

PROPOSED SOLAR DEVELOPMENT

BLACKBIRD FARM
51, 115 & 161 LIMEROCK ROAD
PLAT 45 LOTS 51, 59, 102
SMITHFIELD, RHODE ISLAND

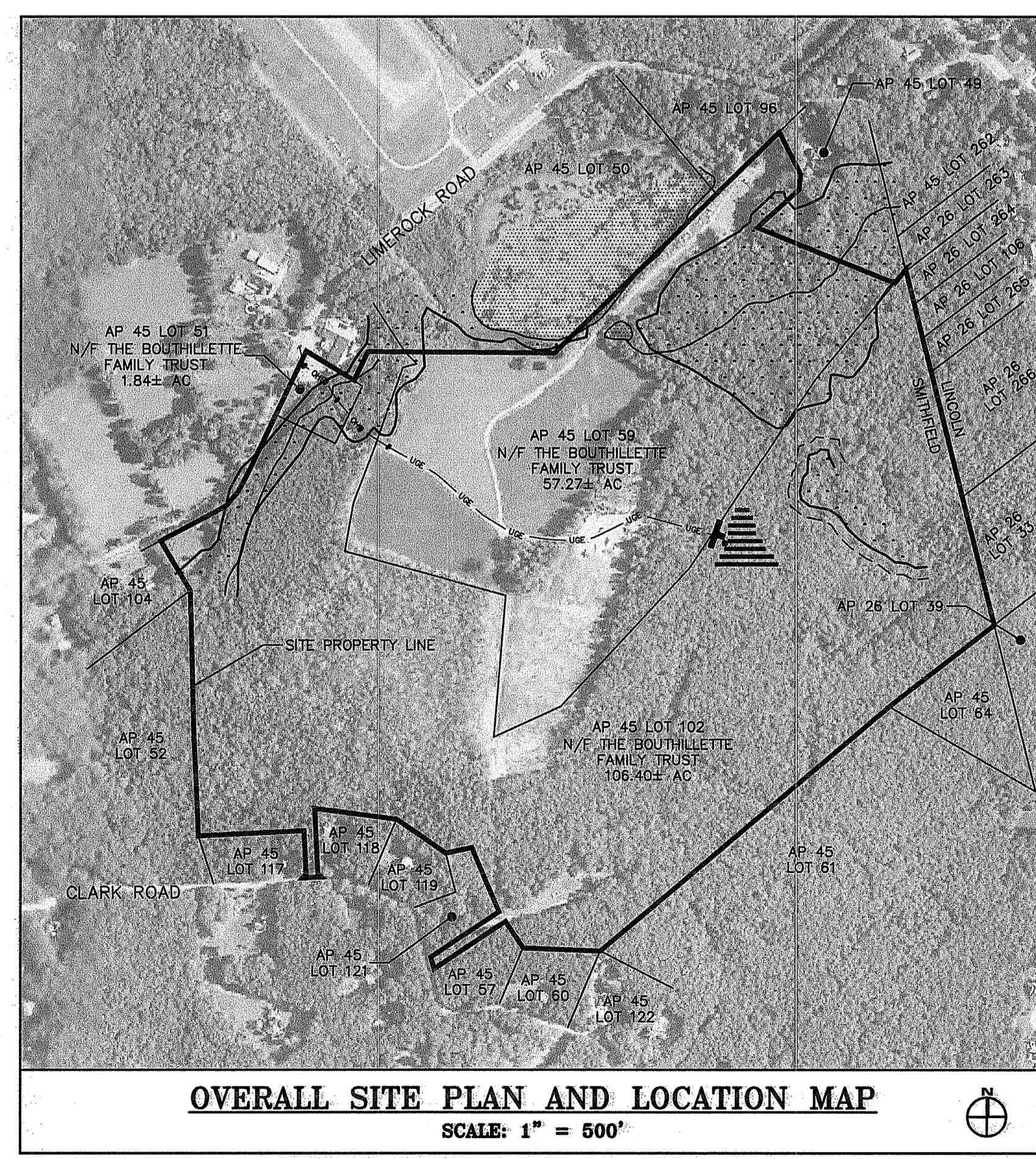
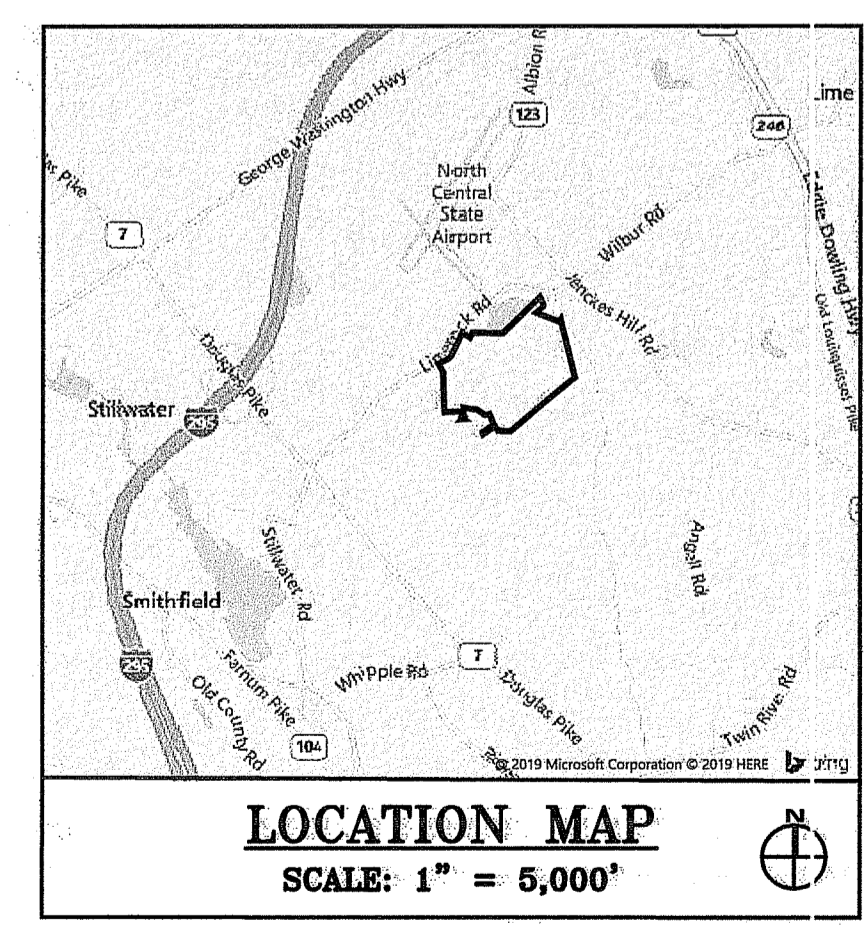
ISSUED FOR PERMITTING

APPLICANT:
ECONOX RENEWABLES, INC.
48 WATERFIELD ROAD
P.O. BOX 808
WINCHESTER, MA 01890

LATEST ISSUED: DECEMBER 23, 2019

PROPERTY OWNERS

PLAT - LOT	PROPERTY ADDRESS	PROPERTY OWNER NAME	MAILING ADDRESS
045-051	51 LIMEROCK ROAD	THE BOUTHILLETTE FAMILY TRUST	122 LIMEROCK ROAD, SMITHFIELD, RI 02917
045-059	115 LIMEROCK ROAD	THE BOUTHILLETTE FAMILY TRUST	122 LIMEROCK ROAD, SMITHFIELD, RI 02917
045-102	161 LIMEROCK ROAD	THE BOUTHILLETTE FAMILY TRUST	122 LIMEROCK ROAD, SMITHFIELD, RI 02917

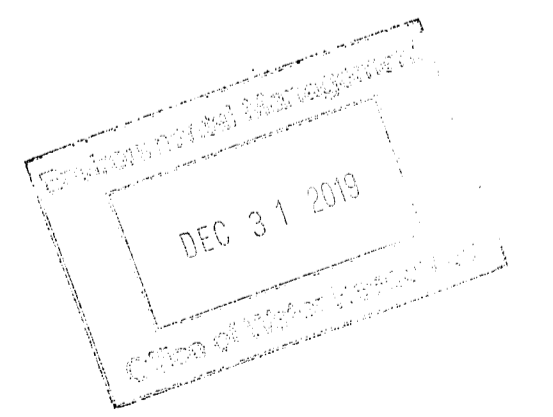


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SURVEY PLANS (BY MARSH & LONG SURVEYING, INC.)	
1 AP 45 LOT 59	3/17/10
2 AP 45 LOTS 52, 61 & 65	11/19/12

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 1 2020 FILE # 19-0261
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Handwritten signature: Nancy L. Freeman



NOT FOR CONSTRUCTION

SEAL:
GREGORY A. AVENIA
No. 9562
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
12/23/2019

REVISION	DATE	DESCRIPTION
5	12/23/2019	RDEN RTC
4	8/29/2019	STORMWATER DESIGN
3	8/12/2019	REVISED LAYOUT
2	7/8/2019	SOIL EROSION APPLICATION
1	6/27/2019	ADD HAMMERHEAD

CLIENT:
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48 WATERFIELD ROAD
P.O. BOX 808
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PROJECT:
PROPOSED SOLAR DEVELOPMENT
AP 45 LOTS 51, 59, 102
BLACKBIRD FARM
161 LIMEROCK ROAD
SMITHFIELD, RHODE ISLAND.

TITLE:

COVER

ISSUED FOR:	PERMITTING
DATE:	DECEMBER 23, 2019
SCALE:	N/A
DRAWN BY:	MJW
CHECKED BY:	GAA
PROJECT NO.:	3652190209

GENERAL NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER, INCLUDING DISCREPANCIES TO ANY CODE/REGULATORY REQUIREMENTS. IF ANY DISCREPANCIES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- ALL ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH THE DRAWINGS. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL, STATE, AND FEDERAL JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
- THE CONTRACTOR SHALL OBTAIN AUTHORIZATION FROM OWNER AND/OR ENGINEER TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED BY THE OWNER, ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
- THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH, AND EQUIPMENT AS SPECIFIED. CONTRACTOR SHALL CLEAN AND SUPPLY A ROLL-OFF CONTAINER OR DUMPSTER TO BE EMPTIED AS NEEDED. CLEANING SHALL BE IN COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM TRASH, DEBRIS, DUST, OR OTHER HAZARDS OF ANY NATURE AT PROJECT COMPLETION.
- DISPOSAL OF ALL MATERIALS SHALL BE COMPLETED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- THE CONTRACTOR SHALL COMPLY WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND EXISTING FEATURES PRIOR TO THE START OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER. CONTRACTOR SHALL VERIFY ACTUAL FIELD CONDITIONS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL UTILITIES AND SERVICES THROUGHOUT THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL PROTECT ALL UTILITY LINES THROUGHOUT ALL PHASES OF WORK.
- UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND MAY NOT INCLUDE ALL UTILITIES WITHIN THE PROJECT SITE.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UNDERGROUND PIPING AND STRUCTURES PRIOR TO ANY EXCAVATION ACTIVITIES BY CONTACTING THE TOWN OF COVENTRY AND RHODE ISLAND DIG-SAFE (1-800-DIG-SAFE) SEVENTY TWO (72) HOURS BEFORE STARTING CONSTRUCTION ACTIVITIES FOR FIELD MARKING UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES THAT MAY NOT BE MARKED BY THE UTILITY COMPANIES. SUBSURFACE CONDITIONS ARE NOT GUARANTEED. THE CONTRACTOR SHALL REPAIR CONTRACTOR-CAUSED DAMAGE ACCORDING TO LOCAL STANDARDS AT CONTRACTOR'S EXPENSE.
- UNLESS OTHERWISE NOTED, ALL EXISTING FEATURES DESIGNATED ON THE PLANS ARE TO REMAIN, INCLUDING, BUT NOT LIMITED TO, TREES, SIGNS, FENCING/GATES, AND SIGN POSTS. FEATURES SHALL BE VERIFIED, LOCATED, AND PROTECTED DURING ALL PHASES OF CONSTRUCTION.
- ALL CONSTRUCTION ACTIVITIES MUST BE COMPLETED WITH RESPECT TO THE ONGOING ACTIVITIES OF THE SURROUNDING AREAS. ACCESS ROADWAYS SHALL REMAIN OPEN AND FREE OF DEBRIS AS MUCH AS PRACTICABLE.
- ALL ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC), RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, AND THE RHODE ISLAND POLLUTION DISCHARGE ELIMINATION SYSTEM (RIPDES) CONSTRUCTION GENERAL PERMIT, IF APPLICABLE.
- CONTRACTOR SHALL LIMIT ALL CONSTRUCTION ACTIVITIES TO THE PROPOSED FENCE LINE, LIMITS OF TREE CLEARING (IF REQUIRED), AND THE ELECTRICAL INTERCONNECTION ROUTE.
- CONTRACTOR TO DISABLE AND SECURE ALL EQUIPMENT PRIOR TO DAILY SHUTDOWN. CLIENT IS NOT RESPONSIBLE FOR VANDALISM, OR LOSS DUE TO TRESPASSING.
- JOB SITE OR NEIGHBORHOOD COMPLAINTS OF EXCESSIVE NOISE, VIBRATION, OR ODORS MUST BE COMMUNICATED WITH ENGINEER UPON RECEIPT OF FIRST COMPLAINT EACH PROJECT DAY. CONTRACTOR MUST HAVE CONTINGENCY PLANS FOR EXCESSIVE NOISE AND ODORS AS APPLICABLE.
- EXISTING CONDITIONS, INCLUDING HORIZONTAL AND VERTICAL DATUMS, ARE FROM THE FOLLOWING SOURCES:
 - VERTICAL DATUM FOR THE PROJECT IS REFERENCED TO NAVD 1988. ELEVATIONS SHOWN ON THE PLANS ARE FROM LIDAR DATA OBTAINED FROM RIGIS.
 - HORIZONTAL DATUM FOR THE PROJECT IS REFERENCED TO NAD83. PROPERTY LINE LOCATIONS SHOWN ON THE PLAN ARE APPROXIMATE. HOWEVER, THE PROPERTY LINE GEOMETRY IS COMPILED FROM SURVEY PLANS PREPARED BY MARSH & LONG SURVEYING INC., AND ARE APPENDED TO THIS PLAN SET.
 - LOCATION OF WETLANDS AND WATERBODIES ARE APPROXIMATE AND WERE TAKEN FROM RIGIS AND TOWN OF SMITHFIELD GIS MAPS.
- ACCORDING TO THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS) WEB SOIL SURVEY, SOILS WITHIN THE AREA OF PROPOSED DEVELOPMENT ARE CANTON AND CHARLTON FINE SANDY LOAMS, 0-8% SLOPES, VERY STONY.
- ACCORDING TO FEMA MAP PANEL 44007C0186G, EFFECTIVE 3/2/2009, THE SITE IS LOCATED WITHIN ZONE X - AREAS OF MINIMAL FLOOD HAZARD.
- WETLAND FLAGGING WAS PERFORMED BY WOOD DURING JULY 2019. FLAGS WERE LOCATED USING A HANDHELD GPS UNIT.
- THE EXISTING ACCESS ROAD WILL REMAIN AS-IS AND SHALL NOT BE PAVED. ANY CHANGES TO THE STRUCTURAL MAKE-UP OF THE ROAD WILL REQUIRE A STORMWATER ANALYSIS.

GRADING, DRAINAGE, AND EROSION CONTROL NOTES:

- NO VEGETATION SHALL BE DISTURBED EXCEPT AS NECESSARY FOR CONSTRUCTION AND ONLY AS APPROVED BY THE ENGINEER. NO HEAVY EQUIPMENT SHALL BE OPERATED OR STORED AND NO MATERIALS SHALL BE HANDLED OR STORED WITHIN THE DRIP LINES OF UNDISTURBED TREES OR WITHIN 100 FEET FROM THE LIMIT OF STREAMS.
- PERMANENT CONTROLS OR SURFACE STABILIZATION SHALL COMMENCE AS SOON AS PRACTICABLE BUT IN NO CASE MORE THAN 14 DAYS AFTER COMPLETION OF FILLING AND GRADING ACTIVITIES. AREAS WHICH WILL NOT BE REWORKED FOR 14 CALENDAR DAYS SHALL BE TEMPORARILY SEEDED AND MULCHED AS SOON AS IT IS KNOWN WITH REASONABLE CERTAINTY THAT WORK WILL BE STOPPED FOR AT LEAST 14 CALENDAR DAYS.
- CONSTRUCT TEMPORARY EROSION CONTROLS AS SHOWN ON THE DRAWINGS PRIOR TO STARTING WORK. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING CONSTRUCTION. WHEN LAND IS EXPOSED DURING CONSTRUCTION, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME. LAND SHOULD NOT BE LEFT EXPOSED DURING THE WINTER MONTHS IF APPLICABLE.
- STRAW WATTLE SHALL BE INSTALLED AND MAINTAINED WHERE SHOWN. ADDITIONAL PERIMETER CONTROLS SHALL BE ADDED AS REQUIRED BY THE ENGINEER PRIOR TO ANY ON SITE DISTURBANCE OF EXISTING SURFACE MATERIAL. STRAW WATTLE SHALL BE MAINTAINED DURING AND AFTER CONSTRUCTION TO REMOVE SEDIMENT FROM RUNOFF WATER AND FROM LAND UNDERGOING CONSTRUCTION. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN ITS DEPTH REACHES 50% OF THE HEIGHT OF THE WATTLE. REPLACE DAMAGED STRAW WATTLE AS REQUIRED BY THE ENGINEER AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. WHERE POSSIBLE, NATURAL DRAINAGE WAYS SHOULD BE UTILIZED AND LEFT OPEN TO REMOVE EXCESS SURFACE WATER.
- ALL LOCATIONS OF TEMPORARY EROSION CONTROL DEVICES SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER, AND SHALL BE REPLACED IF NECESSARY.
- TEMPORARY EROSION AND SEDIMENT CONTROL BMPS (INCLUDING SILT FENCE AND CONSTRUCTION ENTRANCE) SHALL BE REMOVED WITHIN 30 CALENDAR DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPS ARE NO LONGER NEEDED AS DETERMINED BY THE ENGINEER. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL RESULTING FROM REMOVAL OF BMPS OR VEGETATION SHALL BE PERMANENTLY STABILIZED (95% VEGETATION DENSITY).
- EXISTING CONTOUR LINES ARE SHOWN BASED ON GIS AND LIDAR DATA. SHOULD THE CONTRACTOR HAVE ANY QUESTIONS OF THEIR INTENT OR ANY PROBLEMS WITH CONTINUITY OF GRADES, THE ENGINEER SHALL BE CONTACTED PRIOR TO BEGINNING WORK.
- STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS AND WHEREVER CONSTRUCTION TRAFFIC ENTERS AND LEAVES THE SITE. EXISTING CONSTRUCTION ENTRANCES SHALL BE INSPECTED AND MAINTAINED.
- THE EROSION CONTROL DEVICES SHOWN ON THE DRAWING REPRESENT THE MINIMUM REQUIRED FOR EROSION CONTROL AND SHALL BE INSTALLED AS REQUIRED. THE CONTRACTOR SHALL ADD TO THESE DEVICES ANY AND ALL MEASURES AS REQUIRED BY THE ENGINEER TO EFFECTIVELY PREVENT EROSION AND MIGRATION OF SEDIMENT FROM THE WORK AREA.
- EROSION CONTROL MATTING SHALL BE INSTALLED ON ALL SLOPES 3:1 OR GREATER. IF EROSION IS OBSERVED ALONG THE LOWER EDGE OF THE SOLAR PANEL ARRAY ("DRIP EDGE"), EROSION CONTROL MATTING SHALL BE INSTALLED ALONG THE LENGTH OF THE DRIP EDGE.
- EXCESS SOILS REMOVED FOR UNDERGROUND ELECTRICAL CONDUIT SHALL BE REUSED FOR TRENCH BACKFILL AND SHALL BE BACKFILLED THE SAME DAY OF EXCAVATION. SOILS EXCAVATED FROM TRENCH SHALL BE PLACED ON THE UPGRADIENT SIDE OF THE TRENCH TO MITIGATE THE POTENTIAL FOR EROSION BEYOND THE TRENCH. BACKFILLED TRENCH SURFACE SHALL BE MULCHED PRIOR TO VEGETATIVE GROWTH IF NECESSARY TO PREVENT EROSION.
- EXCEPT WHERE OTHERWISE NOTED ON THESE PLANS, NO GRADING IS PROPOSED AS PART OF THIS PROJECT AND EXISTING GROUND COVER WILL BE MAINTAINED IN PROPOSED CONDITIONS. THE PROPOSED CONDITIONS ALLOW FOR AMPLE INFILTRATION TO MAINTAIN EXISTING INFILTRATING CONDITIONS. WITH THESE CONSIDERATIONS, RUNOFF RATES ARE NOT ANTICIPATED TO CHANGE FROM EXISTING TO PROPOSED CONDITIONS.

SEEDING AND REVEGETATION PLAN:

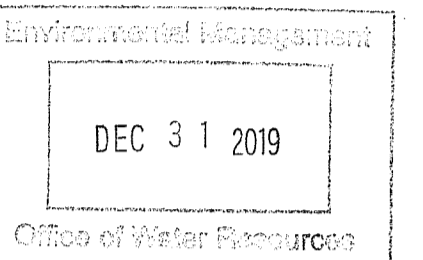
UPON COMPLETION OF SITE CONSTRUCTION, ALL AREAS PREVIOUSLY DISTURBED SHALL BE TREATED AS STATED BELOW PER THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (RI SESC). THESE AREAS WILL BE CLOSELY MONITORED BY THE CONTRACTOR UNTIL SUCH TIME AS A SATISFACTORY GROWTH OF VEGETATION IS ESTABLISHED. SATISFACTORY GROWTH SHALL MEAN APPROXIMATELY 95% OF THE AREA IS VEGETATED WITH VIGOROUS GROWTH:

- DISTURBED AREAS SHALL BE PREPARED FOR SEEDING BY RAKING 3-4" OF THE GROUND SURFACE TO LOOSEN THE EXISTING SOIL.
- SLOW RELEASE FERTILIZER SHALL BE APPLIED AT A 10-20-20 PROPORTION AT A RATE NOT TO EXCEED 1,500 LBS. PER ACRE. GROUND LIMESTONE SHALL BE APPLIED AT A RATE OF 1-3 TONS PER ACRE DEPENDING ON SOIL TYPE AS SPECIFIED IN THE RI SESC.
- HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF 2 TONS PER ACRE FOR MAXIMUM MOISTURE RETENTION RESULTS. CELLULOSE FIBER MULCH APPLICATION RATE SHALL FOLLOW MANUFACTURER'S RECOMMENDATIONS.
- DISTURBED AREAS SHALL BE SEEDED USING THE FOLLOWING MIX OR OTHER APPROVED MIX AS DIRECTED BY THE OWNER AND ENGINEER DEPENDING ON THE TIME OF YEAR AND AMOUNT OF SEEDING REQUIRED:

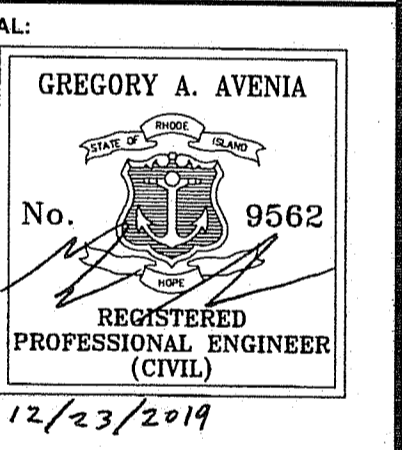
AT THE RATE OF 3.5 LBS. PER 1,000 SQ. FT. OF THE FOLLOWING MIXTURE: KENTUCKY BLUE GRASS (0.5LB/1,000 SF), CREEPING RED FESCUE (2.5 LB/1,000 SF), PERENNIAL RYE GRASS (0.5 LB/1,000 SF). SEEDING SHOULD BE PLANTED TO A DEPTH OF 0.25" TO 0.5" INCHES. SEEDING METHODS MAY BE DRILL SEEDINGS, BROADCASTS AND ROLLED, CULTIPACKED, OR TRACKED WITH A SMALL TRACK PIECE OF CONSTRUCTION EQUIPMENT.
- SEEDING FOR NON-NATIVE SPECIES SHALL BE COMPLETED BETWEEN THE DATES OF APRIL 1 THROUGH JUNE 1 AND AUGUST 15 THROUGH SEPTEMBER 30. SEEDING FOR NATIVE SPECIES SHALL BE COMPLETED IN AUGUST AND SEPTEMBER. WATERING MAY BE REQUIRED DURING DRY PERIODS.
- IF FINAL SEEDING OF THE DISTURBED AREA IS NOT COMPLETED BY OCTOBER 1ST OF THE YEAR OF CONSTRUCTION THEN TEMPORARY VEGETATIVE COVER SHALL BE INSTALLED PER THE RI SESC.
- STEEP SLOPES (3:1 AND STEEPER) SHALL BE STABILIZED BY INSTALLING EROSION CONTROL MATTING (E.G., NORTH AMERICAN GREEN OR EXCELSIOR).
- INSPECT SEEDED AREAS FOR FAILURE AND MAKE NECESSARY REPAIRS AND RESEED IMMEDIATELY. CONDUCT A FOLLOW-UP SURVEY AFTER ONE YEAR AND RESEED WHERE NECESSARY.
- IF THERE ARE AREAS WITH LESS THAN 40% COVER, REEVALUATE CHOICE OF PLANT MATERIALS AND QUANTITIES OF LIME AND FERTILIZER. IF THE SEASON PREVENTS RESEEDING, MULCH OR JUTE NETTING IS AN EFFECTIVE TEMPORARY COVER.
- LIME AND FERTILIZER THEREAFTER AT PERIODIC INTERVALS, AS NEEDED.
- ALL SEDIMENT CONTROL STRUCTURES WILL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED. ESTABLISHED MEANS APPROXIMATELY 95%, AS DETERMINED BY CONSTRUCTION INSPECTOR, OF THE AREA IS VEGETATED WITH VIGOROUS GROWTH.

DUST CONTROL:

- CONSTRUCTION ACTIVITIES SHALL BE SCHEDULED SO THAT A MINIMUM OF DISTURBED SOIL IS EXPOSED AT ONE TIME.
- DUST SHALL BE CONTROLLED ON CONSTRUCTION ROUTES AND OTHER DISTURBED AREAS SUBJECT TO SURFACE DUST MOVEMENT AND DUST BLOWING. THE SITE MAY BE SPRINKLED WITH WATER UNTIL THE SURFACE IS WET. SPRINKLING IS ESPECIALLY EFFECTIVE FOR DUST CONTROL ON HAUL ROADS AND OTHER TRAFFIC ROUTES.
- MAINTAIN DUST CONTROL MEASURES PROPERLY THROUGH DRY WEATHER PERIODS UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
- DUST CONTROL METHODS SHALL INCLUDE VEGETATIVE COVER, MULCH (INCLUDING GRAVEL MULCH), WATER SPRINKLING, STONE, AND BARRIERS.
- VEGETATIVE COVER - FOR DISTURBED AREAS NOT SUBJECT TO TRAFFIC, VEGETATION PROVIDES THE MOST PRACTICAL METHOD OF DUST CONTROL.
- MULCH (INCLUDING GRAVEL MULCH) - WHEN PROPERLY APPLIED, MULCH OFFERS A FAST, EFFECTIVE MEANS OF CONTROLLING DUST.
- STONE - USED TO STABILIZE CONSTRUCTION ROADS; CAN ALSO BE EFFECTIVE FOR DUST CONTROL.
- BARRIERS - A BOARD FENCE, WIND FENCE, SEDIMENT FENCE, OR SIMILAR BARRIER CAN CONTROL AIR CURRENTS AND BLOWING SOIL. ALL OF THESE FENCES ARE NORMALLY CONSTRUCTED OF WOOD AND THEY PREVENT EROSION BY OBSTRUCTING THE WIND NEAR THE GROUND AND PREVENTING THE SOIL FROM BLOWING OFFSITE.



NOT FOR CONSTRUCTION



REVISION	DATE	DESCRIPTION
5	12/23/2019	RDEM RTC
4	8/29/2019	STORMWATER DESIGN
3	8/12/2019	REVISED LAYOUT
2	7/8/2019	SOIL EROSION APPLICATION
1	6/21/2019	ADD HAMMERHEAD

CLIENT:
ECONOX RENEWABLES, INC.
 48 WATERFIELD ROAD
 P.O. BOX 808
 WINCHESTER, MA 01890

PROJECT:
PROPOSED SOLAR DEVELOPMENT
 AP 45 LOTS 51, 59, 102
 BLACKBIRD FARM
 161 LIMEROCK ROAD
 SMITHFIELD, RHODE ISLAND

TITLE:

NOTES

ISSUED FOR:	PERMITTING:
DATE:	DECEMBER 23, 2019
SCALE:	N/A
DRAWN BY:	MJW
CHECKED BY:	GAA
PROJECT NO.:	3652190209

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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 DATED APR 1 2020 FILE # 19-0261
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Wendy C. Freeman



DEC 31 2019

NOT FOR CONSTRUCTION

SEAL:
GREGORY A. AVENIA
No. 9562
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
12/23/2019

REVISION	DATE	DESCRIPTION
5	12/23/2019	RIDEM RTC
4	8/29/2019	STORMWATER DESIGN
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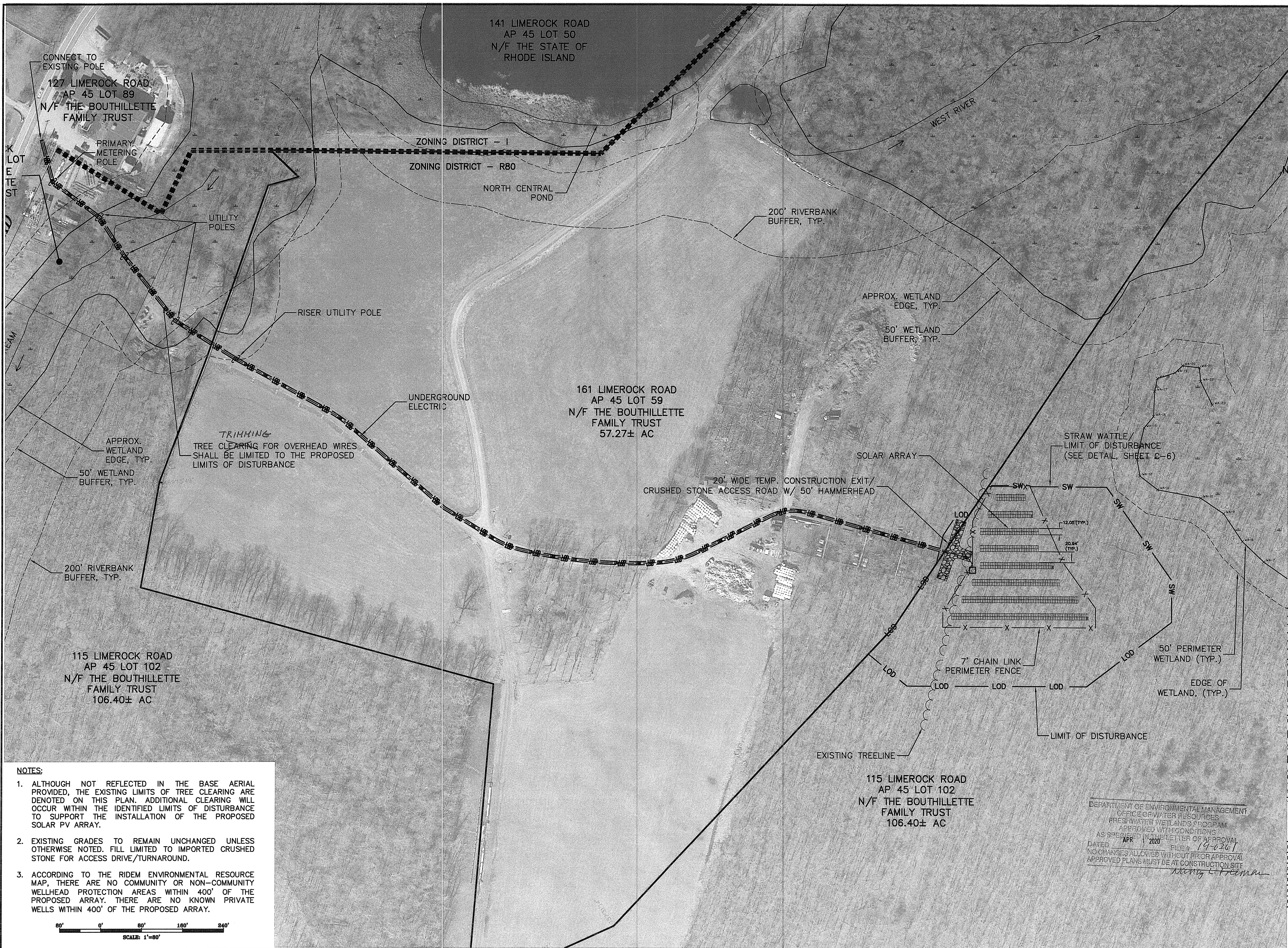
PROJECT:
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161 LIMEROCK ROAD
SMITHFIELD, RHODE ISLAND

TITLE:
OVERALL SITE PLAN

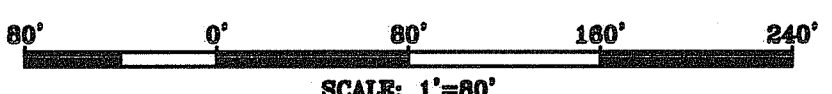
ISSUED FOR:	PERMITTING
DATE:	DECEMBER 23, 2019
SCALE:	1"=80'
DRAWN BY:	MJW
CHECKED BY:	GAA
PROJECT NO.:	3552190209

C-3

SHEET 3 OF 9



- NOTES:**
- ALTHOUGH NOT REFLECTED IN THE BASE AERIAL PROVIDED, THE EXISTING LIMITS OF TREE CLEARING ARE DENOTED ON THIS PLAN. ADDITIONAL CLEARING WILL OCCUR WITHIN THE IDENTIFIED LIMITS OF DISTURBANCE TO SUPPORT THE INSTALLATION OF THE PROPOSED SOLAR PV ARRAY.
 - EXISTING GRADES TO REMAIN UNCHANGED UNLESS OTHERWISE NOTED. FILL LIMITED TO IMPORTED CRUSHED STONE FOR ACCESS DRIVE/TURNAROUND.
 - ACCORDING TO THE RIDEM ENVIRONMENTAL RESOURCE MAP, THERE ARE NO COMMUNITY OR NON-COMMUNITY WELLHEAD PROTECTION AREAS WITHIN 400' OF THE PROPOSED ARRAY. THERE ARE NO KNOWN PRIVATE WELLS WITHIN 400' OF THE PROPOSED ARRAY.



