

August 27, 2021 Coneco Project No. 11550

Soil and Groundwater Management Plan 376 Nash Road New Bedford, Massachusetts 02746 Release Tracking Number (RTN) 4-0846

Coneco Engineers & Scientists, Incorporated (Coneco), the Qualified Environmental Professional (OEP) for this Project, has prepared this Soil and Groundwater Management Plan (SGMP) to establish procedures that will be followed as part of proposed construction activities associated with the installation of a solar array at the property located at 376 Nash Road in New Bedford, Massachusetts (the "Site" or "Property"). The SGMP is required to manage soil and/or groundwater at depths greater than three feet below grade within the boundaries of a Notice of Activity and Use Limitation (AUL) Area, which was implemented for the southwestern portion of the Property. The AUL was implemented as part of the Permanent Solution Statement for the release of oil and/or hazardous material (OHM) associated with RTN 4-0846 and is necessary to maintain a condition of No Significant Risk pursuant to the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000). The original AUL, filed at the Bristol County Registry of Deeds on January 27, 2006, was terminated and replaced with a Confirmatory AUL filed on February 8, 2008. Refer to the attached Sketch Plan (AUL Exhibit B) for an illustration of the AUL Area relative to the Property boundaries. Coneco notes that the work proposed within the AUL Area must also be performed in accordance with a Site-specific Health and Safety Plan (HASP), which will be prepared under separate cover. The Site-specific HASP shall include all necessary information to meet the requirements of 29 CFR 1910.120(b)(4).

Background

The Property, owned by NG 376 Nash LLC, is approximately 3.7 acres and is located in the central portion of New Bedford, Massachusetts. Prior to NG 376 Nash LLC, the Site was owned by Ribeiro Real Estate LLC, various individuals, a realty company, New Bedford Storage Warehouse, and Union Warehouse Co. Several environmental site investigations have been conducted at the Site since an initial investigation was performed in 1989. These investigations identified and delineated the presence of petroleum compounds in soil and groundwater at the Site, including the presence of a weathered mixture of gasoline and fuel oil associated with a leaking 6,000-gallon underground storage tank (UST), and the presence of petroleum floating on the groundwater surface (i.e., light non-aqueous phase liquid (LNAPL)). Notification of compounds associated with the petroleum release was provided to the Massachusetts Department of Environmental Protection (MassDEP) in December 1989. Response actions were performed to address the release and in March 2006, GZA GeoEnvironmental, Inc. submitted a Permanent Solution Statement (a Class A-3 Response Action Outcome) for RTN 4-0846 indicating that the requirements for regulatory closure of the RTN had been met. As previously indicated, the Permanent Solution relies on the AUL to maintain a condition of No Significant Risk.

Applicable Area

This SGMP and affiliated AUL, which restricts the Portion of the Property (as defined in the AUL) to its current Industrial/Commercial use, pertains to soil at depths ranging from 3 to 15 feet below grade within the southwestern Portion of the Property (i.e., the AUL Area). During site assessment work conducted between 1989 and 2005, the depth to groundwater was generally between 7 and 9 feet below grade. Groundwater that may be encountered during excavation activities within the AUL Area is also subject to the provisions outlined in this SGMP. Refer to the attached Proposed Solar Array Site Drawings, dated August 10, 2021, for a depiction of the approximate AUL Area relative to the proposed solar arrays.

Soil Management

For contaminated soil within the AUL Area, the direct exposure pathway is the primary concern at the Site. Individuals engaged in activities at the Site may be exposed through incidental ingestion, dermal contact, or inhalation of vapors or entrained soil particles if proper precautions are not taken. Therefore, the following procedures will be followed to minimize the potential of exposure:

- During site work within the AUL Area, appropriate precautions will be taken to restrict unauthorized access to this area.
- During all site/earthwork within the AUL Area, dust suppression (e.g., watering, etc.) techniques must be employed at all times. If it is anticipated due to the nature of the contaminants of concern that odors may be generated during site activities, air monitoring and means to control odors will be utilized, as appropriate (e.g., odor-suppressing foam, etc.).
- In the event that an unexpected observation or situation arises during site work within the AUL Area, such activities will immediately stop. Workers will not attempt to handle the situation themselves but will contact the QEP for further direction.

In the event that certain soils at the Property were not previously characterized, these soils are presumed to be regulated until such time that it is demonstrated through sampling and laboratory analysis that they are not regulated.

