Final Plan Submission

GDIM: 1-9 Iron Mine Hill Road Solar

North Smithfield, Rhode Island

Assessor's Plat 12 Lots 136B & 137

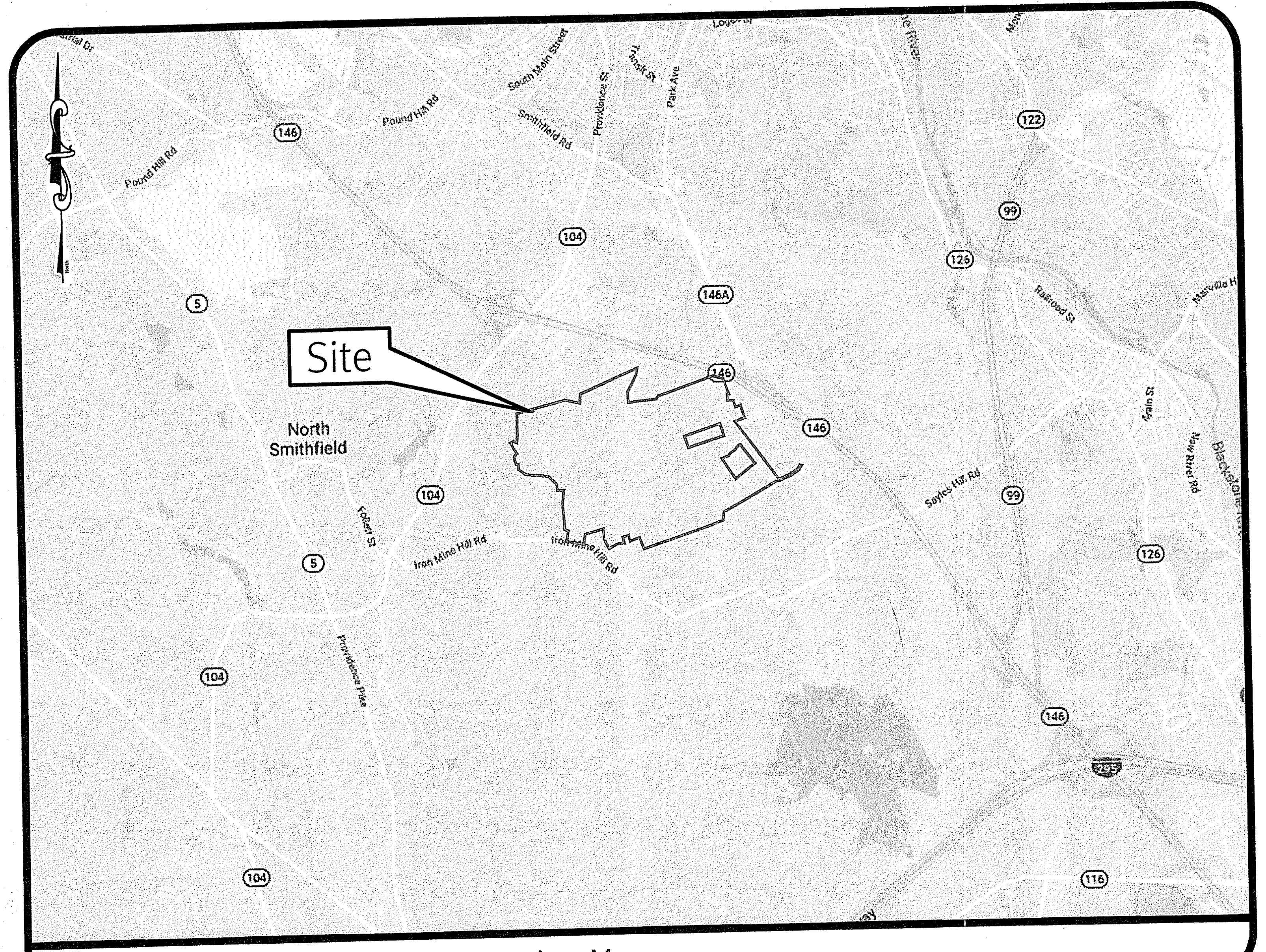
Feridoon Khan Revocable Trust
Feridoon Khan Trustee
5 Kennedy Boulevard
Lincoln, RI 02865

Assessor's Plat 16 Lots 6 & 97

Ralph F. & Muriel J. Ferra
1105 Iron Mine Hill Road
North Smithfield, RI 02896

Assessor's Plat 13 Lots 12 & 51
Assessor's Plat 16 Lot 6
Assessor's Plat 17 Lot 175

Ralph F. & Muriel J. Ferra
1081 Iron Mine Hill Road
North Smithfield, RI 02896



Location Map Scale: 1" = 3,000'

Sheet List

1	Cover Sheet	
2	Site Context Map	
3	Notes and Legend	
4	Boundary Survey Plan	(1 of 1 - by others)
5	Overall Existing Conditions Plan	(by others)
6	Existing Conditions Plan - 1	(by others)
7	Existing Conditions Plan - 2	(by others)
8	Existing Conditions Plan - 3	(by others)
9	Existing Conditions Plan - 4	(by others)
10	Existing Conditions Plan - 5	(by others)
11	Proposed Site Plan	
12	Overall SESC Plan	
13	SESC Plan-1	
14	SESC Plan-2	
15	SESC Plan-3	
16	SESC Plan-4	
17	Grading Plan-1	
18	Grading Plan-2	
19	Grading Plan-3	
20	Grading Plan-4	
21	SESC Detail Sheet	
22	Pond Detail Sheet	
23	Detail Sheet - 1	
24	Detail Sheet - 2	
25	Landscape Plan	

Environmental Management
AUG 18 2020
Office of Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 8 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
6/24/2020
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

Cover Sheet

GDIM 1-9: Iron Mine Hill Road Solar
AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 1 OF 25

DE Job No: 0601-027

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-cvar.dwg Plotted: 6/25/2020

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-cvar.dwg Plotted: 6/25/2020

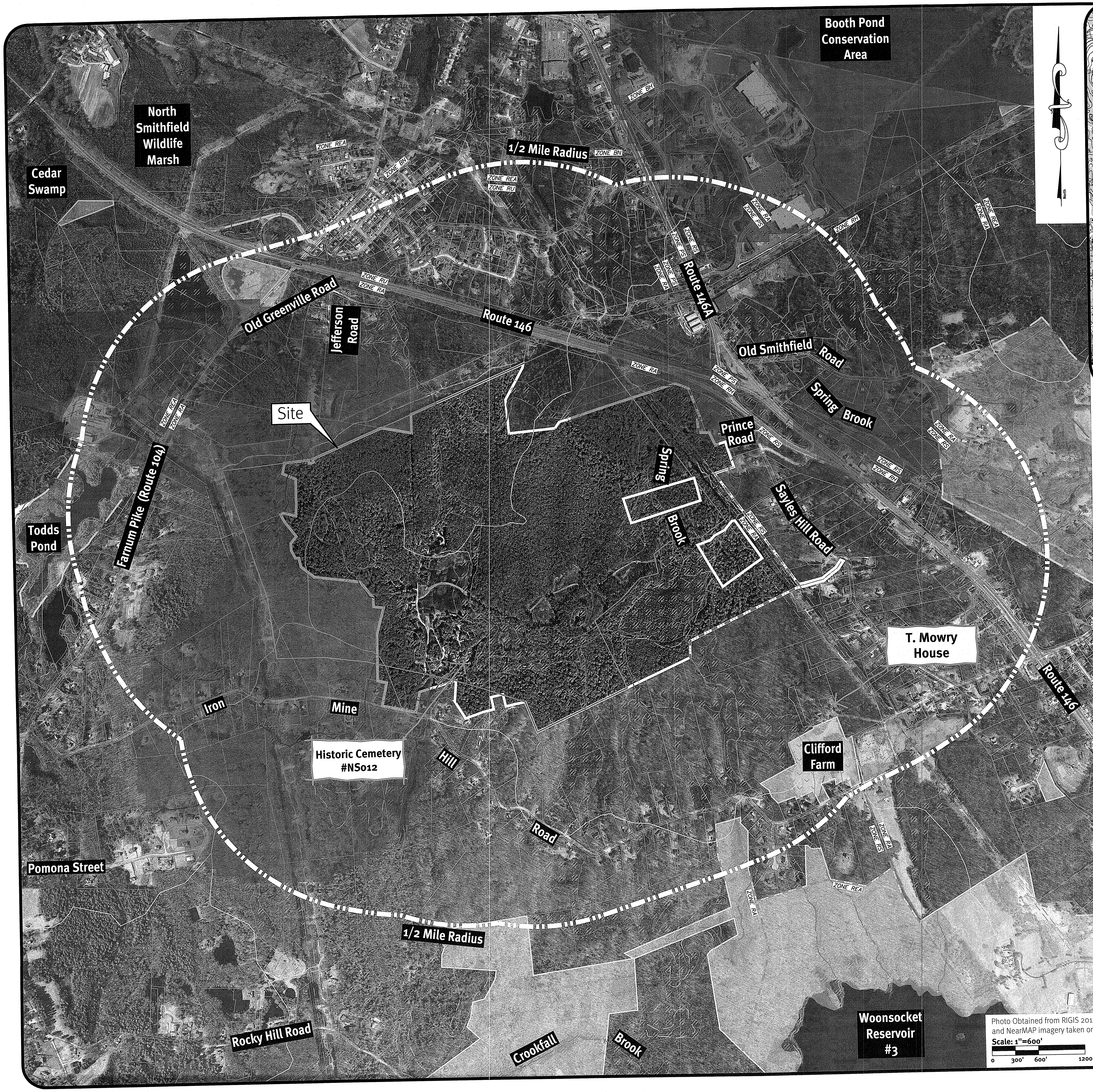
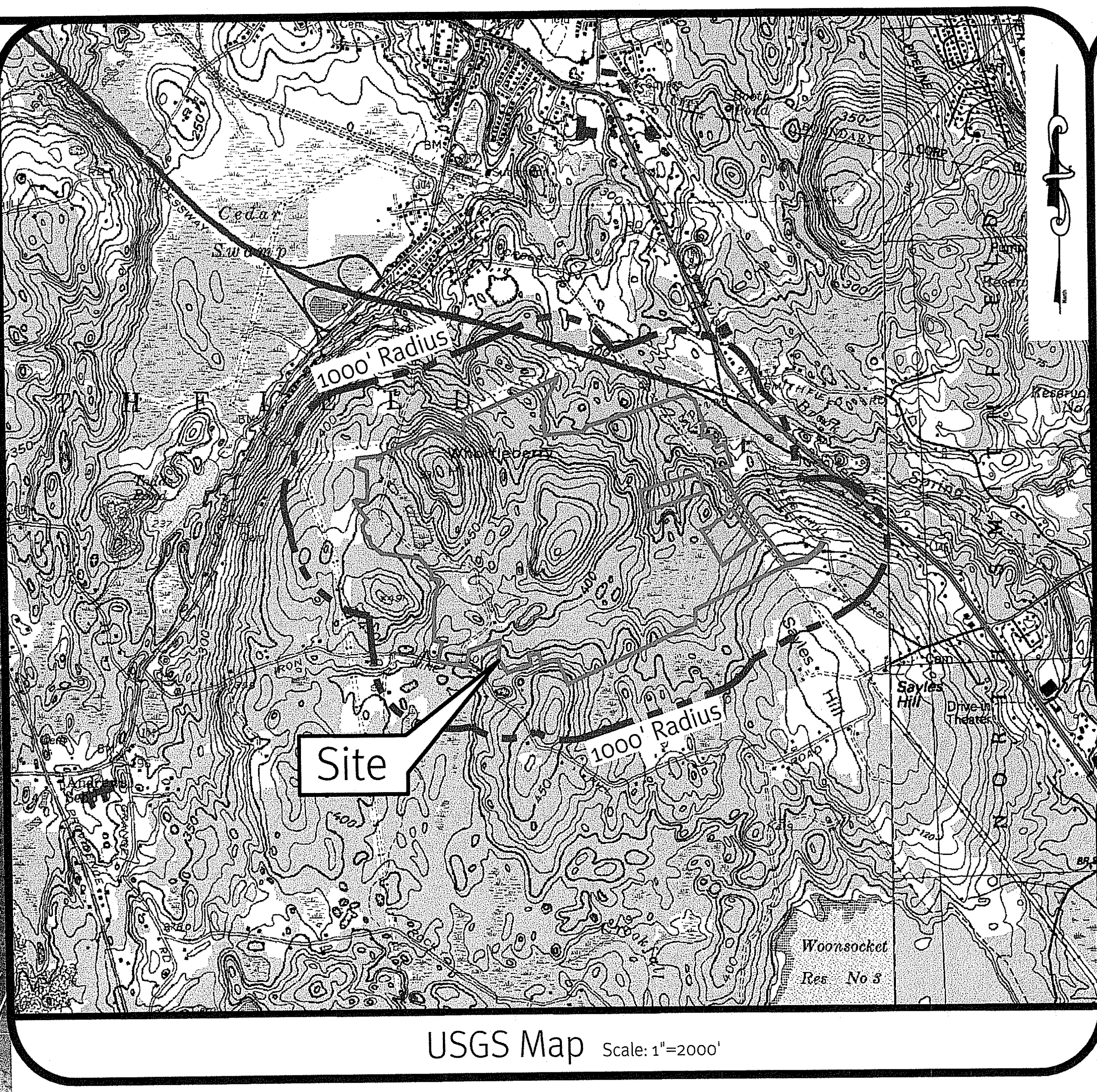

Booth Pond Conservation Area
North Smithfield Wildlife Marsh
Cedar Swamp
1/2 Mile Radius
ZONE REA
ZONE BH
ZONE RU
ZONE RA
ZONE RS
ZONE BN
Old Greenville Road
Jefferson Road
Route 146
Route 146A
Old Smithfield Road
Spring Brook
Site
Prince Road
Sayles Hill Road
Farnum Pike (Route 104)
Todds Pond
T. Mowry House
Route 146
Iron Mine Hill Road
Historic Cemetery #NS012
Clifford Farm
Pomona Street
1/2 Mile Radius
Rocky Hill Road
Crookfall Brook
Woonsocket Reservoir #3
North

Photo Obtained from RIGIS 2014 database and NearMAP imagery taken on 10-04-2017.

Scale: 1"=600'

0 300' 600' 1200'


Cedar Swamp
1000' Radius
1000' Radius
Site
Sayles Hill
Woonsocket Res No 3
NORTH SMITHFIELD
North

USGS Map Scale: 1"=2000'

AUG 1 8 2020

PROPERTY LINE
TOWN LINE
GROUNDWATER RECHARGE AREA
NATURAL HERITAGE AREA
FEMA BOUNDARY
SURFACE WATER PROTECTION AREAS
LOT LINES / RIGHTS-OF-WAY
RIVERS / STREAMS
ZONE RA
ZONE RS
ZONING DISTRICT BOUNDARIES
SOLAR PHOTOVOLTAIC OVERLAY DISTRICT
NON-COMMUNITY WELLHEAD PROTECTION AREA
COMMUNITY WELLHEAD PROTECTION AREA
HISTORIC DISTRICTS
CONSERVATION LAND, OPEN SPACE, AND RECREATIONAL AREAS
PRIME AGRICULTURAL SOILS
HYDRIC SOILS
EASEMENT LINE
NATURAL HERITAGE AREA

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWAT DS PROGRAM
APP DITIONS
AS SPEC E APPROVAL
DATE OCT 2 8 2020
19-0030
NO CH NGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Jencek

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
REGISTERED PROFESSIONAL ENGINEER
CIVIL
8/24/2020

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

Site Context Map
GDIM 1-9: Iron Mine Hill Road Solar
AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 2 OF 25

DE Job No: 0601-027

General Notes:

1. THE SITE IS LOCATED ON THE TOWN OF NORTH SMITHFIELD ASSESSOR'S PLAT 12 LOTS 136B & 137, ASSESSOR'S PLAT 13 LOTS 12 & 51, ASSESSOR'S PLAT 16 LOTS 6 & 97, AND ASSESSOR'S PLAT 17 LOT 175.

2. THE SITE IS 425.53 ACRES AND IS ZONED RA AND IS WITHIN THE SOLAR PHOTOVOLTAIC OVERLAY DISTRICT (S.P.O.D.).

3. THE OWNER OF AP 12 LOTS 136B & 137 IS:
FARIDOON KHAN REVOCABLE TRUST
FARIDOON KHAN, TRUSTEE
5 KENNEDY BOULEVARD
LINCOLN, RI 02865

THE OWNER OF AP 13 LOTS 12 & 51 IS:
RALPH F. & MURIEL J. FERRA
1081 IRON MINE HILL ROAD
NORTH SMITHFIELD, RI 02896

THE OWNER OF AP 16 LOT 97 IS:
RALPH & MURIEL FERRA
1105 IRON MINE HILL ROAD
NORTH SMITHFIELD, RI 02896

THE OWNER OF AP 16 LOT 6 AND AP 17 LOT 175 IS:
RALPH F. & MURIEL J. FERRA
1081 IRON MINE HILL ROAD
NORTH SMITHFIELD, RI 02896

4. THIS SITE IS LOCATED IN FEMA FLOOD ZONES X (UNSHADED) AND X (SHADED). REFERENCE FEMA FLOOD INSURANCE RATE MAP 44007C0160G, MAP REVISED MARCH 2, 2009. (FLOOD PLAIN DESCRIPTIONS SHOWN BELOW)

ZONE X (UNSHADED) – THIS SITE IS LOCATED IN FEMA FLOOD ZONE X. ZONE X ARE AREAS WHERE THERE IS MINIMAL FLOODING.

ZONE X (SHADED) – THIS SITE IS LOCATED IN FEMA FLOOD ZONE X. ZONE X ARE AREAS OF 0.2% ANNUAL CHANCE OF FLOOD; AREAS OF 1% ANNUAL CHANCE OF FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

5. THE BOUNDARY LINE AS SHOWN ON THIS PLAN DEPICTS THE RESULTS OF A CLASS I BOUNDARY RETRACEMENT SURVEY AS PERFORMED BY NATIONAL SURVEYORS–DEVELOPERS, INC. THIS PLAN IS NOT TO BE CONSTRUED AS A CLASS I BOUNDARY RETRACEMENT SURVEY PLAN AND IS NOT SUITABLE FOR RECORDING AS A CLASS I STANDARD SURVEY PLAN.

6. ALL WORK PERFORMED HEREIN IS TO BE GOVERNED BY CURRENT EDITIONS OF THE RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, TOWN OF NORTH SMITHFIELD STANDARD SPECIFICATIONS AND DETAILS AND SPECIFICATIONS INCLUDED AS PART OF THE DRAWINGS. IN AREAS OF CONFLICT BETWEEN THE DIFFERENT SPECIFICATIONS, THE DESIGN PLANS AND PROJECT SPECIFICATIONS WILL TAKE PRECEDENCE OVER THE GENERAL SPECIFICATIONS AND THE DESIGN ENGINEER WILL INTERPRET THE CONSTRUCTION REQUIREMENT. THE CONTRACTOR IS ADVISED TO SUBMIT A REQUEST FOR INFORMATION (RFI) FOR ANY AREAS OF CONFLICT BEFORE COMMITTING TO CONSTRUCTION.

7. THE SITE IS WITHIN A:
   NON–COMMUNITY WELLHEAD PROTECTION AREA (RIDEM)
   NATURAL HERITAGE AREA (RIDEM)
   GROUNDWATER AQUIFER OVERLAY DISTRICT (TOWN)

8. THE FOLLOWING DOCUMENTS ARE CONSIDERED PART OF THE PROJECT PLANS AND THE CONTRACTOR/ OWNER MUST MAINTAIN THESE DOCUMENTS AS PART OF A FULL PLAN SET:
   - SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC). THE SESC CONTAINS THE FOLLOWING:
     - EROSION CONTROL MEASURES
     - SHORT TERM MAINTENANCE
     - ESTABLISHMENT OF VEGETATIVE COVER
     - CONSTRUCTION POLLUTION PREVENTION
     - SEQUENCE OF CONSTRUCTION
   - OPERATION AND MAINTENANCE PLAN (O&M). THE O&M CONTAINS:
     - LONG TERM MAINTENANCE
     - LONG TERM POLLUTION PREVENTION

9. THIS PLAN SET REFERENCES RIDOT STANDARD DETAILS (DESIGNATED AS RIDOT STD X.X.X.). RIDOT STANDARD DETAILS ARE AVAILABLE FROM RIDOT AND ONLINE AT: HTTP://WWW.DOT.RI.GOV/BUSINESS/CONTRACTORSANDCONSULTANTS.PHP.

10. NO NEW WELLS OR OWTS PROPOSED. THE SITE IS NOT PROPOSED TO BE SERVICED BY PUBLIC WATER AND/OR PUBLIC SEWER.

11. THE DRAINAGE SYSTEM MEETS THE TOWN OF NORTH SMITHFIELD SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WITH THE USE OF SWALES AND DRAINAGE BASINS. THE STORMWATER MANAGEMENT SYSTEM MEETS THE RIDEM BEST MANAGEMENT PRACTICES.

12. WORK WILL BE SEQUENCE BEGINNING WITH THE PRIMARY ACCESS ROUTE TO THE SUBSTATION AND SUBSTATION AREA AS A PRIORITY DUE TO THE SCHEDULE FOR NATIONAL GRID TO COMPLETE THE SUBSTATION. THE INTENT IS TO MOBILIZE ON THE SITE ONCE AND PROCEED IN STAGES WITH THE CONSTRUCTION OVER AN APPROXIMATE 1 YEAR TIMEFRAME. WHILE THE NATIONAL GRID WORK ON THE SUBSTATION IS PROCEEDING, THE 9 SOLAR ARRAY AREAS WILL BE PREPARED IN SEQUENCE WITH THE WORK BEGINNING IN THE SUBSTATION AREA AND MOVING SOUTH/SOUTHEAST AND EAST AS WORK PROGRESSES. SOLAR OPERATIONS CANNOT COMMENCE UNTIL NATIONAL GRID'S WORK IS COMPLETED.

13. TEST PITS AND SOIL EVALUATIONS WERE COMPLETED BY DIPRETE ENGINEERING ON JULY 17–19, 2018 AND NOVEMBER 20, 2018.

14. ANY PROPRIETARY PRODUCTS REFERENCED IN THIS PLAN SET ARE REPRESENTATIVE OF THE MINIMUM DESIGN REQUIREMENTS FOR THE PURPOSE IT PROPOSES TO SERVE. ALTERNATIVES TO ANY PROPRIETARY PRODUCT MAY BE SUBMITTED TO THE ENGINEER OF RECORD FOR CONSIDERATION, WHICH MUST BE ACCOMPANIED BY APPROPRIATE SPECIFICATION SHEETS/ DESIGN CALCULATIONS THAT DEMONSTRATE THE ALTERNATIVE(S) MEET THE MINIMUM DESIGN PARAMETERS OF THE PRODUCT SHOWN ON THE PLANS. NO ALTERNATIVES MAY BE USED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.

15. TOPOGRAPHY WAS OBTAINED FROM PLAN ENTITLED "SOLAR FARM PROJECT, NORTH SMITHFIELD, RHODE ISLAND" BY AEROTECH INTERNATIONAL, PROVIDENCE, RI, DATED 09–07–2018, SCALE: 1" = 40'.

16. SOIL MAPPING OBTAINED FROM WEBSOIL SURVEY OF RHODE ISLAND, PREPARED BY U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.

17. THE SITE LOCATION AND LIMITS OF WORK PROVIDE SIGNIFICANT VEGETATED BUFFERS FROM SURROUNDING DEVELOPED PROPERTIES. SELECTIVE SCREENING VEGETATION MAY BE INCORPORATED WITHIN THE APPROVED LIMITS OF DISTURBANCE AS DETERMINED DURING THE TOWNS PRELIMINARY PLAN REVIEW AND PUBLIC HEARING PROCESS AFTER RIDEM REVIEW HAS COMPLETED.

18. THIS PLAN SET MAY REFERENCE AND/ OR INCLUDE REPRODUCTIONS OF PROPRIETARY PRODUCTS/ DETAILS BY OTHERS, AND/ OR THEIR ASSOCIATED SPECIFICATIONS. ANY REFERENCED OR REPRODUCED PROPRIETARY PRODUCT OR DETAIL BY OTHERS THAT IS SHOWN ON DIPRETE PLANS IS STRICTLY FOR INFORMATION/ SPECIFICATION PURPOSES ONLY. DIPRETE ENGINEERING DOES NOT WARRANT ANY PROPRIETARY PRODUCTS, DETAILS BY OTHERS OR THEIR RESPECTIVE DESIGNS. IF A DIPRETE ENGINEERING PLAN INCLUDES A PROPRIETARY PRODUCT/ DETAIL BY OTHERS (EITHER EXPLICITLY OR IMPLIED) AND IS STAMPED BY A REGISTERED PROFESSIONAL ENGINEER OF DIPRETE ENGINEERING, SAID STAMP DOES NOT EXTEND TO ANY PORTION OF THE PROPRIETARY PRODUCT/ DETAIL BY OTHERS OR ITS DESIGN.

19. THE SITE HAS RECEIVED THE FOLLOWING APPROVALS FROM RIDEM: WETLAND EDGE VERIFICATION #18–0237, WETLAND APPLICATION NO. 19–0030, RIPDES FILE NUMBER RIR101865. A DRY HYDRANT WAS ALSO APPROVED UNDER APPLICATION NO. 19–0125.

Soil Erosion and Sedimentation Control Notes:

1. THE CONTRACTOR IS RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENT CONTROL ON SITE WHICH MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS AND AUTHORITY HAVING JURISDICTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER, THE DIRECTOR OF PUBLIC WORKS, THE TOWN ENGINEER, AND RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

2. ALL EROSION CONTROL, TEMPORARY SWALES, TEMPORARY SEDIMENT TRAPS, TEMPORARY SEDIMENTATION PONDS, ETC. TO BE INSTALLED PER THE RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL LATEST EDITION AND THE SOIL EROSION SEDIMENTATION CONTROL PLAN (SESC).

3. TEMPORARY SWALES ARE TO BE USED TO CONTROL RUNOFF DURING CONSTRUCTION OF THE PROPOSED ROADWAY. TEMPORARY SWALES TO BE VEGETATED AFTER CONSTRUCTION. EROSION CONTROL MATS ARE TO BE INSTALLED, IF NECESSARY, TO PREVENT EROSION AND SUPPORT VEGETATION. AFTER CONSTRUCTION IS COMPLETE AND TRIBUTARY AREAS TO THE SWALES HAVE BEEN STABILIZED, THE TEMPORARY SWALES ARE TO BE CLEARED AND FINAL DESIGN, INCLUDING INSTALLATION OF THE GRASS SWALE TO BE PER THE DESIGN PLANS.

4. ONCE THE SEDIMENT TRAPS / SEDIMENT BASINS ARE NO LONGER REQUIRED AND ALL TRIBUTARY AREAS HAVE BEEN STABILIZED, THE TEMPORARY SEDIMENTATION BASINS ARE TO BE CLEANED AND BROUGHT TO FINAL DESIGN GRADES.

5. FOR SEQUENCE OF CONSTRUCTION, PROJECT PHASING AND CONSTRUCTION PHASING SEE SESC PLAN.

6. CONTRACTOR MAY MODIFY SEQUENCE OF CONSTRUCTION WITH APPROVAL FROM DESIGN ENGINEER AND OWNER.

7. TEMPORARY SEDIMENT BASINS MUST BE DEWATERED USING A DEVICE THAT DISCHARGES WATER FROM THE TOP OF THE DEWATERING ZONE. A SKIMMER MUST BE PROVIDED FOR EACH TEMPORARY SEDIMENTATION BASIN SEE SEDIMENTATION BASIN DETAIL.

8. IF CONCRETE TRUCKS ARE WASHED OUT ON SITE, ALL WASHOUT MUST BE COMPLETED IN THE DESIGNATED CONCRETE WASHOUT AREA.

Demolition Notes:

1. ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN WERE PROVIDED BY OTHERS AND ARE APPROXIMATE ONLY. LOCATIONS MUST BE DETERMINED IN THE FIELD BEFORE EXCAVATION, BLASTING, UTILITY INSTALLATION, BACKFILLING, GRADING, PAVEMENT RESTORATION, AND ALL OTHER SITE WORK. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THESE DOCUMENTS. CONTACT DIG SAFE A MINIMUM OF 72 WORKING HOURS PRIOR TO ANY CONSTRUCTION AT 811. DIG SAFE IS RESPONSIBLE FOR CONTACTING MEMBER UTILITY COMPANIES. DIG SAFE MEMBER UTILITY COMPANIES ARE RESPONSIBLE TO MARK ONLY THE FACILITIES THAT THEY OWN OR MAINTAIN. NON DIG SAFE MEMBER COMPANIES ARE NOT NOTIFIED BY DIG SAFE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INVESTIGATE AND NOTIFY IF ANY PRIVATELY OWNED OR NON DIG SAFE MEMBER UTILITIES ARE IN THE AREA.

PER THE CODE OF FEDERAL REGULATIONS – TITLE 29, PART 1926 IT IS THE SITE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ACCURATE UNDERGROUND UTILITY LINE LOCATIONS FROM THE UTILITY COMPANIES, UTILITY OWNERS AND, OR VIA UNDERGROUND UTILITY LOCATION EQUIPMENT AS NEEDED TO ESTABLISH ACCURATE LOCATIONS PRIOR TO ANY EXCAVATION. THE USE OF PROFESSIONAL UTILITY LOCATING COMPANIES PRIOR TO ANY EXCAVATION IS RECOMMENDED.

DIPRETE ENGINEERING IS NOT A PROFESSIONAL UTILITY LOCATION COMPANY, AND IS NOT RESPONSIBLE FOR UNDERGROUND UTILITIES, DEPICTED OR NOT, EITHER IN SERVICE OR ABANDONED. ANY SIZES, LOCATIONS, EXISTENCE, OR LACK OF EXISTENCE OF UTILITIES SHOWN ON THESE PLANS SHOULD BE CONSIDERED APPROXIMATE UNTIL VERIFIED BY A PROFESSIONAL UTILITY LOCATION COMPANY. DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED.

2. CONTRACTOR TO OBTAIN ALL FEDERAL, STATE, AND MUNICIPAL APPROVALS PRIOR TO THE START OF CONSTRUCTION.

3. CONTRACTOR TO PERFORM DAILY SWEEPING AT CONSTRUCTION ENTRANCE DURING DEMOLITION AND CONSTRUCTION TO MINIMIZE SEDIMENTS ON PUBLIC STREETS.

4. ANY EXISTING BUILDING(S) AND PROPERTY PROPOSED TO REMAIN WHICH ARE DAMAGED BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

5. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS INDICATED ON THE PLANS UNLESS SPECIFIED OTHERWISE HERE IN. R&D MATERIALS MUST INCLUDE BUT ARE NOT LIMITED TO PAVEMENT, GRAVEL, CRUSHED ROCK, CATCH BASINS, MANHOLES, GRATES/FRAMES/COVERS, AND ANY EXCESS SOIL THAT IS NOT INCORPORATED INTO THE WORK. NO TOP OR SUBSOIL IS TO LEAVE THE SITE.

6. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, ALL DISTURBED AREAS INCLUDING THE CONTRACTOR'S STOCKPILE AND STAGING AREAS WITHIN THE LIMIT OF WORK MUST BE RESTORED TO MATCH THE DESIGN PLANS.

7. ALL EXISTING STRUCTURES ONSITE TO BE RAISED.

Site Layout Notes:

1. ALL ELECTRICAL CONNECTION AND DISTRIBUTION LINES WITHIN THE FACILITY SHALL BE UNDERGROUND. ELECTRICAL EQUIPMENT BETWEEN THE SUBSTATION AND THE UTILITY CONNECTION WILL BE ABOVE GROUND.

2. OVERNIGHT LIGHTING AT THE SUBSTATION IS TYPICALLY LIMITED TO A COURTESY LIGHT AT THE CONTROL HOUSE DOOR. LIGHTING WILL BE PROVIDED THROUGHOUT THE SUBSTATION TO FACILITATE EMERGENCY NIGHT TIME MAINTENANCE. LIMITED SUBSTATION LIGHTING MAY BE LEFT ON FOR SECURITY PURPOSES IF DEEMED NECESSARY BY NATIONAL GRID.

3. PROPOSED SIGNAGE IS LIMITED TO SECURITY SIGNS AND VOLTAGE WARNING SIGNS (OR SIMILAR) INSTALLED ON THE FACILITY PERIMETER FENCING.

4. NO PRIME AGRICULTURAL SOILS ARE TO BE REMOVED DURING CONSTRUCTION AND INSTALLATION OF THE SYSTEM.

5. THE SOLAR ARRAY SHALL BE ENCLOSED BY A 6' HIGH CHAIN LINK PERIMETER FENCE WITH 12' WIDE GATES WITH KNOX BOXES. THE NATIONAL GRID SUBSTATION WILL BE ENCLOSED BY AN 8' HIGH CHAIN LINK WITH BARRIER WIRE ON TOP. SUBSTATION FENCE EXTENDS BELOW GRADE.

6. GROUND MOUNTED SOLAR INSTALLATIONS SHALL NOT EXCEED 15 FEET IN HEIGHT (ZONING ORDINANCE 5.7.5.j). TYPICALLY, HEIGHT OF PROPOSED SOLAR PANEL INSTALLATION RANGES FROM 3 FEET TO 12 FEET.

7. THE NATIONAL GRID SUBSTATION AREA AND GDIM 1–9 INTERCONNECTION AREA WILL HAVE ABOVE GROUND UTILITIES AND POLES. THE ELECTRIC LINES FROM GDIM 1–9 TO THE INTERCONNECTION AREA WILL BE INSTALLED UNDERGROUND.

As-Built Notes:

ALL COMPONENTS OF THE DRAINAGE SYSTEMS MUST BE ASBUILT PRIOR TO COVERING. ENGINEER TO BE NOTIFIED PRIOR TO COVERING TO SURVEY ASBUILT LOCATIONS. ENGINEER WILL NOT ACCEPT FIELD MEASUREMENTS FROM THE SITE CONTRACTOR.

Soil Information:

(REFERENCE: USDA NATURAL RESOURCES CONSERVATION SERVICE)

SOIL NAME	DESCRIPTION
CaD	CANTON–CHARLTON–ROCK OUTCROP COMPLEX, 15 TO 35 PERCENT SLOPES
CC	CANTON–URBAN LAND COMPLEX, VERY ROCKY
CeC	CANTON AND CHARLTON FINE SANDY LOAMS, VERY ROCKY, 3 TO 15 PERCENT SLOPES
ChB	CANTON AND CHARLTON VERY STONY FINE SANDY LOAMS, 3 TO 8 PERCENT SLOPES
Rf	RIDGEBURY, WHITMAN, AND LEICESTER EXTREMELY STONY FINE SANDY LOAMS
Ss	SUDBURY SANDY LOAM
SvB	SUTTON EXTREMELY STONY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES
WoB	WOODBRIDGE VERY STONY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES
WrB	WOODBRIDGE EXTREMELY STONY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES

Grading and Utility Notes:

1. CONSTRUCTION TO COMMENCE LATE 2019 OR UPON RECEIPT OF ALL NECESSARY APPROVALS.

2. THE CONTRACTOR MUST COORDINATE WITH ALL OF THE APPROPRIATE UTILITY COMPANIES FOR AGREEMENTS TO SERVICE THE PROPOSED SITE. THIS MUST BE DONE PRIOR TO CONSTRUCTION. NO REPRESENTATIONS ARE MADE BY DIPRETE ENGINEERING THAT UTILITY SERVICE IS AVAILABLE.

3. PRIOR TO START OF CONSTRUCTION, CONTRACTOR MUST VERIFY EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES. CONTRACTOR MUST NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

4. ALL PROPOSED UNDERGROUND UTILITIES SERVING THE SITE AND BUILDINGS TO BE COORDINATED WITH OWNER, ARCHITECT, AND ENGINEER PRIOR TO INSTALLATION.

5. ALL RETAINING WALLS AND STEEP SLOPES ARE SUBJECT TO FINAL STRUCTURAL DESIGN. DIPRETE ENGINEERING IS NOT PROVIDING THE STRUCTURAL DESIGN OF THESE ITEMS. ALL WALLS AND STEEP SLOPES ARE TO BE DESIGNED AND BUILT UNDER THE DIRECTION OF A PROFESSIONAL GEOTECHNICAL ENGINEER AND CERTIFIED TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT. SHOP DRAWINGS TO BE SUBMITTED PRIOR TO CONSTRUCTION. FINAL STRUCTURAL DESIGN MUST INCORPORATE THE INTENT OF THE GRADING SHOWN ON THESE PLANS AND ALL WORK MUST BE WITHIN THE LIMIT OF DISTURBANCE SHOWN ON THE PLANS.

6. ALL CUT AND FILL AREAS ARE TO BE DONE UNDER THE DIRECTION OF A PROFESSIONAL GEOTECHNICAL ENGINEER WITH TESTING AND CERTIFICATION TO BE PROVIDED TO THE APPLICANT AT THE COMPLETION OF THE PROJECT. DIPRETE ENGINEERING IS NOT PROVIDING THE FILL SPECIFICATION, GEOTECHNICAL ENGINEERING, STRUCTURAL ENGINEERING SERVICES, OR SUPERVISION AS PART OF THESE DRAWINGS.

7. NO STOCKPILING OF MATERIAL TO BE LOCATED IN THE RIGHT OF WAY AND NO OPEN TRENCHES ARE TO BE LEFT OVERNIGHT.

8. ALL LOAM IN DISTURBED AREAS TO BE STOCKPILED FOR FUTURE USE.

9. ALL EXCESS SOIL, TREES, ROCKS, BOULDERS, AND OTHER REFUSE, MUST BE DISCARDED OFF SITE IN AN ACCEPTABLE MANNER AT AN APPROVED LOCATION. STUMPS MUST BE GROUND ON SITE OR REMOVED.

10. NO STUMP DUMPS ARE PROPOSED ON SITE.

11. GRADING SHOWN ON THE PLANS IS APPROXIMATE AND MAY BE FIELD MODIFIED WITH APPROVAL FROM DESIGN ENGINEER.

Preliminary Plan - Conditions of Approval:

1. THE DEVELOPER AND SOLAR ARRAY OPERATOR SHALL PAY THE FEE FOR THE TOWN'S INDEPENDENT ENGINEER, HIRED BY THE TOWN, TO MONITOR ALL PHASES OF CONSTRUCTION FOR COMPLIANCE WITH LOCAL AND STATE LAWS AS WELL AS PROVISIONS OF THIS APPROVAL WITH MONTHLY PEER REVIEW UPDATES PROVIDED TO THE PLANNING BOARD AS PART OF STAFF'S REPORT.

2. INSTALL A MINIMUM OF 5 MONITORING WELLS WITHIN TWO BLAST ZONES. WATER TEST DESIGN, FREQUENCY , AND DATA PRESENTATION TO BE DEVELOPED BY APPLICANT AND PEER REVIEWER WITH AN APPROACH PRESENTED WITH FINAL APPLICATION. RESULTS OF WELL TESTING ARE PUBLIC RECORD.

3. PEER REVIEW TO OVERSEE ALL WORK IN HISTORICAL SALVAGE AREAS WITH SAID AREAS TO BE TESTED FOR SOIL CONTAMINATION PRIOR TO EARTHWORK. ALL CONTAMINATED SOILS, IF PRESENT, SHALL BE REMEDIATED IN ACCORDANCE WITH RIDEM WASTE MANAGEMENT REGULATIONS.

4. VEGETATIVE MAINTENANCE PLAN TO USE MOWERS (CUT) AS OPPOSED TO PESTICIDES OR HERBICIDES. APPLICANT TO SUBMIT VEGETATIVE MAINTENANCE PLAN WITH FINAL APPLICATION.

5. CREATE GATED ACCESS TO PROTECTED ARCHEOLOGICAL SITES TO ALLOW HERITAGE ASSOCIATION ACCESS UPON REQUEST.

6. APPLICANT TO FURTHER INVESTIGATE AND SEPARATELY FENCE MULTIPLE ARCHEOLOGICAL SITES WITH ASSISTANCE FROM THE TOWN'S HERITAGE ASSOCIATION, OR, REMOVE GDIM 3 ENTIRELY. DECISION TO BE PRESENTED WITH FINAL PLAN APPLICATION.

7. IF SOLAR PROJECT POWER IS INCREASED ABOVE 38.4 MEGAWATTS AC, THE PROJECT SHALL REQUIRE PLANNING BOARD REVIEW. IF INCREASED ABOVE 40 MEGAWATTS, REQUIRE RHODE ISLAND ENERGY FACILITY SITING BOARD REVIEW. APPLICANT SHALL OBTAIN INPUT FROM NATIONAL GRID REGARDING THE POTENTIAL FOR INCREASED USAGE OF THE SUBSTATION AND SUBMIT SAID INPUT WITH FINAL PLAN APPLICATION.

8. APPLICANT MUST SUBMIT A BOND TO PROTECT IRON MINE HILL ROAD – BOND AMOUNT TO BE ESTABLISHED BY PEER REVIEWER AND SUBMITTED WITH FINAL PLAN APPLICATION.

9. APPLICANT SHALL COMPLY WITH AMBIENT SOUND TESTING AS REQUIRED PER ZONING SECTION 5.7.11.G. AND 5.7.5.E.2. LOCATE, ON A PLAN, ALL AREAS FROM WHERE SOUND READINGS WERE TAKEN. CONFIRM WITH NATIONAL GRID THAT THE SUBSTATION WILL ALSO FOLLOW TOWN NOISE ORDINANCE.

10. PROVIDE HEALTH PRODUCT DECLARATIONS/ENVIRONMENTAL PRODUCT DECLARATIONS ON ALL PANELS INSTALLED ON SITE. IF ANY ARE TO BE REPLACED, THEY ARE TO PROVIDE NEW PRODUCT DATA. ALL PANELS TO BE SILICON IN NATURE AND NOT CONTAIN TOXINS.

11. SUBMIT LANDSCAPING PLAN AS DISCUSSED FOR PLAT 12, LOT 291 AND SUBMIT WITH FINAL PLAN APPLICATION. APPLICANT TO MAINTAIN SAID BUFFER PER ZONING SECTION 5.7.5.G.1.

12. EXTERIOR LIGHTING FOR THE SUBSTATION CONTROL BUILDING WILL CONSIST OF A SOUTH–FACING LIGHT CONTROLLED BY A MOTION SENSOR . ALL LIGHTING AT SUBSTATION SHALL BE DARK SKY COMPLIANT WITH NO OFFSIDE LIGHTING IMPACTS. APPLICANT TO ENSURE NATIONAL GRID IS AWARE OF THIS CONDITION WITH INPUT FROM NATIONAL GRID SUBMITTED WITH FINAL APPLICATION.

13. SOLAR ARRAY OPERATOR SHALL COORDINATE WITH CONSERVATION COMMISSION TO VISIT THE SITE ANNUALLY TO OBSERVE POLLINATOR MEADOW GROWTH ALONG WITH ACCESS TO PEER REVIEW REPORTS.

14. OPERATOR SHALL NOTIFY PLANNER AND OR BUILDING INSPECTOR PRIOR TO CLEANING PANELS; USE ONLY WATER TO CLEAN PANELS.

15. BLASTING PLAN DEPICTING BLASTING AREAS, AS APPROVED BY THE STATE FIRE MARSHAL, SHALL BE SUBMITTED TO THE TOWN PRIOR TO BLASTING. NO TOXINS SHALL BE USED IN THE BLASTING PROCESS AND SOIL TESTING IN ALL FORMER SALVAGE AREAS, AS WELL AS THOSE AREAS IDENTIFYING IN THE APPLICANT'S ARCHEOLOGICAL REPORTS, SHALL BE TESTED PRIOR TO BLASTING.

16. UPON REQUEST BY A PROPERTY OWNER WHO OWNS A WELL WITHIN 1,000 FEET OF A BLAST SITE, THE APPLICANT SHALL TEST WELL CAPACITY AND WATER QUALITY BEFORE BLASTING OPERATION BEGINS.

17. PEER REVIEW SHALL BE PROVIDED A CONSTRUCTION SCHEDULE WITH KEY MILESTONES AS TO MAKE FOR EFFICIENT USE OF PEER REVIEW TIME.

18. APPLICANT MUST SATISFY THE CITY OF WOONSOCKET WATER DEPARTMENT REGARDING THEIR LETTER DATED MARCH 4, 2020, AND, THE CITY'S PEER REVIEW NEEDS WITH EVIDENCE TO SUCH SUBMITTED WITH FINAL PLAN APPLICATION.

19. APPLICANT SHALL SUBMIT LIABILITY INSURANCE AS REQUIRED BY ZONING SECTION 5.7.5.Q.

20. APPLICANT TO DISCUSS POTENTIAL FOR CONSERVATION EASEMENT TO PROTECT ARCHEOLOGICAL AREAS AND REPORT BACK AT FINAL PLAN APPLICATION.

21. APPLICANT TO SUPPORT EVIDENCE OF ENFORCEMENT REGARDING CONSTRUCTION TRAFFIC PLAN AND INCLUDE NOTIFICATION TO NATIONAL GRID CONTRACTORS AND SUBCONTRACTORS (BEING MINDFUL OF SPEED LIMITS GIVEN PRESENCE OF SCHOOL PROPERTIES IN THE AREA).

Abbreviations Legend

NOT ALL ITEMS SHOWN WILL APPEAR ON PLANS

ADA	AMERICANS WITH DISABILITY ACT
AHJ	AUTHORITY HAVING JURISDICTION
AP	ASSESSOR'S PLAT
ASSF	AREA SUBJECT TO STORMWATER FLOWAGE
AVGS	AVERAGE SLOPE
BC	BOTTOM OF CURB
BT	BOTTOM OF TESTHOLE
BIT	BITUMINOUS (BERM)
BIO	BIORETENTION
BS	BASEMENT SLAB ELEVATION
BW	FINISHED GRADE AT BOTTOM OF WALL
CB	CATCH BASIN
(C)	CALCULATED
℄	CENTERLINE
(CA)	CHORD ANGLE
CLDIP	CONCRETE LINED DUCTILE IRON PIPE
CO	CLEAN OUT
CONC	CONCRETE
(D)	DEED
D	DEPTH
DCB	DOUBLE CATCH BASIN
DI	DROP INLET
DMH	DRAINAGE MANHOLE
DP	DETENTION POND
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
ESC	EROSION AND SEDIMENT CONTROL
EX	EXISTING
FES	FLARED END SECTION
FFE	FINISH FLOOR ELEVATION
GS	GARAGE SLAB ELEVATION
GWT	GROUND WATER TABLE
HW	HEADWALL
HC	HIGH CAPACITY CATCH BASIN GRATE
HDPE	HIGH DENSITY POLYETHYLENE
ID	INLINE DRAIN
INV	INVERT
IP	INFILTRATION POND
L	LENGTH
LF	LINEAR FEET
LOD	LIMIT OF DISTURBANCE
LP	LIGHT POLE
(M)	MEASURED
N/F	NOW OR FORMERLY
OHW	OVERHEAD WIRE
PE	POLYETHYLENE
ℙ	PROPERTY LINE
PR	PROPOSED
PVC	POLYVINYL CHLORIDE
R	RADIUS
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RIHB	RHODE ISLAND HIGHWAY BOUND
RL	ROOF LEADER
ROW	RIGHT OF WAY
S	SLOPE
SD	SUBDRAIN
SED	SEDIMENT FOREBAY
SF	SQUARE FOOT
SFL	STATE FREEWAY LINE
SFM	SEWER FORCE MAIN
SG	SLAB ON GRADE ELEVATION
SHL	STATE HIGHWAY LINE
SMH	SEWER MANHOLE
SNDF	SAND FILTER
SS	SIDE SLOPE
STA	STATION
TC	TOP OF CURB
TD	TRENCH DRAIN
TF	TOP OF FOUNDATION
TRANS	TRANSITION
TW	TOP OF WALL (FINISHED GRADE AT TOP OF WALL)
TYP	TYPICAL
UDS	UNDERGROUND DETENTION SYSTEM
UIS	UNDERGROUND INFILTRATION SYSTEM
UP	UTILITY POLE
W	WIDTH
WO	WALKOUT ELEVATION
WQ	WATER QUALITY

Existing Legend

NOT ALL ITEMS SHOWN WILL APPEAR ON PLANS

▬	PROPERTY LINE
—— —— ——	SETBACK LINE
—— – – ——	ASSESSORS LINE
—— – – ——	INTERNAL PROPERTY LINE
▨	BUILDING
⌒⌒⌒	BRUSHLINE
⌒⌒⌒	TREELINE
–□–□–□–	GUARDRAIL
—x—x—	FENCE
—∧—∧—	RETAINING WALL
○○○○○	STONE WALL
– – 2 – –	MINOR CONTOUR LINE
—— 10 ——	MAJOR CONTOUR LINE
– – – W —	WATER LINE
– – – S —	SEWER LINE
– – – SFM —	SEWER FORCE MAIN
– – – G —	GAS LINE
– – – E —	ELECTRIC LINE
– – – OHW —	OVERHEAD WIRES
– – – D —	DRAINAGE LINE
HkC / CeC	SOILS LINES
—— —— ——	50' PERIMETER WETLAND
—— • • ——	100' RIVERBANK WETLAND
—— • ——	200' RIVERBANK WETLAND
– – – – – –	ASSF
ZONE X / ZONE X	FEMA BOUNDARY
—— – ——	STREAM
————	EDGE OF GIS WETLANDS
—▲——▲—	EDGE OF FLAGGED WETLANDS
▲	WETLAND FLAG – RIDEM VERIFIED
▲	WETLAND FLAG
—— – – ——	STATE HIGHWAY LINE
—— – ——	STATE FREEWAY LINE
▬	SOLAR PHOTOVOLTAIC OVERLAY DISTRICT (S.P.O.D.)
— — — — —	S.P.O.D. 100' SETBACK LINE
— — — — —	EASEMENT
ZONE RS / ZONE RA	ZONING DISTRICT BOUNDARIES

▲/△		NAIL FOUND/SET
●/◎		DRILL HOLE FOUND/SET
○/◎		
■/□		BOUND FOUND/SET
		SIGN
●		BOLLARD
SEV		SOIL EVALUATION
Ⓒ	CB	CATCH BASIN
Ⓒ	DCB	DOUBLE CATCH BASIN
Ⓓ	DMH	DRAINAGE MANHOLE
	FES	FLARED END SECTION
		GUY POLE
Ⓔ	EMH	ELECTRIC MANHOLE
UP	UP	UTILITY/POWER POLE
☼		LIGHTPOST
Ⓢ	SMH	SEWER/SEPTIC MANHOLE
SV		SEWER VALVE
•		CLEANOUT
		HYDRANT
		IRRIGATION VALVE
WV		WATER VALVE
Ⓦ		WELL
◉		MONITORING WELL
?		UNKNOWN MANHOLE
GV		GAS VALVE
⊕		BENCH MARK

AUG 18 2020

Proposed Legend

NOT ALL ITEMS SHOWN WILL APPEAR ON PLANS

—(310)—	MAJOR CONTOUR LINE
—(308)—	MINOR CONTOUR LINE
×(312)	SPOT ELEVATION
▒	2:1 AND STEEPER SLOPES
————	EDGE OF GRAVEL ROAD
⬡⬡⬡	GRAVEL ACCESS PATH (SEE DETAIL)
▒	DRAINAGE AREAS
–□–□–□–	6' HIGH CHAINLINK FENCE
□	CONCRETE PADS FOR INVERTERS
▭	SOLAR PANELS (SHOWN IN VARIOUS COLORS)
—— E ——	ELECTRIC LINE (DESIGN BY OTHERS)
■□■□■	DRAINAGE LINE
—— SD ——	PERFORATED SUBDRAIN
– –→– –→– –	SWALE
—— OHW ——	OVERHEAD WIRE
—— ETC ——	ELECTRIC, TELEPHONE, CABLE LINE
— — — —	POND EARTHEN EMBANKMENT (SEE DETAIL)
— — — —	LIMIT OF DISTURBANCE/ LIMIT OF CLEARING (NO EROSION CONTROL)
——●——●——	LIMIT OF DISTURBANCE/ LIMIT OF CLEARING (W/ EROSION CONTROL) SEDIMENTATION BARRIER, STAKED SILT FENCE (RIDOT STD 9.2.0), COMPOST SOCK OR APPROVED EQUAL
▨	RIP RAP

DiPrete Engineering

Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
REGISTERED PROFESSIONAL ENGINEER
CIVIL
8/24/2020

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWAT[illegible] [illegible]DS PROGRAM
APPR[illegible] [illegible]DITIONS
AS SPE[illegible] [illegible]F APPROVAL
DATED OCT 2 8 2020 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin [illegible] Sencek

Notes and Legend

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027 Copyright 2020 by DiPrete Engineering Associates, Inc.

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-ovar.dwg Plotted: 6/25/2020

LOCUS MAP
NOT TO SCALE
LOCUS
*
ROUTE 146
SAYLES HILL ROAD
IRON MINE HILL ROAD
LEGEND
NOT TO SCALE
BOUNDARY
ABUTTER
STONEWALL
BUILDING ENVELOPE
ZONE LINE
NC AR
ZONE BOUNDARIES
IRON PIN
BOUND
DRILL HOLE
MAGNETIC
ROUTE 146 NORTH SMITHFIELD EXPRESSWAY
STATE FREEWAY LINE
PLAT 1033
A.P. 12 LOT 318 N/F NARRAGANSETT ELEC CO. D.B. 81 PG. 35
A.P. 13 LOT 10-A N/F BARBARA WEST BUTTERS
A.P. 12 LOT 136 N/F KHAN FARIDOON TRUST FARIDOON KHAN TRUSTEE D.B. 763 PG. 63
A.P. 12 LOT 310 N/F NARRAGANSETT ELEC CO. D.B. 79 PG. 262
A.P. 12 LOT 132 N/F BARBARA WEST BUTTERS D.B. 62 PG. 63
A.P. 12 LOT 292 N/F JOAN F. DINUNZIO TRUST JOAN F. DINUNZIO TRUSTEE D.B. 354 PG. 310
A.P. 12 LOT 291 N/F PETER A. HAINLEY & FREYA R. SALOIO D.B. 750 PG. 58
A.P. 12 LOT 299 N/F KHAN FARIDOON TRUST FARIDOON KHAN TRUSTEE D.B. 763 PG. 68
A.P. 12 LOT 326 N/F JASON K. BRADY & JILL GALLANT D.B. 660 PG. 236
A.P. 13 LOT 107-A N/F IRENE B. WEST ESTATE C/O BARBARA BUTTERS D.B. 473 PG. 283
A.P. 12 LOT 270 N/F MILTON F. & PAULA WEST JR. D.B. 261 PG. 664
A.P. 12 LOT 306 N/F NARRAGANSETT ELEC CO. D.B. 78 PG. 947
PVC PIPE (FOUND) ONLINE 2.35' SOUTH OF CORNER
A.P. 12 LOT 313 N/F NARRAGANSETT ELEC CO D.B. 79 PG. 530
A.P. 12 LOT 312 N/F NARRAGANSETT ELEC CO D.B. 79 PG. 192
A.P. 12 LOT 156-A N/F GRAND BANKS COMMERCE PARK LLC D.B. 274 PG. 947
SEE DETAIL "A"
DETAIL "A"
NOT TO SCALE
825.28' TO IRON PIN (FND)
D.H. (FND)
I.P. (FND)
TOTAL = 163.68'
TOTAL = 109.48'
A.P. 12 LOT 136B N/F KHAN FARIDOON TRUST D.B. 763 PG. 63
LOT AREA: 2,200,810 SQ. FT. 50.5236 ACRES
A.P. 13 LOT 12 N/F RALPH F. & MURIEL J. FERRA D.B. 115 PG. 210
LOT AREA: 1,554,947 SQ. FT. 35.6967 ACRES
APPROXIMATE LOCATION UTILITY EASEMENT
250'
LOT CORNER STA.486+06.13-SS 105.08 LEFT (RADIAL)
LOT CORNER STA.484+18.85-SS 99.91 LEFT (RADIAL)
EXISTING DWELLING #11 PRINCE RD.
A.P. 13 LOT 102 N/F DANIEL C. & CHERI L. DRESSER D.B. 215 PG. 479
A.P. 13 LOT 87 N/F ROGER & CAROL FONTAINE D.B. 107 PG. 783
A.P. 13 LOT 13 N/F NICOLETTA TSIMORTOS D.B. 411 PG. 89
A.P. 13 LOT 62 N/F MICHAEL L. & TINA MARIE PLANTE D.B. 275 PG. 917
A.P. 13 LOT 61 N/F MICHAEL L. PLANTE D.B. 275 PG. 917
PRINCE ROAD
RIGHT OF WAY D.B. 26 PG. 536
OLD FENCE
FIELD STONE BOUND (FND)
"HIGH ROCK" (FND)
STONE BOUND (FND)
A.P. 12 LOT 137 N/F KHAN FARIDOON TRUST D.B. 763 PG. 66
LOT AREA: 2,017,311 SQ. FT. 46.3111 ACRES
A.P. 13 LOT 51 N/F RALPH F. & MURIEL J. FERRA
LOT AREA: 470,993 SQ. FT. 10.8125 ACRES
A.P. 13 LOT 52 N/F TOWN OF NORTH SMITHFIELD D.B. 141 PG. 964 D.B. 130 PG. 148
HEAP OF STONES (FOUND) 13'+/- SOUTHEAST OF PROPERTY LINE
HEAP OF STONES (FOUND) 115'+/- SOUTHEAST OF PROPERTY LINE
A.P. 13 LOT 65 N/F SAYLES HILL ROD GUN CLUB D.B. 42 PG. 14
ZONING LINE : RS
ZONING LINE : RA
A.P. 13 LOT 73 N/F PAUL J. & JUDITH F. CONNOLLY D.B. 140 PG. 244
20' ROW
H.O.S. (FND)
SAYLES HILL ROAD
PUBLIC - (VARIABLE WIDTH)
A.P. 13 LOT 156 N/F ANTHONY R. & DIANA R. SORAFINE D.B. 649 PG. 1
A.P. 13 LOT 74 N/F MARC B. & JACQUELINE C. CORRIVEAU D.B. 167 PG. 226
A.P. 13 LOT 96 N/F GERALD M. & CONSTANCE P. CHAMBERLAND D.B. 189 PG. 97
A.P. 17 LOT 130 N/F RALPH F. & MURIEL J. FERRA D.B. 106 PG. 845
LOT AREA: 362,111 SQ. FT. 8.3129 ACRES
EXISTING CART PATH
179' TIE DIST.
A.P. 17 LOT 127 N/F JAMES CAREY D.B. 644 PG. 294
A.P. 17 LOT 1-A N/F PHILIP G. PIROLO D.B. 724 PG. 164
A.P. 17 LOT 144 N/F LORRAINE M. LAPREY TRUST LORRAINE M. LAPRE TRUSTEE D.B. 674 PG. 251
A.P. 17 LOT 1 N/F JAMES E. CAREY D.B. 276 PG. 431
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11
A.P. 17 LOT 247 N/F THOMAS G. AUCLAIR D.B. 100 PG. 738
A.P. 17 LOT 205
A.P. 17 LOT 163
A.P. 17 LOT 100 N/F GEORGE A. & JANICE M. DUVAL JR. TRUSTEES D.B. 443 PG. 62
A.P. 17 LOT 233 N/F LOVE HOME SOLUTIONS LLC D.B. 755 PG. 8
A.P. 17 LOT 163 N/F KOREL REALTY LLC D.B. 366 PG. 20
A.P. 16 LOT 6 N/F RALPH F. & MURIEL J. FERRA D.B. 88 PG. 257
LOT AREA: 5,619,157 SQ. FT. 128.9981 ACRES
EXISTING GRAVEL DRIVE
EXISTING OUTBUILDING (TYP)
A.P. 17 LOT 175 N/F RALPH F. & MURIEL J. FERRA D.B. 328 PG. 262
LOT AREA: 6,517,302 SQ. FT. 149.6167 ACRES
TOTAL = 3043.77'
A.P. 16 LOT 5 N/F RAYMOND M. & RAYMOND M. HAMILTON JR. D.B. 214 PG. 949
A.P. 16 LOT 97 N/F RALPH FERRA D.B. 370 PG. 146
LOT AREA: 155,696 SQ. FT. 3.5743 ACRES
BLDG. COR. 5.54' OVER PL
40' ROW
A.P. 16 LOT 41 N/F BRIAN E. & MELISSA J. POLAK D.B. 174 PG. 48
A.P. 16 LOT 102 N/F GREGORY MARCOUX & TINA M. PARE-MARCOUX D.B. 519 PG. 125
IRON MINE HILL ROAD
PUBLIC - (VARIABLE WIDTH)
L12 L13 L14 L15 L16 L17 L18
A.P. 16 LOT 87 N/F RALPH F. & MURIEL J. FERRA D.B. 250 PG. 163
A.P. 16 LOT 94 N/F RALPH F. & ROBIN FERRA D.B. 193 PG. 1
A.P. 16 LOT 8 N/F C & B SCRAP LLC D.B. 345 PG. 148
A.P. 16 LOT 99 N/F PAUL & DOROTHY ROY D.B. 104 PG. 523
A.P. 16 LOT 17 N/F MONGEON REALTY INC D.B. 230 PG. 238
A.P. 16 LOT 9 N/F MAURICE BOURGET D.B. 54 PG. 27
A.P. 17 LOT 2 N/F CAROL A. PLANTE LIFE ESTATE D.B. 725 PG. 284
A.P. 17 LOT 5 N/F MILTON F. JR & PAULA M. WEST D.B. 261 PG. 664
A.P. 17 LOT 269 N/F JAMES F. & MARLENE CALLAHAN D.B. 219 PG. 1062
GRAPHIC SCALE
250 0 125 250 500 1000
(IN FEET)
1 inch = 250 ft.

AUG 18 2020

Environmental Management

Office of Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFI[illegible] OF APPROVAL
DATED OCT 28 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PLAN REFERENCES;

1. A PLAN ENTITLED "PLAT OF THE CONNOLLY FARM OWNED BY THE HEIRS OF ELLEN CONNELLY SAYLES HILL, NORTH SMITHFIELD, RI SCALE 1 INCH = 10 RODS, AREA 106 ACRES 86 RODS DECEMBER 1919" RECORDED ON SHELF 11.

2. A PLAN ENTITLED "SUBDIVISION OF LAND FOR ARTHUR Z. & MARCELLE DURAND WEST OF SAYLES HILL ROAD, NORTH SMITHFIELD, RI APRIL 1972 SCALE 1" = 20' PLAN & SURVEY BY LEO A. DEMERS REVISED JULY 3, 1972" RECORDED ON SHELF 7.

3. A PLAN ENTITLED "PLAN OF LAND OWNED BY BERNARD & THERESE ST. GERMAIN & RALPH F. & MURIEL J. FERRA NORTH SMITHFIELD, RI MAY, 1984 SCALE 1 INCH EQUALS 40 FEET BY ROBERT C. COURNOYER" RECORDED ON SHELF 26.

4. A PLAN ENTITLED "ADMINISTRATIVE SUBDIVISION FOR NELIDA F. TELLIER PORTION OF LOT 127, AP 17 TO BE ADDED TO LOT 96, AP 13 GERALD M. & CONSTANCE P. CHAMBERLAND SAYLES HILL ROAD, NORTH SMITHFIELD, RI JULY 1998 SCALE 1 IN = 50 FEET BY NORMAND R. VADENAIS. RECORDED IN CAB-54-B.

5. A PLAN ENTITLED "CAREY MAJOR SUB-DIVISION FINAL ASSESSORS PLAT 17 LOTS 1 & 127 SAYLES HILL ROAD NORTH SMITHFIELD, RHODE SIALND, PREPARED FOR JAMES CAREY 119 SAYLES HILL ROAD NORTH SMITHFIELD, RHODE ISLAND, SCALE 1" = 40' REVISED JULY 13, 2016 BY LEDDY LAND SURVEYING COMPANY" RECORDED IN PLAN BOOK 1 PAGE 38 PLAN 381.

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATIONS FOR PROFESSIONAL LAND SURVEYORS NOVEMBER 25, 2015 AS FOLLOWS:

TYPE OF SURVEY: COMPREHENSIVE BOUNDARY SURVEY
MEASUREMENT SPECIFICATION: CLASS 1 STANDARD

PURPOSE OF SURVEY: BOUNDARY SURVEY

BY: Norbert A. Therien DATE: 9/27/18
NORBERT A. THERIEN, PLS NO. 1739

NORBERT A. THERIEN
No. 1739
PROFESSIONAL LAND SURVEYOR
Norbert A. Therien
9/27/18

NATIONAL
Surveyors-Developers
Inc.
42 Hamlet Ave., Woonsocket, R.I.
(401) 769-7779

ZONING CRITERIA

ZONING DISTRICT	RA
MINIMUM LOT AREA	65,000 SQ. FT.
MINIMUM LOT FRONTAGE	200'
MINIMUM FRONT YARD SETBACK	40'
MINIMUM SIDE YARD SETBACK	25'
MINIMUM REAR YARD SETBACK	40'
MAXIMUM BUILDING COVERAGE	25%
MAXIMUM BUILDING HEIGHT	35'

LINE TABLE

LINE	LENGTH	BEARING
L1	78.40	N79°35'53"E
L2	240.25	N75°06'53"E
L3	146.09	N51°00'53"E
L4	76.39	N53°18'53"E
L5	112.80	N33°30'56"E
L6	40.69	S67°04'42"E
L7	127.26	S33°30'56"W
L8	82.57	S53°18'53"W
L9	153.83	S51°00'53"W
L10	250.35	S75°06'53"W
L11	113.44	S79°35'53"W
L12	14.39	N78°13'35"W
L13	90.04	N77°33'04"W
L14	42.52	N77°12'20"W
L15	53.05	N77°44'22"W
L16	50.00	N12°15'38"E
L17	62.24	N81°26'05"W
L18	184.21	N77°48'48"W

APPLICANT:
GDIM 1-9, LLC
AP 12 LOTS 136B & 137
AP 13 LOTS 12 & 51
AP 16 LOTS 6 & 97
AP 17 LOT 175
NORTH SMITHFIELD, RHODE ISLAND

BOUNDARY SURVEY PLAN

DRAWN BY: J.E.S.	CHECKED BY: N.A.T.	FIELD BY: M.A.&J.S.
SEPTEMBER 2018	JOB No. 2018–105	SHEET 1 OF 1

General Site Information:

1. APPLICANT INFORMATION:
GDIM 1-9, LLC
3760 QUAKER LANE
NORTH KINGSTOWN, RHODE ISLAND 02852

2. OWNER INFORMATION:
AP 13, LOTS 12 & 51,
AP 16, LOTS 6 & 97 AND
AP 17, LOT 175
RALPH F & MURIEL J FERRA
1081 IRON MINE HILL ROAD
NORTH SMITHFIELD, RHODE ISLAND 02896

AP 12, LOTS 136B & 137
KHAN FARIDOON TRUST
5 KENNEDY BOULEVARD
LINCOLN, RHODE ISLAND 02865

3. SITE INFORMATION:
1081 IRON MINE HILL ROAD
NORTH SMITHFIELD, RHODE ISLAND 02896
ASSESSOR'S PLAT 12, LOTS 136B & 137
ASSESSOR'S PLAT 13, LOTS 12 & 51
ASSESSOR'S PLAT 16, LOTS 6 & 97
ASSESSOR'S PLAT 17, LOT 175
TOTAL AREA: 425.53± ACRES
ZONE: RA (RURAL AGRICULTURE)

4. WETLANDS WERE DELINEATED ONSITE BY MASON & ASSOCIATES, INC., 771 PLAINFIELD PIKE, NORTH SCITUATE, RI 02857 ON MARCH 27 & 30, 2018 AND APRIL 6, 10 & 14, 2018.
5. EXISTING CONDITIONS WITHIN THE PROPERTY WERE DETERMINED BY ONLINE INFORMATION, AERIAL MAPPING AND THE RIGIS DATABASE. WETLAND EDGES WERE VERIFIED BY RIDEM UNDER APPLICATION NO. 18-0237.
6. TOPOGRAPHY SHOWN ON THE PLAN IS AERIAL MAPPING AND WAS OBTAINED BY AEROTECH.

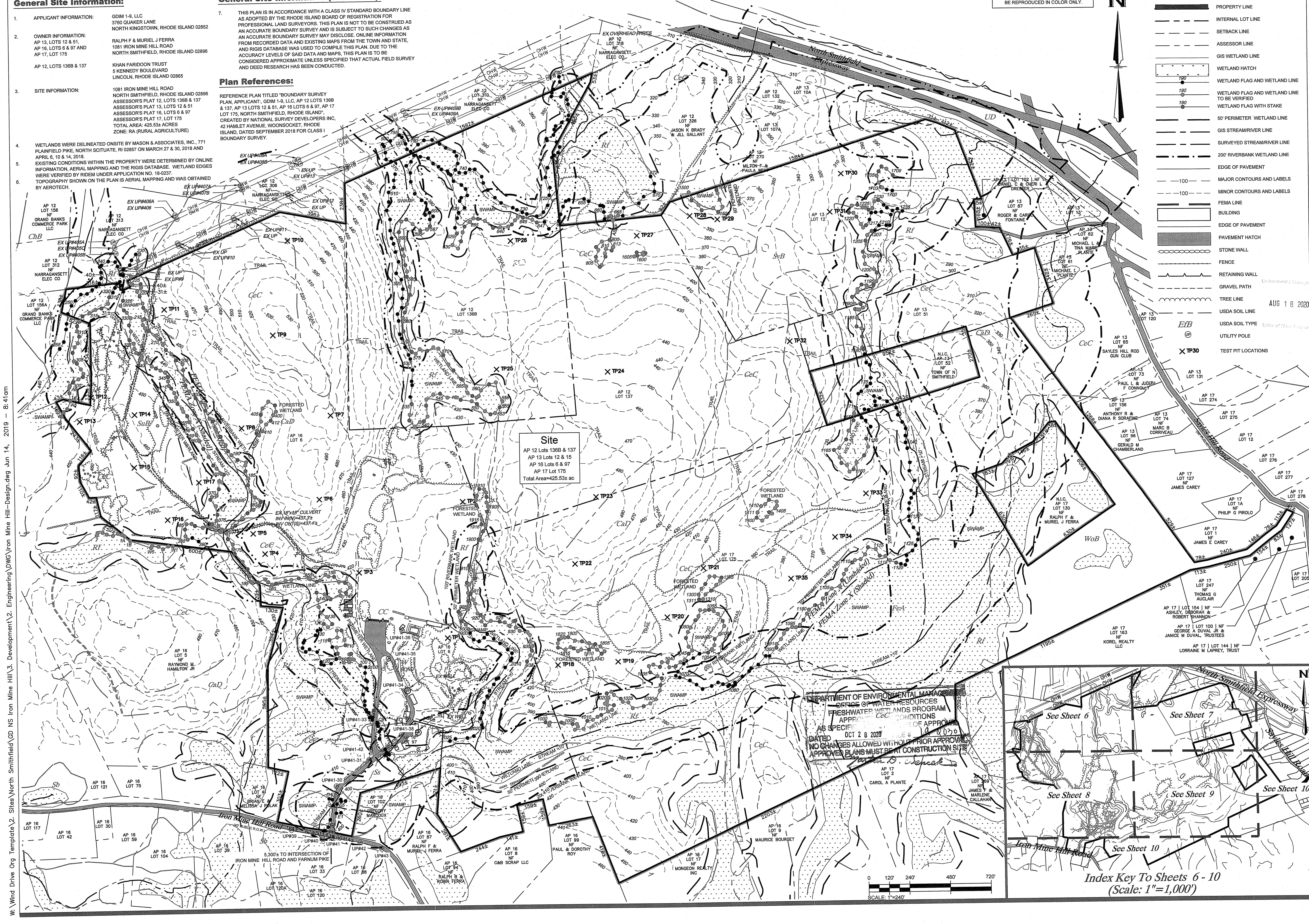
General Site Information (Continued):

7. THIS PLAN IS IN ACCORDANCE WITH A CLASS IV STANDARD BOUNDARY LINE AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS. THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY AND IS SUBJECT TO SUCH CHANGES AS AN ACCURATE BOUNDARY SURVEY MAY DISCLOSE. ONLINE INFORMATION FROM RECORDED DATA AND EXISTING MAPS FROM THE TOWN AND STATE, AND RIGIS DATABASE WAS USED TO COMPILE THIS PLAN. DUE TO THE ACCURACY LEVELS OF SAID DATA AND MAPS, THIS PLAN IS TO BE CONSIDERED APPROXIMATE UNLESS SPECIFIED THAT ACTUAL FIELD SURVEY AND DEED RESEARCH HAS BEEN CONDUCTED.

Plan References:

REFERENCE PLAN TITLED "BOUNDARY SURVEY PLAN, APPLICANT:, GDIM 1-9, LLC, AP 12 LOTS 136B & 137, AP 13 LOTS 12 & 51, AP 16 LOTS 6 & 97, AP 17 LOT 175, NORTH SMITHFIELD, RHODE ISLAND", CREATED BY NATIONAL SURVEY DEVELOPERS INC, 42 HAMLET AVENUE, WOONSOCKET, RHODE ISLAND, DATED SEPTEMBER 2018 FOR CLASS I BOUNDARY SURVEY.

FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.


N
North Smithfield Expressway
Iron Mine Hill Road
Sayles Hill Road
Site
AP 12 Lots 136B & 137
AP 13 Lots 12 & 15
AP 16 Lots 6 & 97
AP 17 Lot 175
Total Area=425.53± ac
AP 12 LOT 136B
AP 12 LOT 137
AP 16 LOT 6
AP 17 LOT 175
AP 13 LOT 51
AP 13 LOT 12
N.I.C. AP 13 LOT 52 NF TOWN OF N SMITHFIELD
N.I.C. AP 17 LOT 130 NF RALPH F & MURIEL J FERRA
SWAMP
FORESTED WETLAND
200' RIVERBANK WETLAND
50' PERIMETER WETLAND
WETLAND LINE
STREAM >10'
FEMA Zone X (Unshaded)
FEMA Zone X (Shaded)
TRAIL
EX 18"x18" CULVERT
5,300'± TO INTERSECTION OF IRON MINE HILL ROAD AND FARNUM PIKE
TP1
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP13
TP14
TP15
TP16
TP17
TP18
TP19
TP20
TP21
TP22
TP23
TP24
TP25
TP26
TP27
TP28
TP29
TP30
TP31
TP32
TP33
TP34
TP35
0
120'
240'
480'
720'
SCALE: 1"=240'
See Sheet 6
See Sheet 7
See Sheet 8
See Sheet 9
See Sheet 10
Iron Mine Hill Road

Index Key To Sheets 6 - 10
(Scale: 1"=1,000')

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN LETTER OF APPROVAL
DATED OCT 2 8 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

Existing Conditions Legend

▬	PROPERTY LINE
	INTERNAL LOT LINE
	SETBACK LINE
	ASSESSOR LINE
	GIS WETLAND LINE
	WETLAND HATCH
190 ●	WETLAND FLAG AND WETLAND LINE
190 ●	WETLAND FLAG AND WETLAND LINE TO BE VERIFIED
190 ●	WETLAND FLAG WITH STAKE
	50' PERIMETER WETLAND LINE
	GIS STREAM/RIVER LINE
	SURVEYED STREAM/RIVER LINE
	200' RIVERBANK WETLAND LINE
	EDGE OF PAVEMENT
100	MAJOR CONTOURS AND LABELS
100	MINOR CONTOURS AND LABELS
	FEMA LINE
☐	BUILDING
	EDGE OF PAVEMENT
▨	PAVEMENT HATCH
	STONE WALL
	FENCE
	RETAINING WALL
	GRAVEL PATH
	TREE LINE
	USDA SOIL LINE
EfB	USDA SOIL TYPE
UP	UTILITY POLE
× TP30	TEST PIT LOCATIONS

Environmental Management
AUG 1 8 2020
Office of Water Resources

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com
GREEN development, LLC

OWNERS:
Ralph F & Muriel J Ferra
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
AP 13, LOTS 12 & 51, AP 16, LOTS 6 & 97 AND AP 17, LOT 175
Khan Faridoon Trust
5 KENNEDY BOULEVARD, LINCOLN, RI 02865
AP 12, LOTS 136B & 137

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
3	6/14/2019	TOWN SUBMISSION	RBS
2	5/24/2019	RIDEM RESUBMISSION	RBS
1	11/19/2018	RIDEM WETLAND EDGE COMMENTS	RBS

SHEET TITLE:
Overall Existing Conditions Plan

PROJECT INFORMATION:
GDIM 1-9: Iron Mine Hill Road Solar
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 12 LOTS 136B & 137, AP 13 LOTS 12 & 51
AP 16 LOTS 6 & 97, & AP 17 LOT 175

KEVIN C. MORIN
No. 7051
REGISTERED PROFESSIONAL ENGINEER CIVIL
6/14/2019

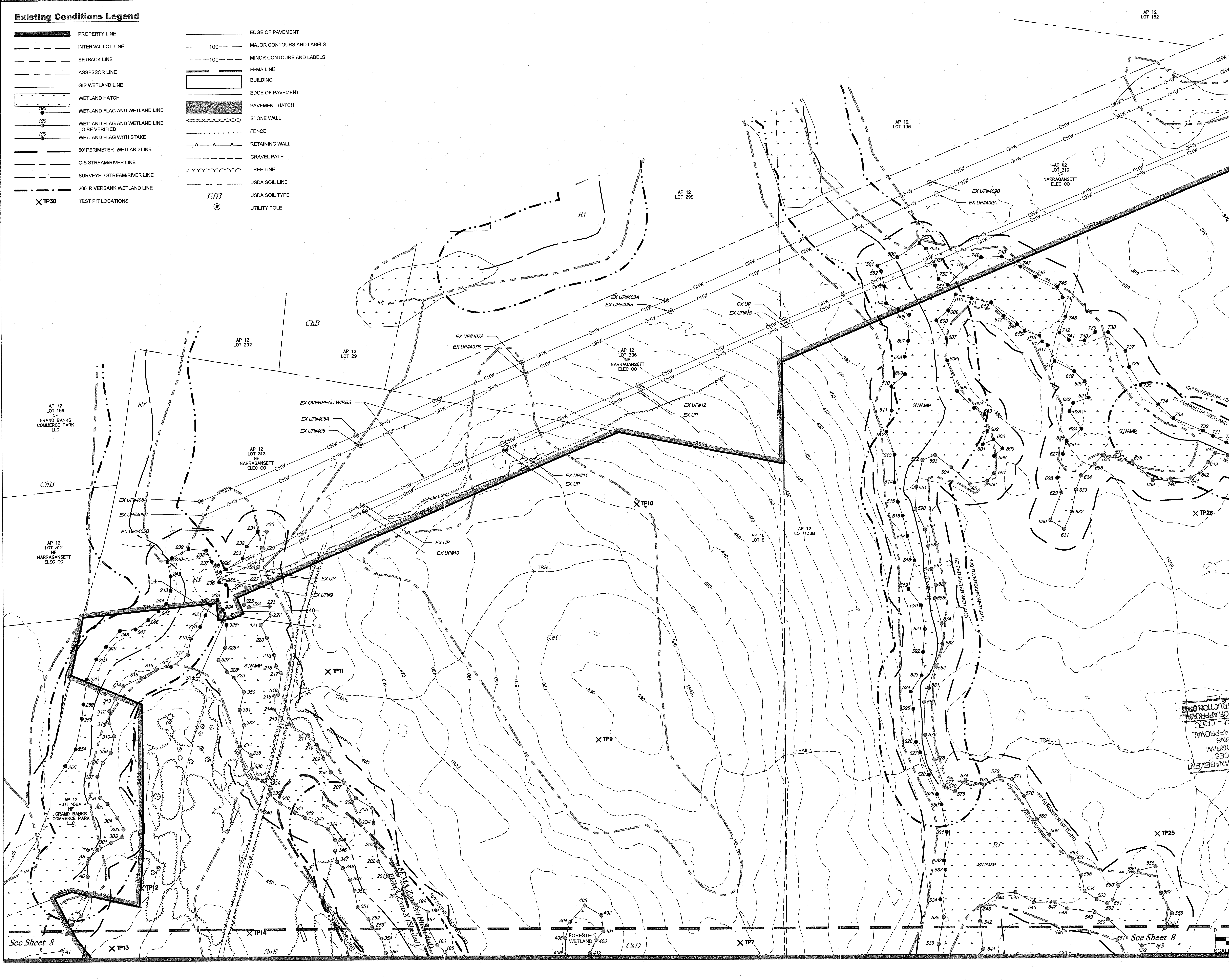
SHEET NO.:
5 OF 25

W:\Wind Drive Org Template\2. Sites\North Smithfield\GD NS Iron Mine Hill\3. Development\2. Engineering\DWG\Iron Mine Hill-Design.dwg Jun 14, 2019 – 8:41am

W:\Wind Drive Org Template\2. Sites\North Smithfield\GD NS Iron Mine Hill\3. Development\2. Engineering\DWG\Iron Mine Hill-Design.dwg Jun 14, 2019 - 8:41am

Existing Conditions Legend

PROPERTY LINE	EDGE OF PAVEMENT
INTERNAL LOT LINE	—100— MAJOR CONTOURS AND LABELS
SETBACK LINE	—100— MINOR CONTOURS AND LABELS
ASSESSOR LINE	FEMA LINE
GIS WETLAND LINE	BUILDING
WETLAND HATCH	EDGE OF PAVEMENT
190 WETLAND FLAG AND WETLAND LINE	PAVEMENT HATCH
190 WETLAND FLAG AND WETLAND LINE TO BE VERIFIED	STONE WALL
190 WETLAND FLAG WITH STAKE	FENCE
50' PERIMETER WETLAND LINE	RETAINING WALL
GIS STREAM/RIVER LINE	GRAVEL PATH
SURVEYED STREAM/RIVER LINE	TREE LINE
200' RIVERBANK WETLAND LINE	USDA SOIL LINE
✕ TP30 TEST PIT LOCATIONS	EfB USDA SOIL TYPE
	UP UTILITY POLE


N
See Sheet 7
See Sheet 8
AP 12 LOT 152
AP 12 LOT 136
AP 12 LOT 310 NF NARRAGANSETT ELEC CO
AP 12 LOT 299
AP 12 LOT 292
AP 12 LOT 291
AP 12 LOT 306 NF NARRAGANSETT ELEC CO
AP 12 LOT 156 NF GRAND BANKS COMMERCE PARK LLC
AP 12 LOT 313 NF NARRAGANSETT ELEC CO
AP 12 LOT 312 NF NARRAGANSETT ELEC CO
AP 12 LOT 156A NF GRAND BANKS COMMERCE PARK LLC
AP 16 LOT 6
AP 12 LOT 136B
AP 12 LOT 137
EX UP#409B
EX UP#409A
EX UP#408A
EX UP#408B
EX UP#13
EX UP
EX UP#407A
EX UP#407B
EX UP#12
EX OVERHEAD WIRES
EX UP#406A
EX UP#406
EX UP#11
EX UP#405A
EX UP#405C
EX UP#405B
EX UP#10
EX UP#9
OHW
SWAMP
100' RIVERBANK WETLAND
50' PERIMETER WETLAND
WETLAND LINE
FEMA Zone X (Shaded)
FORESTED WETLAND
TRAIL
Rf
ChB
CeC
CaD
SuB
TP10
TP11
TP9
TP26
TP25
TP12
TP13
TP14
TP7
396±
592±
316±
40±
31±
164±
0
50'
100'
200'
300'
SCALE: 1"=100'

FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.

