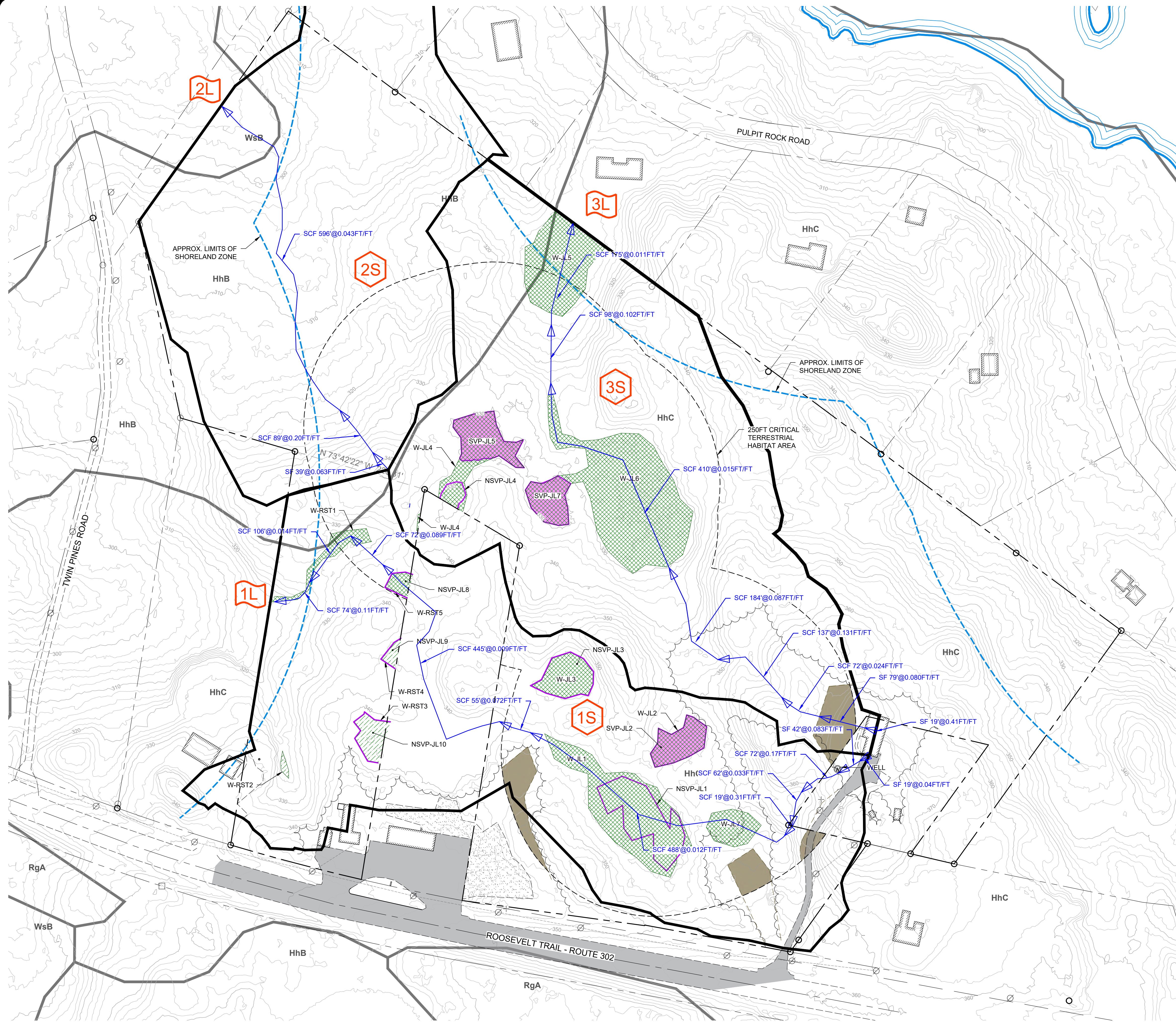
Mainely Solar, LLC  
143 Highland Shores Road  
Casco, Maine

