# SCS MARSHALL SOLAR PROJECT - MARSHALL STREET LANDFILL PROPOSED 2.5 MW-AC SOLAR ARRAY

MARSHALL STREET, HOLLISTON, MA

PREPARED FOR: SCS MARSHALL 012252 HOLLISTON, LLC

C/O SOL SYSTEMS, LLC

1101 CONNECTICUT AVE NW, SECOND FLOOR

WASHINGTON, DC 20036

PREPARED BY: TRC COMPANIES, INC.

LOWELL, MASSACHUSETTS 01854

**DATE: JULY 2021** 



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MASSACHUSETTS

**HOLLISTON, MIDDLESEX COUNTY** 

SITE LOCATOR



# **GENERAL NOTES**

- . THE PROJECT HORIZONTAL COORDINATES SYSTEM IS BASED ON NAD83 MASSACHUSETTS STATE PLANES (US SURVEY FEET. MAINLAND ZONE, MA83F). ELEVATIONS ARE BASED ON NAVD88 (US SURVEY FEET).
- PROJECT PROPERTY BOUNDARIES AND SITE TOPOGRAPHIC INFORMATION ARE BASED UPON AN AERIAL LIDAR SURVEY COMPLETED BY MERIDIAN ASSOCIATES, INC. ON NOVEMBER 6, 2019 AND SUPPLEMENTED WITH INSTRUMENT SURVEY CONDUCTED ON THE GROUND BY MERIDIAN ASSOCIATES, INC. BETWEEN MAY 5-12, 2020 AS PROVIDED IN A PLAN ENTITLED "MARSHALL STREET ALTA/NSPS LAND TITLE SURVEY" AND DATED JUNE12, 2020. SURVEY INFORMATION OBTAINED FROM A COMBINATION OF TOWN OF HOLLISTON TAX MAPS, FIELD SURVEY AND DEED RESEARCH. BOUNDARY SURVEY PLANS SEALED BY A LICENSED PROFESSIONAL LAND SURVEYOR ARE PROVIDED UNDER SEPARATE COVER.
- UTILITY INFORMATION DEPICTED IS COMPILED USING PHYSICAL SURFACE EVIDENCE LOCATED IN THE FIELD IN CONJUNCTION WITH ANY RECORD INFORMATION AVAILABLE AT THE TIME OF THE FIELD SURVEY AND MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. THEREFORE ALL UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE AND BE VERIFIED BY THE CONTRACTOR. DIGSAFE SHALL BE NOTIFIED A MINIMUM OF 72-HOURS PRIOR TO COMMENCING ANY EXCAVATION. FULL UTILITY COORDINATION WITH NON-MEMBER UTILITIES AND USE OF GROUND-PENETRATING RADAR TO LOCATE UTILITIES SHOULD BE PERFORMED AS
- WETLAND DELINEATION WAS PERFORMED BY TRC ON MARCH 31, 2020 AND LOCATED USING MAPPING GRADE GPS UNITS. ADDITIONAL NATURAL RESOURCE LAYERS ARE COMPILED FROM A COMBINATION OF SOURCES INCLUDING STATE OF MASSACHUSETTS GIS DATA LAYERS.
- LIMITS OF LANDFILL COVER ARE ESTIMATED BASED "FIGURE 1 AUGUST 13, 2020 POST-CLOSURE LANDFILL INSPECTION," PREPARED BY KLEINFELDER AND DATED AUGUST 2020, AND SHOULD BE CONSIDERED APPROXIMATE.
- THIS IS A PRELIMINARY DESIGN PLAN. FINAL DESIGN SHALL BE MODIFIED BY CONTRACTOR TO MATCH FINAL ELECTRICAL INTERCONNECTION STUDIES, EQUIPMENT PURCHASED, AND POSSIBLE PERMIT CONSTRAINTS REVEALED DURING PROJECT'S REVIEW. ELECTRICAL EQUIPMENT LAYOUT INCLUDING EQUIPMENT PADS, UTILITY POLES, ETC. WERE PROVIDED BY PURE POWER ENGINEERING, INC. ON JULY 21, 2020.
- 1. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, PROJECT GEOTECHNICAL REPORT, AND ANY OTHER APPLICABLE TECHNICAL REPORTS, WHERE INDICATED. STATE AND/OR LOCAL STANDARD SPECIFICATIONS SHALL APPLY.
- 8. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING STATE AND FEDERAL REQUIREMENTS WITH RESPECT TO STORMWATER
- ). THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES AND SITE INFRASTRUCTURE WITHIN OR ADJACENT TO THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
- 10. CONSTRUCTION SHALL NOT OCCUR IN ANY PUBLIC RIGHTS OF WAY, PUBLIC OR PRIVATE EASEMENTS, BEYOND THE LIMITS OF DISTURBANCE, OR OUTSIDE THE PROPERTY LIMITS WITHOUT NECESSARY PERMITS. ANY PUBLIC OR PRIVATE PROPERTY OR IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE COST OF
- 11. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT OF WAY. OVERNIGHT PARKING OF CONSTRUCTION VEHICLES ON PRIVATE PROPERTY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 12. ALL PROPERTY CORNERS OR MONUMENTS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF
- 13. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS CONTROLLING THE POLLUTION OF
- 14. CONTRACTOR TO ENSURE ALL WORK PERFORMED IS IN ACCORDANCE WITH EXISTING PROJECT PERMITS, STUDIES, AND REPORTS PROVIDED IN THE CONTRACT DOCUMENTS INCLUDING STATE STORMWATER MANAGEMENT PERMIT AND LOCAL ORDINANCE.
- 15. IT IS THE INTENT OF THESE PLANS THAT THE CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE THE IDENTIFIED PROJECT
- 16. IT IS THE INTENT OF THESE PLANS THAT THE CONTRACTOR AVOID "FILLING" WETLANDS AT ALL COSTS. CONTRACTOR TO AVOID THE DELINEATED WETLAND AREAS AND NATURAL RESOURCES ONSITE.
- 17. NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY PROTECTED NATURAL RESOURCE. ALL AREAS WITHIN 75 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIERS NOVEMBER 1
- 18. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DRAINAGE THROUGHOUT THE CONSTRUCTION OF THE PROJECT.
- 19. EXISTING ACCESS ROADS TO BE MAINTAINED SHALL BE PROOF ROLLED, SMOOTHED, AND RESURFACED AS NECESSARY TO
- 20. THE CONTRACTOR SHALL SECURE PERMITS FROM THE STATE AND TOWN OF HOLLISTON AS NECESSARY BEFORE DRIVING CONSTRUCTION EQUIPMENT OVER AND ACROSS STATE AND TOWN MAINTAINED ROADS.
- 21. ALL WORK IN THE PUBLIC RIGHTS OF WAY SHALL CONFORM WITH THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
- 22. THE INTEGRITY OF THE LANDFILL COVER SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. THERE SHALL BE NO PENETRATIONS INTO THE COVER OR REMOVAL OF COVER MATERIAL UNLESS SPECIFIED IN THESE PLANS OR PRIOR APPROVAL IS GRANTED BY THE MASSDEP. IF DAMAGE TO THE COVER OCCURS, IT SHALL BE RESTORED TO PREEXISTING CONDITIONS AS SOON AS POSSIBLE AND COVER MATERIAL SHALL BE SUPPLEMENTED WITH BENTONITE AS NEEDED.
- 3. ONLY LOW GROUND PRESSURE EQUIPMENT (HAVING A CONTACT PRESSURE OF 10 PSI OR LESS), SUCH AS TRACK-MOUNTED CONSTRUCTION EQUIPMENT AND RUBBER-TIRED LANDSCAPING EQUIPMENT, SHALL TRAVEL DIRECTLY ON THE LANDFILL COVER. ALL OTHER EQUIPMENT SHALL BE ROUTED OVER TEMPORARY OR PERMANENT ACCESS ROADS.