AUG 18 2020

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 28 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com

GREEN development, LLC

OWNERS:
Ralph F & Muriel J Ferra
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
AP 13, LOTS 12 & 51, AP 16, LOTS 6 & 97 AND AP 17, LOT 175
Khan Faridoon Trust
5 KENNEDY BOULEVARD, LINCOLN, RI 02865
AP 12, LOTS 136B & 137

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

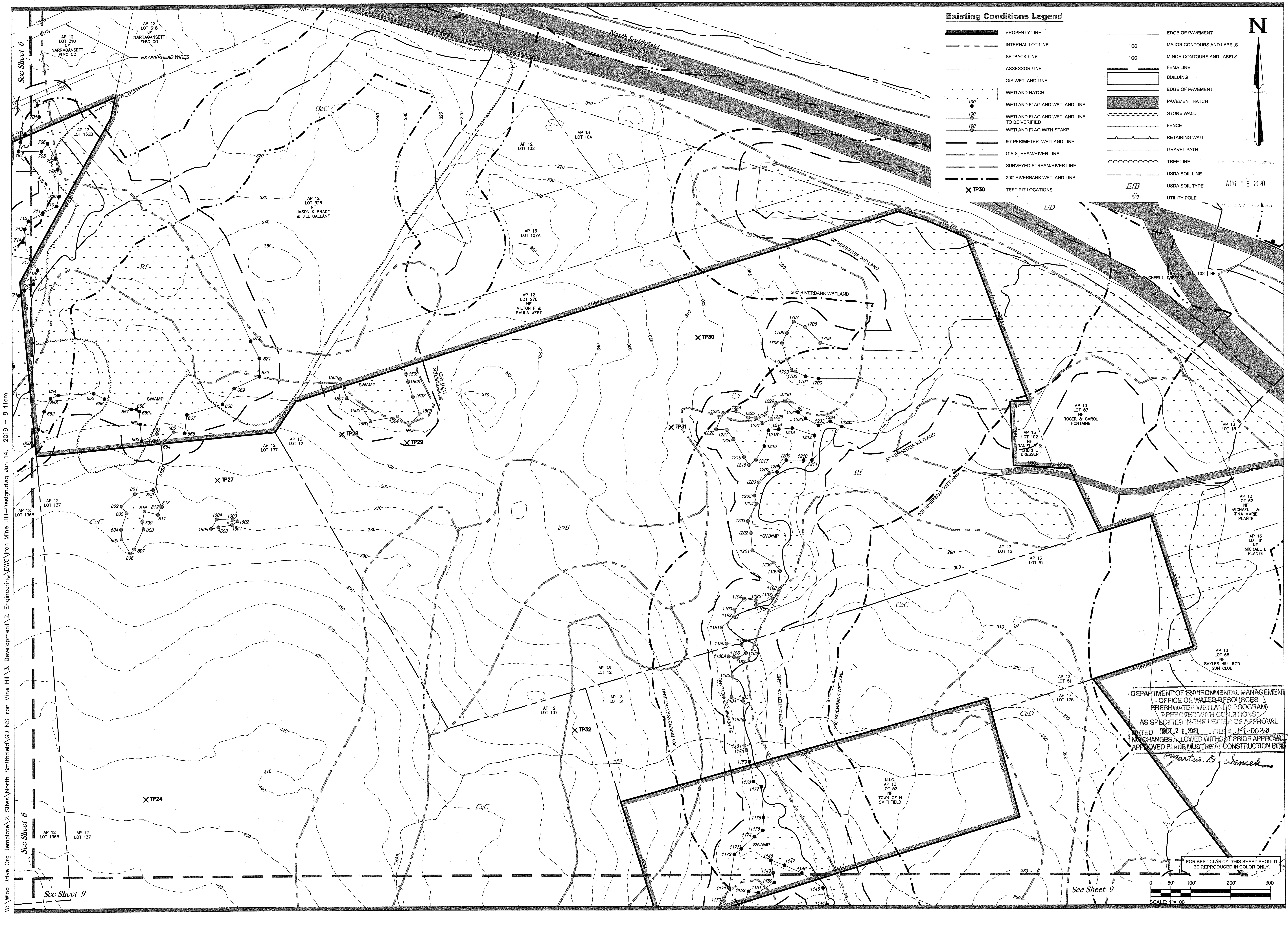
No.	DATE	REVISION	BY
3	6/14/2019	TOWN SUBMISSION	RBS
2	5/24/2019	RIDEM RESUBMISSION	RBS
1	11/19/2018	RIDEM WETLAND EDGE COMMENTS	RBS

SHEET TITLE:
Existing Conditions Plan - 1
PROJECT INFORMATION:
GDIM 1-9: Iron Mine Hill Road Solar
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 12 LOTS 136B & 137, AP 13 LOTS 12 & 51
AP 16 LOTS 6 & 97, & AP 17 LOT 175

KEVIN C. MORIN
No. 7051
REGISTERED PROFESSIONAL ENGINEER CIVIL
6/14/2019

SHEET NO.:
6 OF 25

W: Wind Drive Org Template\2. Sites\North Smithfield\GD NS Iron Mine Hill\3. Development\2. Engineering\DWG\Iron Mine Hill-Design.dwg Jun 14, 2019 - 8:41am


Existing Conditions Legend
PROPERTY LINE
INTERNAL LOT LINE
SETBACK LINE
ASSESSOR LINE
GIS WETLAND LINE
WETLAND HATCH
190 WETLAND FLAG AND WETLAND LINE
190 WETLAND FLAG AND WETLAND LINE TO BE VERIFIED
190 WETLAND FLAG WITH STAKE
50' PERIMETER WETLAND LINE
GIS STREAM/RIVER LINE
SURVEYED STREAM/RIVER LINE
200' RIVERBANK WETLAND LINE
TP30 TEST PIT LOCATIONS
EDGE OF PAVEMENT
100 MAJOR CONTOURS AND LABELS
100 MINOR CONTOURS AND LABELS
FEMA LINE
BUILDING
EDGE OF PAVEMENT
PAVEMENT HATCH
STONE WALL
FENCE
RETAINING WALL
GRAVEL PATH
TREE LINE
USDA SOIL LINE
EfB USDA SOIL TYPE
UP UTILITY POLE
N
North Smithfield Expressway
See Sheet 6
See Sheet 9
EX OVERHEAD WIRES
AP 12 LOT 310 NF NARRAGANSETT ELEC CO
AP 12 LOT 318 NF NARRAGANSETT ELEC CO
AP 12 LOT 136B
AP 12 LOT 132
AP 13 LOT 10A
AP 12 LOT 326 NF JASON K BRADY & JILL GALLANT
AP 13 LOT 107A
AP 12 LOT 270 NF MILTON F & PAULA WEST
AP 13 LOT 12
AP 12 LOT 137
AP 13 LOT 102 NF DANIEL C & CHERI L DRESSER
AP 13 LOT 87 NF ROGER & CAROL FONTAINE
AP 13 LOT 13
AP 13 LOT 62 NF MICHAEL L & TINA MARIE PLANTE
AP 13 LOT 61 NF MICHAEL L PLANTE
AP 13 LOT 51
AP 17 LOT 175
AP 13 LOT 65 NF SAYLES HILL ROD GUN CLUB
N.I.C. AP 13 LOT 52 NF TOWN OF N SMITHFIELD
SWAMP
50' PERIMETER WETLAND
200' RIVERBANK WETLAND
TRAIL
CeC
Rf
SvB
CaD
UD
TP24
TP27
TP28
TP29
TP30
TP31
TP32
FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.
0 50' 100' 200' 300'
SCALE: 1"=100'

AUG 1 8 2020

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 8 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com

GREEN development, LLC

OWNERS:
Ralph F & Muriel J Ferra
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
AP 13, LOTS 12 & 51, AP 16, LOTS 6 & 97 AND AP 17, LOT 175
Khan Faridoon Trust
5 KENNEDY BOULEVARD, LINCOLN, RI 02865
AP 12, LOTS 136B & 137

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

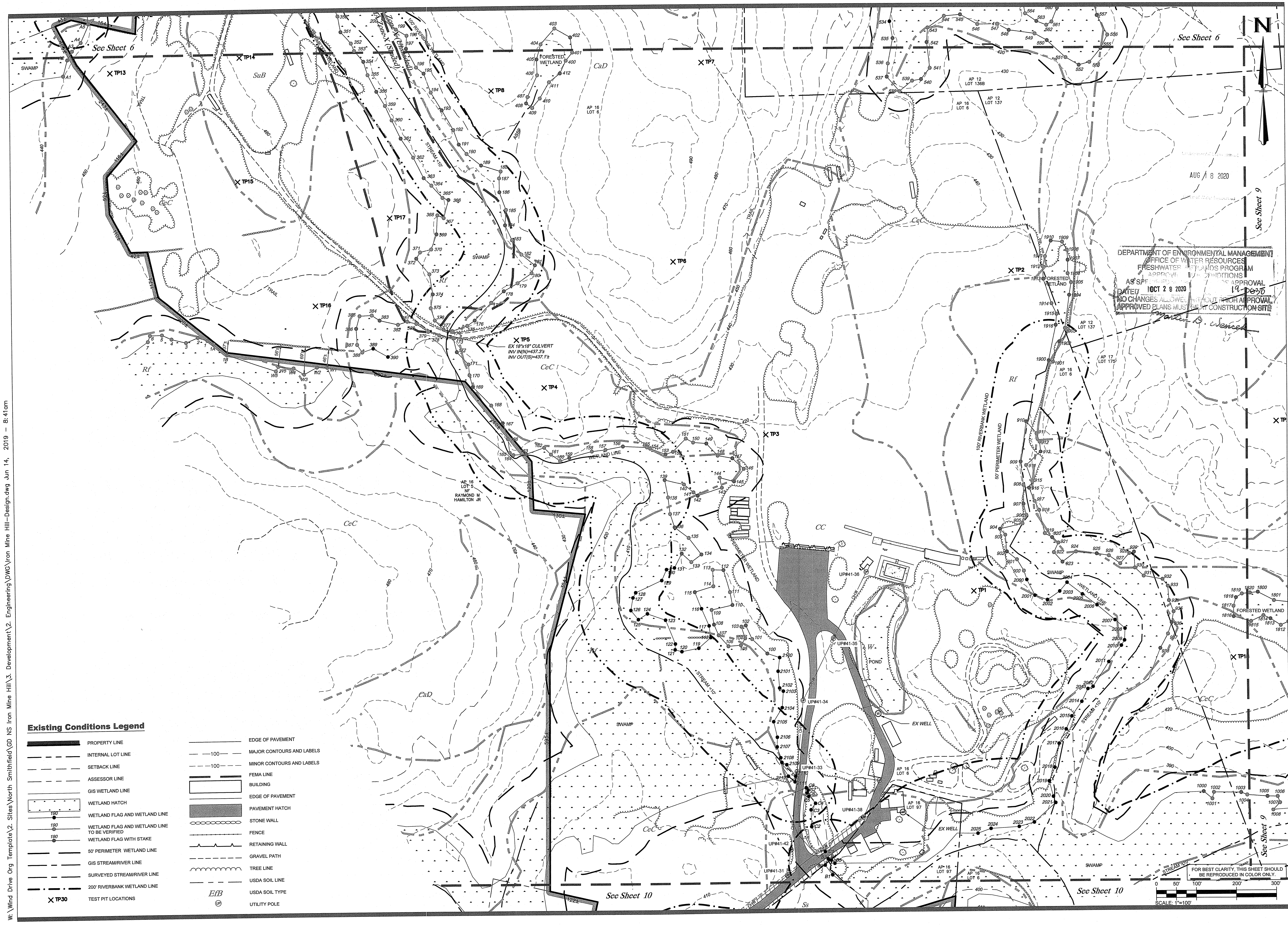
No.	DATE	REVISION	BY
3	6/14/2019	TOWN SUBMISSION	RBS
2	5/24/2019	RIDEM RESUBMISSION	RBS
1	11/19/2018	RIDEM WETLAND EDGE COMMENTS	RBS

SHEET TITLE:
Existing Conditions Plan - 2

PROJECT INFORMATION:
GDIM 1-9: Iron Mine Hill Road Solar
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 12 LOTS 136B & 137, AP 13 LOTS 12 & 51
AP 16 LOTS 6 & 97, & AP 17 LOT 175

KEVIN C. MORIN
No. 7051
REGISTERED PROFESSIONAL ENGINEER CIVIL
6/14/2019

SHEET NO.:
7 OF 25


N
See Sheet 6
See Sheet 6
See Sheet 9
See Sheet 9
See Sheet 10
See Sheet 10
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP13
TP14
TP15
TP16
TP17
TP18
SWAMP
FORESTED WETLAND
WETLAND LINE
STREAM >10'
100' RIVERBANK WETLAND
50' PERIMETER WETLAND
TRAIL
SuB
CeC
CaD
Rf
CC
Ss
W.
POND
EX WELL
UP#41-31
UP#41-33
UP#41-34
UP#41-35
UP#41-36
UP#41-38
UP#41-42
EX 18"x18" CULVERT
INV IN(N)=437.3'±
INV OUT(S)=437.1'±
AP 16 LOT 5 NF RAYMOND M HAMILTON JR
AP 16 LOT 6
AP 16 LOT 97
AP 12 LOT 136B
AP 12 LOT 137
AP 17 LOT 175
0 50' 100' 200' 300'
SCALE: 1"=100'

FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.

AUG 18 2020

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED [illegible] APPROVAL
DATED OCT 2 8 2020 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

Existing Conditions Legend

	PROPERTY LINE
	INTERNAL LOT LINE
	SETBACK LINE
	ASSESSOR LINE
	GIS WETLAND LINE
	WETLAND HATCH
190	WETLAND FLAG AND WETLAND LINE
190	WETLAND FLAG AND WETLAND LINE TO BE VERIFIED
190	WETLAND FLAG WITH STAKE
	50' PERIMETER WETLAND LINE
	GIS STREAM/RIVER LINE
	SURVEYED STREAM/RIVER LINE
	200' RIVERBANK WETLAND LINE
× TP30	TEST PIT LOCATIONS
	EDGE OF PAVEMENT
100	MAJOR CONTOURS AND LABELS
100	MINOR CONTOURS AND LABELS
	FEMA LINE
	BUILDING
	EDGE OF PAVEMENT
	PAVEMENT HATCH
	STONE WALL
	FENCE
	RETAINING WALL
	GRAVEL PATH
	TREE LINE
	USDA SOIL LINE
EfB	USDA SOIL TYPE
UP	UTILITY POLE

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com

GREEN development, LLC

OWNERS:
Ralph F & Muriel J Ferra
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
AP 13, LOTS 12 & 51, AP 16, LOTS 6 & 97 AND AP 17, LOT 175
Khan Faridoon Trust
5 KENNEDY BOULEVARD, LINCOLN, RI 02865
AP 12, LOTS 136B & 137

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
3	6/14/2019	TOWN SUBMISSION	RBS
2	5/24/2019	RIDEM RESUBMISSION	RBS
1	11/19/2018	RIDEM WETLAND EDGE COMMENTS	RBS

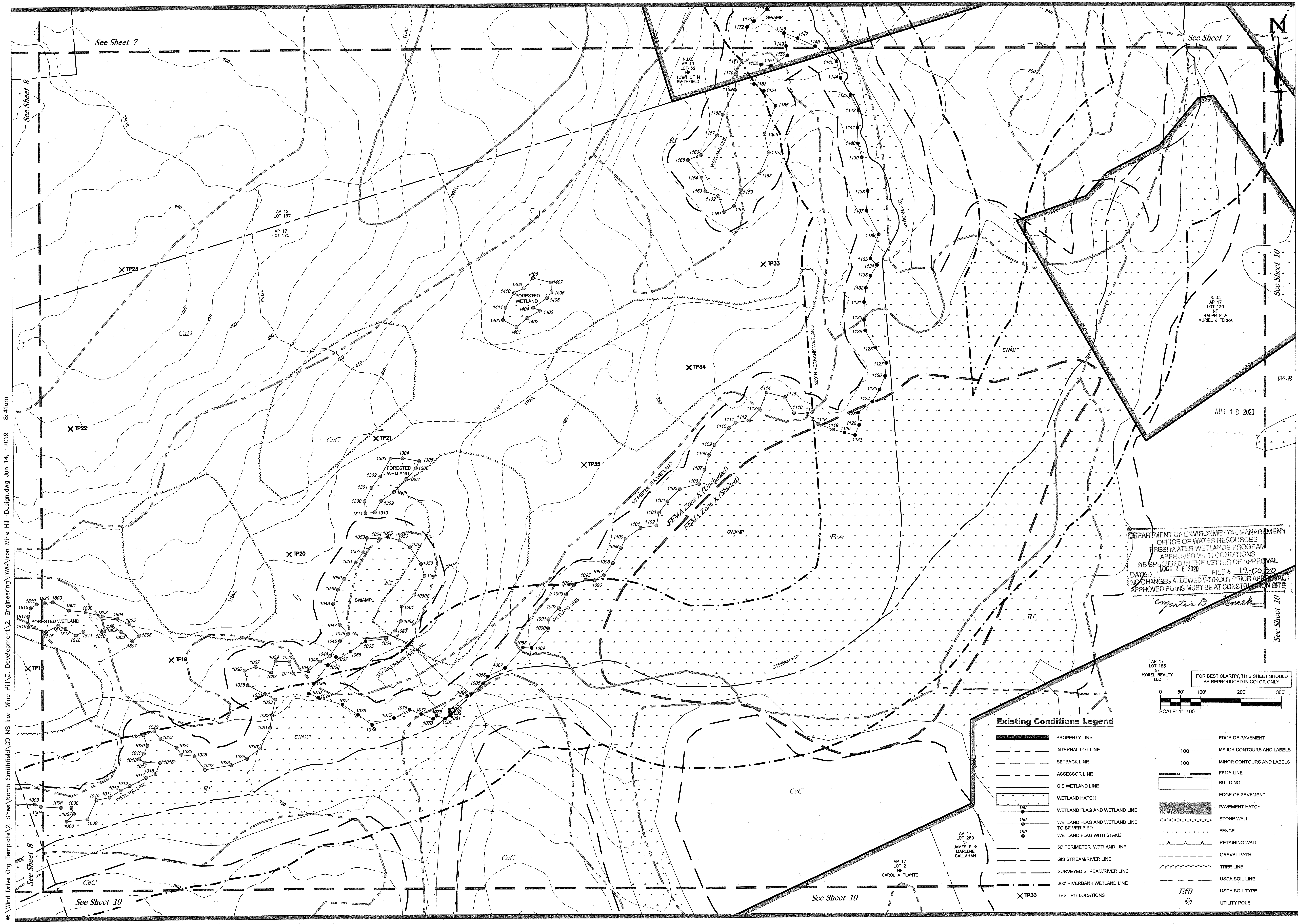
SHEET TITLE:
Existing Conditions Plan - 3

PROJECT INFORMATION:
GDIM 1-9: Iron Mine Hill Road Solar
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 12 LOTS 136B & 137, AP 13 LOTS 12 & 51
AP 16 LOTS 6 & 97, & AP 17 LOT 175

KEVIN C. MORIN
No. 8051
REGISTERED PROFESSIONAL ENGINEER CIVIL
6/14/2019

SHEET NO.:
8 OF 25

W:\Wind Drive Org Template\2. Sites\North Smithfield\GD NS Iron Mine Hill\3. Development\2. Engineering\DWG\Iron Mine Hill-Design.dwg Jun 14, 2019 - 8:41am


See Sheet 7
See Sheet 7
See Sheet 8
See Sheet 8
See Sheet 10
See Sheet 10
See Sheet 10
See Sheet 10
N
TRAIL
N.I.C.
AP 13
LOT 52
NF
TOWN OF N
SMITHFIELD
SWAMP
WETLAND LINE
STREAM >10'
AP 12
LOT 137
AP 17
LOT 175
TP23
TP33
TP34
TP35
TP22
TP21
TP20
TP19
TP18
FORESTED
WETLAND
CaD
CeC
Rf
FeA
WoB
N.I.C.
AP 17
LOT 130
NF
RALPH F &
MURIEL J FERRA
SWAMP
200' RIVERBANK WETLAND
50' PERIMETER WETLAND
FEMA Zone X (Unshaded)
FEMA Zone X (Shaded)
200' RIVERBANK WETLAND
FORESTED WETLAND
AP 17
LOT 163
NF
KOREL REALTY
LLC
AP 17
LOT 269
NF
JAMES F &
MARLENE
CALLAHAN
AP 17
LOT 2
NF
CAROL A PLANTE
FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.
0
50'
100'
200'
300'
SCALE: 1"=100'
Existing Conditions Legend
PROPERTY LINE
INTERNAL LOT LINE
SETBACK LINE
ASSESSOR LINE
GIS WETLAND LINE
WETLAND HATCH
WETLAND FLAG AND WETLAND LINE
WETLAND FLAG AND WETLAND LINE TO BE VERIFIED
WETLAND FLAG WITH STAKE
50' PERIMETER WETLAND LINE
GIS STREAM/RIVER LINE
SURVEYED STREAM/RIVER LINE
200' RIVERBANK WETLAND LINE
TP30 TEST PIT LOCATIONS
EDGE OF PAVEMENT
100 MAJOR CONTOURS AND LABELS
100 MINOR CONTOURS AND LABELS
FEMA LINE
BUILDING
EDGE OF PAVEMENT
PAVEMENT HATCH
STONE WALL
FENCE
RETAINING WALL
GRAVEL PATH
TREE LINE
USDA SOIL LINE
EfB USDA SOIL TYPE
UP UTILITY POLE

AUG 18 2020

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 28 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Senecal

GREEN development, LLC
3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com

OWNERS:
Ralph F & Muriel J Ferra
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
AP 13, LOTS 12 & 51, AP 16, LOTS 6 & 97 AND AP 17, LOT 175
Khan Faridoon Trust
5 KENNEDY BOULEVARD, LINCOLN, RI 02865
AP 12, LOTS 136B & 137

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
3	6/14/2019	TOWN SUBMISSION	RBS
2	5/24/2019	RIDEM RESUBMISSION	RBS
1	11/19/2018	RIDEM WETLAND EDGE COMMENTS	RBS

SHEET TITLE:
Existing Conditions Plan - 4
PROJECT INFORMATION:
GDIM 1-9: Iron Mine Hill Road Solar
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 12 LOTS 136B & 137, AP 13 LOTS 12 & 51
AP 16 LOTS 6 & 97, & AP 17 LOT 175

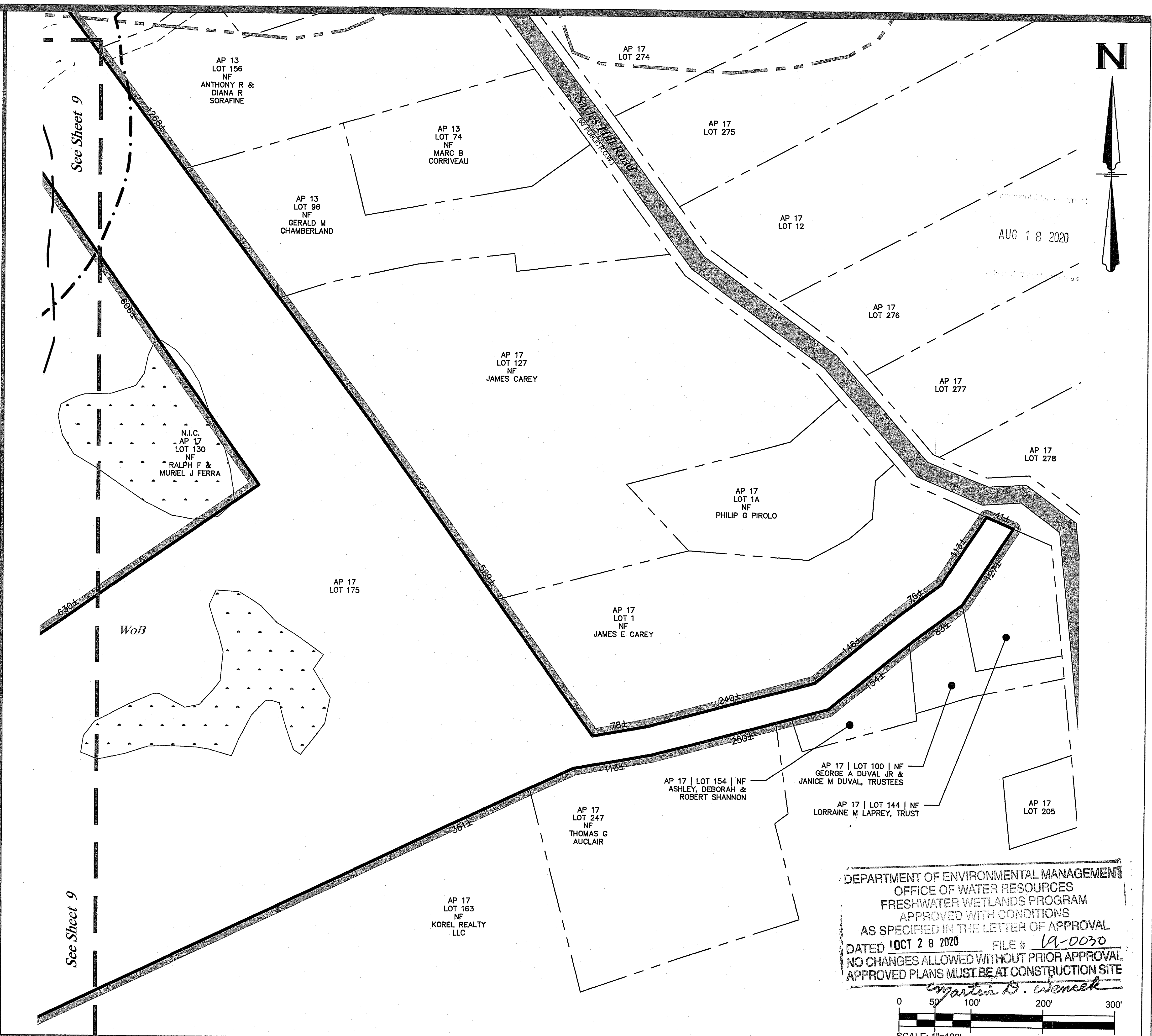
KEVIN C. MORIN
No. 051
REGISTERED
PROFESSIONAL ENGINEER
CIVIL
6/14/2019

SHEET NO.:
9 OF 25

W:\Wind Drive Org Template\2. Sites\North Smithfield\GD NS Iron Mine Hill\3. Development\2. Engineering\DWG\Iron Mine Hill-Design.dwg Jun 14, 2019 - 8:41am

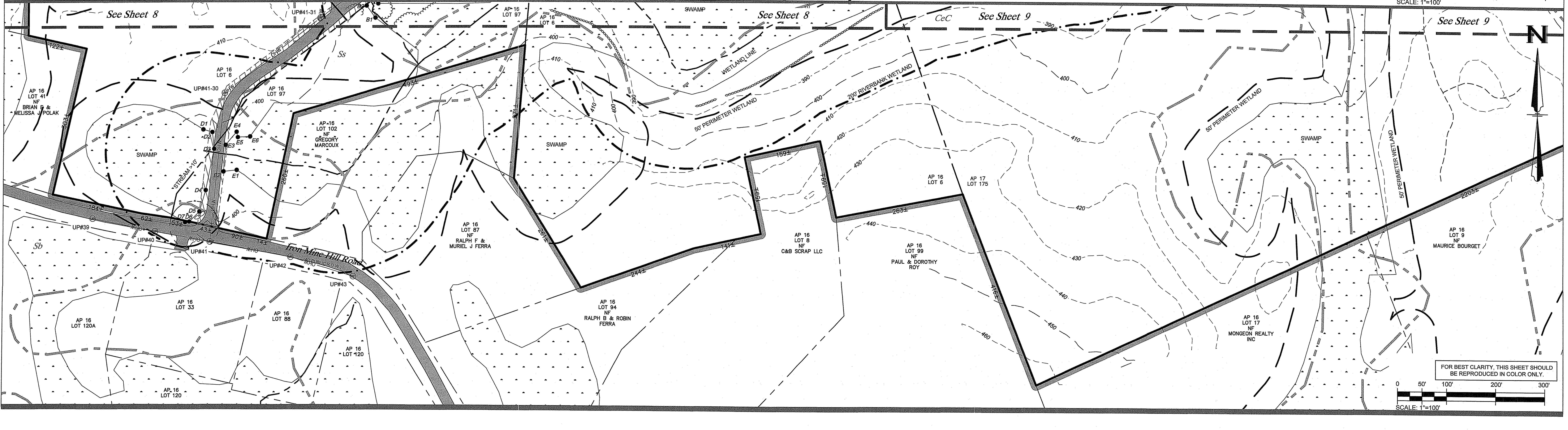
Existing Conditions Legend

- PROPERTY LINE
- INTERNAL LOT LINE
- SETBACK LINE
- ASSESSOR LINE
- GIS WETLAND LINE
- WETLAND HATCH
- 190 WETLAND FLAG AND WETLAND LINE
- 190 WETLAND FLAG AND WETLAND LINE TO BE VERIFIED
- 190 WETLAND FLAG WITH STAKE
- 50' PERIMETER WETLAND LINE
- GIS STREAM/RIVER LINE
- SURVEYED STREAM/RIVER LINE
- 200' RIVERBANK WETLAND LINE
- ✕ TP30 TEST PIT LOCATIONS
- EDGE OF PAVEMENT
- 100 MAJOR CONTOURS AND LABELS
- 100 MINOR CONTOURS AND LABELS
- FEMA LINE
- BUILDING
- EDGE OF PAVEMENT
- PAVEMENT HATCH
- STONE WALL
- FENCE
- RETAINING WALL
- GRAVEL PATH
- TREE LINE
- USDA SOIL LINE
- EfB USDA SOIL TYPE
- UP UTILITY POLE


N
See Sheet 9
See Sheet 9
AP 13 LOT 156 NF ANTHONY R & DIANA R SORAFINE
AP 13 LOT 74 NF MARC B CORRIVEAU
AP 13 LOT 96 NF GERALD M CHAMBERLAND
AP 17 LOT 274
AP 17 LOT 275
AP 17 LOT 12
AP 17 LOT 276
AP 17 LOT 277
AP 17 LOT 278
AP 17 LOT 127 NF JAMES CAREY
AP 17 LOT 1A NF PHILIP G PIROLO
AP 17 LOT 1 NF JAMES E CAREY
AP 17 LOT 175
N.I.C. AP 17 LOT 130 NF RALPH F & MURIEL J FERRA
WoB
Sayles Hill Road
AP 17 | LOT 154 | NF ASHLEY, DEBORAH & ROBERT SHANNON
AP 17 | LOT 100 | NF GEORGE A DUVAL JR & JANICE M DUVAL, TRUSTEES
AP 17 | LOT 144 | NF LORRAINE M LAPREY, TRUST
AP 17 LOT 205
AP 17 LOT 247 NF THOMAS G AUCLAIR
AP 17 LOT 163 NF KOREL REALTY LLC
0 50' 100' 200' 300'
SCALE: 1"=100'

AUG 1 8 2020

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 8 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek


N
See Sheet 8
See Sheet 8
See Sheet 9
See Sheet 9
CeC
SWAMP
SWAMP
SWAMP
SWAMP
Ss
Sb
Iron Mine Hill Road
UP#41-31
UP#41-30
UP#39
UP#40
UP#41
UP#42
UP#43
AP 16 LOT 97
AP 16 LOT 6
AP 16 LOT 41 NF BRIAN G & MELISSA J POLAK
AP 16 LOT 102 NF GREGORY MARCOUX
AP 16 LOT 87 NF RALPH F & MURIEL J FERRA
AP 16 LOT 8 NF C&B SCRAP LLC
AP 16 LOT 99 NF PAUL & DOROTHY ROY
AP 16 LOT 6
AP 17 LOT 175
AP 16 LOT 9 NF MAURICE BOURGET
AP 16 LOT 17 NF MONGEON REALTY INC
AP 16 LOT 94 NF RALPH B & ROBIN FERRA
AP 16 LOT 33
AP 16 LOT 88
AP 16 LOT 120A
AP 16 LOT 120
AP 16 LOT 120
50' PERIMETER WETLAND
200' RIVERBANK WETLAND
WETLAND LINE
STREAM
0 50' 100' 200' 300'
SCALE: 1"=100'

FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com

GREEN development, LLC

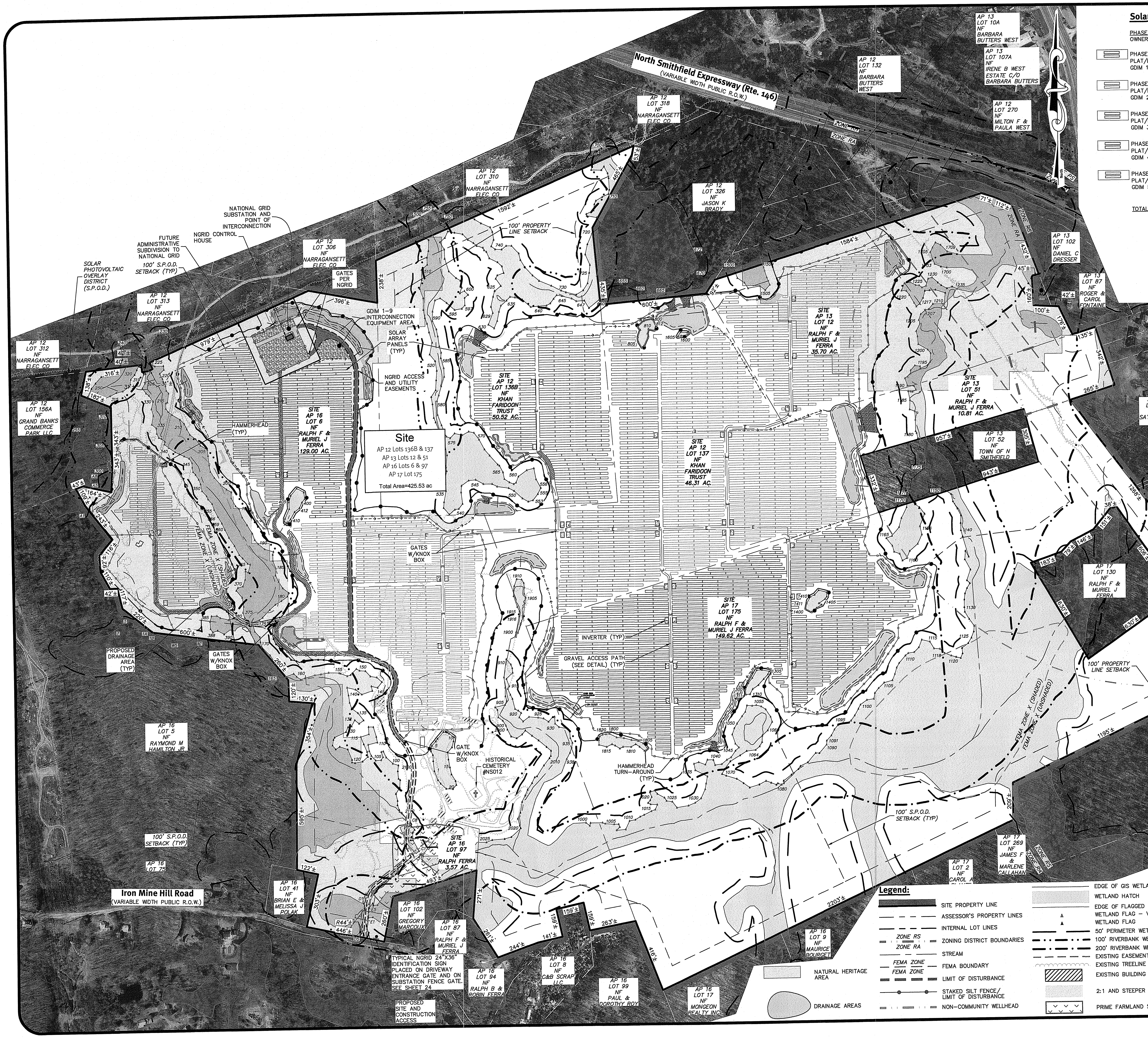
OWNERS: **Ralph F & Muriel J Ferra**
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
AP 13, LOTS 12 & 51, AP 16, LOTS 6 & 97 AND AP 17, LOT 175
Khan Faridoon Trust
5 KENNEDY BOULEVARD, LINCOLN, RI 02865
AP 12, LOTS 136B & 137
PREPARED BY: **Green Development, LLC**
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
3	6/14/2019	TOWN SUBMISSION	RBS
2	5/24/2019	RIDEM RESUBMISSION	RBS
1	11/19/2018	RIDEM WETLAND EDGE COMMENTS	RBS

SHEET TITLE:
Existing Conditions Plan - 5
PROJECT INFORMATION:
GDIM 1-9: Iron Mine Hill Road Solar
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 12 LOTS 136B & 137, AP 13 LOTS 12 & 51
AP 16 LOTS 6 & 97, & AP 17 LOT 175

KEVIN C. MORIN
No. 7951
REGISTERED PROFESSIONAL ENGINEER
CIVIL
6/14/2019

SHEET NO.:
10 OF 25


North Smithfield Expressway (Rte. 146)
(VARIABLE WIDTH PUBLIC R.O.W.)
Iron Mine Hill Road
(VARIABLE WIDTH PUBLIC R.O.W.)
Sayles Hill Road
(50' PUBLIC R.O.W.)
NATIONAL GRID SUBSTATION AND POINT OF INTERCONNECTION
NGRID CONTROL HOUSE
FUTURE ADMINISTRATIVE SUBDIVISION TO NATIONAL GRID
100' S.P.O.D. SETBACK (TYP)
SOLAR PHOTOVOLTAIC OVERLAY DISTRICT (S.P.O.D.)
GATES PER NGRID
GDIM 1-9 INTERCONNECTION EQUIPMENT AREA
SOLAR ARRAY PANELS (TYP)
NGRID ACCESS AND UTILITY EASEMENTS
100' PROPERTY LINE SETBACK
HAMMERHEAD (TYP)
GATES W/KNOX BOX
INVERTER (TYP)
GRAVEL ACCESS PATH (SEE DETAIL) (TYP)
GATE W/KNOX BOX
HISTORICAL CEMETERY #NS012
HAMMERHEAD TURN-AROUND (TYP)
PROPOSED DRAINAGE AREA (TYP)
FEMA ZONE X (SHADED)
FEMA ZONE X (UNSHADED)
ZONE RS
ZONE RA
TYPICAL NGRID 24"X36" IDENTIFICATION SIGN PLACED ON DRIVEWAY ENTRANCE GATE AND ON SUBSTATION FENCE GATE. SEE SHEET 24
PROPOSED SITE AND CONSTRUCTION ACCESS
Site
AP 12 Lots 136B & 137
AP 13 Lots 12 & 51
AP 16 Lots 6 & 97
AP 17 Lot 175
Total Area=425.53 ac
SITE AP 16 LOT 6 NF RALPH F & MURIEL J FERRA 129.00 AC.
SITE AP 12 LOT 136B NF KHAN FARIDOON TRUST 50.52 AC.
SITE AP 12 LOT 137 NF KHAN FARIDOON TRUST 46.31 AC.
SITE AP 13 LOT 12 NF RALPH F & MURIEL J FERRA 35.70 AC.
SITE AP 13 LOT 51 NF RALPH F & MURIEL J FERRA 10.81 AC.
SITE AP 17 LOT 175 NF RALPH F & MURIEL J FERRA 149.62 AC.
SITE AP 16 LOT 97 NF RALPH FERRA 3.57 AC.
AP 12 LOT 312 NF NARRAGANSETT ELEC CO
AP 12 LOT 313 NF NARRAGANSETT ELEC CO
AP 12 LOT 306 NF NARRAGANSETT ELEC CO
AP 12 LOT 310 NF NARRAGANSETT ELEC CO
AP 12 LOT 318 NF NARRAGANSETT ELEC CO
AP 12 LOT 156A NF GRAND BANKS COMMERCE PARK LLC
AP 12 LOT 326 NF JASON K BRADY
AP 12 LOT 132 NF BARBARA BUTTERS WEST
AP 13 LOT 10A NF BARBARA BUTTERS WEST
AP 13 LOT 107A NF IRENE B WEST ESTATE C/O BARBARA BUTTERS
AP 12 LOT 270 NF MILTON F & PAULA WEST
AP 13 LOT 102 NF DANIEL C DRESSER
AP 13 LOT 87 NF ROGER & CAROL FONTAINE
AP 13 LOT 62 NF MICHAEL L & TINA MARIE PLANTE
AP 13 LOT 61 NF MICHAEL L PLANTE
AP 13 LOT 65 NF SAYLES HILL ROD
AP 13 LOT 73 NF PAUL L & JUDITH F CONNOLLY
AP 13 LOT 156 NF ANTHONY R & DIANA R SORAFINE
AP 13 LOT 74 NF MARC B CORRIVEAU
AP 13 LOT 96 NF GERALD M CHAMBERLAND
AP 13 LOT 52 NF TOWN OF N SMITHFIELD
AP 17 LOT 130 NF RALPH F & MURIEL J FERRA
AP 17 LOT 127 NF JAMES CAREY
AP 17 LOT 1A NF PHILIP G PIROLO
AP 17 LOT 1 NF JAMES E CAREY
AP 17 LOT 247 NF THOMAS G AUCLAIR
AP 17 LOT 163 NF KOREL REALTY LLC
AP 17 LOT 144 NF LORRAINE M LAPREY, TRUST
AP 17 LOT 100 NF GEORGE A DUVAL JR & JANICE M DUVAL, TRUSTEES
AP 17 LOT 154 NF ASHLEY, DEBORAH & ROBERT SHANNON
AP 17 LOT 163 NF KOREL REALTY LLC
AP 17 LOT 5 NF MILTON F & PAULA M WEST
AP 17 LOT 269 NF JAMES F & MARLENE CALLAHAN
AP 17 LOT 2 NF CAROL A PLANTE
AP 16 LOT 5 NF RAYMOND M HAMILTON JR
AP 16 LOT 75
AP 16 LOT 41 NF BRIAN E & MELISSA J POLAK
AP 16 LOT 102 NF GREGORY MARCOUX
AP 16 LOT 87 NF RALPH F & MURIEL J FERRA
AP 16 LOT 94 NF RALPH B & ROBIN FERRA
AP 16 LOT 8 NF C&B SCRAP LLC
AP 16 LOT 99 NF PAUL & DOROTHY ROY
AP 16 LOT 9 NF MAURICE BOURGET
AP 16 LOT 17 NF MONGEON REALTY INC
North
1592'±
1584'±
979'±
396'±
238'±
600'±
435'±
465'±
53'±
92'±
432'±
45'±
42'±
160'±
176'±
100'±
135'±
342'±
265'±
957'±
305'±
943'±
332'±
1268'±
38'±
151'±
146'±
79'±
183'±
606'±
630'±
630'±
529'±
351'±
1195'±
209'±
2203'±
416'±
263'±
159'±
159'±
141'±
244'±
261'±
271'±
493'±
446'±
R44'±
260'±
303'±
122'±
595'±
354'±
130'±
120'±
260'±
600'±
220'±
117'±
42'±
110'±
92'±
116'±
243'±
164'±
43'±
101'±
343'±
343'±
182'±
138'±
316'±
31'±
40'±
40'±
41'±
113'±
127'±
76'±
146'±
83'±
154'±
240'±
78'±
113'±
250'±
71'±
112'±

Legend:

	SITE PROPERTY LINE		EDGE OF GIS WETLANDS
	ASSESSOR'S PROPERTY LINES		WETLAND HATCH
	INTERNAL LOT LINES		EDGE OF FLAGGED WETLANDS
ZONE RS ZONE RA	ZONING DISTRICT BOUNDARIES	▲	WETLAND FLAG – VERIFIED
	STREAM	▲	WETLAND FLAG
FEMA ZONE FEMA ZONE	FEMA BOUNDARY		50' PERIMETER WETLANDS
	LIMIT OF DISTURBANCE		100' RIVERBANK WETLANDS
	STAKED SILT FENCE/ LIMIT OF DISTURBANCE		200' RIVERBANK WETLANDS
	NON–COMMUNITY WELLHEAD		EXISTING EASEMENT
	NATURAL HERITAGE AREA		EXISTING TREELINE
	DRAINAGE AREAS	▨	EXISTING BUILDING
			2:1 AND STEEPER SLOPES
			PRIME FARMLAND SOILS

Scale: 1"=250'
0 125' 250' 500'

Solar Legend and Phasing Data:

PHASE 1:
OWNER: RALPH F FERRA, MURIEL J FERRA

▭	PHASE 1.1 PLAT/LOT: GDIM 1, LLC	16–006
▭	PHASE 1.2 PLAT/LOT: GDIM 2, LLC	16–006
▭	PHASE 1.3 PLAT/LOT: GDIM 3, LLC	16–006
▭	PHASE 1.4 PLAT/LOT: GDIM 4, LLC	17–175
▭	PHASE 1.5 PLAT/LOT: GDIM 5, LLC	17–175

PHASE 2:
OWNER: FARIDOON KHAN

▭	PHASE 2.1 PLAT/LOT: GDIM 6, LLC	12–136B
▭	PHASE 2.2 PLAT/LOT: GDIM 7, LLC	12–137
▭	PHASE 2.3 PLAT/LOT: GDIM 8, LLC	12–137

PHASE 3:
OWNER: RALPH F FERRA, MURIEL J FERRA

▭	PHASE 3.1 PLAT/LOT: GDIM 9, LLC	13–012

TOTAL IRON MINE ROAD SOLAR ESTIMATED CAPACITY: 38.40 MW AC

AUG 1 8 2020

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPEC[illegible] OF APPROVAL
DATED OCT 2 8 2020 [illegible] 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

BRIAN C. GIROUX
No. 9341
8/24/2020
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

Dimensional Regulations:

CURRENT ZONING:	RA REQUIRED	PROVIDED
MINIMUM LOT AREA:	65,000 SF	> 155,969 SF
MINIMUM FRONTAGE AND LOT WIDTH:	200'	446'±
MINIMUM FRONT AND CORNER SIDE YARD:	~~40'~~ 100' *	> 800'
MINIMUM SIDE YARD:	~~25'~~ 100' *	> 100'
MINIMUM REAR YARD:	~~40'~~ 100' *	> 100'
MAXIMUM STRUCTURE HEIGHT:	35'	N/A
MAXIMUM LOT COVERAGE:	25%	< 25%

* ZONING ORDINANCE SECTION 5.7.5 (d) – ALL SOLAR ARRAYS MUST BE SET BACK A MINIMUM OF 100 FEET FROM PROPERTY LINES.

SECTION 5.7.11 – SOLAR PHOTOVOLTAIC OVERLAY DISTRICT (S.P.O.D.)
5.7.11.c – OVERLAY DISTRICT
5.7.11.c.ii – NOT WITHSTANDING ANY OTHER DIMENSIONAL PROVISION TO THE CONTRARY, A SETBACK OF 100 FEET SHALL APPLY AND BE MEASURED FROM THE OVERLAY ZONE LINE AS DEPICTED ON MAP 1.

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

Proposed Site Plan

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027

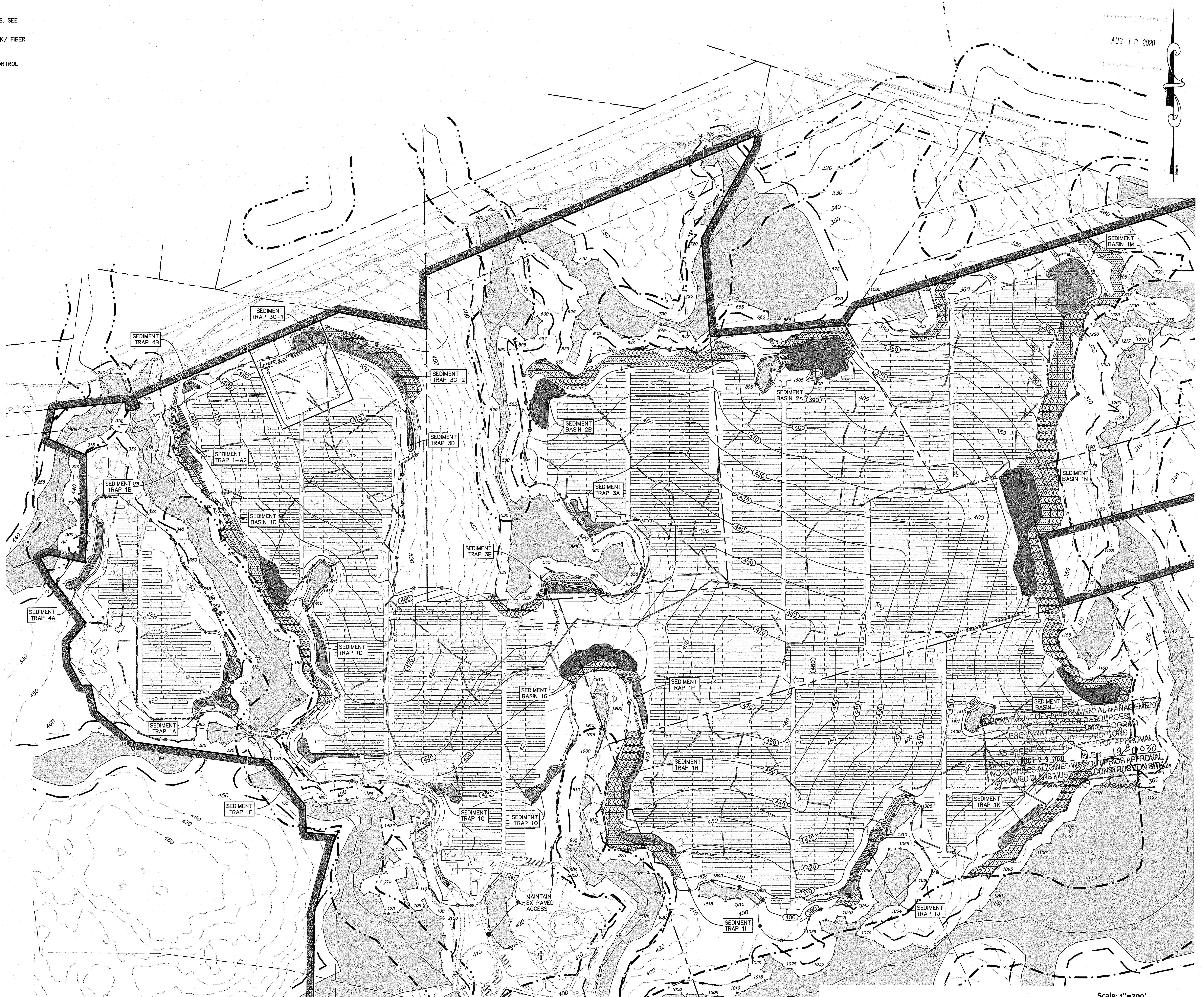
z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-plan.dwg Plotted: 6/25/2020

General Notes:

1. CONTRACTOR MUST INSTALL FILTER BERMS ALONG PROPOSED SLOPES. SEE DETAIL ON SHEET 21.
2. CONTRACTOR MUST INSTALL DOUBLE ROWS OF COMPOST FILTER SOCK/ FIBER ROLL WITH MAXIMUM 20' SEPARATION AT TOE OF SLOPE WHERE NO SEDIMENT TRAP OR BASIN IS PROVIDED.
3. SEE SESC PLAN FOR CONSTRUCTION PHASING AND SOIL EROSION CONTROL IMPLEMENTATION PHASING.

Soil Erosion Control Legend:

DIVERSION RUNOFF CONVEYANCE MEASURE (SWALE AND/OR BERM)	-->--->--->--->-
INITIAL DIVERSION RUNOFF CONVEYANCE MEASURE (EXISTING GRADE SWALE AND/OR BERM)	-->--->--->--->-
SEDIMENT CONTROL WATERSHED AREAS	——— ———
TEMPORARY SEDIMENT BASIN	⬬
TEMPORARY SEDIMENT TRAP	⬭
LIMIT OF DISTURBANCE (NO EROSION CONTROL)	▬ ▬ ▬ ▬
LIMIT OF DISTURBANCE/ LIMIT OF CLEARING (W/ EROSION CONTROL) SEDIMENTATION BARRIER, STAKED SILT FENCE (RIDOT STD 9.2.0), COMPOST STOCK OR APPROVED EQUAL	—●——●—
CONSTRUCTION ENTRANCE (RIDOT STD 9.9.0)	▨
PR CONTOUR	——(308)——
3:1 SLOPES REQUIRING TEMPORARY SLOPE PROTECTION	▦
2:1 AND STEEPER SLOPES WITH SLOPE PROTECTION	░
WETLAND HATCH	▒



AUG 18 2020
North
SEDIMENT TRAP 3C-1
SEDIMENT TRAP 4B
SEDIMENT TRAP 3C-2
SEDIMENT TRAP 3D
SEDIMENT TRAP 1-A2
SEDIMENT TRAP 1B
SEDIMENT BASIN 1C
SEDIMENT TRAP 4A
SEDIMENT TRAP 1D
SEDIMENT TRAP 1A
SEDIMENT TRAP 1F
SEDIMENT TRAP 1Q
SEDIMENT TRAP 1O
SEDIMENT BASIN 1G
SEDIMENT TRAP 3B
SEDIMENT TRAP 3A
SEDIMENT BASIN 2B
SEDIMENT BASIN 2A
SEDIMENT TRAP 1P
SEDIMENT TRAP 1H
SEDIMENT TRAP 1I
SEDIMENT TRAP 1J
SEDIMENT TRAP 1K
SEDIMENT BASIN 1L
SEDIMENT BASIN 1N
SEDIMENT BASIN 1M
MAINTAIN EX PAVED ACCESS

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 28 2020 FILE# 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

Note: This Plan Must Be Reproduced In Color

Scale: 1"=200'
0 100' 200' 400'

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
REGISTERED PROFESSIONAL ENGINEER
CIVIL
6/24/2020

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R. Design By: B.C.G.

Overall SESC Plan

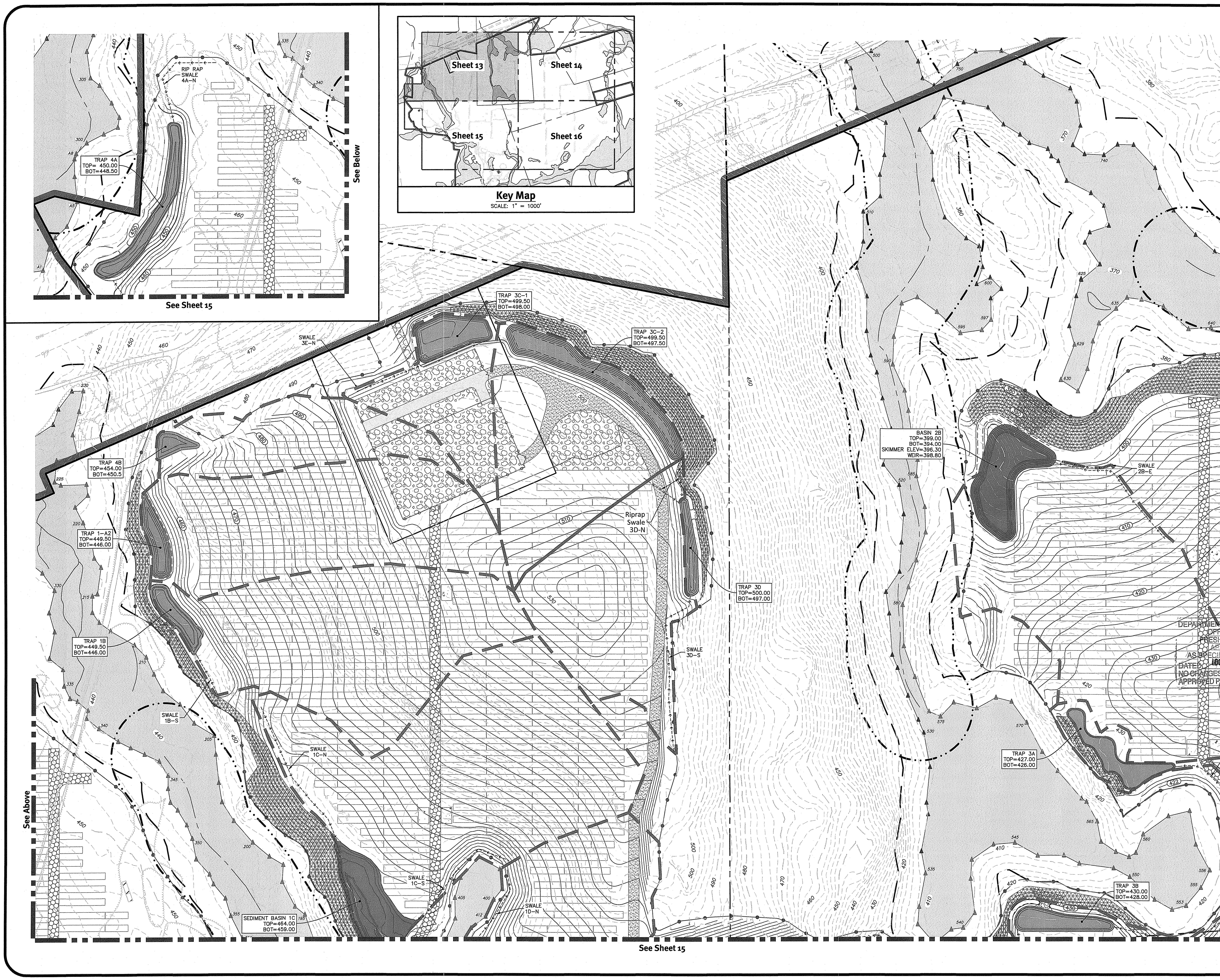
GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-sesc.dwg Plotted: 6/25/2020


Key Map
SCALE: 1" = 1000'
Sheet 13
Sheet 14
Sheet 15
Sheet 16
RIP RAP SWALE 4A-N
TRAP 4A TOP= 450.00 BOT=448.50
See Below
See Sheet 15
TRAP 3C-1 TOP=499.50 BOT=498.00
TRAP 3C-2 TOP=499.50 BOT=497.50
SWALE 3E-N
TRAP 4B TOP=454.00 BOT=450.5
TRAP 1-A2 TOP=449.50 BOT=446.00
TRAP 1B TOP=449.50 BOT=446.00
Riprap Swale 3D-N
TRAP 3D TOP=500.00 BOT=497.00
SWALE 3D-S
SWALE 1B-S
SWALE 1C-N
SWALE 1C-S
SWALE 1D-N
SEDIMENT BASIN 1C TOP=464.00 BOT=459.00
See Above
See Sheet 15
BASIN 2B TOP=399.00 BOT=394.00 SKIMMER ELEV=396.30 WEIR=398.80
SWALE 2B-E
See Sheet 14
TRAP 3A TOP=427.00 BOT=426.00
SWALE 3A-S
TRAP 3B TOP=430.00 BOT=428.00
Scale: 1"=80'
0 40' 80' 160'
North

AUG 1 9 2020

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 8 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-sesc.dwg Plotted: 6/25/2020

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
REGISTERED PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

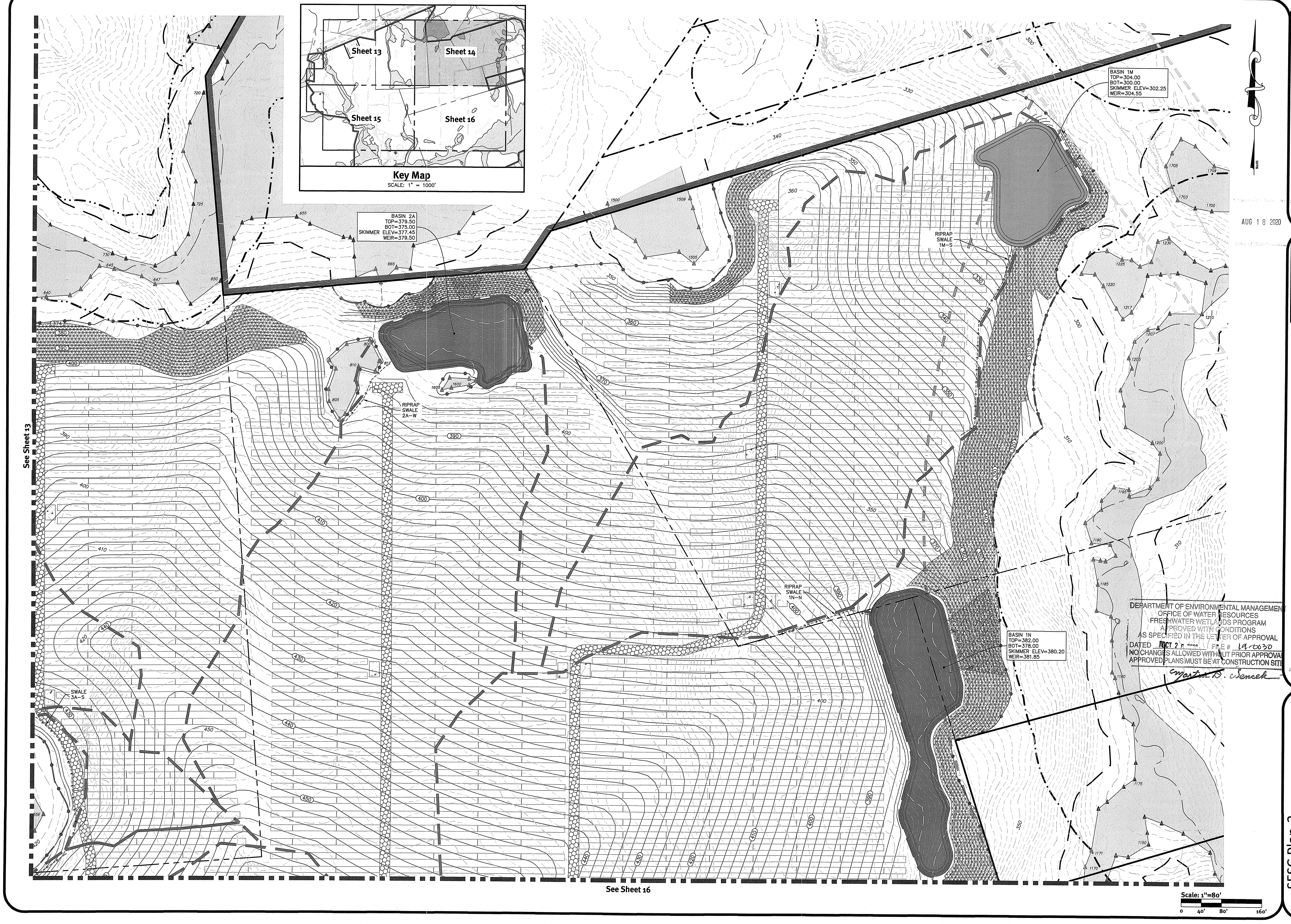
Drawn By: J.A.R.
Design By: B.C.G.

SESC Plan-1
GDIM 1-9: Iron Mine Hill Road Solar
AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027

SHEET 13 OF 25


Sheet 13
Sheet 14
Sheet 15
Sheet 16
Key Map
SCALE: 1" = 1000'
BASIN 2A
TOP=379.50
BOT=375.00
SKIMMER ELEV=377.45
WEIR=379.50
BASIN 1M
TOP=304.00
BOT=300.00
SKIMMER ELEV=302.25
WEIR=304.55
BASIN 1N
TOP=382.00
BOT=378.00
SKIMMER ELEV=380.20
WEIR=381.85
RIPRAP SWALE 2A-W
RIPRAP SWALE 1M-S
RIPRAP SWALE 1N-N
SWALE 3A-S
See Sheet 13
See Sheet 16
Scale: 1"=80'
0 40' 80' 160'

AUG 18 2020

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 P FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin B. Sencek

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-sesc.dwg Plotted: 6/25/2020

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
6/24/2020
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

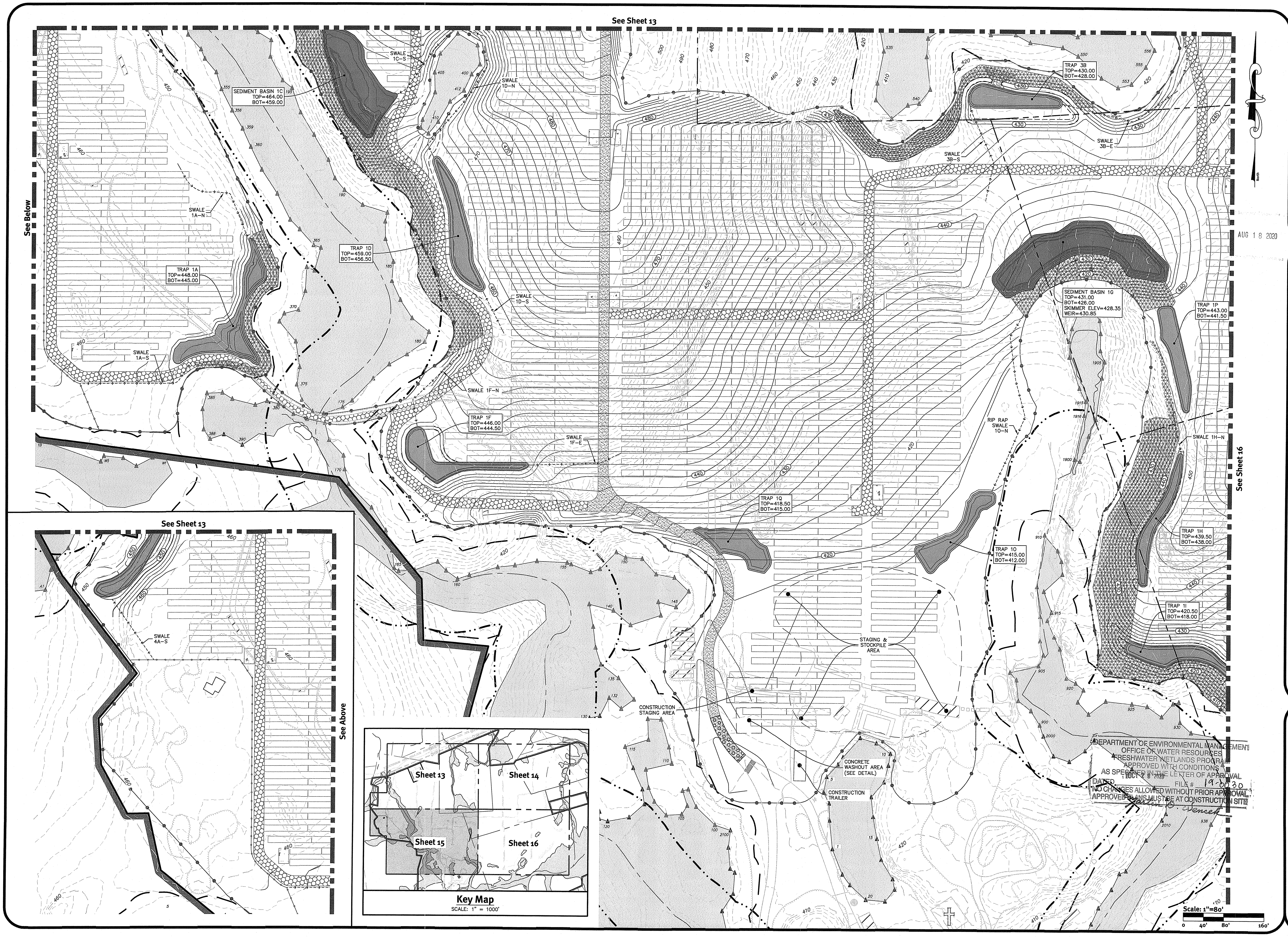
Drawn By: J.A.R.
Design By: B.C.G.

SESC Plan-2
GDIM 1-9: Iron Mine Hill Road Solar
AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027

SHEET 14 OF 25


See Sheet 13
See Below
See Sheet 16
SEDIMENT BASIN 1C
TOP=464.00
BOT=459.00
SWALE 1C–S
SWALE 1D–N
SWALE 1A–N
TRAP 1A
TOP=448.00
BOT=445.00
SWALE 1A–S
TRAP 1D
TOP=459.00
BOT=456.50
SWALE 1D–S
SWALE 1F–N
TRAP 1F
TOP=446.00
BOT=444.50
SWALE 1F–E
TRAP 3B
TOP=430.00
BOT=428.00
SWALE 3B–S
SWALE 3B–E
SEDIMENT BASIN 1G
TOP=431.00
BOT=426.00
SKIMMER ELEV=428.35
WEIR=430.85
TRAP 1P
TOP=443.00
BOT=441.50
RIP RAP SWALE 1O–N
SWALE 1H–N
TRAP 1Q
TOP=418.50
BOT=415.00
TRAP 1O
TOP=415.00
BOT=412.00
TRAP 1H
TOP=439.50
BOT=438.00
TRAP 1I
TOP=420.50
BOT=418.00
STAGING & STOCKPILE AREA
CONSTRUCTION STAGING AREA
CONCRETE WASHOUT AREA (SEE DETAIL)
CONSTRUCTION TRAILER
See Sheet 13
SWALE 4A–S
See Above
Sheet 13
Sheet 14
Sheet 15
Sheet 16
Key Map
SCALE: 1" = 1000'
Scale: 1"=80'
0
40'
80'
160'

AUG 18 2020

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 28 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Martin D. Wencek

DiPrete Engineering

Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

Boston • Providence • Newport

BRIAN C. GIROUX
STATE of RHODE ISLAND
No. 9341
HOPE
REGISTERED PROFESSIONAL ENGINEER CIVIL
8/24/2020

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

SESC Plan-3

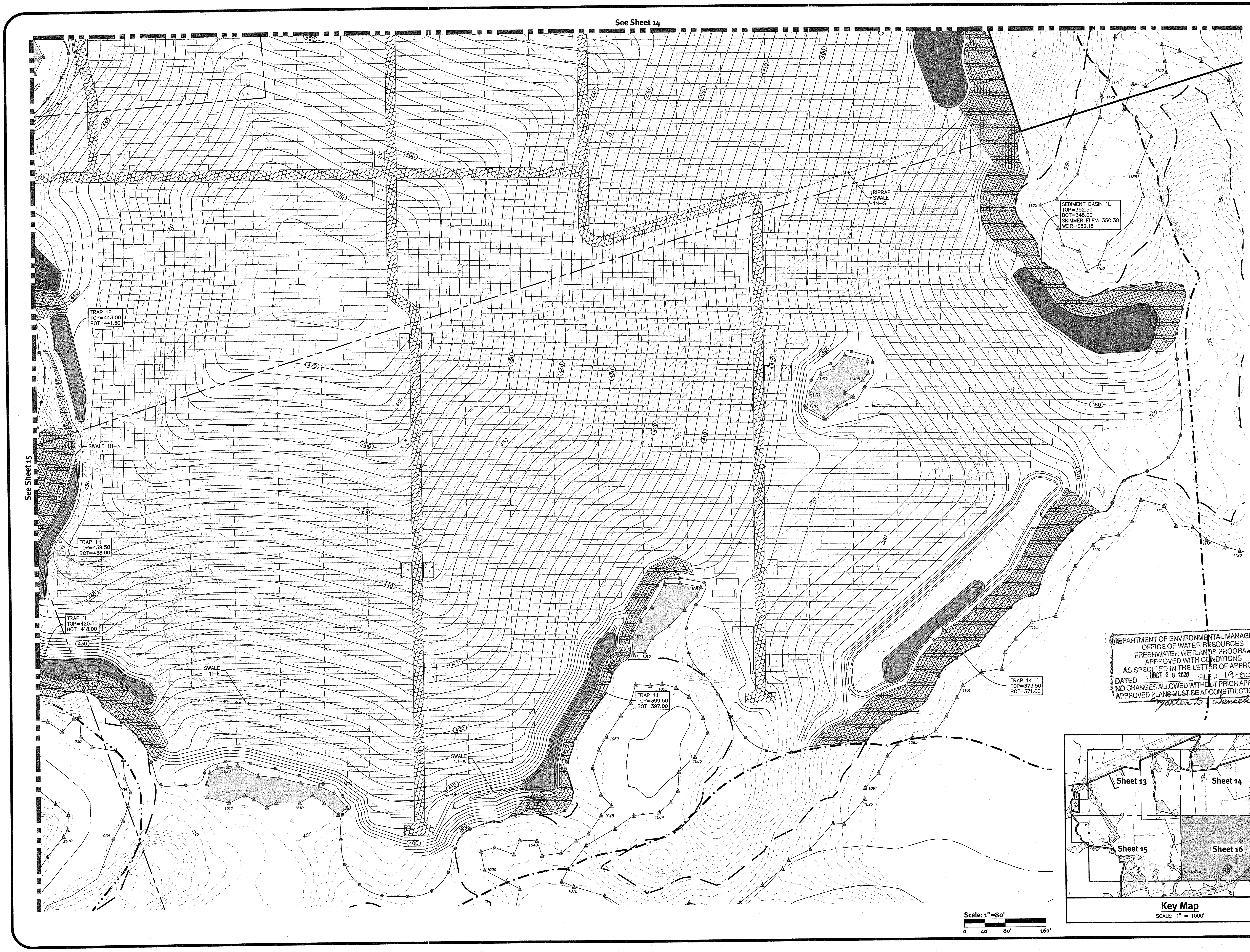
GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-sesc.dwg Plotted: 6/25/2020


See Sheet 14
See Sheet 15
TRAP 1P
TOP=443.00
BOT=441.50
SWALE 1H-N
TRAP 1H
TOP=439.50
BOT=438.00
TRAP 1I
TOP=420.50
BOT=418.00
SWALE 1I-E
SWALE 1J-W
TRAP 1J
TOP=399.50
BOT=397.00
RIPRAP
SWALE
1N-S
SEDIMENT BASIN 1L
TOP=352.50
BOT=348.00
SKIMMER ELEV=350.30
WEIR=352.15
TRAP 1K
TOP=373.50
BOT=371.00
North
Sheet 13
Sheet 14
Sheet 15
Sheet 16
Key Map
SCALE: 1" = 1000'
Scale: 1"=80'
0
40'
80'
160'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 8 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

AUG 1 8 2020

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
STATE of RHODE ISLAND
No. 9341
HOPE
REGISTERED
PROFESSIONAL ENGINEER
CIVIL
8/24/2020

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

SESC Plan-4

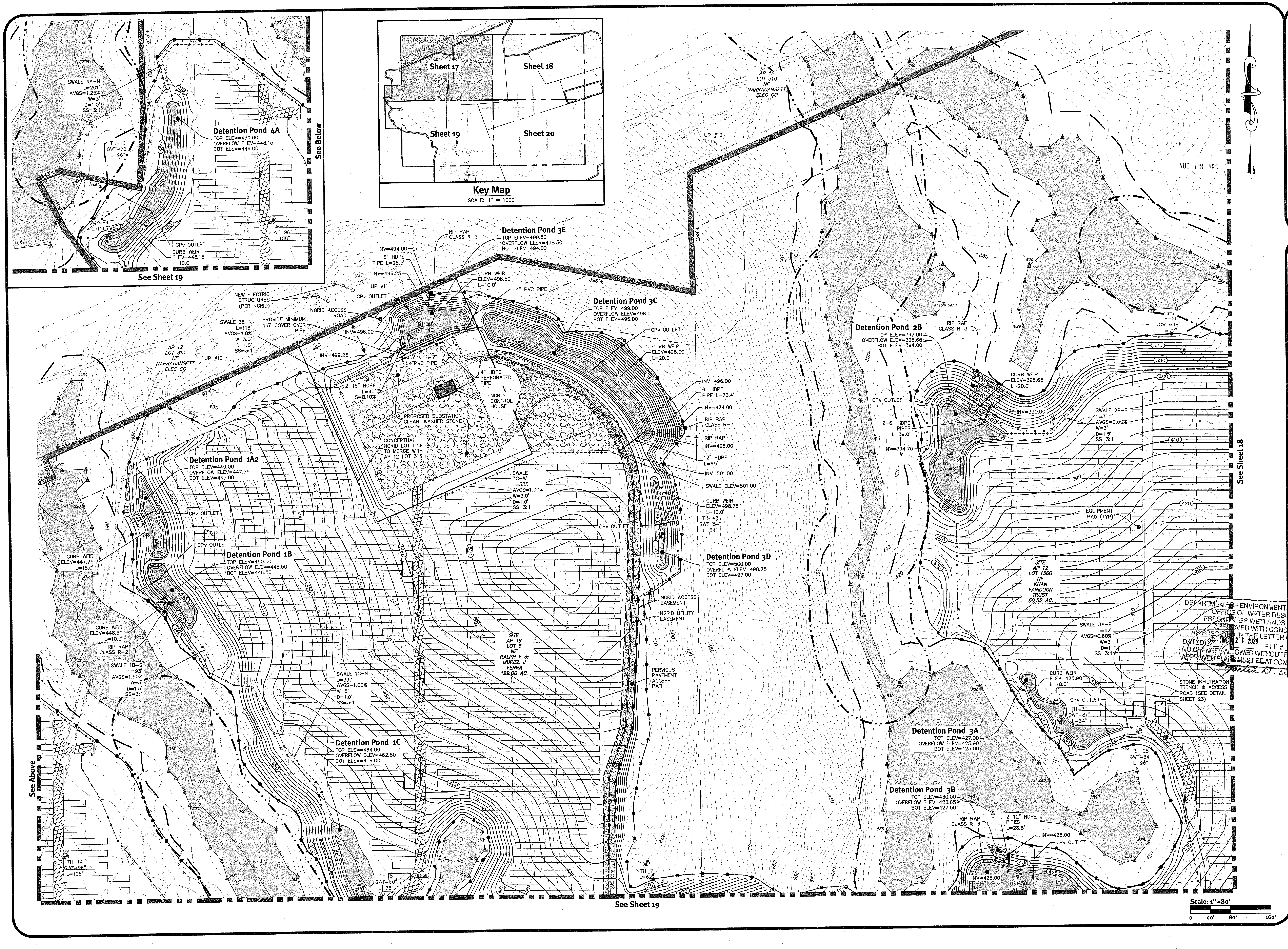
GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 16 OF 25

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-sesc.dwg Plotted: 6/25/2020


Key Map
SCALE: 1" = 1000'
Sheet 17
Sheet 18
Sheet 19
Sheet 20
See Below
See Sheet 19
See Above
See Sheet 18
AUG 1 8 2020
SWALE 4A-N
L=201'
AVGS=1.25%
W=3'
D=1.0'
SS=3:1
Detention Pond 4A
TOP ELEV=450.00
OVERFLOW ELEV=448.15
BOT ELEV=446.00
CPv OUTLET
CURB WEIR
ELEV=448.15
L=10.0'
TH-12
GWT=72"
L=96"
TH-14
GWT=96"
L=108"
Detention Pond 3E
TOP ELEV=499.50
OVERFLOW ELEV=498.50
BOT ELEV=494.00
RIP RAP
CLASS R-3
INV=494.00
6" HDPE
PIPE L=25.5'
INV=496.25
UP #11
CPv OUTLET
CURB WEIR
ELEV=498.50
L=10.0'
4" PVC PIPE
NEW ELECTRIC
STRUCTURES
(PER NGRID)
NGRID ACCESS
ROAD
SWALE 3E-N
L=115'
AVGS=1.0%
W=3.0'
D=1.0'
SS=3:1
PROVIDE MINIMUM
1.5' COVER OVER
PIPE
INV=496.00
INV=499.25
AP 12
LOT 313
NF
NARRAGANSETT
ELEC CO
UP #10
AP 12
LOT 310
NF
NARRAGANSETT
ELEC CO
UP #13
2-15" HDPE
L=40'
S=8.10%
4" PVC PIPE
4" HDPE
PERFORATED
PIPE
NGRID
CONTROL
HOUSE
PROPOSED SUBSTATION
CLEAN, WASHED STONE
CONCEPTUAL
NGRID LOT LINE
TO MERGE WITH
AP 12 LOT 313
Detention Pond 3C
TOP ELEV=499.00
OVERFLOW ELEV=498.00
BOT ELEV=496.00
CPv OUTLET
CURB WEIR
ELEV=498.00
L=20.0'
INV=496.00
6" HDPE
PIPE L=73.4'
INV=474.00
RIP RAP
CLASS R-3
RIP RAP
INV=495.00
12" HDPE
L=65'
INV=501.00
SWALE ELEV=501.00
CURB WEIR
ELEV=498.75
L=10.0'
TH-42
GWT=54"
L=84"
CPv OUTLET
Detention Pond 3D
TOP ELEV=500.00
OVERFLOW ELEV=498.75
BOT ELEV=497.00
Detention Pond 1A2
TOP ELEV=449.00
OVERFLOW ELEV=447.75
BOT ELEV=445.00
CPv OUTLET
CPv OUTLET
Detention Pond 1B
TOP ELEV=450.00
OVERFLOW ELEV=448.50
BOT ELEV=446.50
CURB WEIR
ELEV=447.75
L=18.0'
CURB WEIR
ELEV=448.50
L=10.0'
RIP RAP
CLASS R-2
SWALE 1B-S
L=93'
AVGS=1.50%
W=3'
D=1.5'
SS=3:1
SWALE
3C-W
L=385'
AVGS=1.00%
W=3.0'
D=1.0'
SS=3:1
SITE
AP 16
LOT 6
NF
RALPH F &
MURIEL J
FERRA
129.00 AC.
SWALE 1C-N
L=330'
AVGS=1.00%
W=5'
D=1.0'
SS=3:1
Detention Pond 1C
TOP ELEV=464.00
OVERFLOW ELEV=462.60
BOT ELEV=459.00
NGRID ACCESS
EASEMENT
NGRID UTILITY
EASEMENT
PERVIOUS
PAVEMENT
ACCESS
PATH
TH-8
GWT=60"
L=78"
TH-7
L=62"
TH-14
GWT=96"
L=108"
Detention Pond 2B
TOP ELEV=397.00
OVERFLOW ELEV=395.65
BOT ELEV=394.00
RIP RAP
CLASS R-3
CURB WEIR
ELEV=395.65
L=20.0'
CPv OUTLET
2-6" HDPE
PIPES
L=39.0'
INV=394.75
INV=390.00
SWALE 2B-E
L=300'
AVGS=0.50%
W=3'
D=1.5'
SS=3:1
TH-40
GWT=84"
L=84"
TH-26
GWT=48"
L=72"
EQUIPMENT
PAD (TYP)
SITE
AP 12
LOT 136B
NF
KHAN
FARIDOON
TRUST
50.52 AC.
SWALE 3A-E
L=42'
AVGS=0.60%
W=3'
D=1'
SS=3:1
CURB WEIR
ELEV=425.90
L=18.0'
CPv OUTLET
TH-39
GWT=84"
L=84"
TH-25
GWT=84"
L=96"
STONE INFILTRATION
TRENCH & ACCESS
ROAD (SEE DETAIL
SHEET 23)
Detention Pond 3A
TOP ELEV=427.00
OVERFLOW ELEV=425.90
BOT ELEV=425.00
Detention Pond 3B
TOP ELEV=430.00
OVERFLOW ELEV=428.65
BOT ELEV=427.50
RIP RAP
CLASS R-3
2-12" HDPE
PIPES
L=28.8'
INV=426.00
CPv OUTLET
INV=428.00
TH-38
Scale: 1"=80'
0
40'
80'
160'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 8 2020
FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-plan.dwg Plotted: 6/25/2020

DiPrete Engineering

Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
REGISTERED
PROFESSIONAL ENGINEER
CIVIL
8/24/2020

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

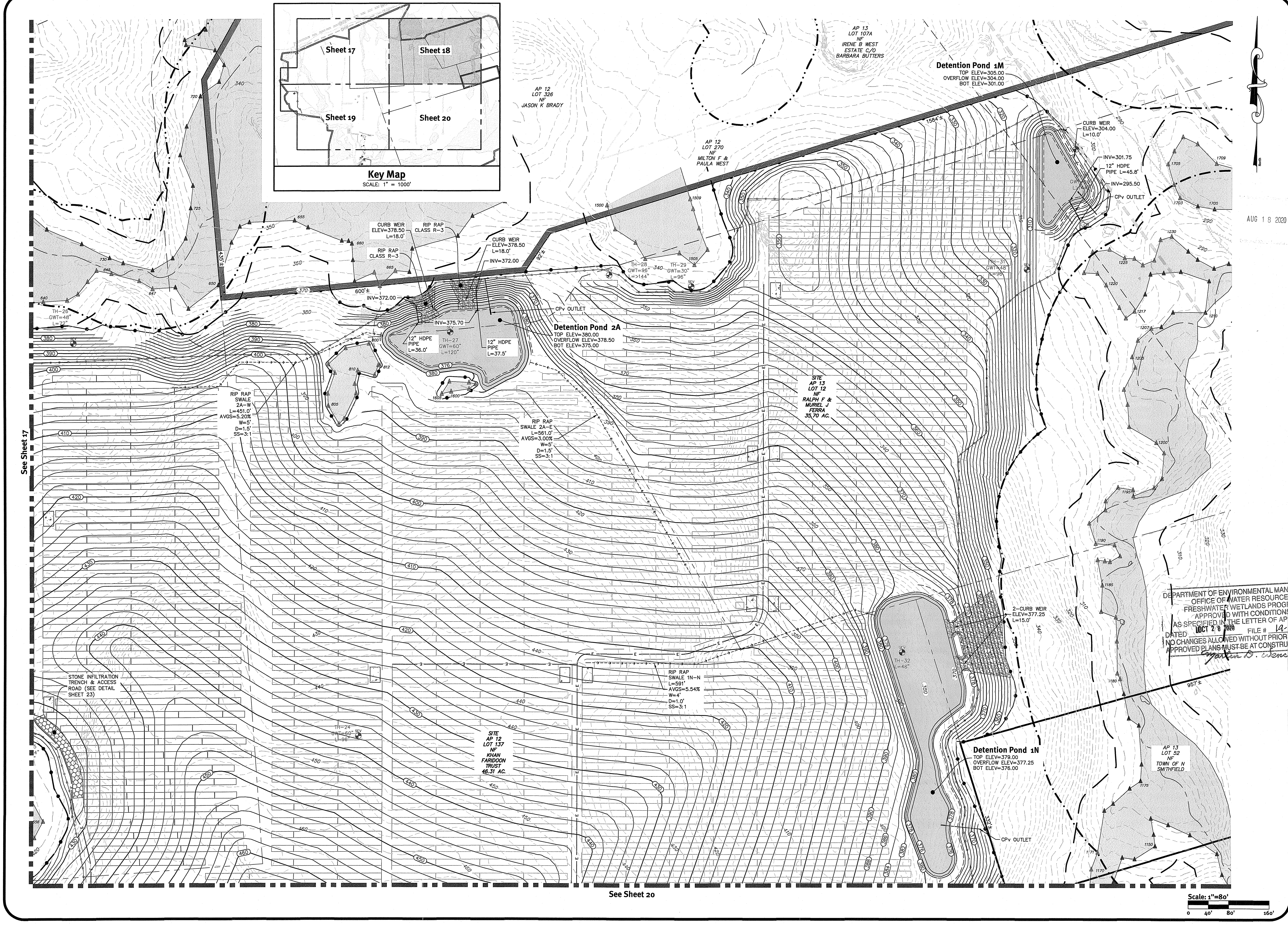
Grading Plan-1

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027


Key Map
SCALE: 1" = 1000'
Sheet 17
Sheet 18
Sheet 19
Sheet 20
North
See Sheet 17
See Sheet 20
AP 13
LOT 107A
NF
IRENE B WEST
ESTATE C/O
BARBARA BUTTERS
AP 12
LOT 326
NF
JASON K BRADY
AP 12
LOT 270
NF
MILTON F &
PAULA WEST
Detention Pond 1M
TOP ELEV=305.00
OVERFLOW ELEV=304.00
BOT ELEV=301.00
1584'±
CURB WEIR
ELEV=304.00
L=10.0'
INV=301.75
12" HDPE
PIPE L=45.8'
INV=295.50
CPv OUTLET
CURB WEIR
ELEV=378.50
L=18.0'
RIP RAP
CLASS R-3
RIP RAP
CLASS R-3
CURB WEIR
ELEV=378.50
L=18.0'
INV=372.00
92'±
600'±
INV=372.00
INV=375.70
12" HDPE
PIPE
L=36.0'
TH-27
GWT=60"
L=120"
12" HDPE
PIPE
L=37.5'
CPv OUTLET
Detention Pond 2A
TOP ELEV=380.00
OVERFLOW ELEV=378.50
BOT ELEV=375.00
TH-26
GWT=48"
L=72"
TH-28
GWT=96"
L=>144"
TH-29
GWT=30"
L=96"
TH-31
GWT=48"
L=96"
435'±
RIP RAP
SWALE
2A-W
L=451.0'
AVGS=5.20%
W=5'
D=1.5'
SS=3:1
RIP RAP
SWALE 2A-E
L=561.0'
AVGS=3.00%
W=5'
D=1.5'
SS=3:1
SITE
AP 13
LOT 12
NF
RALPH F &
MURIEL J
FERRA
35.70 AC.
2-CURB WEIR
ELEV=377.25
L=15.0'
TH-32
L=48"
957'±
STONE INFILTRATION
TRENCH & ACCESS
ROAD (SEE DETAIL
SHEET 23)
RIP RAP
SWALE 1N-N
L=591'
AVGS=5.54%
W=4'
D=1.0'
SS=3:1
TH-24
GWT=60"
L=96"
SITE
AP 12
LOT 137
NF
KHAN
FARIDOON
TRUST
46.31 AC.
Detention Pond 1N
TOP ELEV=379.00
OVERFLOW ELEV=377.25
BOT ELEV=376.00
332'±
CPv OUTLET
AP 13
LOT 52
NF
TOWN OF N
SMITHFIELD
Scale: 1"=80'
0
40'
80'
160'

AUG 18 2020

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 28 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-plan.dwg Plotted: 6/25/2020

DiPrete Engineering

Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
8/24/2020
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

Grading Plan-2

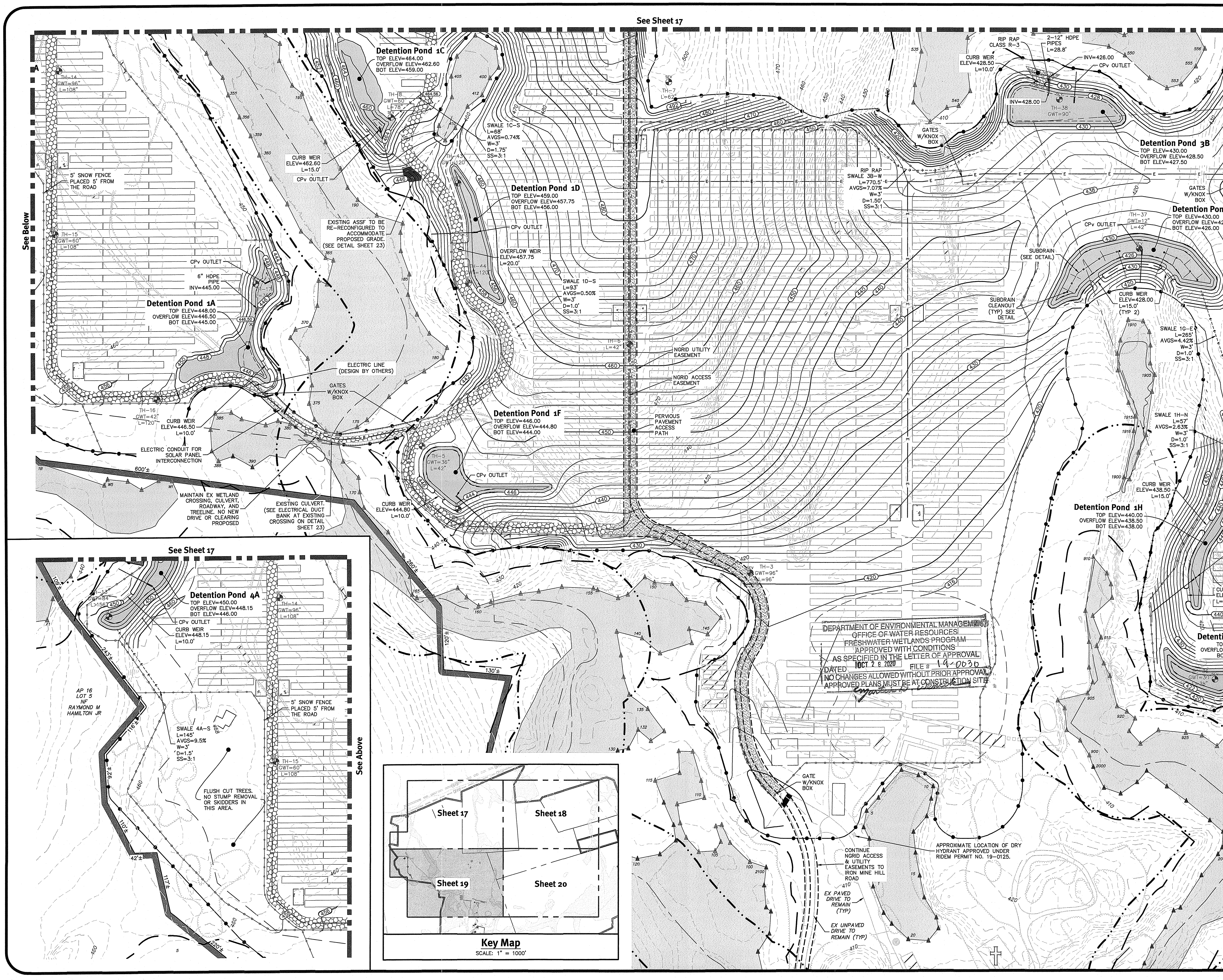
GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 18 OF 25

DE Job No: 0601-027 Copyright 2020 by DiPrete Engineering Associates, Inc.