If excess soil is generated/excavated from the AUL Area, the soil is to remain on-Site for analytical testing, which will be performed by the QEP, in order to evaluate the appropriate disposal and/or management options. Soil excavated from the AUL Area between depths of 0 and 3 feet will be segregated from soil excavated from the AUL Area between depths of 3 and 15 feet. Any soil excavated from within the AUL Area shall be temporarily placed on bituminous concrete pavement pending completion of the specific task for which the soil was excavated. Any excess soil that is not placed back into the excavation from which it was generated that same day must be placed on and covered with 6-mil polyethylene sheeting during the entire duration of its staging and secured with appropriate controls to limit the loss of the cover and protect against stormwater and/or wind erosion (e.g., hay bales, silt fencing, rocks, etc.). Stockpiles shall be monitored to ensure they are properly maintained until an appropriate receiving facility is selected. Stockpiles and/or storage containers shall be maintained by the contractor and will be inspected daily for tears, holes, or other failures in

the polyethylene sheeting or storage container. The contractor shall be responsible for addressing all concerns requiring maintenance or repair.

Excavated soils will be staged and temporarily stored in a designated area of the Property. Within reason, the storage location will be selected to limit the unauthorized access to the materials (e.g., away from public roadways/walkways). No petroleum-contaminated soil will be stockpiled on-Site for more than 120 days.

In the event that stockpiled soils pose a risk or threat of leaching hazardous materials, a proper leak-proof container (e.g., drum or lined roll-off) or secondary containment will be utilized. Soils excavated from the AUL Area may not be re-used as fill on other residential, commercial, or industrial property(ies).

Site soils that are to be disposed off-Site, must be done so at a licensed facility in accordance with all local, state, and federal laws (e.g., Section 40.0030 of the MCP). Copies of the Bill of Lading or material shipping records associated with the disposal of the excess soil shall be maintained by the Site owner.

Best soil management practices should be employed at all times and regulated soils (i.e., soils from depths of 3 and 15 feet below grade within the boundaries of the AUL Area) should be segregated into separate piles (or cells or containers) as appropriate based upon the results of field screening, or visual and/or olfactory indications of contamination.

All non-disposable equipment used during the excavation of soil from 3 to 15 feet below grade within the AUL Area will be properly decontaminated as appropriate prior to removal from the Site. All disposable equipment used during such soil disturbance activities will be properly containerized and disposed of following completion of the work. All vehicles utilized during the work shall be properly decontaminated as appropriate prior to leaving the Site

The petroleum-contaminated soil located at 3 to 15 feet below grade within the AUL Area must remain at depth and may not be relocated to a shallower depth or to any area outside of the AUL Area, unless such activity is first appropriately evaluated by a Licensed Site Professional (LSP) who renders an Opinion which states that such relocation is consistent with maintaining a condition of No Significant Risk associated with RTN 4-0846.

Groundwater Management

For contaminated groundwater at the Property, the direct exposure pathway is the primary concern at the Site. Individuals engaged in activities at the Site may be exposed through incidental ingestion, dermal contact, or inhalation of vapors if proper precautions are not taken. Therefore, the following procedures will be followed to minimize the potential of exposure.

If dewatering is required to facilitate earthwork/construction activities at the Property, recovered groundwater shall <u>not</u> be discharged directly to surface water, storm drains, the municipal sewer system, or the ground surface without prior treatment and testing in accordance with all applicable local, state, and federal laws. Recovered groundwater may be temporarily stored in a fractionation tank or similar secure vessel on-Site and returned

directly to the subsurface without prior treatment at the point/location from which it was extracted, provided that hydraulic control of the groundwater discharge is maintained in accordance with best management practices and all applicable local, state, and federal laws. Recovered groundwater to be disposed off-Site, must be done so at a licensed facility in accordance with all local, state, and federal laws. Copies of the shipping records associated with the off-Site disposal of the groundwater shall be maintained by the Site owner.