Job Number:  
MS001

Drawing No:  
D-2

Sheet 7 of 9





24-HOUR DURATION RAIN FALL AMOUNTS		
STORM TYPE	RETURN PERIOD	STORM DEPTH (in.)
III	2-YR	3.1
III	10-YR	4.6
III	25-YR	5.8

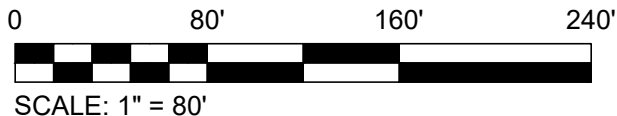
PEAK STORMWATER RUN-OFF RATE TABLE			
POINT OF ANALYSIS	STORM FREQUENCY (yr)	EXISTING CONDITIONS RUNOFF (cfs)	PROPOSED CONDITIONS RUNOFF (cfs)
1L	2	0.1	0.04
	10	1.91	0.90
	25	5.46	4.77
2L	2	0.00	0.00
	10	0.06	0.02
	25	0.34	0.14
3L	2	0.06	0.03
	10	1.54	1.03
	25	4.62	3.49

- NOTES**
- THE PROTECTED NATURAL RESOURCES FIELD DELINEATION SERVICES WERE CONDUCTED BY WATERSHED RESOURCE CONSULTANTS, LLC. PROTECTED NATURAL RESOURCES FIELD DELINEATION SERVICES WERE CONDUCTED ON MAY 2022, AND APRIL & MAY 2023. RESOURCE FEATURES WERE LOCATED BY WATERSHED RESOURCE CONSULTANTS, LLC USING A MAPPING GRADE GPS RECEIVER (SUBMETER ACCURACY AS PER MANUFACTURER).
  - 2 FT CONTOURS WERE DEVELOPED FROM MEGIS LIDAR DOWNLOADED FROM USGS NATIONAL MAP.
  - PLAN REFERENCE: "SURVEY PLAN PROPERTY OF SCOTT ALLEN" DATED MAY 8, 2023, PROVIDED BY PLISGA & DAY LAND SURVEYORS. CAD FILE: 23084 to Acheron 20230508.dwg.
  - ZONING DISTRICTS: RURAL RESIDENTIAL (RR), APPROXIMATELY 5.8 ACRES WITHIN LRR1 SHORELAND ZONE.
  - EXISTING IMPERVIOUS AREA ON LOT: 17,602 SF
  - SOILS: HhB - HERMON SANDY LOAM, 0 - 8% SLOPES, VERY STONY AND HSG A  
HhC - HERMON SANDY LOAM, 8 - 15% SLOPES, VERY STONY AND HSG A  
WsB - WOODBRIDGE VERY STONY FINE SANDY LOAM, 0 - 8% SLOPES AND HSG C

- LEGEND**
- PROJECT PARCEL
  - MDEP CLASSIFIED "WETLANDS NOT OF SPECIAL SIGNIFICANCE" (PRELIMINARY CLASSIFICATION)
  - MDEP CLASSIFIED "WETLANDS OF SPECIAL SIGNIFICANCE"
  - SIGNIFICANT VERNAL POOL (SVP)
  - NON-SIGNIFICANT VERNAL POOL (NSVP)
  - APPROXIMATE SHORELAND ZONE BOUNDARY (LRR1)
  - CRITICAL TERRESTRIAL HABITAT (CTH)
  - PREVIOUSLY IMPACTED CTH AREA
  - UTILITY POLE
  - PAVEMENT
  - TREELINE
  - 2 FT CONTOURS
  - NRCS SOILS BOUNDARY
  - NRCS SOILS LABEL
  - SUBCATCHMENT BOUNDARY
  - SUBCATCHMENT LABEL
  - FLOW PATH
  - ANALYSIS LOCATION
  - UNDER DRAIN SOIL FILTER



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Drwn By: BG

Desg By: BG / KJB

Chkd By: KJB

Aprvd By: KJB

Date: 8/14/2023

Job Number:

M500 I

Drawing No:

SW- I

Sheet 8 of 9

Acheron Engineering, LLC.