See Sheet 17
See Below
See Sheet 20
A
TH-14
GWT=96"
L=108"
5' SNOW FENCE
PLACED 5' FROM
THE ROAD
TH-15
GWT=60"
L=108"
Detention Pond 1C
TOP ELEV=464.00
OVERFLOW ELEV=462.60
BOT ELEV=459.00
TH-8
GWT=60"
L=78"
CURB WEIR
ELEV=462.60
L=15.0'
CPv OUTLET
SWALE 1C-S
L=68'
AVGS=0.74%
W=3'
D=1.75'
SS=3:1
TH-43
GWT=120"
Detention Pond 1D
TOP ELEV=459.00
OVERFLOW ELEV=457.75
BOT ELEV=456.00
CPv OUTLET
EXISTING ASSF TO BE
RE-RECONFIGURED TO
ACCOMMODATE
PROPOSED GRADE.
(SEE DETAIL SHEET 23)
OVERFLOW WEIR
ELEV=457.75
L=20.0'
TH-44
GWT=120"
SWALE 1D-S
L=93'
AVGS=0.50%
W=3'
D=1.0'
SS=3:1
TH-6
L=42"
CPv OUTLET
6" HDPE
PIPE
INV=445.00
Detention Pond 1A
TOP ELEV=448.00
OVERFLOW ELEV=446.50
BOT ELEV=445.00
ELECTRIC LINE
(DESIGN BY OTHERS)
GATES
W/KNOX
BOX
TH-16
GWT=42"
L=120"
CURB WEIR
ELEV=446.50
L=10.0'
ELECTRIC CONDUIT FOR
SOLAR PANEL
INTERCONNECTION
600'±
MAINTAIN EX WETLAND
CROSSING, CULVERT,
ROADWAY, AND
TREELINE. NO NEW
DRIVE OR CLEARING
PROPOSED
EXISTING CULVERT.
(SEE ELECTRICAL DUCT
BANK AT EXISTING
CROSSING ON DETAIL
SHEET 23)
Detention Pond 1F
TOP ELEV=446.00
OVERFLOW ELEV=444.80
BOT ELEV=444.00
TH-5
GWT=36"
L=42"
CPv OUTLET
CURB WEIR
ELEV=444.80
L=10.0'
260'±
TH-7
L=62"
RIP RAP
CLASS R-3
2-12" HDPE
PIPES
L=28.8'
CURB WEIR
ELEV=428.50
L=10.0'
INV=426.00
CPv OUTLET
INV=428.00
TH-38
GWT=90"
GATES
W/KNOX
BOX
Detention Pond 3B
TOP ELEV=430.00
OVERFLOW ELEV=428.50
BOT ELEV=427.50
RIP RAP
SWALE 3B-W
L=770.5'
AVGS=7.07%
W=3'
D=1.50'
SS=3:1
GATES
W/KNOX
BOX
Detention Pond 1G
TOP ELEV=430.00
OVERFLOW ELEV=428.00
BOT ELEV=426.00
TH-37
GWT=12"
L=42"
CPv OUTLET
SUBDRAIN
(SEE DETAIL)
SUBDRAIN
CLEANOUT
(TYP) SEE
DETAIL
CURB WEIR
ELEV=428.00
L=15.0'
(TYP 2)
SWALE 1G-E
L=265'
AVGS=4.42%
W=3'
D=1.0'
SS=3:1
NGRID UTILITY
EASEMENT
NGRID ACCESS
EASEMENT
PERVIOUS
PAVEMENT
ACCESS
PATH
SWALE 1H-N
L=57'
AVGS=2.63%
W=3'
D=1.0'
SS=3:1
CURB WEIR
ELEV=438.50
L=15.0'
Detention Pond 1H
TOP ELEV=440.00
OVERFLOW ELEV=438.50
BOT ELEV=438.00
CPv OUTLET
CURB WEIR
ELEV=438.50
L=15.0'
Detention Pond 1I
TOP ELEV=422.00
OVERFLOW ELEV=419.60
BOT ELEV=418.00
TH-36
GWT=30"
L=38"
TH-3
GWT=96"
L=96"
120'±
130'±
GATE
W/KNOX
BOX
CONTINUE
NGRID ACCESS
& UTILITY
EASEMENTS TO
IRON MINE HILL
ROAD
EX PAVED
DRIVE TO
REMAIN
(TYP)
EX UNPAVED
DRIVE TO
REMAIN (TYP)
APPROXIMATE LOCATION OF DRY
HYDRANT APPROVED UNDER
RIDEM PERMIT NO. 19-0125.
See Sheet 17
Detention Pond 4A
TOP ELEV=450.00
OVERFLOW ELEV=448.15
BOT ELEV=446.00
TH-13
GWT=84"
L>156"
CPv OUTLET
CURB WEIR
ELEV=448.15
L=10.0'
TH-14
GWT=96"
L=108"
109'±
243'±
AP 16
LOT 5
NF
RAYMOND M
HAMILTON JR
116'±
5' SNOW FENCE
PLACED 5' FROM
THE ROAD
SWALE 4A-S
L=145'
AVGS=9.5%
W=3'
D=1.5'
SS=3:1
TH-15
GWT=60"
L=108"
See Above
92'±
FLUSH CUT TREES.
NO STUMP REMOVAL
OR SKIDDERS IN
THIS AREA.
110'±
42'±
117'±
220'±
Sheet 17
Sheet 18
Sheet 19
Sheet 20
Key Map
SCALE: 1" = 1000'
Scale: 1"=80'
0
40'
80'
160'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 8 2020 FILE # 19-0036
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

AUG 1 8 2020

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-plan.dwg Plotted: 6/25/2020

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
8/24/2020
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

Grading Plan-3

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

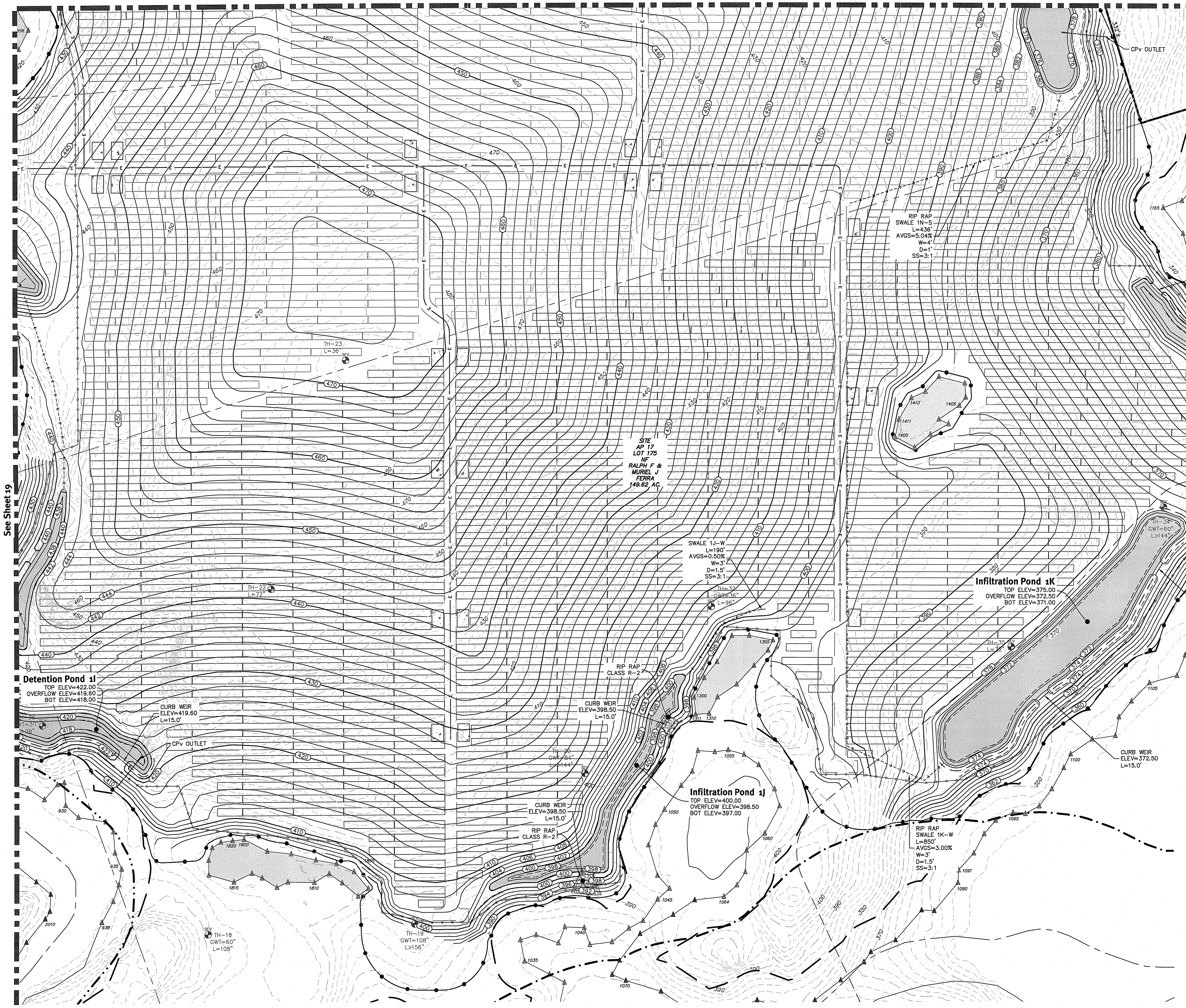
Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027

SHEET 19 OF 25

See Sheet 18

See Sheet 19

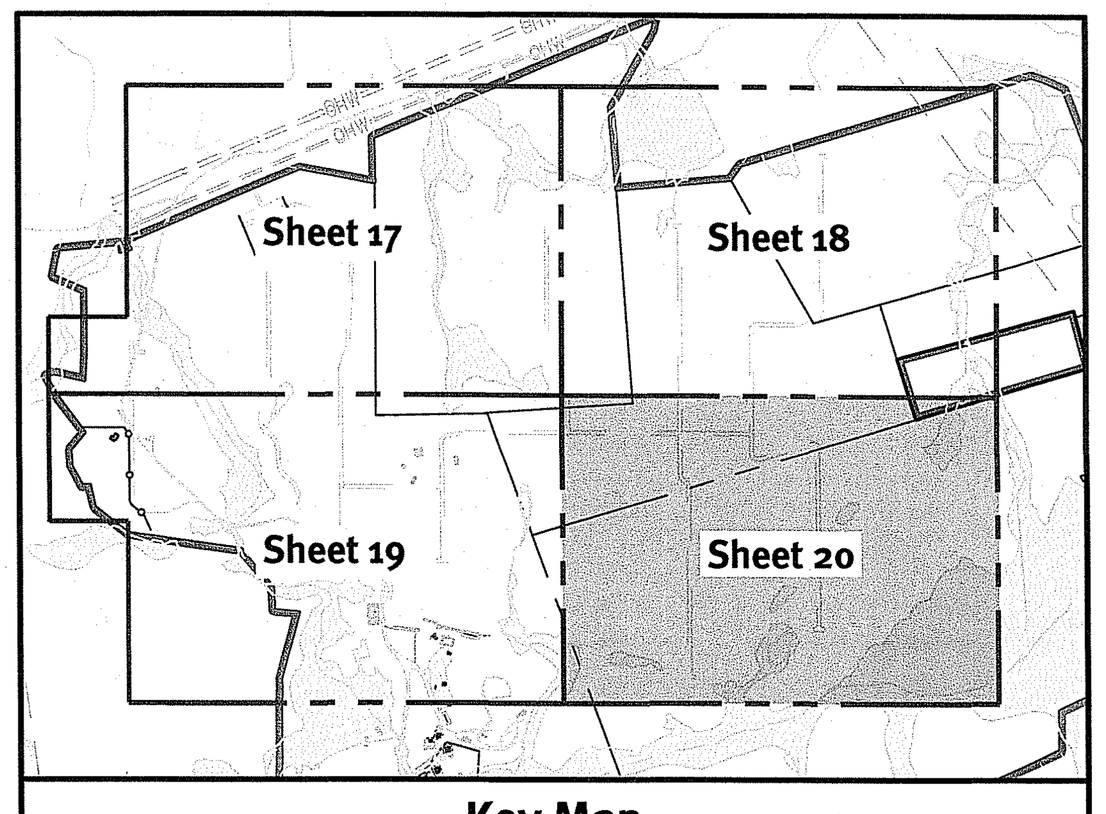

SITE
AP 17
LOT 175
NF
RALPH F &
MURIEL J
FERRA
149.62 AC.
Detention Pond 1I
TOP ELEV=422.00
OVERFLOW ELEV=419.60
BOT ELEV=418.00
CURB WEIR
ELEV=419.60
L=15.0'
CPv OUTLET
Infiltration Pond 1J
TOP ELEV=400.00
OVERFLOW ELEV=398.50
BOT ELEV=397.00
CURB WEIR
ELEV=398.50
L=15.0'
RIP RAP
CLASS R-2
Infiltration Pond 1K
TOP ELEV=375.00
OVERFLOW ELEV=372.50
BOT ELEV=371.00
CURB WEIR
ELEV=372.50
L=15.0'
Infiltration Pond 1L
TOP ELEV=350.00
OVERFLOW ELEV=348.50
BOT ELEV=346.00
CURB WEIR
ELEV=348.50
L=15.0'
CPv OUTLET
RIP RAP
SWALE 1N-S
L=436'
AVGS=5.04%
W=4'
D=1'
SS=3:1
SWALE 1J-W
L=190'
AVGS=0.50%
W=3'
D=1.5'
SS=3:1
RIP RAP
SWALE 1K-W
L=850'
AVGS=3.00%
W=3'
D=1.5'
SS=3:1
TH-23
L=36"
TH-22
L=72"
TH-33
GWT=48"
L=132"
TH-34
GWT=60"
L>144"
TH-18
GWT=60"
L=108"
TH-19
GWT=108"
L>156"
470
460
450
440
430
420
410
400
390
380
370
360
350
340
330
320

Scale: 1"=80'

0 40' 80' 160'

Key Map

SCALE: 1" = 1000'


Sheet 17
Sheet 18
Sheet 19
Sheet 20

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 8 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

AUG 1 8 2020

DiPrete Engineering

Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

Grading Plan-4

GDIM 1-9: Iron Mine Hill Road Solar

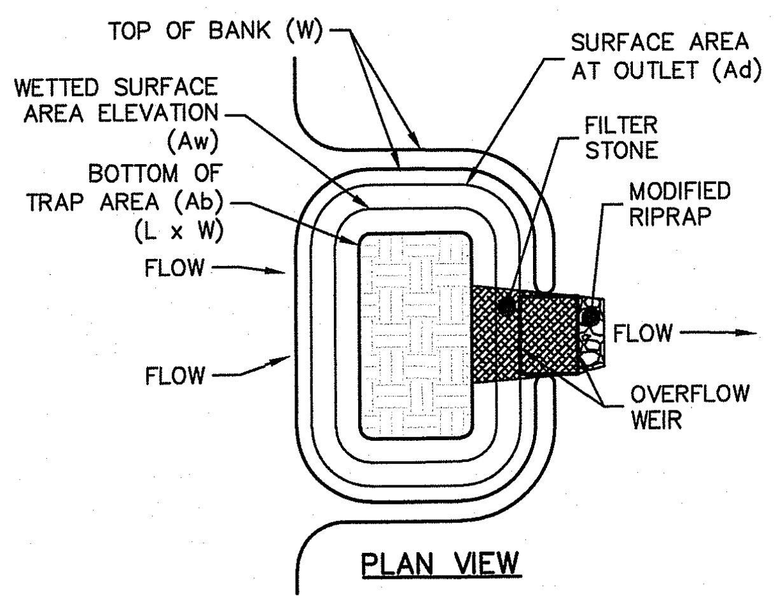
AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027

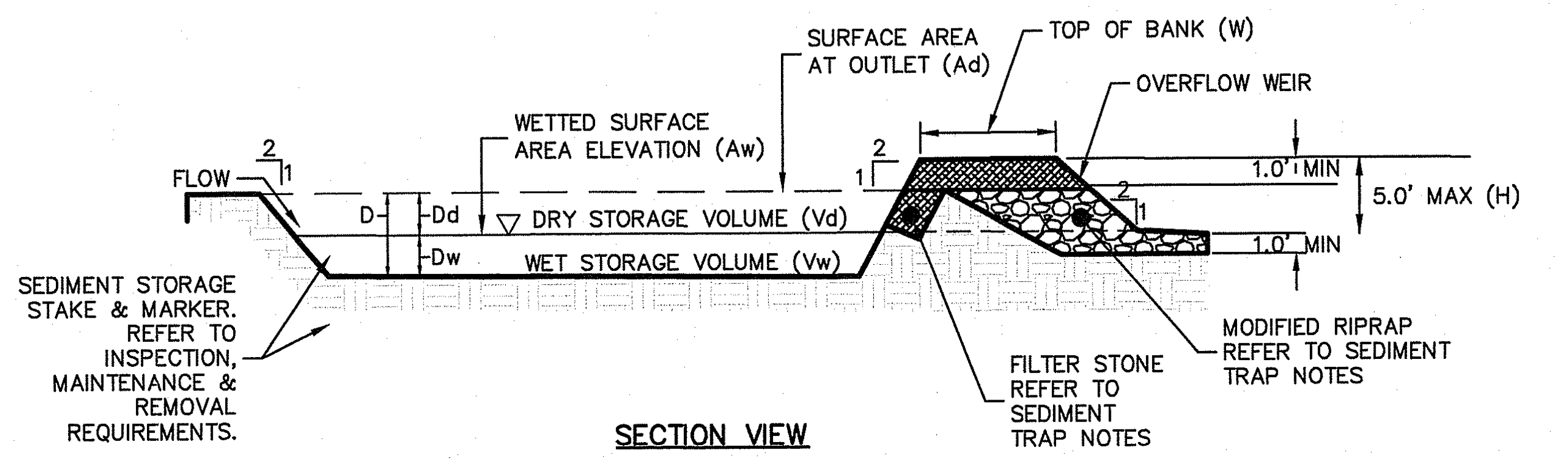
SHEET 20 OF 25

SEDIMENT TRAP DIMENSIONS	TRAP 1A	TRAP 1A-2	TRAP 1B	TRAP 1D	TRAP 1F	TRAP 1H	TRAP1I	TRAP 1J	TRAP 1K	TRAP 1O	TRAP 1P	TRAP 1Q	TRAP 3A	TRAP 3B	TRAP 3C-1	TRAP 3C-2	TRAP 3D	TRAP 4A	TRAP 4B
TRIBUTARY DRAINAGE AREA (AC)	3.598	3.02	3.401	4.226	2.534	1.236	3.930	4.449	4.016	4.226	1.548	4.666	1.512	2.397	1.162	3.276	2.253	1.769	1.317
WET STORAGE DEPTH (Dw)(FT)	2.00	2.00	2.00	1.50	1.00	1	1.5	1.50	1.50	2.00	1.00	2.00	0.50	1.00	1.00	1.00	2.00	1.00	2.00
DRY STORAGE DEPTH (Dd) (FT)	1.00	1.50	1.50	1.00	0.50	0.5	1	1.00	1.00	1.00	0.50	1.50	0.50	1.00	0.50	1.00	1.00	0.50	1.50
TOTAL DEPTH (D)(FT)	3.00	3.50	3.50	2.50	1.50	1.50	2.50	2.50	2.50	3.00	1.50	3.50	1.00	2.00	1.50	2.00	3.00	1.50	3.50
BOTTOM OF TRAP AREA (Ab)(SF)	1,778	1,506	1,772	5,229	5,127	4,042	3,980	3,720	4,129	3,073	4,469	3,764	6,089	4,067	6,840	5,576	643	5,564	715
WETTED SURFACE AREA(Aw)(SF)	7,240	3,255	3,673	7,787	6,914	4,885	6,506	7,070	6,622	5,828	5,809	5,904	6,945	5,243	7,932	7,113	2,727	7,702	1,690
SURFACE AREA AT OUTLET (Ad)(SF)	11,357	4,797	5,192	9,563	7,828	5,743	8,260	9,374	8,354	7,293	6,500	7,086	7,814	6,475	8,499	8,709	3,875	8,792	2,627
MAX TRIBUTARY AREA	5.00	3.02	3.40	5.00	3.20	2.25	4.50	5.00	4.65	5.00	2.70	5.00	1.60	2.45	5.00	3.28	2.55	3.60	1.55


TOP OF BANK (W)
SURFACE AREA AT OUTLET (Ad)
WETTED SURFACE AREA ELEVATION (Aw)
FILTER STONE
BOTTOM OF TRAP AREA (Ab) (L x W)
MODIFIED RIPRAP
FLOW
FLOW
FLOW
OVERFLOW WEIR
PLAN VIEW

TOP WIDTH VS HEIGHT
H=HEIGHT OF EMBANKMENT
W=TOP WIDTH OF EMBANKMENT

H (ft)	W (ft)
1.5	2.0
2.0	2.0
2.5	3.0
3.0	2.5
3.5	3.0
4.0	3.0
4.5	4.0
5.0	4.5


SURFACE AREA AT OUTLET (Ad)
TOP OF BANK (W)
OVERFLOW WEIR
WETTED SURFACE AREA ELEVATION (Aw)
FLOW
2
1
D
Dd
Dw
DRY STORAGE VOLUME (Vd)
WET STORAGE VOLUME (Vw)
1.0' MIN
5.0' MAX (H)
1.0' MIN
SEDIMENT STORAGE STAKE & MARKER. REFER TO INSPECTION, MAINTENANCE & REMOVAL REQUIREMENTS.
FILTER STONE REFER TO SEDIMENT TRAP NOTES
MODIFIED RIPRAP REFER TO SEDIMENT TRAP NOTES
SECTION VIEW

Sediment Trap Notes:

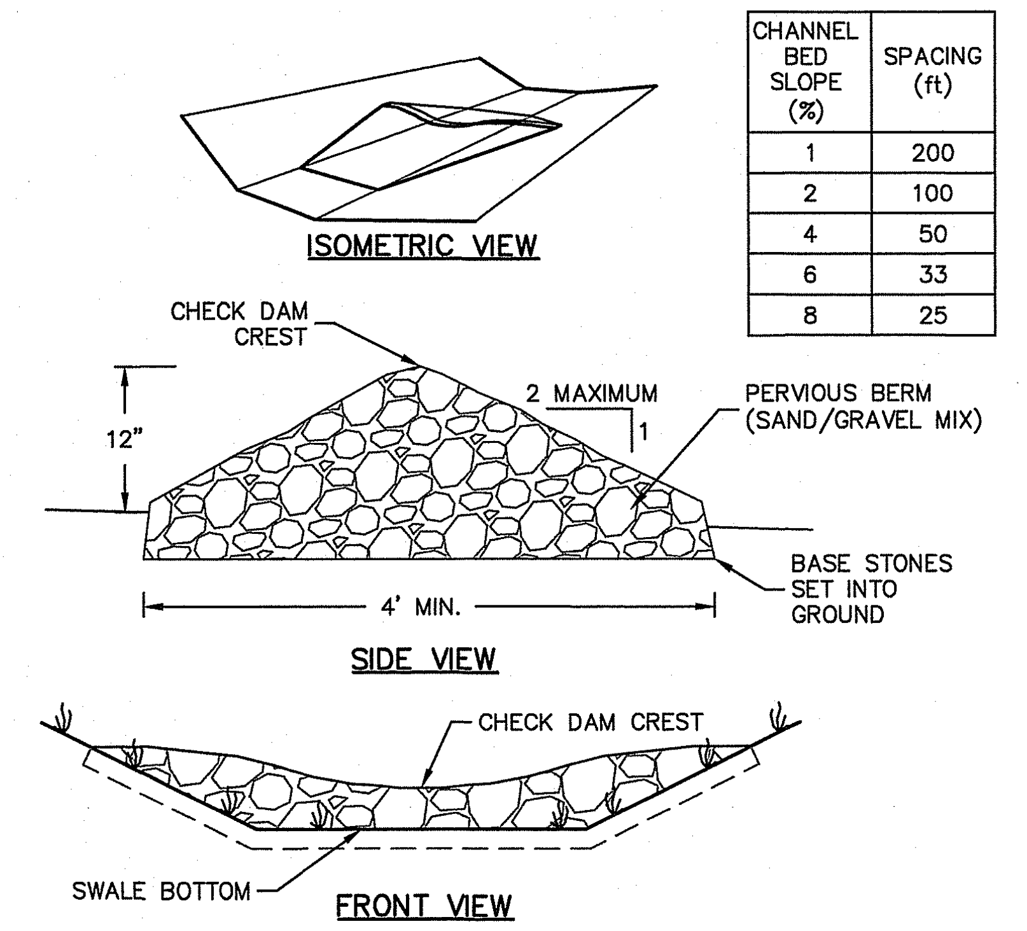
1. THE TEMPORARY SEDIMENT TRAPS SHALL MEET ALL REQUIREMENTS FOR TEMPORARY SEDIMENT TRAPS OUTLINED IN THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (LATEST REVISION) SECTION SIX: SEDIMENT CONTROL MEASURES
2. THE TEMPORARY SEDIMENT TRAP SHALL HAVE AN INITIAL STORAGE VOLUME OF 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER EXCEPT FOR THE EXCAVATED WET STORAGE AREA WHERE SLOPES SHALL NOT EXCEED 1.5:1.
4. THE OUTLET SHALL BE LOCATED AT THE MOST DISTANT HYDRAULIC POINT FROM THE INLET.
5. THE OUTLET CONSISTS OF A PERVIOUS STONE DIKE WITH A CORE OF MODIFIED RIPRAP AND FACED ON THE UPSTREAM SIDE WITH STONE.
6. TEMPORARY SEDIMENT TRAPS MUST OUTLET ONTO STABILIZED GROUND.
7. MAXIMUM HEIGHT OF A TEMPORARY SEDIMENT TRAP EMBANKMENT IS LIMITED TO 5 FEET.
8. SIDE SLOPES OF THE EMBANKMENT SHALL BE 2:1 OR FLATTER.
9. MODIFIED RIPRAP: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.10.03.2.
10. FILTER STONE: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.01.03 TABLE I, COLUMN V FILTER STONE.

Inspection, Maintenance, and Removal Requirements:

1. INSTALL "SEDIMENT STORAGE" STAKE WITH A MARKER AT ONE HALF OF THE WET STORAGE VOLUME.
2. INSPECT THE TEMPORARY SEDIMENT TRAP AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCH OR GREATER.
3. CHECK THE OUTLET TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT.
4. CHECK FOR SEDIMENT ACCUMULATION AND FILTRATION PERFORMANCE.
5. WHEN SEDIMENTS HAVE ACCUMULATED TO ONE HALF THE MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATER THE TRAP AS NEEDED, REMOVE SEDIMENTS AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS.
6. DISPOSE OF THE SEDIMENT REMOVED FROM THE BASIN IN A SUITABLE AREA.
7. THE TEMPORARY SEDIMENT TRAP MAY BE REMOVED AFTER THE CONTRIBUTING DRAINAGE AREA IS STABILIZED.

Temporary Sediment Trap Details

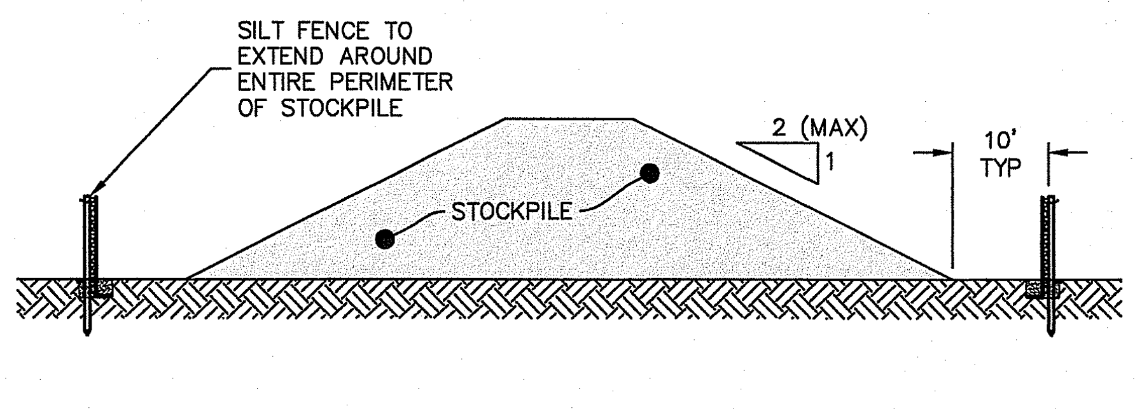
NOT TO SCALE


ISOMETRIC VIEW
CHECK DAM CREST
12"
2 MAXIMUM
1
PERVIOUS BERM (SAND/GRAVEL MIX)
BASE STONES SET INTO GROUND
4' MIN.
SIDE VIEW
CHECK DAM CREST
SWALE BOTTOM
FRONT VIEW

CHANNEL BED SLOPE (%)	SPACING (ft)
1	200
2	100
4	50
6	33
8	25

Stone Check Dam

NOT TO SCALE


SILT FENCE TO EXTEND AROUND ENTIRE PERIMETER OF STOCKPILE
2 (MAX)
1
10' TYP
STOCKPILE

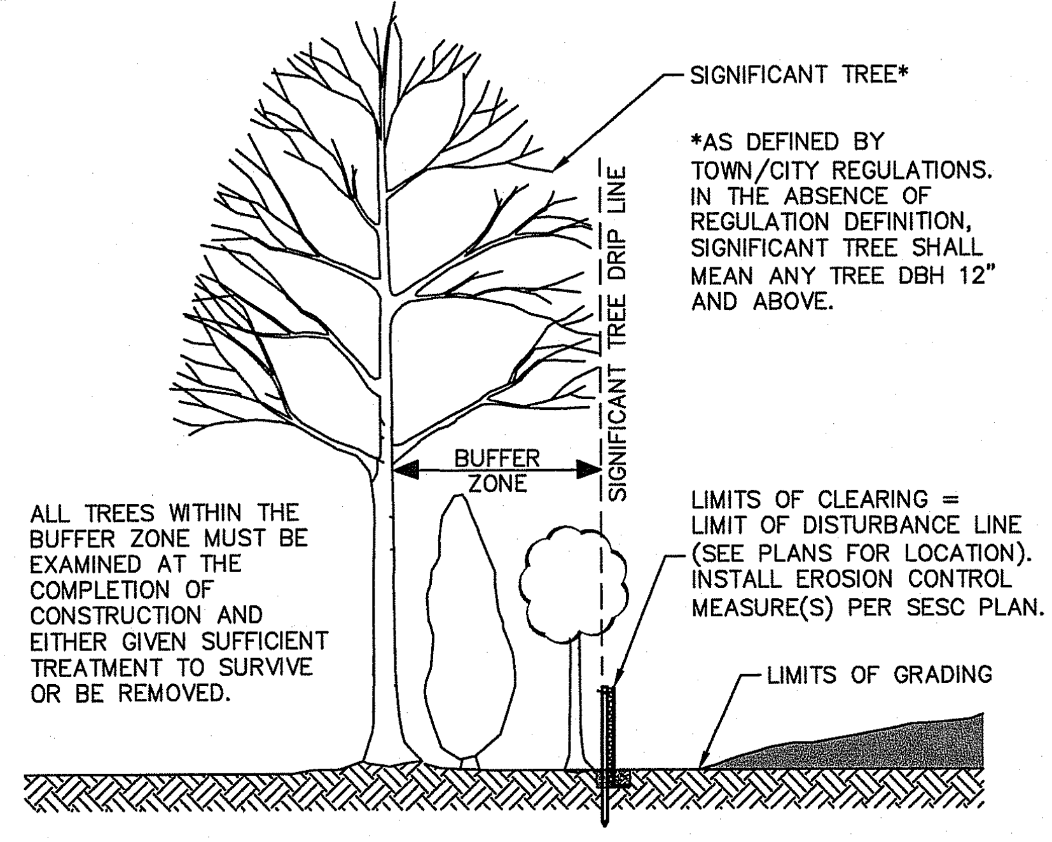
NOTES:

1. ALL STOCKPILES MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 3 "STOCKPILE AND STAGING AREA MANAGEMENT" OF THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HAND BOOK (CURRENT EDITION).
2. DIVERT ALL STORMWATER AWAY FROM STOCKPILES.
3. SOIL STOCKPILES THAT ARE NOT TO BE USED WITHIN 30 DAYS MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER FORMATION OF THE STOCKPILE WITH SEED MIX COMPATIBLE WITH THE SOIL TYPE.
4. STOCKPILE AND SILT FENCE MUST BE INSPECTED AT LEAST ONCE PER WEEK AND AFTER RAIN EVENTS IN EXCESS OF ½" OF RAINFALL. REPAIR/ REPLACE SILT FENCE (AND STOCKPILE COVERS WHERE APPLICABLE) AS NEEDED TO KEEP THEM FUNCTIONING ADEQUATELY.
5. SEDIMENT TRAPPED BY SILT FENCES MUST BE REMOVED AND PROPERLY DISPOSED OF WHENEVER SIGNIFICANT ACCUMULATION OCCURS.

AUG 1 8 2020

Stockpile Protection

NOT TO SCALE


SIGNIFICANT TREE*
SIGNIFICANT TREE DRIP LINE
BUFFER ZONE
LIMITS OF GRADING

*AS DEFINED BY TOWN/CITY REGULATIONS. IN THE ABSENCE OF REGULATION DEFINITION, SIGNIFICANT TREE SHALL MEAN ANY TREE DBH 12" AND ABOVE.

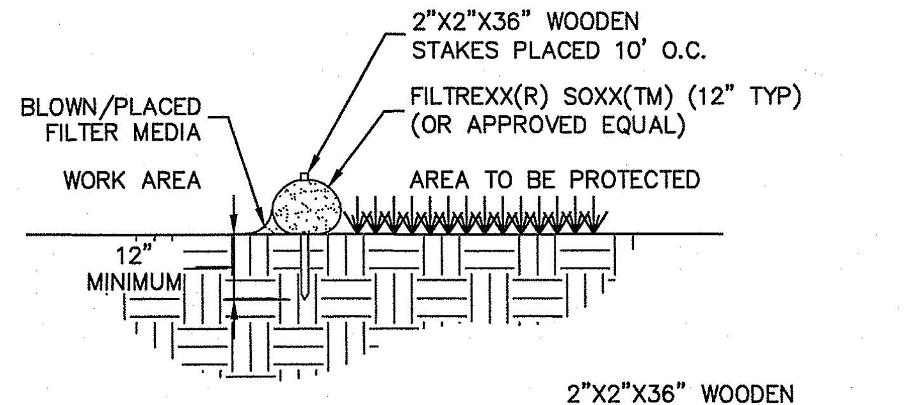
ALL TREES WITHIN THE BUFFER ZONE MUST BE EXAMINED AT THE COMPLETION OF CONSTRUCTION AND EITHER GIVEN SUFFICIENT TREATMENT TO SURVIVE OR BE REMOVED.

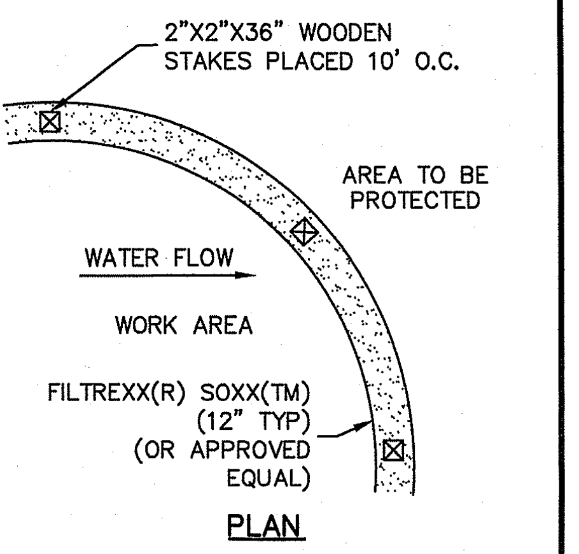
LIMITS OF CLEARING = LIMIT OF DISTURBANCE LINE (SEE PLANS FOR LOCATION). INSTALL EROSION CONTROL MEASURE(S) PER SESC PLAN.

NOTE: LIMIT OF DISTURBANCE (LOD) MUST BE STAKED OUT PRIOR TO CONSTRUCTION. IF ANY SIGNIFICANT TREE DRIP LINE IS ENCROACHING PAST THE LOD, CONTRACTOR MUST CONTACT SITE ENGINEER PRIOR TO CONSTRUCTION.

Limit of Disturbance at Vegetation

NOT TO SCALE


2"X2"X36" WOODEN STAKES PLACED 10' O.C.
BLOWN/PLACED FILTER MEDIA
FILTREXX(R) SOXX(TM) (12" TYP) (OR APPROVED EQUAL)
WORK AREA
AREA TO BE PROTECTED
12" MINIMUM
SECTION

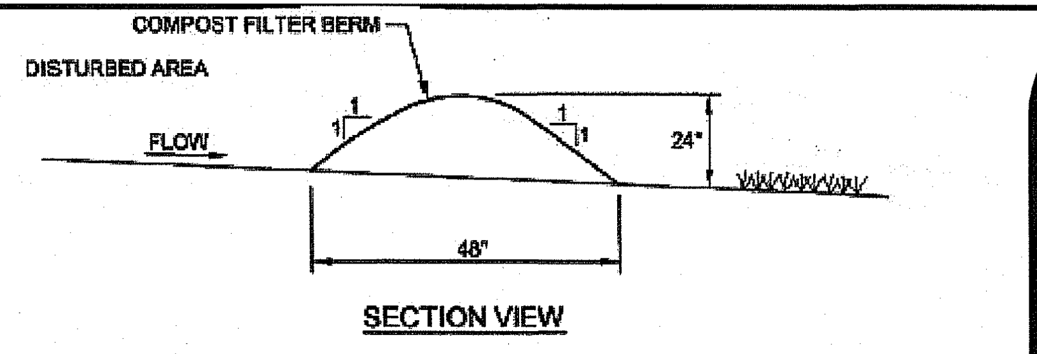

2"X2"X36" WOODEN STAKES PLACED 10' O.C.
AREA TO BE PROTECTED
WATER FLOW
WORK AREA
FILTREXX(R) SOXX(TM) (12" TYP) (OR APPROVED EQUAL)
PLAN

NOTES:

1. ALL MATERIAL TO MEET FILTREXX(R) SPECIFICATIONS
2. FILTER MEDIA(TM) FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER
4. STAKES ARE NOT TO BE USED IN PAVEMENT AREAS.
5. SELF WEIGHT OF FILTREXX SYSTEM IS ADEQUATE TO PREVENT SYSTEM MOVEMENT ONCE POSITIONED ALONG AREA SHOWN ON THE PLANS.
6. CONTRACTOR TO PLACE FILTREXX SEDIMENT CONTROL OR APPROVED EQUAL AROUND ALL CURB INLET LOCATIONS AS SPECIFIED ON PLANS.

Filtrexx Sediment Control (or Approved Equal)

NOT TO SCALE


COMPOST FILTER BERM
DISTURBED AREA
FLOW
1
1
24"
48"
SECTION VIEW

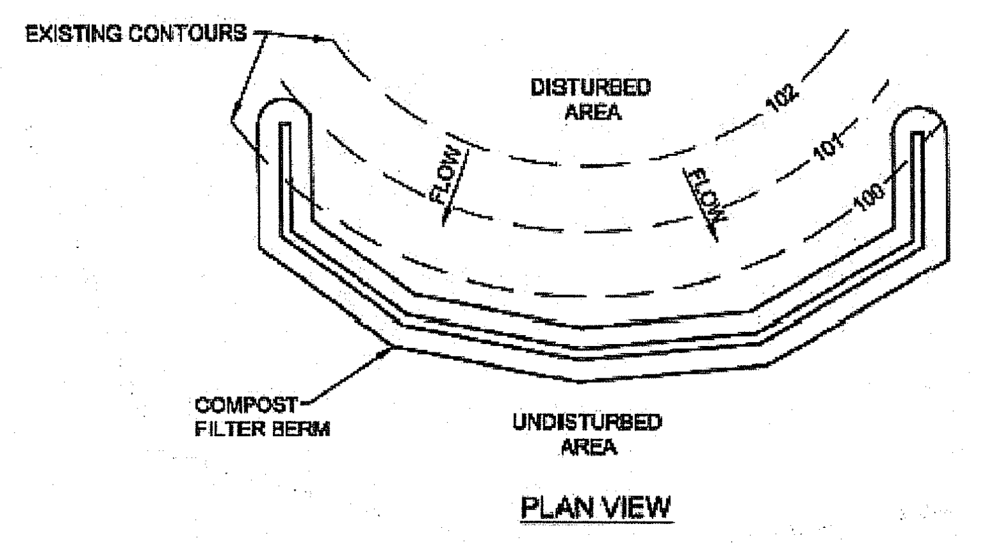

EXISTING CONTOURS
DISTURBED AREA
FLOW
FLOW
102
101
100
COMPOST FILTER BERM
UNDISTURBED AREA
PLAN VIEW

TABLE 4.2
Compost Standards

Organic Matter Content	80% - 100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	5.5 - 8.0
Moisture Content	35% - 55%
Particle Size	98% pass through 1" screen
Soluble Salt Concentration	5.0 dS/m (mmhos/cm) Maximum

Slope %	Maximum slope length above compost filter sock in ft (m)			
	Diameter of compost filter sock required			
	8-inch (200-mm)	12-inch (300-mm)	18-inch (450-mm)	24-inch (600-mm)
2 (or less)	300 (90)	375 (110)	500 (150)	650 (200)
5	200 (60)	250 (75)	275 (85)	325 (100)
10	100 (30)	125 (35)	150 (45)	200 (60)
15	70 (20)	85 (25)	100 (30)	160 (50)
20	50 (15)	65 (20)	70 (20)	130 (40)
25	40 (12)	50 (15)	55 (16)	100 (30)
30	30 (9)	40 (12)	45 (13)	65 (20)
35	30 (9)	40 (12)	45 (13)	55 (18)
40	30 (9)	40 (12)	45 (13)	50 (15)
45	20 (6)	25 (8)	30 (9)	40 (12)
50	20 (6)	25 (8)	30 (9)	35 (10)

Notes:

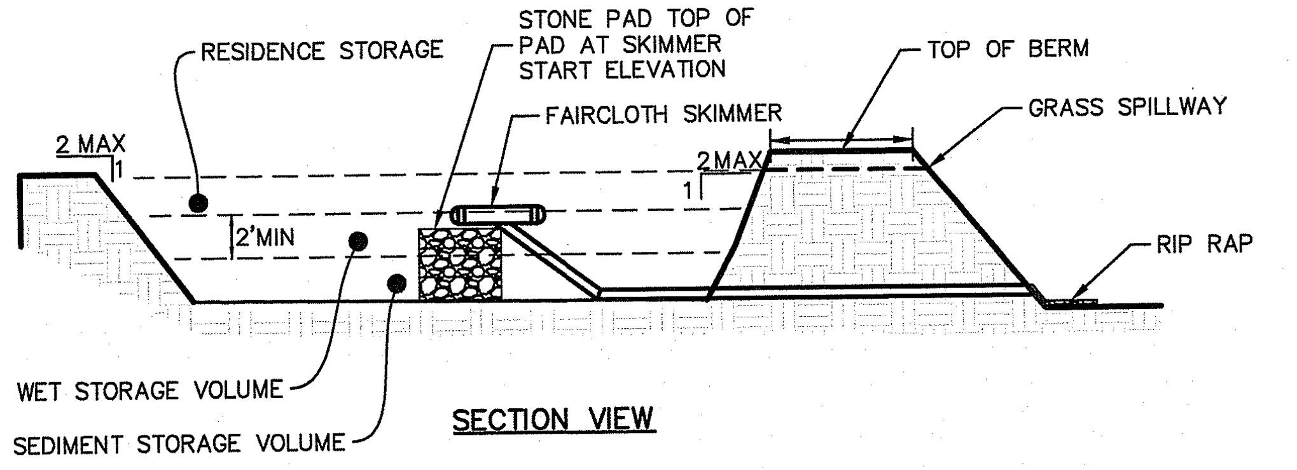
1. WOODS CHIPS CAN BE USED TO CONSTRUCT THE FILTER BERM.
2. FILTER BERMS SHALL BE USED ON SIGNIFICANT FLOW PATHS AND PLACED PARALLEL TO THE SLOPE OF THE FLOW BASED ON THE COMPOST FILTER SOCK/FIBER ROLL REQUIREMENTS IN THE RI SOIL EROSION AND SEDIMENT CONTROL HAND BOOK (2014).

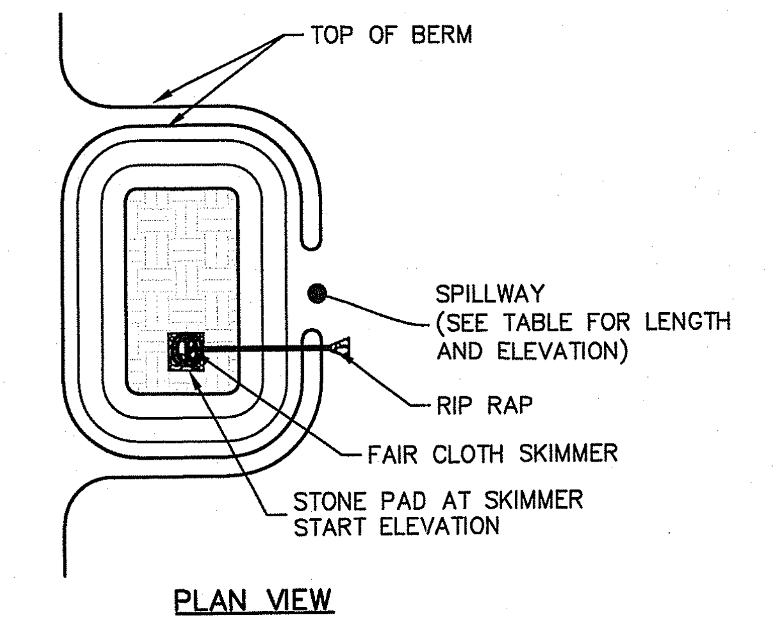
SLOPE STEEPNESS	MAXIMUM LENGTH (FT)
2:1	25
3:1	50
4:1	75
5:1 OR FLATTER	100

2. TALL GRASSES SHALL BE CUT PRIOR TO INSTALLATION TO MINIMIZE POTENTIAL FOR UNDERCUTTING. BERM SHALL BE NETTED OR OTHERWISE ANCHORED AFTER INSTALLATION.
3. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH ⅓ THE ABOVE GROUND HEIGHT OF THE BERM.
4. ANY SECTION COMPOST FILTER BERM WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED. CONCENTRATED FLOWS SHALL NOT BE DIRECTED TOWARDS ANY COMPOST FILTER BERM.
5. CONTRACTOR SHALL FIELD ADJUST FILTER BERMS AS NECESSARY. CERTAIN AREAS MAY BE OMITTED AS NECESSARY OR ADDITIONAL MEASURES ADDED BASED ON FIELD CONDITIONS.
6. FILTER BERMS MAY BE SUBSTITUTED WITH COMPOST FILTER SOCKS PER THE RI SOIL EROSION AND SEDIMENT CONTROL HAND BOOK OF SILT FENCE.
7. CONTRACTOR TO MODIFY BERM CONDITIONS AS SITE GRADING IS REVISED. BERMS MUST BE IN PLACE WHEN A RAINFALL GREATER THAN 0.25" IS EXPECTED.
8. WATTLES AND FIBER ROLLS AT THE TOE OF SLOPES GREATER THAN 5:1 MUST BE AT LEAST 20 INCHES IN DIAMETER. AN EQUIVALENT INSTALLATION, SUCH AS STACKED SMALLER DIAMETER ROLLS, CAN BE USED TO ACHIEVE A SIMILAR LEVEL OF PROTECTION.

Filter Berm Details

NOT TO SCALE


RESIDENCE STORAGE
STONE PAD TOP OF PAD AT SKIMMER START ELEVATION
TOP OF BERM
FAIRCLOTH SKIMMER
GRASS SPILLWAY
2 MAX
1
2 MAX
1
2'MIN
RIP RAP
WET STORAGE VOLUME
SEDIMENT STORAGE VOLUME
SECTION VIEW


TOP OF BERM
SPILLWAY (SEE TABLE FOR LENGTH AND ELEVATION)
RIP RAP
FAIR CLOTH SKIMMER
STONE PAD AT SKIMMER START ELEVATION
PLAN VIEW

Sediment Basin Detail

NOT TO SCALE

General Notes:

1. THE TEMPORARY SEDIMENT BASIN SHALL MEET ALL REQUIREMENTS FOR TEMPORARY SEDIMENT BASIN OUTLINED IN THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (LATEST REVISION) SECTION SIX: SEDIMENT CONTROL MEASURES.
2. TEMPORARY SEDIMENTATION BASINS SHALL USE THE FAIRCLOTH SKIMMER OR APPROVED EQUAL FOR DEWATERING. CONTRACTOR SHALL INSTALL A SKIMMER THAT PROVIDES A RELEASE RATE APPROXIMATELY EQUAL TO BUT NO GREATER THAN THE VALUE PROVIDED IN THE TABLE BELOW.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER EXCEPT FOR THE EXCAVATED WET STORAGE AREA WHERE SLOPES SHALL NOT EXCEED 1.5:1.
4. THE OUTLET SHALL BE LOCATED AT THE MOST DISTANT HYDRAULIC POINT FROM THE INLET. CONTRACTOR SHALL INSTALL BAFFLES AS NECESSARY TO PROVIDE AN EFFECTIVE FLOW LENGTH THAT IS AT LEAST TWO TIMES THE EFFECTIVE WIDTH OF THE BASIN. SEE SECTION SIX OF THE SOIL EROSION AND SEDIMENT CONTROL HANDBOOK FOR MORE INFORMATION.
5. CONTOURS SHOWN ON THIS PLAN AS TEMPORARY STORAGE MAY BE FIELD MODIFIED AS NECESSARY WITH APPROVAL OF DESIGN ENGINEER. CONTOURS REPRESENT MINIMUM VOLUME REQUIRED.
6. TEMPORARY SEDIMENT BASINS MUST OUTLET ONTO STABILIZED GROUND.

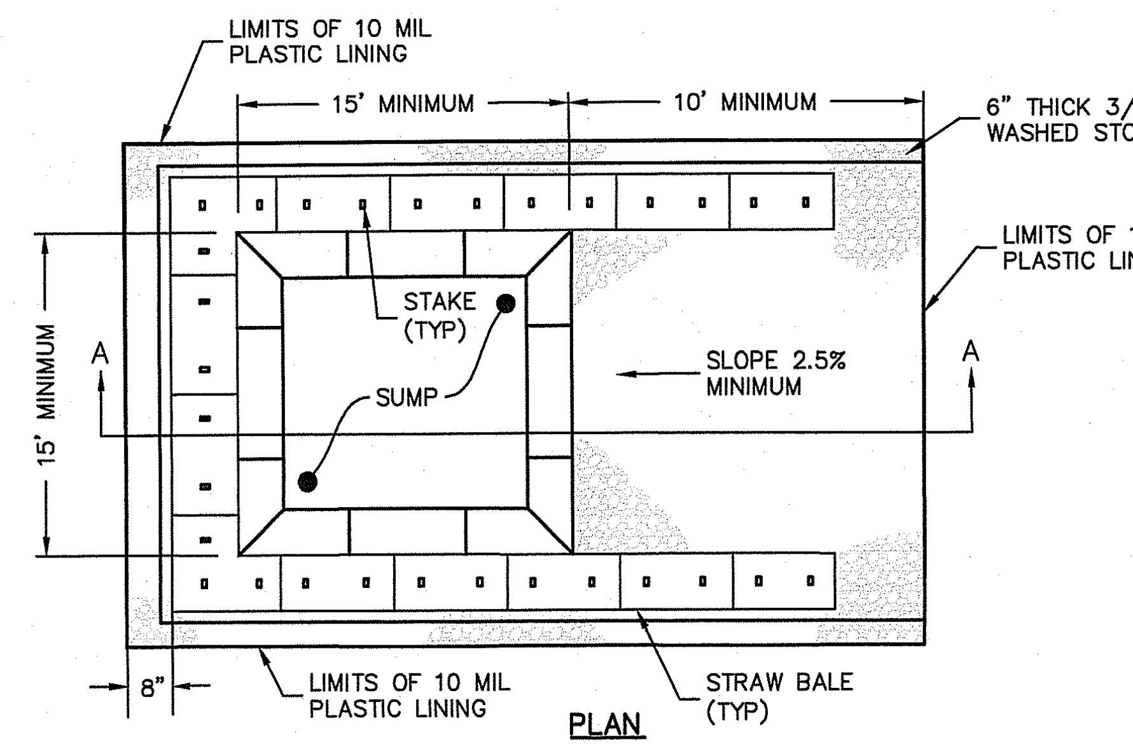
Inspection, Maintenance, and Removal Requirements:

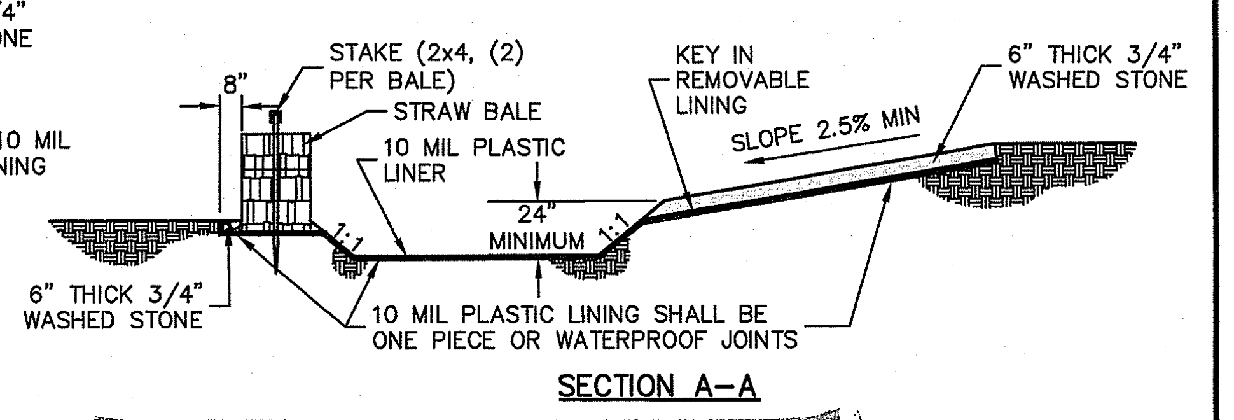
1. INSPECT THE TEMPORARY SEDIMENT TRAP AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCH OR GREATER.
2. CLEAN THE SEDIMENT BASIN OF SEDIMENTS, YEARLY, WHEN ACCUMULATIONS EXCEED 1.5 OF THE WET STORAGE CAPACITY OR WHEN THE AVAILABLE WET POOL IS REDUCED TO 18", WHICHEVER COMES FIRST. SEDIMENTS TO BE REMOVED IN ACCORDANCE WITH THE SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.
3. MAINTAIN FAIRCLOTH SKIMMER PER MANUFACTURERS RECOMMENDATIONS.
4. INSPECT SPILLWAY FOR DEBRIS AND SIGNS OF EROSION. STABILIZE SPILLWAY WITH ADDITIONAL VEGETATION OR RIP RAP AS NECESSARY.

Basin	Required Sediment Storage (cf)	Required Wet Storage (cf)	Skimmer Start Elevation	Max Skimmer Release Rate (cfs)	Spillway Elevation	Spillway Length (ft)
Basin 1C	2,546	5,092	463.35	0.65	465.90	15
Basin 1G	4,059	8,118	428.35	1.25	430.85	15
Basin 1L	2,568	5,136	350.30	1.00	352.15	15
Basin 1M	6,062	12,123	302.25	1.25	304.55	18
Basin 1N	6,536	13,072	380.20	2.00	381.85	10
Basin 2A	6,458	12,916	377.45	2.20	379.50	20
Basin 2B	2,563	5,127	396.30	1.00	398.80	15

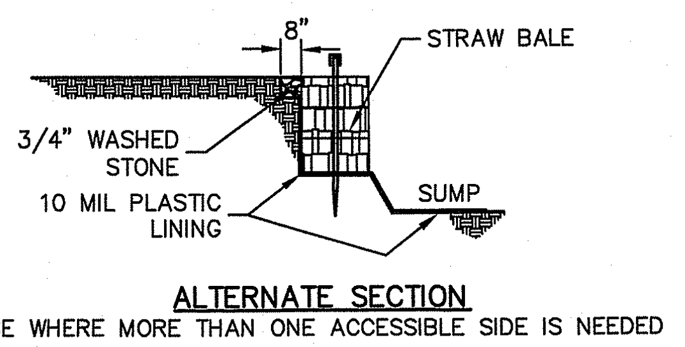
Installation Notes:

1. CLEAR, GRUB AND STRIP ANY VEGETATION AND ROOT MAT FROM ANY PROPOSED EMBANKMENT AND OUTLET AREA.
2. REMOVE STONES AND ROCKS WHOSE DIAMETER IS GREATER THAN THREE (3) INCHES AND OTHER DEBRIS.
3. EXCAVATE WET STORAGE AND CONSTRUCT THE EMBANKMENT AND/OR OUTLET AS NEEDED TO ATTAIN THE NECESSARY STORAGE REQUIREMENTS.
4. CONSTRUCT EARTHEN EMBANKMENT PER PERMANENT DETENTION BASIN DETAILS AND SPECIFICATIONS, INCLUDING THE DETENTION POND EARTHEN EMBANKMENT DETAIL (IMPERVIOUS CORE).
5. STABILIZE THE EARTHEN EMBANKMENT USING ANY OF THE FOLLOWING MEASURES, SEEDING FOR TEMPORARY VEGETATION COVER; SEEDING FOR PERMANENT VEGETATIVE COVER; OR SLOPE PROTECTION, IMMEDIATELY AFTER INSTALLATION


LIMITS OF 10 MIL PLASTIC LINING
15' MINIMUM
10' MINIMUM
6" THICK 3/4" WASHED STONE
LIMITS OF 10 MIL PLASTIC LINING
STAKE (TYP)
SLOPE 2.5% MINIMUM
SUMP
15' MINIMUM
A
A
8"
LIMITS OF 10 MIL PLASTIC LINING
STRAW BALE (TYP)
PLAN


STAKE (2x4, (2) PER BALE)
8"
STRAW BALE
10 MIL PLASTIC LINER
KEY IN REMOVABLE LINING
SLOPE 2.5% MIN
6" THICK 3/4" WASHED STONE
24" MINIMUM
1:1
1:1
6" THICK 3/4" WASHED STONE
10 MIL PLASTIC LINING SHALL BE ONE PIECE OR WATERPROOF JOINTS
SECTION A–A

ALL CONCRETE TRUCKS SHALL WASHOUT HERE
WASHOUT SIGN


8"
STRAW BALE
3/4" WASHED STONE
10 MIL PLASTIC LINING
SUMP
ALTERNATE SECTION

USE WHERE MORE THAN ONE ACCESSIBLE SIDE IS NEEDED

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 8 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NOTES:

1. PIT IS SPECIFICALLY DESIGNATED, DIKED AND IMPERVIOUS CONTAINMENT TO PREVENT CONTACT BETWEEN CONCRETE WASH AND STORMWATER.
2. WASH WATER SHALL NOT BE ALLOWED TO FLOW TO SURFACE WATER.
3. FACILITY MUST HOLD SUFFICIENT VOLUME TO CONTAIN CONCRETE WASTE WITH A MINIMUM FREEBOARD OF 12."
4. FACILITY SHALL NOT BE FILLED BEYOND 95% CAPACITY UNLESS A NEW FACILITY IS CONSTRUCTED.
5. SAWCUT PORTLAND CEMENT CONCRETE, RESIDUE FROM SAWCUT AND GRINDING TO BE DISPOSED OF IN THE PIT.
6. CONCRETE WASHOUTS SHALL BE LOCATED A MINIMUM OF 100' FROM DRAINAGE WAYS, INLETS, AND SURFACE WATERS.
7. MANUFACTURED CONCRETE WASHOUT DEVICES MAY BE USED IF REMOVED FROM THE SITE WHEN 95% FULL CAPACITY.

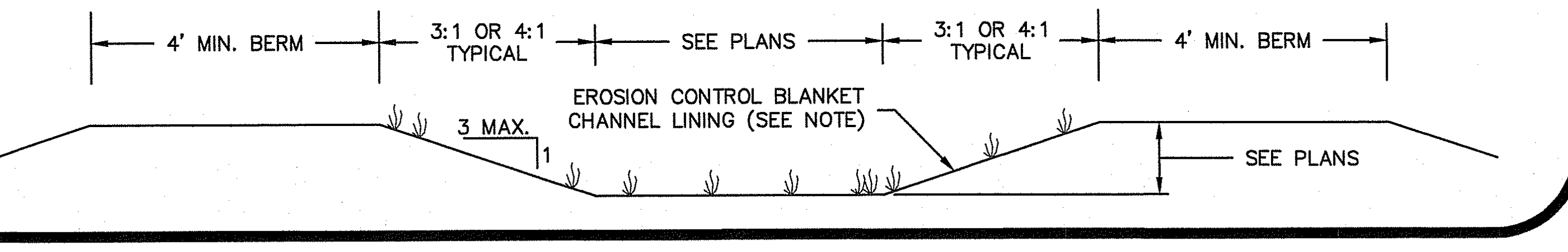
Concrete Washout Area

NOT TO SCALE

	1A-N	1A-S	1B-S	1C-N	1C-S	1D-N	1D-S	1F-N	1F-E	1H-N	1I-E	1J-W	1M-S	1N-N	1N-S	1O-N	2A-W	2B-E	3A-S	3B-E	3B-S	3E-N	3C-W	3D-N	3D-S	4A-N	4A-S
DEPTH	1.50	1.00	1.00	1.00	1.75	1.50	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.50	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.75	1.00	1.00	1.00	1.00	1.50
BASE WIDTH	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	4.00	3.00	6.00	5.00	3.00	3.00	6.00	5.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
LENGTH	239.70	240.10	89.00	296.00	243.00	263.00	93.20	223.50	187.80	77.30	212.50	154.10	400.00	233.00	425.70	375.30	151.20	108.00	334.00	252.30	199.50	270.00	93.00	72.50	318.00	200.70	145.60
AVERAGE SLOPE	0.024	0.033	0.039	0.005	0.005	0.021	0.048	0.007	0.005	0.014	0.010	0.011	0.048	0.030	0.099	0.035	0.056	0.010	0.006	0.005	0.008	0.007	0.016	0.072	0.030	0.021	0.093
CHECK DAMS	Yes	Yes	No	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes	No	Yes

Notes:

1. TEMPORARY EROSION CONTROL BLANKETS TO HANDLE MINIMUM VELOCITY OF 5 FPS. CONTRACTOR TO PROVIDE SHOP DRAWINGS TO DESIGN ENGINEER.
2. CONTRACTOR SHALL FIELD ADJUST TEMPORARY SWALES AS NECESSARY, AND ENSURE PROPER FLOW TO THE APPROPRIATE SEDIMENTATION PRACTICE.
3. SWALES TO BE ADJUSTED TO MAXIMIZE TRIBUTARY AREA TO EACH SEDIMENT TRAP PER DETAIL ABOVE.


4' MIN. BERM
3:1 OR 4:1 TYPICAL
SEE PLANS
3:1 OR 4:1 TYPICAL
4' MIN. BERM
EROSION CONTROL BLANKET CHANNEL LINING (SEE NOTE)
3 MAX.
1
SEE PLANS

Temporary Grass Swale Cross Section

NOT TO SCALE

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-sesc.dwg Plotted: 6/25/2020

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
8/24/2020
REGISTERED PROFESSIONAL ENGINEER CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

SESC Detail Sheet

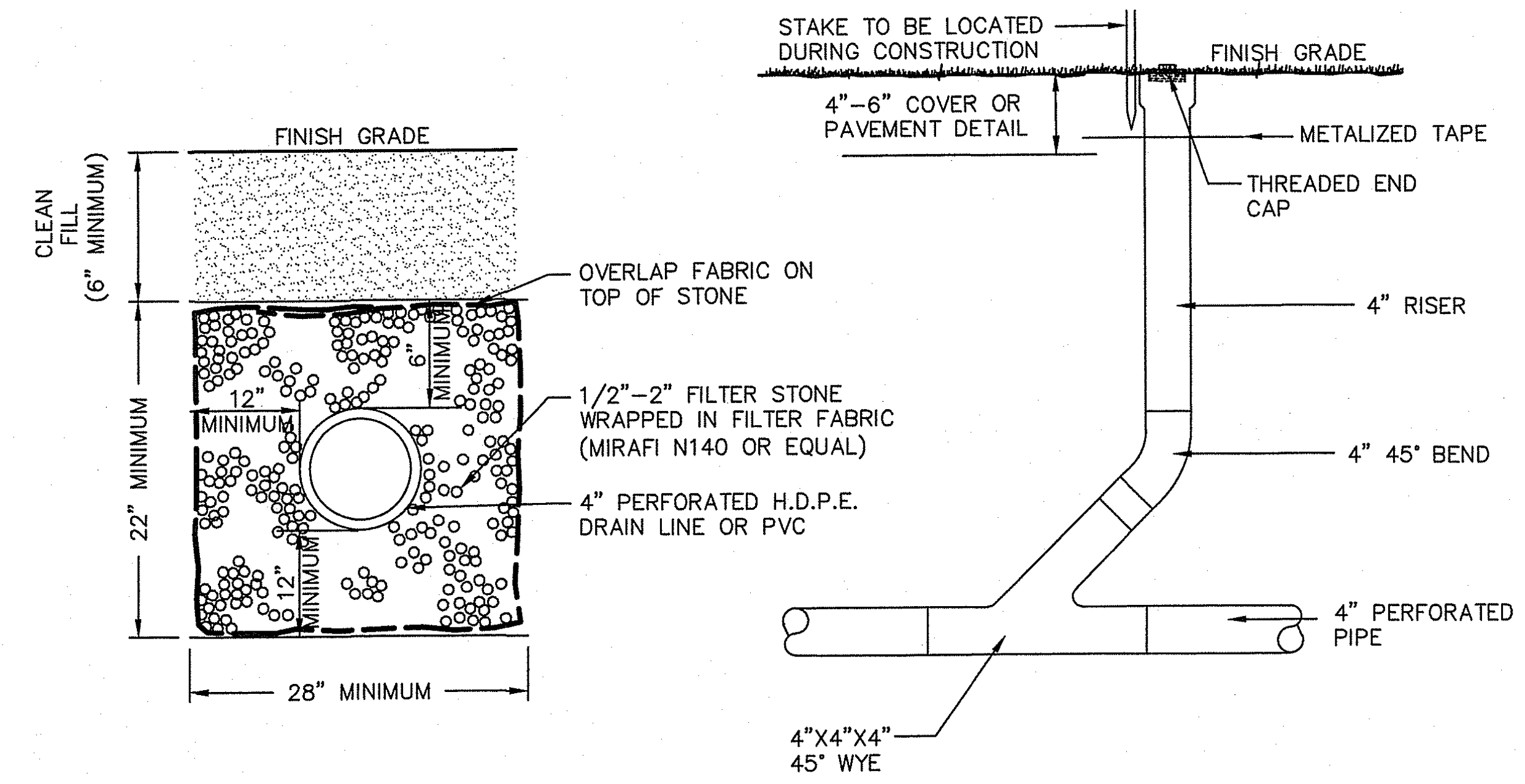
GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 21 OF 25

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-plan.dwg Plotted: 6/25/2020


FINISH GRADE
CLEAN FILL (6" MINIMUM)
OVERLAP FABRIC ON TOP OF STONE
6" MINIMUM
12" MINIMUM
1/2"–2" FILTER STONE WRAPPED IN FILTER FABRIC (MIRAFI N140 OR EQUAL)
4" PERFORATED H.D.P.E. DRAIN LINE OR PVC
22" MINIMUM
12" MINIMUM
28" MINIMUM
STAKE TO BE LOCATED DURING CONSTRUCTION
FINISH GRADE
4"–6" COVER OR PAVEMENT DETAIL
METALIZED TAPE
THREADED END CAP
4" RISER
4" 45° BEND
4" PERFORATED PIPE
4"X4"X4" 45° WYE

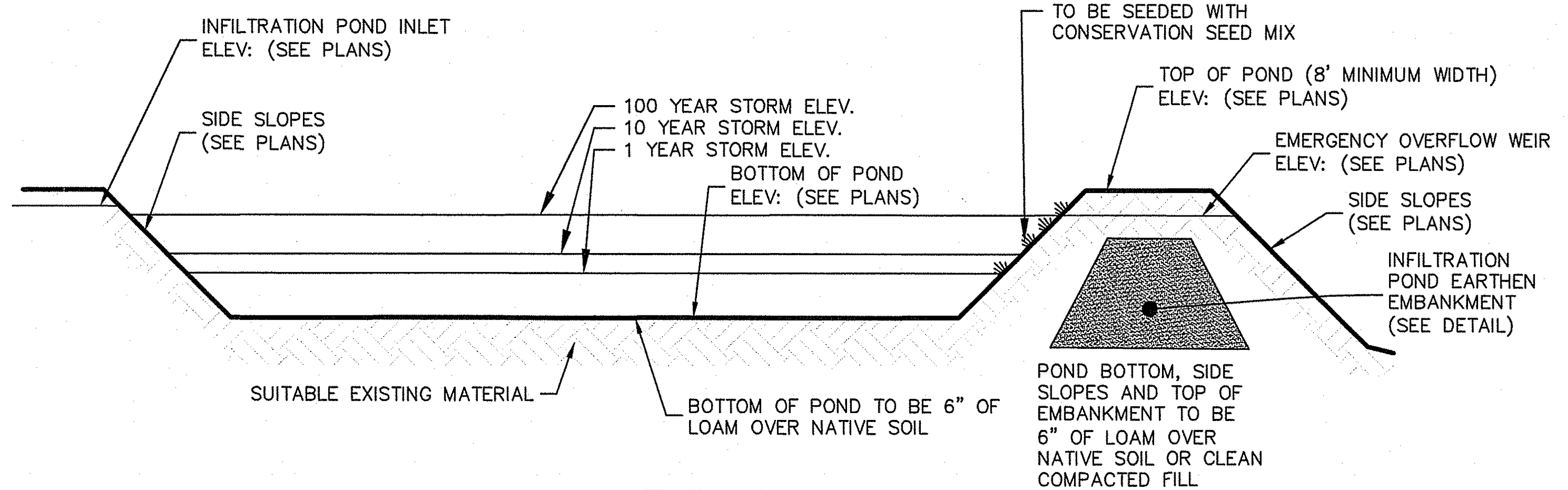
NOTES:
1. ENCASE CLEANOUT IN CONCRETE WHEN INVERT IS 12' OR MORE BELOW FINISH GRADE.
2. AT TERMINAL CLEANOUT REPLACE WYE WITH 45° BEND.
3. SUBDRAIN AREA TO BE STAKED, MARKED, AND REMAIN UNDISTURBED PRIOR TO CONSTRUCTION. THERE IS TO BE NO CONSTRUCTION TRAFFIC ON SUBDRAIN AREA PRIOR TO CONSTRUCTION.

4" Subdrain (Underdrain) Cleanout And Trench (TYP)

NOT TO SCALE

DESCRIPTION	I-1J	I-1K	I-1L
TOP OF POND ELEVATION	400.00	375.00	350.00
100 YEAR STORM ELEVATION	398.95	372.80	348.71
10 YEAR STORM ELEVATION	398.63	372.10	347.23
1 YEAR STORM ELEVATION	397.40	371.20	346.08
BOTTOM OF POND ELEVATION	397.00	371.00	346.00
SEASONAL HIGH GWT ELEVATION	394.00	367.40	342.80
SOIL EVALUATION	TH-20	TH-35	TH-33

NOTE:
LIMITS OF INFILTRATION POND TO BE STAKED OUT AND NOT USED AS A TEMPORARY SEDIMENT BASIN DURING CONSTRUCTION (NO CONSTRUCTION TRAFFIC ALLOWED WITHIN POND LIMITS)


INFILTRATION POND INLET ELEV: (SEE PLANS)
SIDE SLOPES (SEE PLANS)
100 YEAR STORM ELEV.
10 YEAR STORM ELEV.
1 YEAR STORM ELEV.
BOTTOM OF POND ELEV: (SEE PLANS)
SIDE SLOPES OF POND TO BE SEEDED WITH CONSERVATION SEED MIX
TOP OF POND (8' MINIMUM WIDTH) ELEV: (SEE PLANS)
EMERGENCY OVERFLOW WEIR ELEV: (SEE PLANS)
SIDE SLOPES (SEE PLANS)
INFILTRATION POND EARTHEN EMBANKMENT (SEE DETAIL)
SUITABLE EXISTING MATERIAL
BOTTOM OF POND TO BE 6" OF LOAM OVER NATIVE SOIL
POND BOTTOM, SIDE SLOPES AND TOP OF EMBANKMENT TO BE 6" OF LOAM OVER NATIVE SOIL OR CLEAN COMPACTED FILL

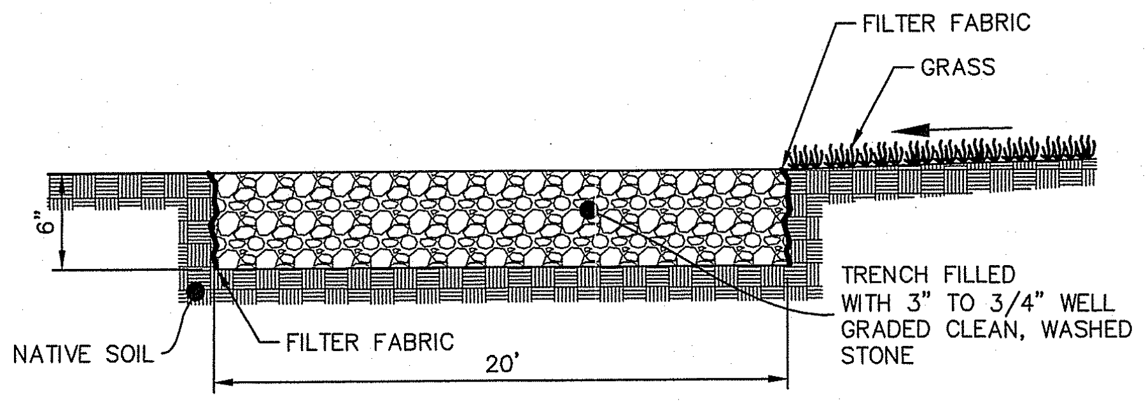
INFILTRATION POND

NOT TO SCALE

AUG 1 8 2020

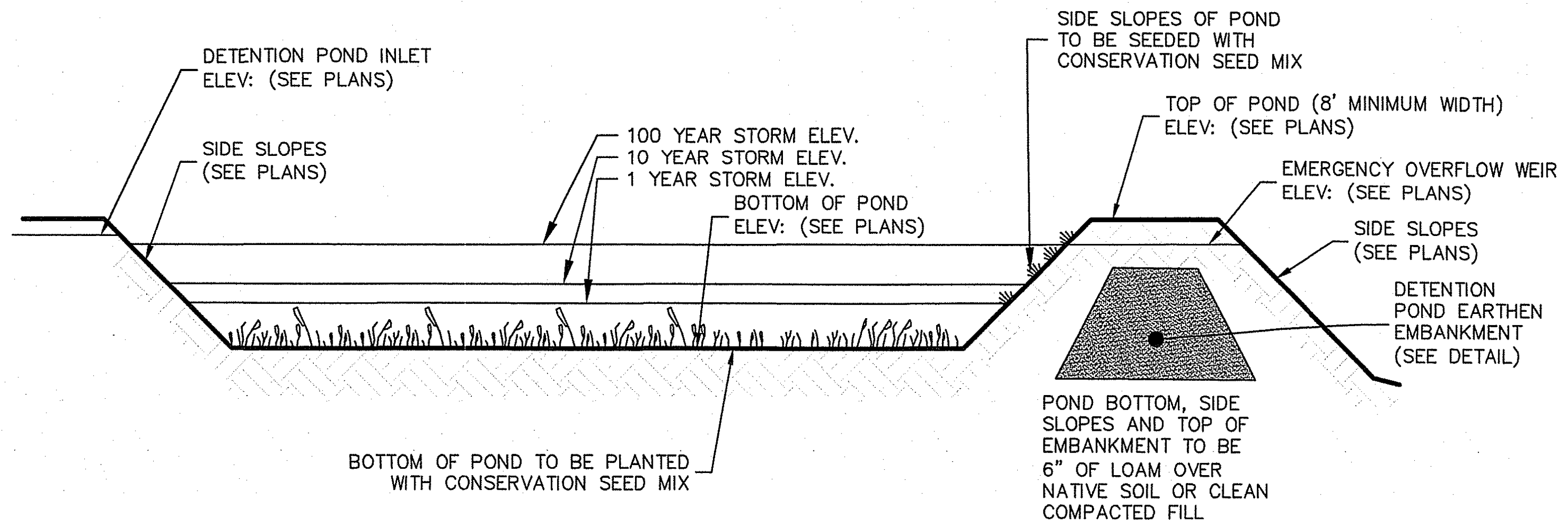
DESCRIPTION	D-1A	D-1A2	D-1B	D-1C	D-1D	D-1F	D-1G	D-1H	D-1I	D-1M	D-1N	D-2A	D-2B	D-3A	D-3B	D-3C	D-3D	D-3E	D-4A
TOP OF POND ELEVATION	448.00	449.00	450.00	464.00	459.00	446.00	430.00	440.00	422.00	305.00	379.00	380.00	397.00	427.00	430.00	499.00	500.00	499.50	450.00
100 YEAR STORM ELEVATION	446.94	448.05	449.04	463.07	458.02	444.99	428.25	438.62	419.45	303.96	377.54	379.00	396.00	425.99	429.01	497.95	498.81	498.45	448.25
10 YEAR STORM ELEVATION	446.60	447.76	448.61	462.69	457.62	444.49	427.31	438.52	418.45	302.17	376.89	376.70	395.11	425.60	428.30	496.73	498.46	496.59	447.10
1 YEAR STORM ELEVATION	445.49	445.54	447.18	460.87	456.27	444.07	426.23	438.12	418.10	301.24	376.14	375.98	394.27	425.10	427.69	496.20	497.35	495.23	446.15
BOTTOM OF POND ELEVATION	445.00	445.00	446.50	459.00	456.00	444.00	426.00	438.00	418.00	301.00	376.00	375.00	394.00	425.00	427.50	496.00	497.00	494.00	446.00
SEASONAL HIGH GWT ELEVATION	N/A	442.00	442.00	459.00	452.70	442.40	417.50	N/A	418.00	301.00	374.70	375.00	384.70	423.50	427.50	493.00	496.60	494.00	444.00
SOIL EVALUATION	TH-17	TH-11	TH-11	TH-8	TH-43	TH-5	TH-37	N/A	TH-36	TH-30	TH-32	TH-27	TH-40	TH-39	TH-38	TH-10	TH-42	TH-41	TH-13

TOP OF POND ELEVATION	427.00
100 YEAR STORM ELEVATION	427.08
10 YEAR STORM ELEVATION	427.03
1 YEAR STORM ELEVATION	426.88
BOTTOM OF POND ELEVATION	426.50
SEASONAL HIGH GWT ELEVATION	<422.00
SOIL EVALUATION	TH–25


FILTER FABRIC
GRASS
6"
NATIVE SOIL
FILTER FABRIC
20'
TRENCH FILLED WITH 3" TO 3/4" WELL GRADED CLEAN, WASHED STONE

Stone Infiltration Trench/ Access Road

NOT TO SCALE

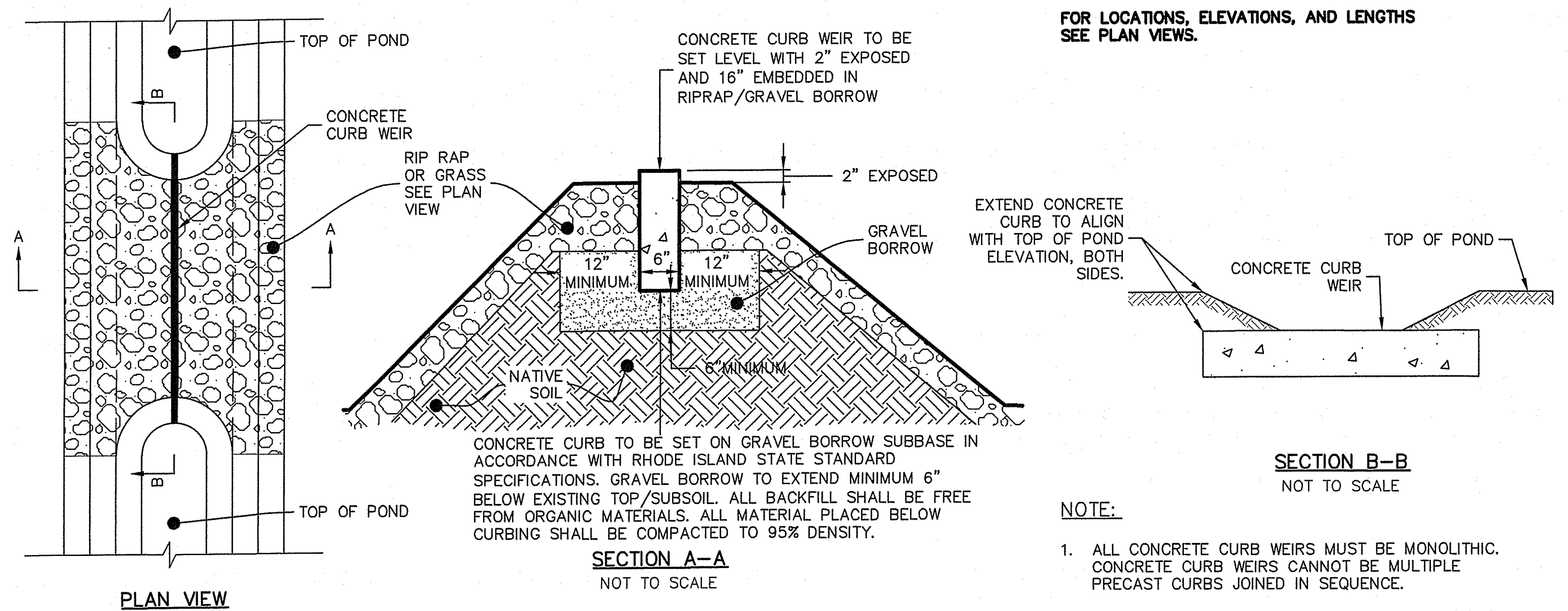

DETENTION POND INLET ELEV: (SEE PLANS)
SIDE SLOPES (SEE PLANS)
100 YEAR STORM ELEV.
10 YEAR STORM ELEV.
1 YEAR STORM ELEV.
BOTTOM OF POND ELEV: (SEE PLANS)
SIDE SLOPES OF POND TO BE SEEDED WITH CONSERVATION SEED MIX
TOP OF POND (8' MINIMUM WIDTH) ELEV: (SEE PLANS)
EMERGENCY OVERFLOW WEIR ELEV: (SEE PLANS)
SIDE SLOPES (SEE PLANS)
DETENTION POND EARTHEN EMBANKMENT (SEE DETAIL)
BOTTOM OF POND TO BE PLANTED WITH CONSERVATION SEED MIX
POND BOTTOM, SIDE SLOPES AND TOP OF EMBANKMENT TO BE 6" OF LOAM OVER NATIVE SOIL OR CLEAN COMPACTED FILL

DETENTION POND

NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 8 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

FOR LOCATIONS, ELEVATIONS, AND LENGTHS SEE PLAN VIEWS.


