

# Acheron Engineering, LLC

Engineering & Environmental & Consultants  
[www.AcheronEngineering.com](http://www.AcheronEngineering.com)

November 8, 2023

Alex Sirois, Code Enforcement Officer  
Town of Raymond  
401 Webbs Mills Road  
Raymond, Maine 04071

## **RE: Allen Solar, LLC - Preliminary Minor Site Plan Review Application Follow Up Submittal**

Dear Alex,

On behalf of our client Allen Solar, LLC attached are revised plans to address comments made during the October 11, 2023 Planning Board meeting, the engineering review memorandum dated October 2, 2023, the Raymond Fire & Rescue plan review memo dated September 6, 2023 and subsequent emails and meetings with the Raymond Fire & Rescue. Review comments, resulting revisions, and request of the board are summarized below.

### **October Meeting Review Comments:**

1. *During the meeting the board showed interest in performing a site walk of the project area. The project limits and access road has been flagged if the board elects to perform a site walk.*
2. *The Raymond Fire & Rescue requested that the access road gate to the project be moved closer to Roosevelt Trail. The site plan has been revised to accommodate this request.*
3. *In lieu of requiring a road to the north end of the project, the fire & rescue department requested that a dry stand pipe system would be acceptable. The stand pipe system would allow firefighters to have hose connections within the solar field. The system should allow a pumper truck to be positioned adjacent to a 10,000 gallon cistern, connected to the dry hydrant and pump water through the dry stand pipe system to hose connections within the solar field. Since the meeting, Sebago Solar and Acheron Engineering has met with the fire department and reviewed the specific requirements for the cistern and dry standpipe system. Based on this meeting a cistern and dry standpipe system for the project has been included on the site plan and a new plan sheet titled "Fire Protection Site Plan & Details" has been included in this submission.*
4. *The fire & rescue department requested that a 16' x 80' bypass be provided if two trucks meet on the access drive. The site plan and access road plan/profile plan have been revised to include the bypass requested.*
5. *The fire & rescue and planning/engineering departments requested that an AutoTurn template be provided to demonstrate that a fire truck can access the solar field. The access road plan and profile sheets have been revised to include the AutoTurn template. Please note the vehicle used has a slightly larger wheelbase than the vehicle specified by the fire & rescue department.*

6. *The planning/engineering department indicated that the design should include an access drive to each of the stormwater soil filters.* The site plan has been revised to include an access drive to each of the soil filters.

#### **Engineering Review Memo:**

1. *The engineer indicated that the elevation of the Soil Filter A, broad crested weir on the plan does not match the weir elevation noted in the HydroCAD model. Please confirm the correct elevation and update the plans accordingly.* We agree that there is a discrepancy, however revisions have not been made to the model or the plans. Additional adjustments will be required to accommodate the additional impervious area from the fire bypass lane. Once the fire bypass lane is approved, final adjustments will be made to the details of Soil Filter A.
2. *The engineer noted that the proposed entrance to the site is adjacent to the existing garage. The applicant shall confirm that the new entrance to the site will not interfere with access or parking for the garage entrance.* The applicant has confirmed that the new entrance will not interfere with access or parking for the garage entrance.
3. *It was requested that the grading under the solar farm be reviewed to make sure that there are no additional areas of channelized flow.* The location of the road and the grading under the solar farm does result in channelized flow. However, the design includes a level spreader to convert the channelized flow to sheet flow.

#### **Raymond Fire & Rescue Memo:**

1. The plans have been revised to show location and detail of designated fire lanes and fire lane signage as referenced in items 1.b, 1.c, 1.d, & 1.g of the memo.
2. A note has been added to the site plan indicating that the "By-Pass" "Fire Lane" design is being provided in lieu of meeting the 20-foot Fire Access Road requirement of NFPA 1.
3. Unobstructed vertical clearance language has been added to the site plan as reference in section 1.f of the memo.
4. Knox Box notes have been added to the site plan as requested in section 1.i.
5. Plans have been revised indicating the location of the fire cistern and notes have been added indicating the project owner's responsibilities as indicated in sections 2.b and 2.b.i.
6. The fire standpipe system has been added to the plans, including access gates providing RFRD accessibility to the fire standpipe outlets.
7. A note has been added noting that the fire standpipe system is proposed in lieu of providing fire lane access around the entire site to meet NFPA requirements.
8. A note has been added to the site plan indicating the requirement for compliance, fire permits and fire inspection as indicated in sections 4 and 8.
9. The note has been added indicating the use of fire resistant plants on site per section 5 of the memo.

10. A note has been added to the site plan to address parking and towing as described in section 6 of the memo.

**Requests:**

1. Allen Solar, LLC requests that the property easement referenced in the Raymond Fire & Rescue memorandum be a condition of approval.
2. Allen Solar, LLC proposes to file for an E-911 address upon approval.

We appreciate the assistance and cooperation of the Town staff and Planning Board addressing these comments. If you have any questions or concerns, please contact me.

Respectfully Submitted,  
Acheron Engineering

A handwritten signature in black ink, appearing to read "KBall", is centered on the page. The signature is written in a cursive, flowing style.

Kirk Ball, PE 11681

Cc: David Fowler  
Lucy Fowler

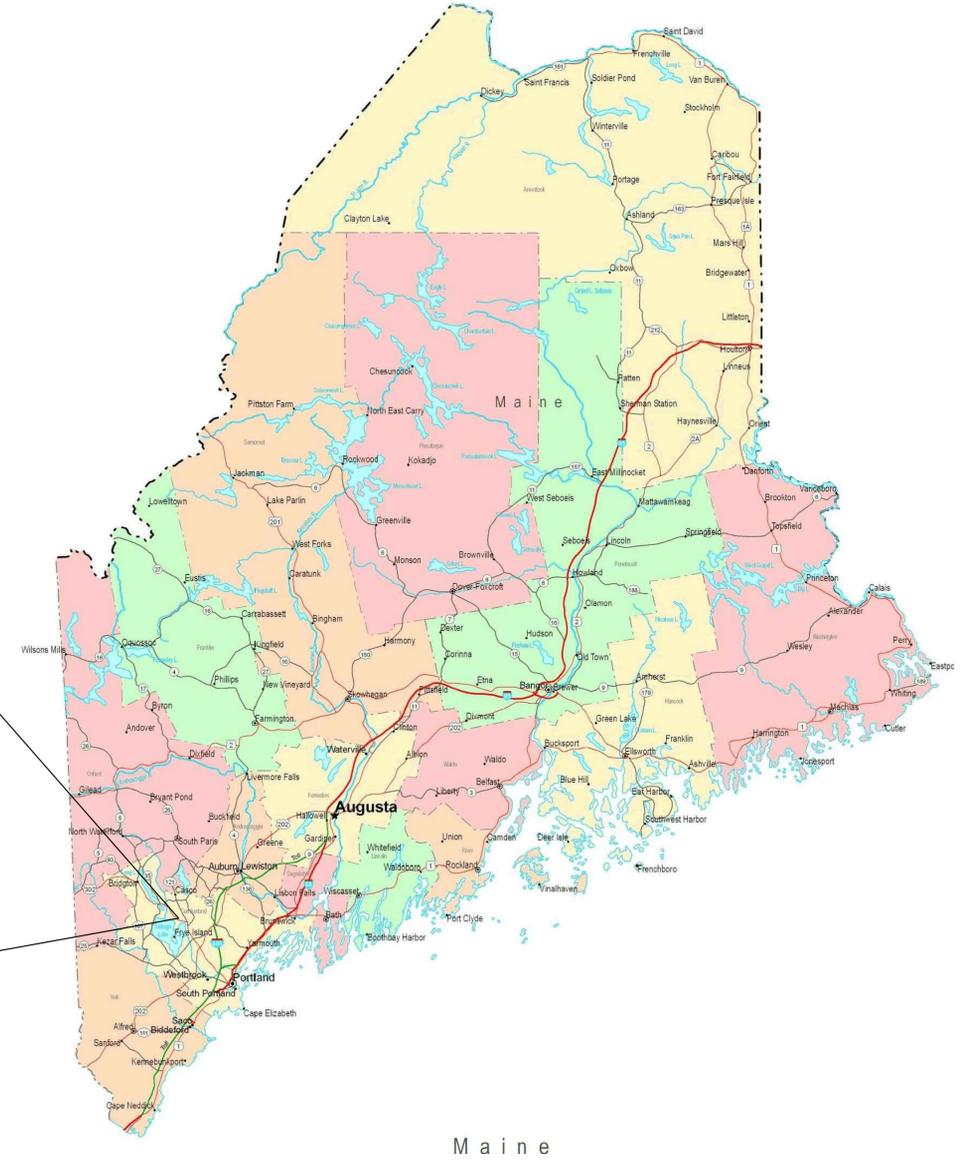
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# Allen Solar Power, LLC. Roosevelt Trail Raymond, Maine



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**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/EMERGSPILLS/ESP/
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 TO GROUNDWATER 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.

24. 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.
30. 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 GRASSES AND VEGETATION 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 PA/NORTHERN VA BLEND (VIRGINIA SPIDERWORT, SOUTHEASTERN PA/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 with fiber 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 rippedrap	X		
Stones are angular, durable and various in size	X		
Stones 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 rippedrap 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 volume and velocity	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 rippedrap	Daily		
Slopes greater than 3% 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
1	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



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

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.	Revision Description
A	B	No.