Engineering & Environmental Consultants

www.AcheronEngineering.com

113 Winter East

Newport, ME 04953

(207) 341-2390

Mainely Solar, LLC

143 Highland Shores Road

Casco, Maine

01/31/24

KJB

Chkd

Date

01/31/24

KJB

Drwn

Date

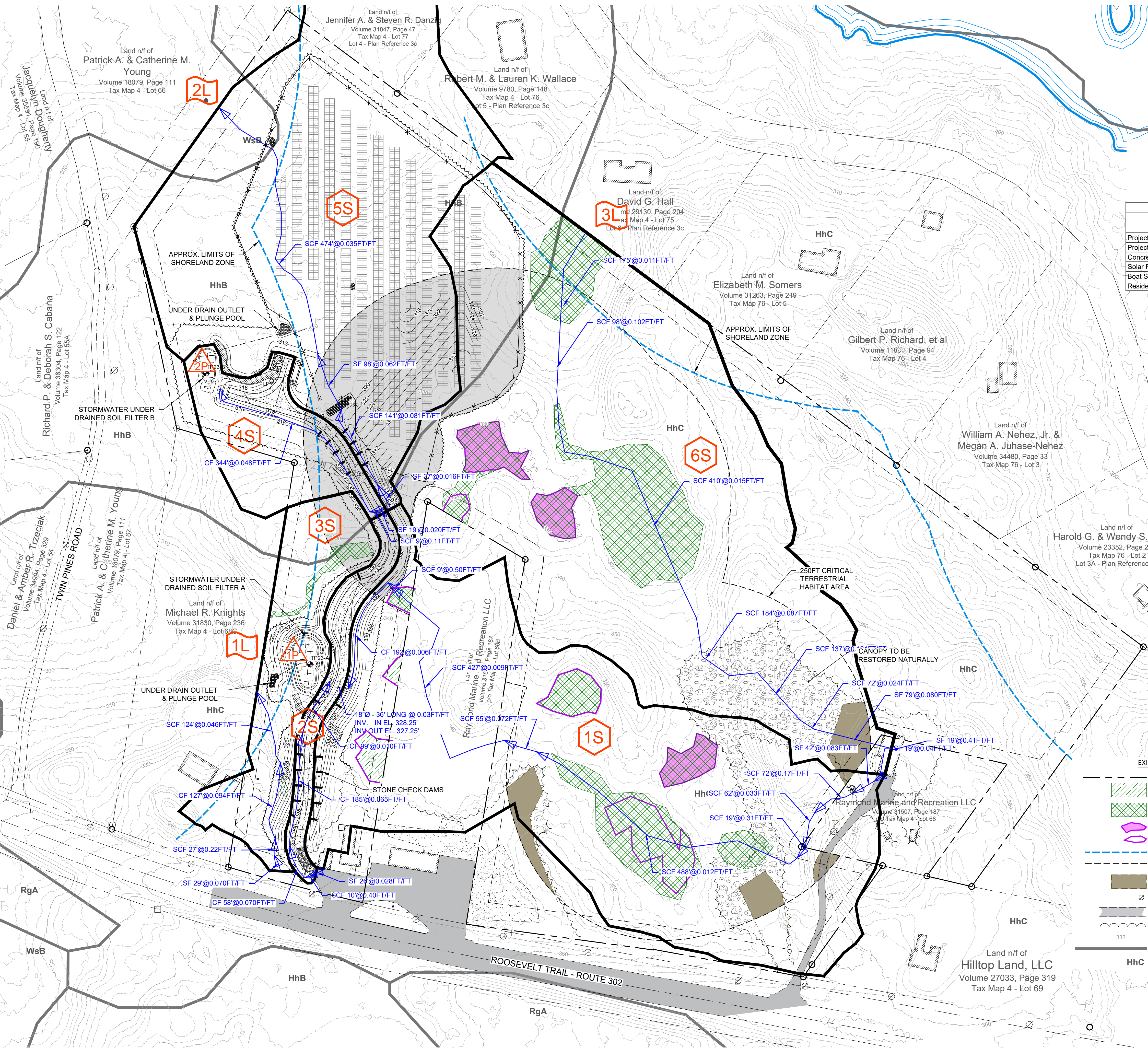
01/31/24

KJB

Rev

Date





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1L	2	0.1	0.04
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	25	5.46	4.77
2L	2	0.00	0.00
	10	0.06	0.02
	25	0.34	0.14
3L	2	0.06	0.03
	10	1.54	1.03
	25	4.62	3.49