TOP OF POND
CONCRETE CURB WEIR
RIP RAP OR GRASS SEE PLAN VIEW
A
A
B
B
TOP OF POND
PLAN VIEW
NOT TO SCALE
CONCRETE CURB WEIR TO BE SET LEVEL WITH 2" EXPOSED AND 16" EMBEDDED IN RIPRAP/GRAVEL BORROW
2" EXPOSED
GRAVEL BORROW
12" MINIMUM
6"
12" MINIMUM
6" MINIMUM
NATIVE SOIL
SECTION A–A
NOT TO SCALE
EXTEND CONCRETE CURB TO ALIGN WITH TOP OF POND ELEVATION, BOTH SIDES.
CONCRETE CURB WEIR
TOP OF POND
SECTION B–B
NOT TO SCALE

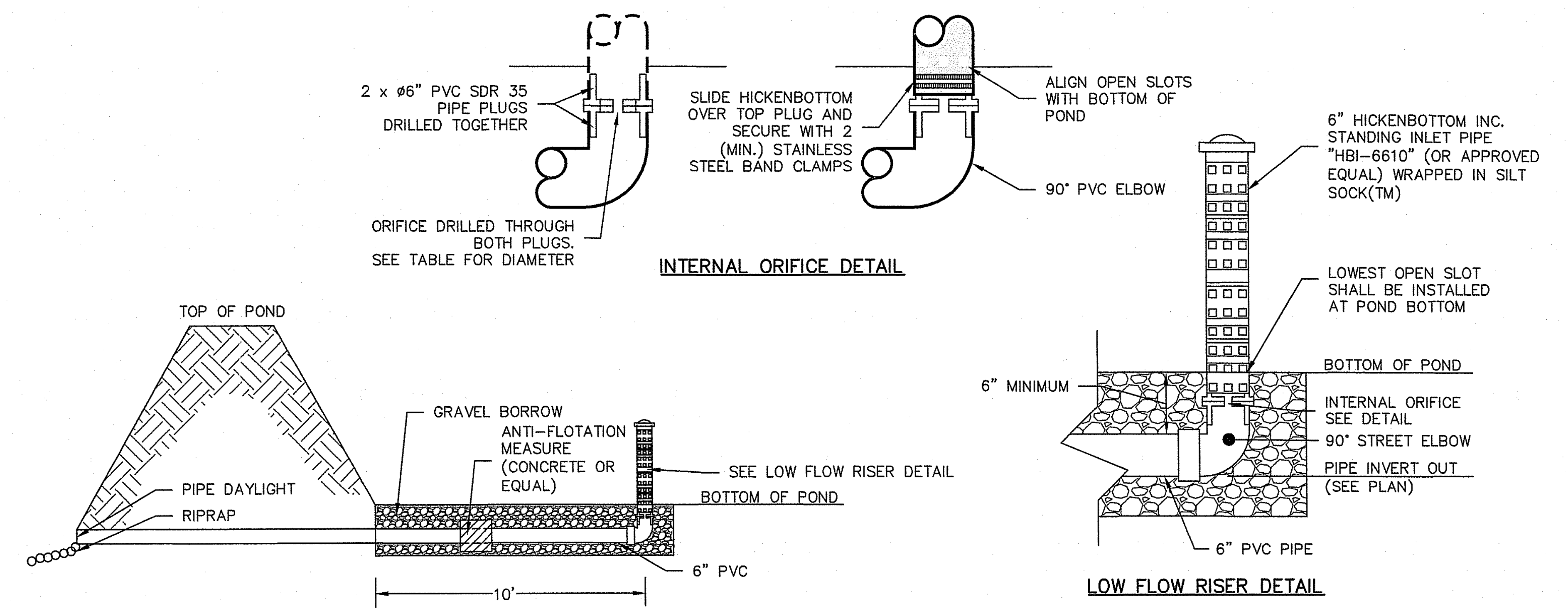
CONCRETE CURB TO BE SET ON GRAVEL BORROW SUBBASE IN ACCORDANCE WITH RHODE ISLAND STATE STANDARD SPECIFICATIONS. GRAVEL BORROW TO EXTEND MINIMUM 6" BELOW EXISTING TOP/SUBSOIL. ALL BACKFILL SHALL BE FREE FROM ORGANIC MATERIALS. ALL MATERIAL PLACED BELOW CURBING SHALL BE COMPACTED TO 95% DENSITY.

NOTE:
1. ALL CONCRETE CURB WEIRS MUST BE MONOLITHIC. CONCRETE CURB WEIRS CANNOT BE MULTIPLE PRECAST CURBS JOINED IN SEQUENCE.
2. CONTRACTOR MAY PROVIDE ALTERNATIVE DESIGNS FOR WEIR TO DESIGN ENGINEER FOR APPROVAL.

Curb Outlet Weir

NOT TO SCALE

INTERNAL ORIFICE SCHEDULE	
LOCATION	DIAMETER
D-1A	1.75"
D-1A2	1.50"
D-1B	1.50"
D-1C	2.00"
D-1D	1.75"
D-1F	2.50"
D-1G	3.50"
D-1H	1.25"
D-1I	2.50"
D-1M	2.50"
D-1N	3.75"
D-2A	2.75"
D-2B	2.50"
D-3A	1.25"
D-3B	2.75"
D-3C	2.50"
D-3D	1.25"
D-3E	2.00"
D-4A	2.00"


2 x ø6" PVC SDR 35 PIPE PLUGS DRILLED TOGETHER
ORIFICE DRILLED THROUGH BOTH PLUGS. SEE TABLE FOR DIAMETER
SLIDE HICKENBOTTOM OVER TOP PLUG AND SECURE WITH 2 (MIN.) STAINLESS STEEL BAND CLAMPS
ALIGN OPEN SLOTS WITH BOTTOM OF POND
90° PVC ELBOW
INTERNAL ORIFICE DETAIL
TOP OF POND
PIPE DAYLIGHT
RIPRAP
GRAVEL BORROW
ANTI–FLOTATION MEASURE (CONCRETE OR EQUAL)
SEE LOW FLOW RISER DETAIL
BOTTOM OF POND
6" PVC
10'
6" HICKENBOTTOM INC. STANDING INLET PIPE "HBI–6610" (OR APPROVED EQUAL) WRAPPED IN SILT SOCK(TM)
LOWEST OPEN SLOT SHALL BE INSTALLED AT POND BOTTOM
6" MINIMUM
BOTTOM OF POND
INTERNAL ORIFICE SEE DETAIL
90° STREET ELBOW
PIPE INVERT OUT (SEE PLAN)
6" PVC PIPE
LOW FLOW RISER DETAIL

Low Flow (CPv) Outlet (Without Outlet Structure)

NOT TO SCALE

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
REGISTERED PROFESSIONAL ENGINEER
CIVIL
8/24/2020

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

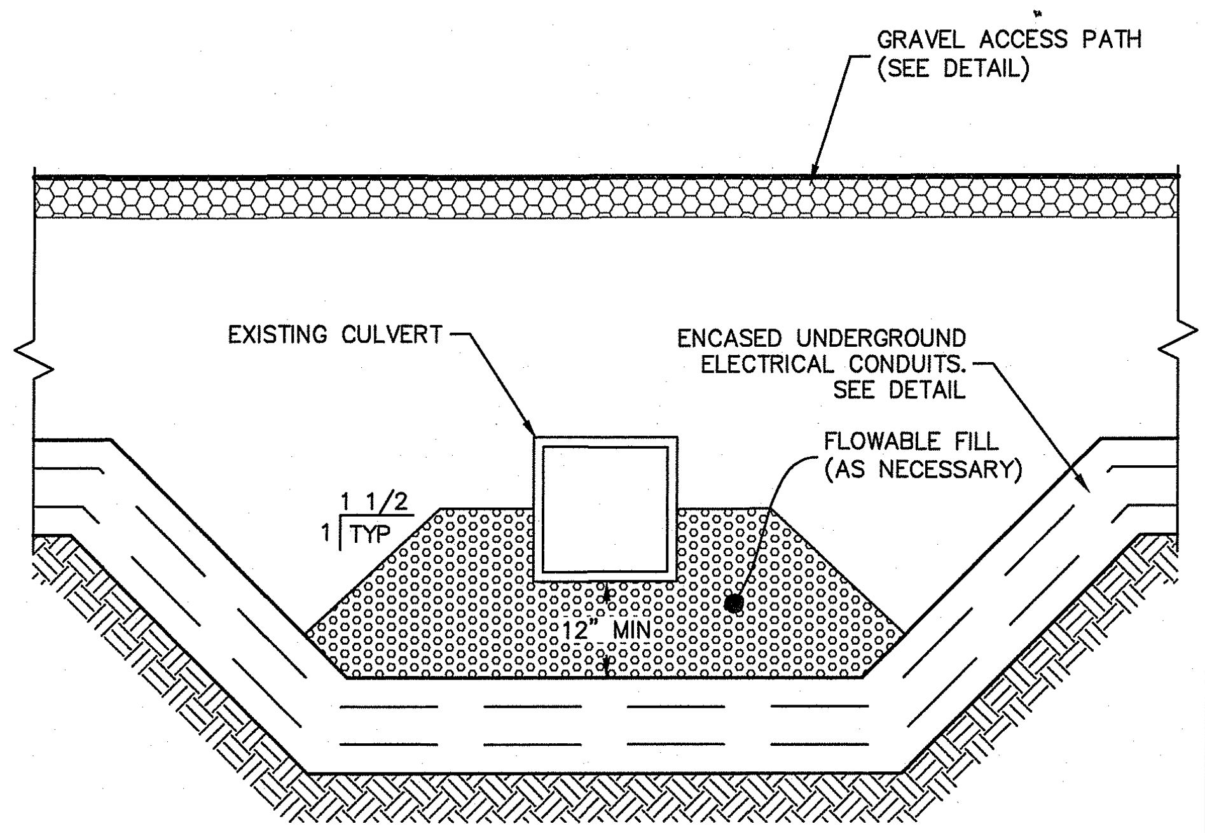
Pond Detail Sheet

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

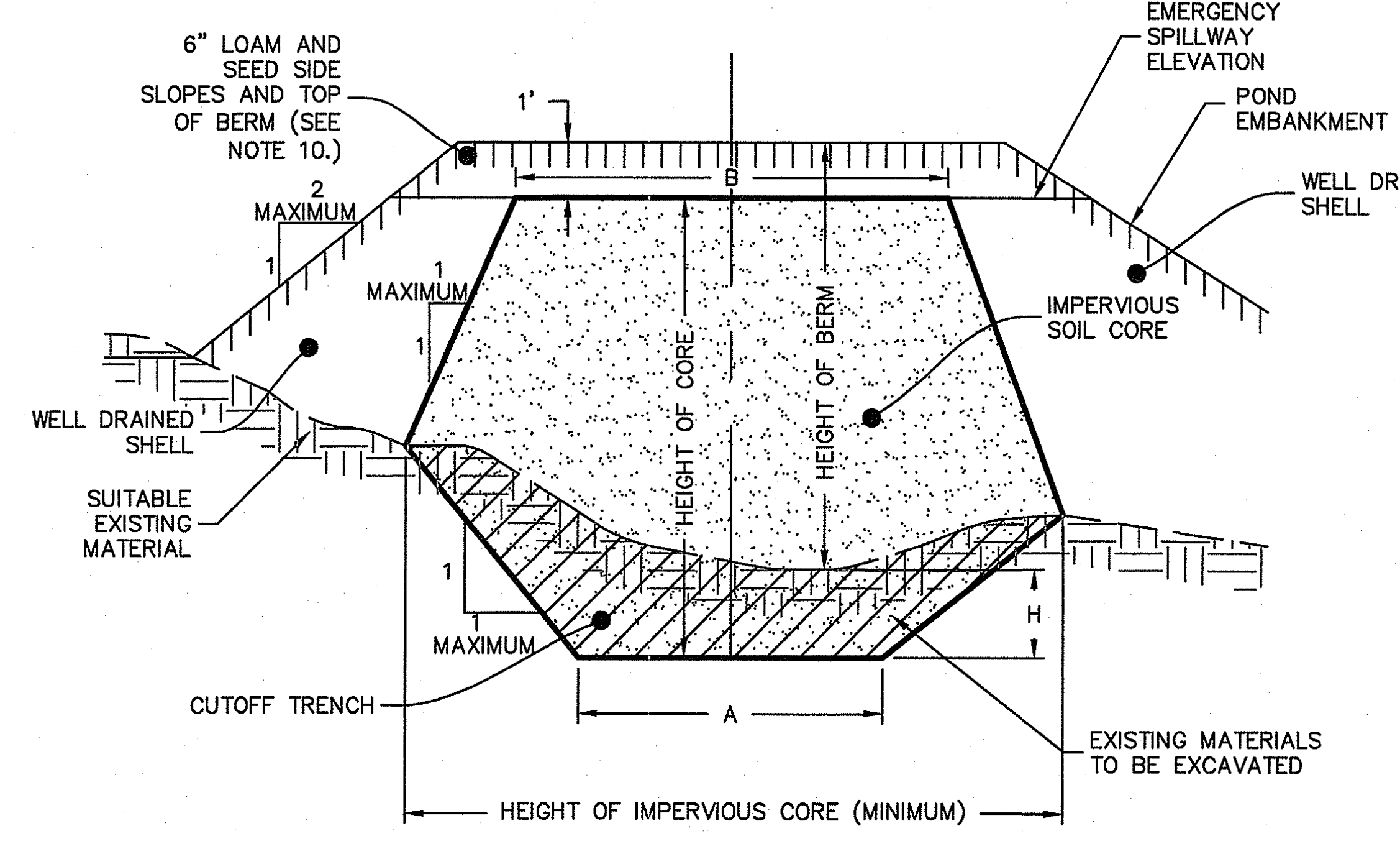
Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027


GRAVEL ACCESS PATH (SEE DETAIL)
EXISTING CULVERT
ENCASED UNDERGROUND ELECTRICAL CONDUITS. SEE DETAIL
FLOWABLE FILL (AS NECESSARY)
1 1/2
1
TYP
12" MIN

Electric Duct Bank at Existing Culvert Detail

NOT TO SCALE


6" LOAM AND SEED SIDE SLOPES AND TOP OF BERM (SEE NOTE 10.)
1'
EMERGENCY SPILLWAY ELEVATION
POND EMBANKMENT
WELL DRAINED SHELL
B
2
MAXIMUM
1
1
MAXIMUM
1
HEIGHT OF CORE
HEIGHT OF BERM
IMPERVIOUS SOIL CORE
WELL DRAINED SHELL
SUITABLE EXISTING MATERIAL
1
1
MAXIMUM
H
CUTOFF TRENCH
A
EXISTING MATERIALS TO BE EXCAVATED
HEIGHT OF IMPERVIOUS CORE (MINIMUM)

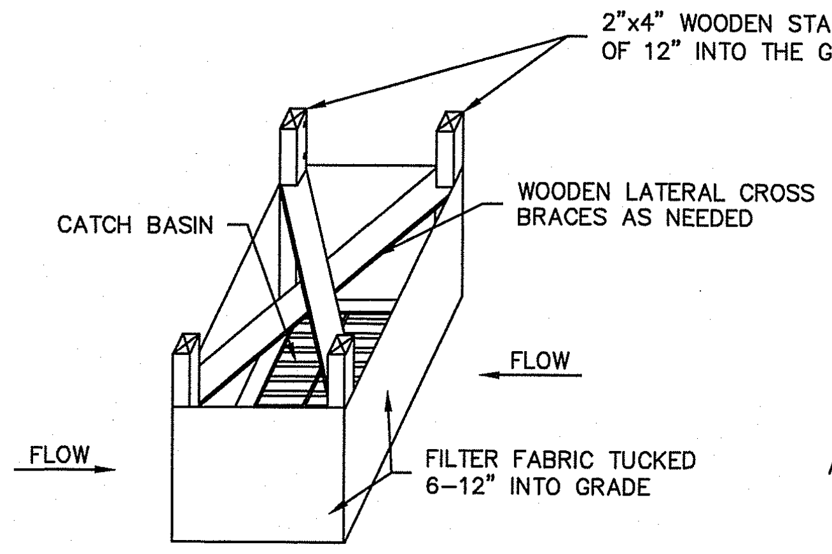
BERM HEIGHT (FT)	TOP WIDTH OF CORE – B (FT)
0–6.5	8.2
6.6–9.8	9.2
9.9–13.1	9.8
13.2–16.4	10.8
16.5–19.7	11.5

NOTES:

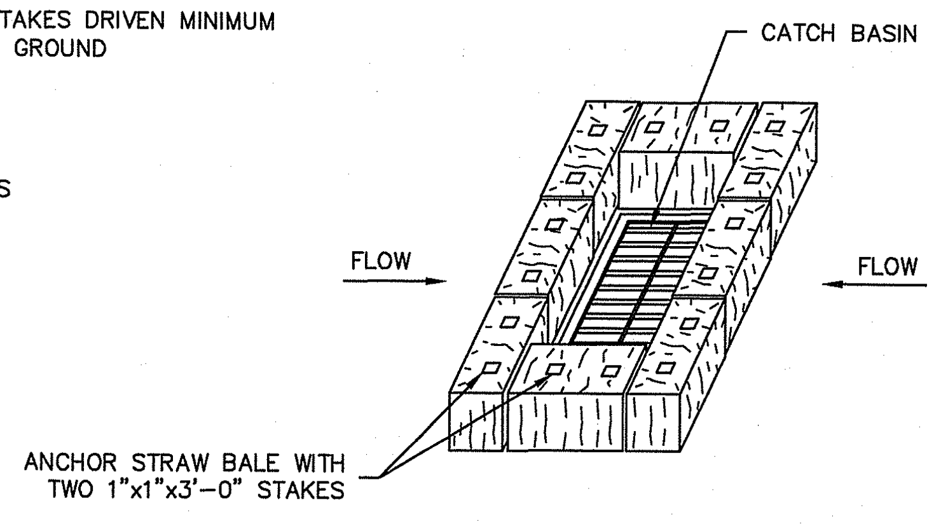
1. IMPERVIOUS SOIL CORE TO BE PROVIDED FOR ALL POND EMBANKMENTS.
2. IMPERVIOUS SOIL CORE TO BE CONSTRUCTED OF A MATERIAL WITH A MINIMUM OF 55% PASSING THE #200 SIEVE AND A MAXIMUM PERMEABILITY OF 0.00005 CM/S.
3. WELL DRAINED SHELL TO BE CONSTRUCTED OF GRAVEL AND/OR SAND WITH LESS THAN 5% PASSING THE #200 SIEVE.
4. MINIMUM DEPTH OF CUTOFF TRENCH (H) SHALL BE 3/4 OF THE TOTAL BERM HEIGHT.
5. THE IMPERVIOUS CORE AT A MINIMUM SHALL EXTEND UP BOTH ABUTMENTS TO THE EMERGENCY SPILLWAY ELEVATION.
6. THE MINIMUM BOTTOM WIDTH (A) SHALL BE 5'–8', AND WIDE ENOUGH TO PERMIT OPERATION OF COMPACTION EQUIPMENT.
7. SIDE SLOPES OF THE TRENCH SHALL BE NO STEEPER THAN 1:1.
8. IF BEDROCK IS ENCOUNTERED BELOW THE DAM THE CUT OFF TRENCH CAN BE REDUCED TO 1'x1' (AxH)
9. COMPACTION REQUIREMENTS FOR THE SHELL AND IMPERVIOUS CORE TO BE 95% OF THE MODIFIED PROCTOR PER ASTM D1557. ALL FILL TO BE PLACED IN LIFTS NOT EXCEEDING 12".
10. SIDE SLOPE OF POND EMBANKMENT TO BE 2:1 MAXIMUM. IF SIDE SLOPES ARE STEEPER THAN 3:1, SLOPE PROTECTION MUST BE UTILIZED ON POND EMBANKMENT. THIS INCLUDES, BUT NOT LIMITED TO, RIPRAP AND EROSION CONTROL MATS.
11. THE IMPERVIOUS CORE SHALL BE KEPT FREE FROM STANDING WATER DURING THE BACKFILL OPERATION.
12. ALL EMBANKMENTS TO BE DESIGNED BY A GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION. ALL EMBANKMENT INSTALLATIONS TO BE SUPERVISED BY A GEOTECHNICAL ENGINEER.

Pond Earthen Embankment

NOT TO SCALE


2"x4" WOODEN STAKES DRIVEN MINIMUM OF 12" INTO THE GROUND
CATCH BASIN
WOODEN LATERAL CROSS BRACES AS NEEDED
FLOW
FLOW
FILTER FABRIC TUCKED 6–12" INTO GRADE

SILT FENCE INSTALLATION FOR CATCH BASINS AT LOW POINTS


CATCH BASIN
FLOW
FLOW
ANCHOR STRAW BALE WITH TWO 1"x1"x3'–0" STAKES

STRAW BALE FILTER INSTALLATION FOR CATCH BASINS AT LOW POINTS

NOTES:

1. STORMWATER INLETS WHICH DO NOT DISCHARGE TO SEDIMENT TRAPS OR BASINS MUST BE PROTECTED UNTIL THE TRIBUTARY AREAS ARE STABILIZED.
2. SEDIMENT MUST BE REMOVED FROM INLET PROTECTION AFTER EACH STORM.
3. REFER TO LONG TERM/SHORT TERM MAINTENANCE NOTES FOR TIMING OF PLACEMENT AND REMOVAL OF EROSION CONTROL ELEMENTS.

Catch Basin Erosion Control

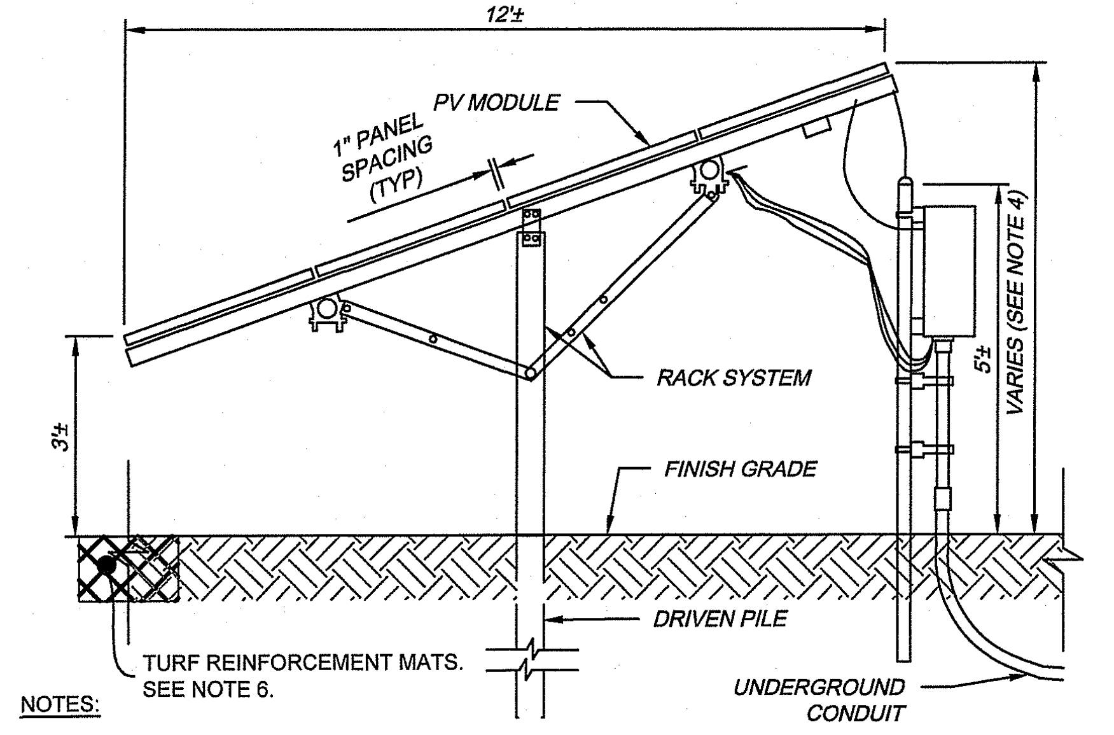
NOT TO SCALE

AUG 1 8 2020

DiPrete Engineering

Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

Boston • Providence • Newport

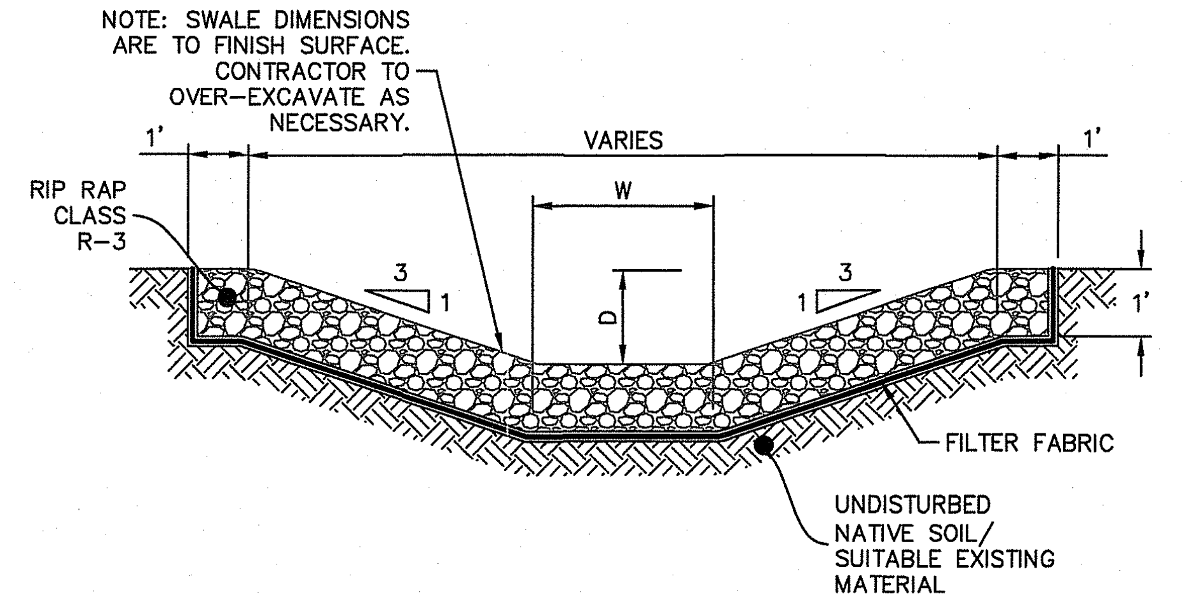

12'±
PV MODULE
1" PANEL SPACING (TYP)
RACK SYSTEM
3'±
5'±
VARIES (SEE NOTE 4)
FINISH GRADE
DRIVEN PILE
TURF REINFORCEMENT MATS. SEE NOTE 6.
UNDERGROUND CONDUIT

NOTES:

1. ADJACENT ARRAY TABLES SHALL BE INSTALLED WITH A MINIMUM OF 6 INCHES OF SEPARATION.
2. ROWS OF ARRAY TABLES SHALL BE INSTALLED WITH A MINIMUM OF 13 FEET OF SEPARATION.
3. TYPICAL SOLAR PANEL RACKING SYSTEM SHOWN. SELECTED RACKING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS.
4. INSTALLED HEIGHT WILL VARY BASED ON THE RACKING LAYOUT AND FINAL DESIGN BUT WILL BE LESS THAN 12' PER ZONING CODE REQUIREMENTS.
5. SEE PLANS FOR PANEL TYPE, QUANTITY AND LOCATIONS.
6. PERMANENT TURF MATS TO BE INSTALLED IF EROSION ISSUES PERSIST AFTER PERMANENT STABILIZATION AND/OR TO SUPPORT PERMANENT STABILIZATION.

Solar Panel Racking

NOT TO SCALE

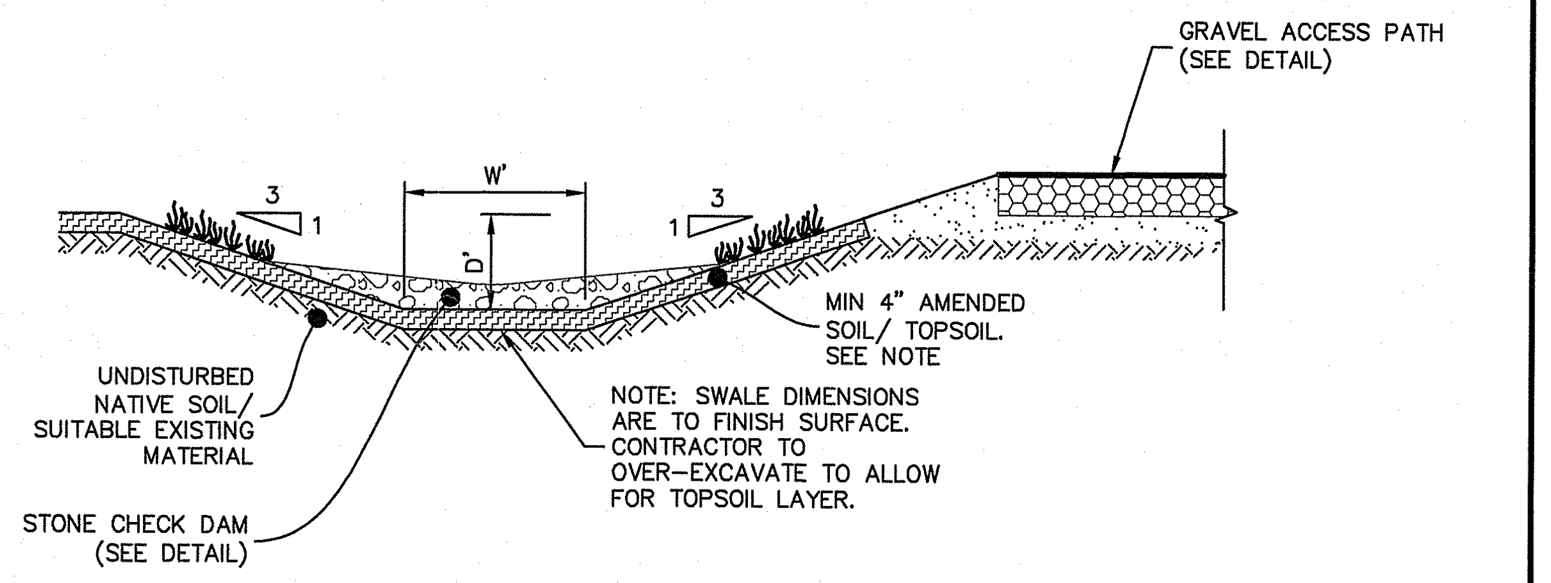

NOTE: SWALE DIMENSIONS ARE TO FINISH SURFACE. CONTRACTOR TO OVER–EXCAVATE AS NECESSARY.
RIP RAP CLASS R–3
1'
VARIES
1'
W
D
3
1
1
3
1'
FILTER FABRIC
UNDISTURBED NATIVE SOIL/ SUITABLE EXISTING MATERIAL

NOTES:

1. FOR DIMENSIONS AND RIP RAP CLASS, SEE SHEETS 12 THROUGH 19.

Rip Rap Swale Cross Section

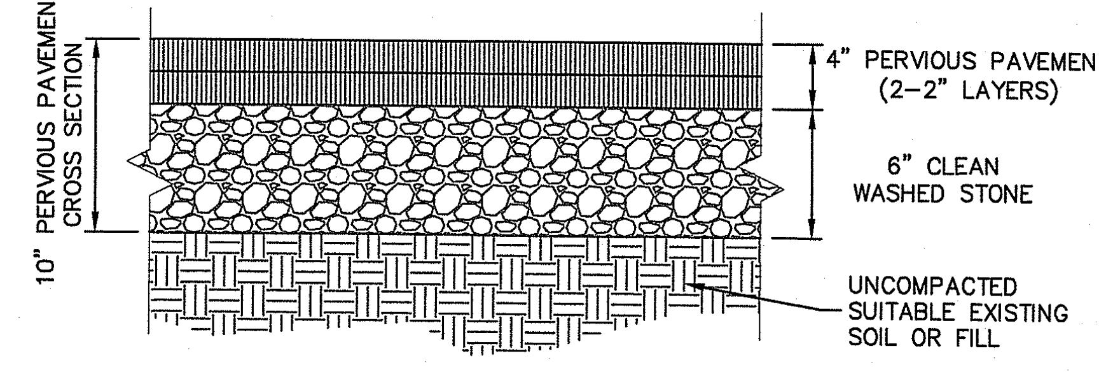
NOT TO SCALE


GRAVEL ACCESS PATH (SEE DETAIL)
W'
D'
3
1
1
3
MIN 4" AMENDED SOIL/ TOPSOIL. SEE NOTE
UNDISTURBED NATIVE SOIL/ SUITABLE EXISTING MATERIAL
STONE CHECK DAM (SEE DETAIL)
NOTE: SWALE DIMENSIONS ARE TO FINISH SURFACE. CONTRACTOR TO OVER–EXCAVATE TO ALLOW FOR TOPSOIL LAYER.

Grass Swale Cross Section

NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 2 8 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek


10" PERVIOUS PAVEMENT CROSS SECTION
4" PERVIOUS PAVEMENT (2–2" LAYERS)
6" CLEAN WASHED STONE
UNCOMPACTED SUITABLE EXISTING SOIL OR FILL

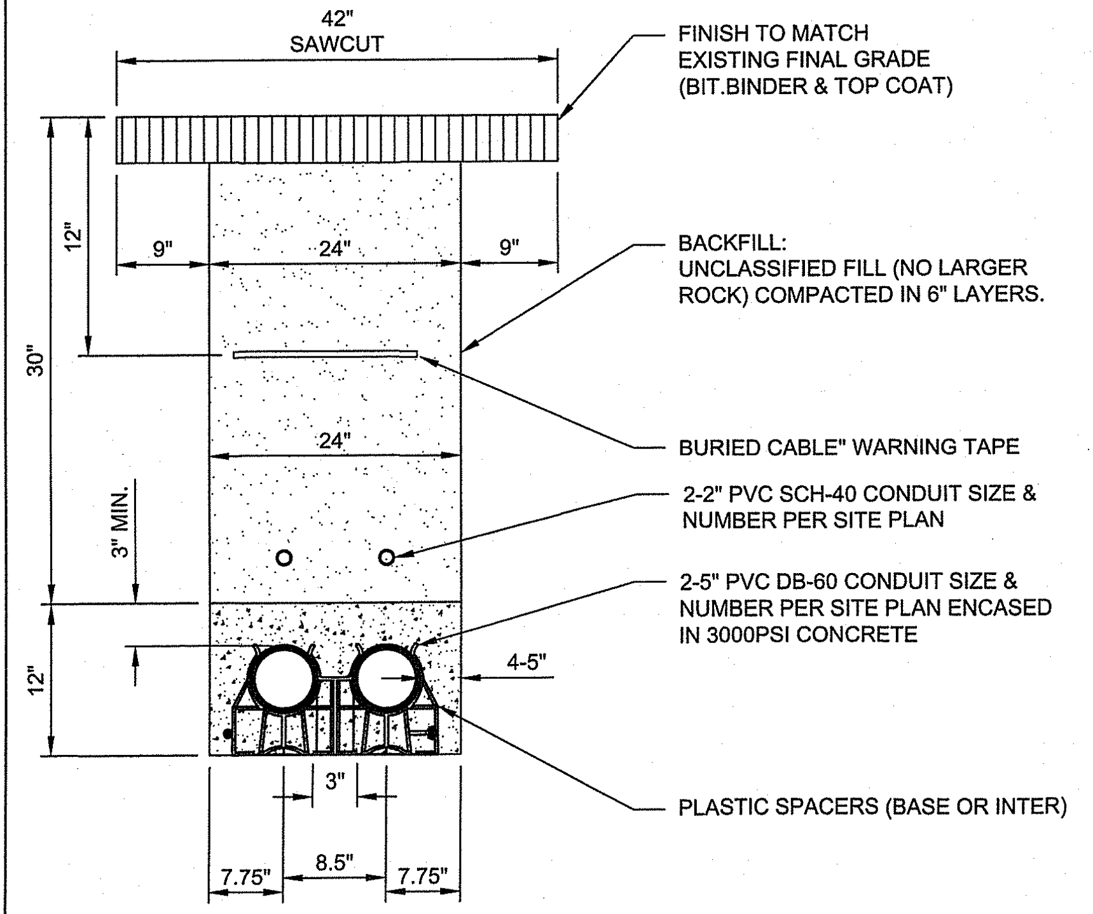
Pervious Access Path

NOT TO SCALE

BRIAN C. GIROUX
No. 9341
8/24/2020
REGISTERED PROFESSIONAL ENGINEER CIVIL

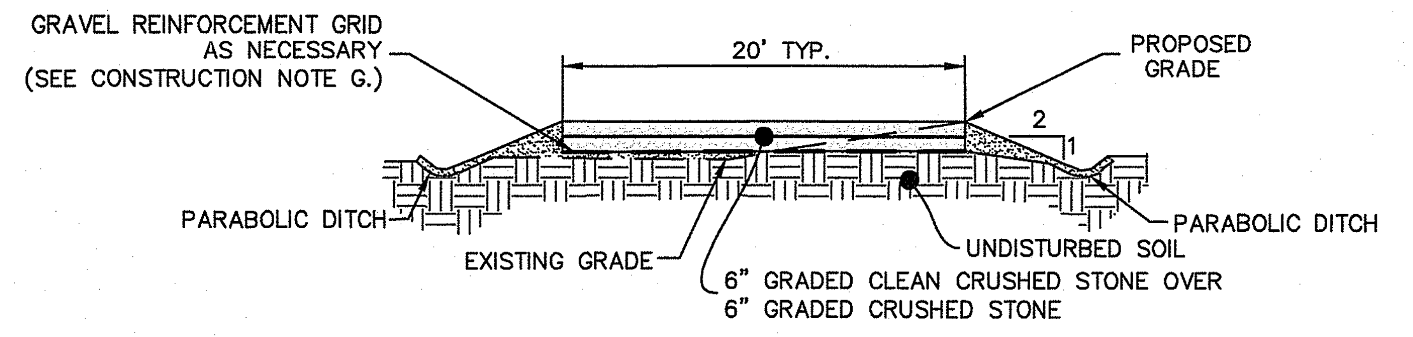
This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

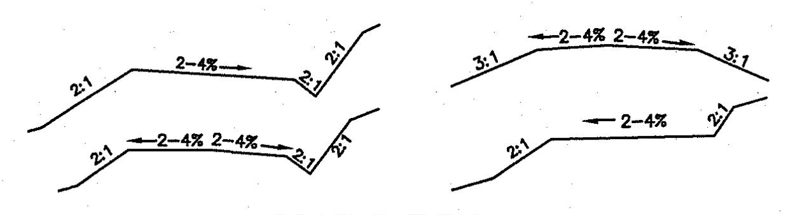

42" SAWCUT
FINISH TO MATCH EXISTING FINAL GRADE (BIT.BINDER & TOP COAT)
12"
9"
24"
9"
30"
BACKFILL: UNCLASSIFIED FILL (NO LARGER ROCK) COMPACTED IN 6" LAYERS.
24"
BURIED CABLE" WARNING TAPE
3" MIN.
2-2" PVC SCH-40 CONDUIT SIZE & NUMBER PER SITE PLAN
2-5" PVC DB-60 CONDUIT SIZE & NUMBER PER SITE PLAN ENCASED IN 3000PSI CONCRETE
12"
4-5"
3"
PLASTIC SPACERS (BASE OR INTER)
7.75"
8.5"
7.75"

Underground Electrical

NOT TO SCALE


GRAVEL REINFORCEMENT GRID AS NECESSARY (SEE CONSTRUCTION NOTE G.)
20' TYP.
PROPOSED GRADE
2
1
PARABOLIC DITCH
PARABOLIC DITCH
EXISTING GRADE
UNDISTURBED SOIL
6" GRADED CLEAN CRUSHED STONE OVER 6" GRADED CRUSHED STONE

SURFACING TYPICAL


2:1
2–4%
2:1
2:1
2:1
2–4% 2–4%
2:1
2:1
3:1
2–4% 2–4%
3:1
2:1
2–4%
2:1

PROFILE TYPICAL

MATERIALS SPECIFICATIONS	
SIEVE DESIGNATION	PERCENTAGE BY MASS (WEIGHT) PASSING SQUARE MESH SIEVES
90mm (3.5in)	100
75mm (3in)	90–100
50mm (2in)	75–100
25mm (1in)	50–80
12.5mm (0.5in)	30–60
4.75mm (No.4)	15–40
7.5um (No. 200)	0–6

DENSE GRADED CRUSHED STONE FOR SUBBASE:

A. DENSE GRADED CRUSHED STONE FOR SUBBASE SHALL CONSIST OF CLEAN, HARD, UNIFORMLY GRADED, CRUSHED STONE. IT SHALL BE SUFFICIENTLY FREE FROM DIRT, DELETERIOUS MATERIAL, AND PIECES THAT ARE STRUCTURALLY WEAK AND SHALL MEET THE FOLLOWING REQUIREMENTS:

B. SOURCE OF MATERIAL SHALL BE OBTAINED FROM AREAS STRIPPED AND CLEANED OF SOIL AND DEBRIS BEFORE BLASTING

C. MATERIAL COARSER THAN THE 4.75mm (No. 4) SIEVE SHALL NOT BE MORE THAN 30 PERCENT, BY MASS (WEIGHT), OF THIN AND/OR ELONGATED PIECES.

MATERIALS SPECIFICATIONS	
SIEVE DESIGNATION	PERCENTAGE BY MASS (WEIGHT) PASSING SQUARE MESH SIEVES
90mm (3.5in)	100
75mm (3in)	90–100
50mm (2in)	75–100
25mm (1in)	50–80
12.5mm (0.5in)	30–60
4.75mm (No.4)	0–40
7.5um (No. 200)	0

DENSE GRADED CLEAN CRUSHED STONE FOR SUBBASE:

A. DENSE GRADED CLEAN CRUSHED STONE FOR SUBBASE SHALL CONSIST OF CLEAN, WASHED, HARD, UNIFORMLY GRADED, CRUSHED STONE. IT SHALL BE SUFFICIENTLY FREE FROM DIRT, DELETERIOUS MATERIAL, AND PIECES THAT ARE STRUCTURALLY WEAK AND SHALL MEET THE FOLLOWING REQUIREMENTS:

B. SOURCE OF MATERIAL SHALL BE OBTAINED FROM AREAS STRIPPED AND CLEANED OF SOIL AND DEBRIS BEFORE BLASTING

C. MATERIAL COARSER THAN THE 4.75mm (No. 4) SIEVE SHALL NOT BE MORE THAN 30 PERCENT, BY MASS (WEIGHT), OF THIN AND/OR ELONGATED PIECES.

SURFACING SPECIFICATIONS			
CONDITIONS:	ROAD THICKNESS	STONE SIZE	FINES
BASE LAYER WITH GEOTEXTILE FABRIC (NOT EXCESSIVELY WET)	4" MIN.	3–3 1/2	0–6%
BASE LAYER WITH GEOTEXTILE FABRICS (WET CONDTIONS)	6" MIN.	3–3 1/2	0–6%

CONSTRUCTION NOTE:

A. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER TO MINIMIZE POTENTIAL EROSION AND WATER QUALITY DEGRADATION.

B. FIXED EROSION CONTROLS AND SITE STABILIZATION SHALL BE CONDUCTED IN ACCORDANCE WITH APPROVED BMP'S OR PURSUANT TO PROJECT SPECIFIC PERMITS.

C. TREES, STUMPS, ROOTS, BRUSH AND WEEDS SHALL BE REMOVED FROM THE WORK AREA IF DETERMINED NECESSARY TO SAFELY CONSTRUCT ROADWAY.

D. ON WEAK BEARING SOIL SUCH AS LOOSE ALLUVIAL, OR WETLAND SOILS, SURFACE TREATMENTS SHOULD BE UNDERLAIN WITH WOVEN GEOTEXTILES.

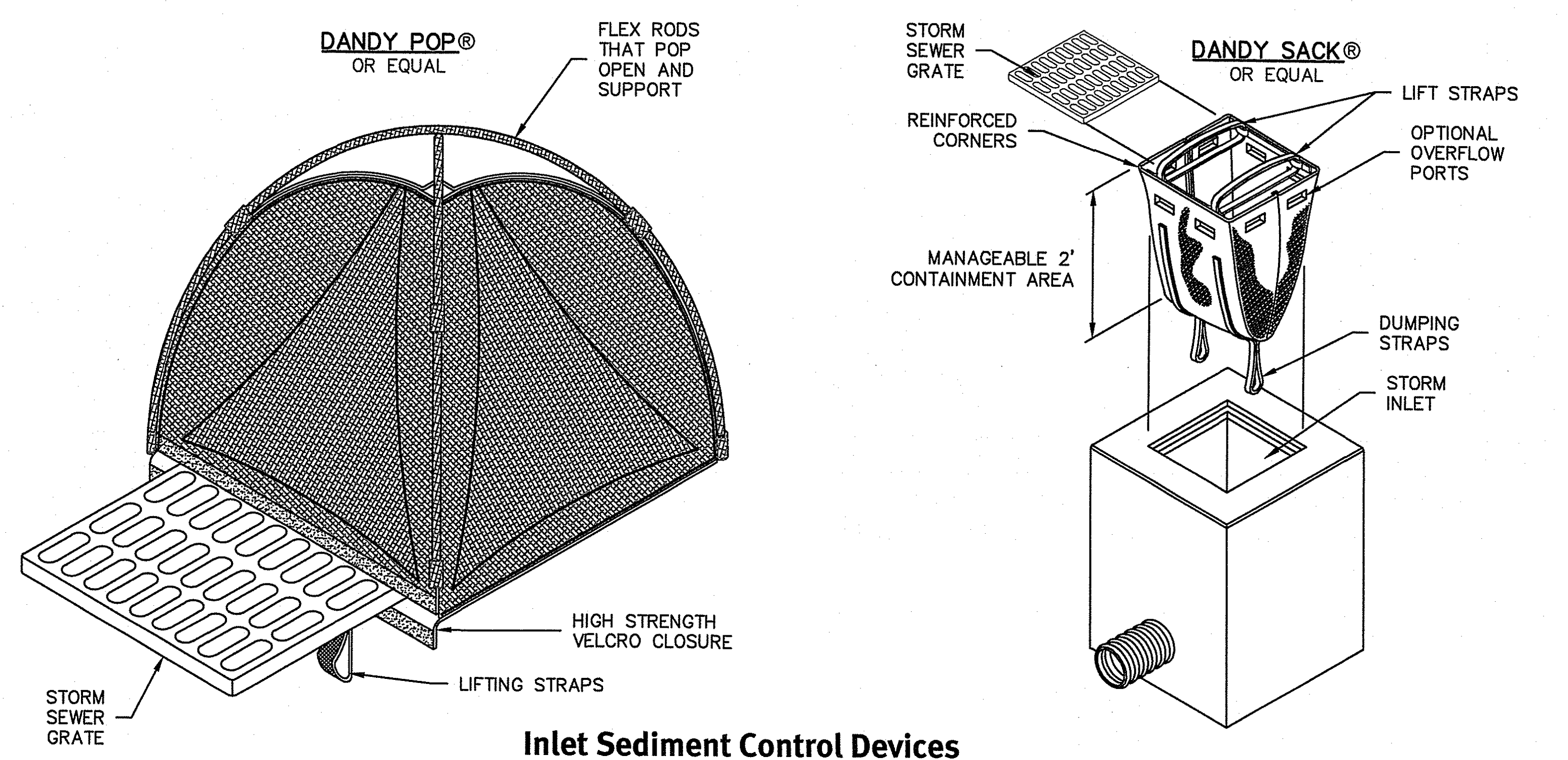
E. AT MINIMUM, ROADSIDE DITCHES SHALL BE 1FT BELOW ROAD SURFACE.

F. DISCHARGE POINTS. FOR DITCHES SHALL NOT BE NEAR WETLANDS OR STREAMS, AND OR BE LOCATED AT THE DIRECTION OF THE DESIGN ENGINEER.

G. CONTRACTOR TO INSTALL GRAVEL REINFORCEMENT GRID AS NECESSARY TO PREVENT EROSION AND/OR VEHICULAR DAMAGE TO THE ACCESS ROAD.

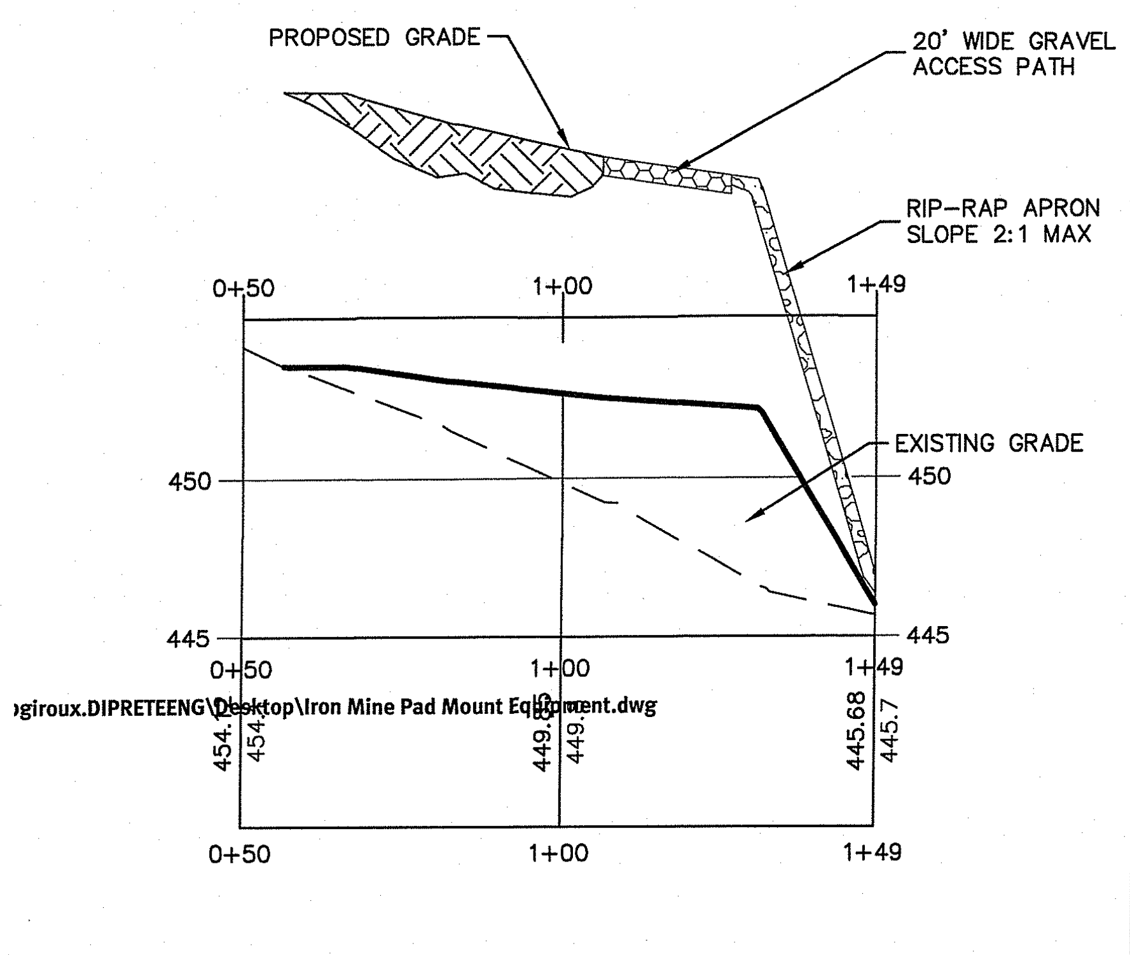
Gravel Access Path Detail

NOT TO SCALE


DANDY POP®
OR EQUAL
FLEX RODS THAT POP OPEN AND SUPPORT
HIGH STRENGTH VELCRO CLOSURE
LIFTING STRAPS
STORM SEWER GRATE
DANDY SACK®
OR EQUAL
STORM SEWER GRATE
REINFORCED CORNERS
LIFT STRAPS
OPTIONAL OVERFLOW PORTS
MANAGEABLE 2' CONTAINMENT AREA
DUMPING STRAPS
STORM INLET

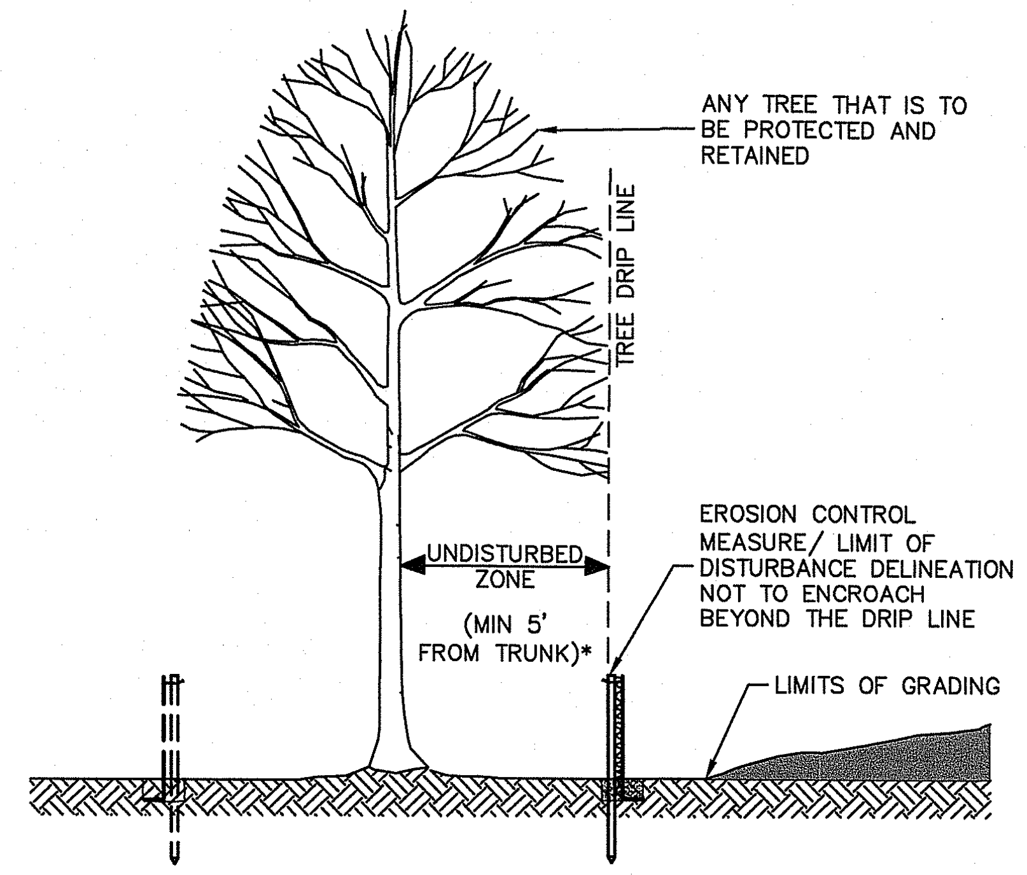
Inlet Sediment Control Devices

NOT TO SCALE



ASSF Profile Detail

NOT TO SCALE


ANY TREE THAT IS TO BE PROTECTED AND RETAINED
TREE DRIP LINE
UNDISTURBED ZONE
(MIN 5' FROM TRUNK)*
EROSION CONTROL MEASURE/ LIMIT OF DISTURBANCE DELINEATION NOT TO ENCROACH BEYOND THE DRIP LINE
LIMITS OF GRADING

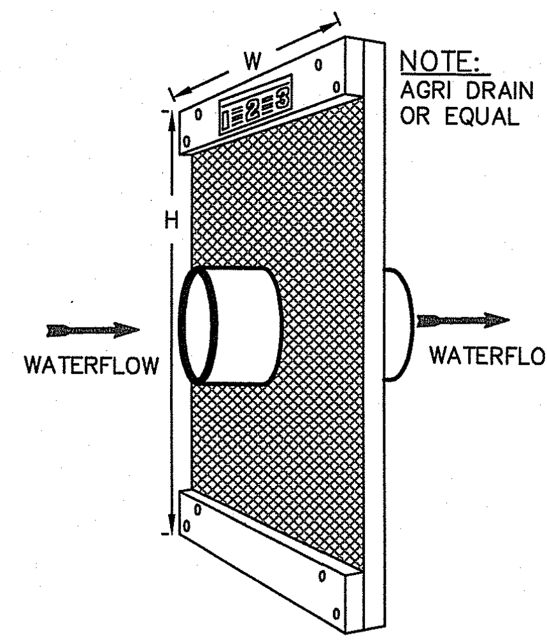
*LIMIT OF DISTURBANCE IS AT THE DRIP LINE OF OUTERMOST BRANCH OR 5' FROM TRUNK, WHICHEVER IS GREATER.

Tree Protection Detail

NOT TO SCALE

INSTALLATION NOTES:

1. UNROLL THE ANTI–SEEP COLLAR AND ALIGN THE BOARDS TO FORM A SQUARE. ATTACH METAL BRACKETS TO THE CORNER OF THE BOARDS WITH THE SCREWS PROVIDED. ATTACH THE RUBBER TO THE FRAME WITH THE NAILS PROVIDED.
2. CUT A ROUND HOLE IN THE CENTER OF THE RUBBER THAT IS SMALLER THAN THE PIPE SIZE (APPROX. 33% SMALLER). THIS WILL ALLOW THE RUBBER TO STRETCH OVER THE PIPE WHEN THE ANTI–SEEP IS INSTALLED ON THE PIPE. THIS WILL PROVIDE A TIGHT SEAL BETWEEN THE PIPE AND THE ANTI–SEEP COLLAR. NOTE: CUTTING AN "X" OR SLIT WILL CAUSE THE RUBBER TO TEAR.
3. SLIP THE PIPE THROUGH THE ANTI–SEEP COLLAR, INSPECT THE SEAL BETWEEN THE PIPE AND THE ANTI–SEEP COLLAR, CAREFULLY BACKFILL, AND COMPACT WITH SUITABLE SOIL.


W
H
WATERFLOW
WATERFLOW

NOTE:
AGRI DRAIN CORP. OR EQUAL

CAUTION:
EXCESSIVE COMPACTION OR DOWNWARD PRESSURE ON FRAME WILL CAUSE RUBBER TO STRETCH AND DISTORT, RESULTING IN LOSS OF SEAL BETWEEN RUBBER AND PIPE.

Anti-Seep Collar

NOT TO SCALE

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

Detail Sheet - 1

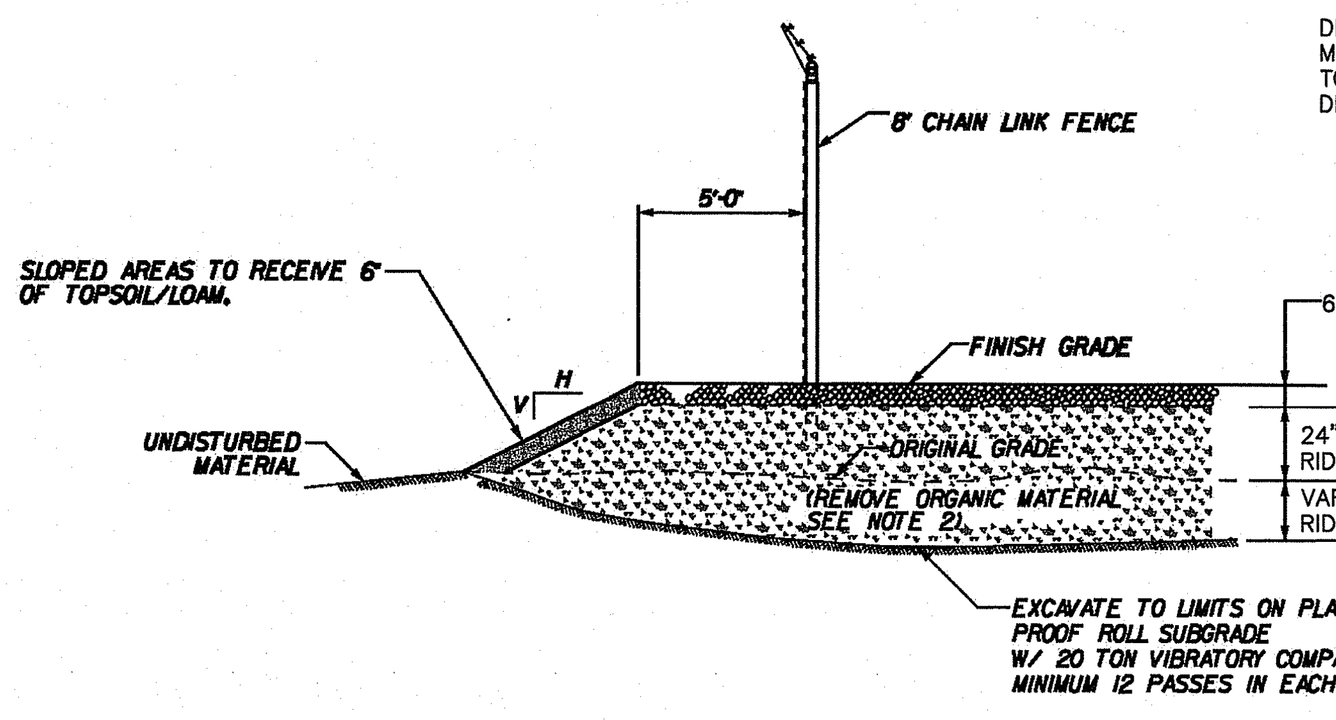
GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 23 OF 25

z:\dmain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-plan.dwg Plotted: 6/25/2020


8' CHAIN LINK FENCE
5'-0"
SLOPED AREAS TO RECEIVE 6" OF TOPSOIL/LOAM.
H
V
UNDISTURBED MATERIAL
FINISH GRADE
ORIGINAL GRADE
(REMOVE ORGANIC MATERIAL SEE NOTE 2)
EXCAVATE TO LIMITS ON PLAN PROOF ROLL SUBGRADE W/ 20 TON VIBRATORY COMPACTOR MINIMUM 12 PASSES IN EACH DIRECTION.
6" CLEAN WASHED CRUSHED STONE
SUB GRADE
24" BANK RUN GRAVEL RIDOT M.01.02.1
VARIES COMMON BORROW RIDOT M.01.01

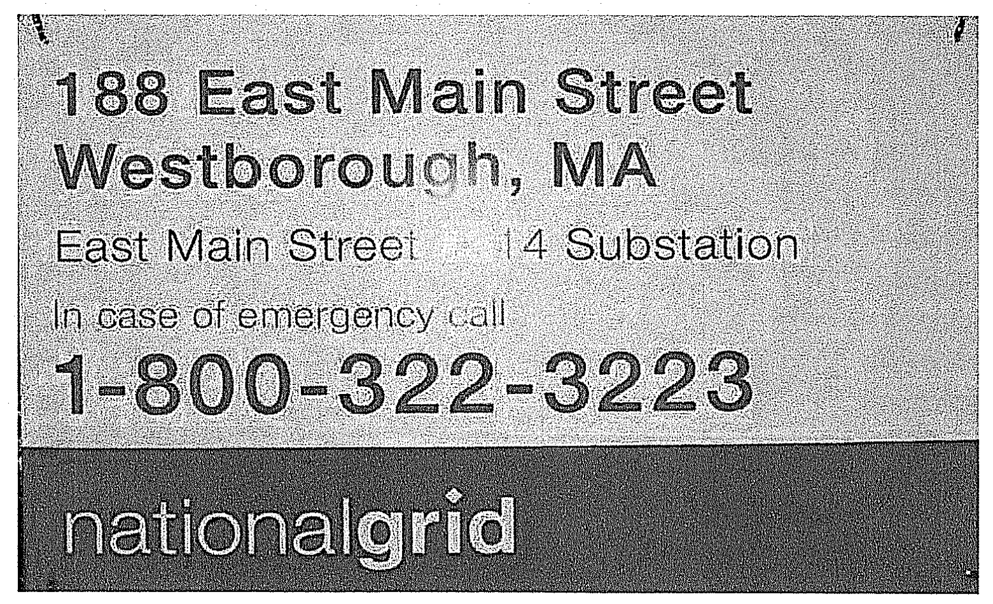
NOTE:

DETAIL PROVIDED BY NGRID AND MODIFIED TO MEET RIDOT AND RIDEM STANDARDS. CONTRACTOR TO COORDINATE FINAL DESIGN WITH NGRID AND DESIGN ENGINEER PRIOR TO CONSTRUCTION.

NGRID Substation Cross Section

NOT TO SCALE

AUG 18 2020


188 East Main Street
Westborough, MA
East Main Street 14 Substation
In case of emergency call
1-800-322-3223
nationalgrid

* CONTRACTOR TO COORDINATE SIGN AND SIGN LOCATION WITH NATIONAL GRID PRIOR TO CONSTRUCTION.

24"x36" Identification Sign

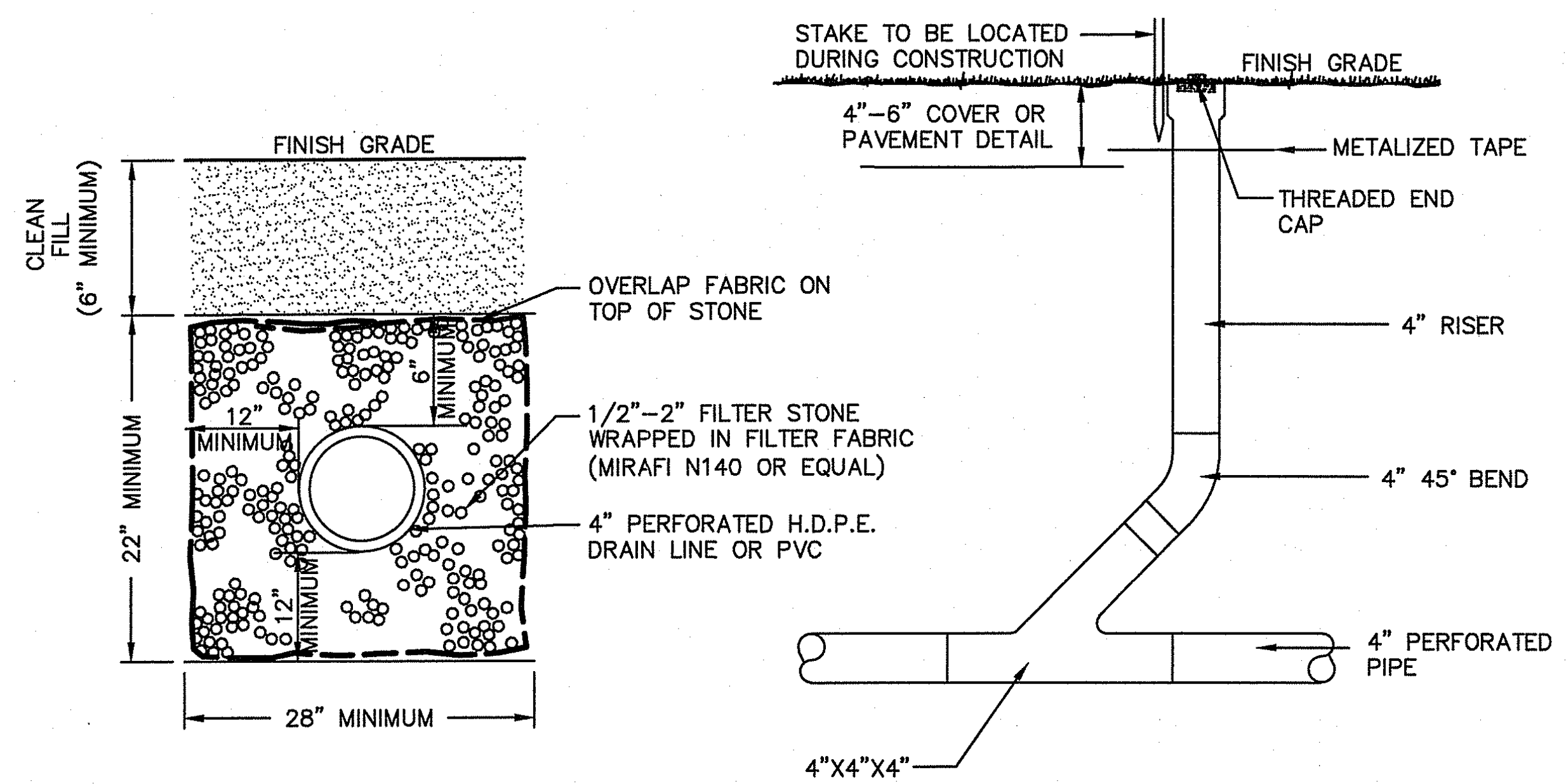
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 28 2020 FILE # 19-0630
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

1. SUBDRAIN AREA IS TO BE STAKED, MARKED, AND IS TO REMAIN UNDISTURBED PRIOR TO CONSTRUCTION. NO CONSTRUCTION TRAFFIC OVER THE SUBDRAIN AREA PRIOR TO CONSTRUCTION IS ALLOWED.
2. SEE CONSTRUCTION SEQUENCE OUTLINED IN SUBDRAIN TRENCH DETAIL.
3. CONTRACTOR SHALL PROVIDE AS-BUILT PLANS OF THE DETENTION BASINS SHOWING THE FIELD-LOCATED SUBDRAIN LOCATIONS, INVERTS, AND SIZES.
4. IF AS-BUILT PLAN INDICATES THAT DETENTION BASIN AND SUBDRAINS ARE NOT INSTALLED AS SHOWN ON THE PLANS AND DETAILS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECONSTRUCTING SUBDRAINS ACCORDING TO DESIGN PLANS.
5. OWNER SHALL MONITOR THE WATER LEVELS WITHIN THE CLEANOUTS AT VARIOUS TIME INTERVALS AFTER RAINFALL EVENTS INDICATING THE EFFECTIVENESS OF THE SYSTEM. IF WATER IS STANDING IN THE SUBDRAIN AFTER A STORM EVENT, SYSTEM FAILURE MAY HAVE OCCURRED AND WILL REQUIRE FLUSHING MAINTENANCE, REPAIR, OR REPLACEMENT OF SUBDRAIN BY OWNER.
6. THE BMPs SHOULD DRAIN AS DESIGNED. STANDING WATER SHOULD NOT BE PRESENT IN THE BASIN 72 HOURS AFTER A RAINFALL EVENT. IF STANDING WATER DOES NOT DRAIN WITHIN 72 HOURS, THE BASIN SHALL BE CONSIDERED DEFICIENT AND SHALL BE REPAIRED IMMEDIATELY BY THE OWNER.
7. THE OWNER AND/OR THE CONTRACTOR SHALL TAKE SPECIAL CARE SO AS TO AVOID DAMAGING THE SUBDRAIN. HEAVY EQUIPMENT SHALL NOT OPERATE DIRECTLY OVER THE SUBDRAIN PIPE; MORE SPECIFICALLY, THEY SHALL NOT PLACE EQUIPMENT STABILIZERS OVER THE SUBDRAIN PIPE. THE LOCATION OF THE SUBDRAIN SHALL BE VERIFIED AND LOCATED PRIOR TO COMMENCEMENT OF INSPECTION, MAINTENANCE, OR REPAIRS WITHIN THE DETENTION BASINS.
8. ANY CHANGE TO SUBDRAIN DESIGN OR LAYOUT SHALL REQUIRE APPROVAL FROM DESIGN ENGINEER

Subdrain Installation, Inspection & Maintenance Notes

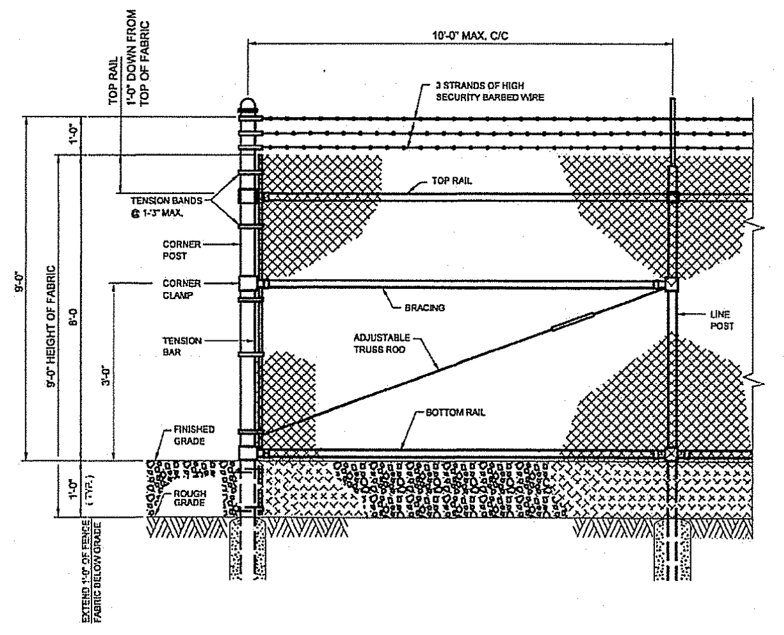
NOT TO SCALE


FINISH GRADE
CLEAN FILL (6" MINIMUM)
22" MINIMUM
12" MINIMUM
6" MINIMUM
12" MINIMUM
28" MINIMUM
OVERLAP FABRIC ON TOP OF STONE
1/2"-2" FILTER STONE WRAPPED IN FILTER FABRIC (MIRAFI N140 OR EQUAL)
4" PERFORATED H.D.P.E. DRAIN LINE OR PVC
STAKE TO BE LOCATED DURING CONSTRUCTION
FINISH GRADE
4"-6" COVER OR PAVEMENT DETAIL
METALIZED TAPE
THREADED END CAP
4" RISER
4" 45° BEND
4" PERFORATED PIPE
4"X4"X4" 45° WYE

NOTES:
1. ENCASE CLEANOUT IN CONCRETE WHEN INVERT IS 12' OR MORE BELOW FINISH GRADE.
2. AT TERMINAL CLEANOUT REPLACE WYE WITH 45° BEND.
3. SUBDRAIN AREA TO BE STAKED, MARKED, AND REMAIN UNDISTURBED PRIOR TO CONSTRUCTION. THERE IS TO BE NO CONSTRUCTION TRAFFIC ON SUBDRAIN AREA PRIOR TO CONSTRUCTION.

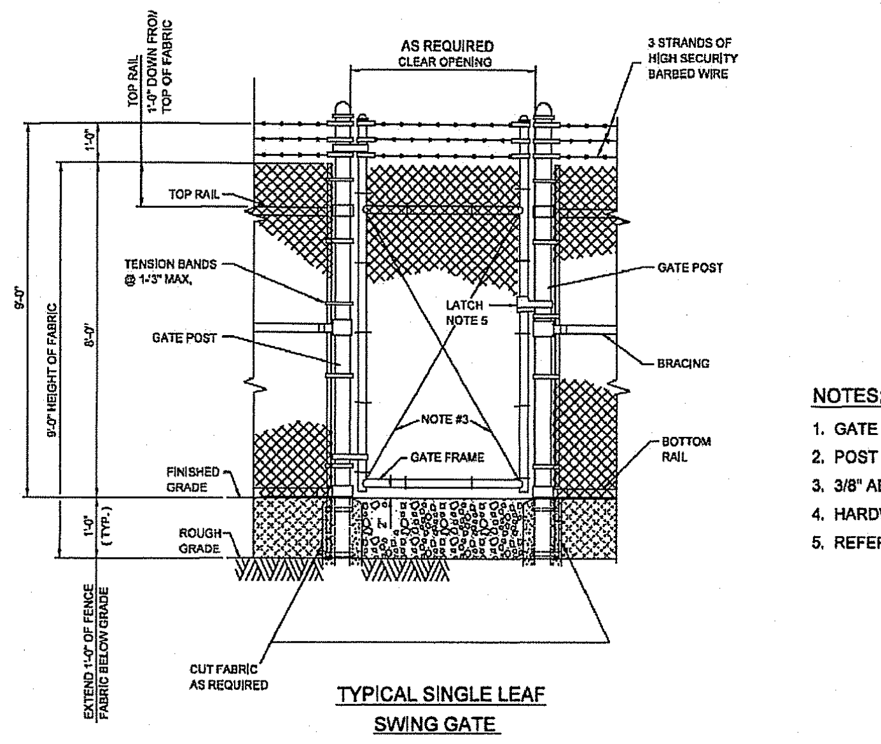
4" Subdrain (Underdrain) Cleanout And Trench (TYP)

NOT TO SCALE


10'-0" MAX. C/C
3 STRANDS OF HIGH SECURITY BARBED WIRE
TOP RAIL 1'-0" DOWN FROM TOP OF FABRIC
TOP RAIL
TENSION BANDS @ 1'-3" MAX.
CORNER POST
CORNER CLAMP
BRACING
TENSION BAR
ADJUSTABLE TRUSS ROD
LINE POST
BOTTOM RAIL
FINISHED GRADE
ROUGH GRADE
9'-0"
9'-0" HEIGHT OF FABRIC
8'-0"
3'-0"
1'-0"
1'-0" (TYP.)
EXTEND 1'-0" OF FENCE FABRIC BELOW GRADE

TYPICAL CORNER, END OR PULL CHAIN LINK FENCE SECTION

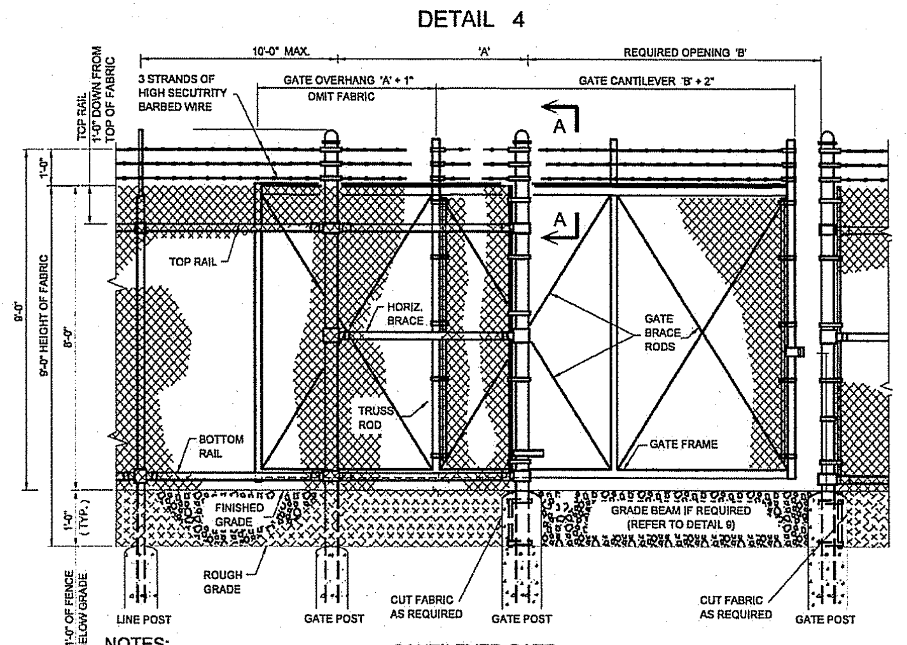
NOTES:
1. LINE POSTS: SEE SECTION 3.0.
2. END, CORNER, & PULL POST: SEE SECTION 3.0.
3. POST FOOTINGS: SEE DETAIL 6.
4. 3/8" ADJUSTABLE TRUSS RODS WHEN FRAME JOINTS ARE NOT WELDED.
5. HARDWARE DETAILS SHALL BE SUBMITTED FOR REVIEW AND ACCEPTANCE.