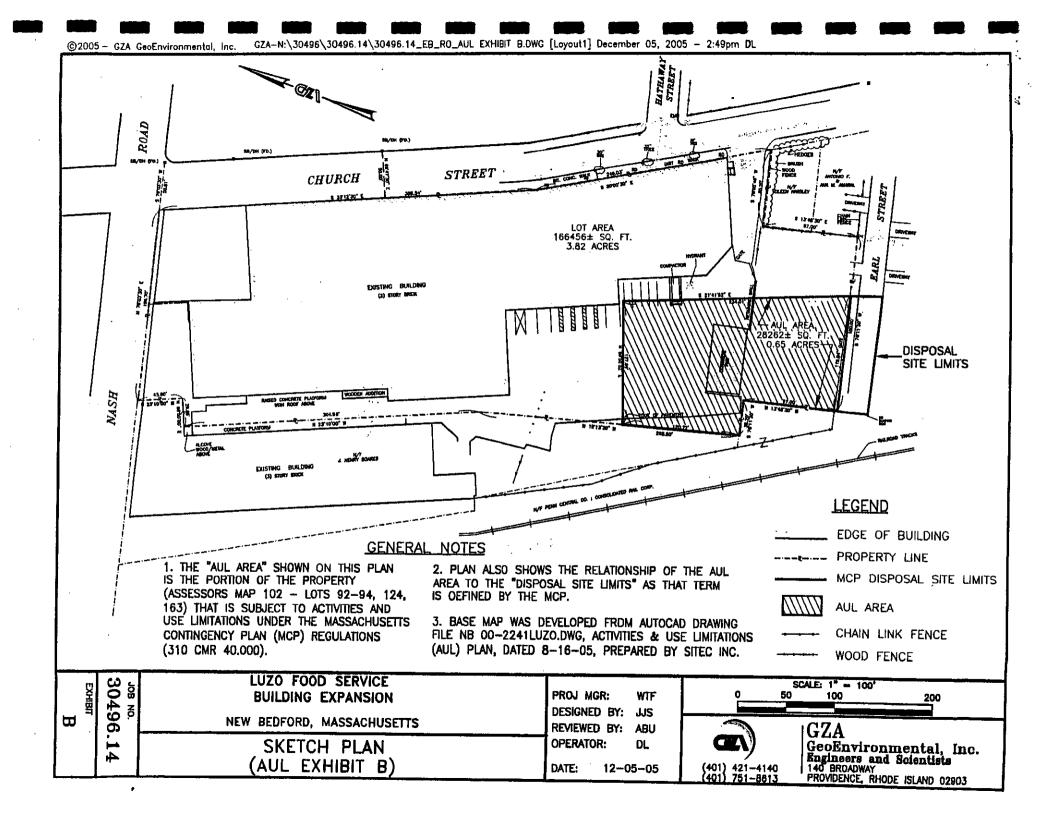
Worker Health and Safety

To ensure the health and safety of on-Site workers, persons involved in the excavation and handling of the material within the Property are required to wear a minimum of Level D personal protection equipment, including high visibility reflective vest, nitrile and/or work gloves, steel toe work boots, eye protection, and a hard hat. Workers are also required to wash their hands with soap and water prior to eating, drinking, smoking, or leaving the Site. As previously indicated, the AUL requires implementation of a Site-specific HASP, which will be prepared under separate cover and will include all necessary information to meet the requirements of 29 CFR 1910.120(b)(4).

ATTACHMENTS

Attachment No. 1 - GZA AUL Sketch Plan, dated December 5, 2005

Attachment No. 2 - Proposed Solar Array Site Drawings prepared by Field Engineering Co., Inc., dated August 10, 2021



PROPOSED SOLAR ARRAY NEXTGRID, INC.

376 NASH ROAD NEW BEDFORD, MASSACHUSETTS



ENGINEER:

FIELD ENGINEERING CO., INC. 11D INDUSTRIAL DRIVE P.O. BOX 1178 MATTAPOISETT, MA 02739

APPLICANT NEXTGRID, INC. P.O. BOX 7775 #73069 SAN FRANCISCO, CA 94120 PROPERTY OWNER

NG 376 NASH LLC P.O. BOX 7775, #73069 SAN FRANCISCO, CA 94120

SITE DRAWINGS

ISSUED FOR: PERMITTING DATE ISSUED: JULY 12, 2021 LATEST ISSUE: AUGUST 10, 2021

INDEX TO DRAWINGS

SHEET	DRAWING TITLE	DATE	REVISED
	TITLE SHEET	7/12/2021	8/10/2021
N-1	NOTES & LEGEND	7/12/2021	8/10/2021
EC-1	EXISTING CONDITIONS	7/12/2021	8/10/2021
SLU-1	SITE LAYOUT &		
	UTILITIES PLAN	7/12/2021	8/10/2021
SGD-1	SITE GRADING		
	& DRAINAGE PLAN	7/12/2021	8/10/2021
D-1	DETAIL SHEET	7/12/2021	8/10/2021

REGULATION	REQUIREMENT
LOT AREA	0 S.F.
LOT FRONTAGE	O FT.
FRONT SETBACK	25 FT.
SIDE SETBACK	25 FT.
REAR SETBACK	25 FT.
BUILDING HEIGHT/ STORIES	100 FT./7 STY.
LOT BUILDING COVERAGE	50%
GREEN SPACE	20%

PROJECT LOCATION:

ASSESSORS MAP 102 LOTS 85, 95, 163 & 185 376 NASH ROAD NEW BEDFORD, MASSACHUSETTS DEED REFERENCES: 19261, 4622-98,

8402-193, 9472-241

CIELD ENGINEERING CO., INC.
CONSULTING ENGINEERS 11D INDUSTRIAL DRIVE P.O. BOX 1178 MATTAPOISETT, MA 02739 TEL: (508) 758-2749 FAX: (508) 758-2849