DEC 31 2019
Office of Water Resources

NOT FOR CONSTRUCTION

SEAL:
GREGORY A. AVENIA
No. 9562
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
12/23/2019

REVISION	DATE	DESCRIPTION
5	12/23/2019	RIDEM R
4	8/29/2019	STORMWATER
3	8/12/2019	REVISED LA
2	7/8/2019	SOIL EROSION
1	5/21/2019	ADD HAMME

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED 1/20/2020 FILE # 19-026
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy C. Freeman

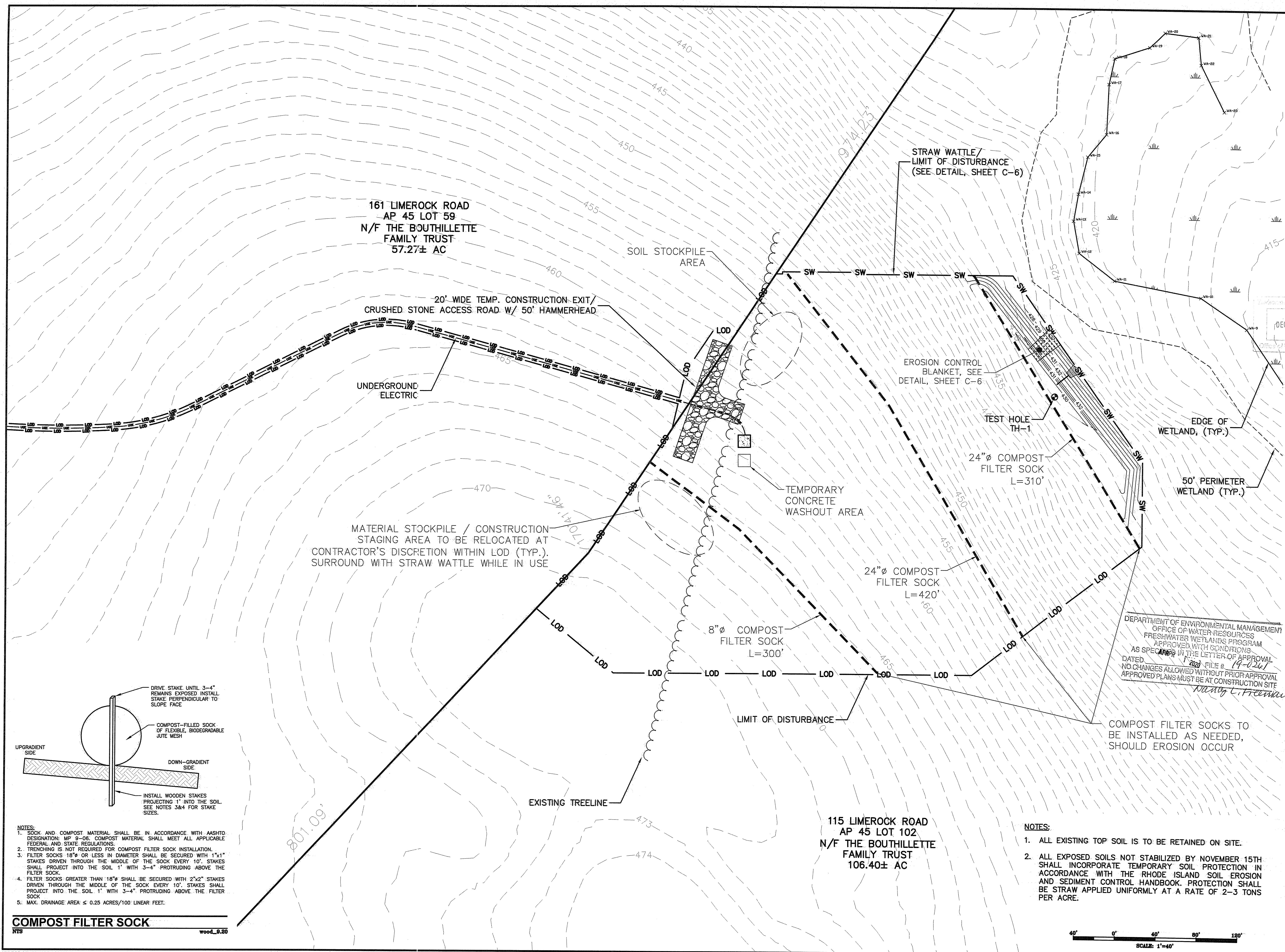
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PROPOSED SOLAR DEVELOPMENT
AP 45 LOTS 51, 53, 102
BLACKBIRD FARM
161 LIMEROCK ROAD
SMITHFIELD, RHODE ISLAND

TITLE:
SOIL EROSION & SEDIMENT CONTROL PLAN

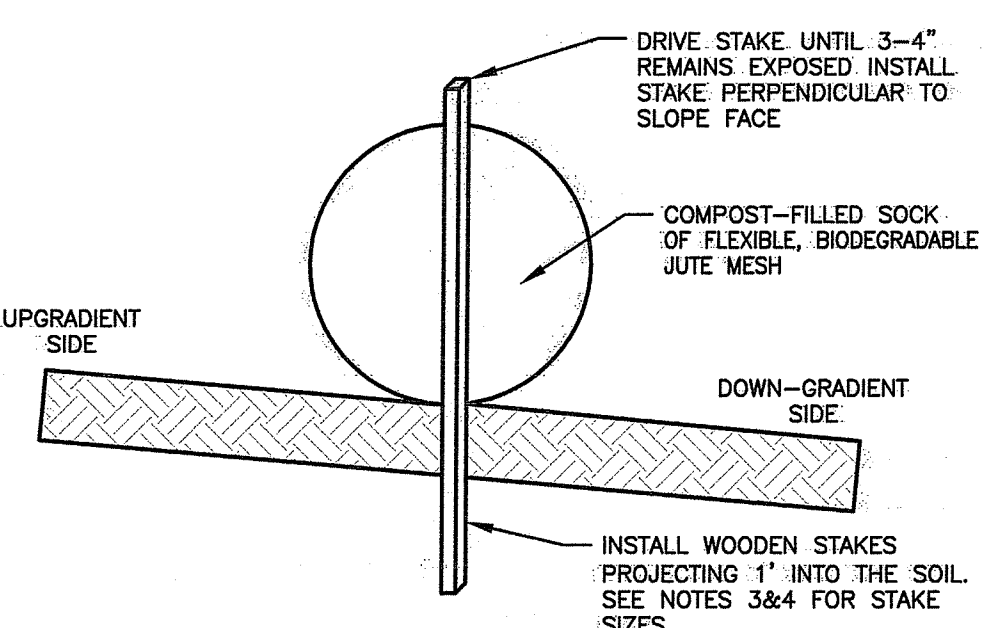
ISSUED FOR: PERMIT
DATE: DECEMBER 23, 2019
SCALE:
DRAWN BY:
CHECKED BY:
PROJECT NO: 38521

C-5
SHEET 5 OF 6



161 LIMEROCK ROAD
AP 45 LOT 59
N/F THE BOUTHILLETTE
FAMILY TRUST
57.27± AC

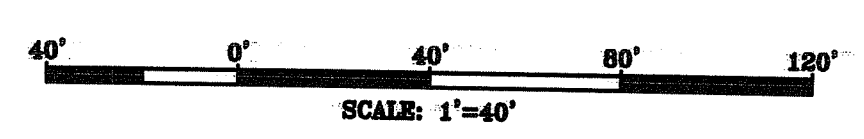
115 LIMEROCK ROAD
AP 45 LOT 102
N/F THE BOUTHILLETTE
FAMILY TRUST
106.40± AC



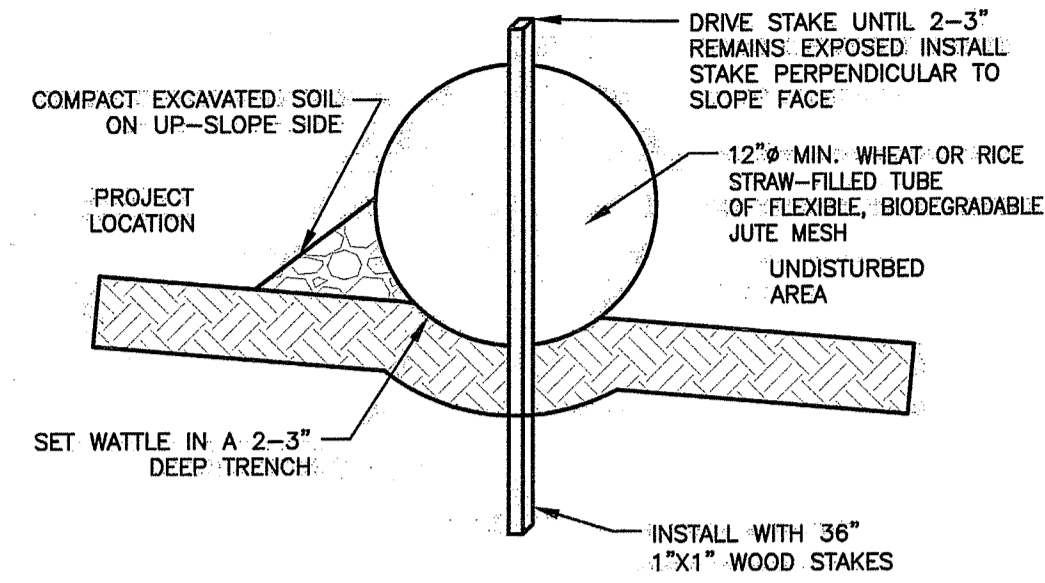
- NOTES:**
1. SOCK AND COMPOST MATERIAL SHALL BE IN ACCORDANCE WITH AASHTO DESIGNATION: MP 9-06. COMPOST MATERIAL SHALL MEET ALL APPLICABLE FEDERAL AND STATE REGULATIONS.
 2. TRENCHING IS NOT REQUIRED FOR COMPOST FILTER SOCK INSTALLATION.
 3. FILTER SOCKS 18" OR LESS IN DIAMETER SHALL BE SECURED WITH 1"x1" STAKES DRIVEN THROUGH THE MIDDLE OF THE SOCK EVERY 10'. STAKES SHALL PROJECT INTO THE SOIL 1" WITH 3-4" PROTRUDING ABOVE THE FILTER SOCK.
 4. FILTER SOCKS GREATER THAN 18" SHALL BE SECURED WITH 2"x2" STAKES DRIVEN THROUGH THE MIDDLE OF THE SOCK EVERY 10'. STAKES SHALL PROJECT INTO THE SOIL 1" WITH 3-4" PROTRUDING ABOVE THE FILTER SOCK.
 5. MAX. DRAINAGE AREA ≤ 0.25 ACRES/100 LINEAR FEET.

COMPOST FILTER SOCK
WOOD_9.20

- NOTES:**
1. ALL EXISTING TOP SOIL IS TO BE RETAINED ON SITE.
 2. ALL EXPOSED SOILS NOT STABILIZED BY NOVEMBER 15TH SHALL INCORPORATE TEMPORARY SOIL PROTECTION IN ACCORDANCE WITH THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK. PROTECTION SHALL BE STRAW APPLIED UNIFORMLY AT A RATE OF 2-3 TONS PER ACRE.