# **HOUSEKEEPING NOTES**

- CONTRACTOR SHALL MAINTAIN THE PROJECT SITE IN ACCORDANCE WITH THE FOLLOWING PERFORMANCE STANDARDS:
- <u>SPILL PREVENTION:</u> CONTROLS SHALL BE IN PLACE TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS USED AND STORED ONSITE. APPROPRIATE CONTROLS INCLUDE, BUT ARE NOT LIMITED TO, PROPER STORAGE PRACTICES THAT MINIMIZE EXPOSURE OF MATERIALS TO STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING
- GROUNDWATER PROTECTION: DURING CONSTRUCTION, THE CONTRACTOR MAY NOT STORE OR HANDLE LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER IN AREAS OF THE PROJECT SITES DRAINING TO AN INFILTRATION AREA OR WITHIN 100 FEET OF A CRITICAL RESOURCE AREA OR STREAM, DIKES. BERMS. SUMPS. AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORING AND HANDLING LIQUID HAZARDOUS MATERIALS.
- FUGITIVE SEDIMENT AND DUST: CONTRACTOR SHALL TAKE ALL NECESSARY ACTIONS TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE FROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION, OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE. CALCIUM CHLORIDE AND OIL MAY NOT BE USED FOR DUST CONTROL. CONTRACTOR SHALL MONITOR VEHICLES ENTERING AND EXITING THE PROJECT SITE FOR EVIDENCE OF TRACKING MUD ONTO PUBLIC OR PRIVATE ROADWAYS OUTSIDE THE WORK AREA. IF NECESSARY, CONTRACTOR SHALL PROVIDE MEANS FOR SWEEPING AND CLEANING ROAD AREAS EXPERIENCING TRACKING. IF OFF-SITE TRACKING OCCURS ON PUBLIC ROADS, THEY SHOULD BE SWEPT IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. DURING THE MUD SEASON IT MAY BE NECESSARY TO INCREASE THE SIZE OF STABILIZED CONSTRUCTION ENTRANCES OR PROVIDE A WHEEL WASHING STATION.
- DEBRIS AND OTHER MATERIALS: CONTRACTOR SHALL MANAGE ALL LITTER, CONSTRUCTION DEBRIS. CONSTRUCTION CHEMICALS. AND BUILDING AND LANDSCAPING MATERIALS EXPOSED TO STORMWATER TO PREVENT MATERIALS FROM BECOMING A SOURCE OF
- TRENCH OR FOUNDATION DEWATERING: TRENCH DEWATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, SUMPS, BASINS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE CONTRACTOR SHALL REMOVE COLLECTED WATER FROM THE PONDED AREAS, EITHER THROUGH GRAVITY OR PUMPING, IN A MANNER THAT SPREADS IT THROUGH NATURAL WOODED BUFFERS OR TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE (E.G. COFFERDAM SEDIMENT BASIN). THE CONTRACTOR SHALL AVOID PRACTICES THAT ALLOW SEDIMENT LADEN WATER FROM DEWATERING TO FLOW OVER DISTURBED AREAS OF THE PROJECT SITES. OTHER MEASURES OR METHODS MAY BE UTILIZED AS REVIEWED AND APPROVED BY THE ENGINEER AND, IF NECESSARY, THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION.
- <u>AUTHORIZED NON-STORMWATER DISCHARGES:</u> THE CONTRACTOR SHALL IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHALL BE TAKEN TO ENSURE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENTS OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE: DISCHARGES FROM FIREFIGHTING ACTIVITY, FIRE HYDRANT FLUSHING, VEHICLE WASHING IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES, DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS, ROUTINE EXTERNAL BUILDING WASHDOWN (EXCLUDING PAINT REMOVAL AND USE OF DETERGENTS), PAVEMENT WASHWATER (EXCLUDING AREAS OF SPILLS OR LEAKS OF TOXIC/HAZARDOUS MATERIALS AND USE OF DETERGENTS). UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE. UNCONTAMINATED GROUNDWATER OR SPRING WATER, FOUNDATION OR FOOTING DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED, UNCONTAMINATED EXCAVATION DEWATERING, POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHING, AND
- <u>UNAUTHORIZED NON-STORMWATER DISCHARGES:</u> THE CONTRACTOR SHALL IDENTIFY AND PREVENT CONTAMINATION BY UNAUTHORIZED NON-STORMWATER DISCHARGES. UNAUTHORIZED STORMWATER DISCHARGES INCLUDE, BUT ARE NOT LIMITED TO, WASTEWATER FROM CONCRETE WASHOUT, FUELS OR HAZARDOUS SUBSTANCES, AND DETERGENTS USED IN VEHICLE AND
- ADDITIONAL REQUIREMENTS: COMPLETION OF THE WORK WILL REQUIRE FREQUENT ACCESS TO VARIOUS PORTIONS OF THE PROJECT AREA FROM STATE AND LOCAL ROADWAYS. CONTRACTOR SHALL MONITOR PUBLIC ROADWAYS AND SHALL CLEAN PAVEMENT BY MEANS NECESSARY IN THE EVENT THAT SEDIMENT OR TRACKING IS OBSERVED. SIGNAGE SHALL BE POSTED AT INTERSECTIONS OF PROJECT ACCESS ROADS AND PUBLIC WAYS, STATING COMPANY NAME AND 24-HOUR CONTACT PHONE

# **ZONING REQUIREMENTS**

LEGEND

— — SURVEYED PROPERTY BOUNDARY

WATER GATE/VALVE

EXISTING GAS VENT

EXISTING EDGE OF GRAVEL

**EXISTING EDGE OF PATHWAY** 

EXISTING EDGE OF PAVEMENT/CONCRETE

NHESP ESTIMATED & PRIORITY HABITATS

TRC DELINEATED POTENTIAL VERNAL POOL

EXISTING OVERHEAD ELECTRIC & POLES

— — — APPROXIMATE LIMITS OF LANDFILL COVER

MASSGIS PERENNIAL STREAM

— — — — 200' PERENNIAL STREAM BUFFER

PROPOSED CHAIN LINK FENCE

---- 100-YEAR FLOOD ZONE LIMIT

. PROPOSED TREE LINE

LIMITS OF DISTURBANCE

100' BUFFER

PROPOSED MAJOR CONTOUR

PROPOSED MINOR CONTOUR

PROPOSED OVERHEAD ELECTRIC LINE AND POLE

PROPOSED FIXED-TILT ARRAY RACKING

—— uge—— uge—— PROPOSED MV UNDERGROUND ELECTRIC LINE

PROPOSED GRAVEL ACCESS/PAD

MASSGIS WETLANDS

TRC DELINEATED WETLANDS

NHESP POTENTIAL VERNAL POOL

— — — 70 — — — EXISTING MAJOR CONTOUR

---- 68 --- EXISTING MINOR CONTOUR

. . . EXISTING TREELINE

——O——O—— EXISTING FENCE

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\_\_\_\_\_ 50' BUFFER

— — SURVEYED PROPERTY BOUNDARY		ZONING DISTRICTS SUMMARY TABLE								
	APPROXIMATE ABUTTING PROPERTY BOUNDARY		GENERAL ZONII	NG DISTRICT			OVE	RLAY ZONING DI	STRICTS	
	— — — INTERNAL PROPERTY LINE	AGRICU	JLTURAL-RESIDEN	TIAL DISTRICT A (A	.R-1)		GROUNDWATER	PROTECTION DIST	RICT ZONES II ANI	) III
•	STONE/CONCRETE BOUND DRILL HOLE				DIMENSIO	NAL STANDAF	RDS			
	CONCRETE BOUND	DISTRICT	MIN. FRONT Y	ARD SETBACK	MIN. SIDE YARD SETBACK		MIN. REAR YARD SETBACK		BUILDING MAX. HEIGHT	
0	IRON PIPE		REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED
0	IRON ROD	AGRICULTURAL- RESIDENTIAL DISTRICT	50'	90'	50'	65'	50'	125'	35'	12'
0	HYDRANT	(AR-1) AND SOLAR SETBACKS								
_										

# PROJECT SCHEDULE

SPECIFICS OF HOW WORK IS TO BE COMPLETED SHALL ALSO BE BASED ON ENVIRONMENTAL CONSIDERATIONS ASSOCIATED WITH SEASONAL CHANGES. THE FOLLOWING DATES ARE PROVIDED TO ESTABLISH A GENERAL GUIDELINE FOR THESE SEASONS:

- WINTER: NOVEMBER 1 TO MARCH 19 - MUD SEASON: MARCH 20 TO APRIL 30 MAY 1 TO JUNE 21 - SPRING: - SUMMER: JUNE 22 TO SEPTEMBER 21 SEPTEMBER 22 TO OCTOBER 31 - FALL:

# FERTILIZER AND LIME REQUIREMENTS

IN GENERAL, FERTILIZER AND LIME APPLICATION RATES WILL FOLLOW THE GUIDELINES IDENTIFIED BELOW UNLESS SITE SPECIFIC SOIL TESTS IDENTIFY THE NEED FOR ALTERNATIVE FERTILIZER/LIME APPLICATION RATES. FERTILIZER WILL BE APPLIED TO UPLAND AREAS PRIOR TO SEEDING AT A RATE OF 800 POUNDS PER ACRE USING 10-0-0 (N-P205-K20) OR EQUIVALENT. GROUND LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) WILL BE APPLIED AT A RATE OF 3 TONS PER ACRE. AN EQUIVALENT MIXTURE OF FERTILIZER AND LIME MAY BE APPLIED USING THE HYDROSEEDING METHOD. NO LIME OR FERTILIZER WILL BE APPLIED TO WETLANDS.

# MULCH ANCHORING REQUIREMENTS

-APPLICATION OF MULCH NETTING

SOIL MATERIAL SPECIFICATIONS

ON SLOPES GREATER THAN 3 PERCENT, STRAW MULCH WILL BE FIRMLY ANCHORED INTO THE SOIL UTILIZING ONE OF THE FOLLOWING METHODS

-CRIMPING WITH A STRAIGHT OR NOTCHED MULCH CRIMPING TOOL (FARM DISCS WILL NOT BE ALLOWED); -TRACK WALKING WITH DEEP-CLEATED EQUIPMENT OPERATING UP AND DOWN THE SLOPE (MULCH CRIMPED PERPENDICULAR TO THE SLOPE) ON SLOPES <25 PERCENT:

-APPLICATION OF 500 LB./ACRE OF WOOD FIBER MULCH OVER STRAW/HAY MULCH; AND -COMMERCIALLY AVAILABLE TACKIFIERS (EXCEPT WITHIN 100 FEET OF WATERBODIES OR WETLANDS).

PROPOSED GRADES SHALL BE ACHIEVED BY PLACING FILL MATERIAL FOLLOWED BY A MINIMUM 3-INCH TOPSOIL LAYER AS SPECIFIED BELOW:

SHALL CONSIST OF EARTH FREE FROM FROZEN MATERIAL, DEBRIS, AND OTHER DELETERIOUS MATERIAL. THE MOISTURE CONTENT SHALL BE SUFFICIENT TO PROVIDE ADEQUATE COMPACTION. MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 3 INCHES IN DIAMETER. A MIXTURE OF STREET SWEEPINGS AND COMPOST MAY BE USED AS THE FILL MATERIAL AS APPROVED BY MASSDEP IN THE TOWN'S BENEFICIAL USE DETERMINATION PERMIT.

TOPSOIL SHALL BE STRIPPED WITHIN THE CONFINES OF THE SHADED AREA INDICATED ON THE SITE GRADING PLAN AND REUSED FOR THE 3-INCH TOPSOIL LAYER PLACED OVER THE FILL MATERIAL. IF THE QUANTITY OF TOPSOIL ON-SITE IS INSUFFICIENT, OR DOES NOT MEET THE REQUIREMENTS OF THIS SPECIFICATION, ADDITIONAL TOPSOIL MATERIAL SHALL BE PROVIDED FROM AN OFF-SITE SOURCE. MATERIAL SHALL BE FRIABLE, FERTILE, LOAMY SOIL CONTAINING AN AMOUNT OF ORGANIC MATTER NORMAL TO THE REGION, CAPABLE OF SUSTAINING HEALTHY PLANT LIFE. SHALL BE FREE FROM REFUSE, SUBSOILS, ROOTS, WEEDS, STUMPS, STONES LARGER THAN 2 INCHES, MATERIALS TOXIC TO PLANT GROWTH, AND FOREIGN OBJECTS.