WATER QUALITY TREATMENT TABLE					
AREA DESCRIPTION	IMPERVIOUS AREA (sf)	DEVELOPED AREA (sf)	IMPERVIOUS AREA TREATED (sf)	DEVELOPED AREA TREATED (sf)	BMP
Project Access Drive, STA 0+00 to 6+40	11,951	39,466	11,951	39,466	SFA
Project Access Drive, STA 6+40 to 9+80	7,417	17,529	7,417	17,529	SFB
Concrete Equipment Pad	160	160	160	160	SFB
Solar Panel Racking Support Posts	10	10	10	10	Self Buffering
Boat Storage Area	0	9,900	0	0	N/A
Residential Paved Driveway to East	2,556	2,556	2,556	2,556	N/A
Total	22,094	69,621	22,094	59,721	
		Percent Treated	100%	86%	

- NOTES**
- THE PROTECTED NATURAL RESOURCES FIELD DELINEATION SERVICES WERE CONDUCTED BY WATERSHED RESOURCE CONSULTANTS, LLC. PROTECTED NATURAL RESOURCES FIELD DELINEATION SERVICES WERE CONDUCTED ON MAY 2022, AND APRIL & MAY 2023. RESOURCE FEATURES WERE LOCATED BY WATERSHED RESOURCE CONSULTANTS, LLC USING A MAPPING GRADE GPS RECEIVER (SUBMETER ACCURACY AS PER MANUFACTURER).
  - 2 FT CONTOURS WERE DEVELOPED FROM MEGIS LIDAR DOWNLOADED FROM USGS NATIONAL MAP.
  - PLAN REFERENCE: "SURVEY PLAN PROPERTY OF SCOTT ALLEN" DATED MAY 8, 2023, PROVIDED BY PLUSGA & DAY LAND SURVEYORS. CAD FILE: 23084 to Acheron 20230508.dwg.
  - ZONING DISTRICTS: RURAL RESIDENTIAL (RR), APPROXIMATELY 5.8 ACRES WITHIN LRR1 SHORELAND ZONE.
  - LOT COVERAGE: EXISTING = 1.3%, PROPOSED = 1.4%, TOTAL = 2.7%
  - 100-YEAR FLOODPLAIN IS NOT WITHIN 300 FEET OF THE PROJECT PARCEL.
  - ALL EXISTING STRUCTURES WITHIN THE PARCEL BOUNDARY TO REMAIN.
  - ALL BUILDINGS WITHIN 100 FEET OF PARCEL BOUNDARY LOCATED USING AERIAL IMAGERY.
  - THE CLOSEST FIRE HYDRANT IS NOT LOCATED WITHIN 200 FEET.
  - MORE THAN 75% OF CTH TO BE MAINTAINED AS UNFRAGMENTED FORESTED CANOPY.
  - PROPOSED WETLAND FILL: 325 SF
  - SOILS: HhB - HERMON SANDY LOAM, 0 - 8% SLOPES, VERY STONY AND HSG A  
HhC - HERMON SANDY LOAM, 8 - 15% SLOPES, VERY STONY AND HSG A  
WsB - WOODBRIDGE VERY STONY FINE SANDY LOAM, 0 - 8% SLOPES AND HSG C

**EXISTING**

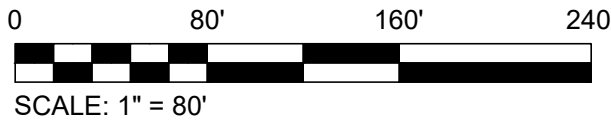
- PROJECT PARCEL
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- SIGNIFICANT VERNAL POOL (SVP)
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- PREVIOUSLY IMPACTED CTH AREA
- UTILITY POLE
- PAVEMENT
- TREELINE
- 2 FT CONTOURS
- NRCS SOILS BOUNDARY
- HhC - NRCS SOILS LABEL