**Acheron Engineering, LLC.**  
 Engineering & Environmental Consultants  
 www.AcheronEngineering.com  
 153 Main St.  
 Newport, ME 04953  
 (207)-868-5700

113 Winter East  
 Williamsburg, VA 23188  
 (207) 341-2590

**Allen Solar Power, LLC**  
 Raymond, Maine  
 Mainely Solar, LLC  
 143 Highland Shores Road  
 Casco, Maine

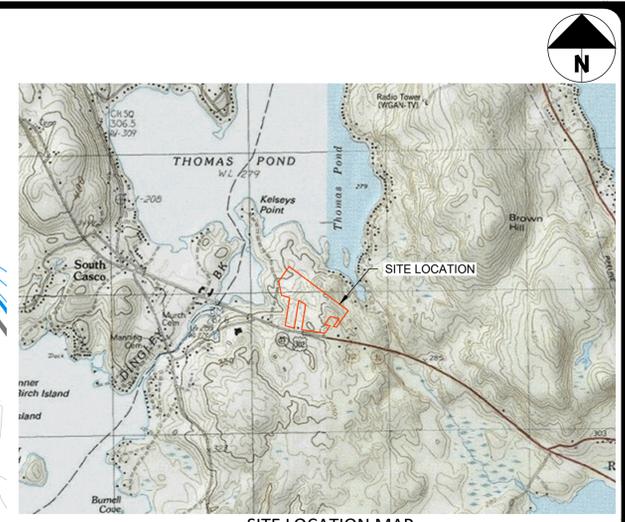
General Notes & Index

Job Number:  
MS001

Drawing No:  
i

Sheet 1 of 9





**SITE LOCATION MAP**  
SCALE: 1" = 2,000'

**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.
- 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

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No.	Revision Description	Drawn	Check	Date

Drawn By: BG  
 Desg. By: BG / KJB  
 Chkd By: KJB  
 Apprd By: KJB  
 Date: 6/14/2023

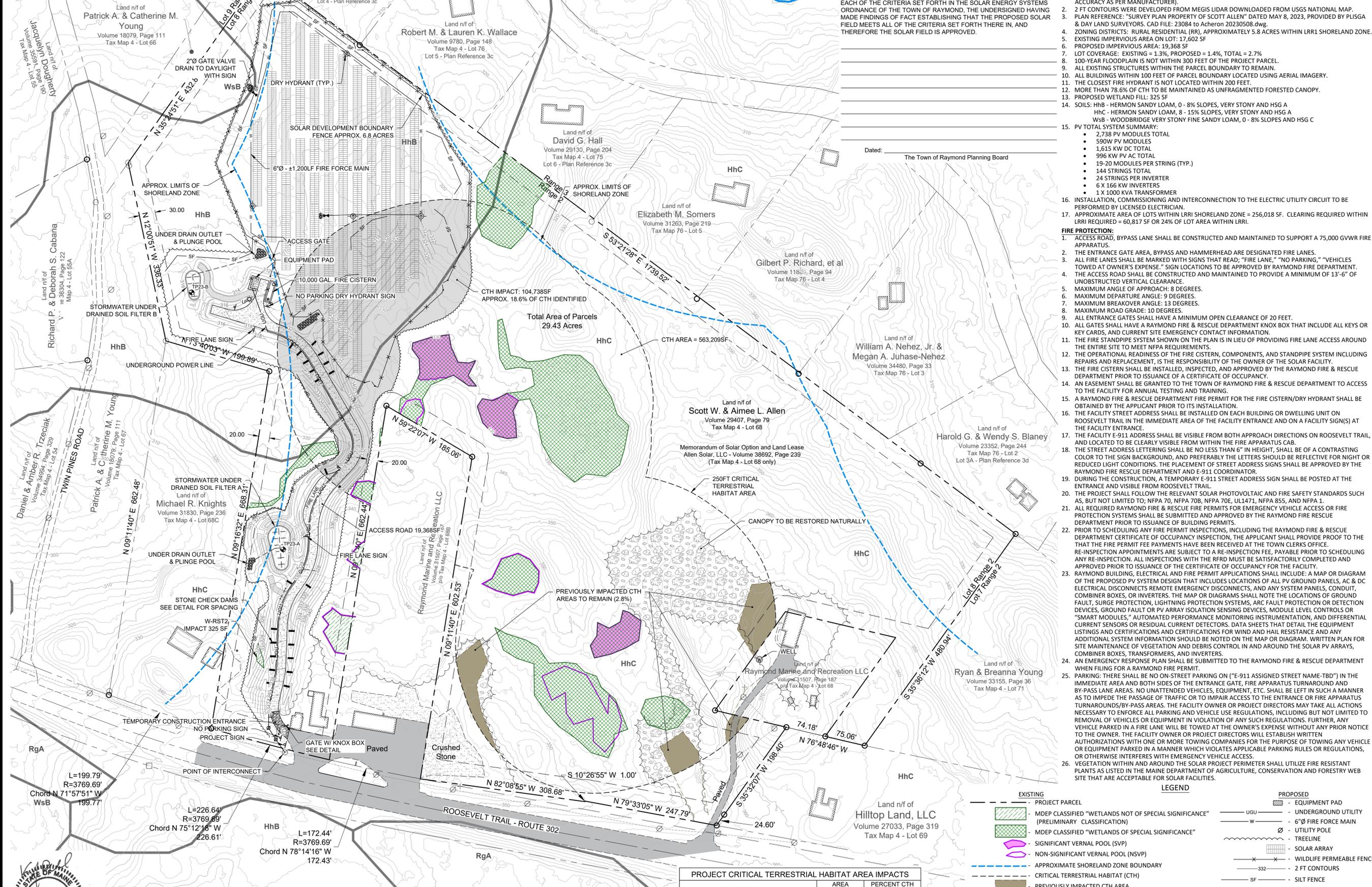
**Acheron Engineering, LLC.**  
 Engineering & Environmental Consultants  
 www.AcheronEngineering.com  
 153 Main St.  
 Newport, ME 04953  
 (207) 368-5700

Site Plan Existing Conditions  
 Mainely Solar, LLC  
 143 Highland Shores Road  
 Casco, Maine

Job Number:  
MS001

Drawing No:  
C-1

Sheet 2 of 9



**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:**

- 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 CLOSURE DISTANCES 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.
- 3. ZONING DISTRICTS: RURAL RESIDENTIAL (RR), APPROXIMATELY 5.8 ACRES WITHIN LRR1 SHORELAND ZONE.
- 4. EXISTING IMPERVIOUS AREA ON LOT: 17,602 SF
- 5. PROPOSED IMPERVIOUS AREA: 19,368 SF
- 6. LOT COVERAGE: EXISTING = 1.3%, PROPOSED = 1.4%, TOTAL = 2.7%
- 7. 100-YEAR FLOODPLAIN IS NOT WITHIN 300 FEET OF THE PROJECT PARCEL.
- 8. ALL EXISTING STRUCTURES WITHIN THE PARCEL BOUNDARY TO REMAIN.
- 9. ALL BUILDINGS WITHIN 100 FEET OF PARCEL BOUNDARY LOCATED USING AERIAL IMAGERY.
- 10. THE CLOSEST FIRE HYDRANT IS NOT LOCATED WITHIN 200 FEET.
- 11. MORE THAN 78.6% OF CTH TO BE MAINTAINED AS UNFRAGMENTED FORESTED CANOPY.
- 12. PROPOSED WETLAND FILL: 325 SF
- 13. 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
- 14. PV TOTAL SYSTEM SUMMARY:
  - 2,738 PV MODULES TOTAL
  - 590W PV MODULES
  - 1,615 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
- 15. INSTALLATION, COMMISSIONING AND INTERCONNECTION TO THE ELECTRIC UTILITY CIRCUIT TO BE PERFORMED BY LICENSED ELECTRICIAN.
- 16. 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.
- 17. 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." SIGN LOCATIONS 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 NPFA 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 ANNUAL 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 VISIBLE FROM WITHIN THE FIRE APPARATUS CAB.
  - 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 RELEVANT 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 TOWN 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 FRFD 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 PANELS, AC & DC ELECTRICAL DISCONNECTS REMOTE EMERGENCY DISCONNECTS, AND ANY SYSTEM PANELS, CONDUIT, COMBINER BOXES, OR INVERTERS. THE MAP OR DIAGRAMS SHALL NOTE THE LOCATIONS OF GROUND FAULT, SURGE PROTECTION, LIGHTNING PROTECTION SYSTEMS, ARC FAULT PROTECTION OR DETECTION DEVICES, GROUND FAULT OR PV ISOLATION SENSING DEVICES, MODULE LEVEL CONTROLS OR "SMART MODULES," 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. AN EMERGENCY RESPONSE PLAN 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 VEHICLE 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.