AS REQUIRED CLEAR OPENING
3 STRANDS OF HIGH SECURITY BARBED WIRE
TOP RAIL 1'-0" DOWN FROM TOP OF FABRIC
TOP RAIL
TENSION BANDS @ 1'-3" MAX.
GATE POST
LATCH NOTE 5
GATE POST
BRACING
NOTE #3
GATE FRAME
BOTTOM RAIL
FINISHED GRADE
ROUGH GRADE
CUT FABRIC AS REQUIRED
9'-0"
9'-0" HEIGHT OF FABRIC
8'-0"
1'-0"
1'-0" (TYP.)
EXTEND 1'-0" OF FENCE FABRIC BELOW GRADE

TYPICAL SINGLE LEAF SWING GATE

NOTES:
1. GATE POSTS: SEE SECTION 3.0.
2. POST FOOTINGS: SEE DETAIL 6.
3. 3/8" ADJUSTABLE TRUSS RODS WHEN FRAME JOINTS ARE NOT WELDED.
4. HARDWARE DETAILS SHALL BE SUBMITTED FOR REVIEW AND ACCEPTANCE.
5. REFERENCE ST.04.18.001, SECTION 5.0

DETAIL 4

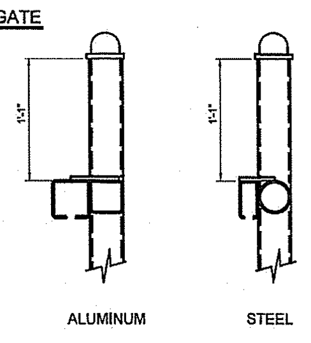

10'-0" MAX.
'A'
REQUIRED OPENING 'B'
3 STRANDS OF HIGH SECUTRITY BARBED WIRE
GATE OVERHANG 'A' + 1"
OMIT FABRIC
GATE CANTILEVER 'B' + 2"
A
A
TOP RAIL 1'-0" DOWN FROM TOP OF FABRIC
TOP RAIL
HORIZ. BRACE
GATE BRACE RODS
TRUSS ROD
BOTTOM RAIL
GATE FRAME
FINISHED GRADE
GRADE BEAM IF REQUIRED (REFER TO DETAIL 9)
ROUGH GRADE
CUT FABRIC AS REQUIRED
CUT FABRIC AS REQUIRED
LINE POST
GATE POST
GATE POST
GATE POST
9'-0"
9'-0" HEIGHT OF FABRIC
8'-0"
1'-0"
1'-0" (TYP.)
EXTEND 1'-0" OF FENCE FABRIC BELOW GRADE

CANTILEVER GATE

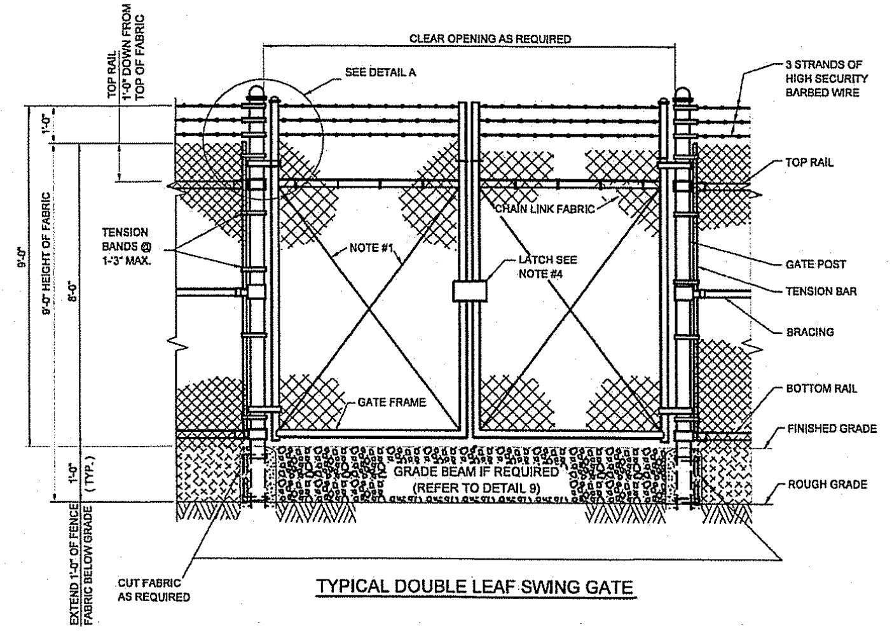
NOTES:
1. GATE POSTS: SEE SECTION 3.0.
2. GATE DIMENSIONS: REFER TO TABLE #1.
3. POST FOOTINGS: SEE DETAIL 6.
4. HARDWARE DETAILS TO SHALL BE SUBMITTED FOR REVIEW AND ACCEPTANCE.
5. FOR SINGLE GATE LEAFS LARGER THAN 22'-0", ADDITIONAL SUPPORT RAILS ARE REQUIRED.

TABLE #1

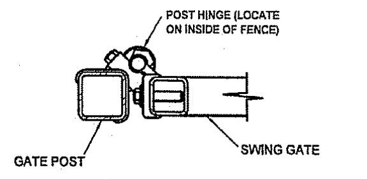
GATE LEAF SIZE	GATE POST SPACING 'A'	GATE POST SPACING 'B'
6'-2" - 10'-2"	6'-6"	6'-0" - 10'-0
11'-2" - 14'-2"	7'-6"	10'-0" - 14'-0"
15'-2" - 22'-2"	10'-0"	15'-0" - 22'-0"
23'-2" - 30'-2"	12'-0"	23'-0" - 30'-0"


1'-1"
1'-1"
ALUMINUM
STEEL

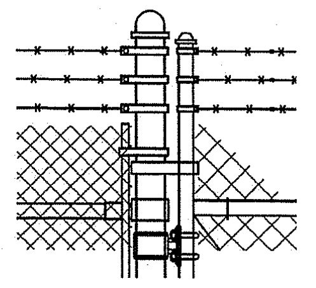
SECTION A-A


CLEAR OPENING AS REQUIRED
SEE DETAIL A
3 STRANDS OF HIGH SECURITY BARBED WIRE
TOP RAIL 1'-0" DOWN FROM TOP OF FABRIC
TOP RAIL
CHAIN LINK FABRIC
TENSION BANDS @ 1'-3" MAX.
NOTE #1
LATCH SEE NOTE #4
GATE POST
TENSION BAR
BRACING
BOTTOM RAIL
GATE FRAME
FINISHED GRADE
GRADE BEAM IF REQUIRED (REFER TO DETAIL 9)
ROUGH GRADE
CUT FABRIC AS REQUIRED
9'-0"
9'-0" HEIGHT OF FABRIC
8'-0"
1'-0"
1'-0" (TYP.)
EXTEND 1'-0" OF FENCE FABRIC BELOW GRADE

TYPICAL DOUBLE LEAF SWING GATE


POST HINGE (LOCATE ON INSIDE OF FENCE)
SWING GATE
GATE POST

NOTES:
1. 3/8" ADJUSTABLE TRUSS RODS REQUIRED WHEN FRAME JOINTS ARE MALLEABLE IRON FITTINGS. SWING GATE LEAF 14'-0" AND WIDER. SPECIAL PIPE BRACING REQUIRED. SUBMITT DETAILS.
2. GATE POSTS: SEE SECTION 3.0.
3. POST FOOTINGS: SEE DETAIL 6.
4. LATCH: SEE SECTION 3.0 MATERIAL.
5. HARDWARE DETAILS TO BE SUBMITTED FOR REVIEW AND ACCEPTANCE.



DETAIL A

1. DETAILS PROVIDED BY NATIONAL GRID. SEE GENERAL NOTE 18 ON SHEET 3.
2. CONTRACTOR TO COORDINATE FINAL FENCE AND FENCE DETAILS WITH NATIONAL GRID PRIOR TO CONSTRUCTION.

NGRID Substation Fencing
Chain Link & Expanded Metal Mesh Fence

NOT TO SCALE

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
8/24/2020
REGISTERED PROFESSIONAL ENGINEER CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	6-24-2020	RIDEM Permit Modification	B.C.G.
1	5-20-2020	RIDEM Permit Modification	B.C.G.
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R. Design By: B.C.G.

Detail Sheet - 2
GDIM 1-9: Iron Mine Hill Road Solar

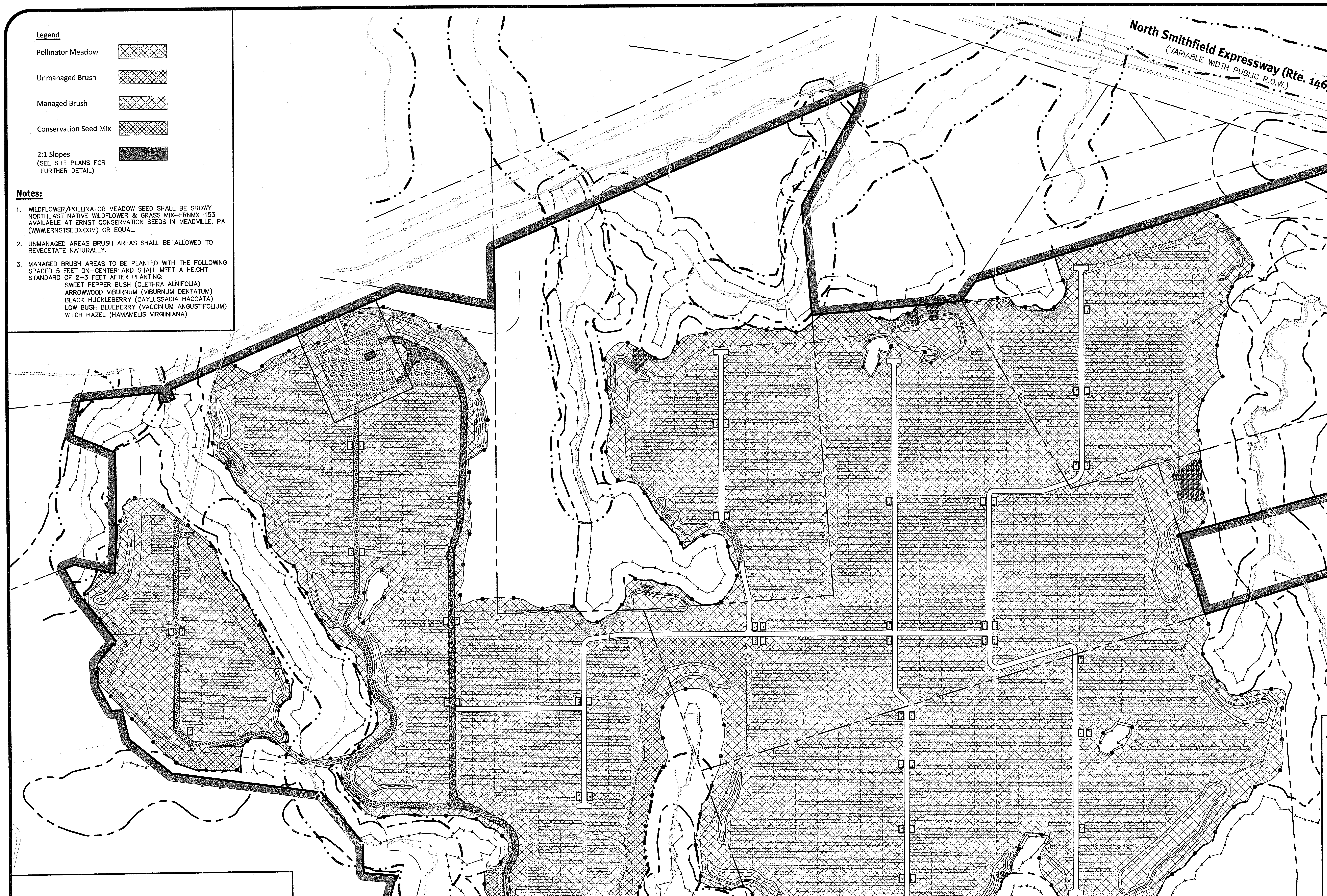
AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 24 OF 25

DE Job No: 0601-027

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-plan.dwg Plotted: 6/25/2020


North Smithfield Expressway (Rte. 146)
(VARIABLE WIDTH PUBLIC R.O.W.)

AUG 18 2020

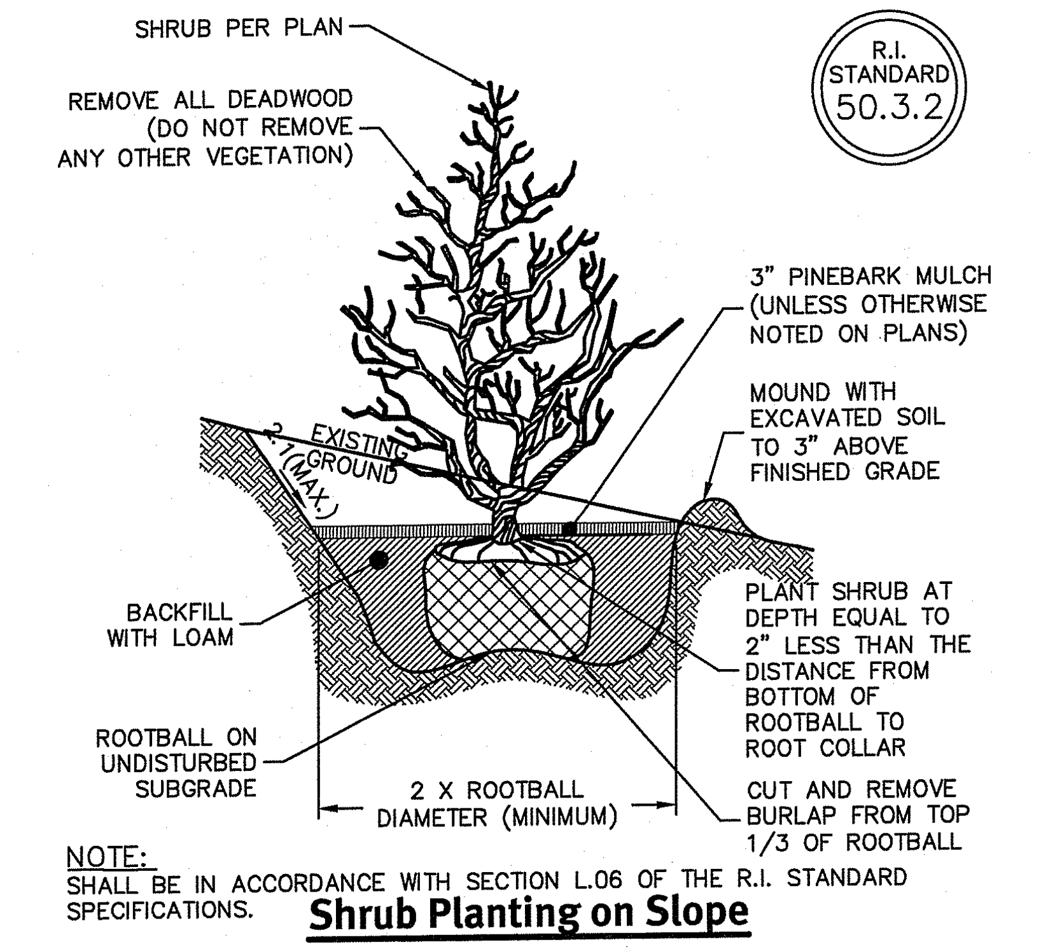
Legend

Pollinator Meadow	▨
Unmanaged Brush	▨
Managed Brush	▨
Conservation Seed Mix	▨
2:1 Slopes (SEE SITE PLANS FOR FURTHER DETAIL)	▩

Notes:

1. WILDFLOWER/POLLINATOR MEADOW SEED SHALL BE SHOWY NORTHEAST NATIVE WILDFLOWER & GRASS MIX–ERNMX–153 AVAILABLE AT ERNST CONSERVATION SEEDS IN MEADVILLE, PA (WWW.ERNSTSEED.COM) OR EQUAL.
2. UNMANAGED AREAS BRUSH AREAS SHALL BE ALLOWED TO REVEGETATE NATURALLY.
3. MANAGED BRUSH AREAS TO BE PLANTED WITH THE FOLLOWING SPACED 5 FEET ON–CENTER AND SHALL MEET A HEIGHT STANDARD OF 2–3 FEET AFTER PLANTING:
    - SWEET PEPPER BUSH (CLETHRA ALNIFOLIA)
    - ARROWWOOD VIBURNUM (VIBURNUM DENTATUM)
    - BLACK HUCKLEBERRY (GAYLUSSACIA BACCATA)
    - LOW BUSH BLUEBERRY (VACCINIUM ANGUSTIFOLIUM)
    - WITCH HAZEL (HAMAMELIS VIRGIINIANA)

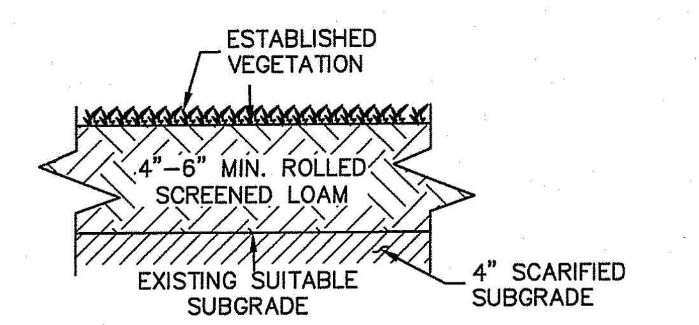
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 28 2020 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek


SHRUB PER PLAN
REMOVE ALL DEADWOOD (DO NOT REMOVE ANY OTHER VEGETATION)
R.I. STANDARD 50.3.2
3" PINEBARK MULCH (UNLESS OTHERWISE NOTED ON PLANS)
MOUND WITH EXCAVATED SOIL TO 3" ABOVE FINISHED GRADE
EXISTING GROUND
2:1 (MAX.)
BACKFILL WITH LOAM
PLANT SHRUB AT DEPTH EQUAL TO 2" LESS THAN THE DISTANCE FROM BOTTOM OF ROOTBALL TO ROOT COLLAR
ROOTBALL ON UNDISTURBED SUBGRADE
2 X ROOTBALL DIAMETER (MINIMUM)
CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOTBALL

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

Shrub Planting on Slope

NOT TO SCALE


ESTABLISHED VEGETATION
4"–6" MIN. ROLLED SCREENED LOAM
EXISTING SUITABLE SUBGRADE
4" SCARIFIED SUBGRADE

NOTE:
1) ALL DISTURBED AREAS TO BE LOAMED WITH A MINIMUM OF 4 TO 6–INCHES OF SCREENED LOAM IN ACCORDANCE WITH RHODE ISLAND DEPARTMENT OF TRANSPORTATION (RIDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION LATEST EDITION SECTIONS L.01 AND M.18.

Loam Detail

NOT TO SCALE

Scale: 1"=200'
0 100' 200' 400'

General Notes:

1. SITE INFORMATION TAKEN FROM PLANS PREPARED BY DIPRETE ENGINEERING. SEE ENGINEERING PLANS FOR MORE DETAIL.
2. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS BY NOTIFYING DIG–SAFE (811) AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION OR SITE PREPARATION AND ANY/OR ALL LOCAL UTILITY COMPANIES AS REQUIRED.
3. CONTRACTOR TO PROVIDE A ONE (1) YEAR GUARANTEE FOR ALL MATERIALS. CONTRACTOR GUARANTEES THAT PLANTS WILL REMAIN HEALTHY FOR ONE (1) GROWING SEASON. CONTRACTOR TO MAINTAIN ALL PLANTING AND LAWNS UNTIL FINAL PROJECT ACCEPTANCE. GUARANTEE PERIOD TO COMMENCE AT FINAL ACCEPTANCE. ANY REPLACEMENT PLANTS SHALL BE OF THE SAME SIZE AND SPECIES AS SPECIFIED WITH NEW GUARANTEE COMMENCING ON THE DATE OF REPLACEMENT.
4. ALL PLANT MATERIAL SHALL CONFORM, IN ALL RESPECTS, TO THE GUIDELINES OF "THE AMERICAN STANDARD FOR NURSERY STOCK," LATEST EDITION, PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION, INC. ALL PLANTS SHALL BE NURSERY GROWN AND SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS.
5. PLANT SUBSTITUTION SELECTION MUST BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
6. ALL PLANTS TO BE PLANTED SO THAT AFTER SETTLEMENT THEY BEAR THE SAME RELATION TO THE SURROUNDING GROUND AS TO THEIR ORIGINAL GRADE BEFORE DIGGING.
7. CREATE SAUCER AROUND INDIVIDUAL PLANTS CAPABLE OF HOLDING WATER. ALL PLANTS TO BE FLOODED WITH CLEAN WATER TWICE WITHIN THE FIRST 24 HOURS OF PLANTING. ADDITIONAL WATERING SHALL BE MADE AS REQUIRED TO KEEP PLANTS FROM WILTING AND DRYING OUT UNTIL FINAL ACCEPTANCE.
8. TRIM BROKEN AND DEAD BRANCHES FROM TREES AND SHRUBS AFTER PLANTING. NEVER CUT A LEADER.
9. RECOMMENDED DATES FOR PLANTING ARE MARCH 15 TO JUNE 15 AND SEPTEMBER 15 TO NOVEMBER 15.
10. ALL LANDSCAPED AREAS SHALL BE KEPT FREE OF WEEDS AND DEBRIS. ALL VEGETATION WITHIN SAID AREAS SHALL BE MAINTAINED FREE OF PHYSICAL DAMAGE CAUSED BY CHEMICALS, INSECTS, DISEASES, LACK OF WATER OR OTHER CAUSES. DAMAGED PLANTS SHALL BE REPLACED WITH THE SAME OR SIMILAR VEGETATION ON AN ANNUAL BASIS.
11. LOAM MOVED ON SITE TO BE STOCKPILED AND RETAINED AND TO BE USED AS REQUIRED FOR THE LANDSCAPE DESIGN. LOAM SHALL NOT BE MIXED WITH ANY UNSUITABLE MATERIALS OR SUBSOIL. EXCESS LOAM TO REMAIN ON THE OWNER'S PROPERTY AND ONLY REMOVED WITH THE OWNERS PERMISSION. NEW LOAM SHALL BE FRIABLE, FERTILE, MEDIUM TEXTURED SANDY LOAM THAT IS FREE OF TOXIC MATERIALS FOR HEALTHY PLANT GROWTH AND SURVIVAL. LOAM SHALL BE FREE OF MATTER 1" OR GREATER IN DIAMETER AND WHEN TESTED SHALL HAVE A PH BETWEEN 5.5 AND 7.5. SEE LOAM DETAIL.
12. THIS PLAN IS FOR LANDSCAPE PLANTING ONLY.

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

ALEXANDRA C. AVERY
NO. 431
2020

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
0	4-28-2020	Final Plan Submission	B.C.G.

Drawn By: J.A.R.
Design By: B.C.G.

Landscape Plan

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 25 OF 25

DE Job No: 0601-027

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-larc.dwg Plotted: 4/28/2020

RIDEM Preliminary Determination Submission

GDIM: 1-9 Iron Mine Hill Road Solar

North Smithfield, Rhode Island

Assessor's Plat 12 Lots 136B & 137

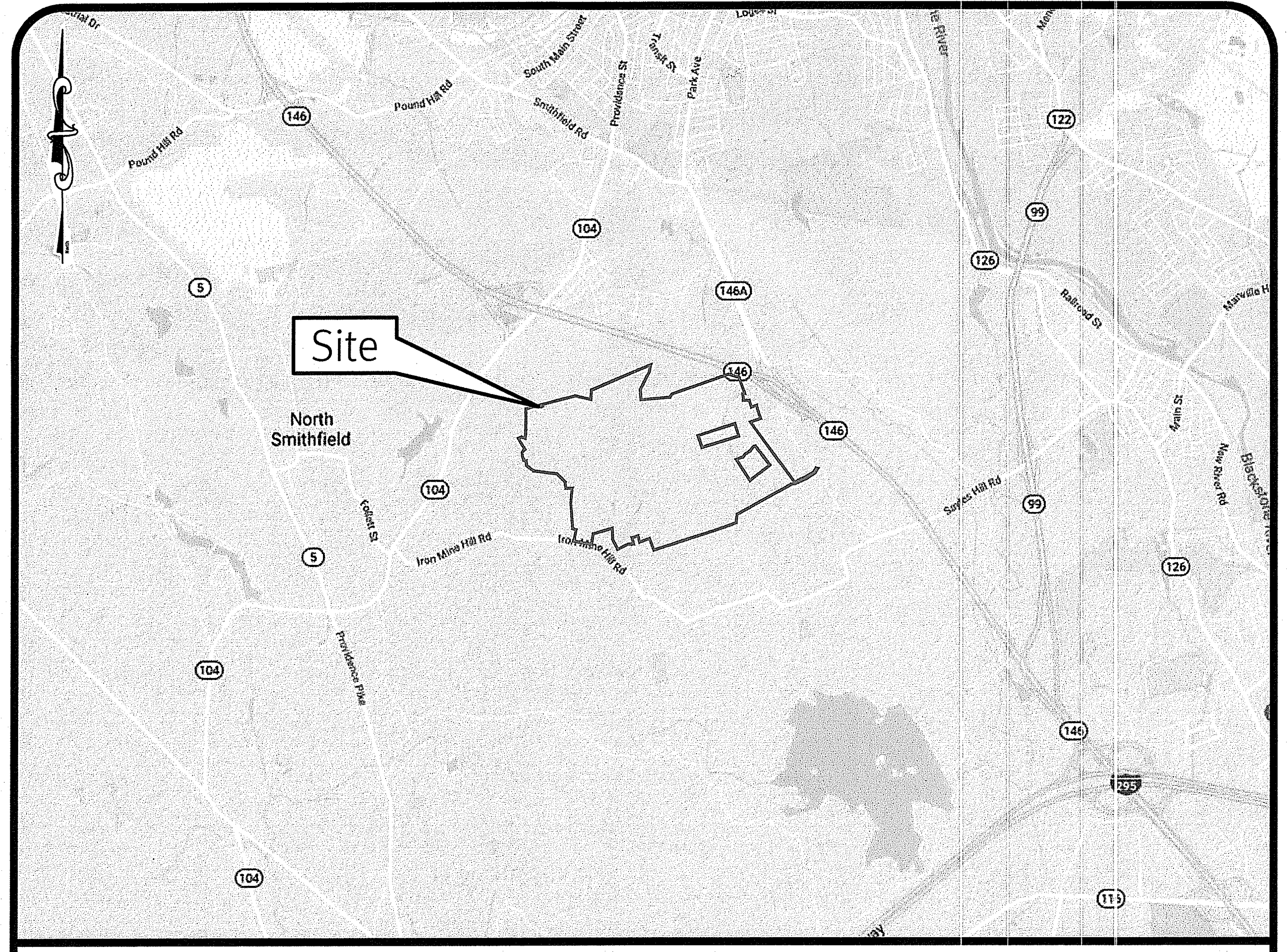
Feridoon Khan Revocable Trust
Feridoon Khan Trustee
5 Kennedy Boulevard
Lincoln, RI 02865

Assessor's Plat 16 Lots 6 & 97

Ralph F. & Muriel J. Ferra
1105 Iron mine Hill Road
North Smithfield, RI 02896

Assessor's Plat 13 Lots 12 & 51
Assessor's Plat 16 Lot 6
Assessor's Plat 17 Lot 175

Ralph F. & Muriel J. Ferra
1081 Iron mine Hill Road
North Smithfield, RI 02896



Location Map Scale: 1" = 3,000'

Sheet List

1	Cover Sheet	
2	Site Context Map	
3	Notes and Legend	
4	Boundary Survey Plan	(1 of 1 - by others)
5	Overall Existing Conditions Plan	(by others)
6	Existing Conditions Plan - 1	(by others)
7	Existing Conditions Plan - 2	(by others)
8	Existing Conditions Plan - 3	(by others)
9	Existing Conditions Plan - 4	(by others)
10	Existing Conditions Plan - 5	(by others)
11	Proposed Site Plan	
12	Overall SESC Plan	
13	SESC Plan-1	
14	SESC Plan-2	
15	SESC Plan-3	
16	SESC Plan-4	
17	Grading Plan-1	
18	Grading Plan-2	
19	Grading Plan-3	
20	Grading Plan-4	
21	SESC Detail Sheet	
22	Pond Detail Sheet	
23	Detail Sheet	
24	Landscape Plan	

Environmental Management
SEP 25 2019
Office of Water Resources

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 08 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
9/16/2019
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R. / P.A.A.

Drawn By: J.A.R.
Design By: B.C.G.

Cover Sheet
GDIM 1-9: Iron Mine Hill Road Solar
AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027

SHEET 1 OF 24

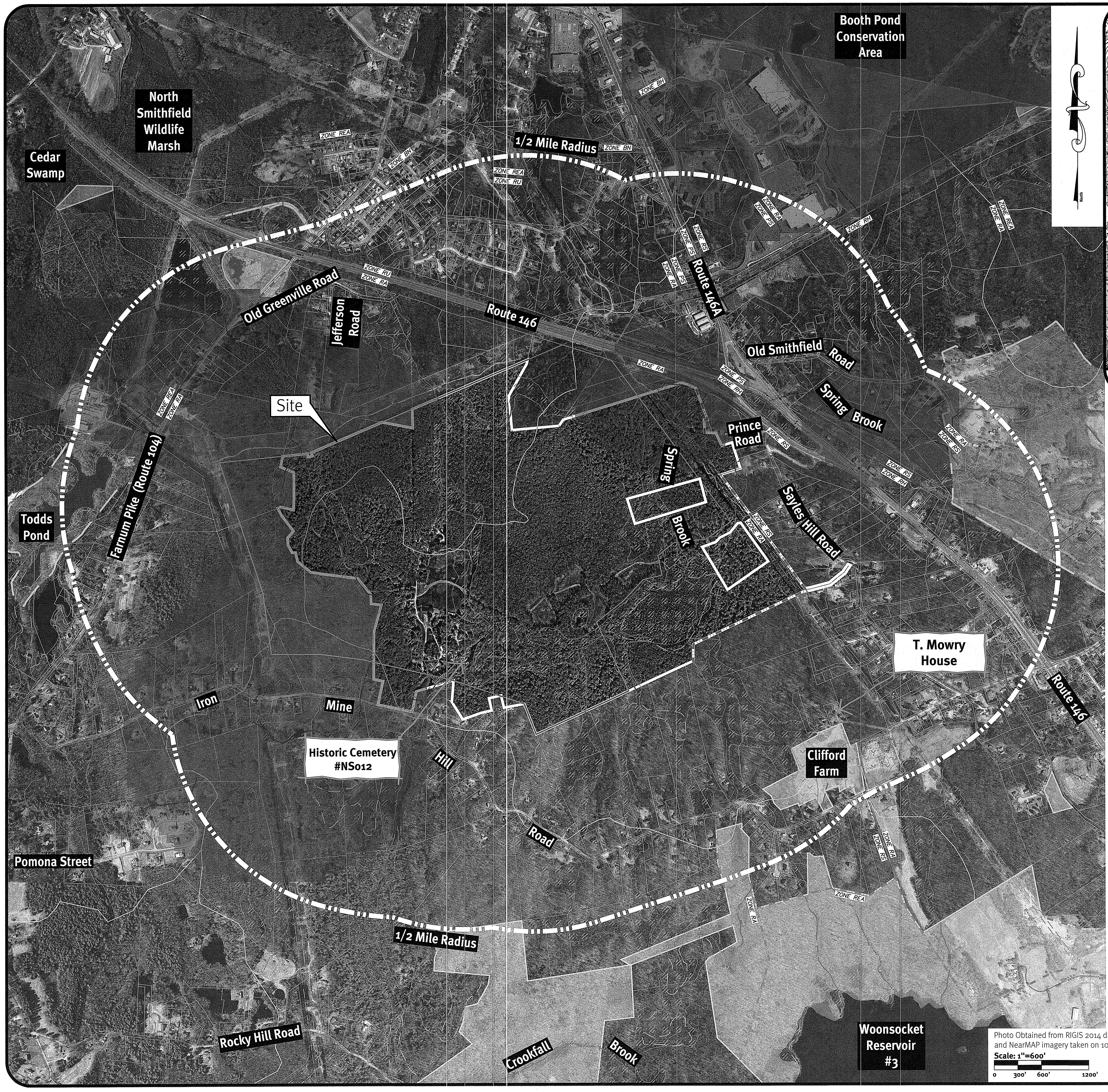
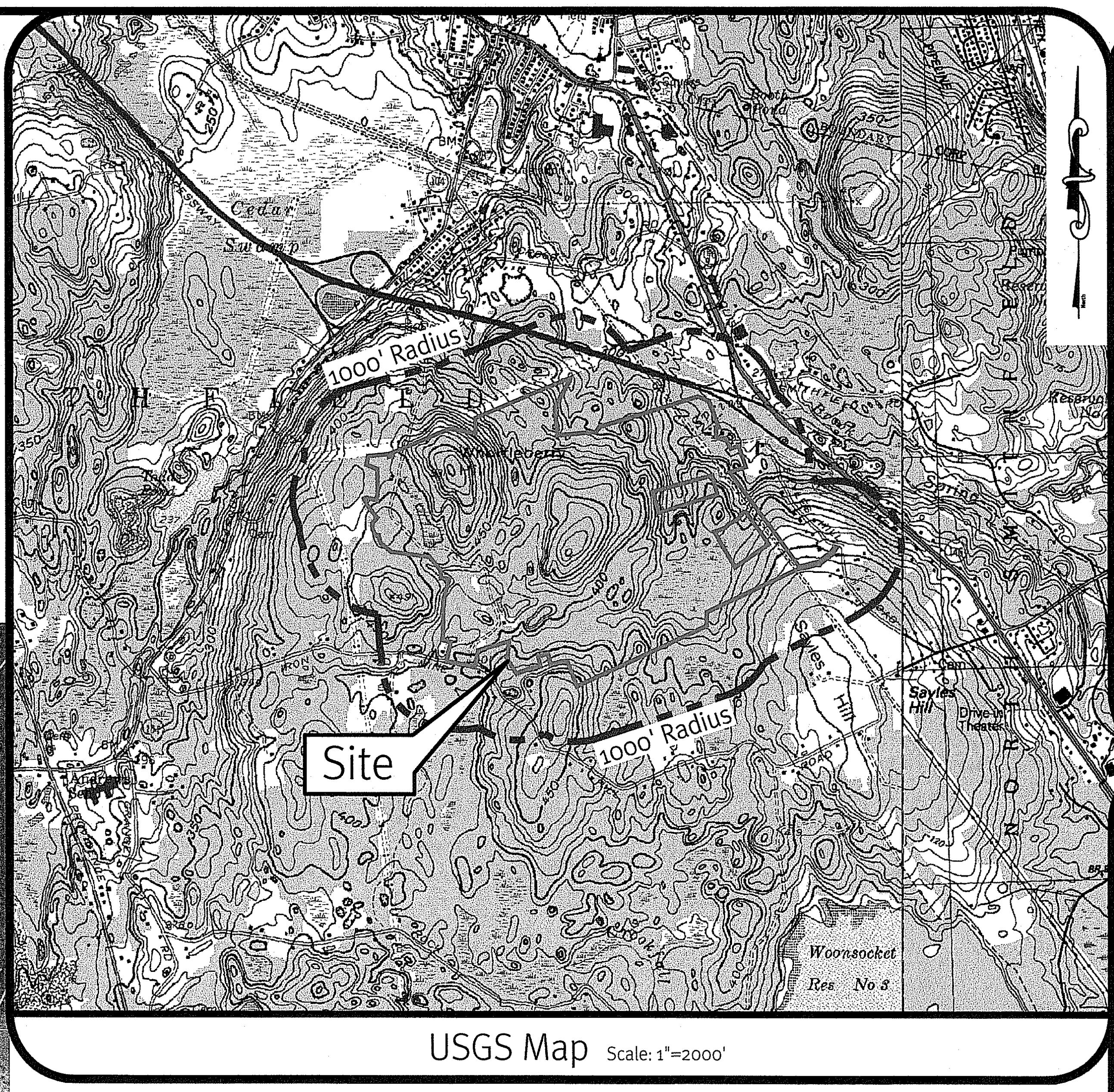

Booth Pond Conservation Area
North Smithfield Wildlife Marsh
Cedar Swamp
1/2 Mile Radius
ZONE REA
ZONE BN
ZONE RU
ZONE BH
ZONE RA
ZONE RS
ZONE PS
ZONE RH
Route 146A
Old Greenville Road
Jefferson Road
Route 146
Old Smithfield Road
Spring Brook
Prince Road
Site
Farnum Pike (Route 104)
Todds Pond
Spring Brook
Sayles Hill Road
T. Mowry House
Route 146
Iron Mine Hill Road
Historic Cemetery #NS012
Clifford Farm
Pomona Street
1/2 Mile Radius
Rocky Hill Road
Crookfall Brook
Woonsocket Reservoir #3
North

Photo Obtained from RIGIS 2014 database
and NearMAP imagery taken on 10-04-2017.

Scale: 1"=600'

0 300' 600' 1200'


1000' Radius
1000' Radius
Site
Cedar Swamp
Woonsocket Res No 3

USGS Map Scale: 1"=2000'

PROPERTY LINE
TOWN LINE
GROUNDWATER RECHARGE AREA
NATURAL HERITAGE AREA
FEMA BOUNDARY
SURFACE WATER PROTECTION AREAS
LOT LINES / RIGHTS-OF-WAY
RIVERS / STREAMS
ZONE RA / ZONE RS — ZONING DISTRICT BOUNDARIES
SOLAR PHOTOVOLTAIC OVERLAY DISTRICT
NON-COMMUNITY WELLHEAD PROTECTION AREA
COMMUNITY WELLHEAD PROTECTION AREA
HISTORIC DISTRICTS
CONSERVATION LAND, OPEN SPACE, AND RECREATIONAL AREAS
PRIME AGRICULTURAL SOILS
HYDRIC SOILS
EASEMENT LINE
NATURAL HERITAGE AREA

Kindly be advised that this
Permit is not equivalent to a
verification of the type or extent
of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 08 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
9/16/2019
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R. / P.A.A.

Drawn By: J.A.R. Design By: B.C.G.

Site Context Map
GDIM 1-9: Iron Mine Hill Road Solar
AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 2 OF 24

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-cvar.dwg Plotted: 9/16/2019

General Notes:

1. THE SITE IS LOCATED ON THE TOWN OF NORTH SMITHFIELD ASSESSOR'S PLAT 12 LOTS 136B & 137, ASSESSOR'S PLAT 13 LOTS 12 & 51, ASSESSOR'S PLAT 16 LOTS 6 & 97, AND ASSESSOR'S PLAT 17 LOT 175.
2. THE SITE IS 425.53 ACRES AND IS ZONED RA AND IS WITHIN THE SOLAR PHOTOVOLTAIC OVERLAY DISTRICT (S.P.O.D.).
3. THE OWNER OF AP 12 LOTS 136B & 137 IS:

   FARIDOON KHAN REVOCABLE TRUST
   FARIDOON KHAN, TRUSTEE
   5 KENNEDY BOULEVARD
   LINCOLN, RI 02865

   THE OWNER OF AP 13 LOTS 12 & 51 IS:

   RALPH F. & MURIEL J. FERRA
   1081 IRON MINE HILL ROAD
   NORTH SMITHFIELD, RI 02896

   THE OWNER OF AP 16 LOT 97 IS:

   RALPH & MURIEL FERRA
   1105 IRON MINE HILL ROAD
   NORTH SMITHFIELD, RI 02896

   THE OWNER OF AP 16 LOT 6 AND AP 17 LOT 175 IS:

   RALPH F. & MURIEL J. FERRA
   1081 IRON MINE HILL ROAD
   NORTH SMITHFIELD, RI 02896
4. THIS SITE IS LOCATED IN FEMA FLOOD ZONES X (UNSHADED) AND X (SHADED). REFERENCE FEMA FLOOD INSURANCE RATE MAP 44007C0160G, MAP REVISED MARCH 2, 2009. (FLOOD PLAIN DESCRIPTIONS SHOWN BELOW)

   ZONE X (UNSHADED) – THIS SITE IS LOCATED IN FEMA FLOOD ZONE X. ZONE X ARE AREAS WHERE THERE IS MINIMAL FLOODING.

   ZONE X (SHADED) – THIS SITE IS LOCATED IN FEMA FLOOD ZONE X. ZONE X ARE AREAS OF 0.2% ANNUAL CHANCE OF FLOOD; AREAS OF 1% ANNUAL CHANCE OF FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.
5. THE BOUNDARY LINE AS SHOWN ON THIS PLAN DEPICTS THE RESULTS OF A CLASS I BOUNDARY RETRACEMENT SURVEY AS PERFORMED BY NATIONAL SURVEYORS–DEVELOPERS, INC. THIS PLAN IS NOT TO BE CONSTRUED AS A CLASS I BOUNDARY RETRACEMENT SURVEY PLAN AND IS NOT SUITABLE FOR RECORDING AS A CLASS I STANDARD SURVEY PLAN.
6. ALL WORK PERFORMED HEREIN IS TO BE GOVERNED BY CURRENT EDITIONS OF THE RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, TOWN OF NORTH SMITHFIELD STANDARD SPECIFICATIONS AND DETAILS AND SPECIFICATIONS INCLUDED AS PART OF THE DRAWINGS. IN AREAS OF CONFLICT BETWEEN THE DIFFERENT SPECIFICATIONS, THE DESIGN PLANS AND PROJECT SPECIFICATIONS WILL TAKE PRECEDENCE OVER THE GENERAL SPECIFICATIONS AND THE DESIGN ENGINEER WILL INTERPRET THE CONSTRUCTION REQUIREMENT. THE CONTRACTOR IS ADVISED TO SUBMIT A REQUEST FOR INFORMATION (RFI) FOR ANY AREAS OF CONFLICT BEFORE COMMITTING TO CONSTRUCTION.
7. THE SITE IS WITHIN A:
   NON–COMMUNITY WELLHEAD PROTECTION AREA (RIDEM)
   NATURAL HERITAGE AREA (RIDEM)
   GROUNDWATER AQUIFER OVERLAY DISTRICT (TOWN)
8. THE FOLLOWING DOCUMENTS ARE CONSIDERED PART OF THE PROJECT PLANS AND THE CONTRACTOR/ OWNER MUST MAINTAIN THESE DOCUMENTS AS PART OF A FULL PLAN SET:
   - SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC). THE SESC CONTAINS THE FOLLOWING:
     - EROSION CONTROL MEASURES
     - SHORT TERM MAINTENANCE
     - ESTABLISHMENT OF VEGETATIVE COVER
     - CONSTRUCTION POLLUTION PREVENTION
     - SEQUENCE OF CONSTRUCTION
   - OPERATION AND MAINTENANCE PLAN (O&M). THE O&M CONTAINS:
     - LONG TERM MAINTENANCE
     - LONG TERM POLLUTION PREVENTION
9. THIS PLAN SET REFERENCES RIDOT STANDARD DETAILS (DESIGNATED AS RIDOT STD X.X.X.). RIDOT STANDARD DETAILS ARE AVAILABLE FROM RIDOT AND ONLINE AT: HTTP: //WWW.DOT.RI.GOV/BUSINESS/CONTRACTORSANDCONSULTANTS.PHP.
10. NO NEW WELLS OR OWTS PROPOSED. THE SITE IS NOT PROPOSED TO BE SERVICED BY PUBLIC WATER AND/OR PUBLIC SEWER.
11. THE DRAINAGE SYSTEM MEETS THE TOWN OF NORTH SMITHFIELD SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WITH THE USE OF SWALES AND DRAINAGE BASINS. THE STORMWATER MANAGEMENT SYSTEM MEETS THE RIDEM BEST MANAGEMENT PRACTICES.
12. PROJECT WORK WILL BE UNDERTAKEN IN MULTIPLE PHASES AND SUB–PHASES AND MAY BE BUILT OUT OF SEQUENCE.
13. TEST PITS AND SOIL EVALUATIONS WERE COMPLETED BY DIPRETE ENGINEERING ON JULY 17–19, 2018 AND NOVEMBER 20, 2018.
14. ANY PROPRIETARY PRODUCTS REFERENCED IN THIS PLAN SET ARE REPRESENTATIVE OF THE MINIMUM DESIGN REQUIREMENTS FOR THE PURPOSE IT PROPOSES TO SERVE. ALTERNATIVES TO ANY PROPRIETARY PRODUCT MAY BE SUBMITTED TO THE ENGINEER OF RECORD FOR CONSIDERATION, WHICH MUST BE ACCOMPANIED BY APPROPRIATE SPECIFICATION SHEETS/ DESIGN CALCULATIONS THAT DEMONSTRATE THE ALTERNATIVE(S) MEET THE MINIMUM DESIGN PARAMETERS OF THE PRODUCT SHOWN ON THE PLANS. NO ALTERNATIVES MAY BE USED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
15. TOPOGRAPHY WAS OBTAINED FROM PLAN ENTITLED "SOLAR FARM PROJECT, NORTH SMITHFIELD, RHODE ISLAND" BY AEROTECH INTERNATIONAL, PROVIDENCE, RI, DATED 09–07–2018, SCALE: 1" = 40'.
16. A WETLAND EDGE VERIFICATION PLAN, DATED 09–01–2018, HAS BEEN SUBMITTED TO RIDEM AND IS PENDING APPROVAL, APPLICATION #18–0237.
17. SOIL MAPPING OBTAINED FROM WEBSOIL SURVEY OF RHODE ISLAND, PREPARED BY U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.
18. THE SITE LOCATION AND LIMITS OF WORK PROVIDE SIGNIFICANT VEGETATED BUFFERS FROM SURROUNDING DEVELOPED PROPERTIES. SELECTIVE SCREENING VEGETATION MAY BE INCORPORATED WITHIN THE APPROVED LIMITS OF DISTURBANCE AS DETERMINED DURING THE TOWNS PRELIMINARY PLAN REVIEW AND PUBLIC HEARING PROCESS AFTER RIDEM REVIEW HAS COMPLETED.

Soil Information:

(REFERENCE: USDA NATURAL RESOURCES CONSERVATION SERVICE)

SOIL NAME	DESCRIPTION
CaD	CANTON–CHARLTON–ROCK OUTCROP COMPLEX, 15 TO 35 PERCENT SLOPES
CC	CANTON–URBAN LAND COMPLEX, VERY ROCKY
CeC	CANTON AND CHARLTON FINE SANDY LOAMS, VERY ROCKY, 3 TO 15 PERCENT SLOPES
ChB	CANTON AND CHARLTON VERY STONY FINE SANDY LOAMS, 3 TO 8 PERCENT SLOPES
Rf	RIDGEBURY, WHITMAN, AND LEICESTER EXTREMELY STONY FINE SANDY LOAMS
Ss	SUDBURY SANDY LOAM
SvB	SUTTON EXTREMELY STONY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES
WoB	WOODBRIDGE VERY STONY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES
WrB	WOODBRIDGE EXTREMELY STONY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES

Soil Erosion and Sedimentation Control Notes:

1. THE CONTRACTOR IS RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENT CONTROL ON SITE WHICH MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS AND AUTHORITY HAVING JURISDICTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER, THE DIRECTOR OF PUBLIC WORKS, THE TOWN ENGINEER, AND RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
2. ALL EROSION CONTROL, TEMPORARY SWALES, TEMPORARY SEDIMENT TRAPS, TEMPORARY SEDIMENTATION PONDS, ETC. TO BE INSTALLED PER THE RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL LATEST EDITION AND THE SOIL EROSION SEDIMENTATION CONTROL PLAN (SESC).
3. TEMPORARY SWALES ARE TO BE USED TO CONTROL RUNOFF DURING CONSTRUCTION OF THE PROPOSED ROADWAY. TEMPORARY SWALES TO BE VEGETATED AFTER CONSTRUCTION. EROSION CONTROL MATS ARE TO BE INSTALLED, IF NECESSARY, TO PREVENT EROSION AND SUPPORT VEGETATION. AFTER CONSTRUCTION IS COMPLETE AND TRIBUTARY AREAS TO THE SWALES HAVE BEEN STABILIZED, THE TEMPORARY SWALES ARE TO BE CLEARED AND FINAL DESIGN, INCLUDING INSTALLATION OF THE GRASS SWALE TO BE PER THE DESIGN PLANS.
4. ONCE THE SEDIMENT TRAPS / SEDIMENT BASINS ARE NO LONGER REQUIRED AND ALL TRIBUTARY AREAS HAVE BEEN STABILIZED, THE TEMPORARY SEDIMENTATION BASINS ARE TO BE CLEANED AND BROUGHT TO FINAL DESIGN GRADES.
5. FOR SEQUENCE OF CONSTRUCTION, PROJECT PHASING AND CONSTRUCTION PHASING SEE SESC PLAN.
6. CONTRACTOR MAY MODIFY SEQUENCE OF CONSTRUCTION WITH APPROVAL FROM DESIGN ENGINEER AND OWNER.
7. TEMPORARY SEDIMENT BASINS MUST BE DEWATERED USING A DEVICE THAT DISCHARGES WATER FROM THE TOP OF THE DEWATERING ZONE. A SKIMMER MUST BE PROVIDED FOR EACH TEMPORARY SEDIMENTATION BASIN SEE SEDIMENTATION BASIN DETAIL.
8. IF CONCRETE TRUCKS ARE WASHED OUT ON SITE, ALL WASHOUT MUST BE COMPLETED IN THE DESIGNATED CONCRETE WASHOUT AREA.

Demolition Notes:

1. ALL EXISTING UTILITIES SHOWN ARE FROM VISIBLE INFORMATION, PLANS OF RECORD, DRAWINGS FROM OTHERS, OR INFORMATION PROVIDED TO DIPRETE ENGINEERING AND ARE SUBJECT TO CHANGE. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM AFOREMENTIONED SOURCES AND ARE APPROXIMATE ONLY. PRIOR TO CONSTRUCTION, THE PROPER UTILITY ENGINEERING DEPARTMENTS MUST BE CONTACTED AND THE ACTUAL LOCATION OF SUBSURFACE STRUCTURES MUST BE DETERMINED IN THE FIELD BY THE CONTRACTOR. CALL THE DIG SAFE CENTER TOLL FREE AT 1–888–344–7233 IN MA, ME, NH, RI & VT, PRIOR TO EXCAVATION. NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES PRIOR TO EXCAVATION. ANY DAMAGE TO UTILITIES WHICH ARE SHOWN ON THE PLANS OR DETAILED BY DIG SAFE ARE THE SITE CONTRACTORS RESPONSIBILITY.
2. CONTRACTOR TO OBTAIN ALL FEDERAL, STATE, AND MUNICIPAL APPROVALS PRIOR TO THE START OF CONSTRUCTION.
3. CONTRACTOR TO PERFORM DAILY SWEEPING AT CONSTRUCTION ENTRANCE DURING DEMOLITION AND CONSTRUCTION TO MINIMIZE SEDIMENTS ON EXTERNAL STREETS.
4. ANY EXISTING BUILDING(S) AND PROPERTY PROPOSED TO REMAIN WHICH ARE DAMAGED BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS INDICATED ON THE PLANS UNLESS SPECIFIED OTHERWISE HERE IN. R&D MATERIALS MUST INCLUDE BUT ARE NOT LIMITED TO PAVEMENT, GRAVEL, CATCH BASINS, MANHOLES, GRATES/FRAMES/COVERS, AND ANY EXCESS SOIL THAT IS NOT INCORPORATED INTO THE WORK.
6. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, ALL DISTURBED AREAS INCLUDING THE CONTRACTOR'S STOCKPILE AND STAGING AREAS WITHIN THE LIMIT OF WORK MUST BE RESTORED TO MATCH THE DESIGN PLANS.
7. ALL EXISTING STRUCTURES ONSITE TO BE RAISED.

Site Layout Notes:

1. ALL ELECTRICAL CONNECTION AND DISTRIBUTION LINES WITHIN THE FACILITY SHALL BE UNDERGROUND. ELECTRICAL EQUIPMENT BETWEEN THE FACILITY AND THE UTILITY CONNECTION MAY BE ABOVE GROUND IF REQUIRED BY THE UTILITY.
2. NO LIGHTING IS PROPOSED AT THIS TIME. FOR THE PROPOSED SOLAR FACILITY, NATIONAL GRID MAY REQUIRE LIGHTING AT THE SUBSTATION.
3. PROPOSED SIGNAGE IS LIMITED TO SECURITY SIGNS AND VOLTAGE WARNING SIGNS (OR SIMILAR) INSTALLED ON THE FACILITY PERIMETER FENCING.
4. PROJECT WORK WILL BE UNDERTAKEN IN MULTIPLE PHASES AND SUB–PHASES AND MAY BE BUILT OUT OF SEQUENCE.
5. NO PRIME AGRICULTURAL SOILS ARE TO BE REMOVED DURING CONSTRUCTION AND INSTALLATION OF THE SYSTEM.
6. THE SOLAR ARRAY SHALL BE ENCLOSED BY A 6' HIGH CHAINLINK PERIMETER FENCE WITH 12' WIDE GATES WITH KNOX BOXES.
7. GROUND MOUNTED SOLAR INSTALLATIONS SHALL NOT EXCEED 15 FEET IN HEIGHT (ZONING ORDINANCE 5.7.5.j). TYPICALLY, HEIGHT OF PROPOSED SOLAR PANEL INSTALLATION RANGES FROM 3 FEET TO 12 FEET.

As-Built Notes:

ALL COMPONENTS OF THE DRAINAGE SYSTEMS MUST BE ASBUILT PRIOR TO COVERING. ENGINEER TO BE NOTIFIED PRIOR TO COVERING TO SURVEY ASBUILT LOCATIONS. ENGINEER WILL NOT ACCEPT FIELD MEASUREMENTS FROM THE SITE CONTRACTOR.

Grading and Utility Notes:

1. CONSTRUCTION TO COMMENCE SPRING 2019 OR UPON RECEIPT OF ALL NECESSARY APPROVALS.
2. THE CONTRACTOR MUST COORDINATE WITH ALL OF THE APPROPRIATE UTILITY COMPANIES FOR AGREEMENTS TO SERVICE THE PROPOSED SITE. THIS MUST BE DONE PRIOR TO CONSTRUCTION. NO REPRESENTATIONS ARE MADE BY DIPRETE ENGINEERING THAT UTILITY SERVICE IS AVAILABLE.
3. PRIOR TO START OF CONSTRUCTION, CONTRACTOR MUST VERIFY EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES. CONTRACTOR MUST NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
4. ALL PROPOSED UNDERGROUND UTILITIES SERVING THE SITE AND BUILDINGS TO BE COORDINATED WITH OWNER, ARCHITECT, AND ENGINEER PRIOR TO INSTALLATION.
5. ALL RETAINING WALLS AND STEEP SLOPES ARE SUBJECT TO FINAL STRUCTURAL DESIGN. DIPRETE ENGINEERING IS NOT PROVIDING THE STRUCTURAL DESIGN OF THESE ITEMS. ALL WALLS AND STEEP SLOPES ARE TO BE DESIGNED AND BUILT UNDER THE DIRECTION OF A PROFESSIONAL GEOTECHNICAL ENGINEER AND CERTIFIED TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT. SHOP DRAWINGS TO BE SUBMITTED PRIOR TO CONSTRUCTION. FINAL STRUCTURAL DESIGN MUST INCORPORATE THE INTENT OF THE GRADING SHOWN ON THESE PLANS AND ALL WORK MUST BE WITHIN THE LIMIT OF DISTURBANCE SHOWN ON THE PLANS.
6. ALL CUT AND FILL AREAS ARE TO BE DONE UNDER THE DIRECTION OF A PROFESSIONAL GEOTECHNICAL ENGINEER WITH TESTING AND CERTIFICATION TO BE PROVIDED TO THE APPLICANT AT THE COMPLETION OF THE PROJECT. DIPRETE ENGINEERING IS NOT PROVIDING THE FILL SPECIFICATION, GEOTECHNICAL ENGINEERING, STRUCTURAL ENGINEERING SERVICES, OR SUPERVISION AS PART OF THESE DRAWINGS.
7. NO STOCKPILING OF MATERIAL TO BE LOCATED IN THE RIGHT OF WAY AND NO OPEN TRENCHES ARE TO BE LEFT OVERNIGHT.
8. ALL LOAM IN DISTURBED AREAS TO BE STOCKPILED FOR FUTURE USE.
9. ALL EXCESS SOIL, TREES, ROCKS, BOULDERS, AND OTHER REFUSE, MUST BE DISCARDED OFF SITE IN AN ACCEPTABLE MANNER AT AN APPROVED LOCATION. STUMPS MUST BE GROUND ON SITE OR REMOVED.
10. NO STUMP DUMPS ARE PROPOSED ON SITE.
11. GRADING SHOWN ON THE PLANS IS APPROXIMATE AND MAY BE FIELD MODIFIED WITH APPROVAL FROM DESIGN ENGINEER.

Abbreviations Legend

NOT ALL ITEMS SHOWN WILL APPEAR ON PLANS

ADA	AMERICANS WITH DISABILITY ACT
AHJ	AUTHORITY HAVING JURISDICTION
AP	ASSESSOR'S PLAT
ASSF	AREA SUBJECT TO STORMWATER FLOWAGE
AVGS	AVERAGE SLOPE
BC	BOTTOM OF CURB
BT	BOTTOM OF TESTHOLE
BIT	BITUMINOUS (BERM)
BIO	BIORETENTION
BS	BASEMENT SLAB ELEVATION
BW	FINISHED GRADE AT BOTTOM OF WALL
CB	CATCH BASIN
(C)	CALCULATED
℄	CENTERLINE
(CA)	CHORD ANGLE
CLDIP	CONCRETE LINED DUCTILE IRON PIPE
CO	CLEAN OUT
CONC	CONCRETE
(D)	DEED
D	DEPTH
DCB	DOUBLE CATCH BASIN
DI	DROP INLET
DMH	DRAINAGE MANHOLE
DP	DETENTION POND
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
ESC	EROSION AND SEDIMENT CONTROL
EX	EXISTING
FES	FLARED END SECTION
FFE	FINISH FLOOR ELEVATION
GS	GARAGE SLAB ELEVATION
GWT	GROUND WATER TABLE
HW	HEADWALL
HC	HIGH CAPACITY CATCH BASIN GRATE
HDPE	HIGH DENSITY POLYETHYLENE
ID	INLINE DRAIN
INV	INVERT
IP	INFILTRATION POND
L	LENGTH
LF	LINEAR FEET
LOD	LIMIT OF DISTURBANCE
LP	LIGHT POLE
(M)	MEASURED
N/F	NOW OR FORMERLY
OHW	OVERHEAD WIRE
PE	POLYETHYLENE
⅊	PROPERTY LINE
PR	PROPOSED
PVC	POLYVINYL CHLORIDE
R	RADIUS
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RIHB	RHODE ISLAND HIGHWAY BOUND
RL	ROOF LEADER
ROW	RIGHT OF WAY
S	SLOPE
SD	SUBDRAIN
SED	SEDIMENT FOREBAY
SF	SQUARE FOOT
SFL	STATE FREEWAY LINE
SFM	SEWER FORCE MAIN
SG	SLAB ON GRADE ELEVATION
SHL	STATE HIGHWAY LINE
SMH	SEWER MANHOLE
SNDF	SAND FILTER
SS	SIDE SLOPE
STA	STATION
TC	TOP OF CURB
TD	TRENCH DRAIN
TF	TOP OF FOUNDATION
TRANS	TRANSITION
TW	TOP OF WALL (FINISHED GRADE AT TOP OF WALL)
TYP	TYPICAL
UDS	UNDERGROUND DETENTION SYSTEM
UIS	UNDERGROUND INFILTRATION SYSTEM
UP	UTILITY POLE
W	WIDTH
WO	WALKOUT ELEVATION
WQ	WATER QUALITY

Existing Legend

NOT ALL ITEMS SHOWN WILL APPEAR ON PLANS

▬	PROPERTY LINE
— — —	SETBACK LINE
— - - —	ASSESSORS LINE
— - - —	INTERNAL PROPERTY LINE
▨	BUILDING
⌒⌒⌒	BRUSHLINE
⌒⌒⌒	TREELINE
□	GUARDRAIL
x	FENCE
∧	RETAINING WALL
○○○	STONE WALL
2	MINOR CONTOUR LINE
10	MAJOR CONTOUR LINE
W	WATER LINE
S	SEWER LINE
SFM	SEWER FORCE MAIN
G	GAS LINE
E	ELECTRIC LINE
OHW	OVERHEAD WIRES
D	DRAINAGE LINE
HkC CeC	SOILS LINES
— — —	50' PERIMETER WETLAND
— • • —	100' RIVERBANK WETLAND
— • —	200' RIVERBANK WETLAND
- - - -	ASSF
ZONE X ZONE X	FEMA BOUNDARY
— - —	STREAM
——	EDGE OF GIS WETLANDS
▲	EDGE OF FLAGGED WETLANDS
▲	WETLAND FLAG – RIDEM VERIFIED
▲	WETLAND FLAG
— — —	STATE HIGHWAY LINE
— — —	STATE FREEWAY LINE
▬	SOLAR PHOTOVOLTAIC OVERLAY DISTRICT (S.P.O.D.)
— — —	S.P.O.D. 100' SETBACK LINE
— — —	EASEMENT
ZONE RS ZONE RA	ZONING DISTRICT BOUNDARIES

△/△		NAIL FOUND/SET
●/◉		DRILL HOLE FOUND/SET
○/◉		
■/□		BOUND FOUND/SET
⊕		SIGN
◉		BOLLARD
SEV		SOIL EVALUATION
Ⓒ	CB	CATCH BASIN
Ⓒ	DCB	DOUBLE CATCH BASIN
Ⓓ	DMH	DRAINAGE MANHOLE
▯	FES	FLARED END SECTION
-○		GUY POLE
Ⓔ	EMH	ELECTRIC MANHOLE
ⓊⓅ	UP	UTILITY/POWER POLE
☼		LIGHTPOST
Ⓢ	SMH	SEWER/SEPTIC MANHOLE
SV		SEWER VALVE
◉		CLEANOUT
⊗		HYDRANT
♁		IRRIGATION VALVE
WV		WATER VALVE
Ⓦ		WELL
◉		MONITORING WELL
?		UNKNOWN MANHOLE
GV		GAS VALVE
⊕		BENCH MARK

Proposed Legend

NOT ALL ITEMS SHOWN WILL APPEAR ON PLANS

310	MAJOR CONTOUR LINE
308	MINOR CONTOUR LINE
× 312	SPOT ELEVATION
▒	2:1 AND STEEPER SLOPES
——	EDGE OF GRAVEL ROAD
⬡⬡⬡	GRAVEL ACCESS PATH (SEE DETAIL)
●	DRAINAGE AREAS
-□-□-	6' HIGH CHAINLINK FENCE
□	CONCRETE PADS FOR INVERTERS
▦	SOLAR PANELS (SHOWN IN VARIOUS COLORS)
E	ELECTRIC LINE (DESIGN BY OTHERS)

▬	DRAINAGE LINE
SD	PERFORATED SUBDRAIN
→ → →	SWALE
OHW	OVERHEAD WIRE
ETC	ELECTRIC, TELEPHONE, CABLE LINE
— — —	POND EARTHEN EMBANKMENT (SEE DETAIL)
— — —	LIMIT OF DISTURBANCE/ LIMIT OF CLEARING (NO EROSION CONTROL)
—●—●—	LIMIT OF DISTURBANCE/ LIMIT OF CLEARING (W/ EROSION CONTROL) SEDIMENTATION BARRIER, STAKED SILT FENCE (RIDOT STD 9.2.0), COMPOST SOCK OR APPROVED EQUAL
○○○	RIP RAP

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

BRIAN C. GIROUX
No. 9341
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R. / P.A.A.

Notes and Legend

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane

LOCUS
ROUTE 146
SAYLES HILL ROAD
IRON MINE HILL ROAD
LOCUS MAP
NOT TO SCALE
ROUTE 146 NORTH SMITHFIELD EXPRESSWAY
STATE FREEWAY LINE
PLAT 1033
PRINCE ROAD
RIGHT OF WAY D.B. 26 PG. 536
SAYLES HILL ROAD
PUBLIC - (VARIABLE WIDTH)
IRON MINE HILL ROAD
PUBLIC - (VARIABLE WIDTH)
A.P. 12 LOT 292
N/F JOAN F. DINUNZIO TRUST
JOAN F. DINUNZIO TRUSTEE
D.B. 354 PG. 310
A.P. 12 LOT 291
N/F PETER A. HAINLEY & FREYA R. SALOIO
D.B. 750 PG. 58
A.P. 12 LOT 299
N/F KHAN FARIDOON TRUST
FARIDOON KHAN TRUSTEE
D.B. 763 PG. 68
A.P. 12 LOT 136
N/F KHAN FARIDOON TRUST
FARIDOON KHAN TRUSTEE
D.B. 763 PG. 63
A.P. 12 LOT 310
N/F NARRAGANSETT ELEC CO.
D.B. 79 PG. 262
A.P. 12 LOT 318
N/F NARRAGANSETT ELEC CO.
D.B. 81 PG. 35
A.P. 12 LOT 132
N/F BARBARA WEST BUTTERS
D.B. 62 PG. 63
A.P. 13 LOT 10-A
N/F BARBARA WEST BUTTERS
A.P. 12 LOT 326
N/F JASON K. BRADY & JILL GALLANT
D.B. 660 PG. 236
A.P. 13 LOT 107-A
N/F IRENE B. WEST ESTATE
C/O BARBARA BUTTERS
D.B. 473 PG. 283
A.P. 12 LOT 270
N/F MILTON F. & PAULA WEST JR.
D.B. 261 PG. 664
A.P. 12 LOT 305
N/F NARRAGANSETT ELEC CO.
D.B. 78 PG. 947
A.P. 12 LOT 313
N/F NARRAGANSETT ELEC CO
D.B. 79 PG. 530
A.P. 12 LOT 312
N/F NARRAGANSETT ELEC CO
D.B. 79 PG. 192
A.P. 12 LOT 156-A
N/F GRAND BANKS COMMERCE PARK LLC
D.B. 274 PG. 947
A.P. 12 LOT 136B
N/F
KHAN FARIDOON TRUST
D.B. 763 PG. 63
LOT AREA:
2,200,810 SQ. FT.
50.5236 ACRES
A.P. 13 LOT 12
N/F
RALPH F. & MURIEL J. FERRA
D.B. 115 PG. 210
LOT AREA:
1,554,947 SQ. FT.
35.6967 ACRES
APPROXIMATE LOCATION UTILITY EASEMENT
250'
LOT CORNER
STA.486+06.13-SS
105.08 LEFT
(RADIAL)
LOT CORNER
STA.484+18.85-SS
99.91 LEFT
(RADIAL)
EXISTING DWELLING
#11 PRINCE RD.
A.P. 13 LOT 102
N/F DANIEL C. & CHERI L. DRESSER
D.B. 215 PG. 479
A.P. 13 LOT 87
N/F ROGER & CAROL FONTAINE
D.B. 107 PG. 783
A.P. 13 LOT 13
N/F NICOLETTA TSIMORTOS
D.B. 411 PG. 89
A.P. 13 LOT 62
N/F MICHAEL L. & TINA MARIE PLANTE
D.B. 275 PG. 917
A.P. 13 LOT 61
N/F MICHAEL L. PLANTE
D.B. 275 PG. 917
MAGNETIC
A.P. 13 LOT 51
N/F
RALPH F. & MURIEL J. FERRA
LOT AREA:
470,993 SQ. FT.
10.8125 ACRES
FIELD STONE BOUND (FND)
OLD FENCE
A.P. 12 LOT 137
N/F
KHAN FARIDOON TRUST
D.B. 763 PG. 66
LOT AREA:
2,017,311 SQ. FT.
46.3111 ACRES
A.P. 13 LOT 52
N/F
TOWN OF NORTH SMITHFIELD
D.B. 141 PG. 964
D.B. 130 PG. 148
HEAP OF STONES (FOUND) 13'+/- SOUTHEAST OF PROPERTY LINE
HEAP OF STONES (FOUND) 115'+/- SOUTHEAST OF PROPERTY LINE
A.P. 13 LOT 65
N/F SAYLES HILL ROD GUN CLUB
D.B. 42 PG. 14
A.P. 13 LOT 73
N/F PAUL J. & JUDITH F. CONNOLLY
D.B. 140 PG. 244
20' ROW
A.P. 13 LOT 156
N/F ANTHONY R. & DIANA R. SORAFINE
D.B. 649 PG. 1
A.P. 13 LOT 74
N/F MARC B. & JACQUELINE C. CORRIVEAU
D.B. 167 PG. 226
A.P. 13 LOT 96
N/F GERALD M. & CONSTANCE P. CHAMBERLAND
D.B. 189 PG. 97
ZONING LINE : RS
ZONING LINE : RA
H.O.S. (FND)
TOTAL = 1267.98'
A.P. 17 LOT 130
N/F
RALPH F. & MURIEL J. FERRA
D.B. 106 PG. 845
LOT AREA:
362,111 SQ. FT.
8.3129 ACRES
EXISTING CART PATH
179' TIE DIST.
A.P. 17 LOT 127
N/F JAMES CAREY
D.B. 644 PG. 294
A.P. 17 LOT 1-A
N/F PHILIP G. PIROLO
D.B. 724 PG. 164
A.P. 17 LOT 144
N/F LORRAINE M. LAPREY TRUST
LORRAINE M. LAPRE TRUSTEE
D.B. 674 PG. 251
A.P. 17 LOT 1
N/F JAMES E. CAREY
D.B. 276 PG. 431
A.P. 17 LOT 247
N/F THOMAS G. AUCLAIR
D.B. 100 PG. 738
A.P. 17 LOT 205
A.P. 17 LOT 163
A.P. 17 LOT 100
N/F GEORGE A. & JANICE M. DUVAL JR. TRUSTEES
D.B. 443 PG. 62
A.P. 17 LOT 233
N/F LOVE HOME SOLUTIONS LLC
D.B. 755 PG. 8
A.P. 17 LOT 163
N/F KOREL REALTY LLC
D.B. 366 PG. 20
STONE BOUND (FND)
A.P. 17 LOT 5
N/F MILTON F. JR & PAULA M. WEST
D.B. 261 PG. 664
A.P. 17 LOT 269
N/F JAMES F. & MARLENE CALLAHAN
D.B. 219 PG. 1062
A.P. 17 LOT 2
N/F CAROL A. PLANTE LIFE ESTATE
D.B. 725 PG. 284
A.P. 16 LOT 9
N/F MAURICE BOURGET
D.B. 54 PG. 27
A.P. 16 LOT 17
N/F MONGEON REALTY INC
D.B. 230 PG. 238
A.P. 16 LOT 99
N/F PAUL & DOROTHY ROY
D.B. 104 PG. 523
A.P. 17 LOT 175
N/F
RALPH F. & MURIEL J. FERRA
D.B. 328 PG. 262
LOT AREA:
6,517,302 SQ. FT.
149.6167 ACRES
A.P. 16 LOT 6
N/F
RALPH F. & MURIEL J. FERRA
D.B. 88 PG. 257
LOT AREA:
5,619,157 SQ. FT.
128.9981 ACRES
EXISTING GRAVEL DRIVE
EXISTING OUTBUILDING (7'±)
STONE BOUND (FND)
"HIGH ROCK" (FND)
PVC PIPE (FOUND) ONLINE 2.35' SOUTH OF CORNER
A.P. 16 LOT 5
N/F RAYMOND M. & RAYMOND M. HAMILTON JR.
D.B. 214 PG. 949
A.P. 16 LOT 97
N/F
RALPH FERRA
D.B. 370 PG. 146
LOT AREA:
155,696 SQ. FT.
3.5743 ACRES
FIELD STONE BOUND (FND)
40' ROW
A.P. 16 LOT 41
N/F BRIAN E. & MELISSA J. POLAK
D.B. 174 PG. 48
A.P. 16 LOT 102
N/F GREGORY MARCOUX & TINA M. PARE-MARCOUX
D.B. 519 PG. 125
A.P. 16 LOT 87
N/F RALPH F. & MURIEL J. FERRA
D.B. 250 PG. 163
A.P. 16 LOT 94
N/F RALPH F. & ROBIN FERRA
D.B. 193 PG. 1
A.P. 16 LOT 8
N/F C & B SCRAP LLC
D.B. 345 PG. 148
SEE DETAIL "A"
DETAIL "A"
NOT TO SCALE
D.H. (FND)
I.P. (FND)
N00°18'10"W 342.79'
N03°39'10"E 132.54'
S76°55'35"E TOTAL = 163.68'
N69°33'07"E 8.51'
42.62'
825.28' TO IRON PIN (FND)
N28°05'30"W TOTAL = 109.48'
N37°34'31"W 243.38'
GRAPHIC SCALE
250 0 125 250 500 1000
(IN FEET)
1 inch = 250 ft.

LEGEND
NOT TO SCALE

BOUNDARY
ABUTTER
STONEWALL
BUILDING ENVELOPE
ZONE LINE NC/AR ZONE BOUNDARIES
○ IRON PIN
▣ BOUND
◉ DRILL HOLE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

PLAN REFERENCES;

1. A PLAN ENTITLED "PLAT OF THE CONNOLLY FARM OWNED BY THE HEIRS OF ELLEN CONNELLY SAYLES HILL, NORTH SMITHFIELD, RI SCALE 1 INCH = 10 RODS, AREA 106 ACRES 86 RODS DECEMBER 1919" RECORDED ON SHELF 11.
2. A PLAN ENTITLED "SUBDIVISION OF LAND FOR ARTHUR Z. & MARCELLE DURAND WEST OF SAYLES HILL ROAD, NORTH SMITHFIELD, RI APRIL 1972 SCALE 1" = 20' PLAN & SURVEY BY LEO A. DEMERS REVISED JULY 3, 1972" RECORDED ON SHELF 7.
3. A PLAN ENTITLED "PLAN OF LAND OWNED BY BERNARD & THERESE ST. GERMAIN & RALPH F. & MURIEL J. FERRA NORTH SMITHFIELD, RI MAY, 1984 SCALE 1 INCH EQUALS 40 FEET BY ROBERT C. COURNOYER" RECORDED ON SHELF 26.
4. A PLAN ENTITLED "ADMINISTRATIVE SUBDIVISION FOR NELIDA F. TELLIER PORTION OF LOT 127, AP 17 TO BE ADDED TO LOT 96, AP 13 GERALD M. & CONSTANCE P. CHAMBERLAND SAYLES HILL ROAD, NORTH SMITHFIELD, RI JULY 1998 SCALE 1 IN = 50 FEET BY NORMAND R. VADENAIS. RECORDED IN CAB-54-B.
5. A PLAN ENTITLED "CAREY MAJOR SUB-DIVISION FINAL ASSESSORS PLAT 17 LOTS 1 & 127 SAYLES HILL ROAD NORTH SMITHFIELD, RHODE SIALND, PREPARED FOR JAMES CAREY 119 SAYLES HILL ROAD NORTH SMITHFIELD, RHODE ISLAND, SCALE 1" = 40' REVISED JULY 13, 2016 BY LEDDY LAND SURVEYING COMPANY" RECORDED IN PLAN BOOK 1 PAGE 38 PLAN 381.

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATIONS FOR PROFESSIONAL LAND SURVEYORS NOVEMBER 25, 2015 AS FOLLOWS:

TYPE OF SURVEY: COMPREHENSIVE BOUNDARY SURVEY
MEASUREMENT SPECIFICATION: CLASS 1 STANDARD

PURPOSE OF SURVEY: BOUNDARY SURVEY

BY: Norbert A. Therien DATE: 9/27/18
NORBERT A. THERIEN, PLS NO. 1739

NORBERT A. THERIEN
No. 1739
PROFESSIONAL LAND SURVEYOR
9/27/18

NATIONAL
Surveyors-Developers
Inc.
42 Hamlet Ave., Woonsocket, R.I.
(401) 769-7779

ZONING CRITERIA

ZONING DISTRICT	RA
MINIMUM LOT AREA	65,000 SQ. FT.
MINIMUM LOT FRONTAGE	200'
MINIMUM FRONT YARD SETBACK	40'
MINIMUM SIDE YARD SETBACK	25'
MINIMUM REAR YARD SETBACK	40'
MAXIMUM BUILDING COVERAGE	25%
MAXIMUM BUILDING HEIGHT	35'

LINE TABLE

LINE	LENGTH	BEARING
L1	78.40	N79°35'53"E
L2	240.25	N75°06'53"E
L3	146.09	N51°00'53"E
L4	76.39	N53°18'53"E
L5	112.80	N33°30'56"E
L6	40.69	S67°04'42"E
L7	127.26	S33°30'56"W
L8	82.57	S53°18'53"W
L9	153.83	S51°00'53"W
L10	250.35	S75°06'53"W
L11	113.44	S79°35'53"W
L12	14.39	N78°13'35"W
L13	90.04	N77°33'04"W
L14	42.52	N77°12'20"W
L15	53.05	N77°44'22"W
L16	50.00	N12°15'38"E
L17	62.24	N81°26'05"W
L18	184.21	N77°48'48"W

APPLICANT:
GDIM 1-9, LLC
AP 12 LOTS 136B & 137
AP 13 LOTS 12 & 51
AP 16 LOTS 6 & 97
AP 17 LOT 175
NORTH SMITHFIELD, RHODE ISLAND

BOUNDARY SURVEY PLAN

DRAWN BY: J.E.S.	CHECKED BY: N.A.T.	FIELD BY: M.A.&J.S.
SEPTEMBER 2018	JOB No. 2018–105	SHEET 1 OF 1

General Site Information:

1. APPLICANT INFORMATION: GDIM 1-9, LLC
3760 QUAKER LANE
NORTH KINGSTOWN, RHODE ISLAND 02852

2. OWNER INFORMATION:
AP 13, LOTS 12 & 51,
AP 16, LOTS 6 & 97 AND
AP 17, LOT 175
RALPH F & MURIEL J FERRA
1081 IRON MINE HILL ROAD
NORTH SMITHFIELD, RHODE ISLAND 02896

AP 12, LOTS 136B & 137
KHAN FARIDOON TRUST
5 KENNEDY BOULEVARD
LINCOLN, RHODE ISLAND 02865

3. SITE INFORMATION: 1081 IRON MINE HILL ROAD
NORTH SMITHFIELD, RHODE ISLAND 02896
ASSESSOR'S PLAT 12, LOTS 136B & 137
ASSESSOR'S PLAT 13, LOTS 12 & 51
ASSESSOR'S PLAT 16, LOTS 6 & 97
ASSESSOR'S PLAT 17, LOT 175
TOTAL AREA: 425.53± ACRES
ZONE: RA (RURAL AGRICULTURE)

4. WETLANDS WERE DELINEATED ONSITE BY MASON & ASSOCIATES, INC., 771 PLAINFIELD PIKE, NORTH SCITUATE, RI 02857 ON MARCH 27 & 30, 2018 AND APRIL 6, 10 & 14, 2018.
5. EXISTING CONDITIONS WITHIN THE PROPERTY WERE DETERMINED BY ONLINE INFORMATION, AERIAL MAPPING AND THE RIGIS DATABASE. WETLAND EDGES WERE VERIFIED BY RIDEM UNDER APPLICATION NO. 18-0237.
6. TOPOGRAPHY SHOWN ON THE PLAN IS AERIAL MAPPING AND WAS OBTAINED BY AEROTECH.

General Site Information (Continued):

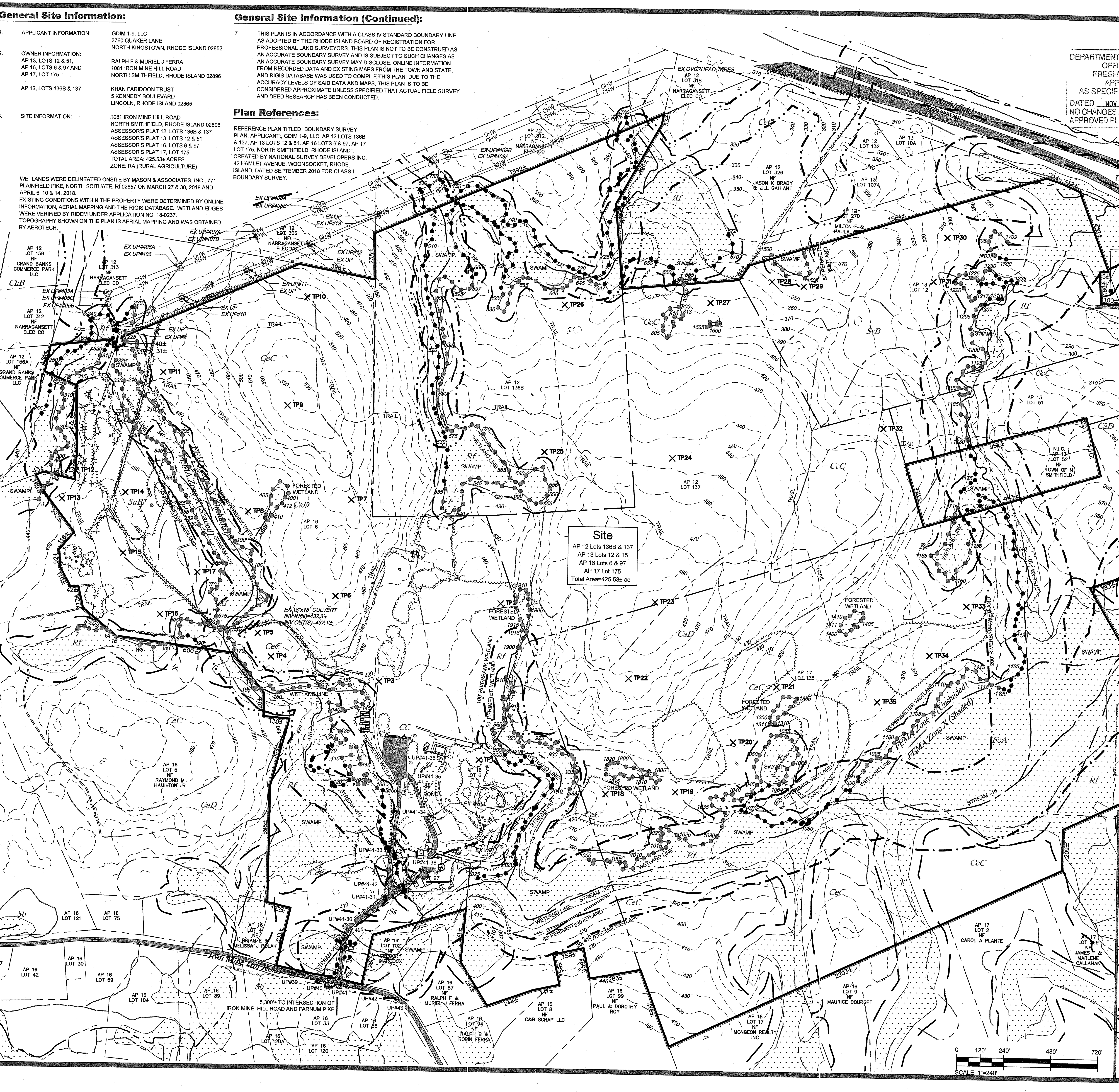
7. THIS PLAN IS IN ACCORDANCE WITH A CLASS IV STANDARD BOUNDARY LINE AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS. THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY AND IS SUBJECT TO SUCH CHANGES AS AN ACCURATE BOUNDARY SURVEY MAY DISCLOSE. ONLINE INFORMATION FROM RECORDED DATA AND EXISTING MAPS FROM THE TOWN AND STATE, AND RIGIS DATABASE WAS USED TO COMPILE THIS PLAN. DUE TO THE ACCURACY LEVELS OF SAID DATA AND MAPS, THIS PLAN IS TO BE CONSIDERED APPROXIMATE UNLESS SPECIFIED THAT ACTUAL FIELD SURVEY AND DEED RESEARCH HAS BEEN CONDUCTED.

Plan References:

REFERENCE PLAN TITLED "BOUNDARY SURVEY PLAN, APPLICANT:, GDIM 1-9, LLC, AP 12 LOTS 136B & 137, AP 13 LOTS 12 & 51, AP 16 LOTS 6 & 97, AP 17 LOT 175, NORTH SMITHFIELD, RHODE ISLAND", CREATED BY NATIONAL SURVEY DEVELOPERS INC, 42 HAMLET AVENUE, WOONSOCKET, RHODE ISLAND, DATED SEPTEMBER 2018 FOR CLASS I BOUNDARY SURVEY.

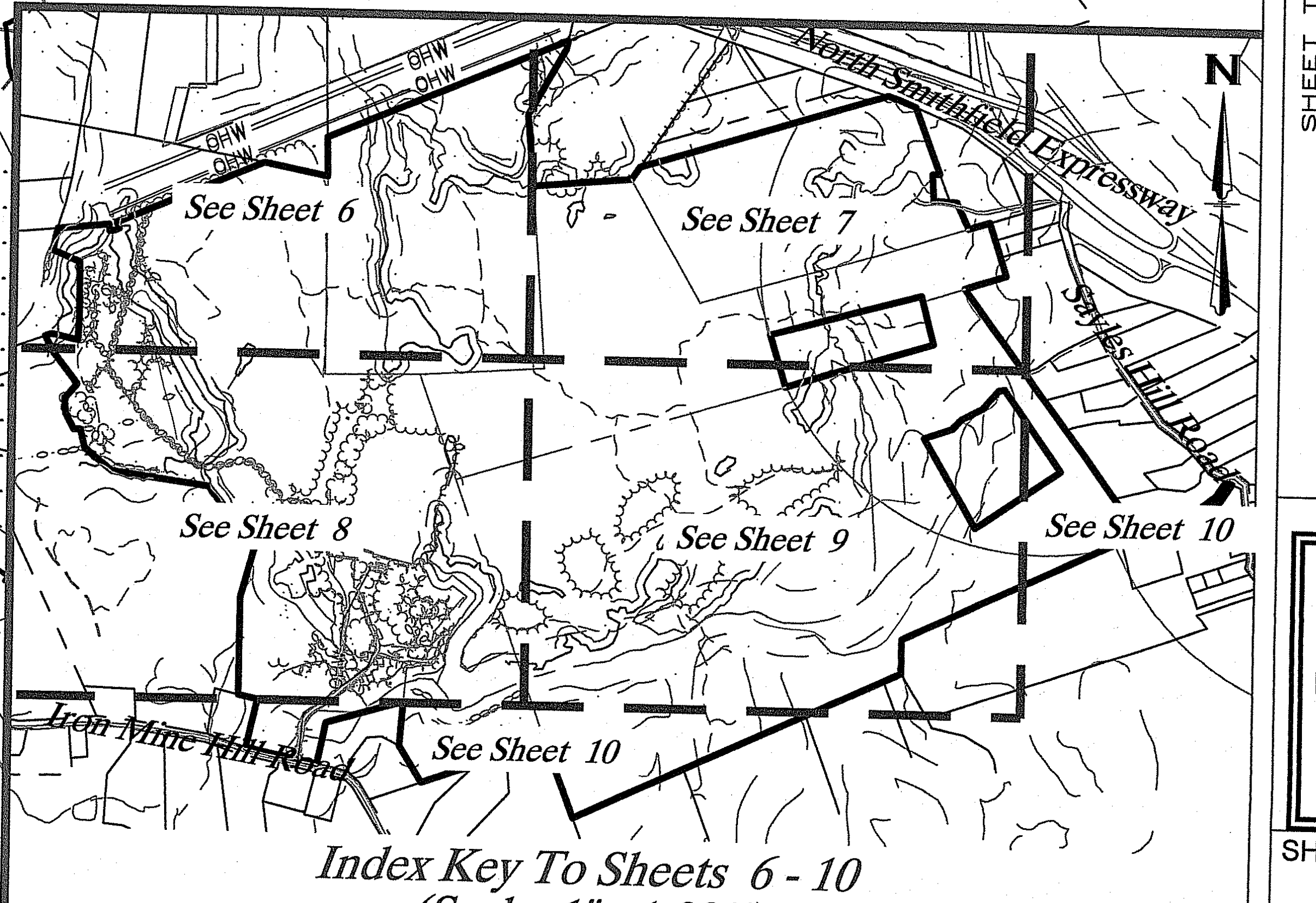
FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE


N
North Smithfield Expressway
Iron Mine Hill Road
Sayles Hill Road
AP 12 LOT 136B
AP 12 LOT 137
AP 16 LOT 6
AP 17 LOT 175
AP 13 LOT 51
TP1
TP30
FORESTED WETLAND
SWAMP
WETLAND LINE
200' RIVERBANK WETLAND
50' PERIMETER WETLAND
FEMA Zone X (Shaded)
FEMA Zone X (Unshaded)
TRAIL
EX 18"x18" CULVERT INV.IN(N)=437.3± INV.OUT(S)=437.1±
5,300'± TO INTERSECTION OF IRON MINE HILL ROAD AND FARNUM PIKE
0 120' 240' 480' 720'
SCALE: 1"=240'

Site
AP 12 Lots 136B & 137
AP 13 Lots 12 & 15
AP 16 Lots 6 & 97
AP 17 Lot 175
Total Area=425.53± ac

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.