## SEED AND MULCH SPECIFICATIONS

SEED MIX NAME	SEED MIX COMPONENTS		LB./ACRE1
TEMPORARY SEED MIX	ANNUAL RYEGRASS	40	
PERMANENT SEED MIXES	•	•	
UPLANDS SEED MIX	CREEPING RED FESCUE SHEEP FESCUE HARD FESCUE 'BEACON' HARD FESCUE 'RHINO' BLUE FESCUE 'BLUE RAY' KENTUCKY BLUEGRASS 'ARGYLE' KENTUCKY BLUEGRASS 'SHAMROCK' AUTUMN BENTGRASS, ALBANY PINE BUSH-NY ECOTYPE (OR APPROVED EQUAL)	34% 33% 10% 5% 5% 5% 5% 5% 3%	262
SUPPLEMENTAL WINTER SEED MIX <sup>2</sup>	WINTER RYEGRASS		120

1. INCREASE SEEDING RATES 10% WHEN HYDROSEEDING 2. WINTER RYE WILL BE ADDED TO UPLANDS SEED MIX AT A RATE OF 120 LB./ACRE BETWEEN OCTOBER 1 AND APRIL 15

CONDITION	TIMING	MULCH TYPE <sup>2</sup>	APPLICATION RATES
TEMPORARY			
INACTIVE AREAS	IF NO ACTIVITY IN EXPOSED AREAS FOR 7 DAYS, OR PRIOR TO A STORM EVENT	STRAW MULCH OR WOOD FIBER MULCH OR EROSION CONTROL MIX	2 TONS/ACRE 1 TON/ACRE 2" THICK OVER AREA
ALL DISTURBED AREAS OF THE CONSTRUCTION WORKSPACE	APPLY MULCH TO ALL EXPOSED AREAS IF NO ACTIVITY OCCURS WITHIN 30 DAYS. APPLY MULCH AND TEMPORARY SEEDING SOONER WHEN IT CAN BE ANTICIPATED THAT ACTIVITY IS NOT GOING TO OCCUR WITHIN 30 DAYS.	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRE 1 TON/ACRE <sup>3</sup>
ALL WORK AREAS EXPOSED ARE TO BE MULCHED DAILY EACH TIME SOIL IS DISTURBED <sup>5</sup>	NOVEMBER 1 - APRIL 15	STRAW MULCH OR WOOD FIBER MULCH	4 TONS/ACRE 2 TONS/ACRE
PERMANENT			
ON ALL EXPOSED AREAS AFTER EEDING TO STABILIZE THE SOIL SURFACE	PERMANENT GRASS AND/OR LEGUME SEEDING COVERED BY STRAW MULCH ON ALL AREAS THAT HAVE BEEN RESTORED TO FINAL GRADE. THIS DOES NOT APPLY TO AREAS STABILIZED BY OTHER MEANS SUCH AS JUTE MATTING OR PERMANENT EROSION CONTROL MIX.	CRIMPED STRAW MULCH OR PAPER MULCH OR WOOD FIBER MULCH	2 TONS/ACRE  1500 LB./ACRE  1 TON/ACRE

SUMMARY OF SEEDING REQUIREMENTS					
CONDITION	TIMING <sup>1,2</sup>	SEED MIX			
TEMPORARY SEEDING <sup>3</sup>	TEMPORARY SEED BETWEEN APRIL 15 AND OCTOBER 1 ONLY. DISTURBED AREAS OR SOIL STOCKPILES WILL BE SEEDED IMMEDIATELY IF FURTHER DISTURBANCE IS NOT EXPECTED FOR 30 DAYS OR MORE.	ANNUAL RYEGRASS			
PERMANENT SEEDING <sup>3,4</sup>					
UPLAND PORTIONS OF THE CONSTRUCTION AREA	DISTURBED AREA WILL BE SEEDED WITHIN 7 DAYS OF FINAL GRADING.	UPLANDS SEED MIX			

DISTURBED AREA WILL BE SEEDED IMMEDIATELY AFTER SEEDBED

DORMANT SEED BETWEEN OCTOBER 1 AND APRIL 15 ONLY

NO SEEDING WILL OCCUR IF SNOW DEPTHS EXCEED 1 INCH.

3. STRAW. HAY. OR HYDROMULCH (WOOD FIBER OR PAPER MULCH AS APPROPRIATE) SHALL PROVIDE MINIMUM 90 PERCENT GROUND COVERAGE.

4. PAPER MULCH IS ACCEPTABLE FOR USE DURING THE GROWING SEASON. ON SLOPES >30 PERCENT AND IN AREAS WHERE VEGETATION HAS NOT

1 WEATHER CONDITIONS PERMITTING 2. AREAS THAT DO NOT SUCCESSFULLY REVEGETATE WITHIN APPROPRIATE PERIOD OF TIME WILL BE RESEEDED AS NECESSARY.

3. LOOSEN COMPACTED SOIL TO A MINIMUM DEPTH OF 4 INCHES.

4. TOP DRESS WITH 4 to 6 INCHES LOAM, AS NEEDED.

ESTABLISHED WELL. ADDITIONAL HAY MULCH WILL BE ADDED AS A WINTERIZING MEASURE

5. MULCH MAY NOT BE SPREAD ON TOP OF SNOW

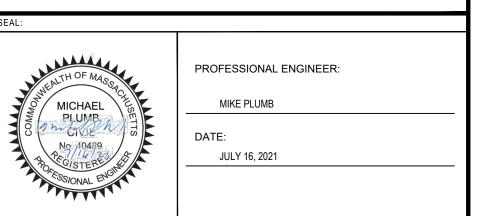
PERMITTING NOT FOR CONSTRUCTION

UPLANDS SEED MIX

RYEGRASS

UPLANDS SEED MIX PLUS WINTER





	TRC	7/16/2021	REVISION 3 PER CONSERVATION COMMISSION COMMENTS	MP
	TRC	6/29/2021	REVISION 2 PER CONSERVATION COMMISSION COMMENTS	MP
	TRC	5/17/2021	REVISED PER CONSERVATION COMMISSION COMMENTS	MP
	TRC	3/8/2021	ISSUED FOR PERMITTING	MP
Ο.	BY	DATE	REVISION	APP'D.
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SCS MARSHALL 012252 HOLLISTON, LLC PROPOSED 2.5 MW-AC SOLAR ARRAY MARSHALL STREET, HOLLISTON, MA

**GENERAL NOTES & LEGEND** 

ARD PROJ. NO.: DRAWN BY: 343578 HECKED BY: G-2 PPROVED BY: JULY 2021



Suite 200 Lowell, MA 01854 Phone: 978.970.5600

650 Suffolk Street

Holliston G-SHEETS.dwa

# **EROSION CONTROL NOTES**

**PROJECT DESCRIPTION** 

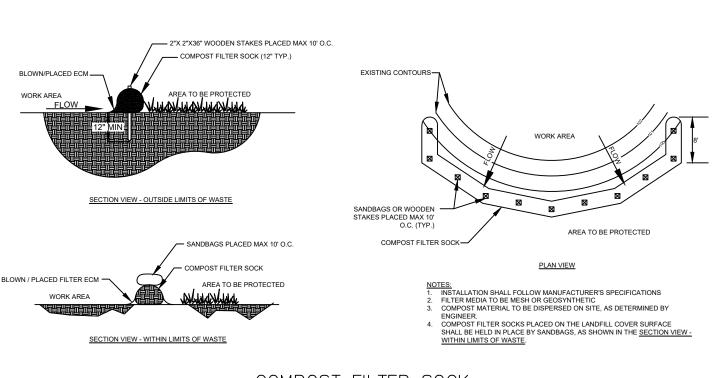
THE PROJECT INVOLVES THE PLACEMENT OF FILL MATERIAL TO REGRADE THE LANDFILL COVER FOLLOWED BY THE CONSTRUCTION OF A GROUND-MOUNTED PHOTOVOLTAIC SOLAR MODULE SYSTEM AND ALL RELATED ACCESS ROADS, UTILITIES, SITE PREPARATION, CLEARING & GRUBBING, EROSION & SEDIMENTATION CONTROL MEASURES, AND TEMPORARY ACCESS ROADS.