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

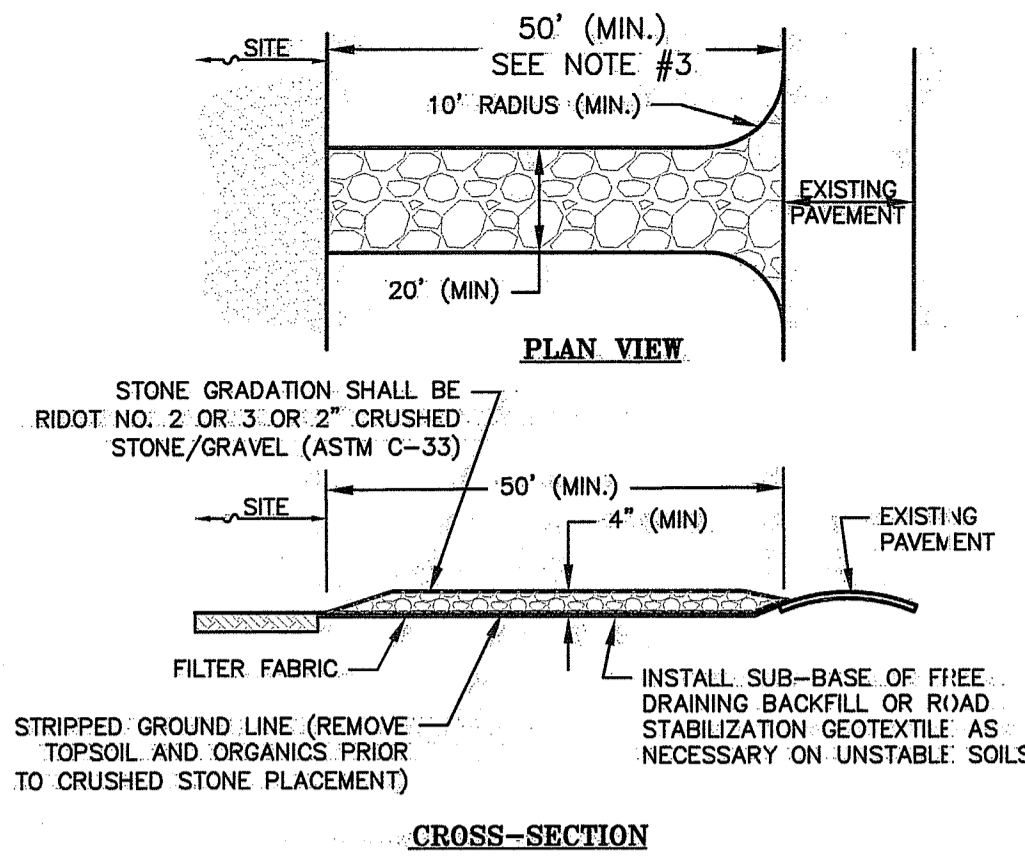


- NOTES:**
- BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3" DEEP X 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHALL BE PLACED UP-SLOPE FROM THE ANCHOR TRENCH.
 - PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT THE SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UP-HILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
 - SECURE THE WATTLE WITH 18-24" STAKES EVERY 3-4' WITH A STAKE ON EACH END. STAKES SHALL BE DRIVEN THROUGH THE MIDDLE OF THE WATTLES LEAVING AT LEAST SAMPLE LINE 2-3" OF STAKE EXTENDING ABOVE THE WATTLE SURFACE. STAKES SHALL BE DRIVEN PERPENDICULAR TO SLOPE FACE.
 - MAX. DRAINAGE AREA ≤ 0.25 ACRES/100 LINEAR FEET.

STRAW WATTLE

NTS

wood

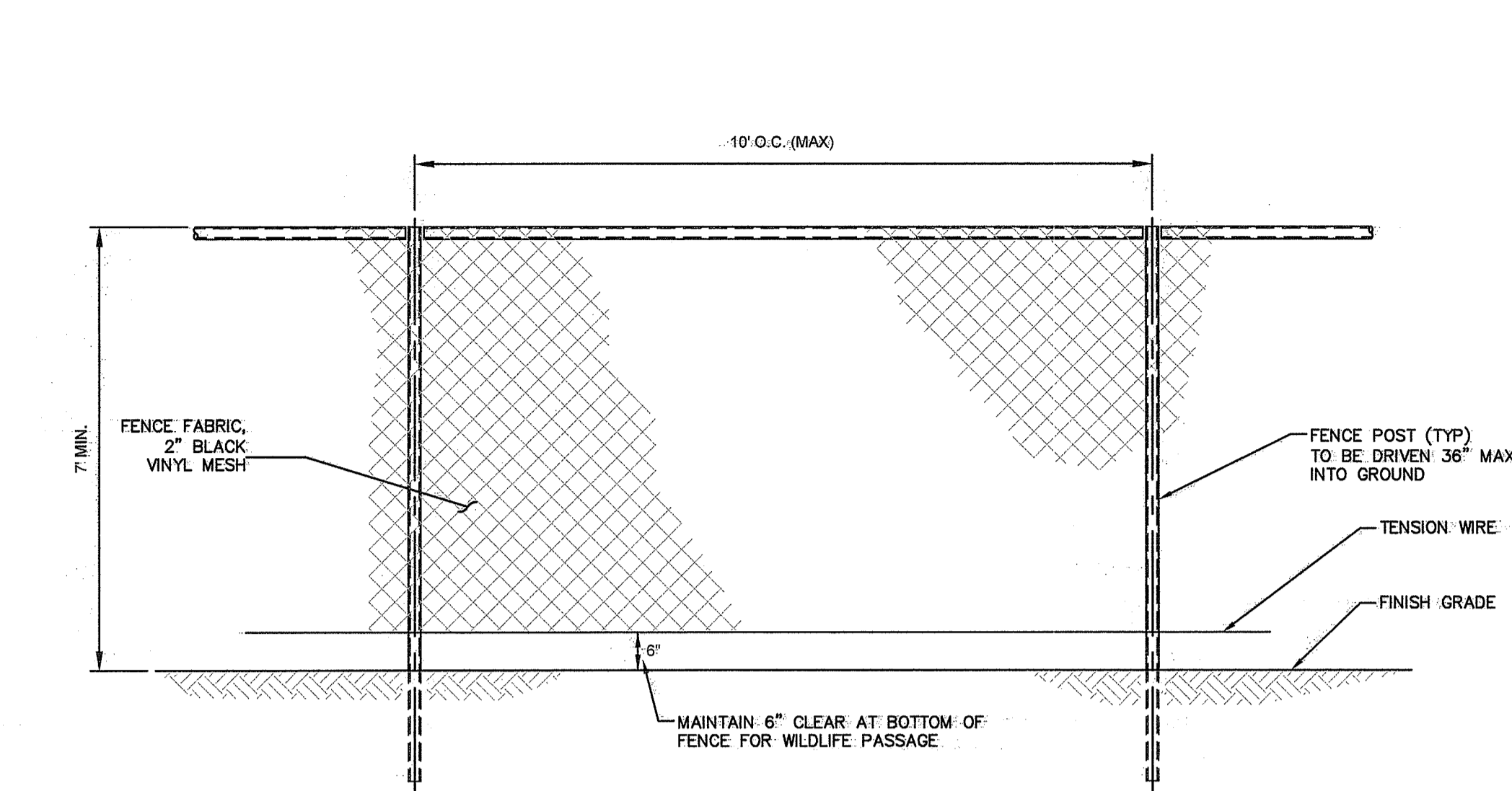


- NOTES:**
- ENTRANCE WIDTH SHALL BE TWENTY (20) FEET WIDE MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND. REPAIR ANY MEASURES USED TO TRAP SEDIMENT AS NEEDED. IMMEDIATELY REMOVE ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PAVED SURFACES, ROADS ADJACENT TO A CONSTRUCTION SITE SHALL BE LEFT CLEAN AT THE END OF EACH DAY.
 - 50 FEET MINIMUM WHERE THE SOILS ARE SANDS OR GRAVELS OR 100 FEET MINIMUM WHERE SOILS ARE CLAYS OR SILTS, EXPECT WHERE THE TRAVELED LENGTH IS LESS THAN 50 OR 100 FEET RESPECTIVELY.

TEMPORARY CONSTRUCTION EXIT

NTS

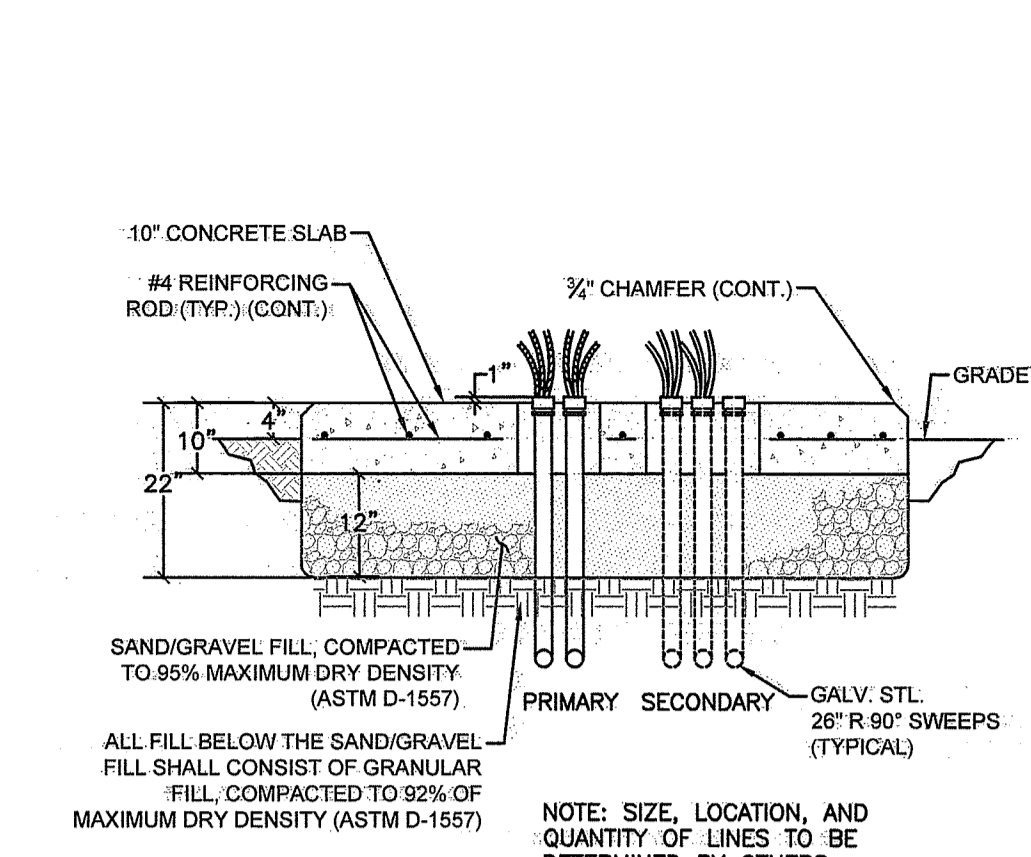
wood



CHAIN LINK PERIMETER FENCE

NTS

wood

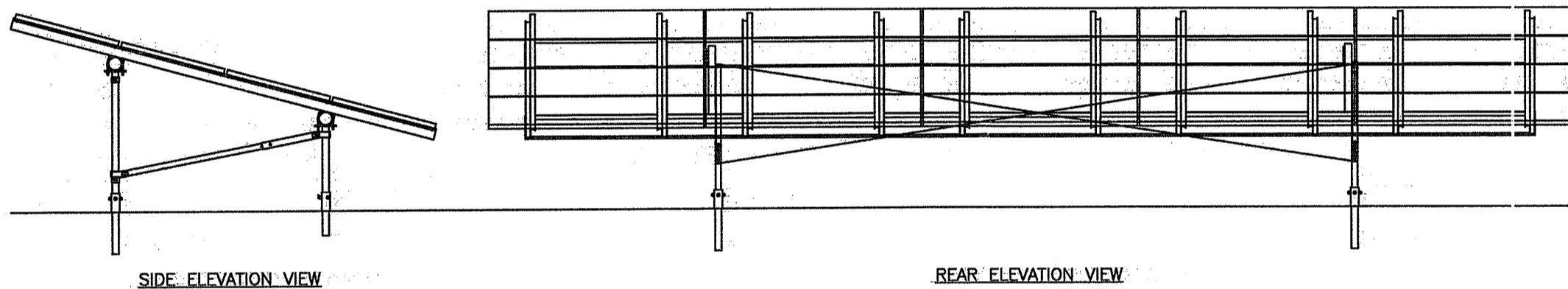


- NOTES:**
- MATS/SLABS TO BE SUPPORTED ON A MINIMUM 12" OF COMPACTED SAND/GRAVEL BASE COURSE.
 - REMOVED ALL ORGANIC SOIL BELOW PROPOSED MATS/SLABS AREAS.