Dated: \_\_\_\_\_  
The Town of Raymond Planning Board



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DESCRIPTION	AREA (SF)	PERCENT CTH IMPACTED
CRITICAL TERRESTRIAL HABITAT AREA	563,209	-
EXISTING CTH IMPACT	67,171	12%
EXISTING CTH IMPACT TO REMAIN	16,168	2.8%
AREA OF CTH TO BE RESTORED NATURALLY	51,003	N/A
PROPOSED CTH IMPACT	104,897	18.6%
TOTAL CTH IMPACT	121,065	21.4%

**LEGEND**

EXISTING	PROPOSED
- PROJECT PARCEL	- EQUIPMENT PAD
- MDEP CLASSIFIED "WETLANDS NOT OF SPECIAL SIGNIFICANCE" (PRELIMINARY CLASSIFICATION)	- UNDERGROUND UTILITY
- MDEP CLASSIFIED "WETLANDS OF SPECIAL SIGNIFICANCE"	- 6"Ø FIRE FORCE MAIN
- SIGNIFICANT VERNAL POOL (SVP)	- UTILITY POLE
- NON-SIGNIFICANT VERNAL POOL (NSVP)	- TREELINE
- APPROXIMATE SHORELAND ZONE BOUNDARY	- SOLAR ARRAY
- CRITICAL TERRESTRIAL HABITAT (CTH)	- WILDLIFE PERMEABLE FENCE
- PREVIOUSLY IMPACTED CTH AREA	- 2 FT CONTOURS
- UTILITY POLE	- SF - SILT FENCE
- PAVEMENT	- TP23-A - STONE CHECK DAM
- TREELINE	- TP23-A - TEST PITS
- 332 - 2 FT CONTOURS	- SIGNS
- NRCS SOILS BOUNDARY	- LIGHT POLE
- HhC - NRCS SOILS LABEL	- FIRE STAND PIPE

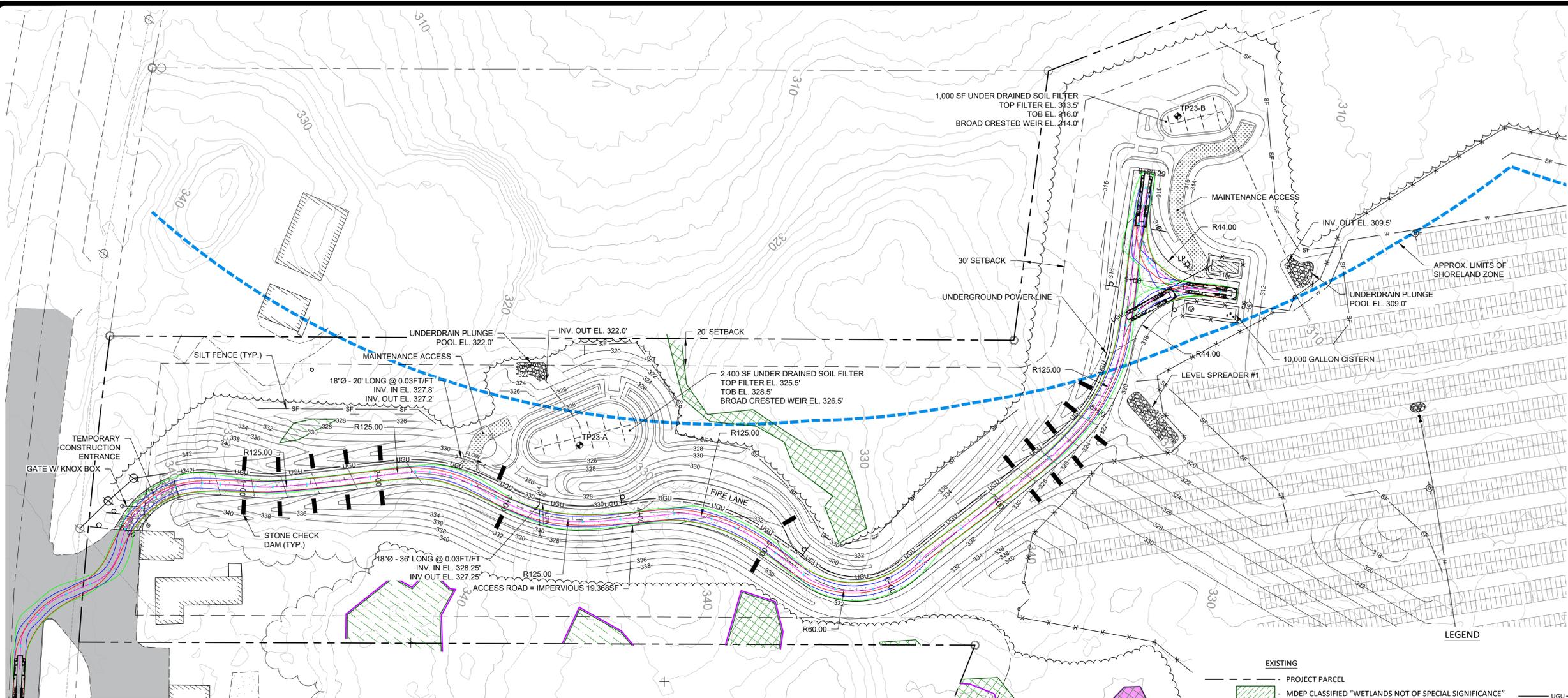
**Acheron Engineering, LLC**  
Engineering & Environmental Consultants  
www.acheronengineering.com  
153 Main St.  
Newport, ME 04953  
(207) 341-2590

**Mainly Solar, LLC**  
143 Highland Shores Road  
Casco, Maine

**Proposed Condition Site Plan**  
& Erosion / Sedimentation Control Plan

Job Number: MS001  
Drawing No: C-2  
Sheet 3 of 9

Rev	Description	Date
1	Project perimeter fence and tree line adjusted to minimize impact to Shore Land Zone.	8/29/23
2	Modifications to access road and solar array regarding the components for fire protection.	11/07/23



No.	Revision Description	Drwn	Chkd	Date

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

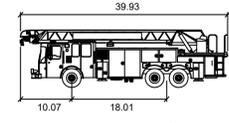
**Acheron Engineering, LLC.**  
 Engineering & Environmental Consultants  
 www.AcheronEngineering.com  
 113 Winter East  
 Williamsburg, VA 23188  
 Newport, ME 04953  
 (207)-368-5700

**Access Road Plan & Profile**  
 Mainely Solar, LLC  
 143 Highland Shores Road  
 Casco, Maine

Job Number:  
 MS001

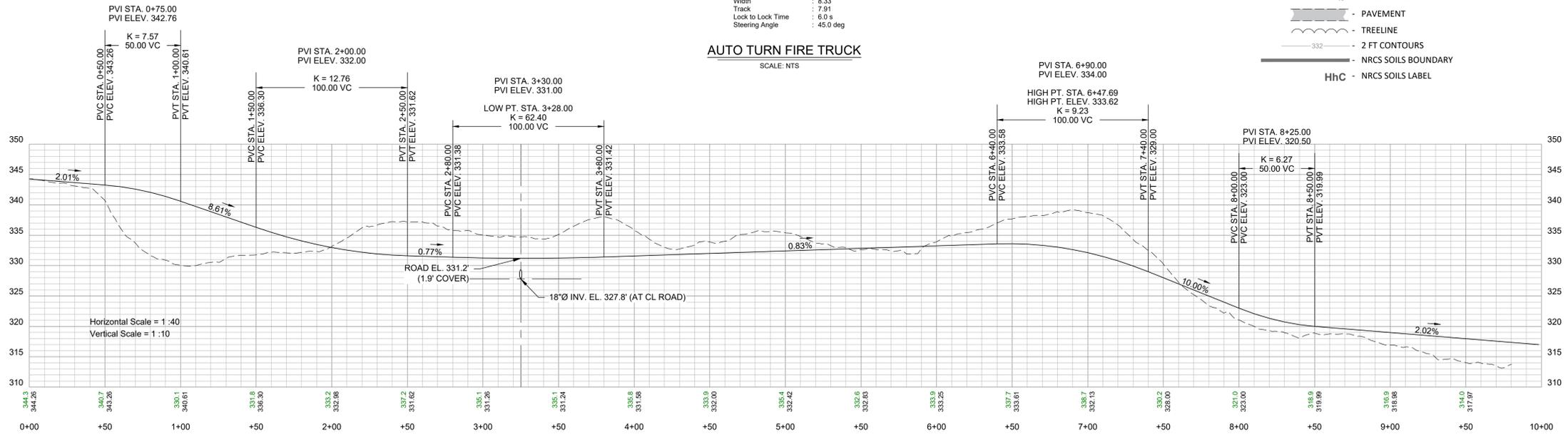
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 C-3