- ESTABLISH CONSTRUCTION WORKSPACE LIMITS; IDENTIFY AND MARK SENSITIVE RECEPTORS INCLUDING NATURAL RESOURCES AND DOWNGRADIENT DRAINAGE INFRASTRUCTURE
- INSTALLATION OF ALL EROSION AND SEDIMENT CONTROL MEASURES AND ASSOCIATED WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE "MASSACHUSETTS EROSION AND SEDIMENTATION CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" (REVISED MAY 2003).
- PRIOR TO USAGE, CONSTRUCT AND STABILIZE THE CONSTRUCTION ENTRANCE IN THE LOCATION INDICATED ON THE SITE GRADING AND DRAINAGE PLAN SHEET. AT A MINIMUM, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED AT EACH POINT OF ACCESS/EGRESS FROM THE PROJECT AREA TO PAVED AREAS (I.E., TOWN'S RECYCLING CENTER, MARSHALL STREET).
- CLEAR BRUSH AND SMALL TREES WITHIN PROJECT AREA; GRUBBING SHALL NOT BE COMPLETED UNTIL JUST PRIOR TO PRELIMINARY GRADING AND ESTABLISHMENT AND STABILIZATION OF TEMPORARY OR PERMANENT DRAINAGE CONVEYANCES.
- INSTALL AND MAINTAIN PERIMETER SEDIMENT BARRIERS SUCH AS SILT FENCING AND OTHER APPROVED EROSION CONTROL BARRIERS ALONG THE DOWNHILL LIMIT OF DISTURBANCE AS SHOWN ON THE DRAWINGS. SEDIMENT BARRIER LOCATIONS MAY BE ADJUSTED IN THE FIELD BASED ON ACTUAL SITE CONDITIONS AS DEEMED NECESSARY TO ENSURE PROPER FUNCTION. WHERE SILT FENCE CANNOT BE TOED-IN PROPERLY DUE TO TREE ROOTS, ROCKS, OR FROZEN GROUND, HAY BALES OR AN EROSION CONTROL MIX BERM MAY BE SUBSTITUTED. PERIMETER SEDIMENT BARRIERS SHALL BE INSTALLED AS SOON AS POSSIBLE BUT MAY FOLLOW INITIAL SITE PREPARATION. EROSION OR SEDIMENTATION ISSUES DEVELOPING DURING INITIAL SITE PREPARATION SHALL BE TEMPORARILY STABILIZED AS NECESSARY. ANY EROSION AND SEDIMENT CONTROL MEASURES PLACED ON THE LANDFILL COVER SURFACE SHALL BE NON-GROUND PENETRATING, SUCH AS COMPOST FILTER SOCKS HELD IN PLACE BY SANDBAGS.
- CONSTRUCT TEMPORARY ACCESS ROADS AS NEEDED TO ROUTE TRAFFIC FROM PROPOSED ACCESS ROAD LOCATION ONTO LANDFILL. ONLY LOW GROUND PRESSURE EQUIPMENT MAY BE USED DIRECTLY ON LANDFILL COVER. TEMPORARY ACCESS ROAD SHALL BE REMOVED AS SOLAR ARRAY CONSTRUCTION PROGRESSES FROM FAR EXTENTS OF LANDFILL LIMITS TO CENTER. UNDERLYING AND SURROUNDING LANDFILL COVER SHALL BE RESTORED AS NEEDED.
- STABILIZE PERMANENT ACCESS ROAD SURFACES, PARKING AREAS, AND EQUIPMENT STORAGE AND LAYDOWN AREAS WITH MATTING, CRUSHED STONE, OR GRAVEL SUBBASE AS NECESSARY TO MINIMIZE RUTTING AND AVOID PONDING OF STORMWATER.
- CONCURRENT WITH INITIATION OF SITE GRADING, CONSTRUCT AND STABILIZE TEMPORARY DRAINAGE SWALES, DIVERSION BERMS. CHECK DAMS, AND CULVERTS WITH TEMPORARY INLET AND OUTLET PROTECTION TO MINIMIZE SEDIMENT IN SITE RUNOFF DURING CONSTRUCTION. DEWATERING SHALL BE IN ACCORDANCE WITH THE DEWATERING NOTES.
- INSTALL PROPERLY SPACED STONE CHECK DAMS IN ANY SECTION OF DITCH WITHIN 24-HOURS OF FORMING, SHAPING, OR ROUGH GRADING THAT SECTION OF DITCH.
- ). MINIMIZE THE AMOUNT OF DISTURBANCE AT ANY ONE TIME BY STAGING CONSTRUCTION AS MUCH AS PRACTICAL FOR EFFICIENT CONSTRUCTION OF THE FACILITY. NATURAL VEGETATIVE BUFFERS SHOULD BE LEFT IN PLACE WHERE FEASIBLE TO AID IN SEDIMENT RETENTION AND REDUCE THE POTENTIAL FOR EROSION. OPEN AREA SHALL BE LIMITED TO 10-ACRES OR NO MORE THAN CAN BE MULCHED IN A SINGLE DAY, WHICHEVER IS LESS.
- STRIP TOPSOIL AT A DEPTH OF NO GREATER THAN 3 INCHES WITHIN THE AREAS TO BE REGRADED AND STOCKPILE IN ON-SITE AREA DESIGNATED BY TOWN FOR REUSE. TOPSOIL REMOVAL WITHIN LIMITS OF WASTE TO BE OVERSEEN BY ENGINEER TO ENSURE THE UNDERLYING BARRIER SOIL LAYER IS NOT REMOVED AND/OR DAMAGED.
- 2. STABILIZE ANY NEWLY GRADED SLOPE GREATER THAN EIGHT PERCENT AND ANY SECTION OF NEWLY CONSTRUCTED DITCH USING ANCHORED EROSION CONTROL BLANKETS OR OTHER APPROVED MULCHING TECHNIQUES WITHIN 24-HOURS. ALL VEGETATED DITCHES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1, OR WILL BE WORKED ON BETWEEN NOVEMBER 1 AND APRIL 15, MUST BE STABILIZED WITH STONE LINING BACKED BY GRAVEL BED OR GEOTEXTILE AS SPECIFIED BY THE ENGINEER.
- 13. DUST CONTROL METHODS SHALL BE EMPLOYED AFTER GRADING AND PRIOR TO FINAL STABILIZATION TO PREVENT THE BLOWING AND MOVEMENT OF NUISANCE DUST THROUGH THE APPLICATION OF WATER. CALCIUM CHLORIDE SHALL NOT BE USED.
- 14. APPLY TEMPORARY SEED AND MULCH TO EXPOSED AREAS WHERE ACTIVITY IS NOT ANTICIPATED FOR 30-DAYS/ TEMPORARILY MULCH ANY EXPOSED AREAS WITHIN 100-FEET OF A WETLAND OR NATURAL RESOURCE WHERE WORK IS NOT ANTICIPATED OR HAS NOT OCCURRED IN 7 DAYS.
- . REMOVE EXCESS SPOILS FROM THE SITE THAT WILL NOT BE USED FOR THE FINAL DESIGN AND STABILIZATION. STOCKPILED SOILS THAT REMAIN IN PLACE FOR 48-HOURS OR MORE SHALL BE CONTAINED WITH SEDIMENT BARRIERS. THE SEDIMENT BARRIERS SHALL BE REINFORCED TO HANDLE A SIGNIFICANT RAIN EVENT AND THE POTENTIAL SLUMPING OF THE PILE. BETWEEN APRIL 15 AND OCTOBER 1, APPLY TEMPORARY SEED AND MULCH TO A STOCKPILE THAT IS NOT ANTICIPATED TO BE DISTURBED WITHIN 30-DAYS, APPLY ANCHORED MULCH DAILY AND/OR AS NEEDED DURING WINTER CONSTRUCTION
- 6. INSPECT AND REPAIR EROSION CONTROL MEASURES DAILY IN AREAS OF ACTIVE CONSTRUCTION; OTHERWISE WEEKLY AND AFTER A RAINFALL EVENT OF 0.5-INCHES OR GREATER WITHIN A 24-HOUR PERIOD. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 OF THE HEIGHT OF THE BARRIER.
- . MONITOR PUBLIC ROADS FOR SIGNS OF TRACKING OR SPILLING OF SPOIL MATERIAL AND CLEAN-UP AS NECESSARY.
- 8. COMPLETE FINAL GRADING AND STABILIZATION OF EARTHEN STRUCTURES SUCH AS DIVERSION BERMS, LEVEL SPREADERS, AND SWALES THAT WILL CONTROL POST-CONSTRUCTION RUNOFF.
- 9. FINISH GRADE AND REPLACE TOPSOIL OR LOAM IN DISTURBED AREAS. SEED AND MULCH DISTURBED AREAS WITHIN 6 DAYS OF FINAL GRADING, BETWEEN NOVEMBER 1 AND APRIL 15. STABILIZE AREAS THAT ARE FINAL GRADED AT THE END OF EACH DAY.
- 20. MAINTAIN ALL TEMPORARY EROSION CONTROLS AND SEDIMENT BARRIERS UNTIL VEGETATION HAS BEEN ESTABLISHED OVER 90% OF THE AREA TO BE REVEGETATED. RESEED SPARSELY VEGETATED AREAS AS NECESSARY
- . REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ONCE THE SITE IS PERMANENTLY STABILIZED.

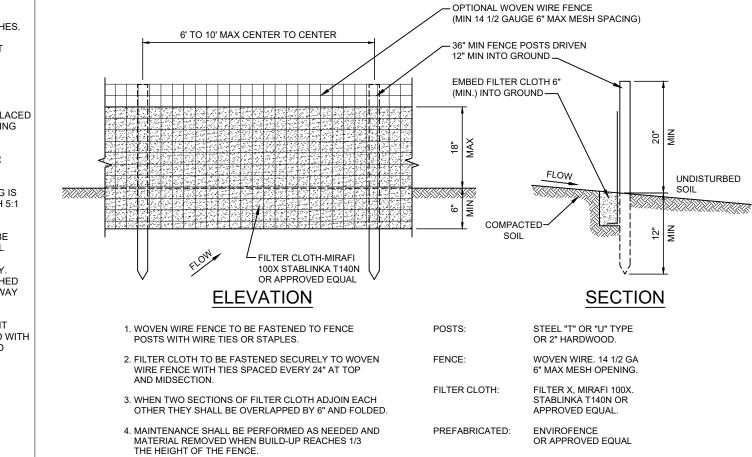
# **DEWATERING NOTES**

SEDIMENT AND OTHER POLLUTANTS ARE MINIMIZED.

- THE CONTRACTOR SHALL INSTALL, MAINTAIN, AND OPERATE ALL CHANNELS, SUMPS, AND OTHER TEMPORARY DIVERSION AND PROTECTIVE WORKS NEEDED TO DIVERT STREAM FLOW AND OTHER SURFACE WATER THROUGH OR AROUND THE CONSTRUCTION SITE. CONTROL OF SURFACE WATER SHALL BE CONTINUOUS DURING THE PERIOD THAT DAMAGE TO CONSTRUCTION WORK COULD
- OPEN EXCAVATIONS SHALL BE DEWATERED AND KEPT FREE OF STANDING WATER AND MUDDY CONDITIONS AS NECESSARY FOR THE PROPER EXECUTION OF THE WORK, THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL DRAINS, SUMPS AND ALL OTHER EQUIPMENT REQUIRED TO PROPERLY DEWATER THE SITE. DEWATERING SYSTEMS THAT CAUSE A LOSS OF SOIL FINES FROM THE FOUNDATION AREAS WILL NOT BE PERMITTED.
- INSTALL DIVERSION DITCHES OR BERMS IF NECESSARY TO MINIMIZE THE AMOUNT OF CLEAN STORMWATER RUNOFF ALLOWED INTO THE EXCAVATION AREA.
- REMOVAL OF WATER FROM THE CONSTRUCTION SITE SHALL BE ACCOMPLISHED SO THAT EROSION AND TRANSPORTATION OF
- DISCHARGE DEWATERING EFFLUENT TO AREAS AS INDICATED ON THE SITE GRADING PLAN. DISCHARGE SHALL BE MANAGED TO
- DEWATERING IN PERIODS OF INTENSE HEAVY RAIN OR WHEN THE INFILTRATIVE CAPACITY OF THE SOIL IS EXCEEDED, SHALL BE
- AVOIDED TO THE MAXIMUM EXTENT PRACTICABLE. FLOW TO THE SEDIMENT REMOVAL STRUCTURE MAY NOT EXCEED THE STRUCTURE'S CAPACITY TO SETTLE AND FILTER FLOW OR
- THE STRUCTURE'S VOLUME CAPACITY.
- WHEN TEMPORARY WORKS ARE NO LONGER NEEDED, THE CONTRACTOR SHALL REMOVE AND RETURN THE AREA TO A CONDITION SIMILAR TO THAT WHICH EXISTED BEFORE CONSTRUCTION. AREAS WHERE TEMPORARY WORKS WERE LOCATED SHALL BE GRADED FOR SIGHTLY APPEARANCE WITH NO OBSTRUCTION TO NATURAL SURFACE WATER FLOWS OR THE PROPER FUNCTIONING AND ACCESS TO THE WORKS OF IMPROVEMENTS INSTALLED. THE CONTRACTOR SHALL EXERCISE EXTREME CARE DURING THE REMOVAL STAGES TO MINIMIZE THE LOSS OF SOIL SEDIMENT AND DEBRIS THAT WAS COLLECTED DURING CONSTRUCTION.