376 NASH ROAD 163 & 185

PROPOSED

SOLAR ARRAY

MAP 102 LOTS 85, 95, NEW BEDFORD, MA



GENERAL CONSTRUCTION NOTES

- THE MATERIALS AND CONSTRUCTION OF ALL PROPOSED UTILITIES SHALL CONFORM TO THE LOCAL D.P.W. STANDARDS AND SPECIFICATIONS AS WELL AS ALL APPLICABLE MASSDOT STANDARDS AND SPECIFICATIONS, LATEST EDITION.
- ALL CONSTRUCTION METHODS AND MATERIALS, AS WELL AS ALL MATERIAL SHOP DRAWINGS AND MANUFACTURERS DATA SHALL RECEIVE THE WRITTEN APPROVAL OF THE LOCAL D.P.W., AND THE PROJECT ENGINEER PRIOR TO FABRICATION AND INSTALLATION.
- 3. THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION, UNDERGROUND UTILITIES SHOWN ARE FROM FIELD OBSERVATION AND THE BEST AVAILABLE RECORD INFORMATION AND ARE NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL UNDERGROUND PIPES OR STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATION AND ELEVATION OF ALL EXISTING LINES.
- 4. THE CONTRACTOR SHALL CONTACT "DIG SAFE" AT 811, 72 HOURS PRIOR TO ANY EXCAVATION AND/OR SUBSURFACE TESTING TO INFORM THE UTILITY COMPANIES OF ANY EXCAVATION.
- WHENEVER EXISTING STRUCTURES ARE ENCOUNTERED, THE CONTRACTOR SHALL REPAIR ANY DAMAGED STRUCTURES OR REPLACE ANY REMOVED STRUCTURES, AND MAKE ANY IMPROVEMENTS ABOVE OR BELOW GRADE TO A CONDITION BETTER THAN OR EQUAL TO PRE-EXISTING CONDITIONS
- ALL EXCAVATED MATERIAL DESIGNATED FOR REUSE SHALL BE STOCKPILED ON SITE NO HIGHER THAN 8 FEET AND SHALL BE ENCLOSED BY TEMPORARY SILT FENCES TO PREVENT TRAVEL OF
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL WASTE MATERIAL AT AN APPROVED LOCATION. BURIAL OF WASTE MATERIAL ON SITE WILL NOT PERMITTED.
- EROSION CONTROL MEASURES SHALL REMAIN IN PLACE AND MAINTAINED IN GOOD CONDITION UNTIL SURFACE RESTORATION IS COMPLETE AND ALL AREAS DISTURBED BY THE CONTRACTORS OPERATIONS ARE STABILIZED.
- 9. THE CONTRACTOR SHALL PROTECT ADJACENT PROPERTIES FROM ON SITE CONSTRUCTION ACTIVITIES AND REMOVE ANY SEDIMENT OR DEBRIS DEPOSITED THEREON IMMEDIATELY.

SEDIMENT TO ADJACENT PROPERTIES OR DRAINAGE WAYS.

- 10. DRAINAGE GENERATED AS A RESULT OF TRENCH DEWATERING SHALL BE DISCHARGED TO EXISTING DRAINAGE COURSES WITH PROPER EROSION CONTROL AND DEWATERING MEASURES SUBJECT TO APPROVAL BY THE PROJECT ENGINEER. DIRECT DISCHARGE ONTO PAVEMENT, WETLANDS OR PRIVATE PROPERTY SHALL NOT BE ALLOWED WITHOUT CONSENT OF THE PROJECT ENGINEER AND THE CONSERVATION COMMISSION.
- 11. THE PROJECT ENGINEER SHALL APPROVE ALL FIELD CHANGES IN THE WORK PRIOR TO IMPLEMENTATION. NO FIELD CHANGES SHALL BE MADE IN ANY SPECIFIED SITE WORK OR ANY MATERIALS FOR WHICH SHOP DRAWINGS HAVE BEEN SUBMITTED AND APPROVED WITHOUT PRIOR CONSULTATION OF THE OWNER AND THE PROJECT ENGINEER. ANY CHANGES SO MADE WITHOUT THE CONSENT OF THE OWNER AND THE PROJECT ENGINEER SHALL, IF DEEMED UNACCEPTABLE BY EITHER PARTY, BE PROMPTLY REMOVED FROM THE WORK AT NO EXPENSE TO THE OWNER OF
- 12. ANY WORK OR MATERIALS NOT MEETING THE APPROVED STANDARDS AND SPECIFICATIONS OF THE LOCAL DPW SHALL BE IMMEDIATELY REMOVED AND REPLACED AT THE FULL RESPONSIBILITY AND
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SITE PREPARATION, THE COORDINATION AND INSTALLATION OF ALL UTILITY CONNECTIONS, AND RELATED WORK INCLUDING BUT NOT LIMITED TO L NECESSARY SHORING, BRACING AND TRENCH DEWATERING FOR THE COMPLETE INSTALLATION OF THE PROJECT FACILITIES DURING CONSTRUCTION.
- 14. SEE CONSTRUCTION DETAIL SHEETS FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.
- 15. ALL OPEN EXCAVATIONS SHALL BE ADEQUATELY SAFEGUARDED IN STRICT ACCORDANCE WITH OSHA GUIDELINES AND TO THE SATISFACTION OF THE LOCAL POLICE DEPARTMENT. PROVISIONS FOR TEMPORARY BARRICADES, CAUTION SIGNS, LIGHTS AND OTHER MEANS TO PREVENT ACCIDENTS AND DAMAGE TO PROPERTY ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE SUITABLE AND SAFE BRIDGES AND OTHER CROSSINGS FOR ACCOMMODATING TRAVEL BY PEDESTRIANS AND WORKMEN. NO EXCAVATIONS SHALL REMAIN OPEN OVERNIGHT.
- 16. NO TRENCH EXCAVATION WILL BE ALLOWED WITHOUT PROPER LOCAL PERMITS.
- 17. UNLESS OTHERWISE SHOWN ON THESE PLANS, ANY AREAS DISTURBED BY THE CONTRACTORS SHALL BE RESTORED TO ITS PRE-EXISTING CONDITION.
- 18. ALL WORK IN PUBLIC WAYS SHALL BE PERFORMED BY A CONTRACTOR REGISTERED WITH THE CITY OF NEW BEDFORD AS A LICENSED DRAIN LAYER.
- 19. THE CONTRACTOR SHALL OBTAIN A STREET DISTURBANCE AND OBSTRUCTION PERMIT PRIOR TO