**PROPOSED**

- EQUIPMENT PAD
- UTILITY POLE
- TREELINE
- SOLAR ARRAY
- WILDLIFE PERMEABLE FENCE
- 2 FT CONTOURS
- SILT FENCE
- STONE CHECK DAM
- TEST PITS
- SUBCATCHMENT BOUNDARY
- SUBCATCHMENT LABEL
- FLOW PATH
- ANALYSIS LOCATION
- UNDER DRAIN SOIL FILTER



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Drwn By: BG

Desg By: BG / KJB

Chkd By: KJB

Apprd By: KJB

Date: 8/14/2023

Acheron Engineering, LLC.

Engineering & Environmental Consultants

www.AcheronEngineering.com

113 Winter East

Williamstown, MA 01463

(207) 341-2390

Post-Construction Stormwater Plan

Mainely Solar, LLC

143 Highland Shores Road

Casco, Maine

Job Number:

M5001

Drawing No:

SW-2

Sheet 9 of 9





22207



**Photo 1:** Wetland RST2, looking southwest. Photograph taken June 12, 2023.



**Photo 2:** Upland (typical) where access road is planned, looking west. Photograph taken June 12, 2023.





22207  
August 7, 2023

Maine Historic Preservation Commission  
Attention: Kirk F. Mohny, Director  
55 Capitol Street, 65 State House Station  
Augusta, Maine, 04333-0065

Subject: Historic Review  
Proposed Solar Project  
Roosevelt Trail, Raymond, Maine

Dear Mr. Mohny,

Watershed Resource Consultants, LLC is conducting permitting assistance services for a proposed solar project on Roosevelt Trail in Raymond, Maine. This letter is to request Maine Historic Preservation Commission (MHPC) review of the project. We understand that MHPC will review the site for known or potential historic and pre-historic resources.

Attached to this letter are a Site Location Map, a plan showing the proposed project, and a tax map referencing each abutting lot and photograph sheets referenced to the tax maps. Only parcels directly abutting the project parcel with structures is included on the tax maps and photograph sheets.

Thank you for your review, if you have any questions, please contact us.

Sincerely,

**Watershed Resource Consultants, LLC**

Jeanna Leclerc

**Project Scientist | *Watershed Resource Consultants, LLC***

[jleclerc@wrcmaine.com](mailto:jleclerc@wrcmaine.com)

207-610-2623





**WATERSHED RESOURCE CONSULTANTS, LLC**  
NATURAL RESOURCE AND SOIL SCIENCE CONSULTING

22207

August 15, 2023

Tribal Historic Preservation Officer

*Via email*

**RE: USACE SVN Application for Mainely Solar LLC - Allen Solar, LLC, Raymond, Maine**

Dear Tribal Historic Preservation Officer,

Please take notice that Mainely Solar, LLC is intending to file a Self-Verification Notification Form application with the US Army Corps of Engineering for wetland alterations associated with a solar project in Raymond, Maine.

**Project Overview:**

The applicant is proposing to develop a commercial solar project on approximately 8.4-acres of land on Roosevelt Trail in Raymond, Maine. As part of the development, approximately 325 square feet of permanent wetland alteration is proposed on the property. We are requesting a review of potential historic or archeological resources as required by Federal Section 106 regulations.

Please contact us if you require any further information.

Sincerely,

Roger St. Amand, CSS, LSE, LPF, PWS, CPESC

Principal | Watershed Resource Consultants, LLC  
[rstamand@wrcmaine.com](mailto:rstamand@wrcmaine.com)





Jeanna Leclerc &lt;jleclerc@wrcmaine.com&gt;

---

**Raymond - Proposed Solar Project**

1 message

---

**Jeanna Leclerc** <jleclerc@wrcmaine.com>

Tue, Aug 15, 2023 at 9:24 AM

To: jdennis@micmac-nsn.gov, chris.sockalexis@penobscotnation.org, soctomah@gmail.com, istjohn@maliseets.com

Cc: "Roger St.Amand" &lt;rstamand@wrcmaine.com&gt;

Dear Tribal Historic Preservation Officers,

Please see the attached letter regarding a proposed commercial solar project located on Roosevelt Trail in Raymond, Maine. Please contact me if you have any questions.