N
North Smithfield Expressway
Sayles Hill Road
Iron Mine Hill Road
See Sheet 6
See Sheet 7
See Sheet 8
See Sheet 9
See Sheet 10
See Sheet 10

Index Key To Sheets 6 - 10
(Scale: 1"=1,000')

Existing Conditions Legend

▬	PROPERTY LINE
— – – —	INTERNAL LOT LINE
– – – –	SETBACK LINE
— – – —	ASSESSOR LINE
—	GIS WETLAND LINE
▨	WETLAND HATCH
190 ●	WETLAND FLAG AND WETLAND LINE
190 ●	WETLAND FLAG AND WETLAND LINE TO BE VERIFIED
190 ●	WETLAND FLAG WITH STAKE
— —	50' PERIMETER WETLAND LINE
— - —	GIS STREAM/RIVER LINE
— - —	SURVEYED STREAM/RIVER LINE
— · — · —	200' RIVERBANK WETLAND LINE
—	EDGE OF PAVEMENT
— —100— —	MAJOR CONTOURS AND LABELS
- - -100- - -	MINOR CONTOURS AND LABELS
▬ ▬	FEMA LINE
☐	BUILDING
—	EDGE OF PAVEMENT
▩	PAVEMENT HATCH
○○○○	STONE WALL
·—·—·	FENCE
—∧—∧—	RETAINING WALL
– – – –	GRAVEL PATH
⌒⌒⌒	TREE LINE
— – —	USDA SOIL LINE
EfB	USDA SOIL TYPE
(UP)	UTILITY POLE
✕ TP30	TEST PIT LOCATIONS

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com

OWNERS:
Ralph F & Muriel J Ferra
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
AP 13, LOTS 12 & 51, AP 16, LOTS 6 & 97 AND AP 17, LOT 175
Khan Faridoon Trust
5 KENNEDY BOULEVARD, LINCOLN, RI 02865
AP 12, LOTS 136B & 137

3	6/14/2019	TOWN SUBMISSION	RBS

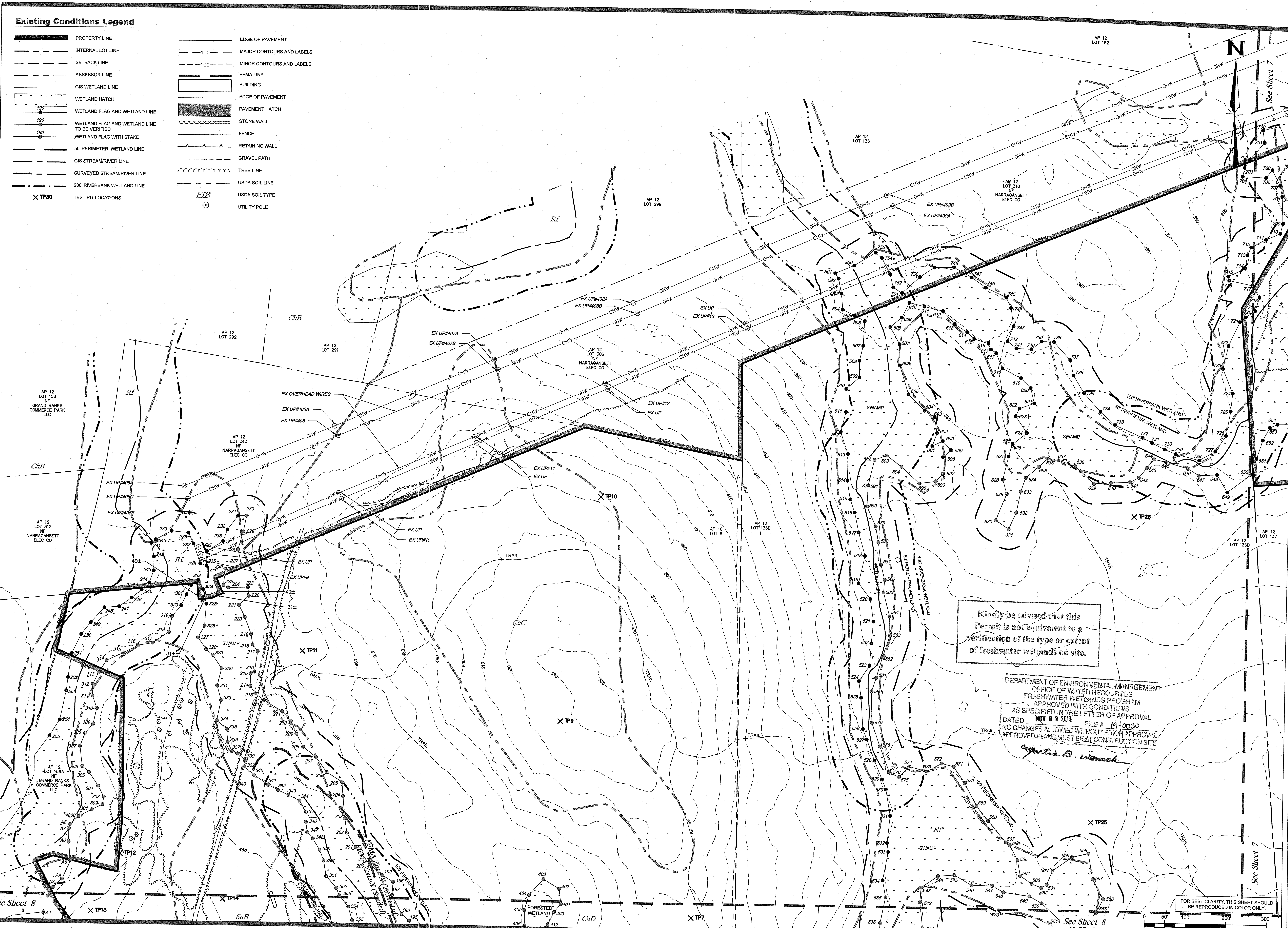
SHEET TITLE:
Overall Existing Conditions Plan
PROJECT INFORMATION:
GDIM 1-9: Iron Mine Hill Road Solar
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896

KEVIN C. MORIN
No.
REGISTERED PROFESSIONAL ENGINEER CIVIL
6/14/

SHEET NO.:
5 OF 2

W:\Wind Drive Org Template\2. Sites\North Smithfield\GD NS Iron Mine Hill\3. Engineering\DWG\Iron Mine Hill-Design.dwg Jun 14, 2019 – 8:41am

W:\Wind Drive Org Template\2. Sites\North Smithfield\GD NS Iron Mine Hill\3. Development\2. Engineering\DWG\Iron Mine Hill-Design.dwg Jun 14, 2019 - 8:41am


Existing Conditions Legend
PROPERTY LINE
INTERNAL LOT LINE
SETBACK LINE
ASSESSOR LINE
GIS WETLAND LINE
WETLAND HATCH
190
WETLAND FLAG AND WETLAND LINE
WETLAND FLAG AND WETLAND LINE TO BE VERIFIED
WETLAND FLAG WITH STAKE
50' PERIMETER WETLAND LINE
GIS STREAM/RIVER LINE
SURVEYED STREAM/RIVER LINE
200' RIVERBANK WETLAND LINE
TP30
TEST PIT LOCATIONS
EDGE OF PAVEMENT
100
MAJOR CONTOURS AND LABELS
MINOR CONTOURS AND LABELS
FEMA LINE
BUILDING
EDGE OF PAVEMENT
PAVEMENT HATCH
STONE WALL
FENCE
RETAINING WALL
GRAVEL PATH
TREE LINE
USDA SOIL LINE
EfB
USDA SOIL TYPE
UP
UTILITY POLE
N
AP 12 LOT 152
AP 12 LOT 136
AP 12 LOT 299
AP 12 LOT 310 NF NARRAGANSETT ELEC CO
AP 12 LOT 292
AP 12 LOT 291
AP 12 LOT 306 NF NARRAGANSETT ELEC CO
AP 12 LOT 156 NF GRAND BANKS COMMERCE PARK LLC
AP 12 LOT 313 NF NARRAGANSETT ELEC CO
AP 12 LOT 312 NF NARRAGANSETT ELEC CO
AP 16 LOT 6
AP 12 LOT 136B
AP 12 LOT 137
AP 12 LOT 156A NF GRAND BANKS COMMERCE PARK LLC
Rf
ChB
CeC
SuB
CaD
OHW
EX UP#409B
EX UP#409A
EX UP#408A
EX UP#408B
EX UP
EX UP#13
EX UP#407A
EX UP#407B
EX OVERHEAD WIRES
EX UP#406A
EX UP#406
EX UP#12
EX UP#11
EX UP#405A
EX UP#405C
EX UP#405B
EX UP#10
EX UP#9
SWAMP
100' RIVERBANK WETLAND
50' PERIMETER WETLAND
TRAIL
FORESTED WETLAND
FEMA Zone X (Shaded)
TP10
TP11
TP9
TP26
TP25
TP12
TP13
TP14
TP7
See Sheet 7
See Sheet 8

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.

0 50' 100' 200' 300'
SCALE: 1"=100'

GREEN
3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com

OWNERS:
Ralph F & Muriel J Ferra
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
AP 13, LOTS 12 & 51, AP 16, LOTS 6 & 97 AND AP 17, LOT 175

Khan Faridoon Trust
5 KENNEDY BOULEVARD, LINCOLN, RI 02865
AP 12, LOTS 136B & 137

PREPARED BY: **Green Development, LLC**

No.	DATE	REVISION	
3	6/14/2019	TOWN SUBMISSION	RBS
2	5/24/2019	RIDEM RESUBMISSION	RBS
1	11/19/2018	RIDEM WETLAND EDGE COMMENTS	RBS

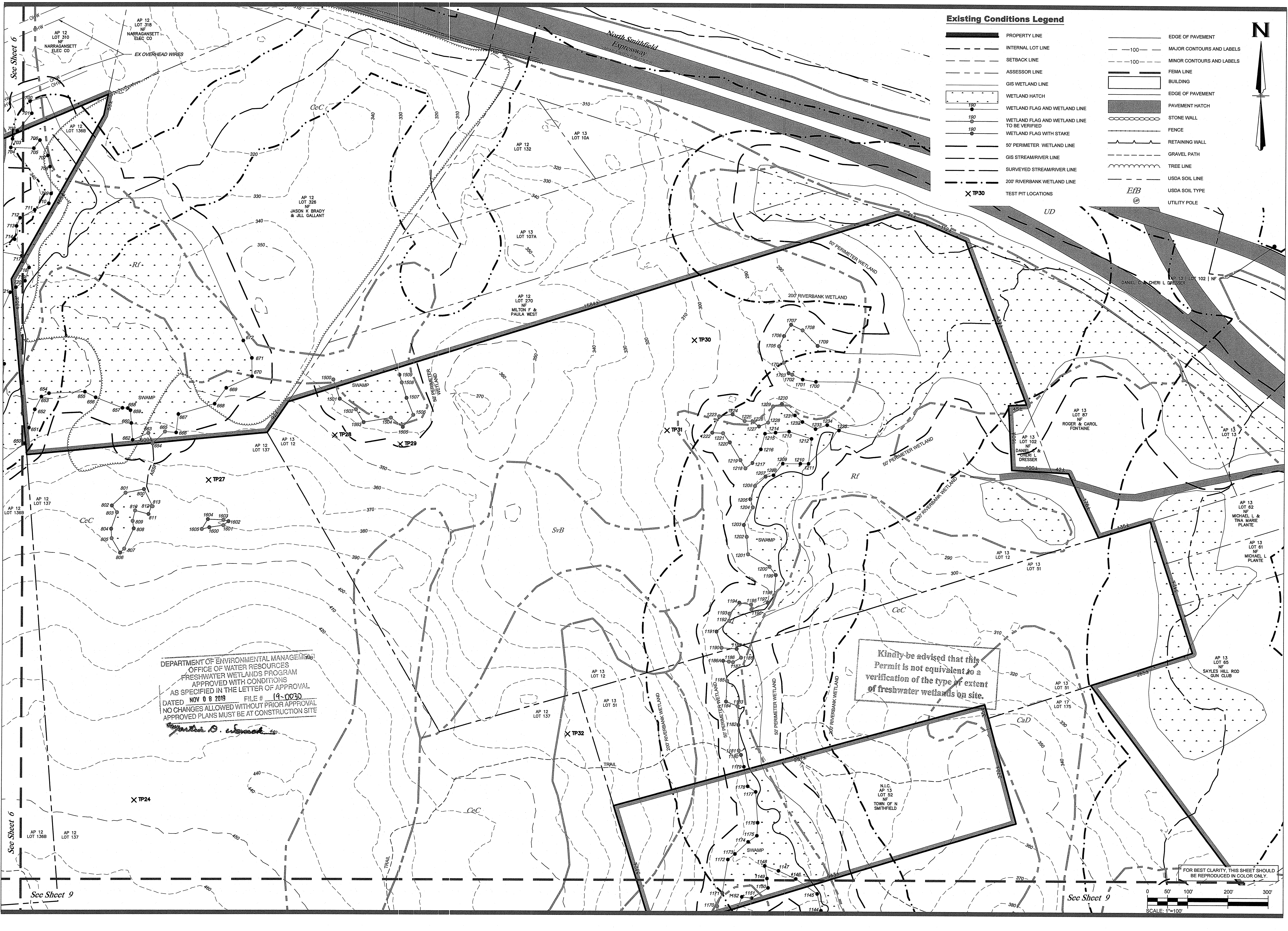
SHEET TITLE:
Existing Conditions Plan - 1

PROJECT INFORMATION:
GDIM 1-9: Iron Mine Hill Road Solar
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 12 LOTS 136B & 137, AP 13 LOTS 12 & 51
AP 16 LOTS 6 & 97, & AP 17 LOT 175

KEVIN C. MORIN
No. 6951
REGISTERED PROFESSIONAL ENGINEER CIVIL
6/14/2019

SHEET NO.:
6 OF 24

W:\Wind Drive Org Template\2. Sites\North Smithfield\GD NS Iron Mine Hill\3. Development\2. Engineering\DWG\Iron Mine Hill-Design.dwg Jun 14, 2019 - 8:41am



N
North Smithfield Expressway
See Sheet 6
See Sheet 9
AP 12 LOT 310 NF NARRAGANSETT ELEC CO
AP 12 LOT 318 NF NARRAGANSETT ELEC CO
EX OVERHEAD WIRES
AP 12 LOT 136B
AP 12 LOT 132
AP 13 LOT 10A
AP 12 LOT 326 NF JASON K BRADY & JILL GALLANT
AP 13 LOT 107A
AP 12 LOT 270 NF MILTON F & PAULA WEST
AP 12 LOT 137
AP 13 LOT 12
AP 13 LOT 51
AP 13 LOT 87 NF ROGER & CAROL FONTAINE
AP 13 LOT 102 NF DANIEL C & CHERI L DRESSER
AP 13 LOT 102 NF DANIEL C & CHERI L DRESSER
AP 13 LOT 62 NF MICHAEL L & TINA MARIE PLANTE
AP 13 LOT 61 NF MICHAEL L PLANTE
AP 13 LOT 65 NF SAYLES HILL ROD GUN CLUB
AP 17 LOT 175
N.I.C. AP 13 LOT 52 NF TOWN OF N SMITHFIELD
SWAMP
50' PERIMETER WETLAND
200' RIVERBANK WETLAND
TP24
TP27
TP28
TP29
TP30
TP31
TP32
TRAIL
CeC
Rf
SvB
UD
CaD
FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.
0 50' 100' 200' 300'
SCALE: 1"=100'

Existing Conditions Legend

▬	PROPERTY LINE	―	EDGE OF PAVEMENT
— – – —	INTERNAL LOT LINE	— —100— —	MAJOR CONTOURS AND LABELS
— — — —	SETBACK LINE	– – —100— – –	MINOR CONTOURS AND LABELS
— – – —	ASSESSOR LINE	▬ ▬	FEMA LINE
―	GIS WETLAND LINE	☐	BUILDING
▨	WETLAND HATCH	―	EDGE OF PAVEMENT
190 ●	WETLAND FLAG AND WETLAND LINE	▨	PAVEMENT HATCH
190 ●	WETLAND FLAG AND WETLAND LINE TO BE VERIFIED	○○○○	STONE WALL
190 ●	WETLAND FLAG WITH STAKE	―	FENCE
—— ——	50' PERIMETER WETLAND LINE	—^—^—	RETAINING WALL
—— – ——	GIS STREAM/RIVER LINE	– – – –	GRAVEL PATH
—— – ——	SURVEYED STREAM/RIVER LINE	⌒⌒⌒	TREE LINE
—·—·—	200' RIVERBANK WETLAND LINE	— – – —	USDA SOIL LINE
× TP30	TEST PIT LOCATIONS	*EfB*	USDA SOIL TYPE
		(UP)	UTILITY POLE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com

GREEN development, LLC

OWNERS: *Ralph F & Muriel J Ferra*
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
AP 13, LOTS 12 & 51, AP 16, LOTS 6 & 97 AND AP 17, LOT 175

Khan Faridoon Trust
5 KENNEDY BOULEVARD, LINCOLN, RI 02865
AP 12, LOTS 136B & 137

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
3	6/14/2019	TOWN SUBMISSION	RBS
2	5/24/2019	RIDEM RESUBMISSION	RBS
1	11/19/2018	RIDEM WETLAND EDGE COMMENTS	RBS

SHEET TITLE:

Existing Conditions Plan - 2

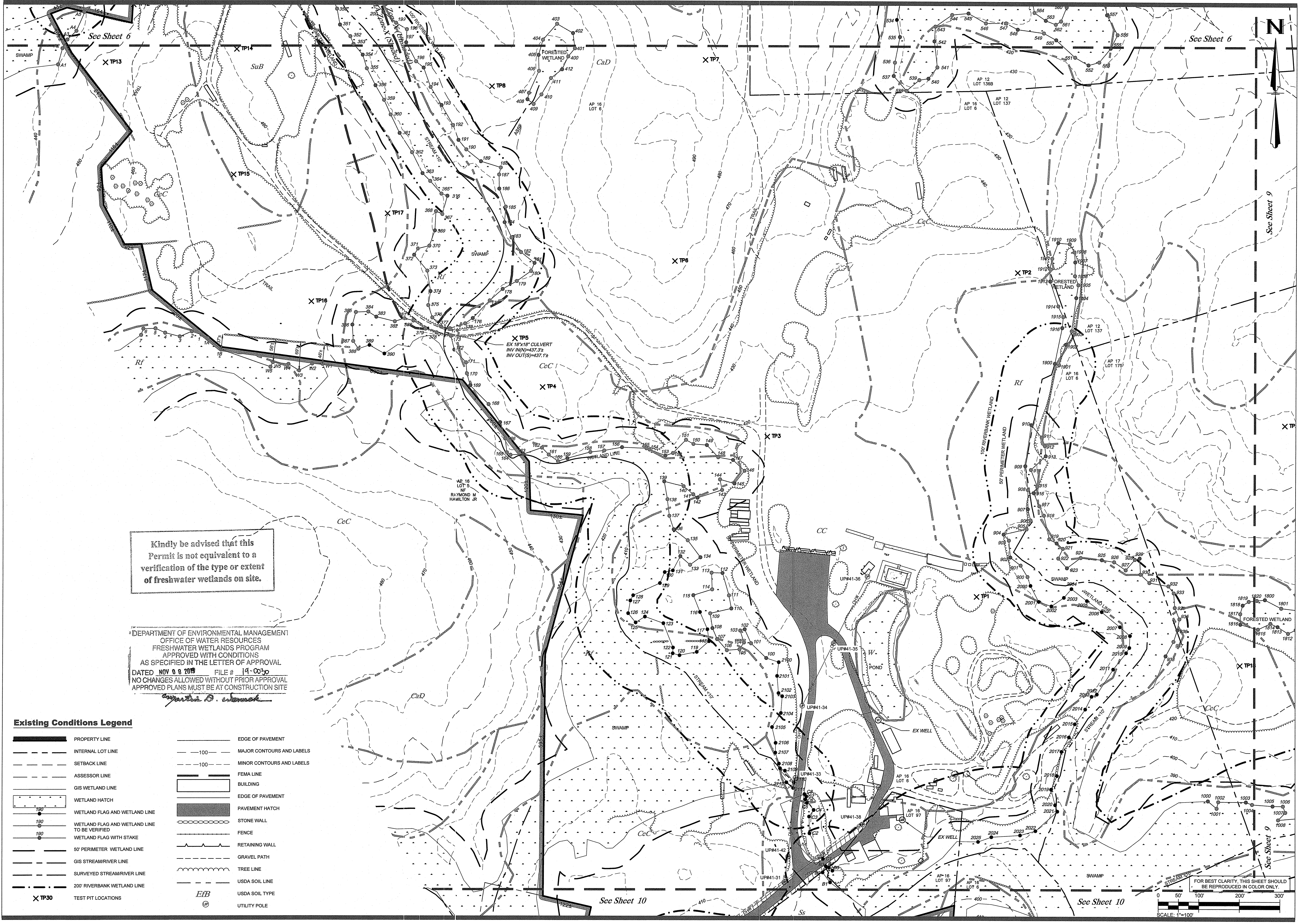
PROJECT INFORMATION:

GDIM 1-9: Iron Mine Hill Road Solar

IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 12 LOTS 136B & 137, AP 13 LOTS 12 & 51
AP 16 LOTS 6 & 97, & AP 17 LOT 175

KEVIN C. MORIN
No. 7051
REGISTERED PROFESSIONAL ENGINEER CIVIL
6/14/2019

SHEET NO.:
7 OF 24


N
See Sheet 6
See Sheet 6
See Sheet 9
See Sheet 9
See Sheet 10
See Sheet 10
SWAMP
FORESTED WETLAND
WETLAND LINE
PERIMETER WETLAND
100' RIVERBANK WETLAND
50' PERIMETER WETLAND
STREAM <10'
TRAIL
POND
EX WELL
EX 18"x18" CULVERT
INV IN(N)=437.3±
INV OUT(S)=437.1±
AP 16 LOT 5 N/F RAYMOND M HAMILTON JR
AP 16 LOT 6
AP 12 LOT 136B
AP 12 LOT 137
AP 17 LOT 175
AP 16 LOT 97
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP13
TP14
TP15
TP16
TP17
CaD
CeC
SuB
Rf
CC
Ss
0
50'
100'
200'
300'
SCALE: 1"=100'

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Existing Conditions Legend

PROPERTY LINE	EDGE OF PAVEMENT
INTERNAL LOT LINE	MAJOR CONTOURS AND LABELS
SETBACK LINE	MINOR CONTOURS AND LABELS
ASSESSOR LINE	FEMA LINE
GIS WETLAND LINE	BUILDING
WETLAND HATCH	EDGE OF PAVEMENT
WETLAND FLAG AND WETLAND LINE	PAVEMENT HATCH
WETLAND FLAG AND WETLAND LINE TO BE VERIFIED	STONE WALL
WETLAND FLAG WITH STAKE	FENCE
50' PERIMETER WETLAND LINE	RETAINING WALL
GIS STREAM/RIVER LINE	GRAVEL PATH
SURVEYED STREAM/RIVER LINE	TREE LINE
200' RIVERBANK WETLAND LINE	USDA SOIL LINE
TP30 TEST PIT LOCATIONS	EfB USDA SOIL TYPE
	UP UTILITY POLE

FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.

W:\Wind Drive Org Template\2. Sites\North Smithfield\GD NS Iron Mine Hill\3. Development\2. Engineering\DWG\Iron Mine Hill-Design.dwg Jun 14, 2019 – 8:41am

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com

GREEN development, LLC

OWNERS:
Ralph F & Muriel J Ferra
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
AP 13, LOTS 12 & 51, AP 16, LOTS 6 & 97 AND AP 17, LOT 175
Khan Faridoon Trust
5 KENNEDY BOULEVARD, LINCOLN, RI 02865
AP 12, LOTS 136B & 137

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

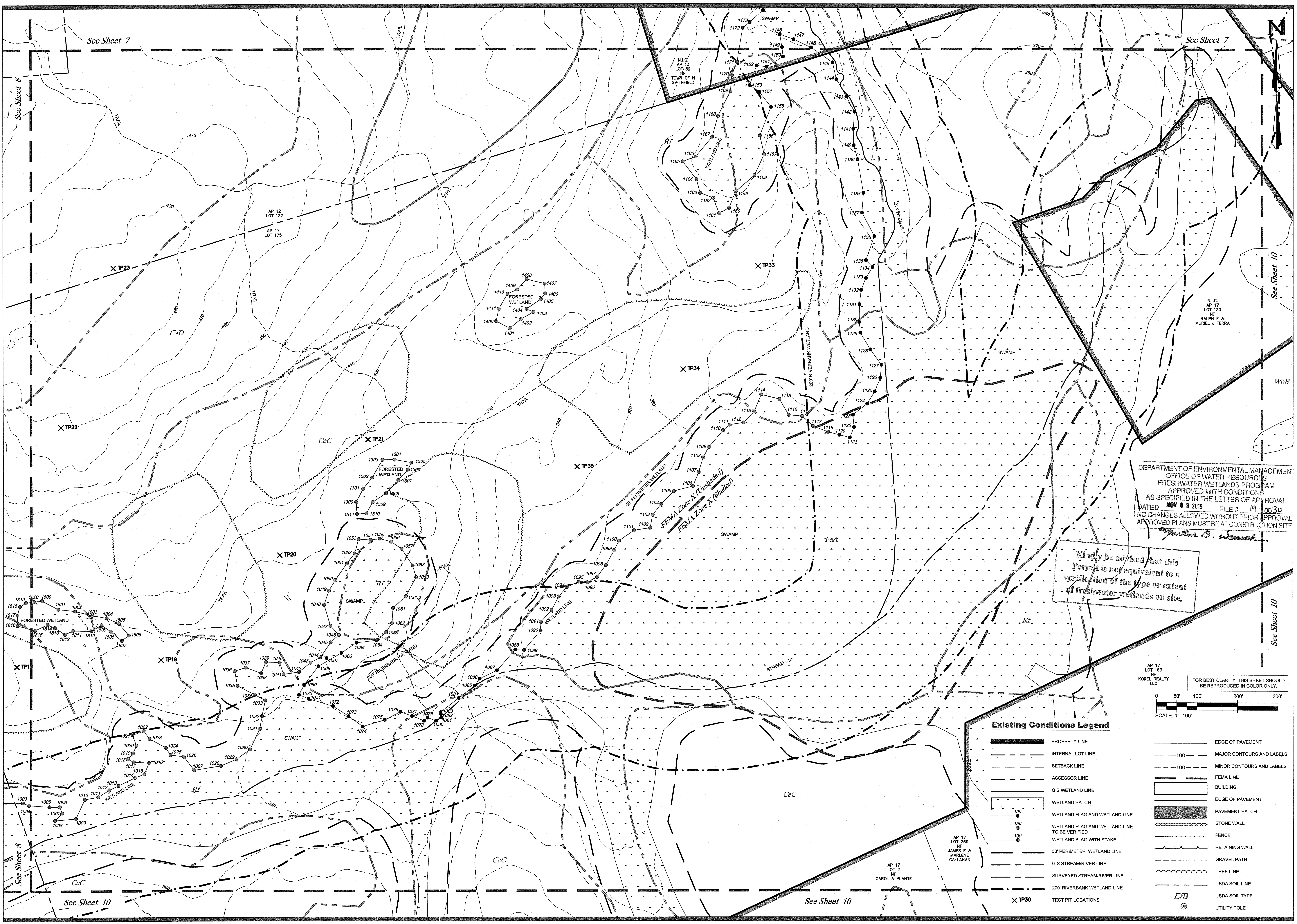
No.	DATE	REVISION	BY
3	6/14/2019	TOWN SUBMISSION	RBS
2	5/24/2019	RIDEM RESUBMISSION	RBS
1	11/19/2018	RIDEM WETLAND EDGE COMMENTS	RBS

SHEET TITLE:
Existing Conditions Plan - 3

PROJECT INFORMATION:
GDIM 1-9: Iron Mine Hill Road Solar
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 12 LOTS 136B & 137, AP 13 LOTS 12 & 51
AP 16 LOTS 6 & 97, & AP 17 LOT 175

KEVIN C. MORIN
No. 951
REGISTERED PROFESSIONAL ENGINEER CIVIL
6/14/2019

SHEET NO.: 24 (Per DEM)
8 OF ~~23~~


See Sheet 7
See Sheet 8
See Sheet 10
N
N.I.C.
AP 13
LOT 52
NF
TOWN OF N SMITHFIELD
AP 12
LOT 137
AP 17
LOT 175
N.I.C.
AP 17
LOT 130
NF
RALPH F & MURIEL J FERRA
AP 17
LOT 163
NF
KOREL REALTY LLC
AP 17
LOT 269
NF
JAMES F & MARLENE CALLAHAN
AP 17
LOT 2
NF
CAROL A PLANTE
TP18
TP19
TP20
TP21
TP22
TP23
TP33
TP34
TP35
FORESTED WETLAND
SWAMP
WETLAND LINE
200' RIVERBANK WETLAND
50' PERIMETER WETLAND
FEMA Zone X (Unshaded)
FEMA Zone X (Shaded)
STREAM ±10'
TRAIL
CaD
CeC
Rf
FeA
WoB
480
470
460
450
440
430
420
410
400
390
380
370
360

FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.

0 50' 100' 200' 300'
SCALE: 1"=100'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

Existing Conditions Legend

	PROPERTY LINE		EDGE OF PAVEMENT
	INTERNAL LOT LINE	—100—	MAJOR CONTOURS AND LABELS
	SETBACK LINE	—100—	MINOR CONTOURS AND LABELS
	ASSESSOR LINE		FEMA LINE
	GIS WETLAND LINE		BUILDING
	WETLAND HATCH		EDGE OF PAVEMENT
190 ●	WETLAND FLAG AND WETLAND LINE	▨	PAVEMENT HATCH
190 ●	WETLAND FLAG AND WETLAND LINE TO BE VERIFIED		STONE WALL
190 ●	WETLAND FLAG WITH STAKE		FENCE
	50' PERIMETER WETLAND LINE		RETAINING WALL
	GIS STREAM/RIVER LINE		GRAVEL PATH
	SURVEYED STREAM/RIVER LINE		TREE LINE
	200' RIVERBANK WETLAND LINE		USDA SOIL LINE
× TP30	TEST PIT LOCATIONS	EfB	USDA SOIL TYPE
		UP	UTILITY POLE

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com

GREEN development, LLC

OWNERS:
Ralph F & Muriel J Ferra
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
AP 13, LOTS 12 & 51, AP 16, LOTS 6 & 97 AND AP 17, LOT 175
Khan Faridoon Trust
5 KENNEDY BOULEVARD, LINCOLN, RI 02865
AP 12, LOTS 136B & 137

PREPARED BY: Green Development, LLC
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
3	6/14/2019	TOWN SUBMISSION	RBS
2	5/24/2019	RIDEM RESUBMISSION	RBS
1	11/19/2018	RIDEM WETLAND EDGE COMMENTS	RBS

SHEET TITLE:
Existing Conditions Plan - 4

PROJECT INFORMATION:
GDIM 1-9: Iron Mine Hill Road Solar
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 12 LOTS 136B & 137, AP 13 LOTS 12 & 51
AP 16 LOTS 6 & 97, & AP 17 LOT 175

KEVIN C. MORIN
No. 7951
REGISTERED PROFESSIONAL ENGINEER CIVIL
6/14/2019

SHEET NO.: 9 OF 24

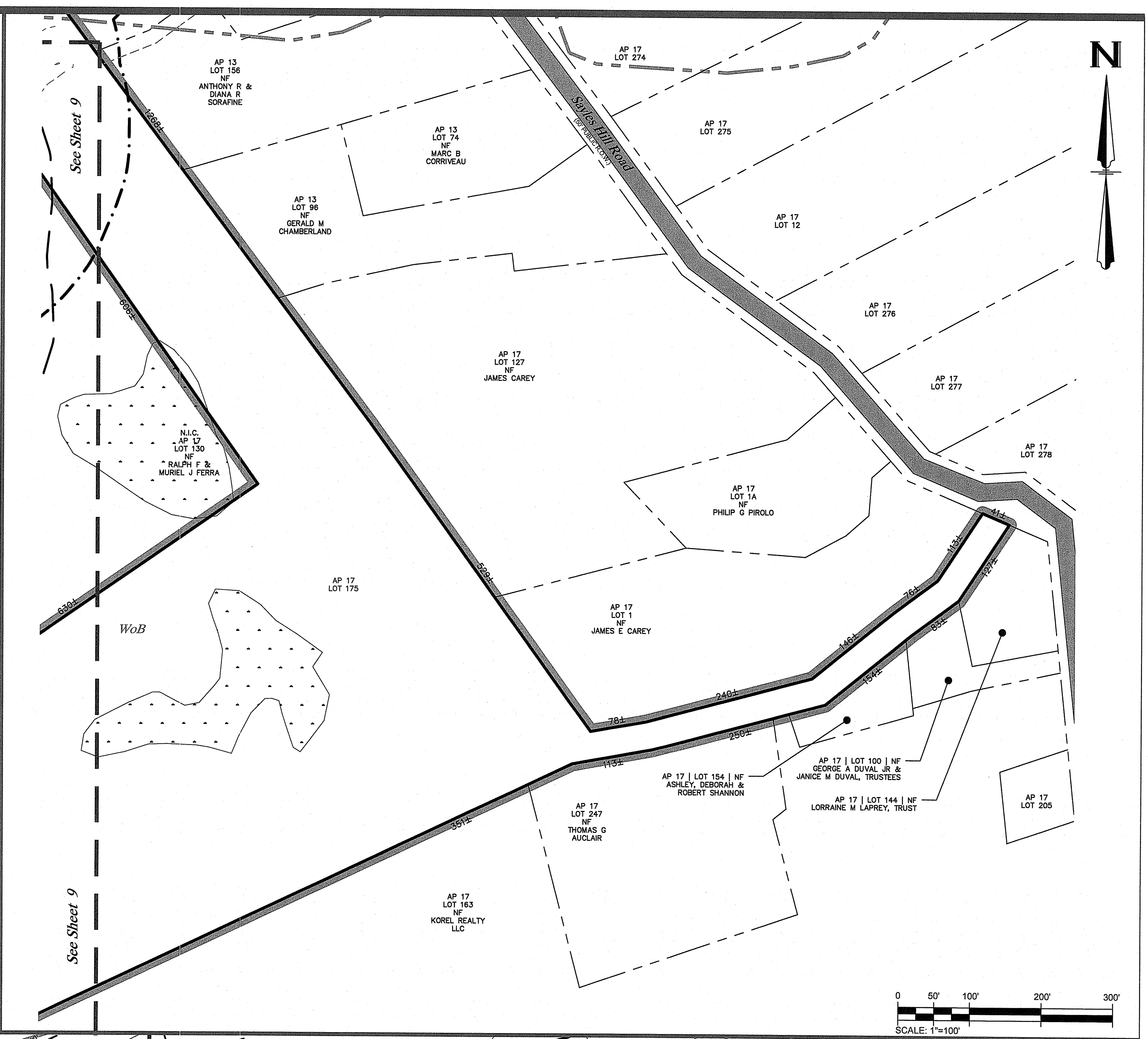
Existing Conditions Legend

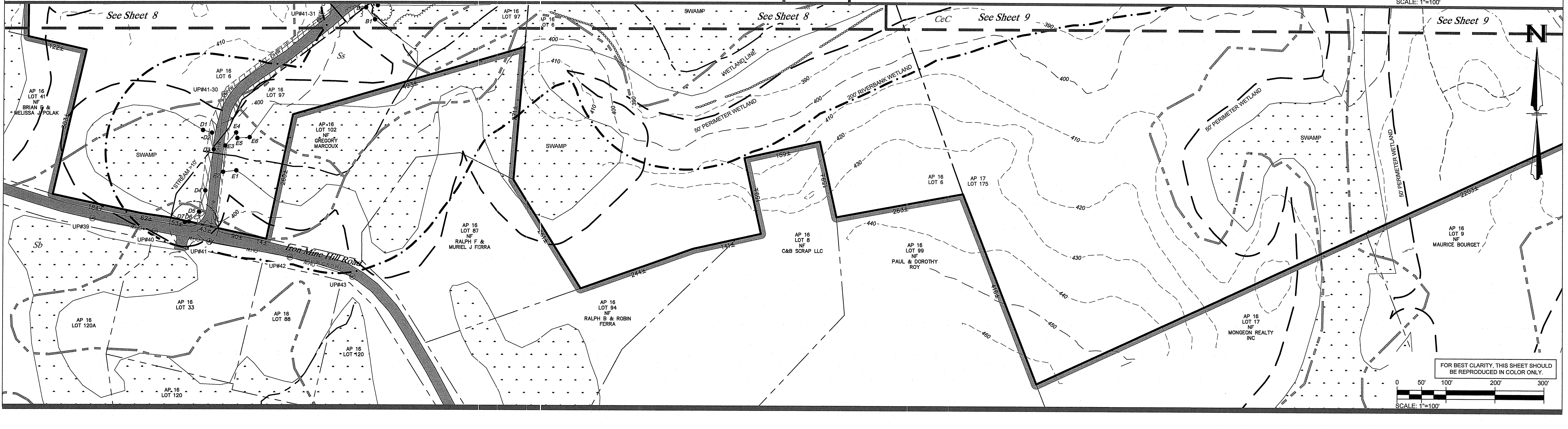
PROPERTY LINE
INTERNAL LOT LINE
SETBACK LINE
ASSESSOR LINE
GIS WETLAND LINE
WETLAND HATCH
WETLAND FLAG AND WETLAND LINE
WETLAND FLAG AND WETLAND LINE TO BE VERIFIED
WETLAND FLAG WITH STAKE
50' PERIMETER WETLAND LINE
GIS STREAM/RIVER LINE
SURVEYED STREAM/RIVER LINE
200' RIVERBANK WETLAND LINE
TP30 TEST PIT LOCATIONS

EDGE OF PAVEMENT
MAJOR CONTOURS AND LABELS
MINOR CONTOURS AND LABELS
FEMA LINE
BUILDING
EDGE OF PAVEMENT
PAVEMENT HATCH
STONE WALL
FENCE
RETAINING WALL
GRAVEL PATH
TREE LINE
USDA SOIL LINE
EfB USDA SOIL TYPE
UP UTILITY POLE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE


N
See Sheet 9
See Sheet 9
Sayles Hill Road
AP 13 LOT 156 NF ANTHONY R & DIANA R SORAFINE
AP 13 LOT 74 NF MARC B CORRIVEAU
AP 13 LOT 96 NF GERALD M CHAMBERLAND
AP 17 LOT 274
AP 17 LOT 275
AP 17 LOT 12
AP 17 LOT 276
AP 17 LOT 277
AP 17 LOT 278
AP 17 LOT 127 NF JAMES CAREY
N.I.C. AP 17 LOT 130 NF RALPH F & MURIEL J FERRA
AP 17 LOT 1A NF PHILIP G PIROLO
AP 17 LOT 1 NF JAMES E CAREY
AP 17 LOT 175
WoB
AP 17 | LOT 154 | NF ASHLEY, DEBORAH & ROBERT SHANNON
AP 17 | LOT 100 | NF GEORGE A DUVAL JR & JANICE M DUVAL, TRUSTEES
AP 17 | LOT 144 | NF LORRAINE M LAPREY, TRUST
AP 17 LOT 205
AP 17 LOT 247 NF THOMAS G AUCLAIR
AP 17 LOT 163 NF KOREL REALTY LLC
0 50' 100' 200' 300'
SCALE: 1"=100'


See Sheet 8
See Sheet 8
See Sheet 9
See Sheet 9
N
SWAMP
SWAMP
SWAMP
UP#41-31
UP#41-30
UP#39
UP#40
UP#41
UP#42
UP#43
B1
B2
D1
D2
D3
D4
D5
D6
D7
E1
E2
E3
E4
E5
E6
STREAM >10'
Ss
Sb
CeC
WETLAND LINE
200' RIVERBANK WETLAND
50' PERIMETER WETLAND
50' PERIMETER WETLAND
50' PERIMETER WETLAND
Iron Mine Hill Road
(40' PUBLIC R.O.W.)
AP 16 LOT 41 NF BRIAN E & MELISSA J POLAK
AP 16 LOT 6
AP 16 LOT 97
AP 16 LOT 102 NF GREGORY MARCOUX
AP 16 LOT 87 NF RALPH F & MURIEL J FERRA
AP 16 LOT 94 NF RALPH B & ROBIN FERRA
AP 16 LOT 8 NF C&B SCRAP LLC
AP 16 LOT 6
AP 17 LOT 175
AP 16 LOT 99 NF PAUL & DOROTHY ROY
AP 16 LOT 17 NF MONGEON REALTY INC
AP 16 LOT 9 NF MAURICE BOURGET
AP 16 LOT 33
AP 16 LOT 120A
AP 16 LOT 88
AP 16 LOT 120
AP 16 LOT 120
390
400
410
420
430
440
450
460
0 50' 100' 200' 300'
SCALE: 1"=100'

FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com

GREEN development, LLC

OWNERS:
Ralph F & Muriel J Ferra
1081 IRON MINE HILL ROAD, N SMITHFIELD, RI 02896
AP 13, LOTS 12 & 51, AP 16, LOTS 6 & 97 AND AP 17, LOT 175
Khan Faridoon Trust
5 KENNEDY BOULEVARD, LINCOLN, RI 02865
AP 12, LOTS 136B & 137

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
3	6/14/2019	TOWN SUBMISSION	RBS
2	5/24/2019	RIDEM RESUBMISSION	RBS
1	11/19/2018	RIDEM WETLAND EDGE COMMENTS	RBS

SHEET TITLE:
Existing Conditions Plan - 5

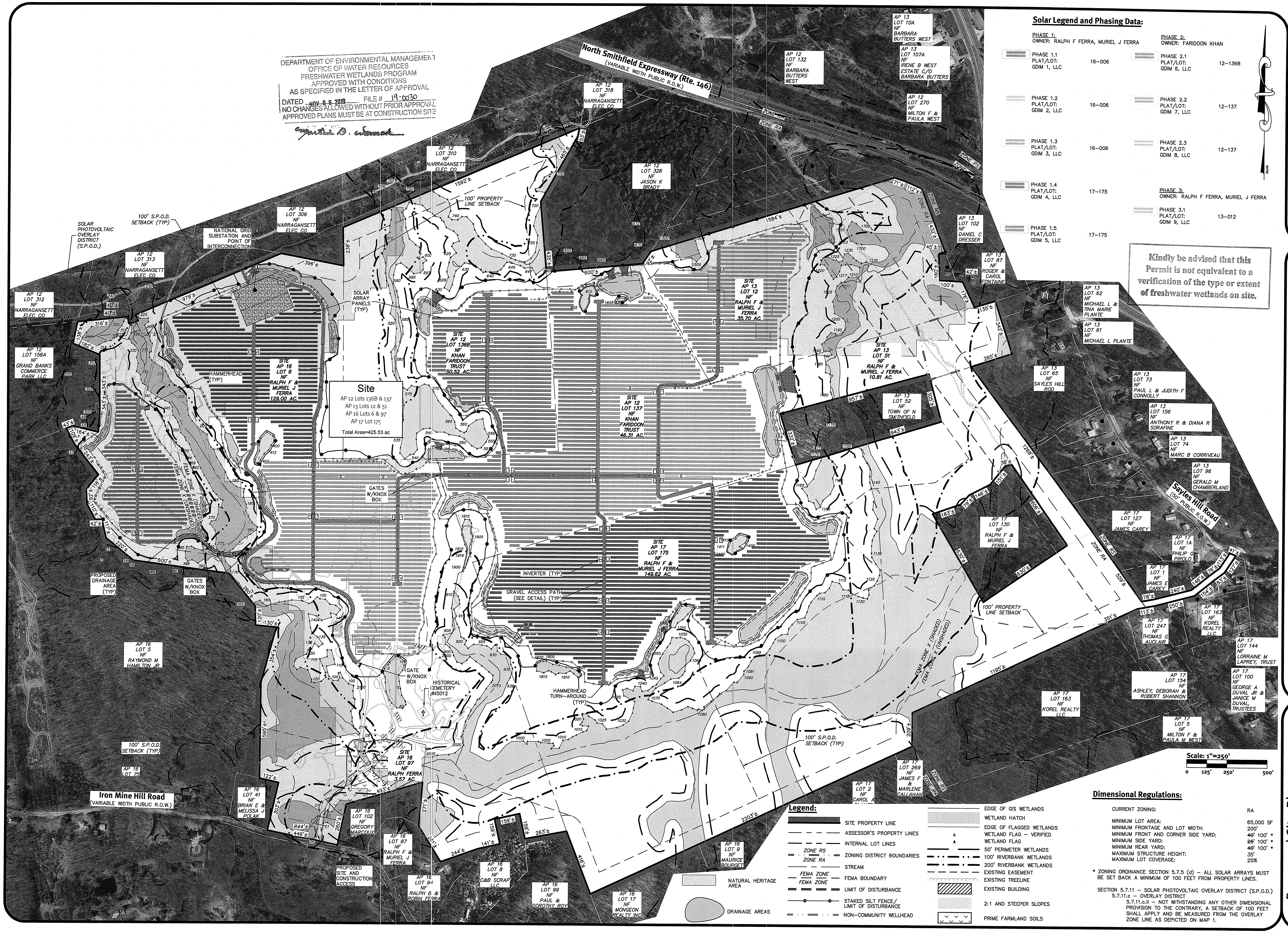
PROJECT INFORMATION:
GDIM 1-9: Iron Mine Hill Road Solar
IRON MINE HILL ROAD, NORTH SMITHFIELD, RI 02896
AP 12 LOTS 136B & 137, AP 13 LOTS 12 & 51
AP 16 LOTS 6 & 97, & AP 17 LOT 175

KEVIN C. MORIN
No. 7951
REGISTERED PROFESSIONAL ENGINEER CIVIL
6/14/2019

SHEET NO.:
10 OF 24

W: \Wind Drive Org Template\2. Sites\North Smithfield\GD NS Iron Mine Hill\3. Development\2. Engineering\DWG\Iron Mine Hill—Design.dwg Jun 14, 2019 – 8:41am

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE


North Smithfield Expressway (Rte. 146)
(VARIABLE WIDTH PUBLIC R.O.W.)
Iron Mine Hill Road
(VARIABLE WIDTH PUBLIC R.O.W.)
Sayles Hill Road
(50' PUBLIC R.O.W.)
Site
AP 12 Lots 136B & 137
AP 13 Lots 12 & 51
AP 16 Lots 6 & 97
AP 17 Lot 175
Total Area=425.53 ac
SITE AP 16 LOT 6 NF RALPH F & MURIEL J FERRA 129.00 AC.
SITE AP 12 LOT 136B NF KHAN FARIDOON TRUST 50.52 AC.
SITE AP 12 LOT 137 NF KHAN FARIDOON TRUST 46.31 AC.
SITE AP 13 LOT 12 NF RALPH F & MURIEL J FERRA 35.70 AC.
SITE AP 13 LOT 51 RALPH F & MURIEL J FERRA 10.81 AC.
SITE AP 17 LOT 175 NF RALPH F & MURIEL J FERRA 149.62 AC.
SITE AP 16 LOT 97 NF RALPH FERRA 3.57 AC.
SOLAR PHOTOVOLTAIC OVERLAY DISTRICT (S.P.O.D.)
100' S.P.O.D. SETBACK (TYP)
NATIONAL GRID SUBSTATION AND POINT OF INTERCONNECTION
100' PROPERTY LINE SETBACK
SOLAR ARRAY PANELS (TYP)
HAMMERHEAD (TYP)
GATES W/KNOX BOX
GATE W/KNOX BOX
HISTORICAL CEMETERY #NS012
INVERTER (TYP)
GRAVEL ACCESS PATH (SEE DETAIL) (TYP)
HAMMERHEAD TURN-AROUND (TYP)
PROPOSED DRAINAGE AREA (TYP)
PROPOSED SITE AND CONSTRUCTION ACCESS
FEMA ZONE X (SHADED)
FEMA ZONE X (UNSHADED)
ZONE RA
ZONE RS
ZONE PS
AP 12 LOT 318 NF NARRAGANSETT ELEC CO
AP 12 LOT 310 NF NARRAGANSETT ELEC CO
AP 12 LOT 306 NF NARRAGANSETT ELEC CO
AP 12 LOT 313 NF NARRAGANSETT ELEC CO
AP 12 LOT 312 NF NARRAGANSETT ELEC CO
AP 12 LOT 156A NF GRAND BANKS COMMERCE PARK LLC
AP 12 LOT 326 NF JASON K BRADY
AP 12 LOT 132 NF BARBARA BUTTERS WEST
AP 12 LOT 270 NF MILTON F & PAULA WEST
AP 13 LOT 10A NF BARBARA BUTTERS WEST
AP 13 LOT 107A NF IRENE B WEST ESTATE C/O BARBARA BUTTERS
AP 13 LOT 102 NF DANIEL C DRESSER
AP 13 LOT 87 NF ROGER & CAROL FONTAINE
AP 13 LOT 62 NF MICHAEL L & TINA MARIE PLANTE
AP 13 LOT 61 NF MICHAEL L PLANTE
AP 13 LOT 65 NF SAYLES HILL ROD
AP 13 LOT 52 NF TOWN OF N SMITHFIELD
AP 13 LOT 73 NF PAUL L & JUDITH F CONNOLLY
AP 13 LOT 156 NF ANTHONY R & DIANA R SORAFINE
AP 13 LOT 74 NF MARC B CORRIVEAU
AP 13 LOT 96 NF GERALD M CHAMBERLAND
AP 17 LOT 130 NF RALPH F & MURIEL J FERRA
AP 17 LOT 127 NF JAMES CAREY
AP 17 LOT 1A NF PHILIP G PIROLO
AP 17 LOT 1 NF JAMES E CAREY
AP 17 LOT 247 NF THOMAS G AUCLAIR
AP 17 LOT 163 NF KOREL REALTY LLC
AP 17 LOT 144 NF LORRAINE M LAPREY, TRUST
AP 17 LOT 100 NF GEORGE A DUVAL JR & JANICE M DUVAL, TRUSTEES
AP 17 LOT 154 ASHLEY, DEBORAH & ROBERT SHANNON
AP 17 LOT 163 NF KOREL REALTY LLC
AP 17 LOT 5 NF MILTON F & PAULA M WEST
AP 17 LOT 269 NF JAMES F & MARLENE CALLAHAN
AP 17 LOT 2 NF CAROL A PLANTE
AP 16 LOT 5 NF RAYMOND M HAMILTON JR
AP 16 LOT 75
AP 16 LOT 41 NF BRIAN E & MELISSA J POLAK
AP 16 LOT 102 NF GREGORY MARCOUX
AP 16 LOT 87 NF RALPH F & MURIEL J FERRA
AP 16 LOT 94 NF RALPH B & ROBIN FERRA
AP 16 LOT 8 NF C&D SCRAP LLC
AP 16 LOT 99 NF PAUL & DOROTHY ROY
AP 16 LOT 9 NF MAURICE BOURGET
AP 16 LOT 17 NF MONGEON REALTY INC
1592'±
1584'±
979'±
396'±
600'±
2203'±
1195'±
1288'±
North

Solar Legend and Phasing Data:

	PHASE 1: OWNER: RALPH F FERRA, MURIEL J FERRA	
▤	PHASE 1.1 PLAT/LOT: GDIM 1, LLC	16–006
▤	PHASE 1.2 PLAT/LOT: GDIM 2, LLC	16–006
▤	PHASE 1.3 PLAT/LOT: GDIM 3, LLC	16–006
▤	PHASE 1.4 PLAT/LOT: GDIM 4, LLC	17–175
▤	PHASE 1.5 PLAT/LOT: GDIM 5, LLC	17–175
	PHASE 2: OWNER: FARIDOON KHAN	
▤	PHASE 2.1 PLAT/LOT: GDIM 6, LLC	12–136B
▤	PHASE 2.2 PLAT/LOT: GDIM 7, LLC	12–137
▤	PHASE 2.3 PLAT/LOT: GDIM 8, LLC	12–137
	PHASE 3: OWNER: RALPH F FERRA, MURIEL J FERRA	
▤	PHASE 3.1 PLAT/LOT: GDIM 9, LLC	13–012

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

Legend:

▬	SITE PROPERTY LINE
— — —	ASSESSOR'S PROPERTY LINES
— — —	INTERNAL LOT LINES
ZONE RS / ZONE RA	ZONING DISTRICT BOUNDARIES
— —	STREAM
FEMA ZONE / FEMA ZONE	FEMA BOUNDARY
▬ ▬ ▬	LIMIT OF DISTURBANCE
—●—●—	STAKED SILT FENCE/ LIMIT OF DISTURBANCE
▬ · · ▬	NON–COMMUNITY WELLHEAD
▨	NATURAL HERITAGE AREA
●	DRAINAGE AREAS
——	EDGE OF GIS WETLANDS
▨	WETLAND HATCH
——	EDGE OF FLAGGED WETLANDS
▲	WETLAND FLAG – VERIFIED
▲	WETLAND FLAG
—— ——	50' PERIMETER WETLANDS
▬ • • ▬	100' RIVERBANK WETLANDS
▬ • ▬	200' RIVERBANK WETLANDS
— — —	EXISTING EASEMENT
⌒⌒⌒	EXISTING TREELINE
▨	EXISTING BUILDING
▨	2:1 AND STEEPER SLOPES
⌄ ⌄ ⌄	PRIME FARMLAND SOILS

Scale: 1"=250'

0 125' 250' 500'

Dimensional Regulations:

CURRENT ZONING:	RA
MINIMUM LOT AREA:	65,000 SF
MINIMUM FRONTAGE AND LOT WIDTH:	200'
MINIMUM FRONT AND CORNER SIDE YARD:	~~40'~~ 100' *
MINIMUM SIDE YARD:	~~25'~~ 100' *
MINIMUM REAR YARD:	~~40'~~ 100' *
MAXIMUM STRUCTURE HEIGHT:	35'
MAXIMUM LOT COVERAGE:	25%

* ZONING ORDINANCE SECTION 5.7.5 (d) – ALL SOLAR ARRAYS MUST BE SET BACK A MINIMUM OF 100 FEET FROM PROPERTY LINES.

SECTION 5.7.11 – SOLAR PHOTOVOLTAIC OVERLAY DISTRICT (S.P.O.D.)
5.7.11.c – OVERLAY DISTRICT
5.7.11.c.ii – NOT WITHSTANDING ANY OTHER DIMENSIONAL PROVISION TO THE CONTRARY, A SETBACK OF 100 FEET SHALL APPLY AND BE MEASURED FROM THE OVERLAY ZONE LINE AS DEPICTED ON MAP 1.

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C GIROUX
No. 9341
9/16/2019
REGISTERED PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R./P.A.A.

Drawn By: J.A.R. Design By: B.C.G.

Proposed Site Plan

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 11 OF 24

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-plan.dwg Plotted: 9/16/2019

General Notes:

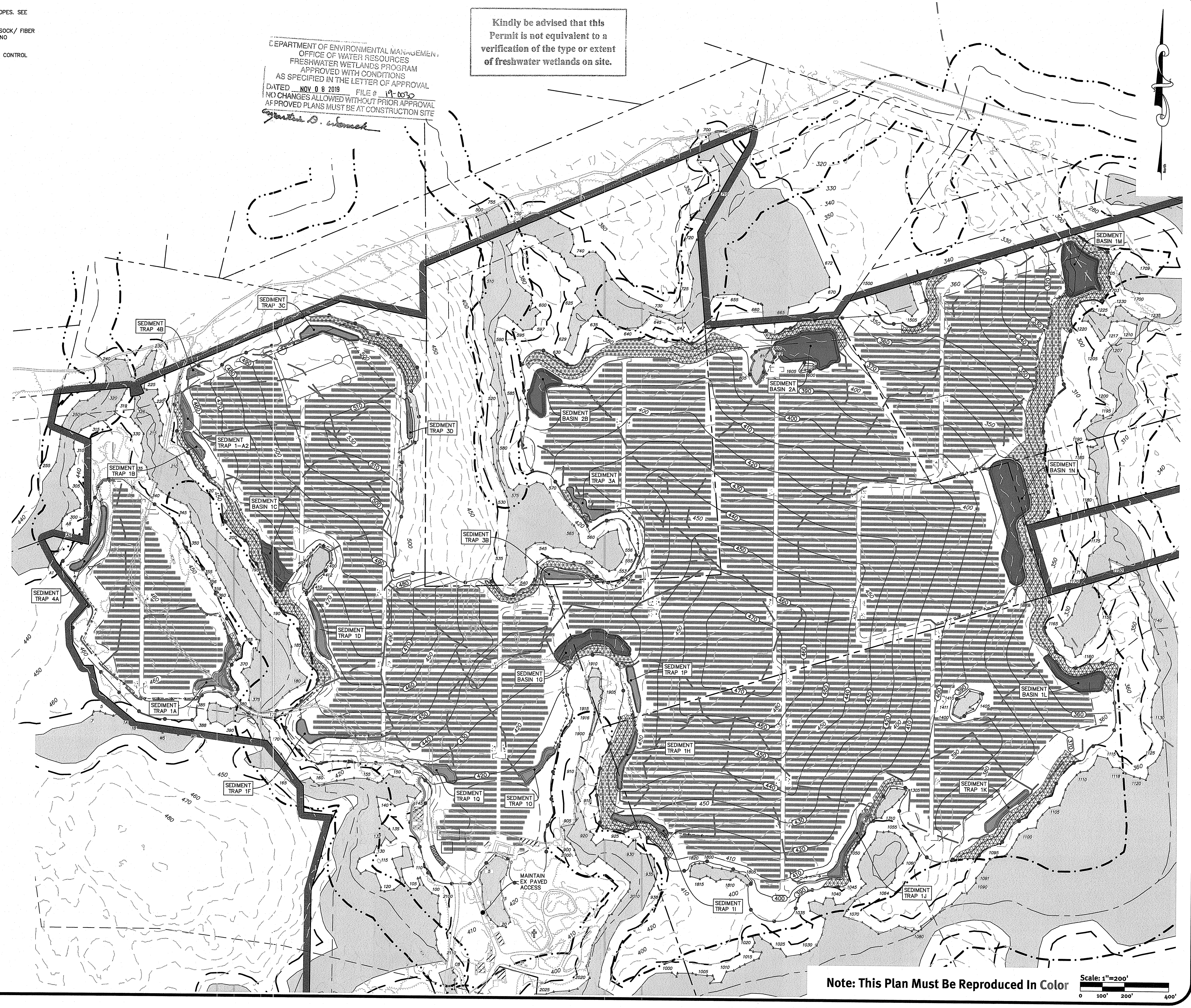
1. CONTRACTOR MUST INSTALL FILTER BERMS ALONG PROPOSED SLOPES. SEE DETAIL ON SHEET 21.
2. CONTRACTOR MUST INSTALL DOUBLE ROWS OF COMPOST FILTER SOCK/ FIBER ROLL WITH MAXIMUM 20' SEPARATION AT TOE OF SLOPE WHERE NO SEDIMENT TRAP OR BASIN IS PROVIDED.
3. SEE SESC PLAN FOR CONSTRUCTION PHASING AND SOIL EROSION CONTROL IMPLEMENTATION PHASING.

Soil Erosion Control Legend:

DIVERSION RUNOFF CONVEYANCE MEASURE (SWALE AND/OR BERM)	--→--→--→--→-
INITIAL DIVERSION RUNOFF CONVEYANCE MEASURE (EXISTING GRADE SWALE AND/OR BERM)	--→--→--→--→-
SEDIMENT CONTROL WATERSHED AREAS	— —
TEMPORARY SEDIMENT BASIN	⬬
TEMPORARY SEDIMENT TRAP	⬭
LIMIT OF DISTURBANCE (NO EROSION CONTROL)	▬ ▬ ▬ ▬
LIMIT OF DISTURBANCE/ LIMIT OF CLEARING (W/ EROSION CONTROL) SEDIMENTATION BARRIER, STAKED SILT FENCE (RIDOT STD 9.2.0), COMPOST STOCK OR APPROVED EQUAL	—●——●—
CONSTRUCTION ENTRANCE (RIDOT STD 9.9.0)	▨
PR CONTOUR	—(308)—
3:1 SLOPES REQUIRING TEMPORARY SLOPE PROTECTION	▨
2:1 AND STEEPER SLOPES WITH SLOPE PROTECTION	░
WETLAND HATCH	▒

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.


North
SEDIMENT TRAP 3C
SEDIMENT TRAP 4B
SEDIMENT TRAP 3D
SEDIMENT TRAP 1-A2
SEDIMENT TRAP 1B
SEDIMENT TRAP 1C
SEDIMENT TRAP 4A
SEDIMENT TRAP 1D
SEDIMENT TRAP 1A
SEDIMENT TRAP 1F
SEDIMENT BASIN 2B
SEDIMENT BASIN 2A
SEDIMENT TRAP 3A
SEDIMENT TRAP 3B
SEDIMENT BASIN 1G
SEDIMENT TRAP 1Q
SEDIMENT TRAP 1O
SEDIMENT TRAP 1P
SEDIMENT TRAP 1H
SEDIMENT TRAP 1I
SEDIMENT TRAP 1J
SEDIMENT TRAP 1K
SEDIMENT BASIN 1L
SEDIMENT BASIN 1N
SEDIMENT BASIN 1M
MAINTAIN EX PAVED ACCESS
Scale: 1"=200'
0 100' 200' 400'

Note: This Plan Must Be Reproduced In Color

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
STATE of RHODE ISLAND
HOPE
No. 9341
REGISTERED PROFESSIONAL ENGINEER CIVIL
9/16/2019

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R. / P.A.A.

Drawn By: J.A.R. Design By: B.C.G.

Overall SESC Plan

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

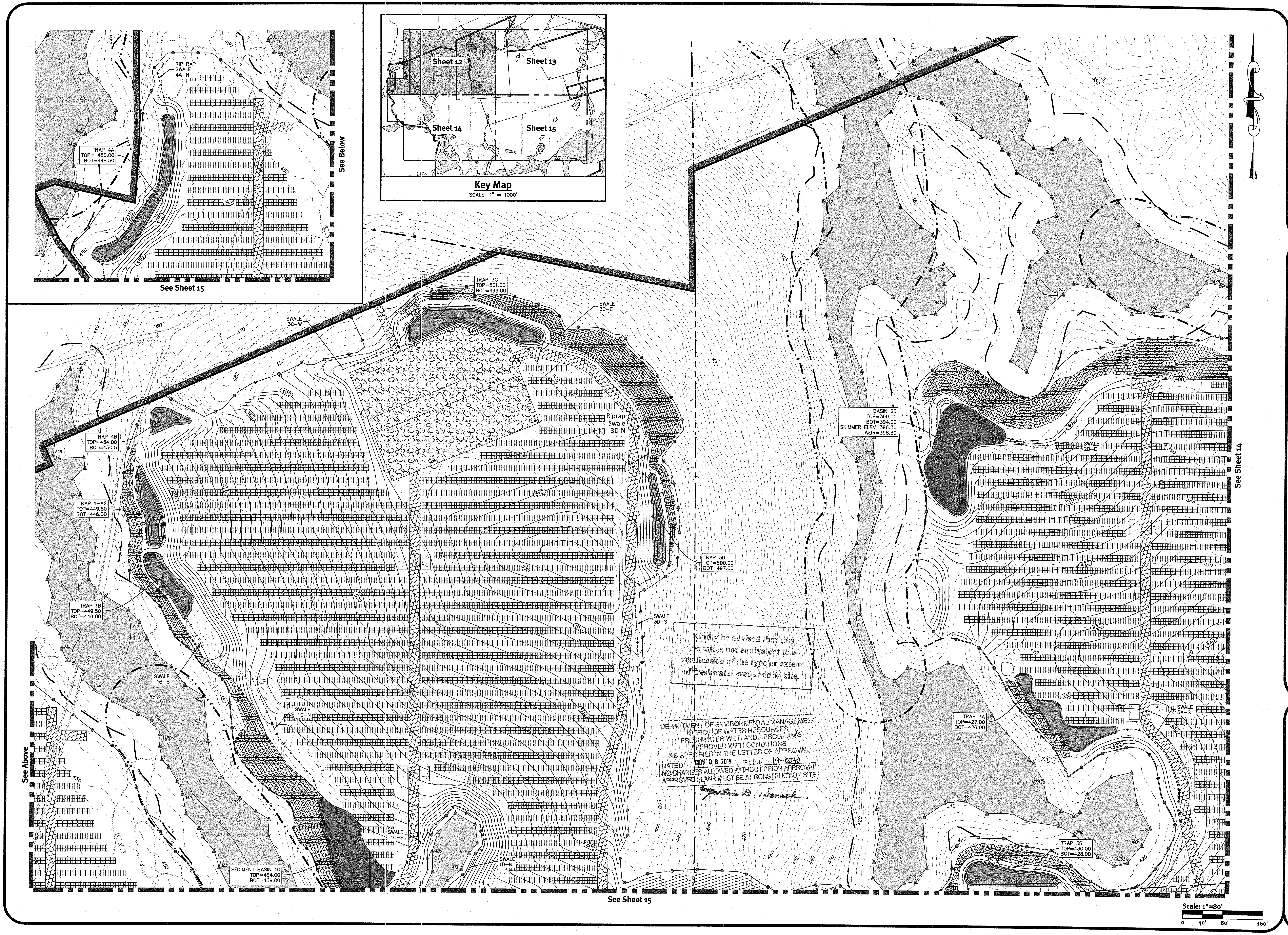
Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 12 OF 24

DE Job No: 0601-027

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-sesc.dwg Plotted: 9/16/2019

z:\dmain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-sesc.dwg Plotted: 9/16/2019


Key Map
SCALE: 1" = 1000'
Sheet 12
Sheet 13
Sheet 14
Sheet 15
RIP RAP SWALE 4A-N
TRAP 4A TOP= 450.00 BOT=448.50
See Below
See Sheet 15
TRAP 3C TOP=501.00 BOT=499.00
SWALE 3C-E
SWALE 3C-W
Riprap Swale 3D-N
TRAP 4B TOP=454.00 BOT=450.5
TRAP 1-A2 TOP=449.50 BOT=446.00
TRAP 1B TOP=449.50 BOT=446.00
SWALE 1B-S
SWALE 1C-N
SWALE 1C-S
SEDIMENT BASIN 1C TOP=464.00 BOT=459.00
SWALE 1D-N
TRAP 3D TOP=500.00 BOT=497.00
SWALE 3D-S
BASIN 2B TOP=399.00 BOT=394.00 SKIMMER ELEV=396.30 WEIR=398.80
SWALE 2B-E
See Sheet 14
TRAP 3A TOP=427.00 BOT=426.00
SWALE 3A-S
TRAP 3B TOP=430.00 BOT=428.00
See Above
See Sheet 15
Scale: 1"=80'
0 40' 80' 160'

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

North

DiPrete Engineering

Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

BRIAN C GIROUX
No. 934
REGISTERED PROFESSIONAL ENGINEE
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R. / P

SESC Plan-1

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

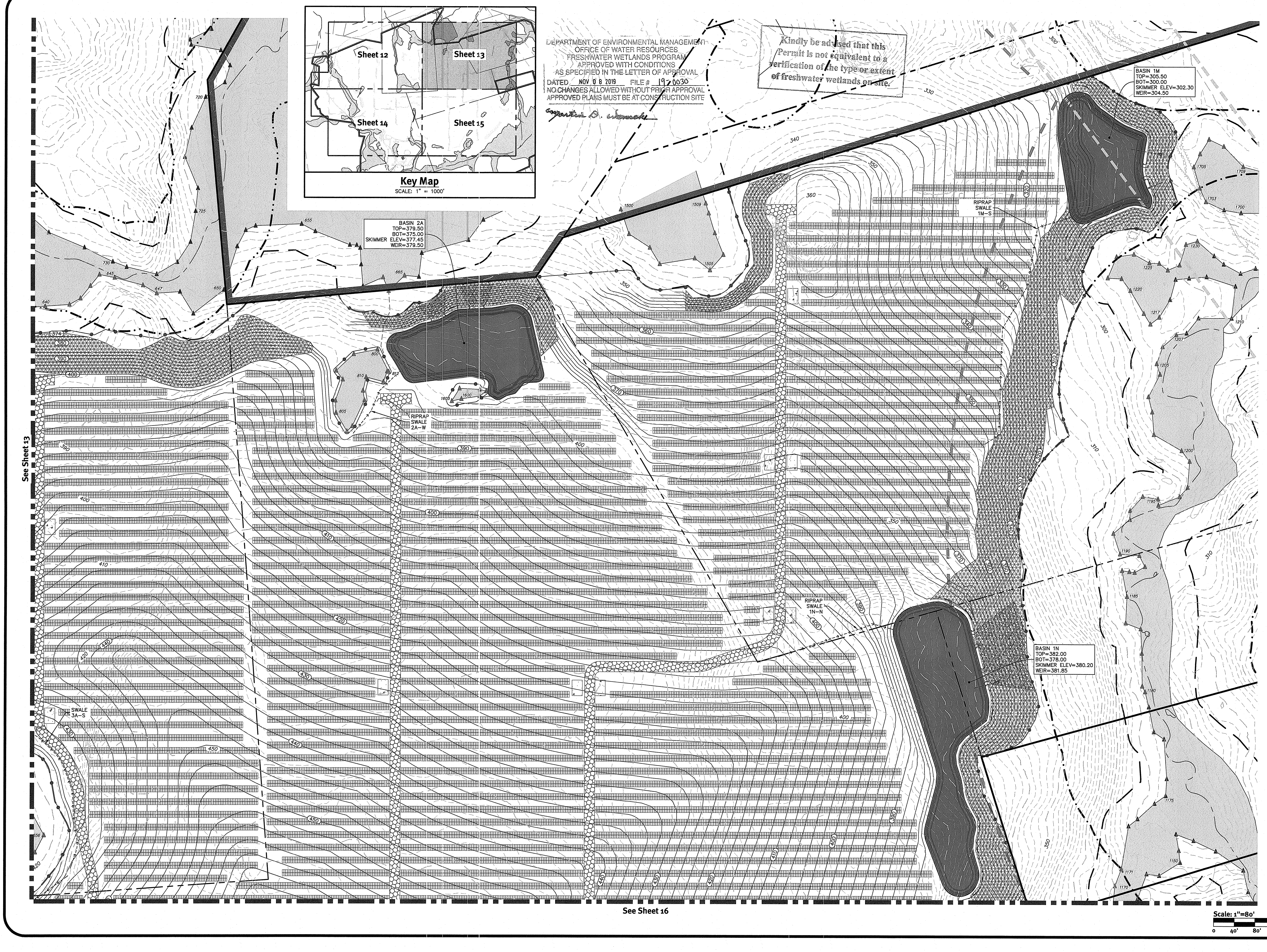
Prepared for
GDIM 1-9, LLC
2760 Quaker Lane

SHEET 13 OF 24

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-sesc.dwg Plotted: 9/16/2019

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.


Sheet 12
Sheet 13
Sheet 14
Sheet 15
Key Map
SCALE: 1" = 1000'
See Sheet 13
See Sheet 16
BASIN 2A
TOP=379.50
BOT=375.00
SKIMMER ELEV=377.45
WEIR=379.50
BASIN 1M
TOP=305.50
BOT=300.00
SKIMMER ELEV=302.30
WEIR=304.50
BASIN 1N
TOP=382.00
BOT=378.00
SKIMMER ELEV=380.20
WEIR=381.85
RIPRAP SWALE 2A-W
RIPRAP SWALE 1M-S
RIPRAP SWALE 1N-N
SWALE 3A-S
330
340
350
360
390
400
410
420
430
440
450
300
310
320
North

Scale: 1"=80'
0 40' 80' 160'

SESC Plan-2

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 14 OF 24

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R. / P.A.A.

Drawn By: J.A.R.
Design By: B.C.G.

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

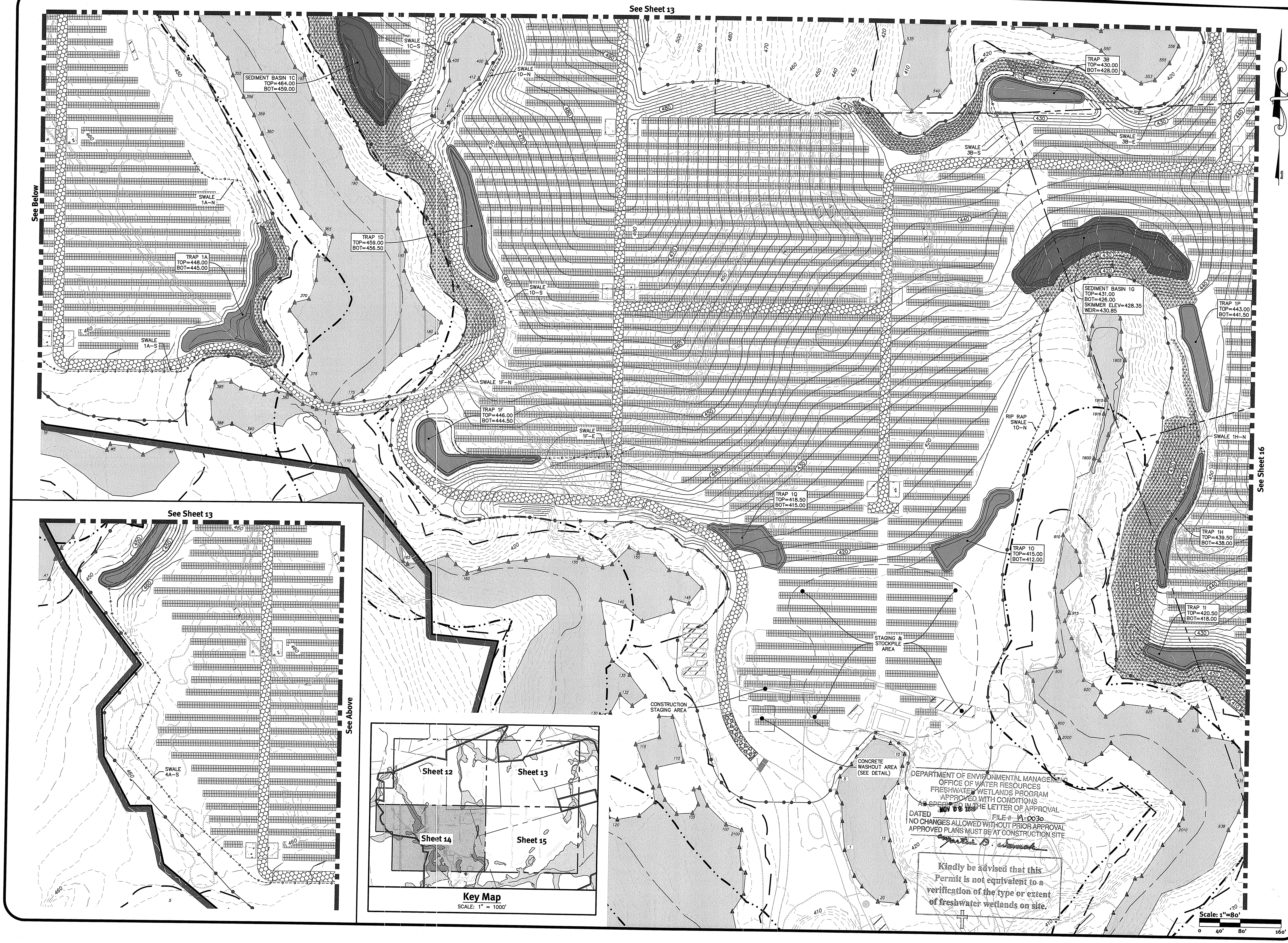
The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

BRIAN C GIROUX
9341
REGISTERED
PROFESSIONAL ENGINEER
CIVIL
9/16/2019

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

DE Job No: 0601-027

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-sesc.dwg Plotted: 9/16/2019


See Sheet 13
See Below
SEDIMENT BASIN 1C
TOP=464.00
BOT=459.00
SWALE 1C-S
SWALE 1D-N
TRAP 3B
TOP=430.00
BOT=428.00
SWALE 3B-S
SWALE 3B-E
SWALE 1A-N
TRAP 1A
TOP=448.00
BOT=445.00
SWALE 1A-S
TRAP 1D
TOP=459.00
BOT=456.50
SWALE 1D-S
SEDIMENT BASIN 1G
TOP=431.00
BOT=426.00
SKIMMER ELEV=428.35
WEIR=430.85
TRAP 1P
TOP=443.00
BOT=441.50
SWALE 1F-N
TRAP 1F
TOP=446.00
BOT=444.50
SWALE 1F-E
RIP RAP SWALE 1O-N
SWALE 1H-N
See Sheet 16
TRAP 1Q
TOP=418.50
BOT=415.00
TRAP 1O
TOP=415.00
BOT=412.00
TRAP 1H
TOP=439.50
BOT=438.00
TRAP 1I
TOP=420.50
BOT=418.00
STAGING & STOCKPILE AREA
CONSTRUCTION STAGING AREA
CONCRETE WASHOUT AREA (SEE DETAIL)
See Sheet 13
SWALE 4A-S
See Above
Key Map
Sheet 12
Sheet 13
Sheet 14
Sheet 15
SCALE: 1" = 1000'
Scale: 1"=80'
0
40'
80'
160'
North

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 08 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DiPrete Engineering

Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

BRIAN C. GIROUX
No. 9341
9/16/2019
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R. / P.A.A.

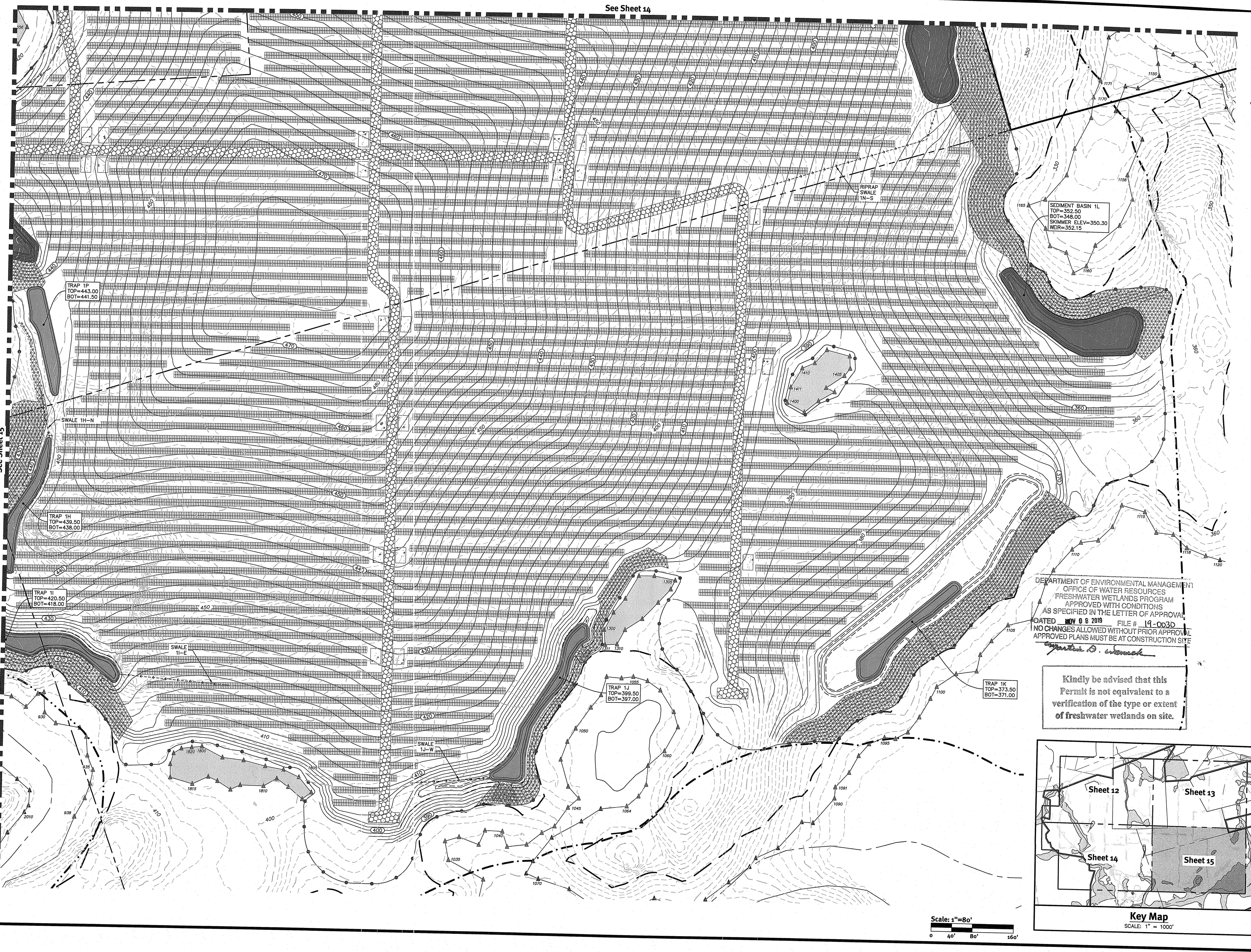
SESC Plan-3

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 15 OF 24


See Sheet 14
See Sheet 15
RIPRAP SWALE 1N–S
SEDIMENT BASIN 1L
TOP=352.50
BOT=348.00
SKIMMER ELEV=350.30
WEIR=352.15
TRAP 1P
TOP=443.00
BOT=441.50
SWALE 1H–N
TRAP 1H
TOP=439.50
BOT=438.00
TRAP 1I
TOP=420.50
BOT=418.00
SWALE 1I–E
TRAP 1J
TOP=399.50
BOT=397.00
SWALE 1J–W
TRAP 1K
TOP=373.50
BOT=371.00
Scale: 1"=80'
0 40' 80' 160'
Sheet 12
Sheet 13
Sheet 14
Sheet 15
Key Map
SCALE: 1" = 1000'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 08 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

z:\domain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-sesc.dwg Plotted: 9/16/2019

DiPrete Engineering

Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

BRIAN C. GIROUX
No. 9341
9/16/2019
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped "Issued for Construction" and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-02-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R./P.A.A.

Drawn By: J.A.R. Design By: B.C.G.