STORMWATER FACILITY OPERATION/MAINTENANCE PLAN

ANY WORK BEING PERFORMED WITHIN THE CITY RIGHT OF WAY.

PROPERTY OWNER:

NG 376 NASH LLC P.O. BOX 7775 #73069 SAN FRANCISCO, CA 94120

APPLICANT/PROPONENT:

NEXTGRID, INC. P.O. BOX 7775 #73069 SAN FRANCISCO, CA 94120

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF ALL STORMWATER MANAGEMENT FACILITIES INCLUDING THE CONTINUED STABILIZATION OF THE SITE UNTIL SUCH TIME AS THE PROJECT IS ACCEPTED BY THE OWNER. THEREAFTER, THE OWNER SHALL BE RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF ANY STORMWATER FACILITIES IN ACCORDANCE WITH THIS OPERATION AND MAINTENANCE PLAN.
- 2. ALL STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S), INCLUDING THE SILTATION CONTROL, SHOULD BE INSPECTED AFTER EVERY MAJOR RAINFALL EVENT EXCEEDING 1.0—INCH UNTIL THE SITE IS FULLY STABILIZED TO ENSURE NO SEDIMENTATION INTO ADJACENT PROPERTIES HAS OCCURRED.
- 3. THEREAFTER REGULAR BMP INSPECTIONS SHOULD BE CONDUCTED ACCORDING TO THE FOLLOWING SCHEDULE: BMP STRUCTURE INSPECTIONS PER YEAR

CRUSHED STONE EDGE DRAIN TRENCHES VEGETATED DEPRESSION AREAS

- 4. ACCUMULATED SILT AND SEDIMENT AHEAD OF THE SILTATION CONTROLS SHOULD BE REMOVED IF THE ACCUMULATED DEPTH OF SEDIMENT EXCEEDS ONE HALF OF THE HEIGHT OF THE STRUCTURE. ANY ACCUMULATED SILT WITHIN THE DETENTION BASINS SHOULD BE REMOVED ONCE THE ACCUMULATED DEPTH OF SILT EXCEEDS THREE INCHES.
- 5. THE CRUSHED STONE EDGE DRAINS SHALL BE INSPECTED TWICE PER YEAR. IF IT IS DETERMINED THAT THE TOP STONE ABOVE THE FILTER FABRIC IS SILTED OR COMPROMISED, THE TOP STONE SHALL BE REMOVED, ANY DAMAGED FILTER FABRIC SHALL BE REMOVED AND REPLACED AND CLEAN STONE SHALL BE PLACED OVER THE FILTER FABRIC.
- 6. ALL REMOVED SEDIMENTS ARE TO BE PROPERLY DISPOSED OF AT A LOCATION TO BE APPROVED BY THI BOARD OF HEALTH. TRANSPORTATION AND DISPOSAL OF SEDIMENTS SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
- 7. THE ACCESS DRIVEWAY INTO THE FACILITY SHALL BE PLOWED AFTER ALL SNOW EVENTS TO MAINTAIN EMERGENCY ACCESS TO THE FACILITY. SNOW SHALL BE STOCKPILED ON—SITE AND ALLOW TO MELT ON—SITE AND FLOW OVERLAND FOLLOWING NATURAL DRAINAGE PATTERNS.
- 8. THE ACCESS DRIVEWAY SHALL BE MONITORED ON A REGULAR BASIS TO INSURE ITS SUITABILITY FOR ACCESS. GRAVEL ALONG THE ACCESS DRIVEWAY SHALL BE REPLACED AS NECESSARY TO MAINTAIN SUITABLE ACCESS TO THE ARRAY. IN ADDITION THE ENTIRE FACILITY SHALL BE MONITORED ON A REGULAR BASIS FOR ANY SIGNS OF EROSION DUE TO STORMWATER RUNOFF. ERODED AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE.
- 9. THE SITE SHALL BE MONITORED TO INSURE PROPOSED DRAINAGE PATTERNS ARE MAINTAINED FOLLOWING CONSTRUCTION. SHOULD CHANNEL FLOW FROM RUNOFF DEVELOP WITHIN THE SITE THAT REQUIRES CORRECTIVE MEASURES, THESE
- MEASURES SHALL BE REVIEWED WITH THE PLANNING BOARD PRIOR TO THEIR IMPLEMENTATION. 10. SIDE SLOPES AND BOTTOM AREAS OF THE VEGETATED DEPRESSIONS SHOULD BE MOWED TO A MINIMUM
- HEIGHT OF FOUR INCHES AT LEAST ONCE A YEAR. REMOVE ALL GRASS CLIPPINGS AND ORGANIC MATTER FROM ALL DRAINAGE WAYS AS NECESSARY.
- 11. THE VEGETATED DEPRESSIONS SHOULD BE INSPECTED FOR TRASH ON A REGULAR BASIS. ANY ACCUMULATED TRASH, LITTER, AND DISCARDED MATERIALS SHOULD BE REMOVED.
- 12. THE CONTRACTOR AND THE OWNER SHALL MAINTAIN A BMP INSPECTION REPORT FOLLOWING EACH SITE INSPECTION AS RECOMMENDED ABOVE. THE BMP INSPECTION REPORT SHALL IDENTIFY THE DATE OF INSPECTION, THE NAME AND CONTACT NUMBER OF THE RESPONSIBLE PARTY, SPECIFIC STRUCTURES INSPECTED, SPECIFIC MAINTENANCE REQUIRED AND OBSERVATIONS AT A MINIMUM, INSPECTION REPORTS SHOULD ADDRESS THE FOLLOWING CONDITIONS WHERE APPLICABLE:

1. EMBANKMENT SUBSIDENCE

2. EROSION 3. CRACKING OF CONTAINMENT BERM

4.INLET/OUTLET CONDITIONS 5 SEDIMENT ACCUMULATIONS

6. SLOPE STABILITY

- 13. NO HAZARDOUS MATERIALS SHALL BE STORED ON-SITE DURING AND/OR FOLLOWING CONSTRUCTION OF THE
- 14. NO FERTILIZERS OR HERBICIDES OF ANY KIND SHALL BE USED OR STORED ON-SITE DURING AND/OR FOLLOWING CONSTRUCTION OF THE PROPOSED SOLAR ARRAY.

INVASIVE SPECIES CONTROL PLAN (ISCP)

- 1. THE OWNER WILL MONITOR THE VEGETATED DEPRESSIONS PURSUANT TO THE RECOMMENDATIONS OUTLINED IN THE USACE DOCUMENT TITLED "NEW ENGLAND DISTRICT COMPENSATORY MITIGATION GUIDANCE" DOCUMENT, PAGES 24-26 SECTION 4.F. INVASIVE SPECIES.. DUE TO THE PROXIMITY OF THE BMP'S TO THE EXISTING BORDERING VEGETATED WETLAND, THE APPLICANT HAS CHOSEN A MECHANICAL CONTROL METHOD OF REMOVAL. INVASIVE SPECIES WILL BE REMOVED BY HAND (PULLING, MOWING OR EXCAVATING ON-SITE). NO CHEMICAL CONTROL WILL BE UTILIZED.
- 2. SPECIAL ATTENTION WILL BE GIVEN TO ASSURE THAT NONE OF THE FOLLOWING INVASIVE SPECIES POPULATE THE STORM WATER BMP'S: COMMON REED (PHRAGMITES AUSTRALIS), PURPLE LOOSESTRIFE (LYTHRUM SALICARIA), SMOOTH AND COMMON BUCKTHORN (FRANGULA ALNUS, RHAMNUS CARTHARTICA), RUSSIAN AND AUTUMN OLIVES (ELAEAGNUS ANGUSTIFOLIA AND E. UMBELLATA), MULTIFLORA ROSE (ROSA MULTIFLORA), REED CANARY-GRASS (PHALARIS ARUNDINACEA), AND JAPANESE KNOTWEED (FALLOPIA JAPONICA).