Sheet 4 of 9

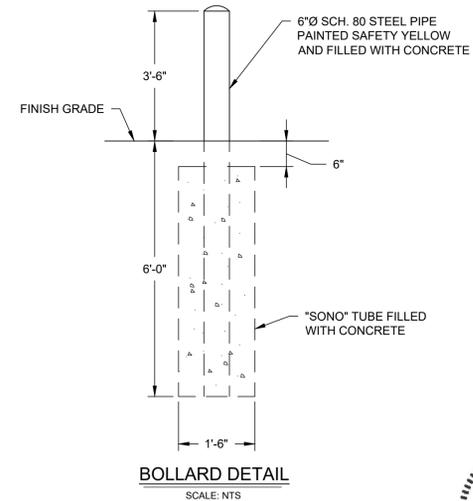
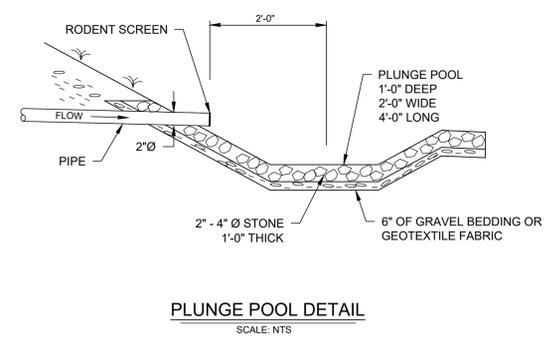
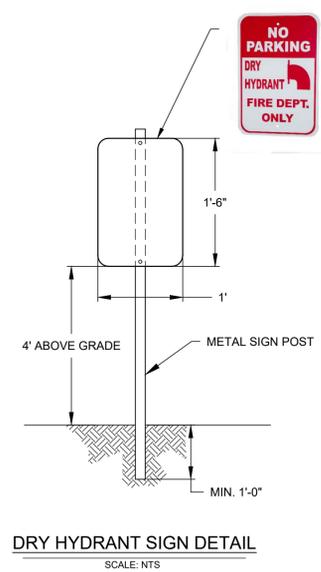
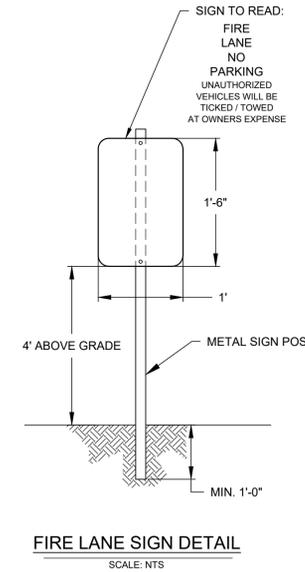
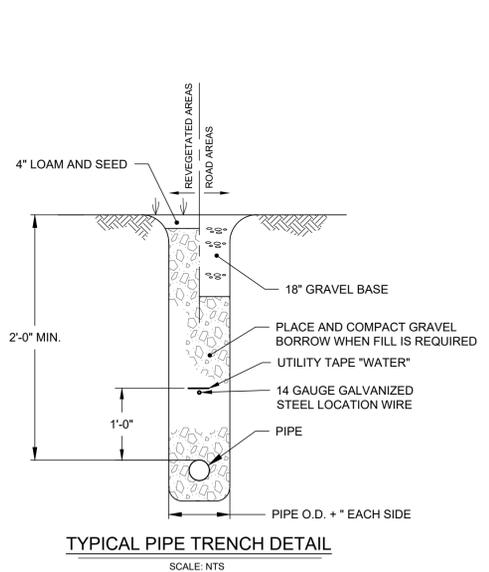
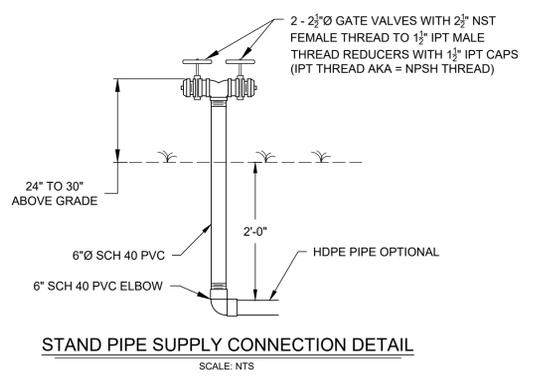
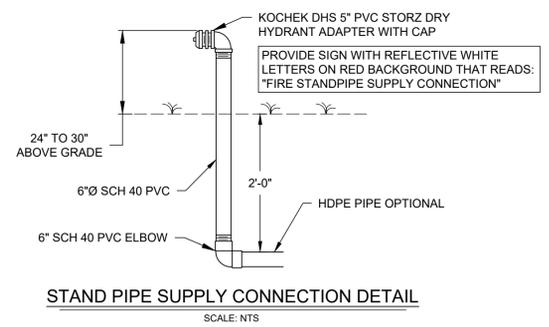
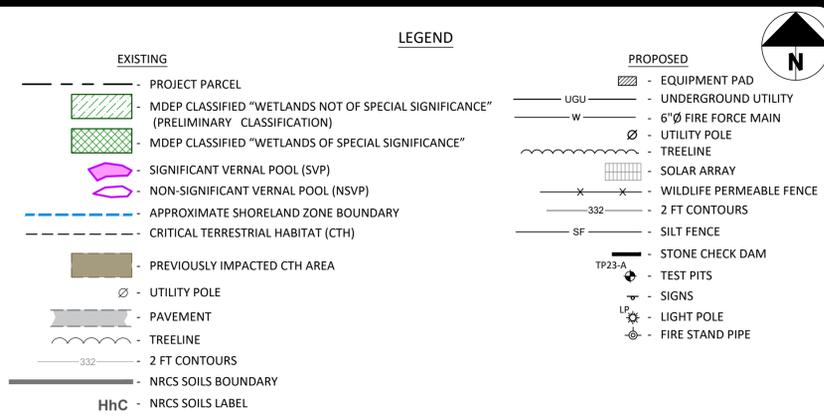
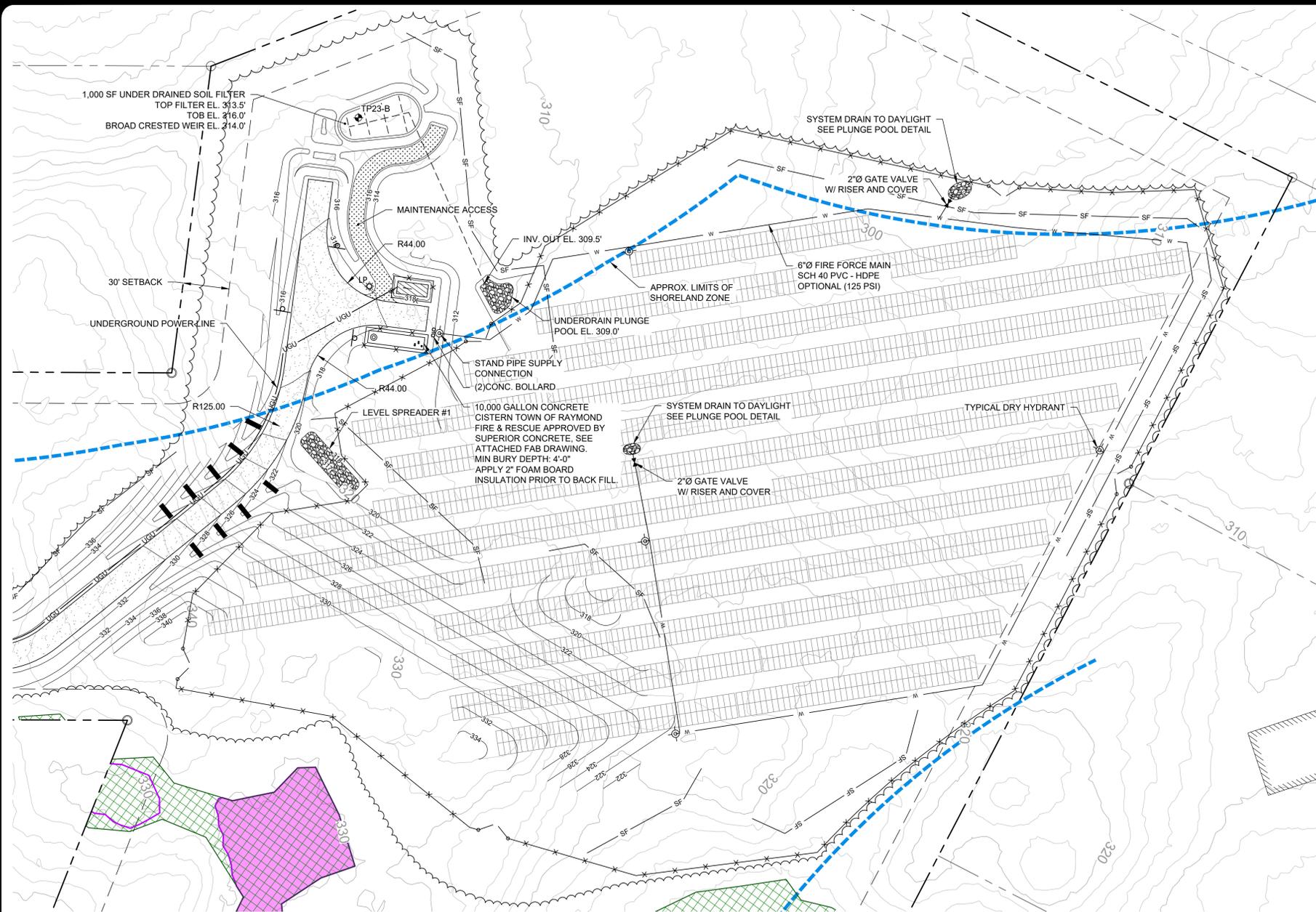