50' MIN STONE SIZE - USE 2" CRUSHED STONE. LENGTH - NOT LESS THAN 50 FEET. 3. THICKNESS - NOT LESS THAN SIX (6) INCHES. ─WOVEN GEOTEXTILE FABRIC 4. WIDTH - TWELVE (12) FOOT MIN. BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE. WOVEN GEOTEXTILE FABRIC - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING DIVERSION-RIDGE SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED MIN MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED ∠ EXISTING OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY GROUND MUST BE REMOVED IMMEDIATELY. WHEN VEHICLE WASHING IS REQUIRED. IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. -BERM OF CRUSHED STONE **EROSION CONTROL MIX. OR** STRAW BALES, IF NECESSARY SPILLWAY STABILIZED CONSTRUCTION ENTRANCE



# STABILIZE ENTIRE PILE WITH VEGETATION OR SLOPE OR LESS COVER SILT FENCE SEE

INSTALLATION NOTES: 1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE. 2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.

OR STRAW BALES, THEN STABILIZED WITH VEGETATION

5. HOLD MULCH IN PLACE IMMEDIATELY AFTER SPREADING WITH A PLASTIC NETTING INSTALLED AS SHOWN. 6. START LAYING THE NET FROM THE TOP OF THE

UPSTREAM END OF THE CHANNEL AND UNROLL I DOWN GRADE. DO NOT STRETCH THE NETTING. 7. BURY THE UP SLOPE END AND STAPLE THE NET EVERY 12" ACROSS THE TOP END, EVERY 3 FT AROUND THE EDGES AND ACROSS THE NET SO THAT THE STRAW IS ELD CLOSELY AGAINST THE SOIL. HOWEVER, DO NOT STRETCH THE NETTING WHEN STAPLING

8 NETTING STRIPS SHOULD BE JOINED TOGETHER ALONG THE SIDES WITH A 3" OVERLAP AND STAPLED TOGETHER TO JOIN ENDS OF STRIPS, INSERT A NEW ROLL OF NET IN A TRENCH AS WITH THE UP SLOPE END AND OVERLAP IT 18" WITH THE PREVIOUSLY LAID UPPER .. TURN UNDER 6" OF THE 18" OVERLAP AND STAPLE EVERY 12" ACROSS THE END.

TEMPORARY LINER, STRAW

MULCH HELD IN PLACE WITH

LASTIC OR JUTE NETTING

1. EXCAVATE THE CHANNEL AND SHAPE IT TO AN

PERIMETER FOR SILTING AND BULKING

EVEN CROSS-SECTION AS SHOWN. WHEN STAKING

2. GRADE SOIL AWAY FROM CHANNEL SO THAT SURFACE

3. APPLY LIME, FERTILIZER AND SEED TO THE CHANNEL

4. SPREAD HAY OR STRAW MULCH AT THE RATE OF

AND ADJOINING AREAS IN ACCORDANCE WITH THE

INDICATE A 0.2' OVERCUT AROUND THE CHANNEL

ROLL OUT STRIPS OF NETTING

PARALLEL TO THE DIRECTION OF

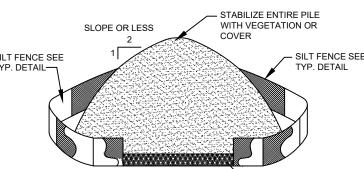
EROSION CONTROL PLAN.

100LB/1000 SF.

ANCHOR NETTING IN

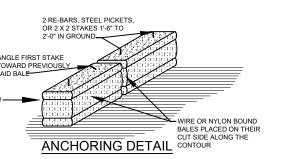
JOIN STRIPS BY ANCHORING

AND OVERLAPPING



3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE

3. ORGANIC MATERIAL 20% - 100% (DRY WEIGHT BASIS) ORGANIC PORTION MUST BE FIBROUS AND ELONGATED 4. SOLUBLE SALTS SHALL BE < 4.0 mmhos/cm ROSION CONTROL BERM



**EMBEDDING DETAIL** 

EROSION CONTROL SOIL/BARK MIX: SHALL CONSIST OF SHREDDED

BARK STUMP GRINDINGS COMPOSTED BARK OR FLUMF GRIT AND

MIX SHALL NOT CONTAIN LARGE PORTIONS OF SILTS, CLAYS OR

SYSTEMS. THE MIX SHALL CONFORM TO THE FOLLOWING:

3/4" - 70% TO 85% PASSING

1. pH - 5.0 TO 8.0. 2. SCREEN SIZE: 6" - 100% PASSING

FRAGMENTED WOOD GENERATED FROM WATER-FLUME LOG HANDLING

STRAW BALF BARRIFR

PLAN

LDIRT BAG SEDIMENT CONTROL DEVICE

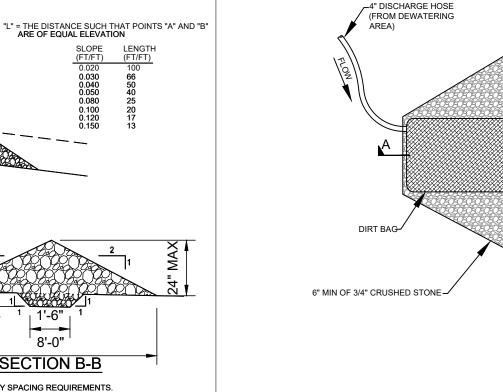
-6" MIN OF 3/4" CRUSHED STONE

MIRAFI 140N OR APPROVED

SECTION A-A EQUIVALENT

BY AFC ENVIRONMENTAL, OR

APPROVED EQUIVALENT



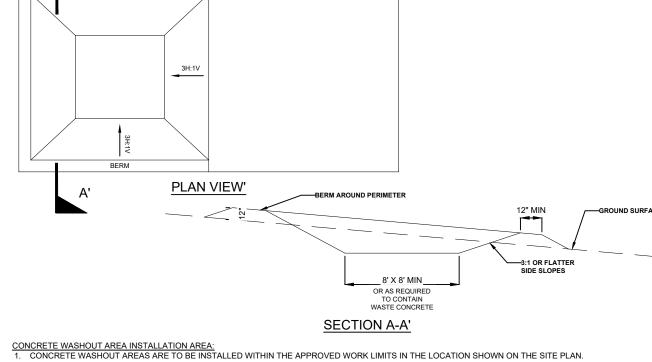
DEWATERING DETAIL NOTES:

1. DIRT BAG MATERIAL BASED ON PARTICLE SIZE IN DIRTY WATER, LE FOR COARSE PARTICLES A WOVEN MATERIAL IS PREFERRED FOR SILTS/CLAYS A NON-WOVEN MATERIAL SHOULD BE IMPLEMENTED. 2. DO NOT OVER PRESSURIZE DIRT BAG OR USE BEYOND 3. LOCATE DISCHARGE SITE AS INDICATED ON THE SITE GRADING PLAN. 4. DOWNGRADIENT RECEIVING AREA MUST BE WELL VEGETATED OR OTHERWISE STABLE FROM EROSION, E.G., PERMANENT VEGETATION OR COARSE GRAVEL/STONE.

. DISCHARGE OF DEWATERING ACTIVITIES PROHIBITED WITHIN 25'

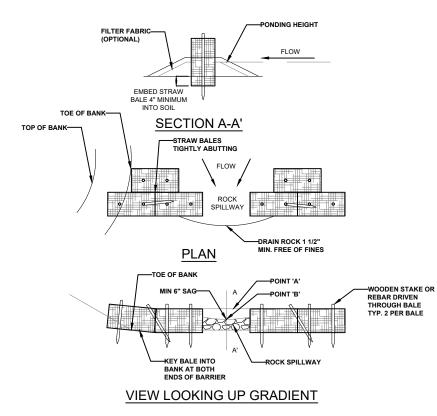
OF A NATURAL RESOURCE.

EXCAVATION DEWATERING DETAIL



- 2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON THE SITE. 3. VEHICLE TRACKING CONTROL IS REQUIRED AT THE ACCESS POINT
- 4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS. 5. MATERIAL EXCAVATED TO CREATE CONCRETE WASHOUT PIT SHALL BE UTILIZED TO CONSTRUCT PERIMETER BERM AROUND PIT
- CONCRETE WASHOUT AREA MAINTENANCE NOTES:
- THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED
- 2. AT THE END OF CONSTRUCTION, REMOVE ALL CONCRETE, COVER THE DISTURBED AREA WITH TOPSOIL, DRILL SEED AND CRIMP MULCH OR OTHERWISE

CONCRETE WASHOUT AREA



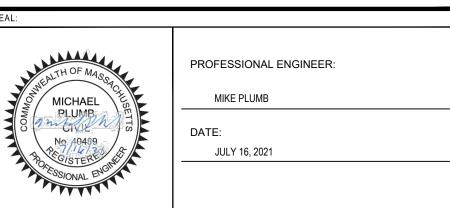
1. PLACE BALES PERPENDICULAR TO FLOW.

- 2. EMBED THE BALE 4" INTO THE SOIL AND KEY THE END BALES INTO THE SOIL AND "KEY" THE END BALES INTO THE CHANNEL BANKS TO PREVENT FLOW AROUND THE
- 3. BALES PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING.
- 4. POINT "A" SHALL BE HIGHER THAN POINT "B."
- SPILLWAY HEIGHT SHALL NOT EXCEED 24". 6. SILT FENCE MAY BE USED IN LIEU OF BALES (FOLLOW SAME GUIDELINES).

SEMI-PERVIOUS SEDIMENT BARRIER

PERMITTING NOT FOR CONSTRUCTION





TRC	7/16/2021	REVISION 3 PER CONSERVATION COMMISSION COMMENTS	MP
TRC	6/29/2021	REVISION 2 PER CONSERVATION COMMISSION COMMENTS	MP
TRC	5/17/2021	REVISED PER CONSERVATION COMMISSION COMMENTS	MP
TRC	3/8/2021	ISSUED FOR PERMITTING	MP
BY	DATE	REVISION	APP'D.