EROSION & SEDIMENTATION CONTROL PROGRAM

- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL APPROVING AUTHORITY AND AS DIRECTED BY THE PROJECT ENGINEER
- THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME, AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL IF THE DISTURBANCE IS WITHIN 100 FEET OF A WETLAND RESOURCE AREA. THE DISTURBED AREAS SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY FORECASTED STORM EVENT.
- 3. SEDIMENT BARRIERS (SILT FENCE, HAY BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE UPGRADIENT CONTRIBUTING DRAINAGE AREA. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 8.0% AFTER OCTOBER 1ST.
- 4. INSTALL SILT FENCE AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE SILT FENCE DETAIL FOR
- 5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL, SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSURE. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT AND WHEN THE DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER, SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF.
- 6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN THREE TO ONE (3 TO 1)
- 7. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH OR DORMANT SEEDING TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
- 8. TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.
- REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:

A) THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS, AND SHALL BE PLACED TO A DEPTH OF FOUR (4) INCHES ON ALL LOAM AND SEED AREAS OR AS SPECIFIED ON

B) APPLY FERTILIZER AT A RATE OF 800 LB PER ACRE OR 18.4 LB PER 1,000 SF. APPLY GROUND IMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE OR 138 LB PER 1,000 S.F.

C) THE DESIGN MIX FOR SEEDING SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE. THE SEED MIX SHALL BE INOCULATED WITHIN TWENTY-FOUR (24) HOURS, BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.

LOAM AND SEED AREAS - MASSDOT SPEC M6.03.0

% BY WEIGHT

RED FESCUE KENTUCKY 3 DOMESTIC RYE RED TOP LADINO APPLICATION RATE 4.0 LBS./1000 S.F.

- 10. HAY OR STRAW MULCH SHALL BE LOOSELY SPREAD TO A UNIFORM DEPTH AT THE RATE OF 4.5 TONS PER ACRE EXCEPT OVER CERTAIN SELECTED SEEDED AREAS WHERE 2 TONS PER ACRE SHALL BE USED AS DIRECTED BY THE ENGINEER AND/OR THE LOCAL APPROVING AUTHORITY. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS WILL BE USED ON HAY MULCH FOR WIND CONTROL.
- 11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED TO THE SATISFACTION OF THE LOCAL APPROVING AUTHORITY AND THE PROJECT ENGINEER.
- 12. ADJACENT PROPERTIES WILL BE PROTECTED WITH HAY BALES AND/OR SILT FENCING INSTALLED AS SHOWN ON THE DRAWINGS. ADDITIONAL HAY BALES OR SAND BAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER AND/OR THE LOCAL APPROVING AUTHORITY.
- 13. TEMPORARY HAY BALE EROSION CHECKS OR FILTER FABRIC GRATE INSERTS SHALL BE PROVIDED AT ALL DRAINAGE STRUCTURE INLETS DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION AND SATISFACTORY STABILIZATION OF DISTURBED AREAS, THE CONTRACTOR SHALL CLEAN ALL CATCH BASIN
- 14. THE CONTRACTOR MUST REPAIR OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND SHALL. DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER OR APPLICANT.
- 15. THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THROUGH JUNE 15TH AND
- 16. STOCKPILES OF TOP SOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 1:1.

MULCH AND MULCH ANCHORING

RATE (1.000 S.F.) MULCH LOCATION MULCH SHREDDED OR CHOPPED CORNSTALKS 200-275 POUNDS 3:1 HIGH WIND VELOCITY AREAS MODERATE TO HIGH VELOCITY AREAS ANCHORED STRAW OR HAY (1)
JUTE MESH OR EXCELSIOR MAT STEEP SLOPES GREATER THAN 3:1 JUTE MESH OR EXCELSIOR MAT

(1) A HYDRO-APPLICATION OF WOOD OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS SHALL BE USED ON HAY MULCH FOR WIND

MULCH ANCHORING MAY BE ACCOMPLISHED WITH PEG AND TWINE (1 SQ. YD/BLOCK); MULCH NETTING (PER MANUFACTURERS SPECIFICATIONS); OR WOOD CELLULOSE FIBER (750 LBS/ACRE)

EROSION CONTROL NOTES DURING CONSTRUCTION

- CONSTRUCTION ACTIVITY EXECUTED DURING THE WINTER CONSTRUCTION PERIOD BETWEEN NOVEMBER 1
- THROUGH APRIL 1ST SHALL BE SUBJECT TO THE FOLLOWING ADDITIONAL REQUIREMENTS. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE
- SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
- 3. EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY
- CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO AREA IN EXCESS OF ONE ACRE IS WITHOUT EROSION CONTROL PROTECTION.
- AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING
- BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 1ST, LOAM OR SEED WILL NOT BE PERMITTED.

 DURING PERIODS OF ABOVE FREEZING TEMPERATURES, THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL
- IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 200 TO 300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT E LEFT UNEXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS
- Until such time as weather conditions allow ditches to be finished with the permanent SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF HAY BALE/SAND BAG
- BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 1ST ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL, TRACK OR WOOD CELLULOSE FIBER. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3%, FOR SLOPES EXPOSED TO DIRECT WINDS, AND FOR ALL OTHER SLOPES GREATER THAN 8%. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15% AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
- ALL EROSION MITIGATION MEASURES SHALL BE IN PLACE PRIOR TO MAJOR CONSTRUCTION OR SOIL DISTURBANCE COMMENCING ON THE SITE.