**Smeal Aerial RM 100ft**  
 SCALE: NTS  
 Width: 8.33 Feet  
 Track: 7.91 Feet  
 Lock to Lock Time: 6.0 s  
 Steering Angle: 45.0 deg

- |  |   |
|--|---|
| <p><b>EXISTING</b></p> <ul style="list-style-type: none"> <li>- PROJECT PARCEL</li> <li>- MDEP CLASSIFIED "WETLANDS NOT OF SPECIAL SIGNIFICANCE" (PRELIMINARY CLASSIFICATION)</li> <li>- MDEP CLASSIFIED "WETLANDS OF SPECIAL SIGNIFICANCE"</li> <li>- SIGNIFICANT VERNAL POOL (SVP)</li> <li>- NON-SIGNIFICANT VERNAL POOL (NSVP)</li> <li>- APPROXIMATE SHORELAND ZONE BOUNDARY</li> <li>- CRITICAL TERRESTRIAL HABITAT (CTH)</li> <li>- PREVIOUSLY IMPACTED CTH AREA</li> <li>- UTILITY POLE</li> <li>- PAVEMENT</li> <li>- TREELINE</li> <li>- 2 FT CONTOURS</li> <li>- NRCS SOILS BOUNDARY</li> <li>- NRCS SOILS LABEL</li> </ul> | <p><b>PROPOSED</b></p> <ul style="list-style-type: none"> <li>- EQUIPMENT PAD</li> <li>- UNDERGROUND UTILITY</li> <li>- UTILITY POLE</li> <li>- TREELINE</li> <li>- SOLAR ARRAY</li> <li>- WILDLIFE PERMEABLE FENCE</li> <li>- 2 FT CONTOURS</li> <li>- SILT FENCE</li> <li>- STONE CHECK DAM</li> <li>- TEST PITS</li> <li>- PROJECT SIGN</li> <li>- LIGHT POLE</li> </ul> |
|--|---|



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NOTE:  
THE LOCATION OF THE SIGNS SHALL BE  
APPROVED BY THE RAYMOND FIRE  
RESCUE DEPARTMENT (RFRD).

NOTE:  
THE LOCATION OF THE SIGNS SHALL BE  
APPROVED BY THE RAYMOND FIRE  
RESCUE DEPARTMENT (RFRD).



No.	Revision Description	Drwn	Chk'd	Date
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 fire protection.	BFG	KJB	11/07/23

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

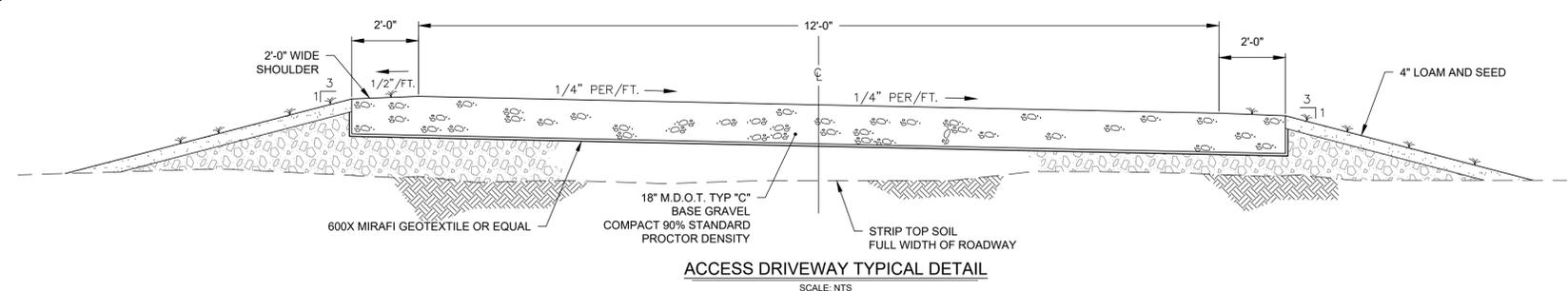
**Acheron Engineering, LLC.**  
 Engineering & Environmental Consultants  
 www.AcheronEngineering.com  
 113 Winter East  
 Williamsburg, VA 23188  
 Newport, ME 04953  
 (207) 341-2390

**Fire Protection Site Plan & Details**  
 Mainely Solar, LLC  
 143 Highland Shores Road  
 Casco, Maine

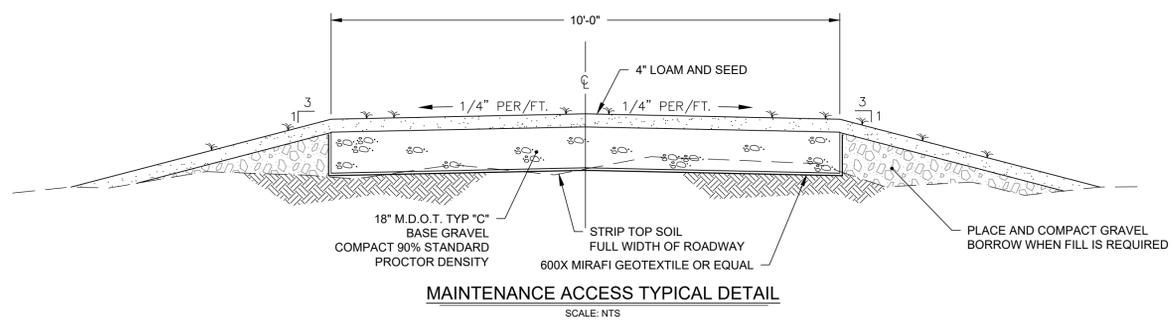
Job Number:  
MS001

Drawing No:  
C-4

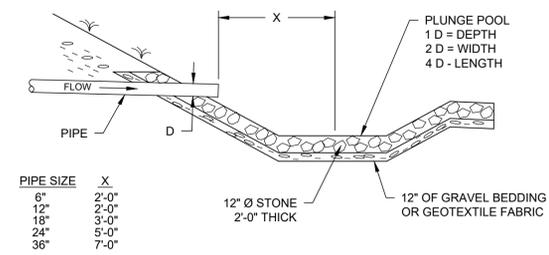
Sheet 5 of 9



**ACCESS DRIVEWAY TYPICAL DETAIL**  
SCALE: NTS

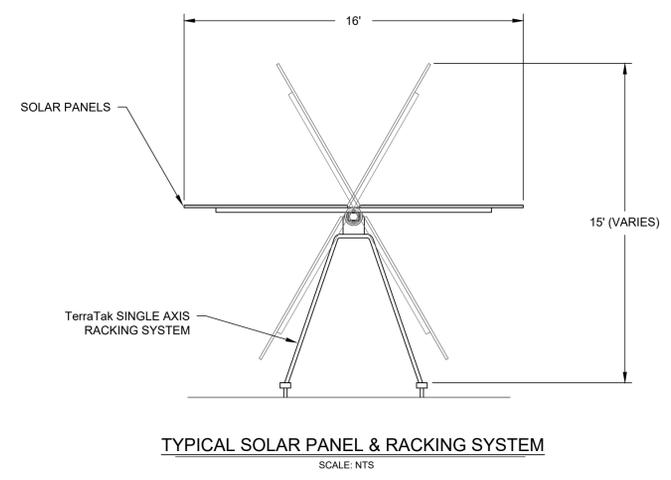


**MAINTENANCE ACCESS TYPICAL DETAIL**  
SCALE: NTS

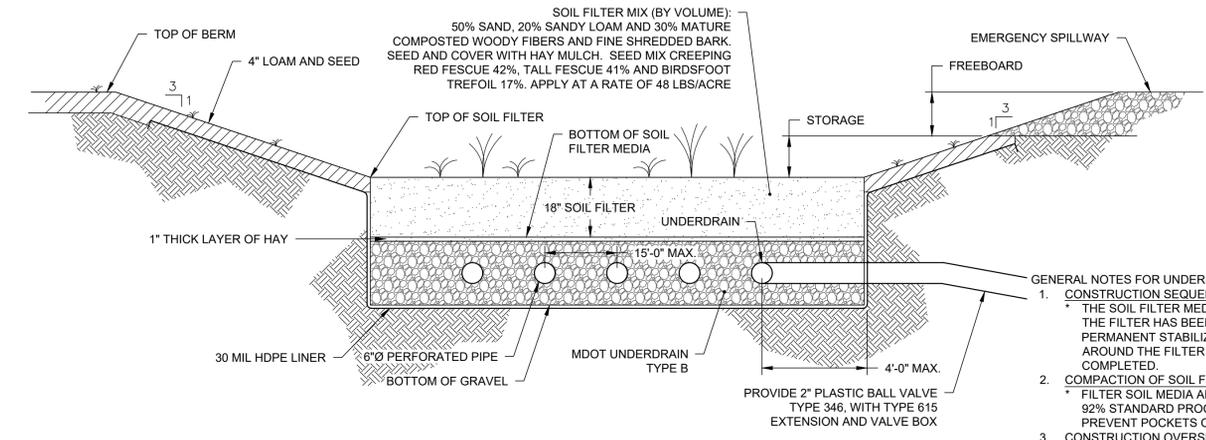


PIPE SIZE	X
6"	2'-0"
12"	2'-0"
18"	3'-0"
24"	5'-0"
36"	7'-0"

**PLUNGE POOL DETAIL**  
SCALE: NTS



**TYPICAL SOLAR PANEL & RACKING SYSTEM**  
SCALE: NTS



**GENERAL NOTES FOR UNDERDRAIN FILTER BASINS:**

- 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.
- 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.
- 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.
- 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 TEST OF THE SOIL FILTER MEDIA MIXTURE WITH THE MIXTURE AT A MEASURED BULK DRY DENSITY OF 90-92% BASED ON ASTM D698.
- 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.