CONCRETE PAD

NTS

wood



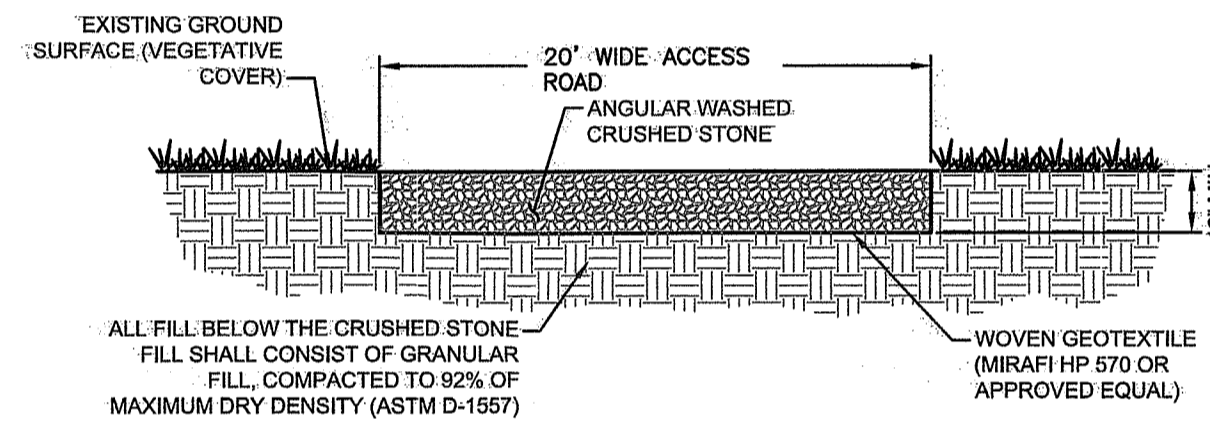
NOTE:

- DESIGN FOR FOUNDATIONS, RACKING, AND MODULES BY OTHERS. DETAILS SHOWN FOR ILLUSTRATION PURPOSES ONLY.

TYPICAL SOLAR ARRAY

NTS

wood



NOTES:

- ACCESS ROAD TO BE CONSTRUCTED OF A MINIMUM 12" OF ANGULAR WASHED CRUSHED STONE FILL.
- REMOVE ALL ORGANIC SOIL BELOW PROPOSED CRUSHED STONE ROAD AREAS.

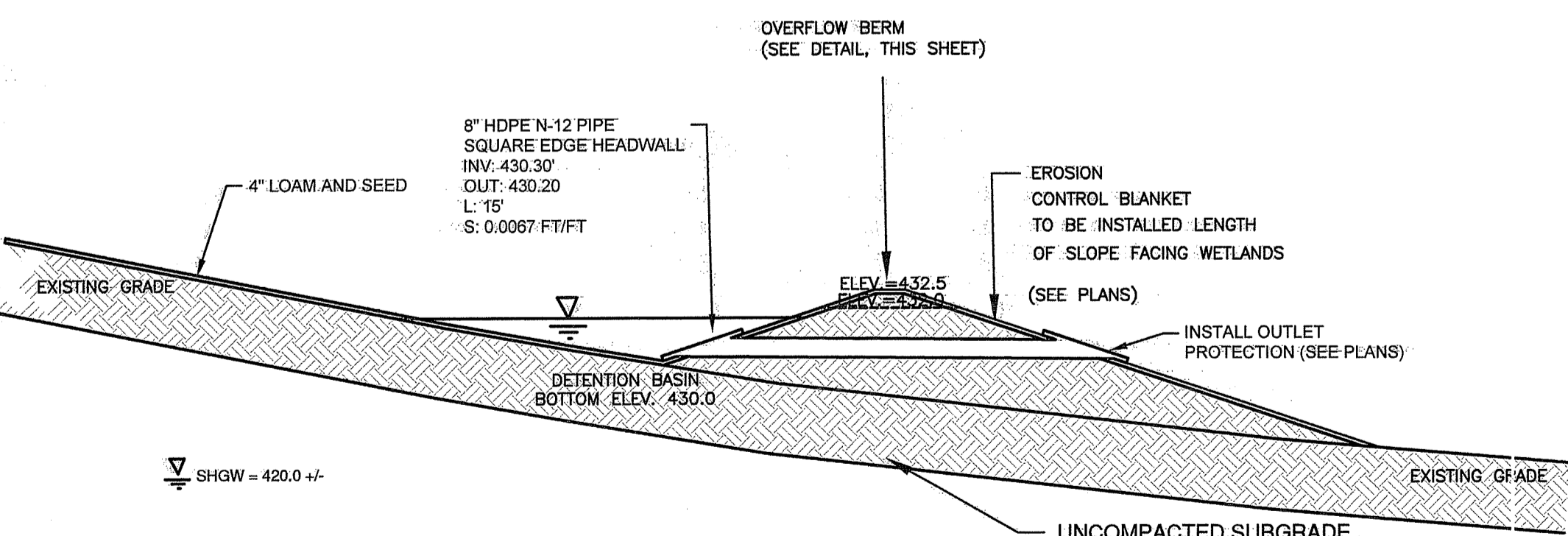
ACCESS ROAD

NTS

OUTLET PROTECTION

NTS

wood



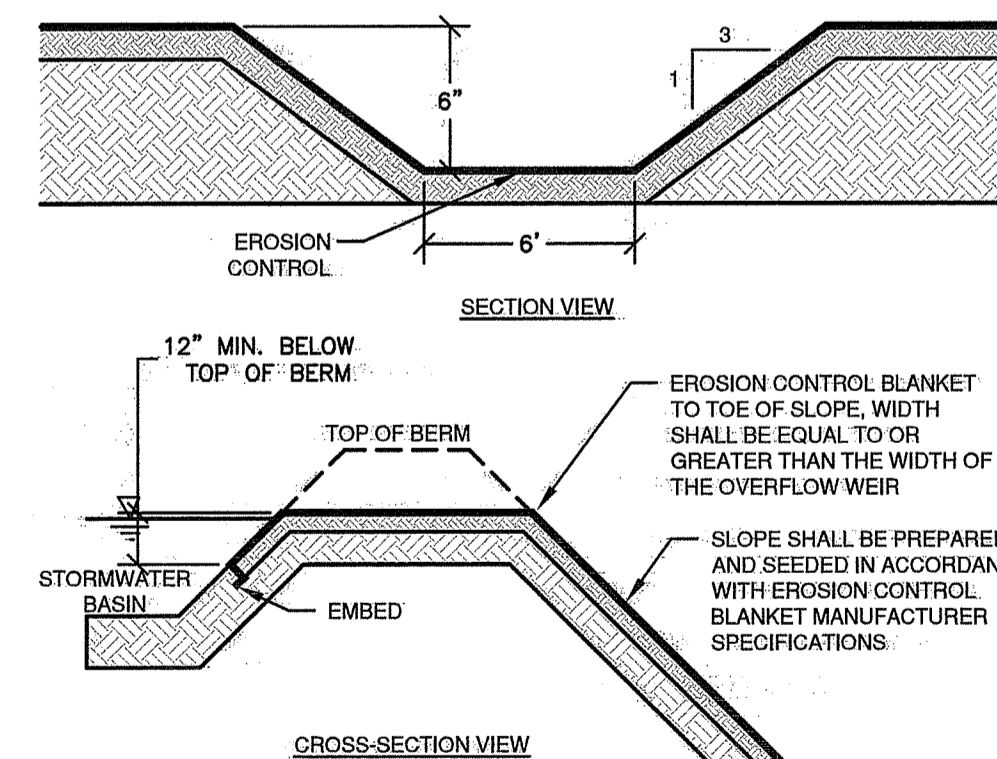
NOTES:

- OVERFLOW BERM TO BE CONSTRUCTED FROM MATERIALS EXCAVATED FROM EXISTING GRADE.
- UPON COMPLETION OF CONSTRUCTION, DETENTION BASIN WILL BE SEED WITH MEADOW GRASS SEED MIX.

DETENTION BASIN

1" = 5'

wood



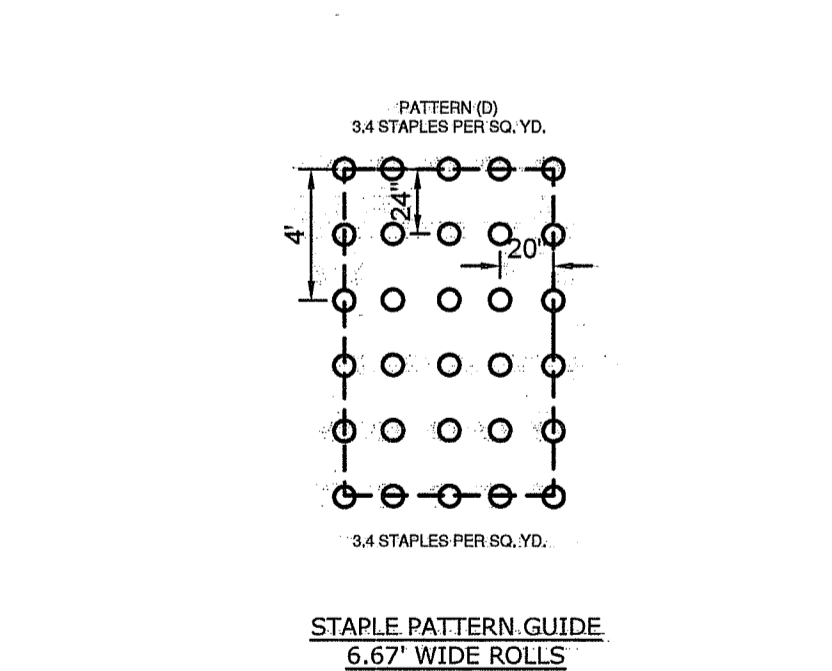
NOTES:

- EROSION CONTROL BLANKET SHALL BE NORTH AMERICAN GREEN PRODUCTS ERONET S150 OR APPROVED EQUIVALENT.
- EROSION CONTROL BLANKET SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

OVERFLOW BERM AND OUTLET WEIR

NTS

wood



NOTE:

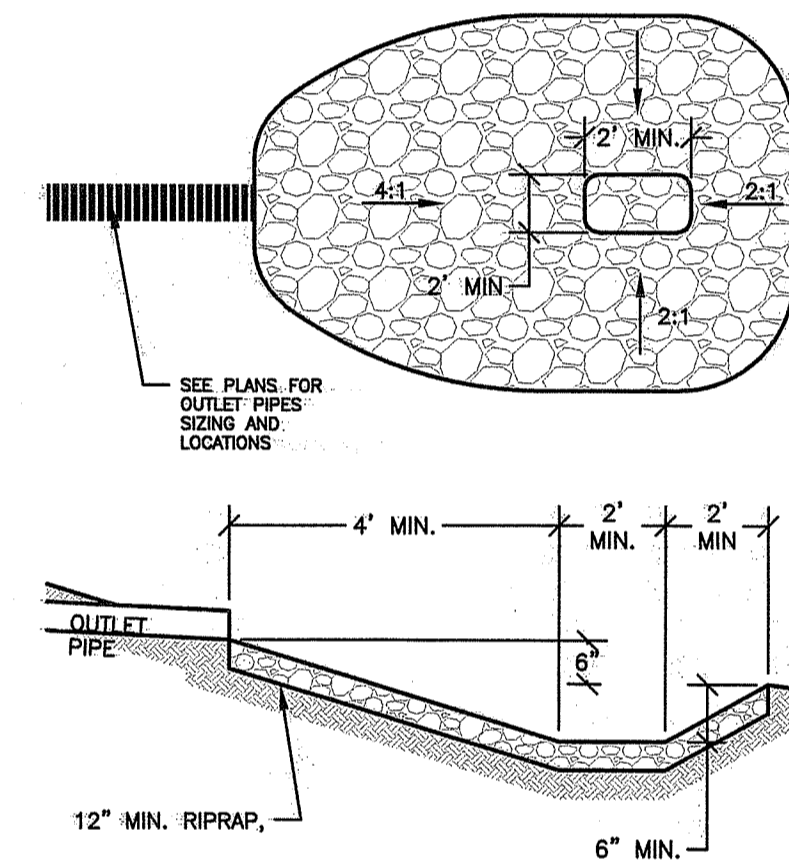
- THIS DETAIL REFERENCES PRODUCTS BY NORTH AMERICAN GREEN. EQUIVALENT PRODUCTS MAY BE USED AS APPROVED BY THE ENGINEER. EROSION CONTROL BLANKETS TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS. EROSION CONTROL BLANKET TO BE INSTALLED ON ALL PROPOSED SLOPES 3:1 OR STEEPER AND AS INDICATED ON BASIN DETAIL.
- EROSION CONTROL MATTING TO BE NORTH AMERICAN GREEN ERONET S150 OR APPROVED EQUAL. INSTALL USING STAPLE PATTERN D.
 - PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPS), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED, IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
 - BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECPS IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECPS EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPS WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECPS BACK OVER SEED AND COMPACTED SOIL. SECURE RECPS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECPS.
 - ROLL THE RECPS DOWN THE SLOPE. RECPS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECPS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
 - THE EDGES OF PARALLEL RECPS MUST BE STAPLED WITH AN APPROXIMATE 3" OVERLAP.
 - CONSECUTIVE RECPS SPUN DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECPS WIDTH.

EROSION CONTROL BLANKET

NTS

wood

Environmental Management
DEC 31 2019
Office of Water Resources



NOT FOR CONSTRUCTION

SEAL:

GREGORY A. AVENIA
No. 9562
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

12/23/2019

REVISION	DATE	DESCRIPTION
5	12/23/2019	RIBBY RTC
4	8/29/2019	STORMWATER DESIGN
3	8/12/2019	REVISED LAYOUT
2	7/8/2019	WEL ENGINEER APPLICATION
1	6/21/2019	ADD HAMMERHEAD

CLIENT:

ECONOX RENEWABLES, INC.
48 WATERFIELD ROAD
P.O. BOX 808
WINCHESTER, MA 01890

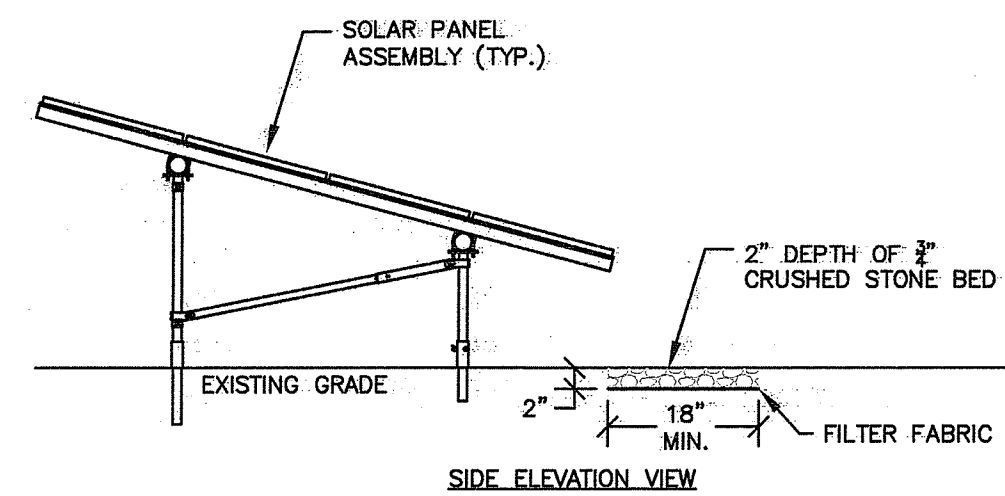
PROJECT:

PROPOSED SOLAR DEVELOPMENT
AP 45 LOTS 51, 59, 102
BLACKBIRD FARM
161 LIMESTOCK ROAD
SMITHFIELD, RHODE ISLAND

TITLE:

DETAILS-1

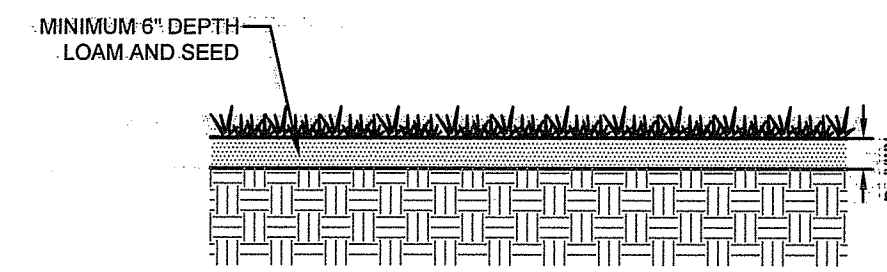
ISSUED FOR:	PERMITTING
DATE:	DECEMBER 23, 2019
SCALE:	N/A
DRAWN BY:	MJW
CHECKED BY:	GAA
PROJECT NO.:	3652190209



- NOTE:**
1. SHOULD EROSION OCCUR AT THE DRIP EDGE OF A GIVEN SOLAR PANEL, A CRUSHED STONE BED SHALL BE INSTALLED WITHIN THE AREA OF THE EROSION AS REPAIR.
 2. DESIGN FOR FOUNDATIONS, RACKING, AND MODULES BY OTHERS. DETAILS SHOWN FOR ILLUSTRATION PURPOSES ONLY.

DRIP EDGE EROSION PROTECTION

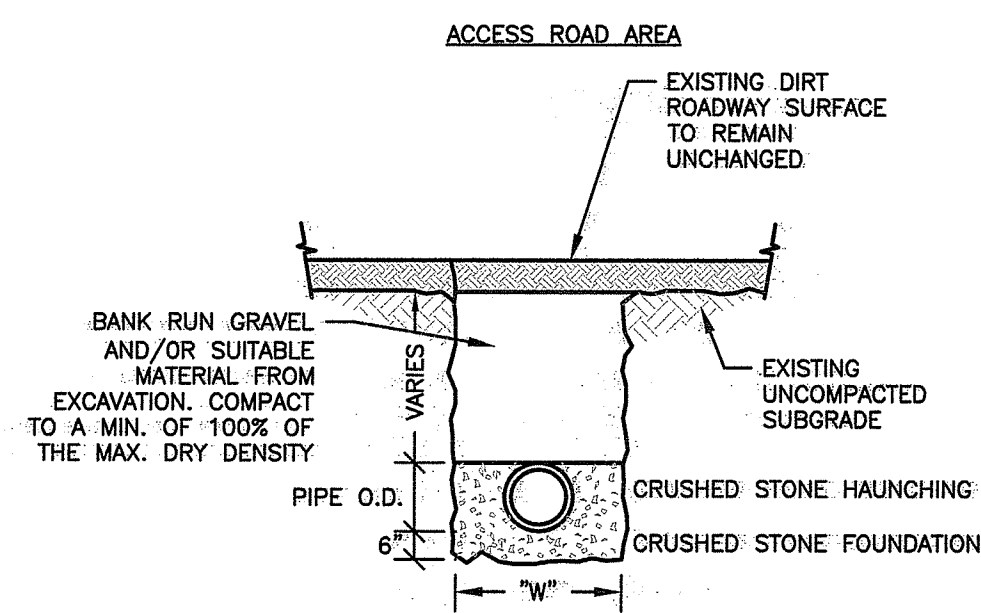
NTS wood



- NOTE:**
1. SEED MIX SHALL BE URI #3 OR APPROVED EQUAL.

TYPICAL SEEDING CROSS-SECTION

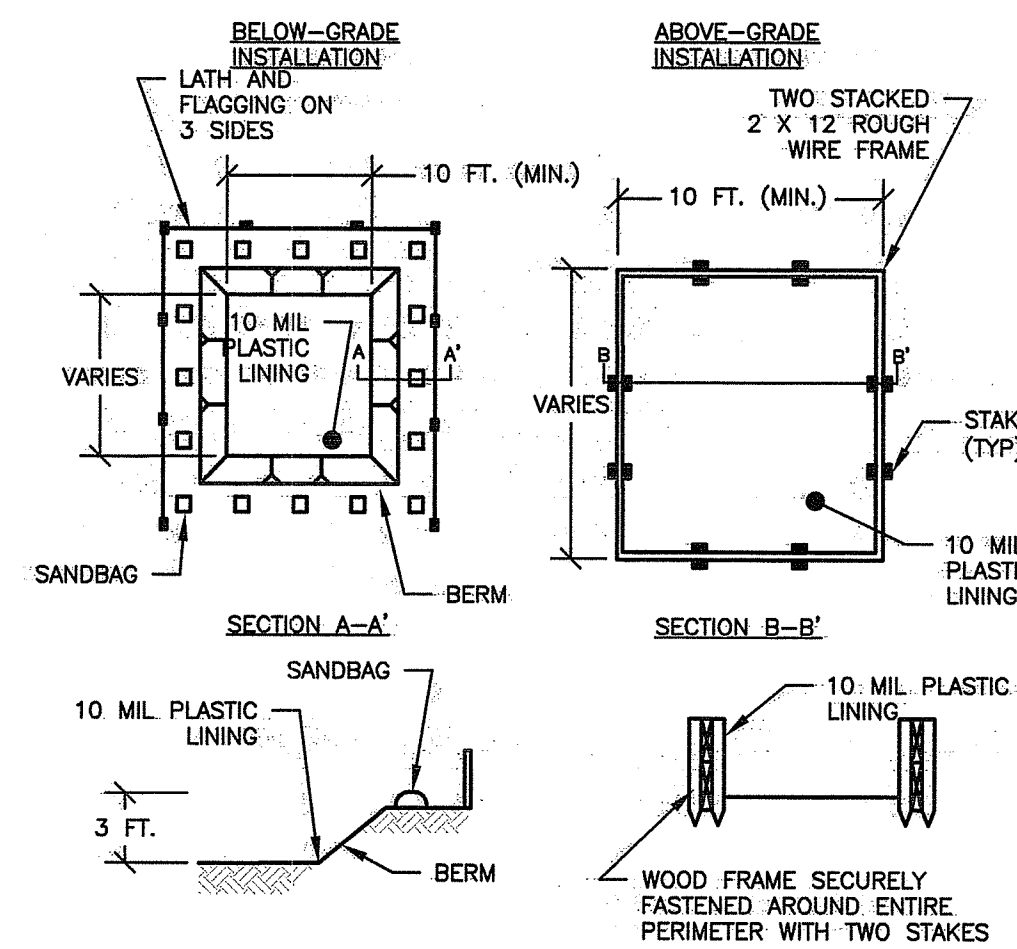
NTS wood



- NOTES:**
1. WIDTH (W) OF TRENCH IS EQUAL TO THE INSIDE DIAMETER OF THE PIPE PLUS 12".
 2. SOIL UNDER CRUSHED STONE FOUNDATION SHALL BE UNDISTURBED AND COMPACTED WITH SEVERAL PASSES OF A VIBRATORY PLATE COMPACTOR.
 3. CRUSHED STONE FOUNDATION 3/4" MAXIMUM SIZE, SHALL BE PLACED 6" UNDER THE PIPE AND UP TO THE PIPE GRADE. THE PIPE LAID THEREON, CRUSHED STONE PULLED AGAINST THE PIPE SIDES TO FIRMLY HOLD THE PIPE IN PLACE.
 4. CRUSHED STONE HAUNCHING 3/4" MAXIMUM SIZE SHALL BE BROUGHT LEVEL TO THE TOP OF THE PIPE AND OUT TO THE TRENCH WALL AT THIS ELEVATION FOR ALL PIPE.