Thank you,

Jeanna Leclerc

--

**Jeanna Leclerc****Project Scientist | Watershed Resource Consultants, LLC**

(207)610-2623

jleclerc@wrcmaine.com

**22207\_TPHO\_ReqLtr\_20230815.pdf**

351K





## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Maine Ecological Services Field Office  
P. O. Box A  
East Orland, ME 04431  
Phone: (207) 469-7300 Fax: (207) 902-1588



In Reply Refer To:  
Project code: 2023-0111605  
Project Name: Mainely Solar, LLC - Allen Solar, LLC, Raymond, Maine

August 16, 2023

Federal Action Agency (if applicable): Army Corps of Engineers

**Subject:** Record of project representative's no effect determination for 'Mainely Solar, LLC - Allen Solar, LLC, Raymond, Maine'

Dear Jeanna Leclerc:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on August 16, 2023, for 'Mainely Solar, LLC - Allen Solar, LLC, Raymond, Maine' (here forward, Project). This project has been assigned Project Code 2023-0111605 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

### **Ensuring Accurate Determinations When Using IPaC**

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

### **Determination for the Northern Long-Eared Bat**

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed



action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

### **Other Species and Critical Habitat that May be Present in the Action Area**

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate
- Small Whorled Pogonia *Isotria medeoloides* Threatened

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

### **Next Steps**

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Maine Ecological Services Field Office and reference Project Code 2023-0111605 associated with this Project.

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**Action Description**

You provided to IPaC the following name and description for the subject Action.

**1. Name**

Mainely Solar, LLC - Allen Solar, LLC, Raymond, Maine

**2. Description**

The following description was provided for the project 'Mainely Solar, LLC - Allen Solar, LLC, Raymond, Maine':

Mainely Solar Energy, Allen Solar Project. Approximately 8.4 acre development off of Roosevelt Trail Road in Raymond, Maine.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.911454750000004,-70.50092321071116,14z>





## DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (*Myotis septentrionalis*). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

## QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

**Note:** Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats are likely to be present in the action area, answer "NO" and continue through the key.

Do you want to make a no effect determination?

Yes

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## PROJECT QUESTIONNAIRE



**IPAC USER CONTACT INFORMATION**

Agency: Watershed Resource Consultants, LLC

Name: Jeanna Leclerc

Address: 1366 State Highway 102, #6

City: Bar Harbor

State: ME

Zip: 04609

Email: jleclerc@arc-env.com

Phone: 2079447288

**LEAD AGENCY CONTACT INFORMATION**

Lead Agency: Army Corps of Engineers

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## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Maine Ecological Services Field Office

P. O. Box A

East Orland, ME 04431

Phone: (207) 469-7300 Fax: (207) 902-1588



In Reply Refer To:

February 08, 2024

Project Code: 2023-0111605

Project Name: Mainely Solar, LLC - Allen Solar, LLC, Raymond, Maine

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological



evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.



Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

## OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Maine Ecological Services Field Office**

P. O. Box A

East Orland, ME 04431

(207) 469-7300



## PROJECT SUMMARY

Project Code: 2023-0111605  
Project Name: Mainely Solar, LLC - Allen Solar, LLC, Raymond, Maine  
Project Type: Power Gen - Solar  
Project Description: Mainely Solar Energy, Allen Solar Project. Approximately 8.4 acre development off of Roosevelt Trail Road in Raymond, Maine.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.9114625,-70.50092338998843,14z>



Counties: Cumberland County, Maine



## ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Endangered

## INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## FLOWERING PLANTS

NAME	STATUS
Small Whorled Pogonia <i>Isotria medeoloides</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1890">https://ecos.fws.gov/ecp/species/1890</a>	Threatened

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.



# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

## BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act<sup>1</sup> and the Migratory Bird Treaty Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats<sup>3</sup>, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

- 
1. The [Bald and Golden Eagle Protection Act](#) of 1940.
  2. The [Migratory Birds Treaty Act](#) of 1918.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

### There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Dec 1 to Aug 31

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.



**Probability of Presence (■)**

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

**Breeding Season (■)**

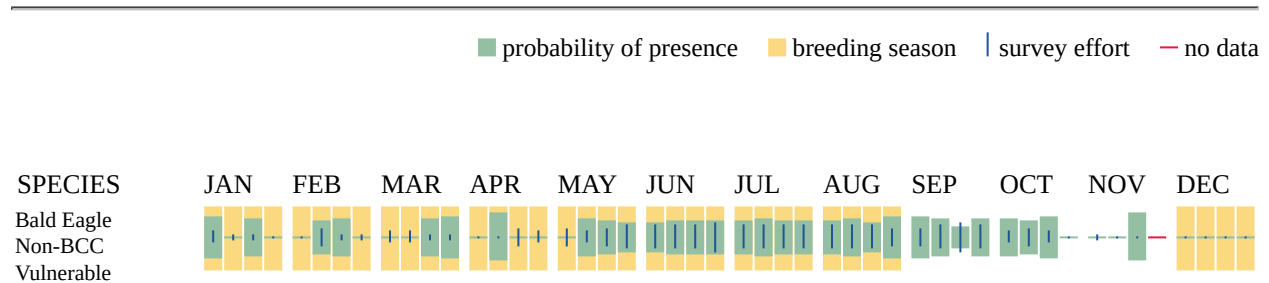
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

**Survey Effort (|)**

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

**No Data (—)**

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

## MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats<sup>3</sup> should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).



1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<b>Bald Eagle <i>Haliaeetus leucocephalus</i></b> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Dec 1 to Aug 31
<b>Bobolink <i>Dolichonyx oryzivorus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9454">https://ecos.fws.gov/ecp/species/9454</a>	Breeds May 20 to Jul 31
<b>Canada Warbler <i>Cardellina canadensis</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9643">https://ecos.fws.gov/ecp/species/9643</a>	Breeds May 20 to Aug 10
<b>Cape May Warbler <i>Setophaga tigrina</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/10571">https://ecos.fws.gov/ecp/species/10571</a>	Breeds Jun 1 to Jul 31
<b>Chimney Swift <i>Chaetura pelagica</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9406">https://ecos.fws.gov/ecp/species/9406</a>	Breeds Mar 15 to Aug 25
<b>Eastern Whip-poor-will <i>Antrostomus vociferus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/10678">https://ecos.fws.gov/ecp/species/10678</a>	Breeds May 1 to Aug 20
<b>Evening Grosbeak <i>Coccothraustes vespertinus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9465">https://ecos.fws.gov/ecp/species/9465</a>	Breeds May 15 to Aug 10



NAME	BREEDING SEASON
<b>Olive-sided Flycatcher <i>Contopus cooperi</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/3914">https://ecos.fws.gov/ecp/species/3914</a>	Breeds May 20 to Aug 31
<b>Prairie Warbler <i>Dendroica discolor</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9513">https://ecos.fws.gov/ecp/species/9513</a>	Breeds May 1 to Jul 31
<b>Wood Thrush <i>Hylocichla mustelina</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9431">https://ecos.fws.gov/ecp/species/9431</a>	Breeds May 10 to Aug 31

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

### Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

### Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

### No Data (—)

A week is marked as having no data if there were no survey events for that week.

■ probability of presence   ■ breeding season   | survey effort   — no data

SPECIES   JAN   FEB   MAR   APR   MAY   JUN   JUL   AUG   SEP   OCT   NOV   DEC





Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

## WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.



For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1E
- PSS1E



## **IPAC USER CONTACT INFORMATION**

Agency: Watershed Resource Consultants, LLC

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## **LEAD AGENCY CONTACT INFORMATION**

Lead Agency: Army Corps of Engineers