SAND SPECIFICATION	
SIEVE SIZE	% BY WEIGHT
3/8"	100
#4	95 - 100
#8	80 - 100
#16	50 - 85
#30	25 - 60
#60	10 - 30
#100	2 - 10
#200	0 - 5

SOURCE: MAINE DOT SPECIFICATION SECTION 703.01

SANDY LOAM TO FINE SANDY LOAM SPECIFICATIONS	
SIEVE SIZE	% BY WEIGHT
#4	75 - 95
#10	60 - 90
#40	35 - 85
#200	20 - 70
200 (Clay size)	<2.0

SOURCE: MAINE DEP BMP CHAPTER 7.1

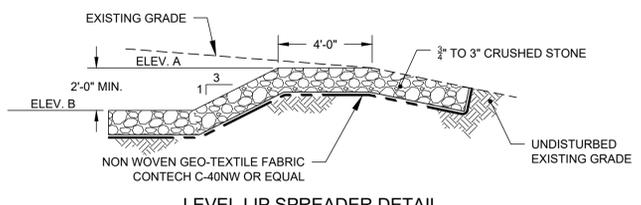
UNDERDRAIN TYPE B	
SIEVE SIZE	% BY WEIGHT
1"	90 - 100
1/2"	75 - 100
#4	50 - 100
#20	15 - 80
#50	0 - 15
#200	0 - 5

SOURCE: TABLE 7.1.1 MAINE DOT SPECIFICATIONS SECTION 703.22

	TOP OF BERM ELEV.	TOP OF SPILLWAY ELEV / LENGTH	TOP OF SOIL FILTER ELEV.	BOTTOM OF SOIL FILTER MEDIA ELEV.	BOTTOM OF GRAVEL ELEV.	OUTLET 1 (UD) DIA. / LENGTH	OUTLET 1 (UD) ELEV. IN / OUT
SF A	328.5'	325.9' / 4 FT	325.5'	324'	322.5'	6"Ø / 52 FT	323' / 322'
SF B	316'	314' / 4 FT	313.5'	312'	310.5'	6"Ø / 120 FT	311' / 309.5'

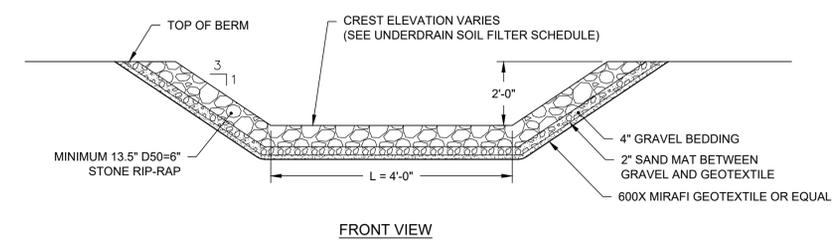
**TYPICAL UNDERDRAIN SOIL FILTER**  
SCALE: NTS

LEVEL LIP SPREADER ELEVATION TABLE			
LEVEL LIP SPREADER	ELEVATION A	ELEVATION B	LENGTH
#1	318.0'	317.0'	40

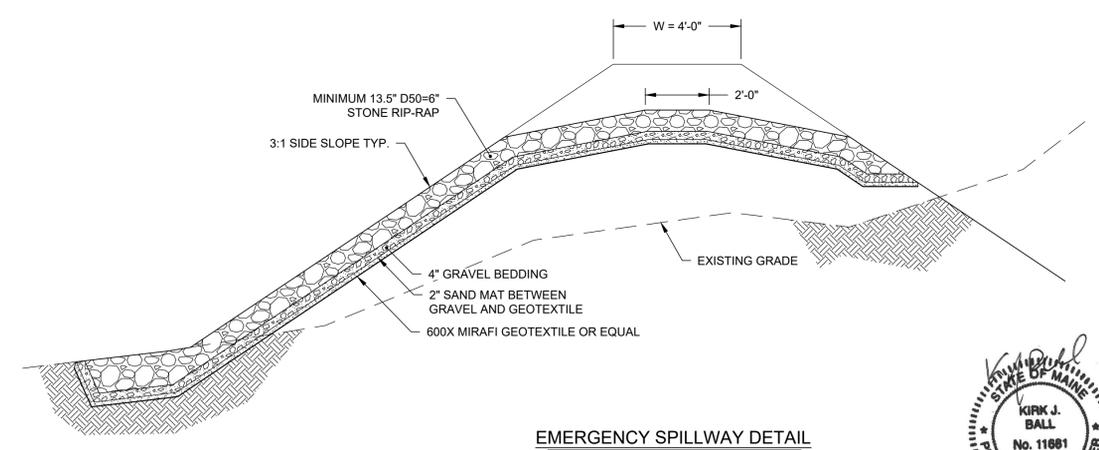


**LEVEL LIP SPREADER DETAIL**  
NOT TO SCALE

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.



**FRONT VIEW**



**EMERGENCY SPILLWAY DETAIL**  
SCALE: NTS



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Drwn By:	BG	BG / KJB	Drwn	Chk'd	Date
Desg By:	BG	KJB	BPG	KJB	11/07/23
Chkd By:	KJB				
Aprvd By:	KJB				
Date:	8/14/2023				

Modifications to access road and solar array regarding the components for fire protection.  
No.

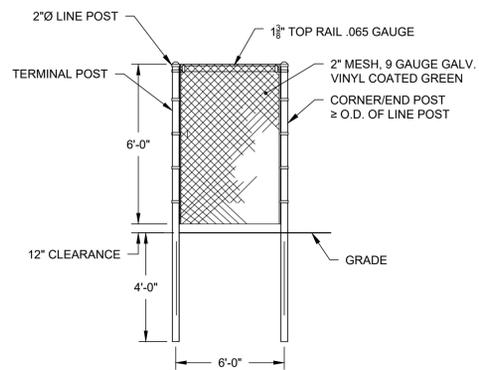
**Acheron Engineering, LLC.**  
Engineering & Environmental Consultants  
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113 Winter East  
Williamsburg, VA 23188  
Newport, ME 04953  
(207)-368-5700

**Construction Details**  
Mainely Solar, LLC  
143 Highland Shores Road  
Casco, Maine

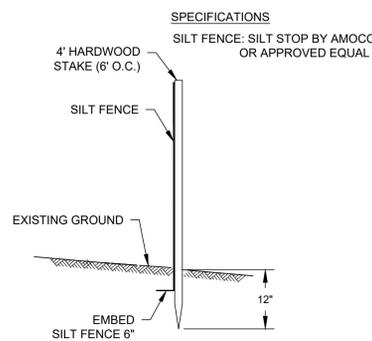
Job Number:  
MS001

Drawing No:  
D-1

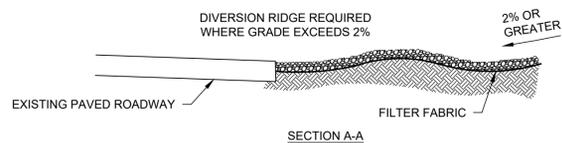
Sheet 6 of 9



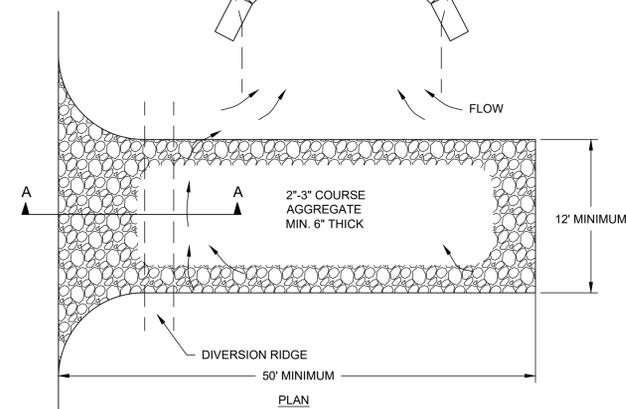
TYPICAL FENCE DETAIL  
SCALE: NTS



SILT FENCE DETAIL  
NOT TO SCALE

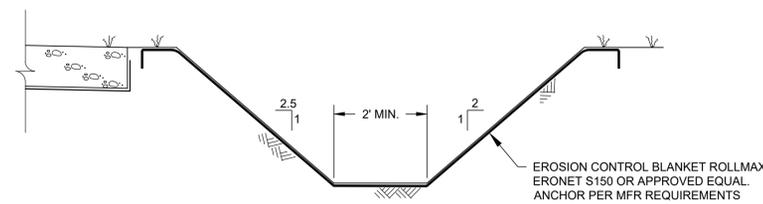


NOTE:  
USE SANDBAGS, HAY BALES OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN AS REQUIRED.