SCS MARSHALL 012252 HOLLISTON, LLC PROPOSED 2.5 MW-AC SOLAR ARRAY MARSHALL STREET, HOLLISTON, MA

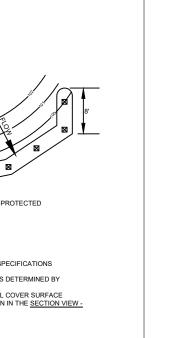
**EROSION CONTROL NOTES & DETAILS** 

ARD PROJ. NO.: 343578 DRAWN BY HECKED BY G-3 PPROVED BY



650 Suffolk Street Suite 200 Lowell, MA 01854 Phone: 978.970.5600

Holliston G-SHEETS.dwg



FERTILIZER & MULCH WITH ECB TO 1' ABOVE **BOTTOM ELEVATION** 

SECTION A-A

PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY

APPLICATION OF LIME, FERTILIZER, AND SEED, NOTE: WHEN USING CELL-O-

SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED

BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 12"

DEEP X 12" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTEDED

BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH

A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE

COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER

SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A

3. ROLL THE BLANKETS (A) DOWN THE SLOPE. HORIZONTAL (B) INSTALLATION MAY

BE APPROPRIATE IN SOME INSTANCES AS APPROVED BY THE ENGINEER.
BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE.

ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING

4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH A MINIMUM OF 4"-6"

AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH

EROSION CONTROL BLANKET

MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

CUTOFF TRENCH -18" WIDE x 6" DEEP

NONWOVEN GEOTEXTILE

OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT

ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH

STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH

EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.

PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.

\*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6"