UTILITY TRENCH

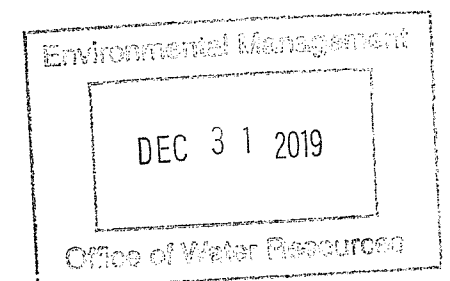
NTS wood_3.85



- NOTES:**
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
 2. LOCATE A MIN. OF 50 FEET FROM STORM DRAINS, OPEN CHANNELS, WATER BODIES, AND JURISDICTIONAL WETLANDS.
 3. SOIL BASE SHALL BE PREPARED FREE OF ROCKS OR OTHER DEBRIS THAT COULD CAUSE A TEAR IN THE LINER.
 4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE AREAS SUCH AS STORM DRAINS, OPEN DITCHES, OR WATER BODIES, INCLUDING ALL JURISDICTIONAL WETLANDS.

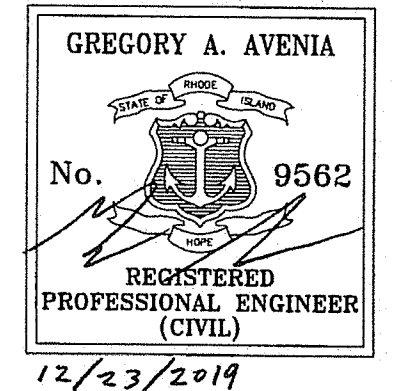
TEMPORARY CONCRETE WASHOUT

NTS wood



NOT FOR CONSTRUCTION

SEAL:



REVISION	DATE	DESCRIPTION
5	12/23/2019	RIDEM RTC
4	8/29/2019	STORMWATER DESIGN
3	8/12/2019	REVISED LAYOUT
2	7/8/2019	SOIL EROSION APPLICATION
1	6/21/2019	ADD HAMMERHEAD

CLIENT:
ECONOX RENEWABLES, INC.
48 WATERFIELD ROAD
P.O. BOX 808
WINCHESTER, MA 01890

PROJECT:
PROPOSED SOLAR DEVELOPMENT
AP 45 LOTS 51, 59, 102
BLACKBIRD FARM
161 LIMEROCK ROAD
SMITHFIELD, RHODE ISLAND

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 1 2020 FILE # 19-0261
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Walter E. Freeman

DETAILS-2

ISSUED FOR: PERMITTING
DATE: DECEMBER 23, 2019
SCALE: N/A
DRAWN BY: MAJW
CHECKED BY: GAA
PROJECT NO: 3652190209

NOTES:

1. THIS PARCEL LIES WITHIN ZONE 'X'
FOUND ON FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 44007CO186G
ZONE 'X' = AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.
MAP REVISED: MARCH 2, 2009
2. HORIZONTAL DATA ON THIS PLAN WAS OBTAINED BY FIELD SURVEY.

REFERENCE PLANS:

1. "SMITHFIELD-LINCOLN, R.I. PLAN OF LAND TO BE CONVEYED TO SECOND PAWTUCKET AREA INDUSTRIAL DEVELOPMENT FOUNDATION, INC. SCALE 1" = 100' JULY, 1975 EARL R. MARSH ASSOC. LINCOLN, R.I."
2. "SMITHFIELD, RI PLAN OF LAND PREPARED FOR CARLSON PROPERTIES AP 45 LOT 49 LIME ROCK ROAD SURVEYED BY MARSH SURVEYING 840 SMITHFIELD AVE. LINCOLN, RI NOVEMBER 15, 2000 SCALE 1" = 60' "
3. "SMITHFIELD, R.I. DIVISION OF LAND OWNED BY LAWRENCE T. CARLSON ET ALS SURVEYED BY EARL R. MARSH ASSOC. JUNE, 1985 SCALE: 1" = 80' "RECORDED IN DEED BOOK 82 PAGE 1030
4. "NORTH CENTRAL STATE AIRPORT BOUNDARY SURVEY SCALE: 1" = 100' DATE: 9/23/99 SHEET 6 OF 7" BY BRYANT ASSOCIATES, INC.

SITE

SMITHFIELD, RI
LOCUS MAP
NOT TO SCALE

Environmental Management
DEC 31 2019
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 APR 1 2009 FILE # 19-0261
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
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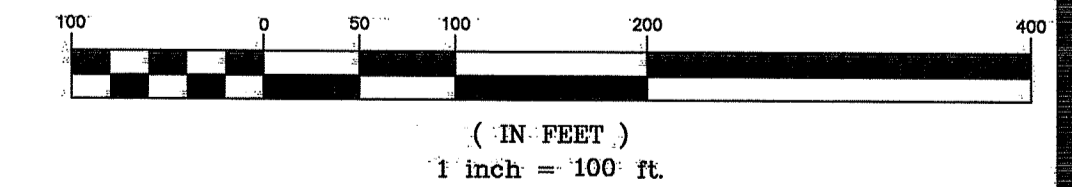
Kenneth T. Freeman

**SMITHFIELD, RI
PLAN OF LAND
PREPARED FOR
BOUTHILLETTE FAMILY TRUST**

CLASS I SURVEY OF
AP 45 LOT 59
LIME ROCK ROAD

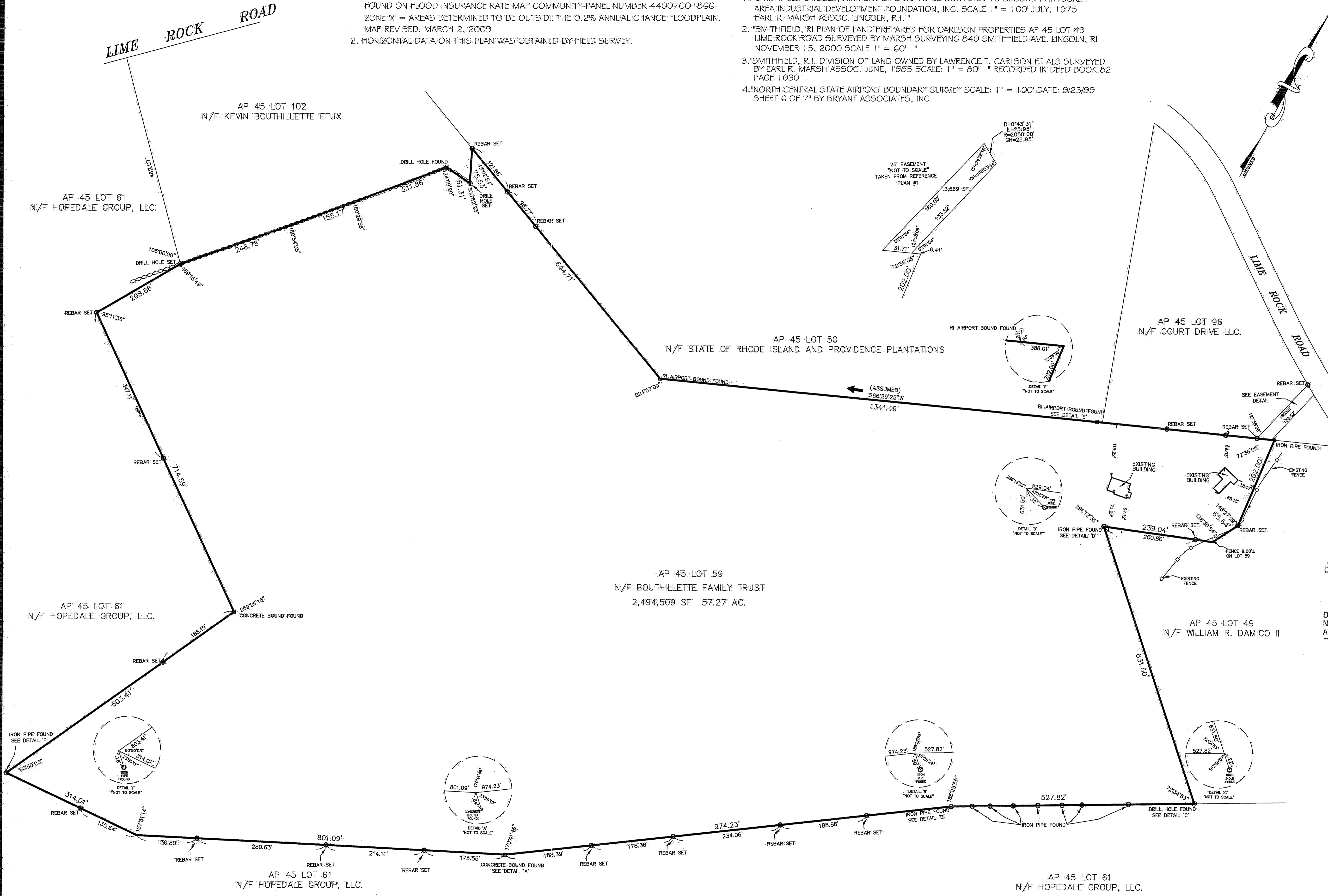
BY
MLC SURVEYING, INC.
450 GEO. WASH. HWY. SMITHFIELD, RI
(401) 232-1990
DECEMBER 16, 2009

GRAPHIC SCALE



NO.	DATE	DESCRIPTION	BY
1.	09/17/10	ADD BUILDINGS TO PLAN	MCL

THIS PLAN TO BE INDEXED BY THE FOLLOWING:
LIME ROCK ROAD



THIS SURVEY AND PLAN CONFORM TO THE FOLLOWING STANDARDS
AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION
FOR PROFESSIONAL LAND SURVEYORS. HORIZONTAL: CLASS I

BY: _____ REGISTERED PROFESSIONAL LAND SURVEYOR DATE: _____

G:\LAND PROJECTS\2009\2009_04\AP-45-LOT-59-LIME-ROCK-ROAD-SURVEY.dwg 8/17/2016 1:57:09 PM EDT