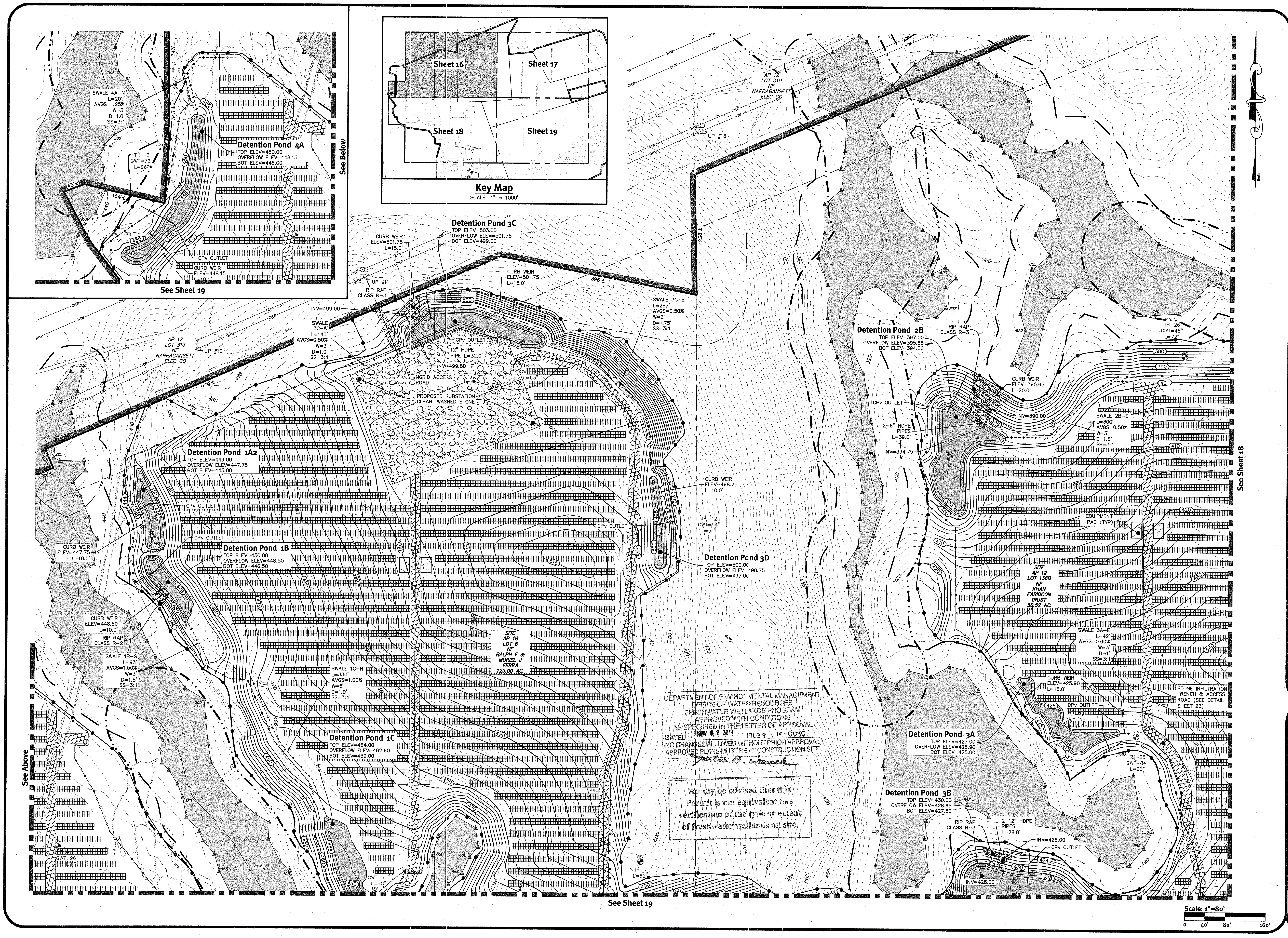
SESC Plan-4

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 16 OF 24


SWALE 4A–N
L=201'
AVGS=1.25%
W=3'
D=1.0'
SS=3:1
343'±
43'±
164'±
109'±
TH–12
GWT=72"
L=96"
TH–13
GWT=84"
L>156"
Detention Pond 4A
TOP ELEV=450.00
OVERFLOW ELEV=448.15
BOT ELEV=446.00
CPv OUTLET
CURB WEIR
ELEV=448.15
L=10.0'
GWT=96"
L=108"
See Below
See Sheet 19
Sheet 16
Sheet 17
Sheet 18
Sheet 19
Key Map
SCALE: 1" = 1000'
AP 12
LOT 310
NF
NARRAGANSETT
ELEC CO
UP #13
Detention Pond 3C
TOP ELEV=503.00
OVERFLOW ELEV=501.75
BOT ELEV=499.00
CURB WEIR
ELEV=501.75
L=15.0'
UP #11
RIP RAP
CLASS R–3
INV=499.00
SWALE
3C–W
L=140'
AVGS=0.50%
W=3'
D=1.0'
SS=3:1
CPv OUTLET
12" HDPE
PIPE L=32.0'
INV=499.80
NGRID ACCESS
ROAD
PROPOSED SUBSTATION
CLEAN, WASHED STONE
TH–10
GWT=48"
L=63"
396'±
238'±
SWALE 3C–E
L=287'
AVGS=0.50%
W=2'
D=1.75'
SS=3:1
AP 12
LOT 313
NF
NARRAGANSETT
ELEC CO
UP #10
979'±
40'±
31'±
Detention Pond 1A2
TOP ELEV=449.00
OVERFLOW ELEV=447.75
BOT ELEV=445.00
CPv OUTLET
CURB WEIR
ELEV=447.75
L=18.0'
Detention Pond 1B
TOP ELEV=450.00
OVERFLOW ELEV=448.50
BOT ELEV=446.50
CURB WEIR
ELEV=448.50
L=10.0'
RIP RAP
CLASS R–2
SWALE 1B–S
L=93'
AVGS=1.50%
W=3'
D=1.5'
SS=3:1
See Above
SWALE 1C–N
L=330'
AVGS=1.00%
W=5'
D=1.0'
SS=3:1
Detention Pond 1C
TOP ELEV=464.00
OVERFLOW ELEV=462.60
BOT ELEV=459.00
SITE
AP 16
LOT 6
NF
RALPH F &
MURIEL J
FERRA
129.00 AC.
GWT=60"
L=78"
TH–7
L=62"
CURB WEIR
ELEV=498.75
L=10.0'
TH–42
GWT=54"
L=54"
Detention Pond 3D
TOP ELEV=500.00
OVERFLOW ELEV=498.75
BOT ELEV=497.00
See Sheet 19
Detention Pond 2B
TOP ELEV=397.00
OVERFLOW ELEV=395.65
BOT ELEV=394.00
RIP RAP
CLASS R–3
CURB WEIR
ELEV=395.65
L=20.0'
CPv OUTLET
2–6" HDPE
PIPES
L=39.0'
INV=390.00
INV=394.75
TH–40
GWT=84"
L=84"
TH–26
GWT=48"
L=72"
SWALE 2B–E
L=300'
AVGS=0.50%
W=3'
D=1.5'
SS=3:1
EQUIPMENT
PAD (TYP)
See Sheet 18
SITE
AP 12
LOT 136B
NF
KHAN
FARIDOON
TRUST
50.52 AC.
SWALE 3A–E
L=42'
AVGS=0.60%
W=3'
D=1'
SS=3:1
CURB WEIR
ELEV=425.90
L=18.0'
CPv OUTLET
STONE INFILTRATION
TRENCH & ACCESS
ROAD (SEE DETAIL
SHEET 23)
Detention Pond 3A
TOP ELEV=427.00
OVERFLOW ELEV=425.90
BOT ELEV=425.00
TH–25
GWT=84"
L=96"
Detention Pond 3B
TOP ELEV=430.00
OVERFLOW ELEV=428.65
BOT ELEV=427.50
RIP RAP
CLASS R–3
2–12" HDPE
PIPES
L=28.8'
INV=426.00
CPv OUTLET
INV=428.00
TH–38
GWT=90"
North
Scale: 1"=80'
0
40'
80'
160'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Martin D. Wencek

Kindly be advised that this
Permit is not equivalent to a
verification of the type or extent
of freshwater wetlands on site.

DiPrete Engineering

Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
REGISTERED
PROFESSIONAL ENGINEER
CIVIL
9/16/2019

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R. / P.A.A.

Drawn By: J.A.R.
Design By: B.C.G.

Grading Plan-1

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

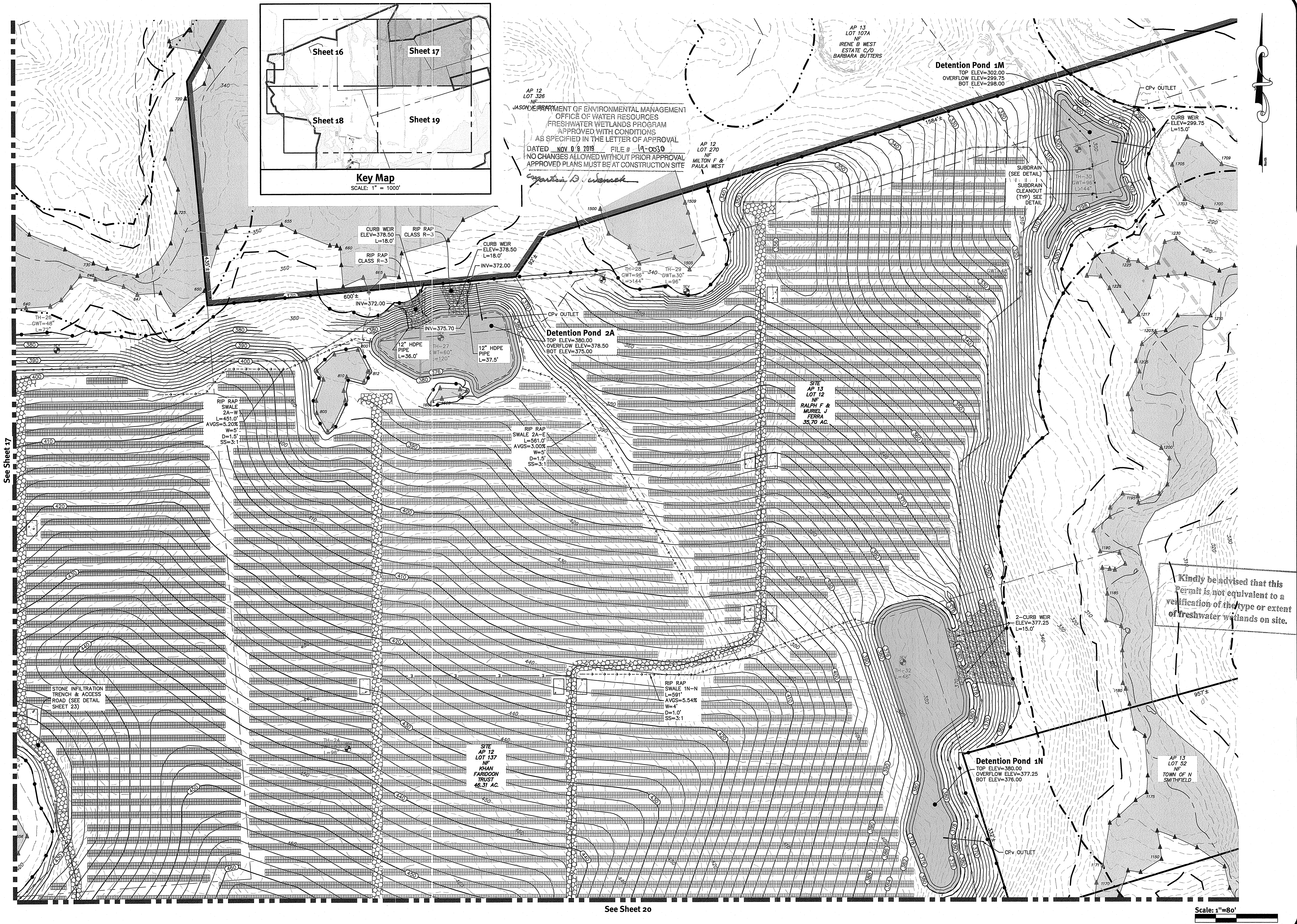
Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027 Copyright 2019 by DiPrete Engineering Associates, Inc.

SHEET 17 OF 24

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-plan.dwg Plotted: 9/16/2019

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-plan.dwg Plotted: 9/16/2019


Key Map
SCALE: 1" = 1000'
Sheet 16
Sheet 17
Sheet 18
Sheet 19
AP 12 LOT 326 NF JASON K. BRADY
AP 12 LOT 270 NF MILTON F & PAULA WEST
AP 13 LOT 107A NF IRENE B WEST ESTATE C/O BARBARA BUTTERS
Detention Pond 1M
TOP ELEV=302.00
OVERFLOW ELEV=299.75
BOT ELEV=298.00
CPv OUTLET
CURB WEIR ELEV=299.75 L=15.0'
SUBDRAIN (SEE DETAIL)
SUBDRAIN CLEANOUT (TYP) SEE DETAIL
TH-30 GWT=96" L=144"
1584'±
CURB WEIR ELEV=378.50 L=18.0'
RIP RAP CLASS R-3
RIP RAP CLASS R-3
CURB WEIR ELEV=378.50 L=18.0'
INV=372.00
INV=372.00
INV=375.70
600'±
435'±
92'±
12" HDPE PIPE L=36.0'
12" HDPE PIPE L=37.5'
TH-27 GWT=60" L=120"
CPv OUTLET
Detention Pond 2A
TOP ELEV=380.00
OVERFLOW ELEV=378.50
BOT ELEV=375.00
TH-26 GWT=48" L=72"
TH-28 GWT=96" L=144"
TH-29 GWT=30" L=96"
RIP RAP SWALE 2A-W L=451.0' AVGS=5.20% W=5' D=1.5' SS=3:1
RIP RAP SWALE 2A-E L=561.0' AVGS=3.00% W=5' D=1.5' SS=3:1
SITE AP 13 LOT 12 NF RALPH F & MURIEL J FERRA 35.70 AC.
SITE AP 12 LOT 137 NF KHAN FARIDOON TRUST 46.31 AC.
2-CURB WEIR ELEV=377.25 L=15.0'
TH-32 L=48"
RIP RAP SWALE 1N-N L=591' AVGS=5.54% W=4' D=1.0' SS=3:1
STONE INFILTRATION TRENCH & ACCESS ROAD (SEE DETAIL SHEET 23)
Detention Pond 1N
TOP ELEV=380.00
OVERFLOW ELEV=377.25
BOT ELEV=376.00
CPv OUTLET
957'±
AP 13 LOT 52 NF TOWN OF N SMITHFIELD
See Sheet 17
See Sheet 20
North
Scale: 1"=80'
0
40'
80'
160'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
9/16/2019
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R. / P.A.A.

Drawn By: J.A.R.
Design By: B.C.G.

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

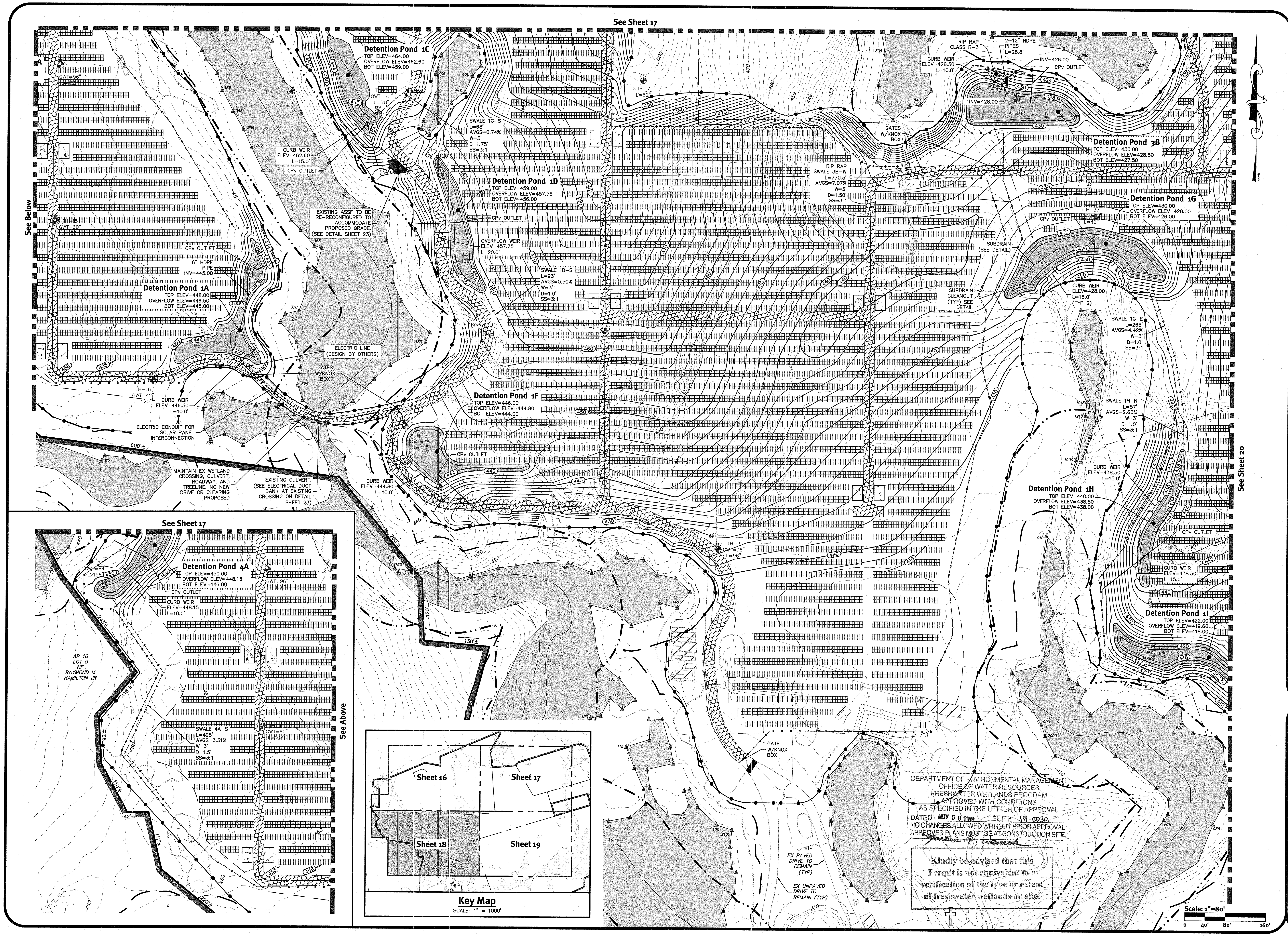
Grading Plan-2

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 18 OF 24


See Sheet 17
See Below
See Sheet 20
Detention Pond 1C
TOP ELEV=464.00
OVERFLOW ELEV=462.60
BOT ELEV=459.00
CURB WEIR
ELEV=462.60
L=15.0'
CPv OUTLET
SWALE 1C-S
L=68'
AVGS=0.74%
W=3'
D=1.75'
SS=3:1
Detention Pond 1D
TOP ELEV=459.00
OVERFLOW ELEV=457.75
BOT ELEV=456.00
CPv OUTLET
OVERFLOW WEIR
ELEV=457.75
L=20.0'
SWALE 1D-S
L=93'
AVGS=0.50%
W=3'
D=1.0'
SS=3:1
EXISTING ASSF TO BE
RE-RECONFIGURED TO
ACCOMMODATE
PROPOSED GRADE.
(SEE DETAIL SHEET 23)
CPv OUTLET
6" HDPE
PIPE
INV=445.00
Detention Pond 1A
TOP ELEV=448.00
OVERFLOW ELEV=446.50
BOT ELEV=445.00
ELECTRIC LINE
(DESIGN BY OTHERS)
GATES
W/KNOX
BOX
TH-16
GWT=42"
L=120"
CURB WEIR
ELEV=446.50
L=10.0'
ELECTRIC CONDUIT FOR
SOLAR PANEL
INTERCONNECTION
600'±
MAINTAIN EX WETLAND
CROSSING, CULVERT,
ROADWAY, AND
TREELINE. NO NEW
DRIVE OR CLEARING
PROPOSED
EXISTING CULVERT.
(SEE ELECTRICAL DUCT
BANK AT EXISTING
CROSSING ON DETAIL
SHEET 23)
Detention Pond 1F
TOP ELEV=446.00
OVERFLOW ELEV=444.80
BOT ELEV=444.00
TH-5
GWT=36"
L=42"
CPv OUTLET
CURB WEIR
ELEV=444.80
L=10.0'
260'±
120'±
130'±
TH-7
L=62"
RIP RAP
CLASS R-3
2-12" HDPE
PIPES
L=28.8'
CURB WEIR
ELEV=428.50
L=10.0'
INV=426.00
CPv OUTLET
INV=428.00
TH-38
GWT=90"
GATES
W/KNOX
BOX
Detention Pond 3B
TOP ELEV=430.00
OVERFLOW ELEV=428.50
BOT ELEV=427.50
RIP RAP
SWALE 3B-W
L=770.5'
AVGS=7.07%
W=3'
D=1.50'
SS=3:1
Detention Pond 1G
TOP ELEV=430.00
OVERFLOW ELEV=428.00
BOT ELEV=426.00
CPv OUTLET
TH-37
L=42"
SUBDRAIN
(SEE DETAIL)
SUBDRAIN
CLEANOUT
(TYP) SEE
DETAIL
CURB WEIR
ELEV=428.00
L=15.0'
(TYP 2)
SWALE 1G-E
L=265'
AVGS=4.42%
W=3'
D=1.0'
SS=3:1
SWALE 1H-N
L=57'
AVGS=2.63%
W=3'
D=1.0'
SS=3:1
CURB WEIR
ELEV=438.50
L=15.0'
Detention Pond 1H
TOP ELEV=440.00
OVERFLOW ELEV=438.50
BOT ELEV=438.00
CPv OUTLET
CURB WEIR
ELEV=438.50
L=15.0'
Detention Pond 1I
TOP ELEV=422.00
OVERFLOW ELEV=419.60
BOT ELEV=418.00
TH-3
GWT=96"
L=96"
GATE
W/KNOX
BOX
EX PAVED
DRIVE TO
REMAIN
(TYP)
EX UNPAVED
DRIVE TO
REMAIN (TYP)
North
See Sheet 17
Detention Pond 4A
TOP ELEV=450.00
OVERFLOW ELEV=448.15
BOT ELEV=446.00
CPv OUTLET
CURB WEIR
ELEV=448.15
L=10.0'
TH-13
GWT=84"
L>156"
GWT=96"
GWT=60"
AP 16
LOT 5
NF
RAYMOND M
HAMILTON JR
SWALE 4A-S
L=498'
AVGS=3.31%
W=3'
D=1.5'
SS=3:1
109'±
243'±
116'±
92'±
110'±
42'±
117'±
220'±
See Above
Sheet 16
Sheet 17
Sheet 18
Sheet 19
Key Map
SCALE: 1" = 1000'
Scale: 1"=80'
0
40'
80'
160'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Kindly be advised that this
Permit is not equivalent to a
verification of the type or extent
of freshwater wetlands on site.

DiPrete Engineering

Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
9/16/2019
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R. / P.A.A.

Drawn By: J.A.R.
Design By: B.C.G.

Grading Plan-3

GDIM 1-9: Iron Mine Hill Road Solar

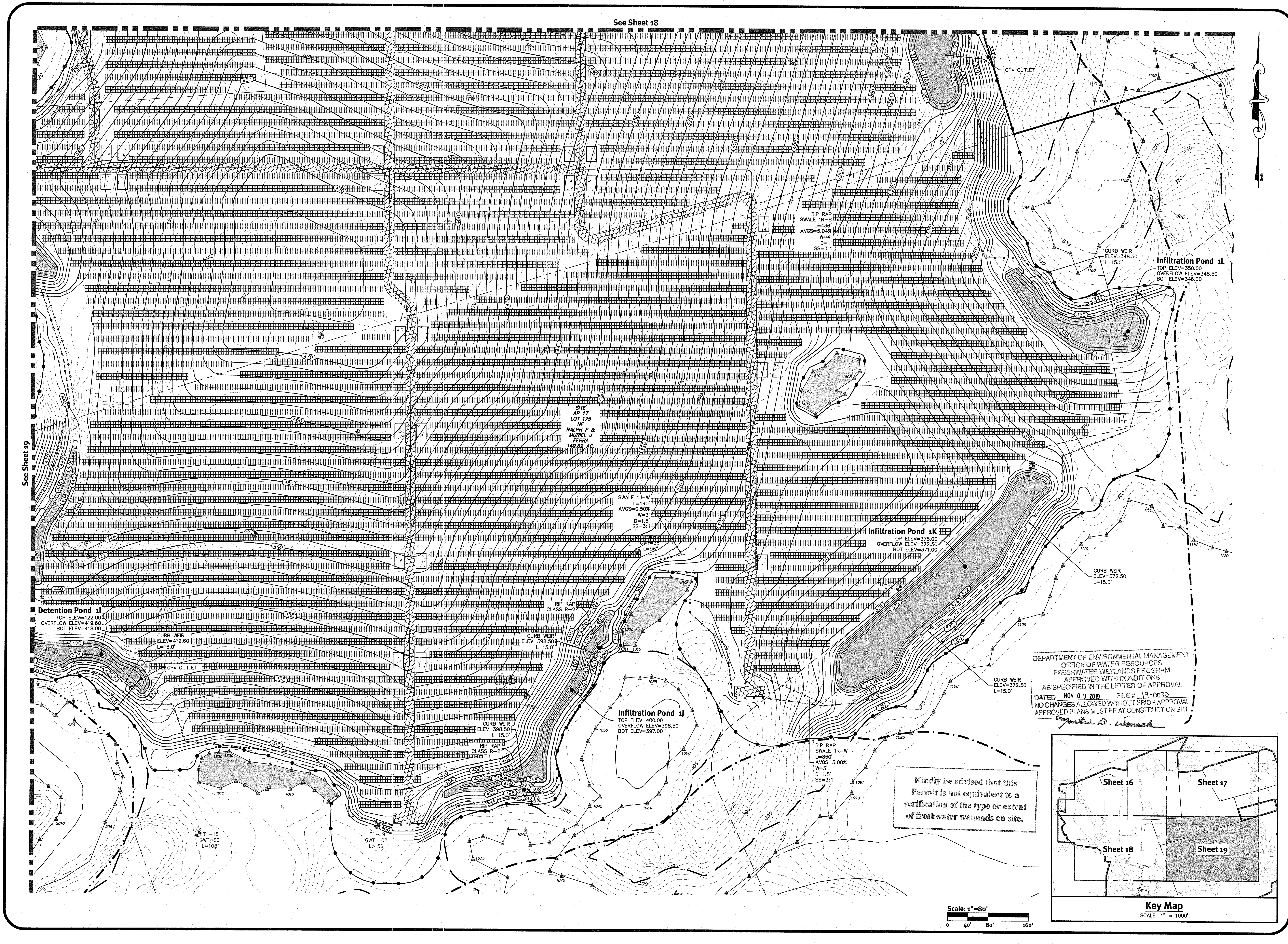
AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 19 OF 24

DE Job No: 0601-027

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-plan.dwg Plotted: 9/16/2019



See Sheet 18
See Sheet 19
SITE
AP 17
LOT 175
NF
RALPH F & MURIEL J FERRA
149.62 AC
RIP RAP
SWALE 1N-S
L=436'
AVGS=5.04%
W=4'
D=1'
SS=3:1
CPv OUTLET
CURB WEIR
ELEV=348.50
L=15.0'
Infiltration Pond 1L
TOP ELEV=350.00
OVERFLOW ELEV=348.50
BOT ELEV=346.00
TH-33
GWT=48"
L=132"
TH-23
TH-22
TH-34
GWT=60"
L>144"
SWALE 1J-W
L=190'
AVGS=0.50%
W=3'
D=1.5'
SS=3:1
Infiltration Pond 1K
TOP ELEV=375.00
OVERFLOW ELEV=372.50
BOT ELEV=371.00
CURB WEIR
ELEV=372.50
L=15.0'
Detention Pond 1I
TOP ELEV=422.00
OVERFLOW ELEV=419.60
BOT ELEV=418.00
CURB WEIR
ELEV=419.60
L=15.0'
CPv OUTLET
CURB WEIR
ELEV=398.50
L=15.0'
RIP RAP
CLASS R-2
Infiltration Pond 1J
TOP ELEV=400.00
OVERFLOW ELEV=398.50
BOT ELEV=397.00
CURB WEIR
ELEV=398.50
L=15.0'
RIP RAP
CLASS R-2
RIP RAP
SWALE 1K-W
L=850'
AVGS=3.00%
W=3'
D=1.5'
SS=3:1
TH-18
GWT=60"
L=108"
TH-19
GWT=108"
L>156"
North
Scale: 1"=80'
0
40'
80'
160'
Sheet 16
Sheet 17
Sheet 18
Sheet 19
Key Map
SCALE: 1" = 1000'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-plan.dwg Plotted: 9/16/2019

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
REGISTERED
PROFESSIONAL ENGINEER
CIVIL
9/16/2019

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R. / P.A.A.

Drawn By: J.A.R.
Design By: B.C.G.

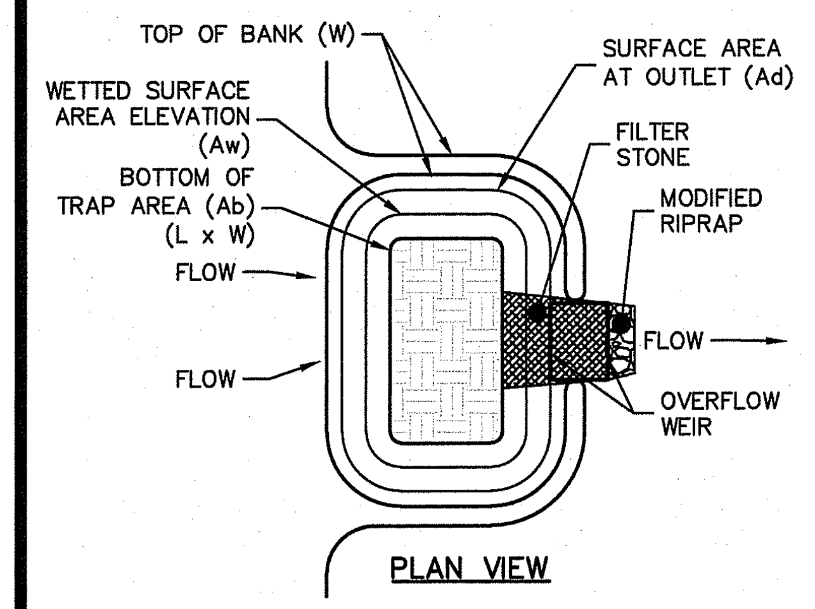
Grading Plan-4
GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027

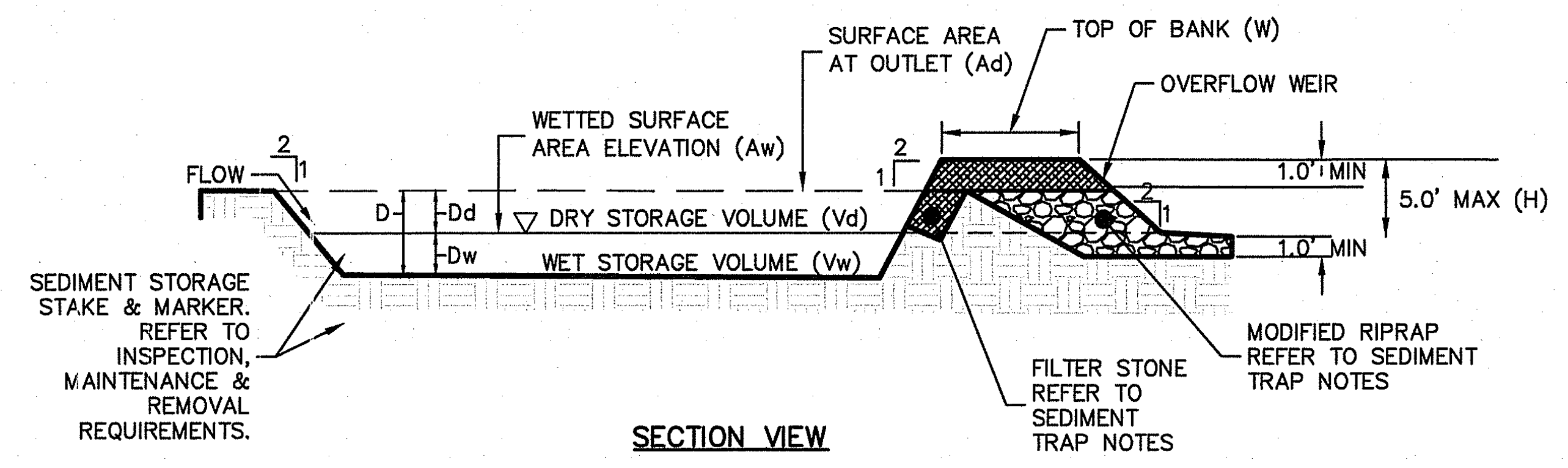
SEDIMENT TRAP DIMENSIONS	TRAP 1A	TRAP 1A-2	TRAP 1B	TRAP 1D	TRAP 1F	TRAP 1H	TRAP1I	TRAP 1J	TRAP 1K	TRAP 1O	TRAP 1P	TRAP 1Q	TRAP 3A	TRAP 3B	TRAP 3C	TRAP 3D	TRAP 4A	TRAP 4B
TRIBUTARY DRAINAGE AREA (AC)	4.301	3.02	3.401	4.226	2.534	1.236	3.930	4.449	4.016	4.226	1.548	4.666	1.512	2.397	3.276	2.253	2.572	1.317
WET STORAGE DEPTH (Dw)(FT)	2.00	2.00	2.00	1.50	1.00	1	1.5	1.50	1.50	2.00	1.00	2.00	0.50	1.00	1.00	2.00	1.00	2.00
DRY STORAGE DEPTH (Dd) (FT)	1.00	1.50	1.50	1.00	0.50	0.5	1	1.00	1.00	1.00	0.50	1.50	0.50	1.00	1.00	1.00	0.50	1.50
TOTAL DEPTH (D)(FT)	3.00	3.50	3.50	2.50	1.50	1.50	2.50	2.50	2.50	3.00	1.50	3.50	1.00	2.00	2.00	3.00	1.50	3.50
BOTTOM OF TRAP AREA (Ab)(SF)	1,778	1,506	1,772	5,229	5,127	4,042	3,980	3,720	4,129	3,073	4,469	3,764	6,089	4,067	5,576	643	5,564	715
WETTED SURFACE AREA(Aw)(SF)	7,240	3,255	3,673	7,787	6,914	4,885	6,506	7,070	6,622	5,828	5,809	5,904	6,945	5,243	7,113	2,727	7,702	1,690
SURFACE AREA AT OUTLET (Ad)(SF)	11,357	4,797	5,192	9,563	7,828	5,743	8,260	9,374	8,354	7,293	6,500	7,086	7,814	6,475	8,709	3,875	8,792	2,627
MAX TRIBUTARY AREA	5.00	3.02	3.40	5.00	3.20	2.25	4.50	5.00	4.65	5.00	2.70	5.00	1.60	2.45	3.28	2.55	3.60	1.55


TOP OF BANK (W)
WETTED SURFACE AREA ELEVATION (Aw)
BOTTOM OF TRAP AREA (Ab) (L x W)
FLOW
FLOW
SURFACE AREA AT OUTLET (Ad)
FILTER STONE
MODIFIED RIPRAP
FLOW
OVERFLOW WEIR

PLAN VIEW

TOP WIDTH VS HEIGHT
H=HEIGHT OF EMBANKMENT
W=TOP WIDTH OF EMBANKMENT

H (ft)	W (ft)
1.5	2.0
2.0	2.0
2.5	3.0
3.0	2.5
3.5	3.0
4.0	3.0
4.5	4.0
5.0	4.5


FLOW
2
1
D
Dd
Dw
WETTED SURFACE AREA ELEVATION (Aw)
DRY STORAGE VOLUME (Vd)
WET STORAGE VOLUME (Vw)
SURFACE AREA AT OUTLET (Ad)
TOP OF BANK (W)
OVERFLOW WEIR
1.0' MIN
5.0' MAX (H)
1.0' MIN
SEDIMENT STORAGE STAKE & MARKER. REFER TO INSPECTION, MAINTENANCE & REMOVAL REQUIREMENTS.
FILTER STONE REFER TO SEDIMENT TRAP NOTES
MODIFIED RIPRAP REFER TO SEDIMENT TRAP NOTES

SECTION VIEW

Sediment Trap Notes:

1. THE TEMPORARY SEDIMENT TRAPS SHALL MEET ALL REQUIREMENTS FOR TEMPORARY SEDIMENT TRAPS OUTLINED IN THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (LATEST REVISION) SECTION SIX: SEDIMENT CONTROL MEASURES
2. THE TEMPORARY SEDIMENT TRAP SHALL HAVE AN INITIAL STORAGE VOLUME OF 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER EXCEPT FOR THE EXCAVATED WET STORAGE AREA WHERE SLOPES SHALL NOT EXCEED 1.5:1.
4. THE OUTLET SHALL BE LOCATED AT THE MOST DISTANT HYDRAULIC POINT FROM THE INLET.
5. THE OUTLET CONSISTS OF A PERVIOUS STONE DIKE WITH A CORE OF MODIFIED RIPRAP AND FACED ON THE UPSTREAM SIDE WITH STONE.
6. TEMPORARY SEDIMENT TRAPS MUST OUTLET ONTO STABILIZED GROUND.
7. MAXIMUM HEIGHT OF A TEMPORARY SEDIMENT TRAP EMBANKMENT IS LIMITED TO 5 FEET.
8. SIDE SLOPES OF THE EMBANKMENT SHALL BE 2:1 OR FLATTER.
9. MODIFIED RIPRAP: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.10.03.2.
10. FILTER STONE: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.01.03 TABLE I, COLUMN V FILTER STONE.

Inspection, Maintenance, and Removal Requirements:

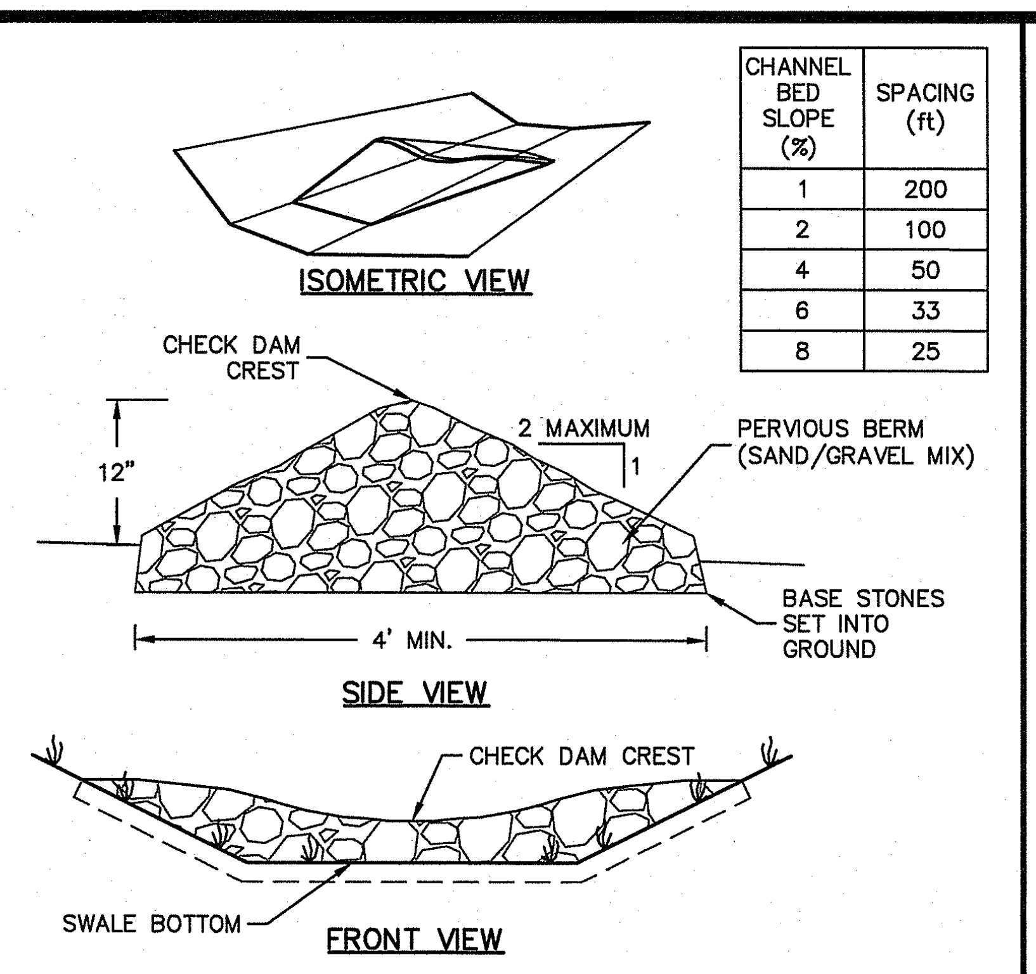
1. INSTALL "SEDIMENT STORAGE" STAKE WITH A MARKER AT ONE HALF OF THE WET STORAGE VOLUME.
2. INSPECT THE TEMPORARY SEDIMENT TRAP AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCH OR GREATER.
3. CHECK THE OUTLET TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT.
4. CHECK FOR SEDIMENT ACCUMULATION AND FILTRATION PERFORMANCE.
5. WHEN SEDIMENTS HAVE ACCUMULATED TO ONE HALF THE MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATER THE TRAP AS NEEDED, REMOVE SEDIMENTS AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS.
6. DISPOSE OF THE SEDIMENT REMOVED FROM THE BASIN IN A SUITABLE AREA.
7. THE TEMPORARY SEDIMENT TRAP MAY BE REMOVED AFTER THE CONTRIBUTING DRAINAGE AREA IS STABILIZED.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Temporary Sediment Trap Details

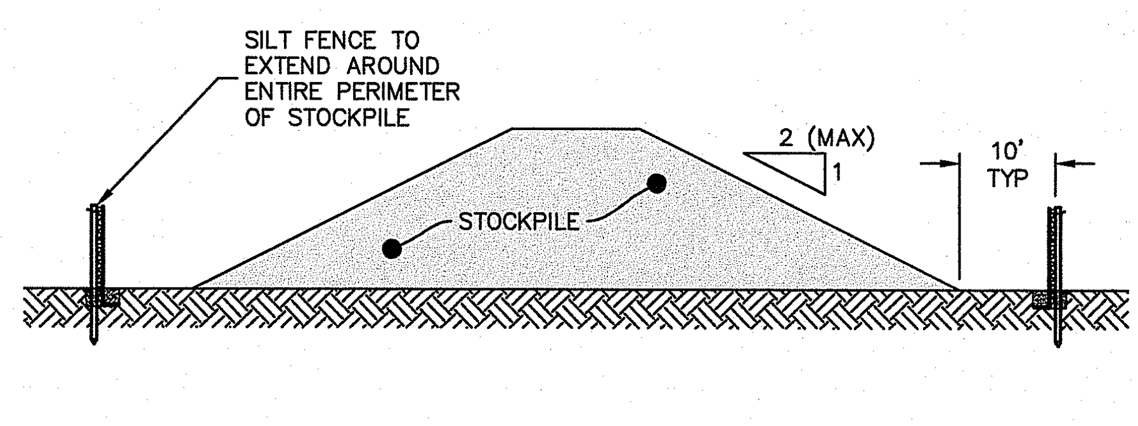
NOT TO SCALE

CHANNEL BED SLOPE (%)	SPACING (ft)
1	200
2	100
4	50
6	33
8	25


ISOMETRIC VIEW
CHECK DAM CREST
12"
2 MAXIMUM
1
PERVIOUS BERM (SAND/GRAVEL MIX)
4' MIN.
BASE STONES SET INTO GROUND
SIDE VIEW
CHECK DAM CREST
SWALE BOTTOM
FRONT VIEW

Stone Check Dam

NOT TO SCALE

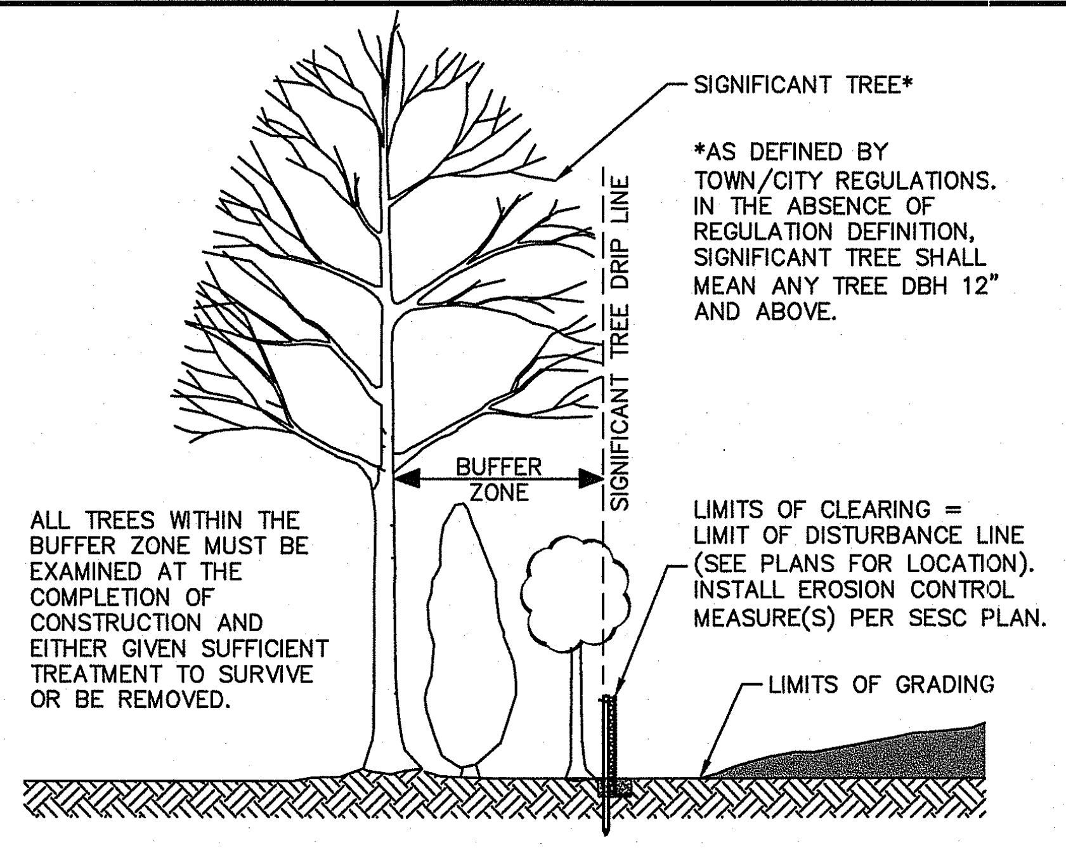

SILT FENCE TO EXTEND AROUND ENTIRE PERIMETER OF STOCKPILE
2 (MAX)
1
10' TYP
STOCKPILE

NOTES:

1. ALL STOCKPILES MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 3 "STOCKPILE AND STAGING AREA MANAGEMENT" OF THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HAND BOOK (CURRENT EDITION).
2. DIVERT ALL STORMWATER AWAY FROM STOCKPILES.
3. SOIL STOCKPILES THAT ARE NOT TO BE USED WITHIN 30 DAYS MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER FORMATION OF THE STOCKPILE WITH SEED MIX COMPATIBLE WITH THE SOIL TYPE.
4. STOCKPILE AND SILT FENCE MUST BE INSPECTED AT LEAST ONCE PER WEEK AND AFTER RAIN EVENTS IN EXCESS OF ½" OF RAINFALL. REPAIR/ REPLACE SILT FENCE (AND STOCKPILE COVERS WHERE APPLICABLE) AS NEEDED TO KEEP THEM FUNCTIONING ADEQUATELY.
5. SEDIMENT TRAPPED BY SILT FENCES MUST BE REMOVED AND PROPERLY DISPOSED OF WHENEVER SIGNIFICANT ACCUMULATION OCCURS.

Stockpile Protection

NOT TO SCALE


SIGNIFICANT TREE*
SIGNIFICANT TREE DRIP LINE
BUFFER ZONE
LIMITS OF GRADING

*AS DEFINED BY TOWN/CITY REGULATIONS. IN THE ABSENCE OF REGULATION DEFINITION, SIGNIFICANT TREE SHALL MEAN ANY TREE DBH 12" AND ABOVE.

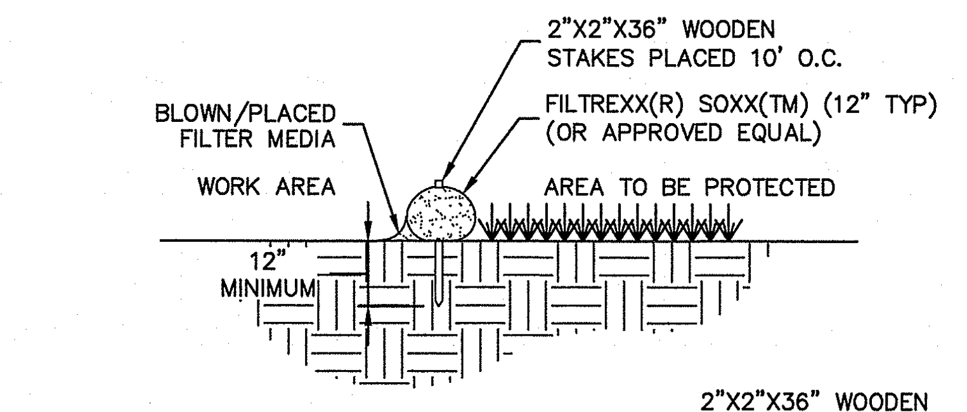
ALL TREES WITHIN THE BUFFER ZONE MUST BE EXAMINED AT THE COMPLETION OF CONSTRUCTION AND EITHER GIVEN SUFFICIENT TREATMENT TO SURVIVE OR BE REMOVED.

LIMITS OF CLEARING = LIMIT OF DISTURBANCE LINE (SEE PLANS FOR LOCATION). INSTALL EROSION CONTROL MEASURE(S) PER SESC PLAN.

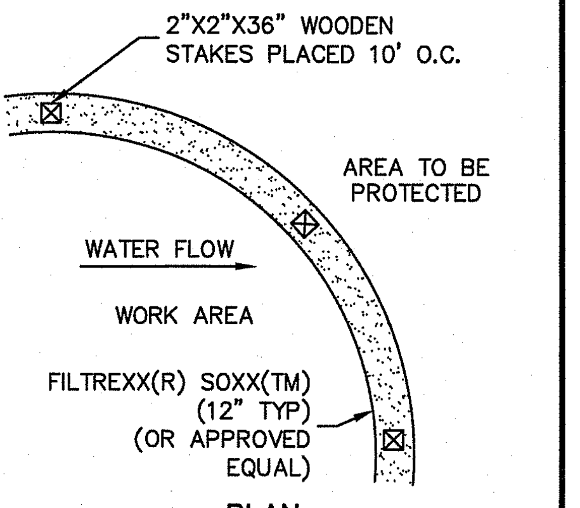
NOTE: LIMIT OF DISTURBANCE (LOD) MUST BE STAKED OUT PRIOR TO CONSTRUCTION. IF ANY SIGNIFICANT TREE DRIP LINE IS ENCROACHING PAST THE LOD, CONTRACTOR MUST CONTACT SITE ENGINEER PRIOR TO CONSTRUCTION.

Limit of Disturbance at Vegetation

NOT TO SCALE


2"X2"X36" WOODEN STAKES PLACED 10' O.C.
BLOWN/PLACED FILTER MEDIA
FILTREXX(R) SOXX(TM) (12" TYP) (OR APPROVED EQUAL)
WORK AREA
AREA TO BE PROTECTED
12" MINIMUM

SECTION


2"X2"X36" WOODEN STAKES PLACED 10' O.C.
AREA TO BE PROTECTED
WATER FLOW
WORK AREA
FILTREXX(R) SOXX(TM) (12" TYP) (OR APPROVED EQUAL)

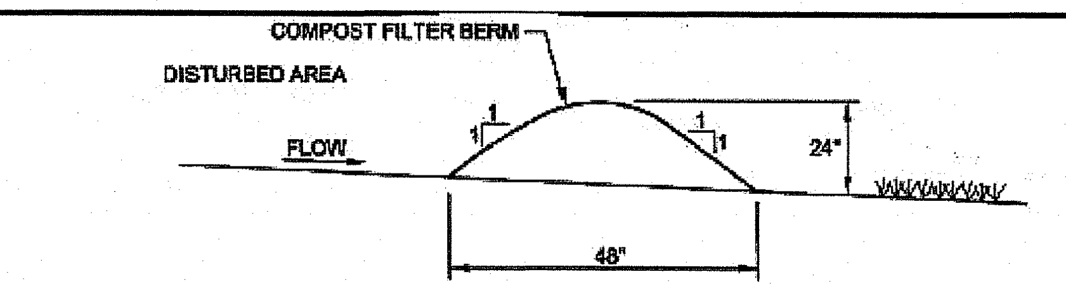
PLAN

NOTES:

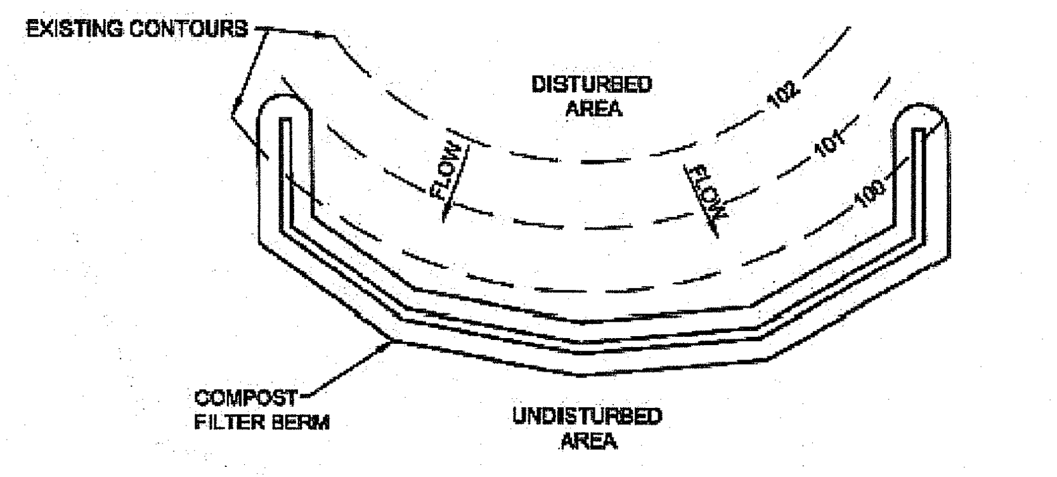
1. ALL MATERIAL TO MEET FILTREXX(R) SPECIFICATIONS
2. FILTER MEDIA(TM) FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER
4. STAKES ARE NOT TO BE USED IN PAVEMENT AREAS.
5. SELF WEIGHT OF FILTREXX SYSTEM IS ADEQUATE TO PREVENT SYSTEM MOVEMENT ONCE POSITIONED ALONG AREA SHOWN ON THE PLANS.
6. CONTRACTOR TO PLACE FILTREXX SEDIMENT CONTROL OR APPROVED EQUAL AROUND ALL CURB INLET LOCATIONS AS SPECIFIED ON PLANS.

Filtrexx Sediment Control (or Approved Equal)

NOT TO SCALE


COMPOST FILTER BERM
DISTURBED AREA
FLOW
1
1
1
1
24"
48"

SECTION VIEW


EXISTING CONTOURS
DISTURBED AREA
FLOW
FLOW
102
101
100
COMPOST FILTER BERM
UNDISTURBED AREA

PLAN VIEW

TABLE 4.2
Compost Standards

Organic Matter Content	80% - 100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	5.5 - 8.0
Moisture Content	35% - 55%
Particle Size	98% pass through 1" screen
Soluble Salt Concentration	5.0 dS/m (mmhos/cm) Maximum

Slope %	Maximum slope length above compost filter sock in ft (m) Diameter of compost filter sock required 8-inch (200-mm)	12-inch (300-mm)	18-inch (450-mm)	24-inch (600-mm)
2 (or less)	300 (90)	375 (110)	500 (150)	650 (200)
5	200 (60)	250 (75)	275 (85)	325 (100)
10	100 (30)	125 (35)	150 (45)	200 (60)
15	70 (20)	85 (25)	100 (30)	160 (50)
20	50 (15)	65 (20)	70 (20)	130 (40)
25	40 (12)	50 (15)	55 (16)	100 (30)
30	30 (9)	40 (12)	45 (13)	65 (20)
35	30 (9)	40 (12)	45 (13)	55 (18)
40	30 (9)	40 (12)	45 (13)	50 (15)
45	20 (6)	25 (8)	30 (9)	40 (12)
50	20 (6)	25 (8)	30 (9)	35 (10)

Notes:

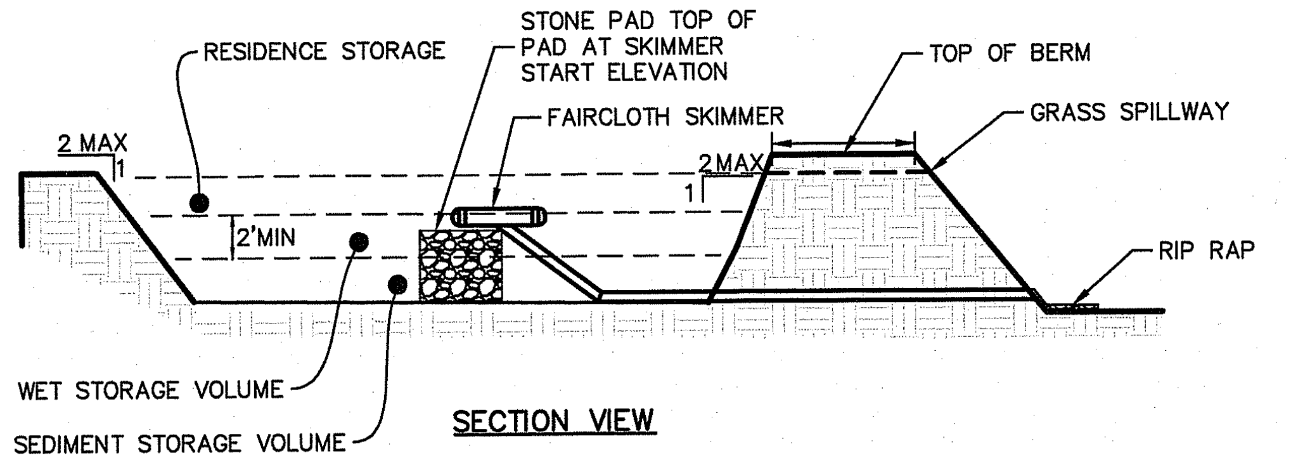
1. WOODS CHIPS CAN BE USED TO CONSTRUCT THE FILTER BERM.
2. FILTER BERMS SHALL BE USED ON SIGNIFICANT FLOW PATHS AND PLACED PARALLEL TO THE SLOPE OF THE FLOW BASED ON THE COMPOST FILTER SOCK/FIBER ROLL REQUIREMENTS IN THE RI SOIL EROSION AND SEDIMENT CONTROL HAND BOOK (2014).

SLOPE STEEPNESS	MAXIMUM LENGTH (FT)
2:1	25
3:1	50
4:1	75
5:1 OR FLATTER	100

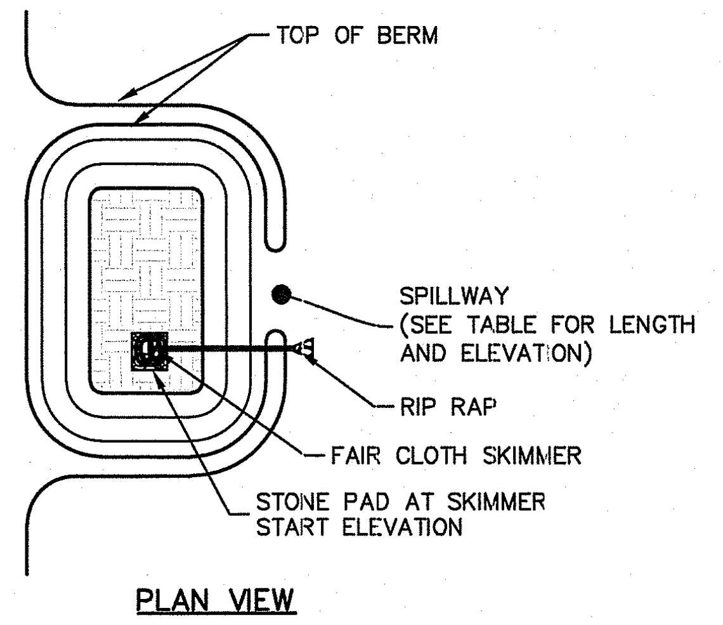
2. TALL GRASSES SHALL BE CUT PRIOR TO INSTALLATION TO MINIMIZE POTENTIAL FOR UNDERCUTTING. BERM SHALL BE NETTED OR OTHERWISE ANCHORED AFTER INSTALLATION.
3. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH ⅓ THE ABOVE GROUND HEIGHT OF THE BERM.
4. ANY SECTION COMPOST FILTER BERM WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED. CONCENTRATED FLOWS SHALL NOT BE DIRECTED TOWARDS ANY COMPOST FILTER BERM.
5. CONTRACTOR SHALL FIELD ADJUST FILTER BERMS AS NECESSARY. CERTAIN AREAS MAY BE OMITTED AS NECESSARY OR ADDITIONAL MEASURES ADDED BASED ON FIELD CONDITIONS.
6. FILTER BERMS MAY BE SUBSTITUTED WITH COMPOST FILTER SOCKS PER THE RI SOIL EROSION AND SEDIMENT CONTROL HAND BOOK OF SILT FENCE.
7. CONTRACTOR TO MODIFY BERM CONDITIONS AS SITE GRADING IS REVISED. BERMS MUST BE IN PLACE WHEN A RAINFALL GREATER THAN 0.25" IS EXPECTED.
8. WATTLES AND FIBER ROLLS AT THE TOE OF SLOPES GREATER THAN 5:1 MUST BE AT LEAST 20 INCHES IN DIAMETER. AN EQUIVALENT INSTALLATION, SUCH AS STACKED SMALLER DIAMETER ROLLS, CAN BE USED TO ACHIEVE A SIMILAR LEVEL OF PROTECTION.

Filter Berm Details

NOT TO SCALE


RESIDENCE STORAGE
STONE PAD TOP OF PAD AT SKIMMER START ELEVATION
FAIRCLOTH SKIMMER
TOP OF BERM
GRASS SPILLWAY
2 MAX
1
2 MAX
1
2'MIN
RIP RAP
WET STORAGE VOLUME
SEDIMENT STORAGE VOLUME

SECTION VIEW


TOP OF BERM
SPILLWAY (SEE TABLE FOR LENGTH AND ELEVATION)
RIP RAP
FAIR CLOTH SKIMMER
STONE PAD AT SKIMMER START ELEVATION

PLAN VIEW

Sediment Basin Detail

NOT TO SCALE

General Notes:

1. THE TEMPORARY SEDIMENT BASIN SHALL MEET ALL REQUIREMENTS FOR TEMPORARY SEDIMENT BASIN OUTLINED IN THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (LATEST REVISION) SECTION SIX: SEDIMENT CONTROL MEASURES.
2. TEMPORARY SEDIMENTATION BASINS SHALL USE THE FAIRCLOTH SKIMMER OR APPROVED EQUAL FOR DEWATERING. CONTRACTOR SHALL INSTALL A SKIMMER THAT PROVIDES A RELEASE RATE APPROXIMATELY EQUAL TO BUT NO GREATER THAN THE VALUE PROVIDED IN THE TABLE BELOW.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER EXCEPT FOR THE EXCAVATED WET STORAGE AREA WHERE SLOPES SHALL NOT EXCEED 1.5:1.
4. THE OUTLET SHALL BE LOCATED AT THE MOST DISTANT HYDRAULIC POINT FROM THE INLET. CONTRACTOR SHALL INSTALL BAFFLES AS NECESSARY TO PROVIDE AN EFFECTIVE FLOW LENGTH THAT IS AT LEAST TWO TIMES THE EFFECTIVE WIDTH OF THE BASIN. SEE SECTION SIX OF THE SOIL EROSION AND SEDIMENT CONTROL HANDBOOK FOR MORE INFORMATION.
5. CONTOURS SHOWN ON THIS PLAN AS TEMPORARY STORAGE MAY BE FIELD MODIFIED AS NECESSARY WITH APPROVAL OF DESIGN ENGINEER. CONTOURS REPRESENT MINIMUM VOLUME REQUIRED.
6. TEMPORARY SEDIMENT BASINS MUST OUTLET ONTO STABILIZED GROUND.

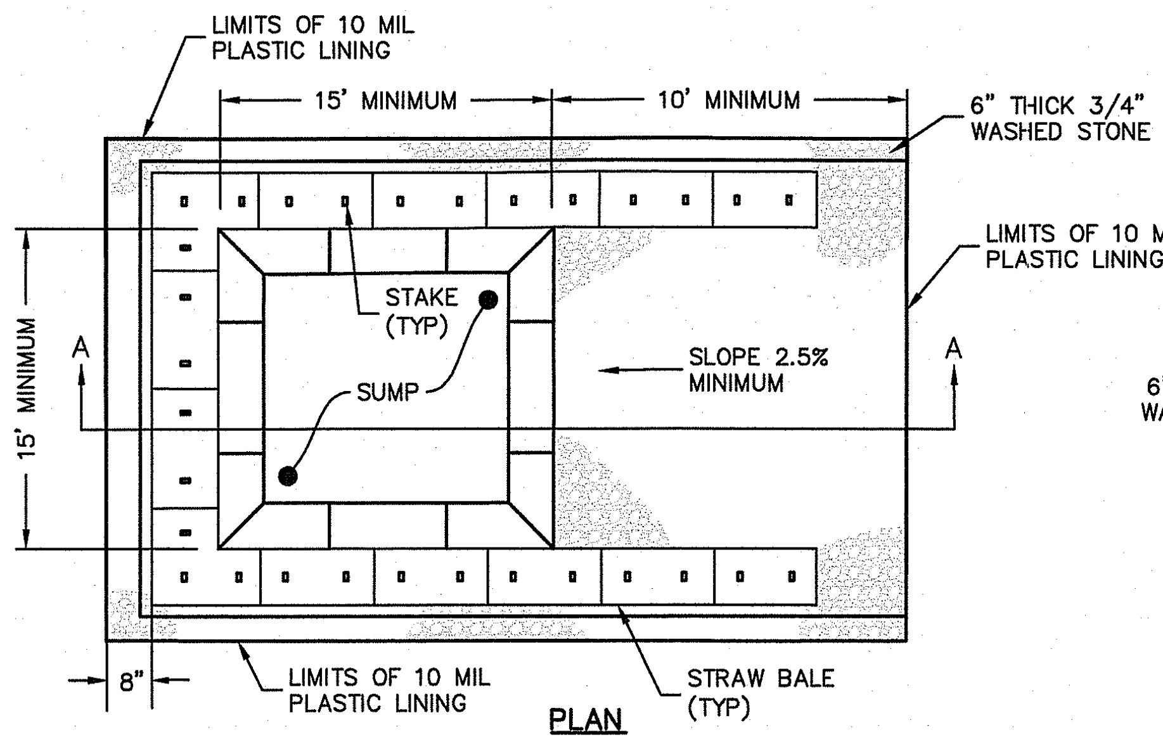
Inspection, Maintenance, and Removal Requirements:

1. INSPECT THE TEMPORARY SEDIMENT TRAP AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCH OR GREATER.
2. CLEAN THE SEDIMENT BASIN OF SEDIMENTS, YEARLY, WHEN ACCUMULATIONS EXCEED 1.5 OF THE WET STORAGE CAPACITY OR WHEN THE AVAILABLE WET POOL IS REDUCED TO 18", WHICHEVER COMES FIRST. SEDIMENTS TO BE REMOVED IN ACCORDANCE WITH THE SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.
3. MAINTAIN FAIRCLOTH SKIMMER PER MANUFACTURERS RECOMMENDATIONS.
4. INSPECT SPILLWAY FOR DEBRIS AND SIGNS OF EROSION. STABILIZE SPILLWAY WITH ADDITIONAL VEGETATION OR RIP RAP AS NECESSARY.

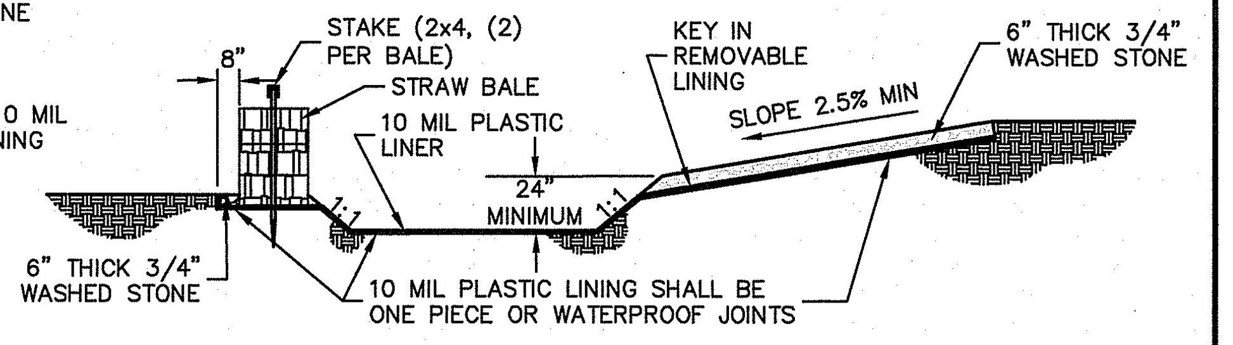
Basin	Required Sediment Storage (cf)	Required Wet Storage (cf)	Skimmer Start Elevation	Max Skimmer Release Rate (cfs)	Spillway Elevation	Spillway Length (ft)
Basin 1C	2,546	5,092	463.35	0.65	465.90	15
Basin 1G	4,059	8,118	428.35	1.25	430.85	15
Basin 1L	2,568	5,136	350.30	1.00	352.15	15
Basin 1M	5,888	11,775	302.30	2.00	304.90	18
Basin 1N	6,536	13,072	380.20	2.00	381.85	10
Basin 2A	6,458	12,916	377.45	2.20	379.50	20
Basin 2B	2,563	5,127	396.30	1.00	398.80	15

Installation Notes:

1. CLEAR, GRUB AND STRIP ANY VEGETATION AND ROOT MAT FROM ANY PROPOSED EMBANKMENT AND OUTLET AREA.
2. REMOVE STONES AND ROCKS WHOSE DIAMETER IS GREATER THAN THREE (3) INCHES AND OTHER DEBRIS.
3. EXCAVATE WET STORAGE AND CONSTRUCT THE EMBANKMENT AND/OR OUTLET AS NEEDED TO ATTAIN THE NECESSARY STORAGE REQUIREMENTS.
4. CONSTRUCT EARTHEN EMBANKMENT PER PERMANENT DETENTION BASIN DETAILS AND SPECIFICATIONS, INCLUDING THE DETENTION POND EARTHEN EMBANKMENT DETAIL (IMPERVIOUS CORE).
5. STABILIZE THE EARTHEN EMBANKMENT USING ANY OF THE FOLLOWING MEASURES, SEEDING FOR TEMPORARY VEGETATION COVER; SEEDING FOR PERMANENT VEGETATIVE COVER; OR SLOPE PROTECTION, IMMEDIATELY AFTER INSTALLATION

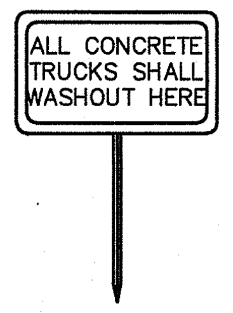

LIMITS OF 10 MIL PLASTIC LINING
15' MINIMUM
10' MINIMUM
6" THICK 3/4" WASHED STONE
LIMITS OF 10 MIL PLASTIC LINING
STAKE (TYP)
SUMP
SLOPE 2.5% MINIMUM
15' MINIMUM
A
A
8"
LIMITS OF 10 MIL PLASTIC LINING
STRAW BALE (TYP)

PLAN

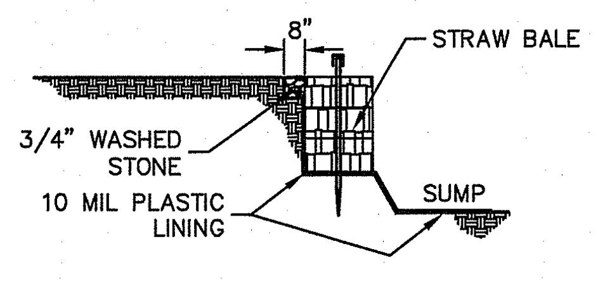

8"
STAKE (2x4, (2) PER BALE)
STRAW BALE
10 MIL PLASTIC LINER
KEY IN REMOVABLE LINING
SLOPE 2.5% MIN
6" THICK 3/4" WASHED STONE
24" MINIMUM
1:1
1:1
6" THICK 3/4" WASHED STONE
10 MIL PLASTIC LINING SHALL BE ONE PIECE OR WATERPROOF JOINTS

SECTION A–A

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.


ALL CONCRETE TRUCKS SHALL WASHOUT HERE

WASHOUT SIGN


8"
STRAW BALE
3/4" WASHED STONE
10 MIL PLASTIC LINING
SUMP

ALTERNATE SECTION
USE WHERE MORE THAN ONE ACCESSIBLE SIDE IS NEEDED

NOTES:

1. PIT IS SPECIFICALLY DESIGNATED, DIKED AND IMPERVIOUS CONTAINMENT TO PREVENT CONTACT BETWEEN CONCRETE WASH AND STORMWATER.
2. WASH WATER SHALL NOT BE ALLOWED TO FLOW TO SURFACE WATER.
3. FACILITY MUST HOLD SUFFICIENT VOLUME TO CONTAIN CONCRETE WASTE WITH A MINIMUM FREEBOARD OF 12."
4. FACILITY SHALL NOT BE FILLED BEYOND 95% CAPACITY UNLESS A NEW FACILITY IS CONSTRUCTED.
5. SAWCUT PORTLAND CEMENT CONCRETE, RESIDUE FROM SAWCUT AND GRINDING TO BE DISPOSED OF IN THE PIT.
6. CONCRETE WASHOUTS SHALL BE LOCATED A MINIMUM OF 100' FROM DRAINAGE WAYS, INLETS, AND SURFACE WATERS.
7. MANUFACTURED CONCRETE WASHOUT DEVICES MAY BE USED IF REMOVED FROM THE SITE WHEN 95% FULL CAPACITY.

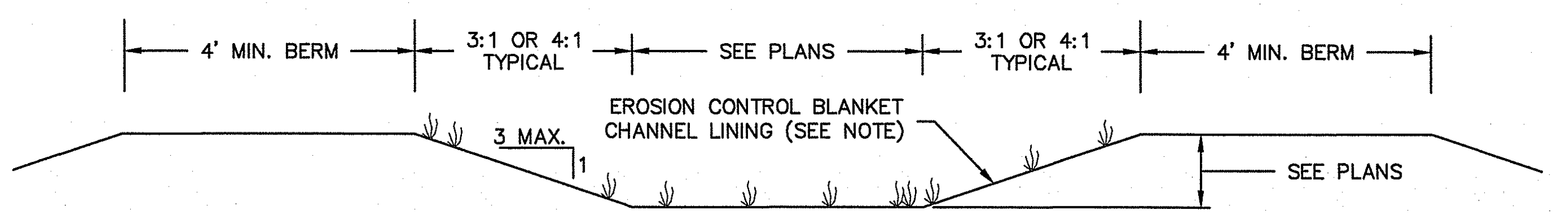
Concrete Washout Area

NOT TO SCALE

	1A-N	1A-S	1B-S	1C-N	1C-S	1D-N	1D-S	1F-N	1F-E	1H-N	1I-E	1J-W	1M-S	1N-N	1N-S	1O-N	2A-W	2B-E	3A-S	3B-E	3B-S	3C-E	3C-W	3D-N	3D-S	4A-N	4A-S
DEPTH	1.50	1.00	1.00	1.00	1.75	1.50	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.50	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.75	1.00	1.00	1.00	1.00	1.50
BASE WIDTH	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	4.00	3.00	6.00	5.00	3.00	3.00	6.00	5.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
LENGTH	239.70	522.10	89.00	296.00	243.00	263.00	93.20	223.50	187.80	77.30	212.50	154.10	519.00	233.00	425.70	375.30	151.20	108.00	334.00	252.30	199.50	270.00	93.00	72.50	318.00	200.70	504.00
AVERAGE SLOPE	0.024	0.035	0.039	0.005	0.005	0.021	0.048	0.007	0.005	0.014	0.010	0.011	0.035	0.030	0.099	0.035	0.056	0.010	0.006	0.005	0.008	0.007	0.016	0.072	0.030	0.021	0.031
CHECK DAMS	Yes	Yes	No	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes	No	Yes

Notes:

1. TEMPORARY EROSION CONTROL BLANKETS TO HANDLE MINIMUM VELOCITY OF 5 FPS. CONTRACTOR TO PROVIDE SHOP DRAWINGS TO DESIGN ENGINEER.
2. CONTRACTOR SHALL FIELD ADJUST TEMPORARY SWALES AS NECESSARY, AND ENSURE PROPER FLOW TO THE APPROPRIATE SEDIMENTATION PRACTICE.
3. SWALES TO BE ADJUSTED TO MAXIMIZE TRIBUTARY AREA TO EACH SEDIMENT TRAP PER DETAIL ABOVE.


4' MIN. BERM
3:1 OR 4:1 TYPICAL
SEE PLANS
3:1 OR 4:1 TYPICAL
4' MIN. BERM
3 MAX.
1
EROSION CONTROL BLANKET CHANNEL LINING (SEE NOTE)
SEE PLANS

Temporary Grass Swale Cross Section

NOT TO SCALE

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

BRIAN C. GIROUX
No. 9341
9/16/2019
REGISTERED PROFESSIONAL ENGINEER CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By
2	09-16-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
-	03-18-2019	RIDEM Preliminary Determination Submission	J.A.R./P.K.A.

Drawn By: J.A.R.
Design By: B.C.G.

SESC Detail Sheet
GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

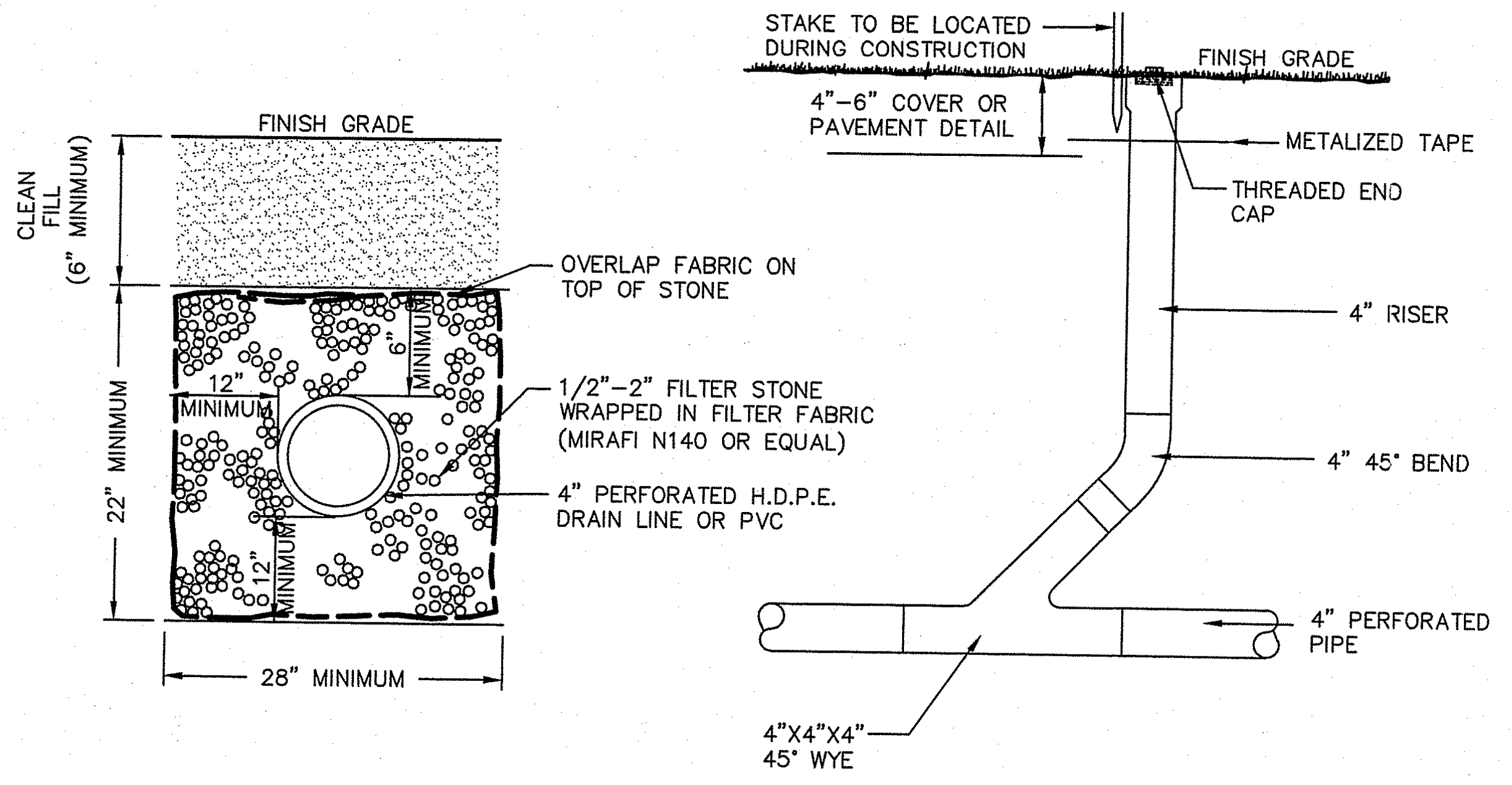
Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

DE Job No: 0601-027

SHEET 21 OF 24

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-sesc.dwg Plotted: 9/16/2019

NOTES:
1. ENCASE CLEANOUT IN CONCRETE WHEN INVERT IS 12' OR MORE BELOW FINISH GRADE.
2. AT TERMINAL CLEANOUT REPLACE WYE WITH 45° BEND.
3. SUBDRAIN AREA TO BE STAKED, MARKED, AND REMAIN UNDISTURBED PRIOR TO CONSTRUCTION. THERE IS TO BE NO CONSTRUCTION TRAFFIC ON SUBDRAIN AREA PRIOR TO CONSTRUCTION.