2" DIAMETER CRUSHED STONE

5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END

TRENCH, BACKFILL AND COMPACT THE TRENCH AFTER STAPLING, APPLY SEED TO

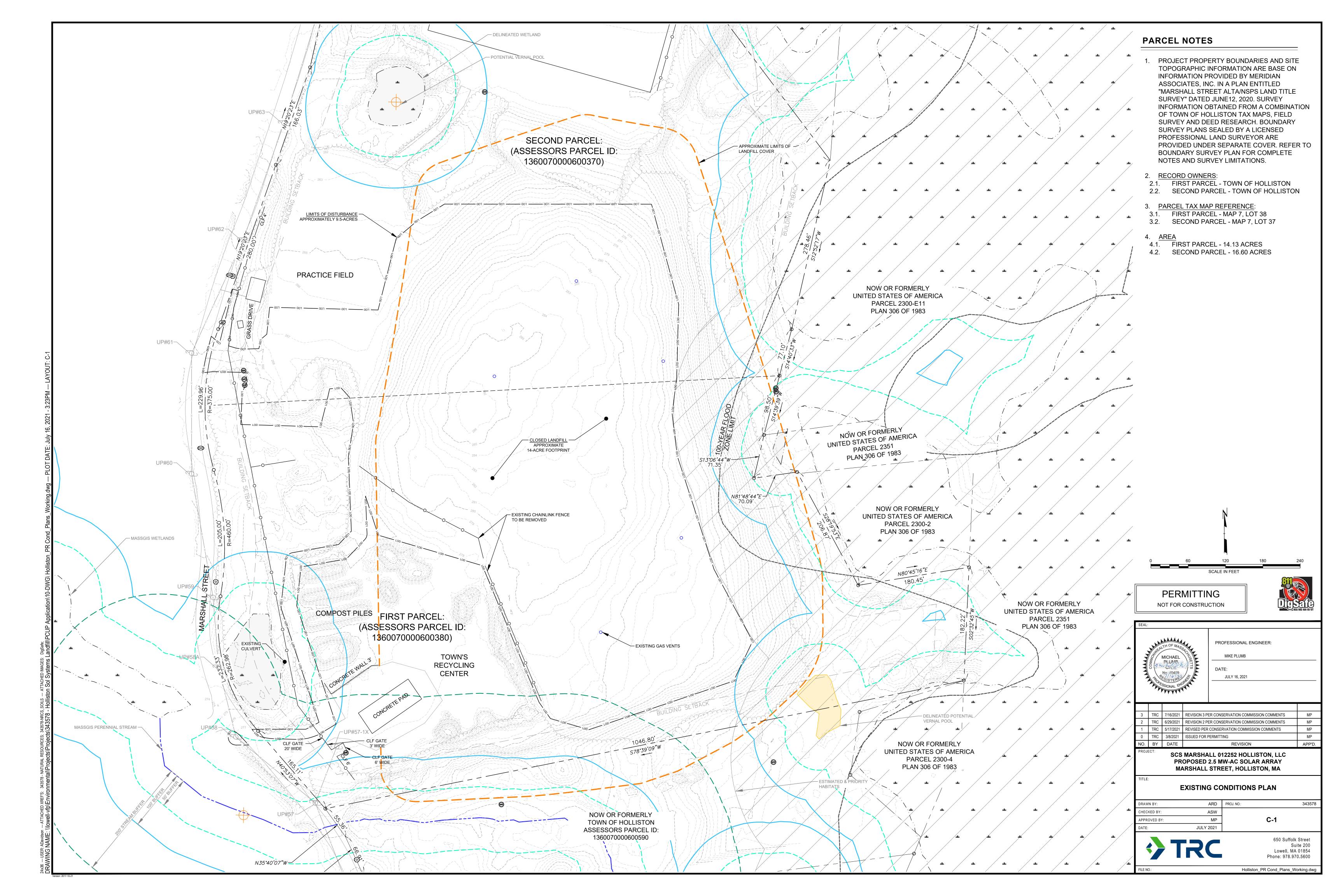
WITH PAPER SIDE DOWN

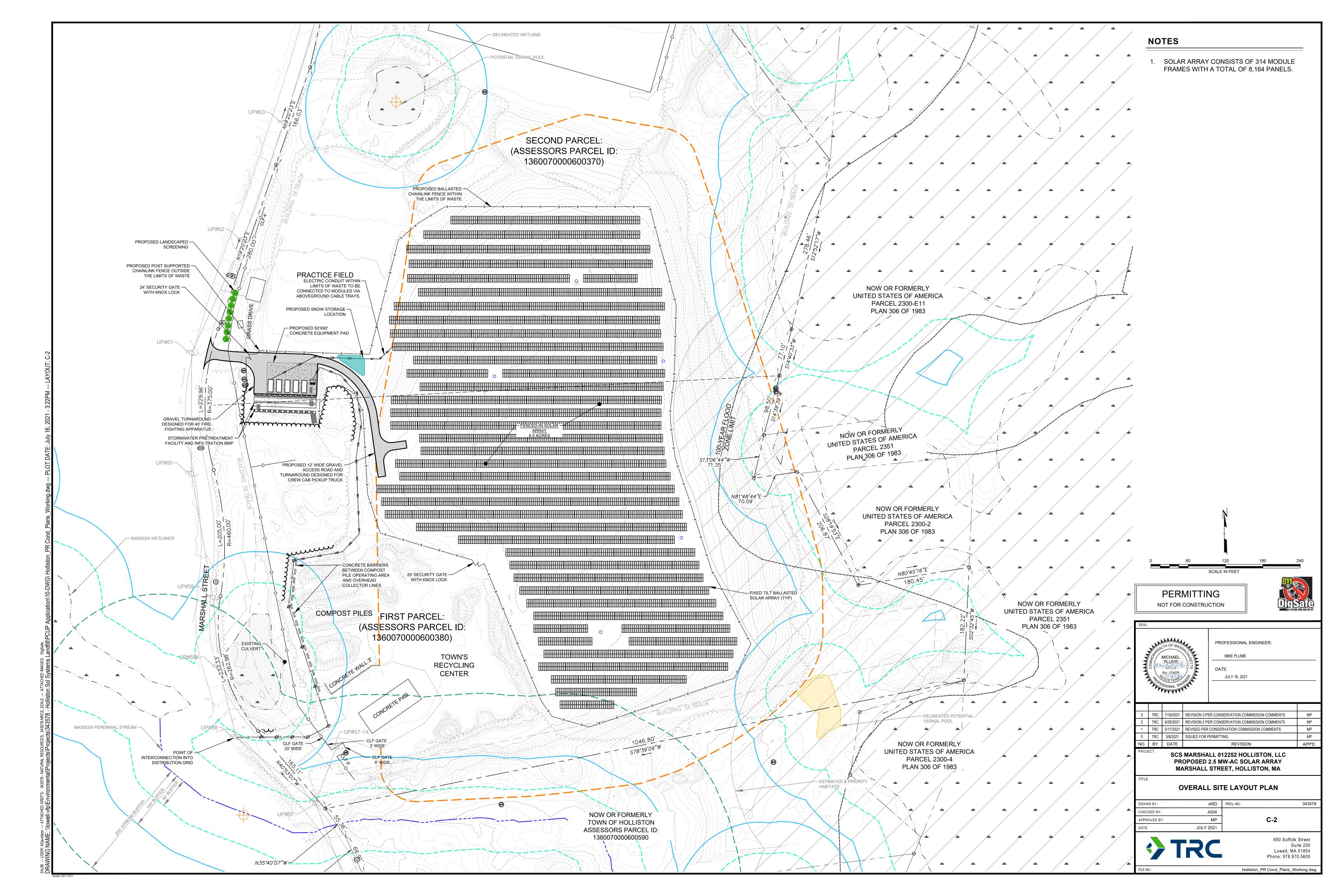
NOT TO SCALE

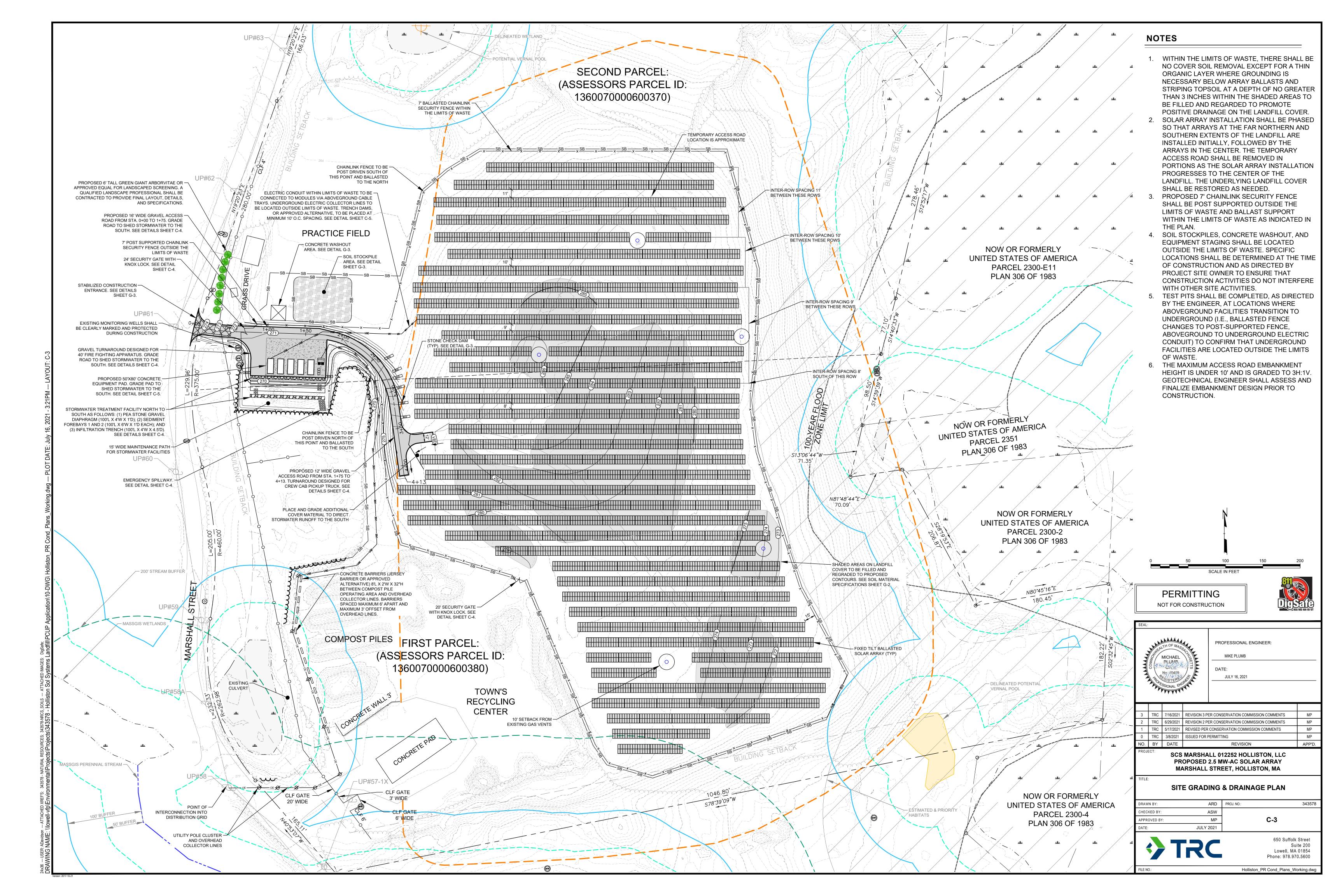
NOTE: INSTALL WHERE INDICATED ON SITE GRADING PLAN AND AS NEEDED BY SPACING REQUIREMENTS

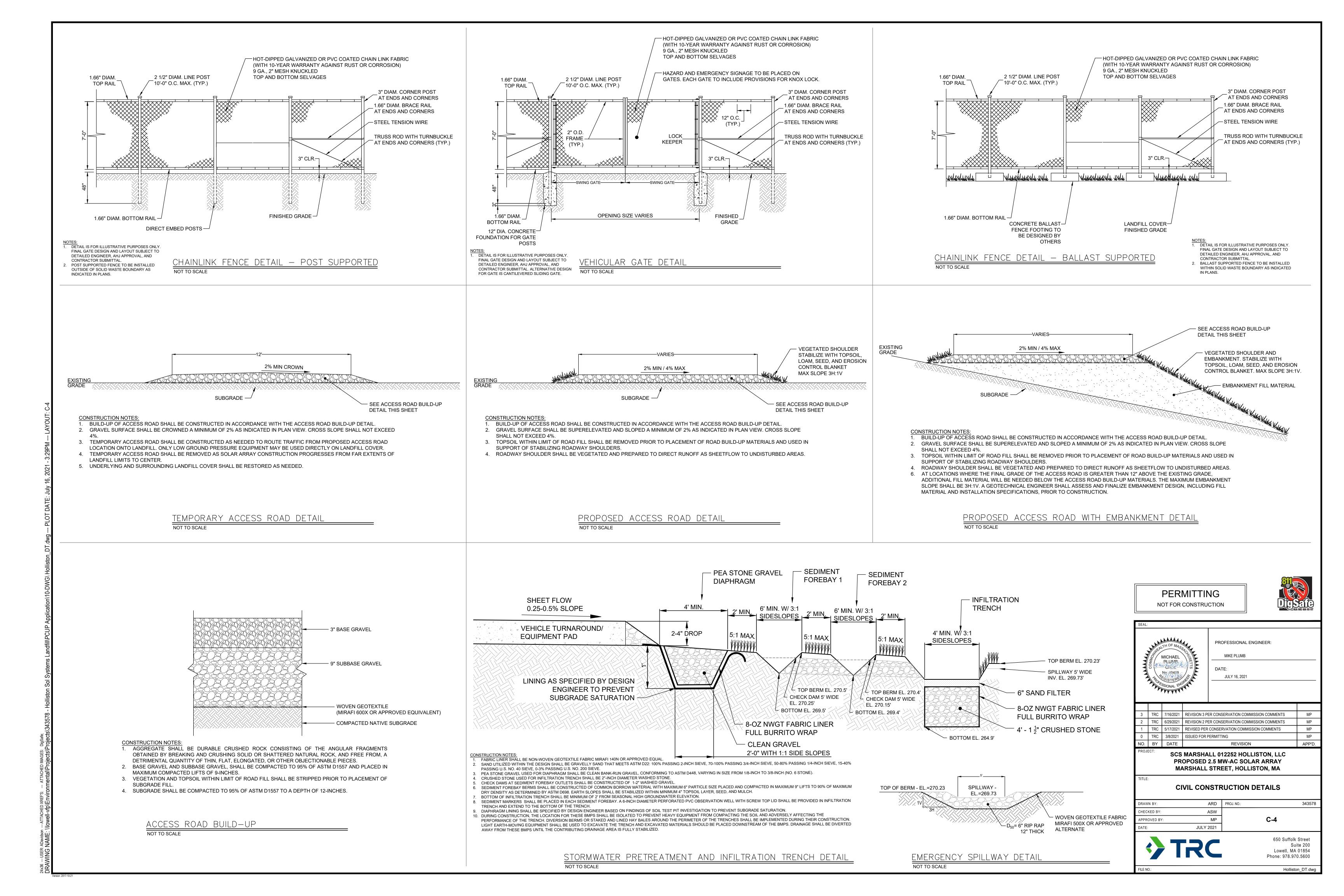
CHECK DAM DETAILS

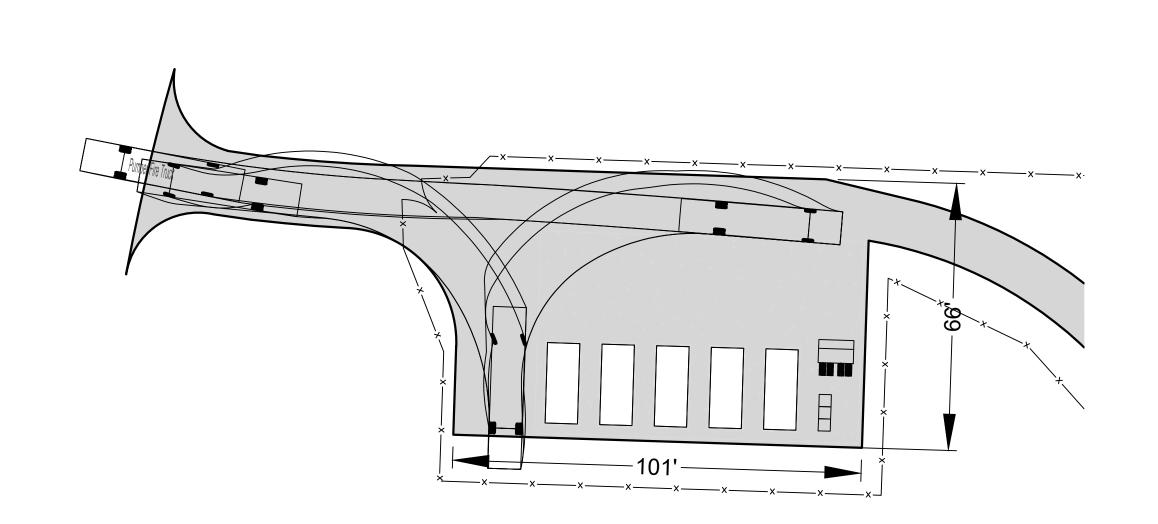
RIP RAP STONE D<sub>v</sub>=6" DIA, 15" DEEP











NOTES:

1. SWEPT VEHICLE PATH WAS CREATED WITH A NCHRP 659 PUMPER FIRE TRUCK, 40'

TRENCH DAMS TO BE PLACED MINIMUM

10' O.C. SPACING AT LOCATIONS

2. IMPERMEABLE SOIL MATERIAL TO HAVE

MINIMUM 35% FINES AND MAXIMUM

WITH ASTM D698) AND PLACED IN

RUBBER COLLAR) MAY BE USED AS

MAXIMUM COMPACTED LIFTS OF

APPROVED BY ENGINEER.

PARTICLE SIZE OF 3 INCHES. MATERIAL

SHALL BE COMPACTED WITHIN 4% ABOVE

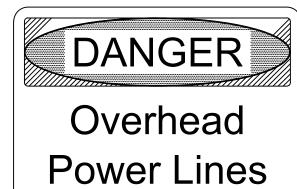
THE OPTIMUM MOISTURE CONTENT AND

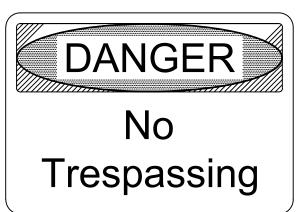
A MINIMUM IN-PLACE DENSITY OF 90% OF MAXIMUM DRY DENSITY (IN ACCORDANCE

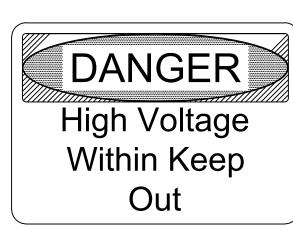
INDICATED ON SITE PLAN.