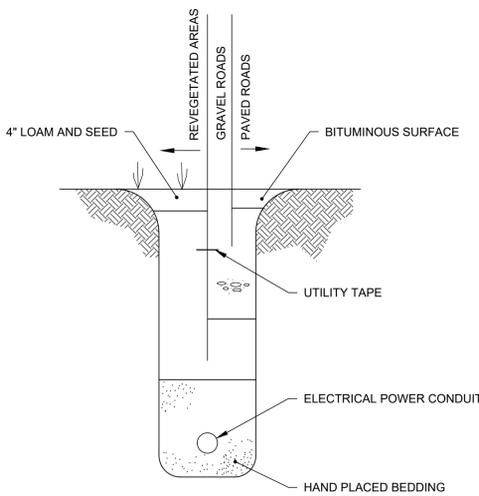


TEMPORARY CONSTRUCTION ENTRANCE DETAIL  
NOT TO SCALE

- NOTE:
1. 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.
  2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
  3. 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.

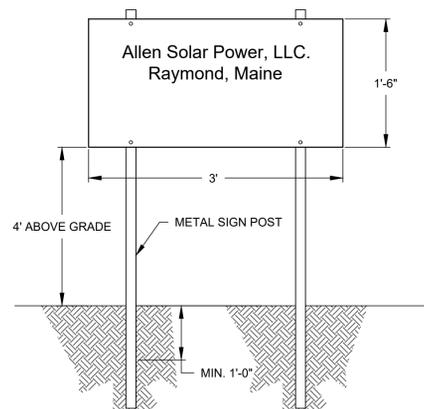


COLLECTION DITCH DETAIL  
NOT TO SCALE



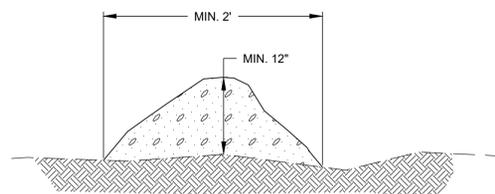
- NOTES:
1. INSTALL WIRING PER MAINE ELECTRICAL CODE & CMP REQUIREMENTS.
  2. CONTRACTOR TO INSTALL CABLES PER CODE AND UTILITY SPECIFICATIONS. MATERIAL TO BE SUPPLIED BY OWNER. COORDINATE INSTALLATION WITH LOCAL UTILITIES.

ELECTRIC TRENCH DETAIL  
NOT TO SCALE



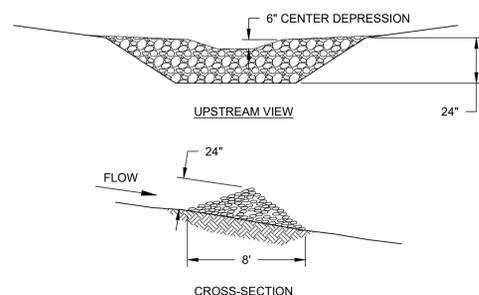
PROJECT SIGN DETAIL  
SCALE: NTS

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).

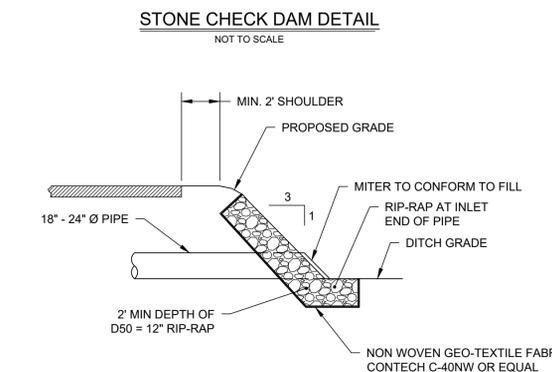
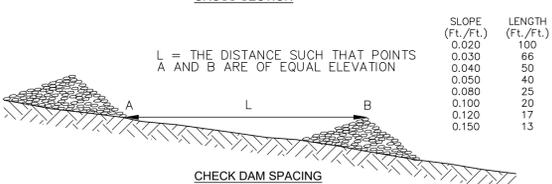


EROSION CONTROL MIX BERM DETAIL  
SCALE: NTS

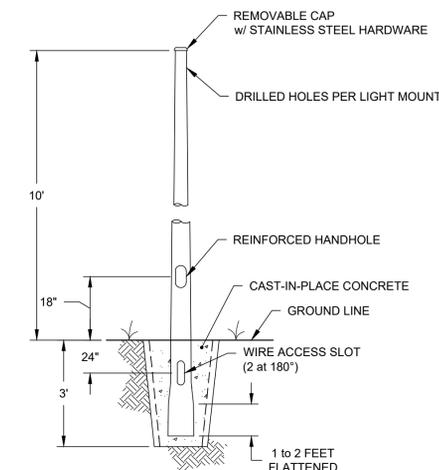
NOTE:  
KEY CHECK DAM INTO BANKS AND EXTEND 18" MINIMUM TO PREVENT BYPASS. SEE SHEET C-2



STONE CHECK DAM DETAIL  
NOT TO SCALE

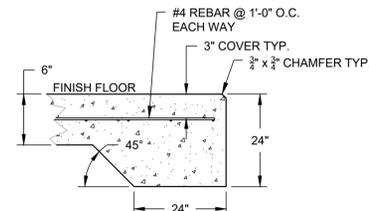


CULVERT INLET DETAIL  
NOT TO SCALE



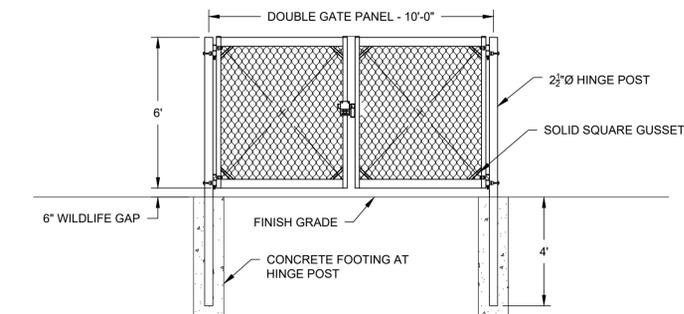
NOTE:  
ROUND TAPERED DIRECT BURIAL 6063 ALUMINUM LIGHT POLE, 10 FEET ABOVE GRADE, 5 INCH DIAMETER, 0.125 INCH WALL THICKNESS OR APPROVED EQUAL.  
HUBBELL OUTDOOR LIGHTING GEOPACK SERIES SIZE 1 LED LIGHT TRP1, TYPE III, ZERO UPLIGHT (UO) DARK SKY, NEIGHBOR FRIENDLY OR APPROVED EQUAL.

OUTDOOR LIGHT POLE DETAIL  
SCALE: NTS

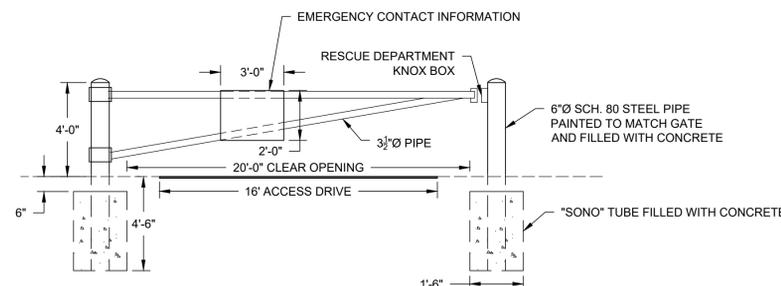


NOTES:  
EQUIPMENT PAD SUB-BASE SHALL BE 6" OF 3/4" CRUSHED STONE ON 1'-0" OF MDOT TYPE A GRAVEL THAT IS COMPACTED 95% STANDARD PROCTOR DENSITY.  
EQUIPMENT PAD 1 FINISH FLOOR ELEVATION: 298.5'  
EQUIPMENT PAD 2 FINISH FLOOR ELEVATION: 313.5'

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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For Regulatory Review Only



Rev	Description	By	Date
A	Project perimeter fence and tree line adjusted to minimize impact to Shore Land Zone.	BFG	8/29/23
B	Modifications to access road and solar array regarding the components for fire protection.	BFG	11/07/23

Drwn By: BG / KJB  
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  
Mainly Solar, LLC  
143 Highland Shores Road  
Casco, Maine