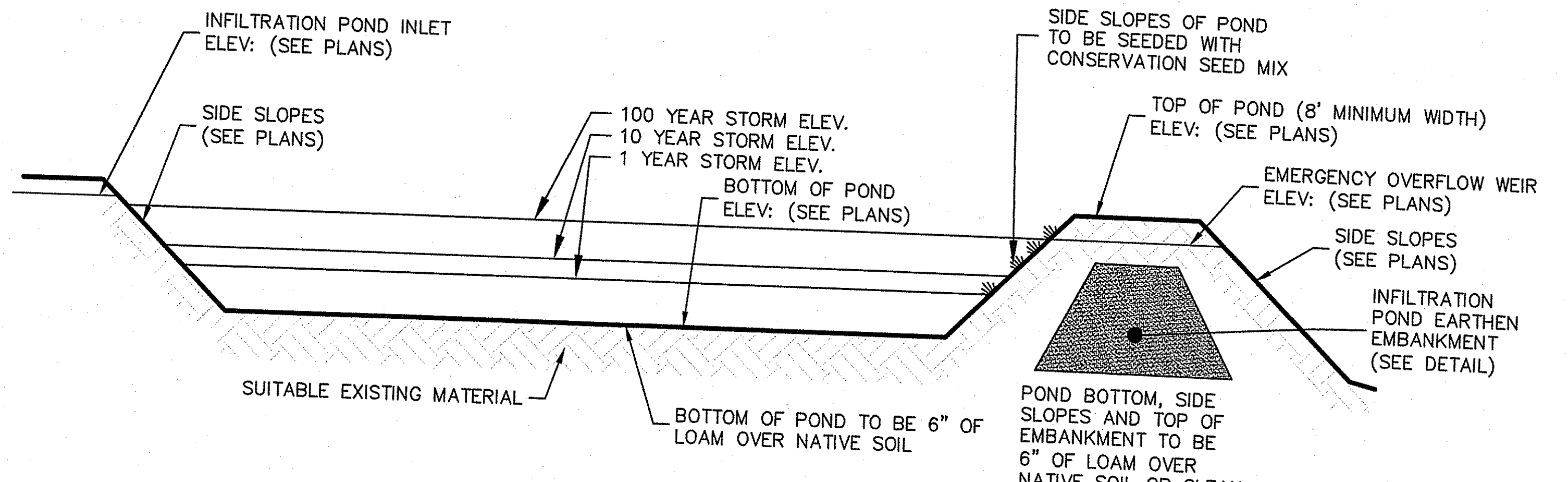

FINISH GRADE
CLEAN FILL (6" MINIMUM)
22" MINIMUM
12" MINIMUM
6" MINIMUM
12" MINIMUM
28" MINIMUM
OVERLAP FABRIC ON TOP OF STONE
1/2"-2" FILTER STONE WRAPPED IN FILTER FABRIC (MIRAFI N140 OR EQUAL)
4" PERFORATED H.D.P.E. DRAIN LINE OR PVC
STAKE TO BE LOCATED DURING CONSTRUCTION
FINISH GRADE
4"-6" COVER OR PAVEMENT DETAIL
METALIZED TAPE
THREADED END CAP
4" RISER
4" 45° BEND
4" PERFORATED PIPE
4"X4"X4" 45° WYE

4" Subdrain (Underdrain) Cleanout And Trench (TYP)

NOT TO SCALE

DESCRIPTION	I-1J	I-1K	I-1L
TOP OF POND ELEVATION	400.00	375.00	350.00
100 YEAR STORM ELEVATION	398.95	372.80	348.71
10 YEAR STORM ELEVATION	398.63	372.10	347.23
1 YEAR STORM ELEVATION	397.40	371.20	346.08
BOTTOM OF POND ELEVATION	397.00	371.00	346.00
SEASONAL HIGH GWT ELEVATION	394.00	367.40	342.80
SOIL EVALUATION	TH-20	TH-35	TH-33

NOTE:
LIMITS OF INFILTRATION POND TO BE STAKED OUT AND NOT USED AS A TEMPORARY SEDIMENT BASIN DURING CONSTRUCTION (NO CONSTRUCTION TRAFFIC ALLOWED WITHIN POND LIMITS)

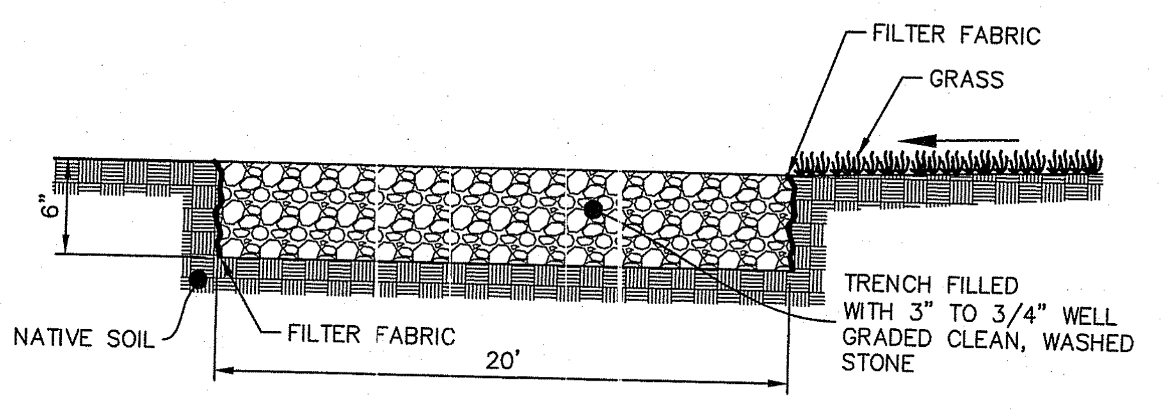

INFILTRATION POND INLET ELEV: (SEE PLANS)
SIDE SLOPES (SEE PLANS)
100 YEAR STORM ELEV.
10 YEAR STORM ELEV.
1 YEAR STORM ELEV.
BOTTOM OF POND ELEV: (SEE PLANS)
SIDE SLOPES OF POND TO BE SEEDED WITH CONSERVATION SEED MIX
TOP OF POND (8' MINIMUM WIDTH) ELEV: (SEE PLANS)
EMERGENCY OVERFLOW WEIR ELEV: (SEE PLANS)
SIDE SLOPES (SEE PLANS)
INFILTRATION POND EARTHEN EMBANKMENT (SEE DETAIL)
SUITABLE EXISTING MATERIAL
BOTTOM OF POND TO BE 6" OF LOAM OVER NATIVE SOIL
POND BOTTOM, SIDE SLOPES AND TOP OF EMBANKMENT TO BE 6" OF LOAM OVER NATIVE SOIL OR CLEAN COMPACTED FILL

INFILTRATION POND
NOT TO SCALE

DESCRIPTION	D-1A	D-1A2	D-1B	D-1C	D-1D	D-1F	D-1G	D-1H	D-1I
TOP OF POND ELEVATION	448.00	449.00	450.00	464.00	459.00	446.00	430.00	440.00	422.00
100 YEAR STORM ELEVATION	446.97	448.05	449.04	463.07	458.02	444.99	428.25	438.62	419.45
10 YEAR STORM ELEVATION	446.65	447.76	448.61	462.69	457.62	444.49	427.31	438.52	418.45
1 YEAR STORM ELEVATION	445.69	445.54	447.18	460.87	456.27	444.07	426.23	438.12	418.10
BOTTOM OF POND ELEVATION	445.00	445.00	446.50	459.00	456.00	444.00	426.00	438.00	418.00
SEASONAL HIGH GWT ELEVATION	N/A	442.00	442.00	459.00	452.70	442.40	417.50	N/A	418.00
SOIL EVALUATION	TH-17	TH-11	TH-11	TH-8	TH-43	TH-5	TH-37	N/A	TH-36

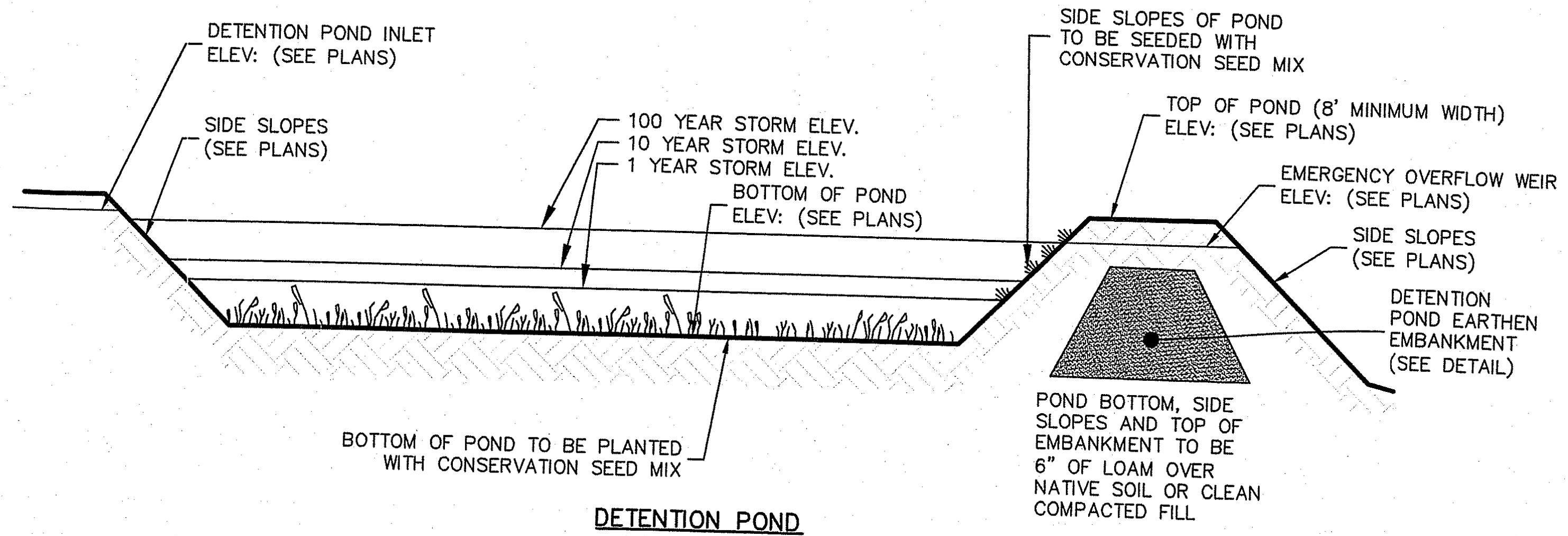
DESCRIPTION	D-1M	D-1N	D-2A	D-2B	D-3A	D-3B	D-3C	D-3D	D-4A
TOP OF POND ELEVATION	302.00	380.00	380.00	397.00	427.00	430.00	503.00	500.00	450.00
100 YEAR STORM ELEVATION	300.05	377.54	379.00	395.99	425.99	428.98	501.97	498.91	448.42
10 YEAR STORM ELEVATION	299.03	376.89	376.70	395.09	425.60	428.33	500.63	498.46	447.54
1 YEAR STORM ELEVATION	298.12	376.14	375.98	394.25	425.10	427.68	499.73	497.35	446.25
BOTTOM OF POND ELEVATION	298.00	376.00	375.00	394.00	425.00	427.50	499.00	497.00	446.00
SEASONAL HIGH GWT ELEVATION	303.00	374.70	375.00	384.70	423.50	427.50	499.00	496.60	444.00
SOIL EVALUATION	TH-30	TH-32	TH-27	TH-40	TH-39	TH-38	TH-41	TH-42	TH-13

TOP OF POND ELEVATION	427.00
100 YEAR STORM ELEVATION	427.08
10 YEAR STORM ELEVATION	427.03
1 YEAR STORM ELEVATION	426.88
BOTTOM OF POND ELEVATION	426.50
SEASONAL HIGH GWT ELEVATION	<422.00
SOIL EVALUATION	TH-25


FILTER FABRIC
GRASS
6"
NATIVE SOIL
FILTER FABRIC
20'
TRENCH FILLED WITH 3" TO 3/4" WELL GRADED CLEAN, WASHED STONE

Stone Infiltration Trench/ Access Road

NOT TO SCALE

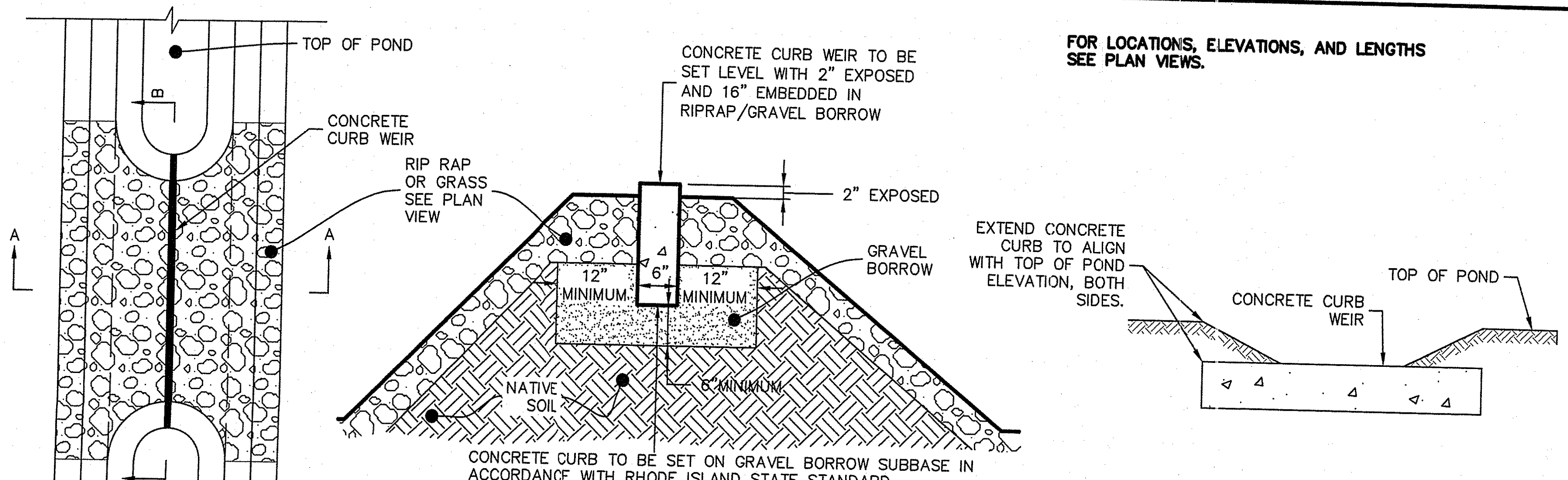

DETENTION POND INLET ELEV: (SEE PLANS)
SIDE SLOPES (SEE PLANS)
100 YEAR STORM ELEV.
10 YEAR STORM ELEV.
1 YEAR STORM ELEV.
BOTTOM OF POND ELEV: (SEE PLANS)
SIDE SLOPES OF POND TO BE SEEDED WITH CONSERVATION SEED MIX
TOP OF POND (8' MINIMUM WIDTH) ELEV: (SEE PLANS)
EMERGENCY OVERFLOW WEIR ELEV: (SEE PLANS)
SIDE SLOPES (SEE PLANS)
DETENTION POND EARTHEN EMBANKMENT (SEE DETAIL)
BOTTOM OF POND TO BE PLANTED WITH CONSERVATION SEED MIX
POND BOTTOM, SIDE SLOPES AND TOP OF EMBANKMENT TO BE 6" OF LOAM OVER NATIVE SOIL OR CLEAN COMPACTED FILL

DETENTION POND
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

FOR LOCATIONS, ELEVATIONS, AND LENGTHS SEE PLAN VIEWS.


TOP OF POND
CONCRETE CURB WEIR
RIP RAP OR GRASS SEE PLAN VIEW
A
A
B
B
TOP OF POND
CONCRETE CURB WEIR TO BE SET LEVEL WITH 2" EXPOSED AND 16" EMBEDDED IN RIPRAP/GRAVEL BORROW
2" EXPOSED
GRAVEL BORROW
12" MINIMUM
6"
12" MINIMUM
NATIVE SOIL
6" MINIMUM
EXTEND CONCRETE CURB TO ALIGN WITH TOP OF POND ELEVATION, BOTH SIDES.
CONCRETE CURB WEIR
TOP OF POND

PLAN VIEW
NOT TO SCALE

CONCRETE CURB TO BE SET ON GRAVEL BORROW SUBBASE IN ACCORDANCE WITH RHODE ISLAND STATE STANDARD SPECIFICATIONS. GRAVEL BORROW TO EXTEND MINIMUM 6" BELOW EXISTING TOP/SUBSOIL. ALL BACKFILL SHALL BE FREE FROM ORGANIC MATERIALS. ALL MATERIAL PLACED BELOW CURBING SHALL BE COMPACTED TO 95% DENSITY.

SECTION A–A
NOT TO SCALE

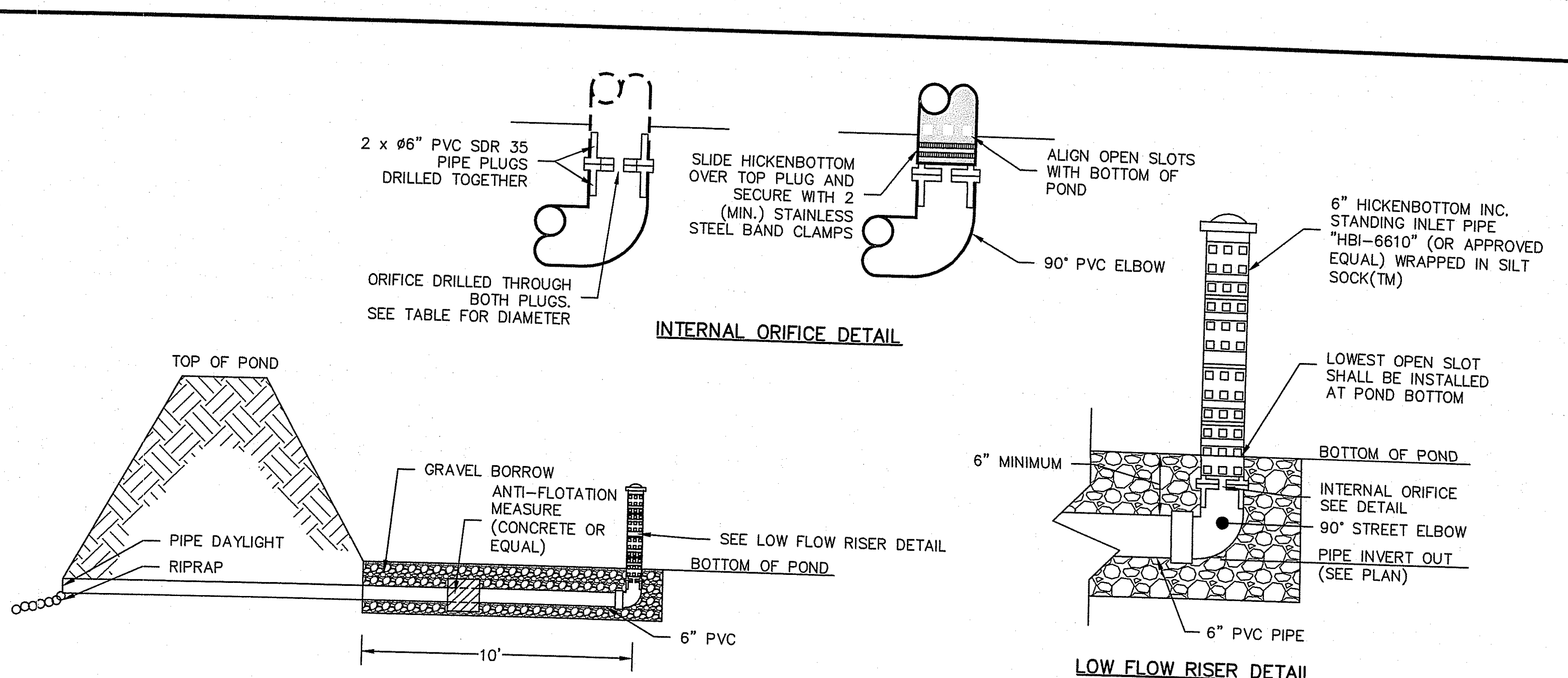
SECTION B–B
NOT TO SCALE

NOTE:
1. ALL CONCRETE CURB WEIRS MUST BE MONOLITHIC. CONCRETE CURB WEIRS CANNOT BE MULTIPLE PRECAST CURBS JOINED IN SEQUENCE.
2. CONTRACTOR MAY PROVIDE ALTERNATIVE DESIGNS FOR WEIR TO DESIGN ENGINEER FOR APPROVAL.

Curb Outlet Weir

NOT TO SCALE

INTERNAL ORIFICE SCHEDULE	
LOCATION	DIAMETER
D-1A	1.75"
D-1A2	1.50"
D-1B	1.50"
D-1C	2.00"
D-1D	1.75"
D-1F	2.50"
D-1G	3.50"
D-1H	1.25"
D-1I	2.50"
D-1M	3.25"
D-1N	3.75"
D-2A	2.75"
D-2B	2.50"
D-3A	1.25"
D-3B	2.75"
D-3C	2.50"
D-3D	1.25"
D-4A	2.00"


2 x ø6" PVC SDR 35 PIPE PLUGS DRILLED TOGETHER
ORIFICE DRILLED THROUGH BOTH PLUGS. SEE TABLE FOR DIAMETER
SLIDE HICKENBOTTOM OVER TOP PLUG AND SECURE WITH 2 (MIN.) STAINLESS STEEL BAND CLAMPS
ALIGN OPEN SLOTS WITH BOTTOM OF POND
90° PVC ELBOW
TOP OF POND
PIPE DAYLIGHT
RIPRAP
GRAVEL BORROW
ANTI-FLOTATION MEASURE (CONCRETE OR EQUAL)
SEE LOW FLOW RISER DETAIL
BOTTOM OF POND
6" PVC
10'
6" HICKENBOTTOM INC. STANDING INLET PIPE "HBI-6610" (OR APPROVED EQUAL) WRAPPED IN SILT SOCK(TM)
LOWEST OPEN SLOT SHALL BE INSTALLED AT POND BOTTOM
6" MINIMUM
BOTTOM OF POND
INTERNAL ORIFICE SEE DETAIL
90° STREET ELBOW
PIPE INVERT OUT (SEE PLAN)
6" PVC PIPE

INTERNAL ORIFICE DETAIL

LOW FLOW RISER DETAIL

Low Flow (CPv) Outlet (Without Outlet Structure)

NOT TO SCALE

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

BRIAN C. GIROUX
No. 934
REGISTERED PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R./P.A.A.

Drawn By: J.A.R.

Pond Detail Sheet

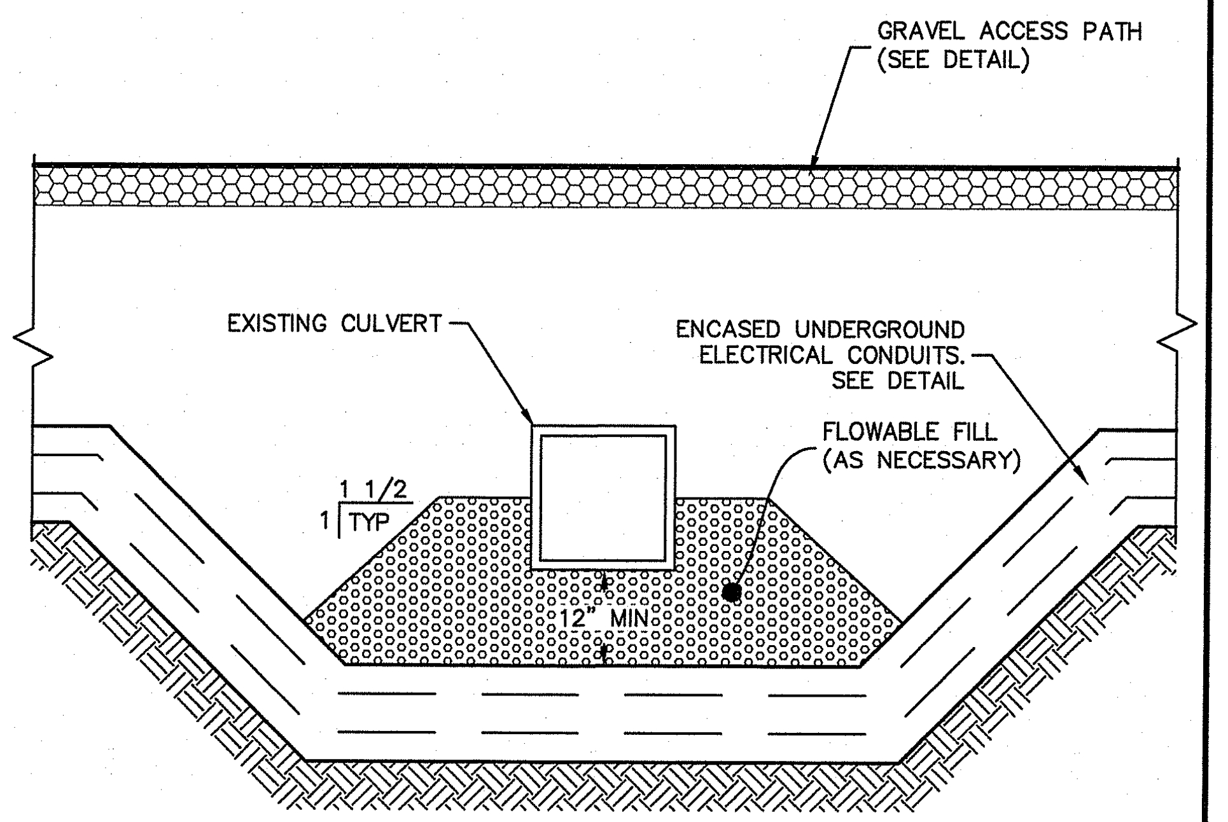
GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

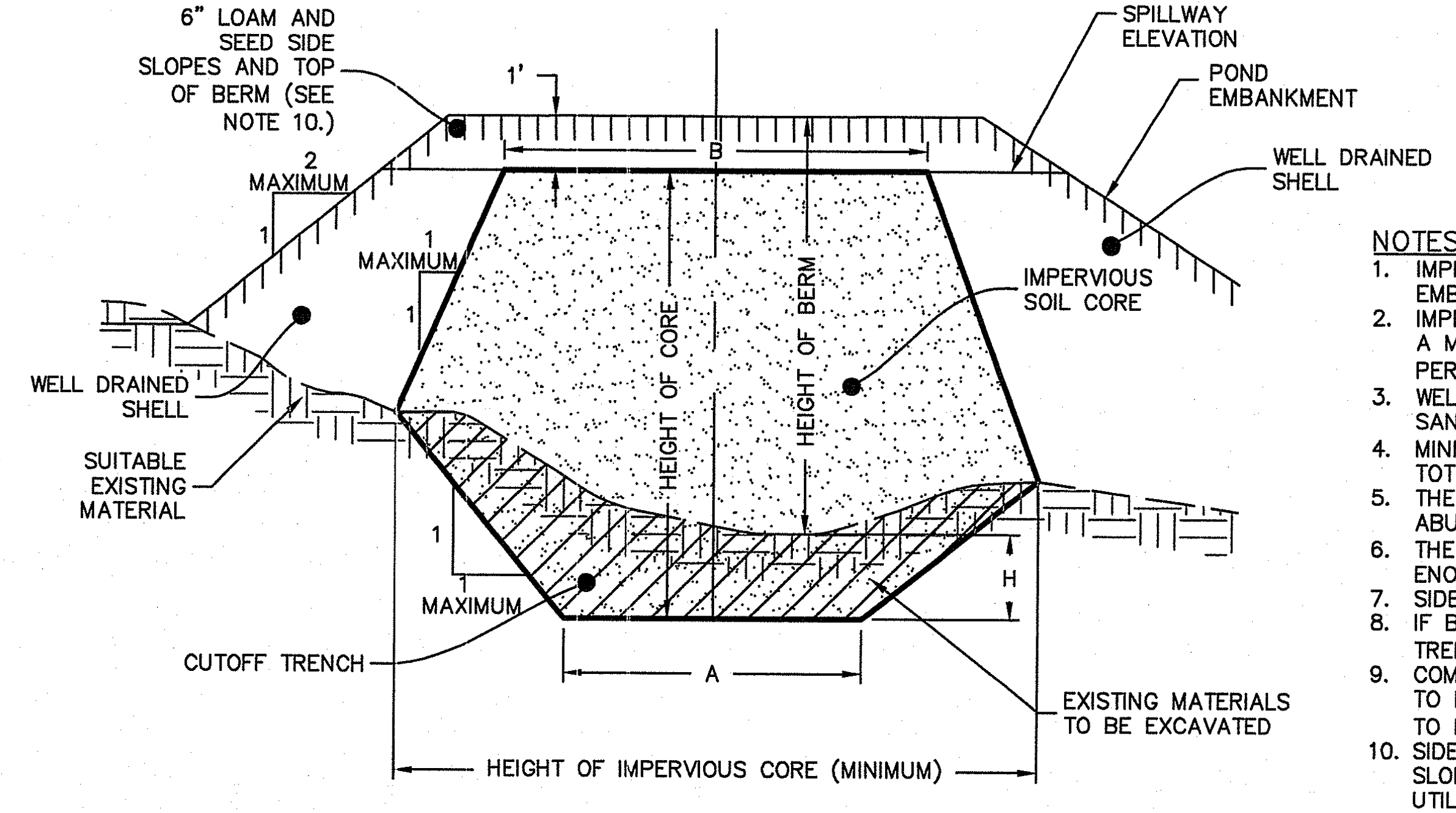
Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 22 OF 24

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-plan.dwg Plotted: 9/16/2019


GRAVEL ACCESS PATH (SEE DETAIL)
EXISTING CULVERT
ENCASED UNDERGROUND ELECTRICAL CONDUITS. SEE DETAIL
FLOWABLE FILL (AS NECESSARY)
1 1/2
1 TYP
12" MIN

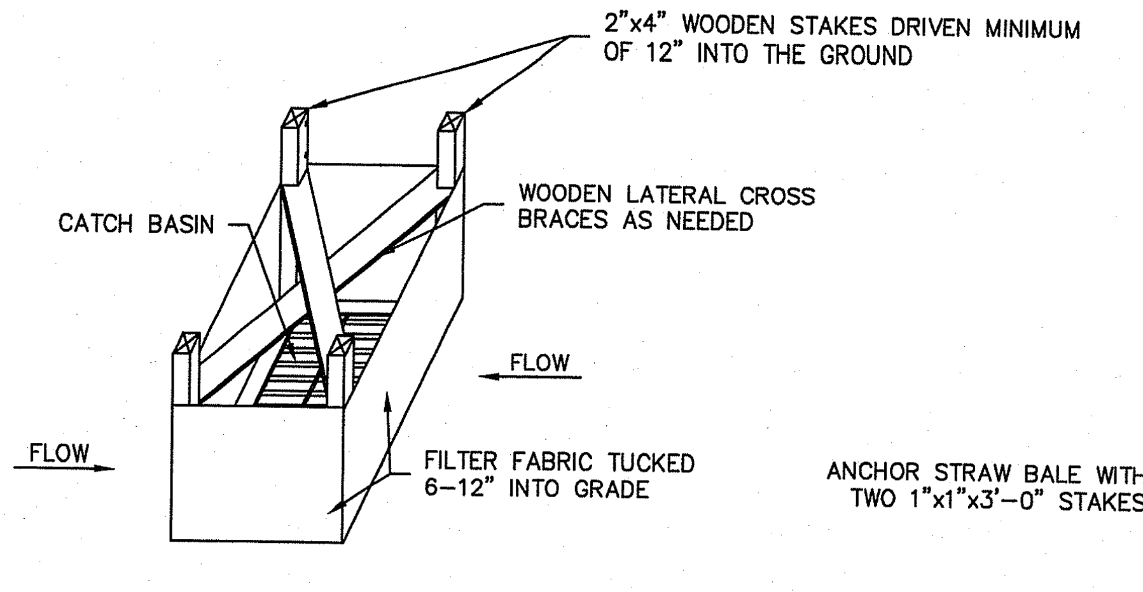
Electric Duct Bank at Existing Culvert Detail
NOT TO SCALE


6" LOAM AND SEED SIDE SLOPES AND TOP OF BERM (SEE NOTE 10.)
EMERGENCY SPILLWAY ELEVATION
POND EMBANKMENT
WELL DRAINED SHELL
1'
B
2
MAXIMUM
1
MAXIMUM
HEIGHT OF CORE
HEIGHT OF BERM
IMPERVIOUS SOIL CORE
WELL DRAINED SHELL
SUITABLE EXISTING MATERIAL
1
MAXIMUM
H
CUTOFF TRENCH
A
EXISTING MATERIALS TO BE EXCAVATED
HEIGHT OF IMPERVIOUS CORE (MINIMUM)

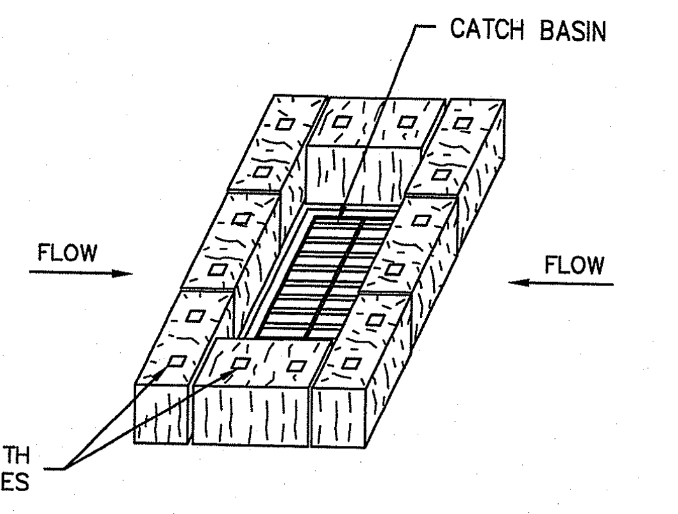
BERM HEIGHT (FT)	TOP WIDTH OF CORE – B (FT)
0–6.5	8.2
6.6–9.8	9.2
9.9–13.1	9.8
13.2–16.4	10.8
16.5–19.7	11.5

NOTES:
1. IMPERVIOUS SOIL CORE TO BE PROVIDED FOR ALL POND EMBANKMENTS.
2. IMPERVIOUS SOIL CORE TO BE CONSTRUCTED OF A MATERIAL WITH A MINIMUM OF 55% PASSING THE #200 SIEVE AND A MAXIMUM PERMEABILITY OF 0.00005 CM/S.
3. WELL DRAINED SHELL TO BE CONSTRUCTED OF GRAVEL AND/OR SAND WITH LESS THAN 5% PASSING THE #200 SIEVE.
4. MINIMUM DEPTH OF CUTOFF TRENCH (H) SHALL BE 3/4 OF THE TOTAL BERM HEIGHT.
5. THE IMPERVIOUS CORE AT A MINIMUM SHALL EXTEND UP BOTH ABUTMENTS TO THE EMERGENCY SPILLWAY ELEVATION.
6. THE MINIMUM BOTTOM WIDTH (A) SHALL BE 5'–8', AND WIDE ENOUGH TO PERMIT OPERATION OF COMPACTION EQUIPMENT.
7. SIDE SLOPES OF THE TRENCH SHALL BE NO STEEPER THAN 1:1.
8. IF BEDROCK IS ENCOUNTERED BELOW THE DAM THE CUT OFF TRENCH CAN BE REDUCED TO 1'x1' (AxH)
9. COMPACTION REQUIREMENTS FOR THE SHELL AND IMPERVIOUS CORE TO BE 95% OF THE MODIFIED PROCTOR PER ASTM D1557. ALL FILL TO BE PLACED IN LIFTS NOT EXCEEDING 12".
10. SIDE SLOPE OF POND EMBANKMENT TO BE 2:1 MAXIMUM. IF SIDE SLOPES ARE STEEPER THAN 3:1, SLOPE PROTECTION MUST BE UTILIZED ON POND EMBANKMENT. THIS INCLUDES, BUT NOT LIMITED TO, RIPRAP AND EROSION CONTROL MATS.
11. THE IMPERVIOUS CORE SHALL BE KEPT FREE FROM STANDING WATER DURING THE BACKFILL OPERATION.
12. ALL EMBANKMENTS TO BE DESIGNED BY A GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION. ALL EMBANKMENT INSTALLATIONS TO BE SUPERVISED BY A GEOTECHNICAL ENGINEER.

Pond Earthen Embankment
NOT TO SCALE


2"x4" WOODEN STAKES DRIVEN MINIMUM OF 12" INTO THE GROUND
CATCH BASIN
WOODEN LATERAL CROSS BRACES AS NEEDED
FLOW
FLOW
FILTER FABRIC TUCKED 6–12" INTO GRADE

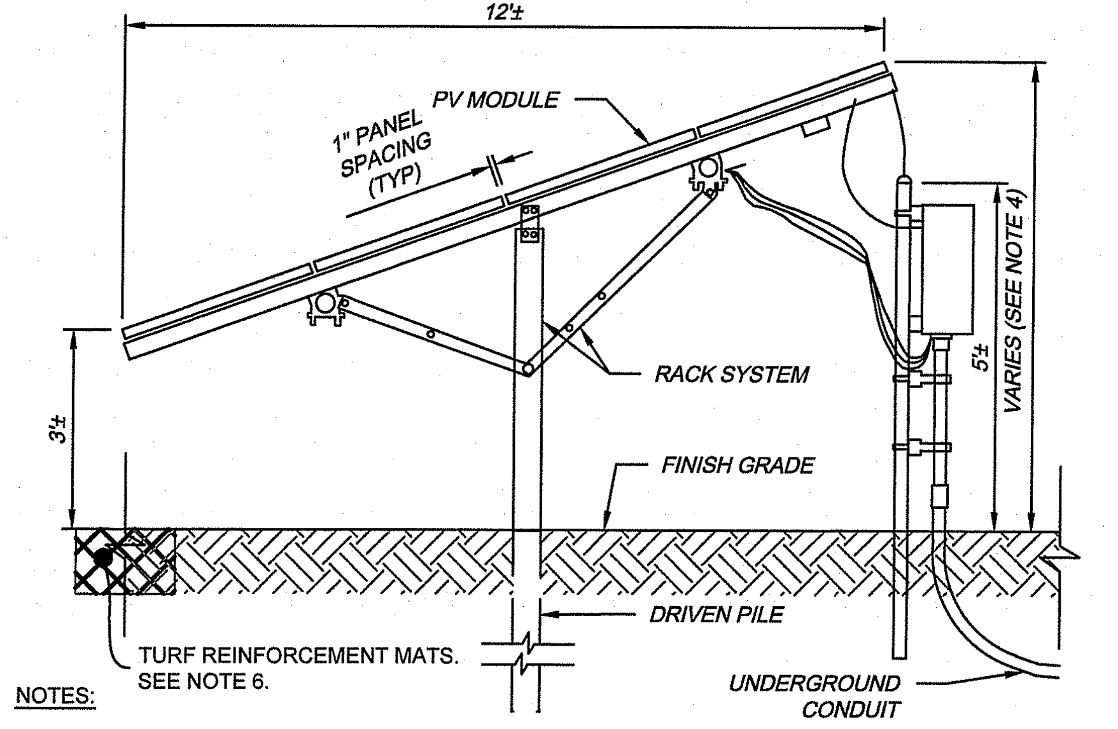
SILT FENCE INSTALLATION FOR CATCH BASINS AT LOW POINTS


CATCH BASIN
FLOW
FLOW
ANCHOR STRAW BALE WITH TWO 1"x1"x3'–0" STAKES

STRAW BALE FILTER INSTALLATION FOR CATCH BASINS AT LOW POINTS

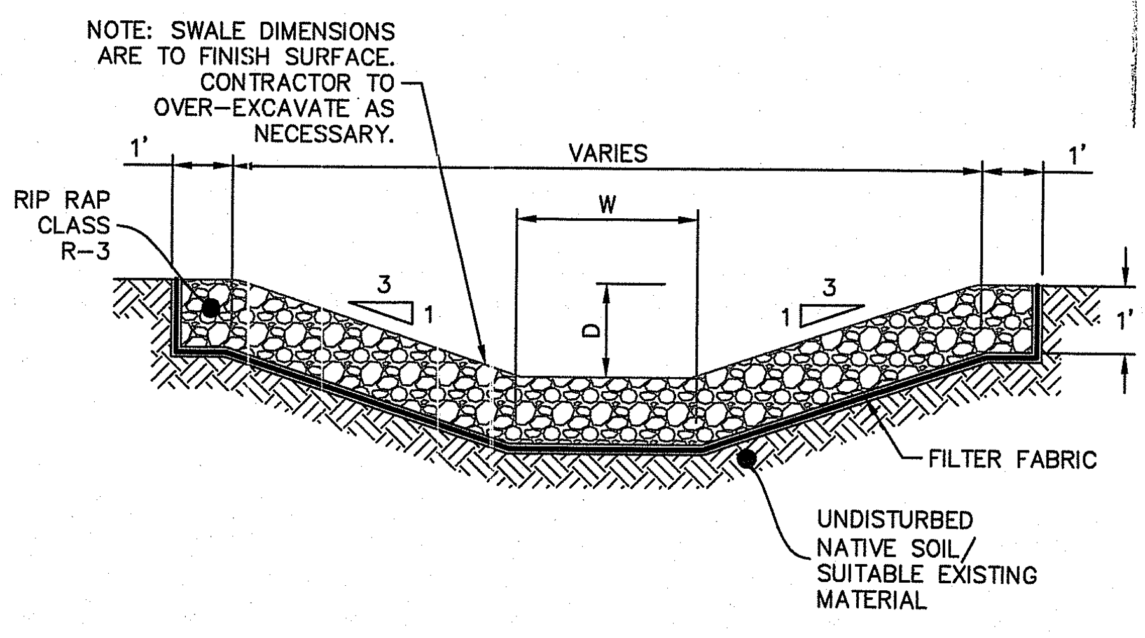
NOTES:
1. STORMWATER INLETS WHICH DO NOT DISCHARGE TO SEDIMENT TRAPS OR BASINS MUST BE PROTECTED UNTIL THE TRIBUTARY AREAS ARE STABILIZED.
2. SEDIMENT MUST BE REMOVED FROM INLET PROTECTION AFTER EACH STORM.
3. REFER TO LONG TERM/SHORT TERM MAINTENANCE NOTES FOR TIMING OF PLACEMENT AND REMOVAL OF EROSION CONTROL ELEMENTS.

Catch Basin Erosion Control
NOT TO SCALE


12'±
PV MODULE
1" PANEL SPACING (TYP)
RACK SYSTEM
FINISH GRADE
3'±
5'±
VARIES (SEE NOTE 4)
DRIVEN PILE
TURF REINFORCEMENT MATS. SEE NOTE 6.
UNDERGROUND CONDUIT

NOTES:
1. ADJACENT ARRAY TABLES SHALL BE INSTALLED WITH A MINIMUM OF 6 INCHES OF SEPARATION.
2. ROWS OF ARRAY TABLES SHALL BE INSTALLED WITH A MINIMUM OF 13 FEET OF SEPARATION.
3. TYPICAL SOLAR PANEL RACKING SYSTEM SHOWN. SELECTED RACKING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS.
4. INSTALLED HEIGHT WILL VARY BASED ON THE RACKING LAYOUT AND FINAL DESIGN BUT WILL BE LESS THAN 12' PER ZONING CODE REQUIREMENTS.
5. SEE PLANS FOR PANEL TYPE, QUANTITY AND LOCATIONS.
6. PERMANENT TURF MATS TO BE INSTALLED IF EROSION ISSUES PERSIST AFTER PERMANENT STABILIZATION AND/OR TO SUPPORT PERMANENT STABILIZATION.

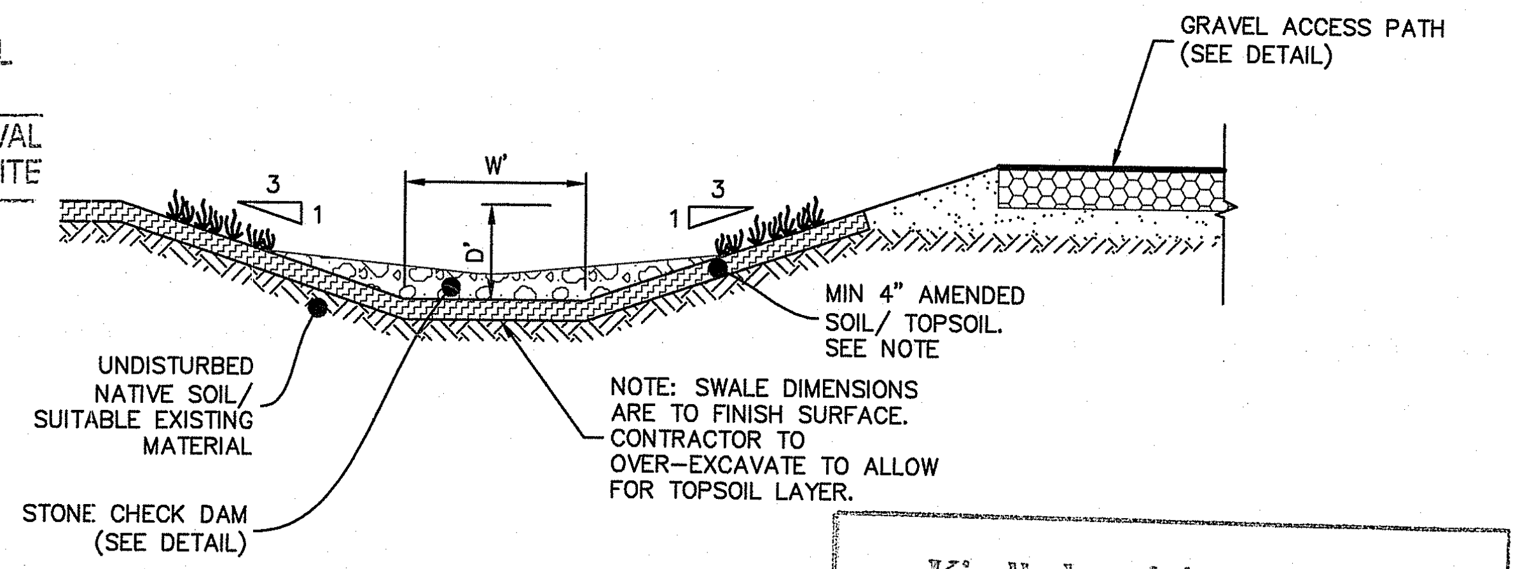
Solar Panel Racking
NOT TO SCALE


NOTE: SWALE DIMENSIONS ARE TO FINISH SURFACE. CONTRACTOR TO OVER–EXCAVATE AS NECESSARY.
1'
VARIES
1'
W
RIP RAP CLASS R–3
3
1
D
3
1
1'
FILTER FABRIC
UNDISTURBED NATIVE SOIL/ SUITABLE EXISTING MATERIAL

Rip Rap Swale Cross Section
NOT TO SCALE

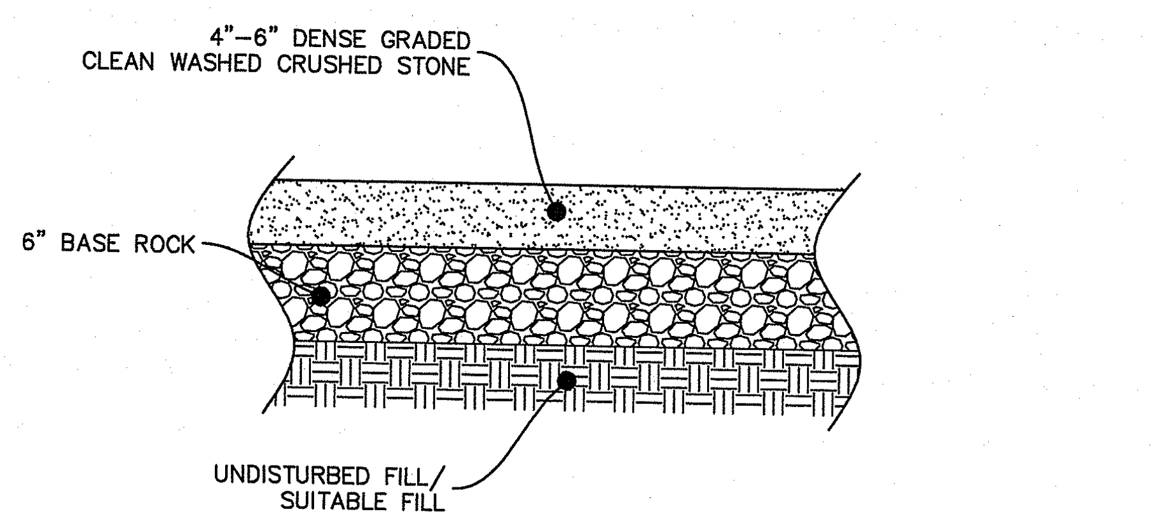
NOTES:
1. FOR DIMENSIONS AND RIP RAP CLASS, SEE SHEETS 12 THROUGH 19.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE


GRAVEL ACCESS PATH (SEE DETAIL)
3
1
W'
D'
3
1
MIN 4" AMENDED SOIL/ TOPSOIL. SEE NOTE
UNDISTURBED NATIVE SOIL/ SUITABLE EXISTING MATERIAL
NOTE: SWALE DIMENSIONS ARE TO FINISH SURFACE. CONTRACTOR TO OVER–EXCAVATE TO ALLOW FOR TOPSOIL LAYER.
STONE CHECK DAM (SEE DETAIL)

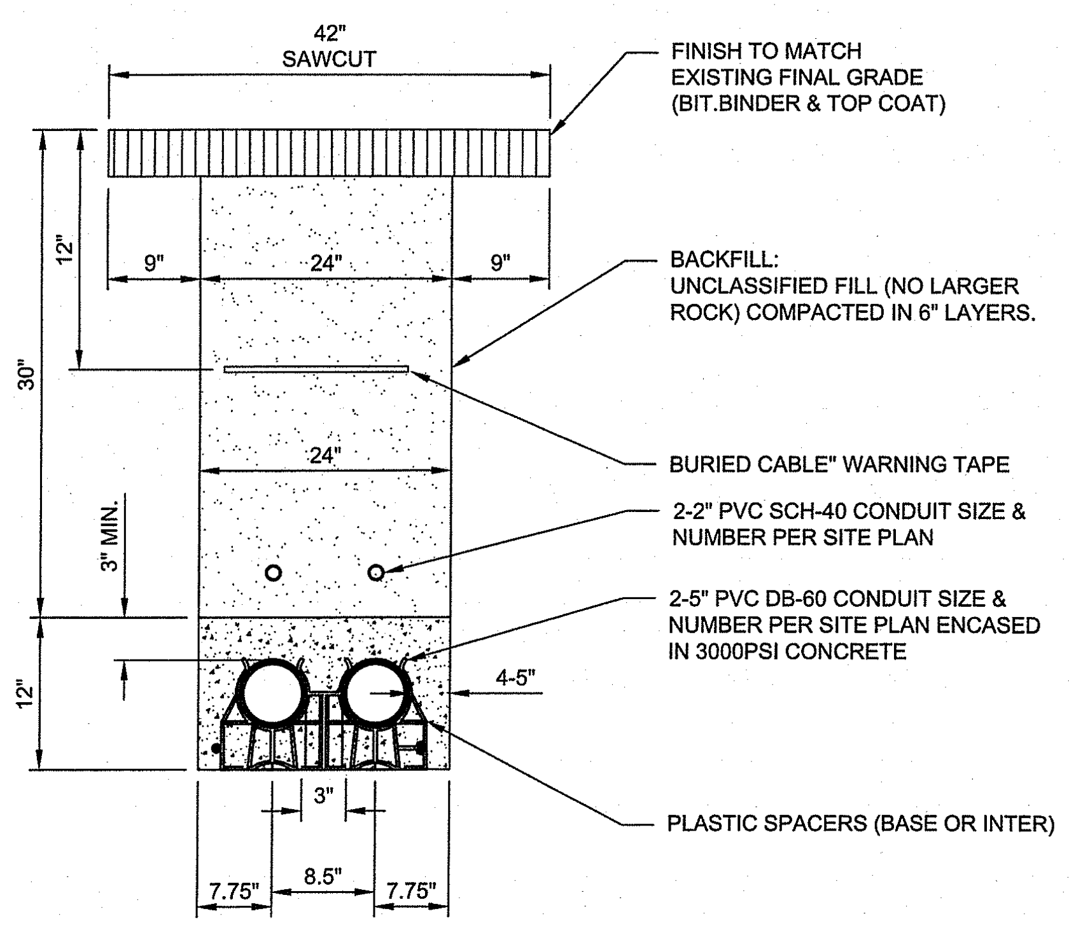
Grass Swale Cross Section
NOT TO SCALE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

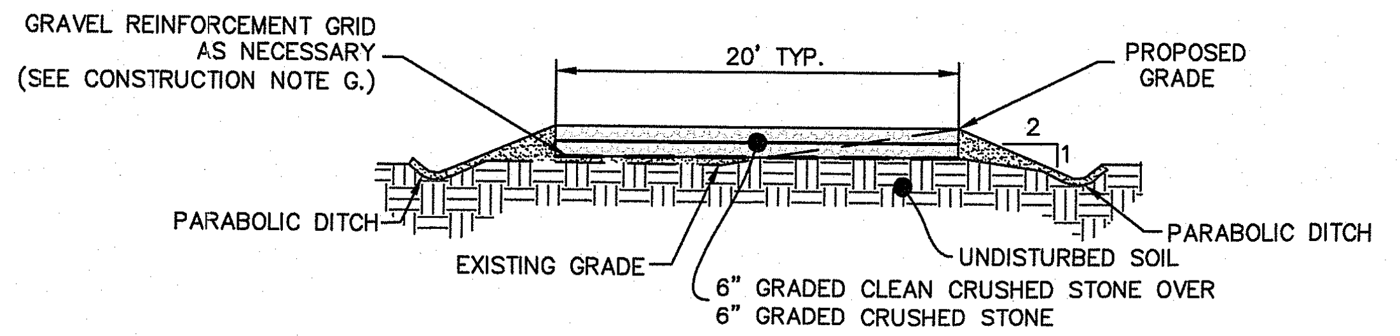

4"–6" DENSE GRADED CLEAN WASHED CRUSHED STONE
6" BASE ROCK
UNDISTURBED FILL/ SUITABLE FILL

NOTE:
CROSS SECTION REPRESENTS MINIMUM REQUIRED THICKNESS. CONTRACTOR TO COORDINATE FINAL CROSS SECTION THICKNESS WITH NGRID AND THE SUBSTATION DESIGNER PRIOR TO CONSTRUCTION

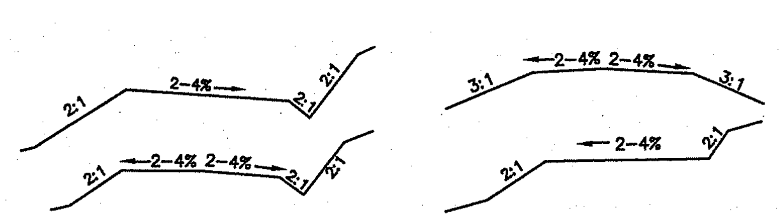
Substation Cross Section
NOT TO SCALE


42" SAWCUT
FINISH TO MATCH EXISTING FINAL GRADE (BIT.BINDER & TOP COAT)
12"
9"
24"
9"
30"
BACKFILL: UNCLASSIFIED FILL (NO LARGER ROCK) COMPACTED IN 6" LAYERS.
24"
BURIED CABLE" WARNING TAPE
3" MIN.
2-2" PVC SCH-40 CONDUIT SIZE & NUMBER PER SITE PLAN
2-5" PVC DB-60 CONDUIT SIZE & NUMBER PER SITE PLAN ENCASED IN 3000PSI CONCRETE
12"
4-5"
3"
PLASTIC SPACERS (BASE OR INTER)
7.75"
8.5"
7.75"

Underground Electrical
NOT TO SCALE


GRAVEL REINFORCEMENT GRID AS NECESSARY (SEE CONSTRUCTION NOTE G.)
20' TYP.
PROPOSED GRADE
2
1
PARABOLIC DITCH
PARABOLIC DITCH
EXISTING GRADE
UNDISTURBED SOIL
6" GRADED CLEAN CRUSHED STONE OVER 6" GRADED CRUSHED STONE

SURFACING TYPICAL


2:1
2–4%
2:1
2:1
2:1
2–4% 2–4%
2:1
2:1
3:1
2–4% 2–4%
3:1
2:1
2–4%
2:1

PROFILE TYPICAL

MATERIALS SPECIFICATIONS	
SIEVE DESIGNATION	PERCENTAGE BY MASS (WEIGHT) PASSING SQUARE MESH SIEVES
90mm (3.5in)	100
75mm (3in)	90–100
50mm (2in)	75–100
25mm (1in)	50–80
12.5mm (0.5in)	30–60
4.75mm (No.4)	15–40
7.5um (No. 200)	0–6

DENSE GRADED CRUSHED STONE FOR SUBBASE:

A. DENSE GRADED CRUSHED STONE FOR SUBBASE SHALL CONSIST OF CLEAN, HARD, UNIFORMLY GRADED, CRUSHED STONE. IT SHALL BE SUFFICIENTLY FREE FROM DIRT, DELETERIOUS MATERIAL, AND PIECES THAT ARE STRUCTURALLY WEAK AND SHALL MEET THE FOLLOWING REQUIREMENTS:

B. SOURCE OF MATERIAL SHALL BE OBTAINED FROM AREAS STRIPPED AND CLEANED OF SOIL AND DEBRIS BEFORE BLASTING

C. MATERIAL COARSER THAN THE 4.75mm (No. 4) SIEVE SHALL NOT BE MORE THAN 30 PERCENT, BY MASS (WEIGHT), OF THIN AND/OR ELONGATED PIECES.

MATERIALS SPECIFICATIONS	
SIEVE DESIGNATION	PERCENTAGE BY MASS (WEIGHT) PASSING SQUARE MESH SIEVES
90mm (3.5in)	100
75mm (3in)	90–100
50mm (2in)	75–100
25mm (1in)	50–80
12.5mm (0.5in)	30–60
4.75mm (No.4)	0–40
7.5um (No. 200)	0

DENSE GRADED CLEAN CRUSHED STONE FOR SUBBASE:

A. DENSE GRADED CLEAN CRUSHED STONE FOR SUBBASE SHALL CONSIST OF CLEAN, WASHED, HARD, UNIFORMLY GRADED, CRUSHED STONE. IT SHALL BE SUFFICIENTLY FREE FROM DIRT, DELETERIOUS MATERIAL, AND PIECES THAT ARE STRUCTURALLY WEAK AND SHALL MEET THE FOLLOWING REQUIREMENTS:

B. SOURCE OF MATERIAL SHALL BE OBTAINED FROM AREAS STRIPPED AND CLEANED OF SOIL AND DEBRIS BEFORE BLASTING

C. MATERIAL COARSER THAN THE 4.75mm (No. 4) SIEVE SHALL NOT BE MORE THAN 30 PERCENT, BY MASS (WEIGHT), OF THIN AND/OR ELONGATED PIECES.

SURFACING SPECIFICATIONS			
CONDITIONS:	ROAD THICKNESS	STONE SIZE	FINES
BASE LAYER WITH GEOTEXTILE FABRIC (NOT EXCESSIVELY WET)	4" MIN.	3–3 1/2	0–6%
BASE LAYER WITH GEOTEXTILE FABRICS (WET CONDTIONS)	6" MIN.	3–3 1/2	0–6%

CONSTRUCTION NOTE:

A. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER TO MINIMIZE POTENTIAL EROSION AND WATER QUALITY DEGRADATION.

B. FIXED EROSION CONTROLS AND SITE STABILIZATION SHALL BE CONDUCTED IN ACCORDANCE WITH APPROVED BMP'S OR PURSUANT TO PROJECT SPECIFIC PERMITS.

C. TREES, STUMPS, ROOTS, BRUSH AND WEEDS SHALL BE REMOVED FROM THE WORK AREA IF DETERMINED NECESSARY TO SAFELY CONSTRUCT ROADWAY.

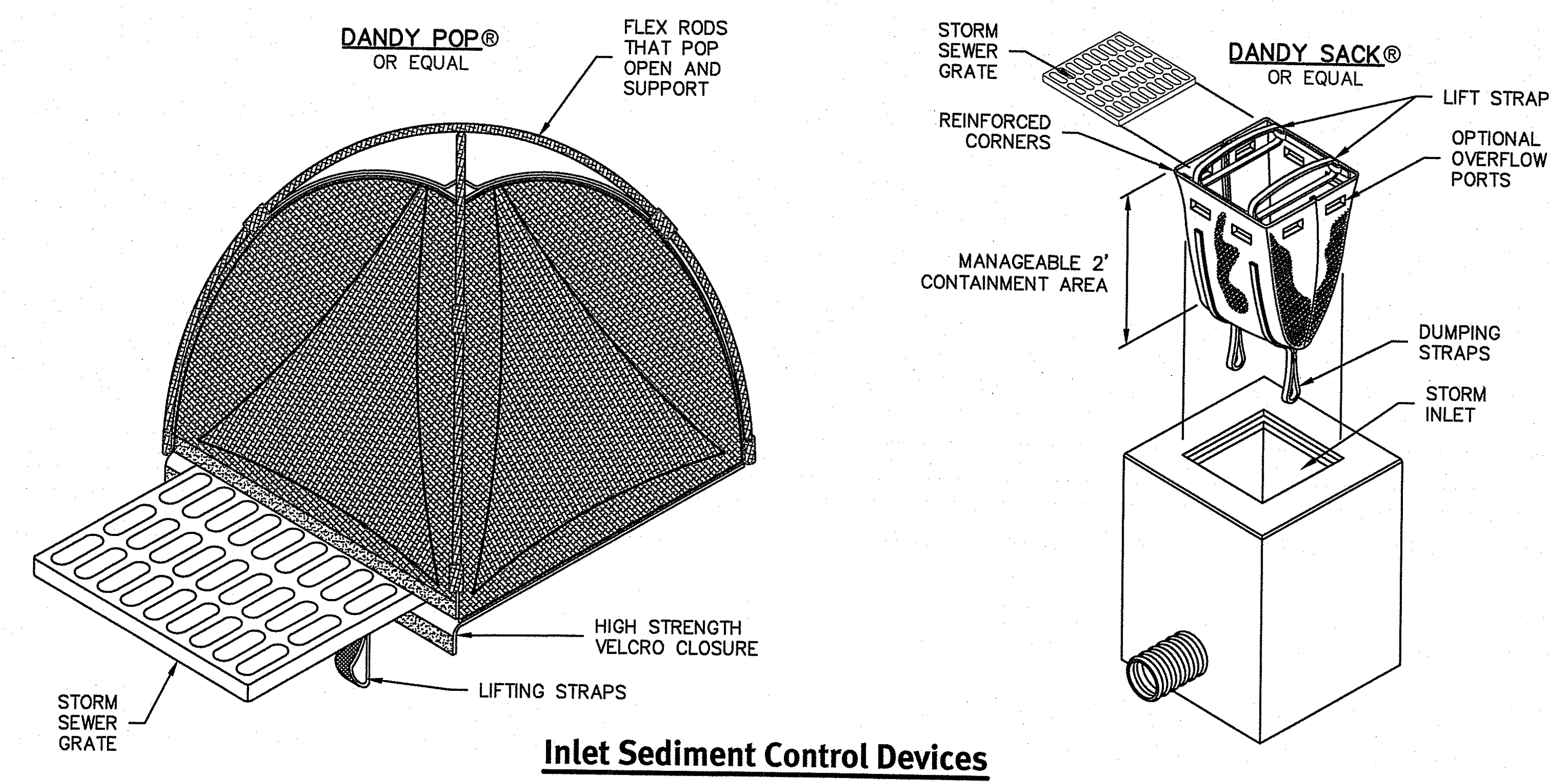
D. ON WEAK BEARING SOIL SUCH AS LOOSE ALLUVIAL, OR WETLAND SOILS, SURFACE TREATMENTS SHOULD BE UNDERLAIN WITH WOVEN GEOTEXTILES.

E. AT MINIMUM, ROADSIDE DITCHES SHALL BE 1FT BELOW ROAD SURFACE.

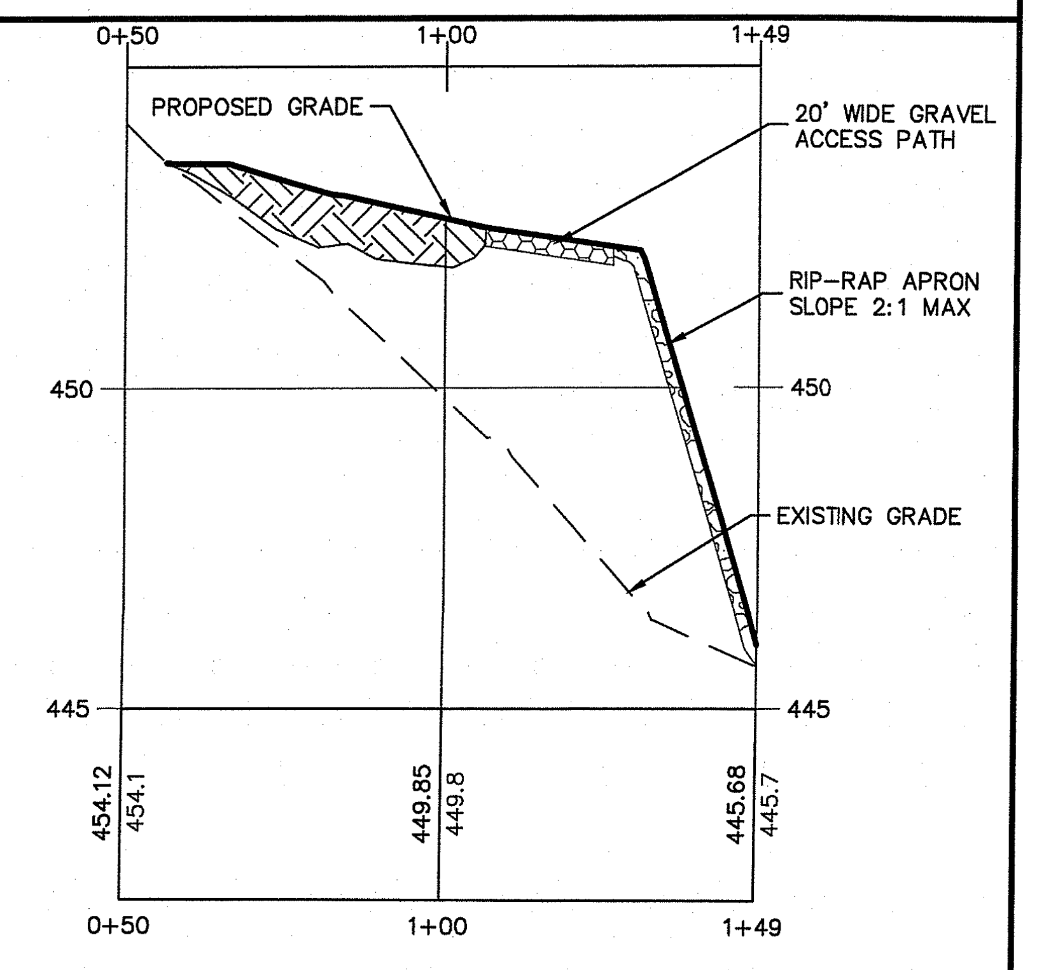
F. DISCHARGE POINTS. FOR DITCHES SHALL NOT BE NEAR WETLANDS OR STREAMS, AND OR BE LOCATED AT THE DIRECTION OF THE DESIGN ENGINEER.

G. CONTRACTOR TO INSTALL GRAVEL REINFORCEMENT GRID AS NECESSARY TO PREVENT EROSION AND/OR VEHICULAR DAMAGE TO THE ACCESS ROAD.

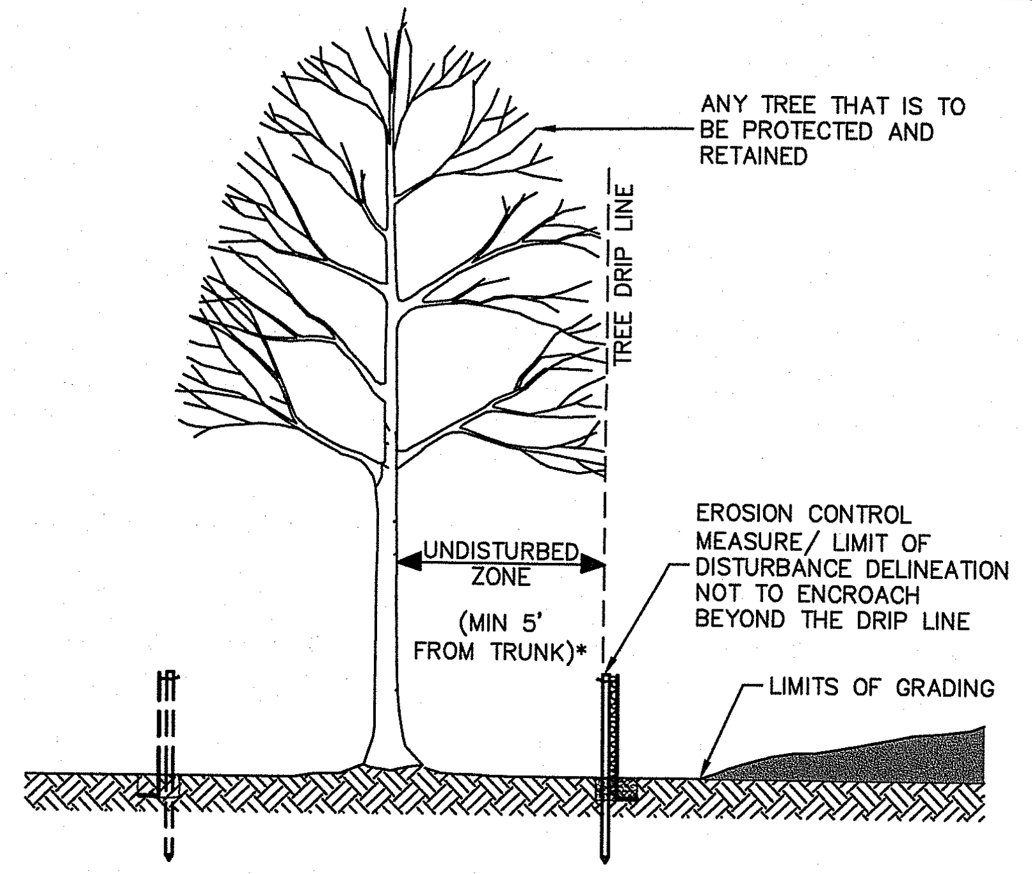
Gravel Access Path Detail
NOT TO SCALE


DANDY POP® OR EQUAL
FLEX RODS THAT POP OPEN AND SUPPORT
HIGH STRENGTH VELCRO CLOSURE
LIFTING STRAPS
STORM SEWER GRATE
STORM SEWER GRATE
DANDY SACK® OR EQUAL
REINFORCED CORNERS
LIFT STRAPS
OPTIONAL OVERFLOW PORTS
MANAGEABLE 2' CONTAINMENT AREA
DUMPING STRAPS
STORM INLET

Inlet Sediment Control Devices
NOT TO SCALE



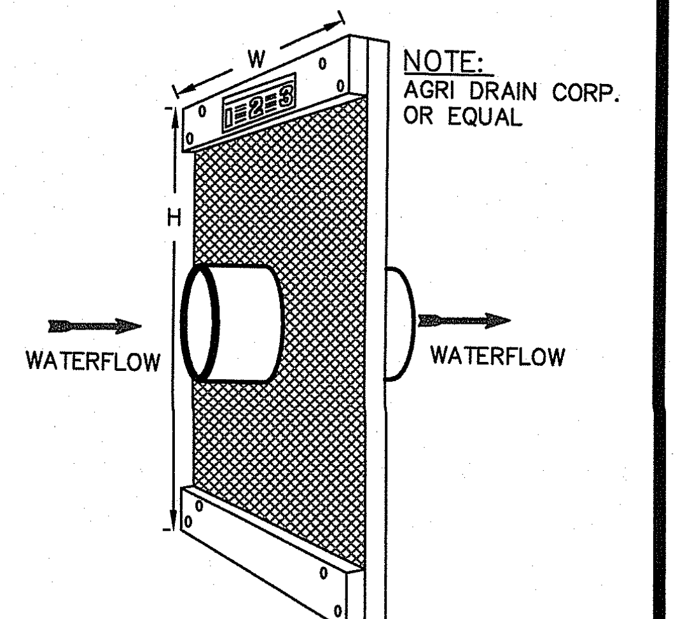
Sta. 0+50 To 1+49
ASSF Profile Detail
NOT TO SCALE


ANY TREE THAT IS TO BE PROTECTED AND RETAINED
TREE DRIP LINE
UNDISTURBED ZONE
(MIN 5' FROM TRUNK)*
EROSION CONTROL MEASURE/ LIMIT OF DISTURBANCE DELINEATION NOT TO ENCROACH BEYOND THE DRIP LINE
LIMITS OF GRADING

*LIMIT OF DISTURBANCE IS AT THE DRIP LINE OF OUTERMOST BRANCH OR 5' FROM TRUNK, WHICHEVER IS GREATER.

Tree Protection Detail
NOT TO SCALE

INSTALLATION NOTES:
1. UNROLL THE ANTI–SEEP COLLAR AND ALIGN THE BOARDS TO FORM A SQUARE. ATTACH METAL BRACKETS TO THE CORNER OF THE BOARDS WITH THE SCREWS PROVIDED. ATTACH THE RUBBER TO THE FRAME WITH THE NAILS PROVIDED.
2. CUT A ROUND HOLE IN THE CENTER OF THE RUBBER THAT IS SMALLER THAN THE PIPE SIZE (APPROX. 33% SMALLER). THIS WILL ALLOW THE RUBBER TO STRETCH OVER THE PIPE WHEN THE ANTI–SEEP IS INSTALLED ON THE PIPE. THIS WILL PROVIDE A TIGHT SEAL BETWEEN THE PIPE AND THE ANTI–SEEP COLLAR. NOTE: CUTTING AN "X" OR SLIT WILL CAUSE THE RUBBER TO TEAR.
3. SLIP THE PIPE THROUGH THE ANTI–SEEP COLLAR, INSPECT THE SEAL BETWEEN THE PIPE AND THE ANTI–SEEP COLLAR, CAREFULLY BACKFILL, AND COMPACT WITH SUITABLE SOIL.


W
H
WATERFLOW
WATERFLOW

NOTE:
AGRI DRAIN CORP. OR EQUAL

CAUTION:
EXCESSIVE COMPACTION OR DOWNWARD PRESSURE ON FRAME WILL CAUSE RUBBER TO STRETCH AND DISTORT, RESULTING IN LOSS OF SEAL BETWEEN RUBBER AND PIPE.

Anti-Seep Collar
NOT TO SCALE

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

BRIAN C. GIROUX
No. 9341
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R. / P.A.A.

Detail Sheet
GDIM 1-9: Iron Mine Hill Road Solar
AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 23 OF 24

Legend

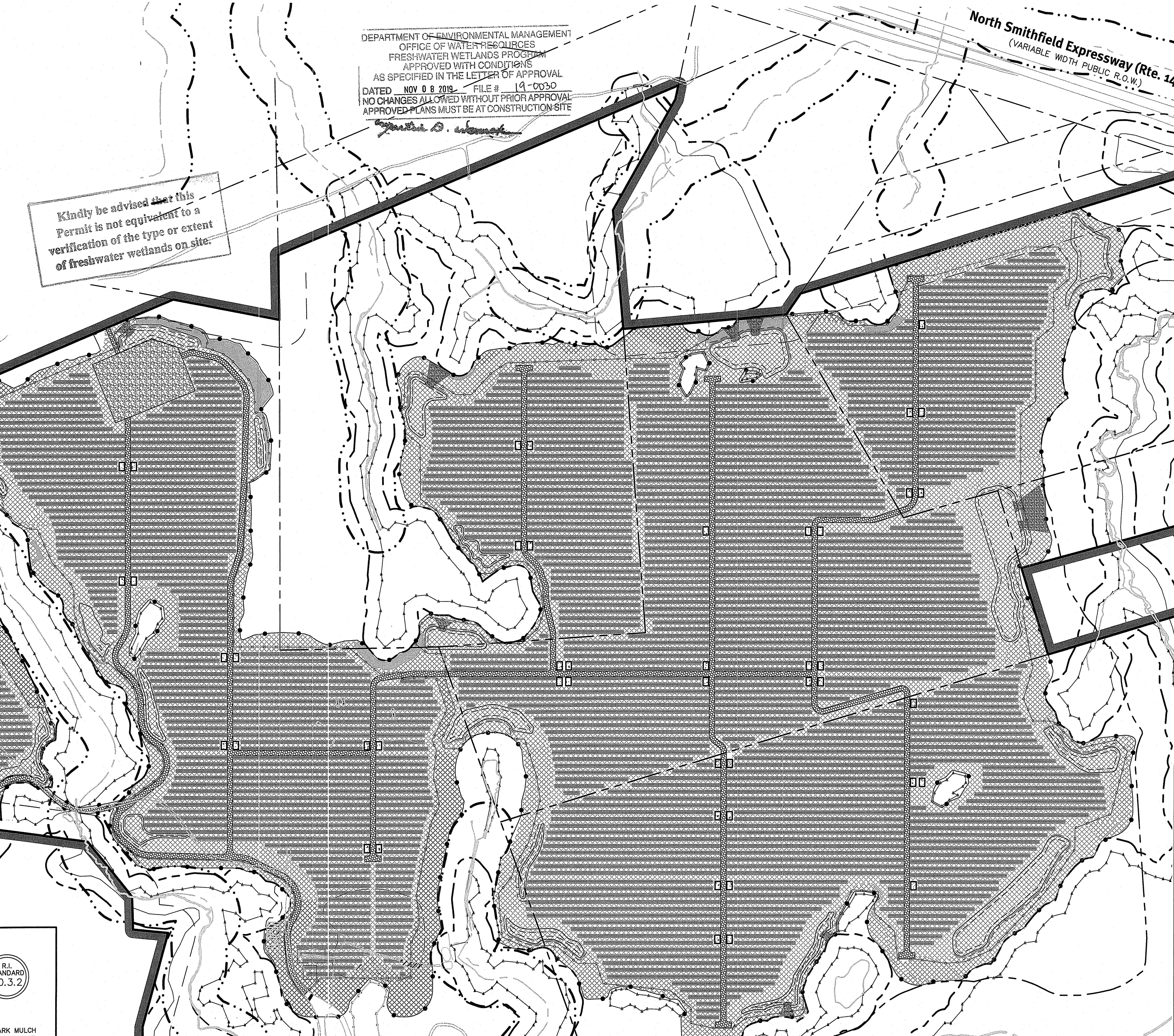
Pollinator Meadow	▨
Unmanaged Brush	▨
Managed Brush	▨
Conservation Seed Mix	▨
2:1 Slopes (SEE SITE PLANS FOR FURTHER DETAIL)	■

Notes:

1. WILDFLOWER/POLLINATOR MEADOW SEED SHALL BE SHOWY NORTHEAST NATIVE WILDFLOWER & GRASS MIX–ERNMX–153 AVAILABLE AT ERNST CONSERVATION SEEDS IN MEADVILLE, PA (WWW.ERNSTSEED.COM) OR EQUAL.
2. UNMANAGED AREAS BRUSH AREAS SHALL BE ALLOWED TO REVEGETATE NATURALLY.
3. MANAGED BRUSH AREAS TO BE PLANTED WITH THE FOLLOWING SPACED 5 FEET ON–CENTER AND SHALL MEET A HEIGHT STANDARD OF 2–3 FEET AFTER PLANTING:
   - SWEET PEPPER BUSH (CLETHRA ALNIFOLIA)
   - ARROWWOOD VIBURNUM (VIBURNUM DENTATUM)
   - BLACK HUCKLEBERRY (GAYLUSSACIA BACCATA)
   - LOW BUSH BLUEBERRY (VACCINIUM ANGUSTIFOLIUM)
   - WITCH HAZEL (HAMAMELIS VIRGIINIANA)

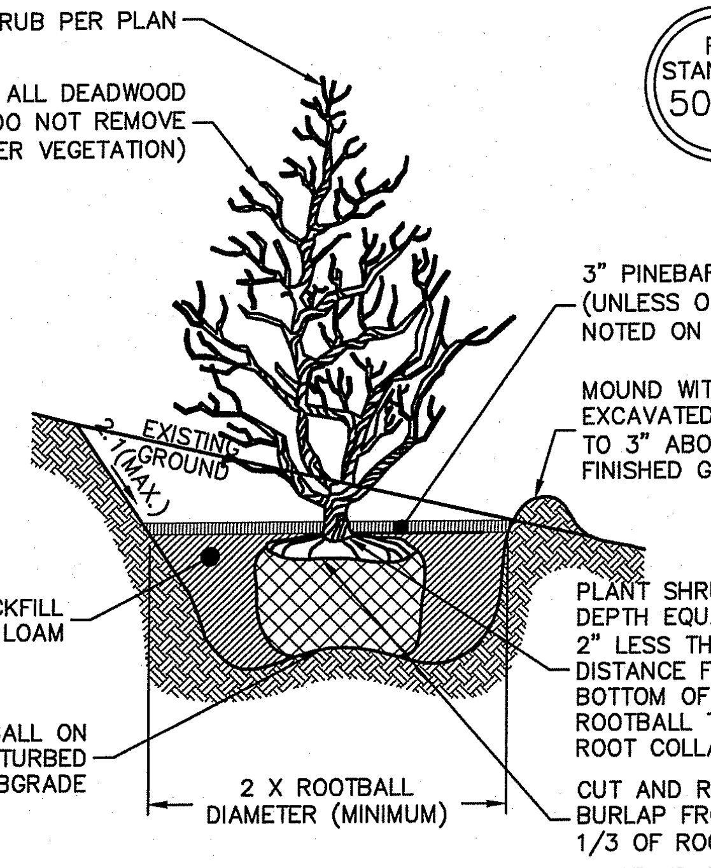
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 0 8 2019 FILE # 19-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Kindly be advised that this
Permit is not equivalent to a
verification of the type or extent
of freshwater wetlands on site.


North Smithfield Expressway (Rte. 146)
(VARIABLE WIDTH PUBLIC R.O.W.)
Scale: 1"=200'
0
100'
200'
400'

General Notes:

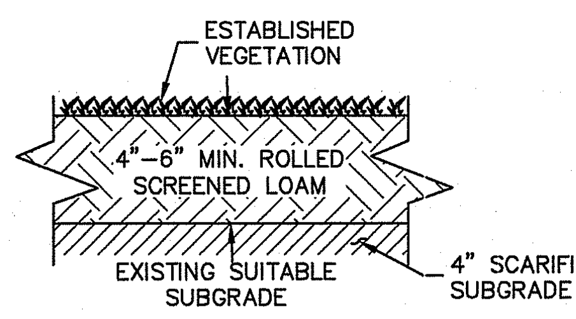
1. SITE INFORMATION TAKEN FROM PLANS PREPARED BY DIPRETE ENGINEERING. SEE ENGINEERING PLANS FOR MORE DETAIL.
2. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS BY NOTIFYING DIG–SAFE (811) AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION OR SITE PREPARATION AND ANY/OR ALL LOCAL UTILITY COMPANIES AS REQUIRED.
3. CONTRACTOR TO PROVIDE A ONE (1) YEAR GUARANTEE FOR ALL MATERIALS. CONTRACTOR GUARANTEES THAT PLANTS WILL REMAIN HEALTHY FOR ONE (1) GROWING SEASON. CONTRACTOR TO MAINTAIN ALL PLANTING AND LAWNS UNTIL FINAL PROJECT ACCEPTANCE. GUARANTEE PERIOD TO COMMENCE AT FINAL ACCEPTANCE. ANY REPLACEMENT PLANTS SHALL BE OF THE SAME SIZE AND SPECIES AS SPECIFIED WITH NEW GUARANTEE COMMENCING ON THE DATE OF REPLACEMENT.
4. ALL PLANT MATERIAL SHALL CONFORM, IN ALL RESPECTS, TO THE GUIDELINES OF "THE AMERICAN STANDARD FOR NURSERY STOCK," LATEST EDITION, PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION, INC. ALL PLANTS SHALL BE NURSERY GROWN AND SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS.
5. PLANT SUBSTITUTION SELECTION MUST BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
6. ALL PLANTS TO BE PLANTED SO THAT AFTER SETTLEMENT THEY BEAR THE SAME RELATION TO THE SURROUNDING GROUND AS TO THEIR ORIGINAL GRADE BEFORE DIGGING.
7. CREATE SAUCER AROUND INDIVIDUAL PLANTS CAPABLE OF HOLDING WATER. ALL PLANTS TO BE FLOODED WITH CLEAN WATER TWICE WITHIN THE FIRST 24 HOURS OF PLANTING. ADDITIONAL WATERING SHALL BE MADE AS REQUIRED TO KEEP PLANTS FROM WILTING AND DRYING OUT UNTIL FINAL ACCEPTANCE.
8. TRIM BROKEN AND DEAD BRANCHES FROM TREES AND SHRUBS AFTER PLANTING. NEVER CUT A LEADER.
9. RECOMMENDED DATES FOR PLANTING ARE MARCH 15 TO JUNE 15 AND SEPTEMBER 15 TO NOVEMBER 15.
10. ALL LANDSCAPED AREAS SHALL BE KEPT FREE OF WEEDS AND DEBRIS. ALL VEGETATION WITHIN SAID AREAS SHALL BE MAINTAINED FREE OF PHYSICAL DAMAGE CAUSED BY CHEMICALS, INSECTS, DISEASES, LACK OF WATER OR OTHER CAUSES. DAMAGED PLANTS SHALL BE REPLACED WITH THE SAME OR SIMILAR VEGETATION ON AN ANNUAL BASIS.
11. LOAM MOVED ON SITE TO BE STOCKPILED AND RETAINED AND TO BE USED AS REQUIRED FOR THE LANDSCAPE DESIGN. LOAM SHALL NOT BE MIXED WITH ANY UNSUITABLE MATERIALS OR SUBSOIL. EXCESS LOAM TO REMAIN ON THE OWNER'S PROPERTY AND ONLY REMOVED WITH THE OWNERS PERMISSION. NEW LOAM SHALL BE FRIABLE, FERTILE, MEDIUM TEXTURED SANDY LOAM THAT IS FREE OF TOXIC MATERIALS FOR HEALTHY PLANT GROWTH AND SURVIVAL. LOAM SHALL BE FREE OF MATTER 1" OR GREATER IN DIAMETER AND WHEN TESTED SHALL HAVE A PH BETWEEN 5.5 AND 7.5. SEE LOAM DETAIL.
12. THIS PLAN IS FOR LANDSCAPE PLANTING ONLY.


SHRUB PER PLAN
REMOVE ALL DEADWOOD (DO NOT REMOVE ANY OTHER VEGETATION)
R.I. STANDARD 50.3.2
3" PINEBARK MULCH (UNLESS OTHERWISE NOTED ON PLANS)
MOUND WITH EXCAVATED SOIL TO 3" ABOVE FINISHED GRADE
EXISTING GROUND
2:1 (MAX.)
BACKFILL WITH LOAM
PLANT SHRUB AT DEPTH EQUAL TO 2" LESS THAN THE DISTANCE FROM BOTTOM OF ROOTBALL TO ROOT COLLAR
ROOTBALL ON UNDISTURBED SUBGRADE
2 X ROOTBALL DIAMETER (MINIMUM)
CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOTBALL

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

Shrub Planting on Slope

NOT TO SCALE


ESTABLISHED VEGETATION
4"–6" MIN. ROLLED SCREENED LOAM
EXISTING SUITABLE SUBGRADE
4" SCARIFIED SUBGRADE

NOTE:
1) ALL DISTURBED AREAS TO BE LOAMED WITH A MINIMUM OF 4 TO 6–INCHES OF SCREENED LOAM IN ACCORDANCE WITH RHODE ISLAND DEPARTMENT OF TRANSPORTATION (RIDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION LATEST EDITION SECTIONS L.01 AND M.18.

Loam Detail

NOT TO SCALE

z:\demain\projects\0601-027 iron mine hill road\autocad drawings\0601-027-larc.dwg Plotted: 9/16/2019

DiPrete Engineering
Two Stafford Court Cranston, RI 02920
tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com
Boston • Providence • Newport

ALEXANDRA C. AVERY
NO. 431
2019

This regulatory submission set shall not be used for construction purposes unless stamped 'Issued for Construction' and signed by a DiPrete Engineering representative.

The contractor is responsible for all of the means, methods, safety precautions and requirements, and OSHA conformance in the implementation of this plan and design.

No.	Date	Description	By:
2	09-15-2019	RIDEM Comments	B.C.G.
1	07-03-2019	RIDEM Comments	B.C.G.
0	01-18-2019	RIDEM Preliminary Determination Submission	J.A.R. / P.A.A.

Drawn By: J.A.R.
Design By: B.C.G.

Landscape Plan

GDIM 1-9: Iron Mine Hill Road Solar

AP 12 Lots 136B & 137, AP 13 Lots 12 & 51, AP 16 Lots 6 & 97, AP 17 Lot 175
North Smithfield, Rhode Island

Prepared for
GDIM 1-9, LLC
3760 Quaker Lane
North Kingstown, Rhode Island 02852

SHEET 24 OF 24