EMERGENCY VEHICLE TURNING EXHIBIT NOT TO SCALE







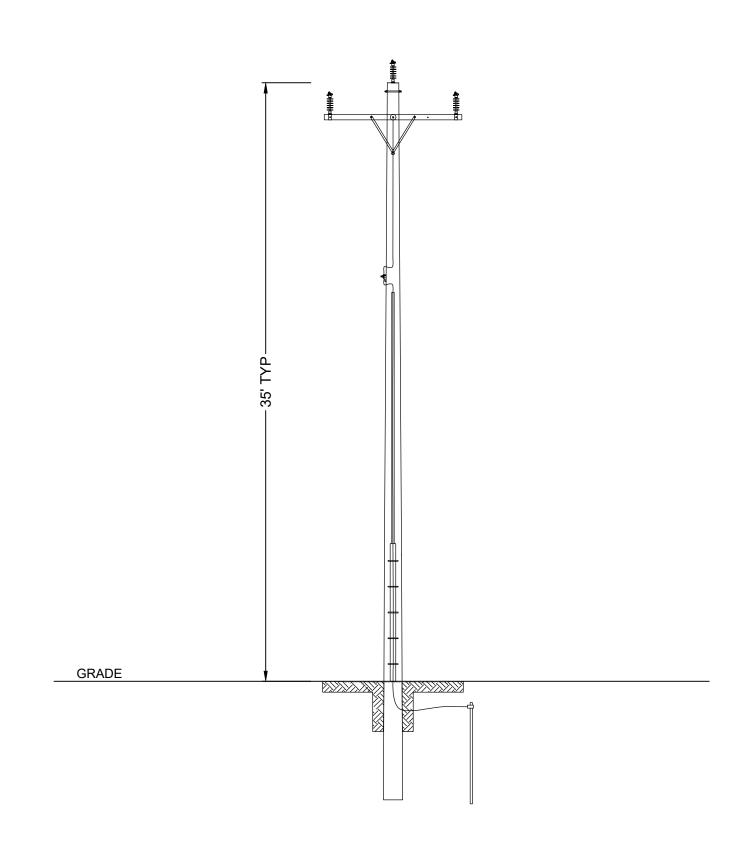


# **NOTES**

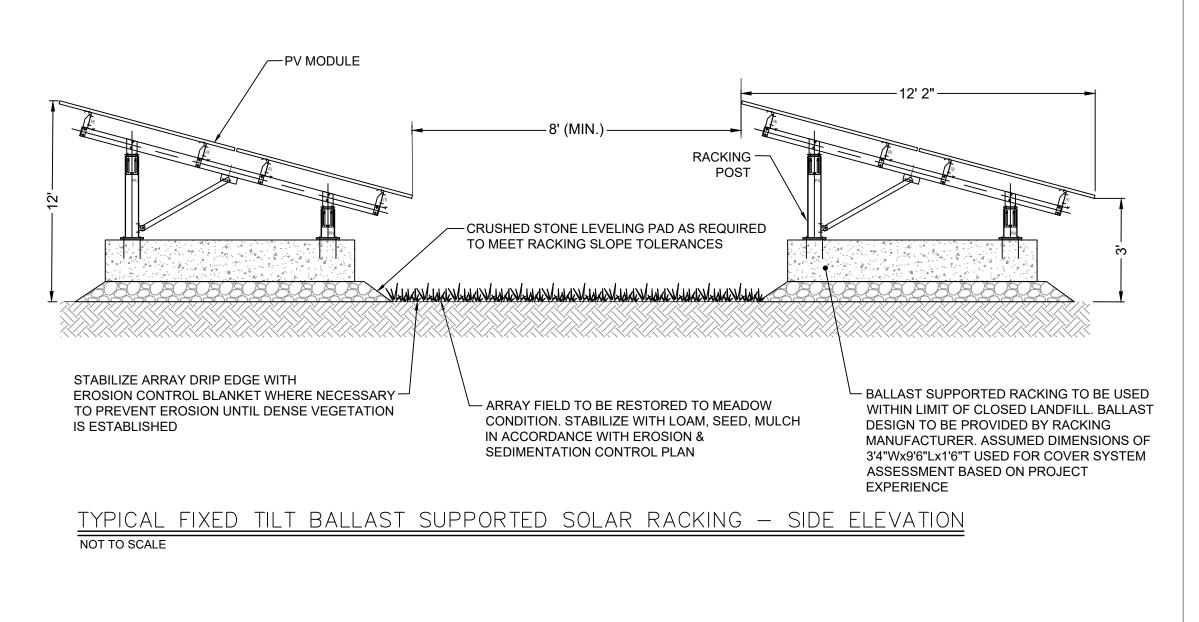
- NO PARKING SIGN SHALL BE POSTED AT EQUIPMENT PAD ENTRANCE AND IN FRONT OF ANY GATES. OVERHEAD POWER LINES SIGN SHALL BE POSTED ON EACH UTILITY POLE WITHIN TRANSFER STATION AREA, UNLESS OTHERWISE SPECIFIED BY SITE OWNER. OTHER SIGNS SHALL BE PLACED ON GATES AND ALONG PERIMETER FENCING.
- SIGNS SHALL CONFORM TO THE 2013 OSHA AND ANSI REQUIREMENTS.
- SIGNS SHALL BE 20" WIDE BY 14" HIGH.
- SIGNS SHALL HAVE A MOUNTING HEIGHT OF BETWEEN 45 TO 66 INCHES.
- SIGN PANELS SHALL BE 10 GAUGE ALUMINUM WITH HIGH VISIBILITY REFLECTIVE
- SIGNAGE SHALL INCLUDE 24-HR EMERGENCY CONTACT INFORMATION FOR FACILITY OPERATOR.

HAZARD & EMERGENCY SIGNAGE

NOT TO SCALE

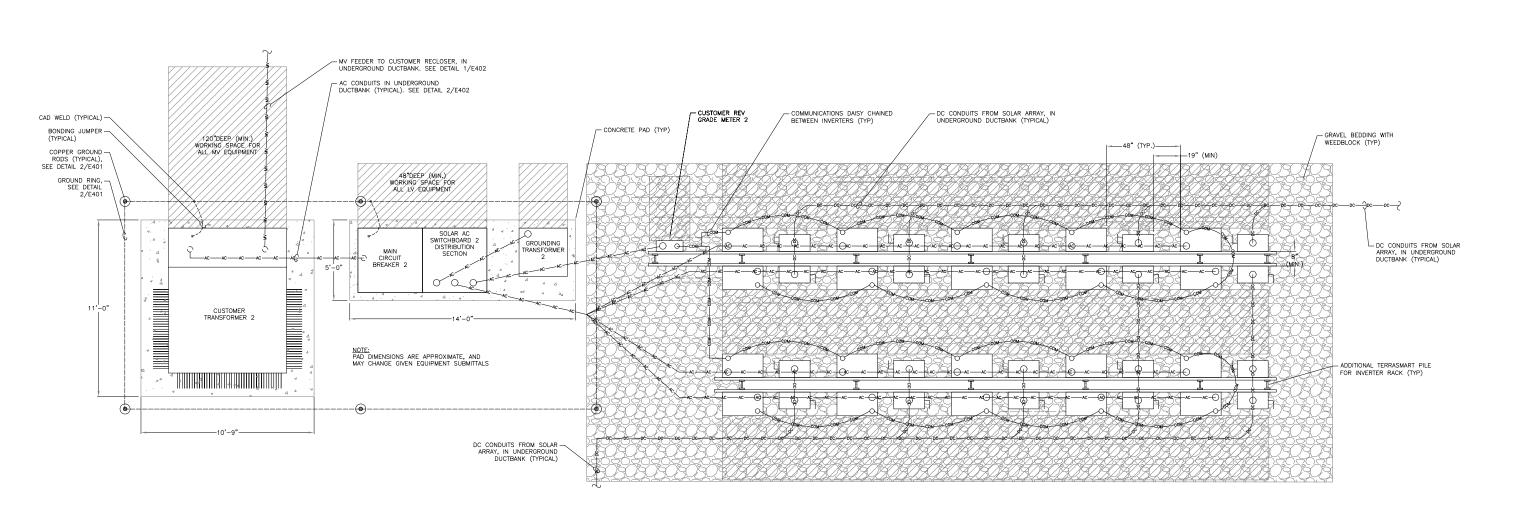


TYPICAL UTILITY POLE



COMPACTED **IMPERMEABLE** SOIL MATERIAL \_\_\_ \_\_ ✓ MV CABLE BED & BACKFILL DIRECT BURIAL CABLE AS SPECIFIED BY FINAL 9-INCHES. - ELECTRICAL DESIGN 3. ALTERNATE METHOD (I.E., HDPE PLATE, 6" (MIN.)

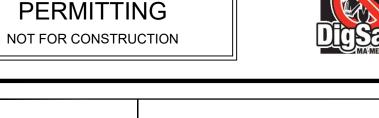
> SUBGRADE -TRENCH DAM NOT TO SCALE



1. EQUIPMENT SHOWN FOR REFERENCE ONLY. ACTUAL EQUIPMENT SIZE, LAYOUT, AND CONFIGURATION WILL DEPEND ON COMPLETED SYSTEM IMPACT STUDY AND LARGE GENERATOR INTERCONNECTION AGREEMENT.

TYPICAL INVERTER AND MV TRANSFORMER LAYOUT NOT TO SCALE







PROFESSIONAL ENGINEER: MIKE PLUMB JULY 16, 2021

3 TRC 7/16/2021 REVISION 3 PER CONSERVATION COMMISSION COMMENTS 2 TRC 6/29/2021 REVISION 2 PER CONSERVATION COMMISSION COMMENTS 1 TRC 5/17/2021 REVISED PER CONSERVATION COMMISSION COMMENTS 0 TRC 3/8/2021 ISSUED FOR PERMITTING NO. BY DATE APP'D.

> SCS MARSHALL 012252 HOLLISTON, LLC PROPOSED 2.5 MW-AC SOLAR ARRAY MARSHALL STREET, HOLLISTON, MA

PRELIMINARY ELECTRICAL DETAILS

ARD PROJ. NO.: 343578 DRAWN BY: CHECKED BY: C-5 PPROVED BY:



650 Suffolk Street Suite 200 Lowell, MA 01854 Phone: 978.970.5600

Holliston\_DT.dwg