Job Number:  
MS001

Drawing No:  
D-2

Sheet 7 of 9



Superior Concrete, LLC

982 MINOT AVE. AUBURN, ME. 04210

TEL: 207-784-1388

FAX: 866-414-9083

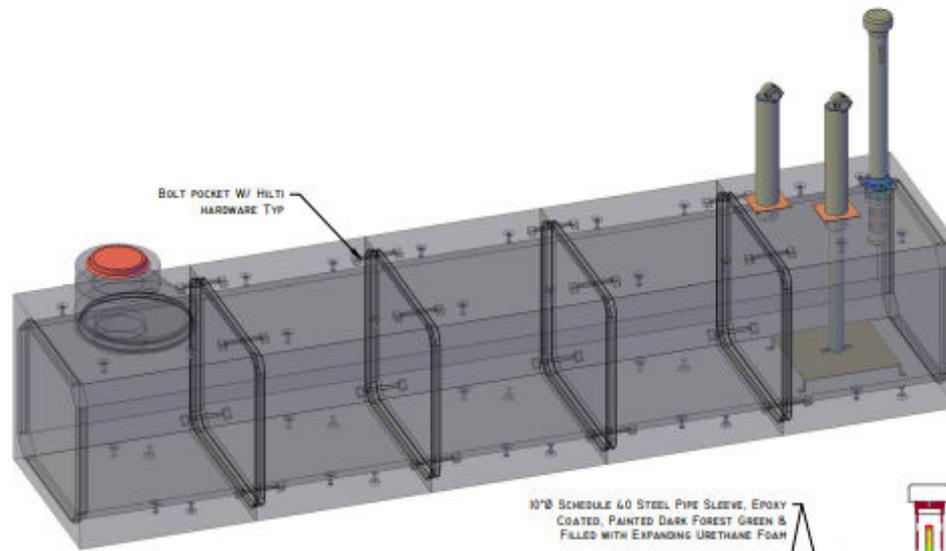
WWW.AMERICANCONCRETE.COM

SCALE: 1/4" = 1'-0" Unless Otherwise Noted

NOTE: SOME DETAILS NOT SHOWN FOR CLARITY

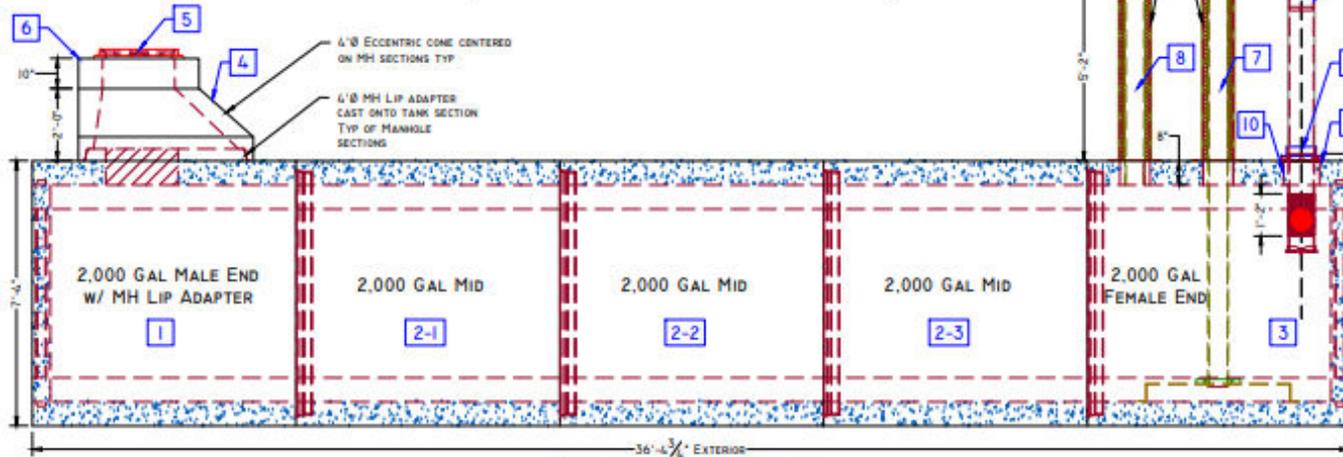
DESIGN NOTES:

1. Concrete
  - 1.1. COMP. STRENGTH MIN. 5,000PSI @ 28 DAYS
  - 1.2. AIR-ENTRAINMENT: MIN. 5%-6%
2. Structural Reinforcement:
  - 2.1. BAR PER ASTM A615, GRADE 60
  - 2.2. DESIGNED FOR H20 WHEEL LOAD RATING
3. Bar Clearance / Protection:
  - 3.1. 1.5" CLR UNLESS OTHERWISE NOTED
4. Manufacturing & Materials:
  - 4.1. JOINTS SEALED W/ TYLOX SUPERSEAL RUBBER GASKET
  - 4.2. CAPACITY TO 6' OF TANK CEILING: 10,000 GAL
  - 4.3. AVAILABLE CAPACITY (MAXIMUM): 10,885 GAL
  - 4.4. ALL EXTERIOR PIPING TO BE PAINTED DARK FOREST GREEN

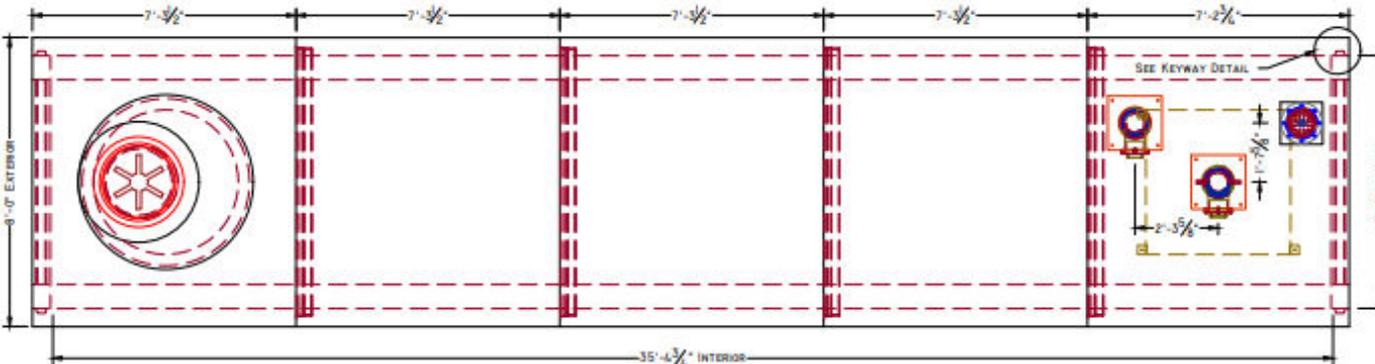


CONCEPTUAL VIEW - NTS

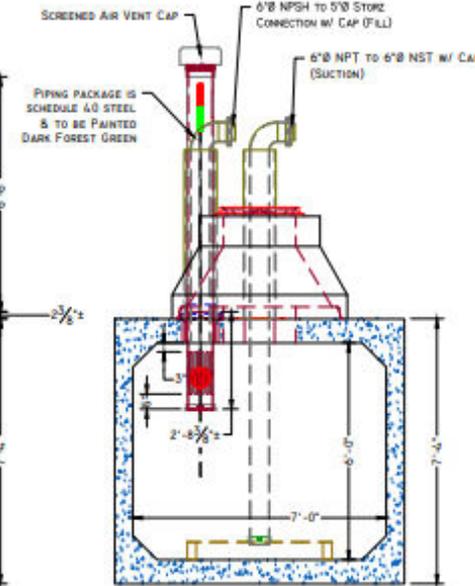
10"Ø SCHEDULE 40 STEEL PIPE SLEEVE, EPOXY COATED, PAINTED DARK FOREST GREEN & FILLED WITH EXPANDING URETHANE FOAM



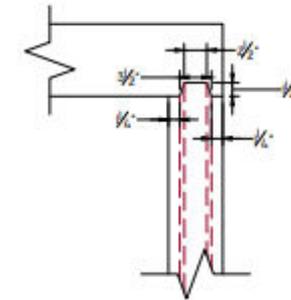
ELEVATION VIEW



PLAN VIEW



END VIEW



KEYWAY DETAIL

SCALE: 3/4" = 1'-0"

ITEM	QTY	BILL OF MATERIALS
1	(1)	7'x6'x7"-2 3/4" FEM. END SECTION W/ WALL WEIGHT: 21,235 # (2,000GAL)
2	(3)	7' x 6' x 7'-3 1/2" STOCK MID SECTION WEIGHT: 19,085 # / EA. (2,000GAL)
3	(1)	7'x6'x7"-3 1/2" MALE END SECTION W/ WALL & MH LIP ADAPTER WEIGHT: 22,950 # (2,000GAL)
4	(1)	4'-0" x 2'-0" MANHOLE ECCENTRIC CONE W/ 24"Ø OPENING WEIGHT: 1,885 #
5	(1)	24"Ø FRAME & COVER
6	(1)	10" GRADE RING W/ 24"Ø OPENING
7	(1)	6"Ø NPT TO 6"Ø NST W/ CAP (SUCTION)
8	(1)	6"Ø NPSH TO 5"Ø STORZ CONNECTION W/ CAP (FILL)
9	(1)	8"Ø PVC VENT ASSEMBLY W/ WATER LEVEL INDICATOR
10	(1)	LS475(12) 12"Ø HOLE FOR 8"Ø PVC VENT PIPE
11	(1)	14" x 14" x 1/2" THICK PLATE
12	(1)	LASCO 8" PVC BOLT FLANGE
	(40)	LPABT436G LIFTING PIN
	(16)	BOLT POCKETS W/ HILTI HARDWARE

STRUCTURE NAME:  
10,000 GAL FIRE CISTERN

JOB NAME:  
SEBAGO CAMP

LOCATION:  
RAYMOND, ME

CONTRACTOR:  
TBDD LLC

DRAWN BY: JWP DATE: 08/10/2020 PROJECT MGR: C.H.

REV.#: 0.00 DATE: 00/00/00 SHEET: 1 OF 1