CITY OF NEW BEDFORD REQUIRED NOTES

- ANY MINOR MODIFICATIONS (AS DETERMINED BY THE CITY ENGINEER) TO THE INFORMATION SHOWN ON THE APPROVED SITE PLANS SHALL BE SUBMITTED TO THE CITY ENGINEER AS A MINOR PLAN REVISION FOR APPROVAL PRIOR TO THE WORK BEING PERFORMED.
- 2. ANY WORK AND MATERIAL WITHIN THE CITY RIGHT-OF-WAY SHALL CONFORM TO THE CITY OF NEW BEDFORD REQUIREMENTS
- 3. ALL HANDICAP PARKING, RAMPS, AND ACCESS SHALL CONFORM TO AAB & MAAB REQUIREMENTS 4. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION. EROSION CONTROL SHALL CONFORM TO THE CITY OF NEW BEDFORD CONSERVATION COMMISSION REQUIREMENTS .
- 5. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO MUTCO REQUIREMENTS

GENERAL ABBREVIATIONS

ASPHALT COATED CORRUGATED METAL PIPE APPROX. **APPROXIMATE** BOTTOM OF CURB IT. CONC. BITUMINOUS CONCRETE BY OTHERS BENCH MARK BOTTOM OF WAL CEMENT CONCRETE CAPE COD BERM CURB INLET CAST IRON PIPE CHANGE IN TYPE CLEARANCE CHAIN LINK FENCE CEMENT LINED DUCTILE IRON CORRUGATED PLASTIC PIPE CONDUIT DUCTILE IRON PIPE FLEV. OR FL. FLEVATION EDGE OF PAVEMENT EDGE OF TRAVELED WAY FLARED END FRAME AND COVER FRAME AND GRATE FOUNDATION FILLED WITH DEBRIS HAND HOLE HOT MIX ASPHALT HORIZONTAL LOAM BORROW MUMIXAM MONUMENT NOT IN CONTRACT NATIONAL GEODETIC VERTICAL DATUM NOW OR FORMERLY ON CENTER OVERHEAD WIRE PROFILE GRADE LINE PROPOSED POLYVINYLCHLORIDE PIPE PAVEMENT PAVED WATERWAY RELOC RELOCATED REMOVE AND DISPOSE REMOVE AND RESET REMOVE AND STACK REMODE REINFORCED CONCRETE PIPE RIGHT OF WAY RAILROAD STONE BOUND/DRILL HOLE SHOULDER. SLOPED GRANITE CURB TEMPORARY BENCH MARK TAPPING SLEEVE, VALVE AND BOX TOP OF WALL UNDER CONSTRUCTION

EXISTING LEGEND

TRANSFORMER

FIBER OPTIC BOX

FIBER OPTIC LINE

SOIL BORING LOCATION

TEST PIT LOCATION

SWITCH BOX

U.S. GEOLOGICAL SURVEY

VERTICAL GRANITE CURB

VITRIFIED CLAY PIPE

WHEELCHAIR RAMP

VERTICAL

			<u> </u>	PROPOSED WATER LI
-	P	PROPERTY LINE	SIZE & TYPE	PROPOSED GAS LINE
0	95	TOPOGRAPHIC CONTOUR	CONDUIT SIZE	PROPOSED ELECTRIC
	DH-CB/FD	DRILL HOLE—CONCRETE BOUND/FOUND	TYPE	PROPOSED CABLE T.
	CLF	CHAIN-LINK FENCE	000	PROPOSED SEPTIC S
	WG	WATER GATE	-	PROPOSED WETLAND
	DMH	DRAIN MANHOLE	LOC	PROPOSED SILTATION
	CBSN	CATCH BASIN	, and and —a—	PROPOSED LIMIT OF
	DI	DROP INLET	(DEM)	EXISTING STRUCTURE DEMOLISHED
	FHYD	FIRE HYDRANT	(R&D)	REMOVE & DISPOSE
	SMH	SEWER MANHOLE	(R&R)	REMOVE & RESET
	CMH	CATV MANHOLE	(AG)	ADJUST TO GRADE
	СНН	CATV HAND HOLE	(AB)	ABANDON
	THH	TELEPHONE HAND HOLE	(AIP)	ABANDON IN PLACE
	EMH	ELECTRIC MANHOLE		
	EHH	ELECTRIC HAND HOLE		
	LP	LIGHT POLE		

PROPOSED LEGEND

SED LE	SEND
PROPOSED	INDEX CONTOUR
PROPOSED	INTERMEDIATE CONTOUR
PROPOSED	SPOT GRADE
PROPOSED	PROPERTY LINE
PROPOSED	MONUMENT
PROPOSED	BUILDING
PROPOSED	EDGE OF PAVEMENT
PROPOSED	CURB
	PROPOSED PROPOSED PROPOSED PROPOSED

PROPOSED EDGE GRAVEL DRIVES PROPOSED LIMIT OF CLEARING ---- x ----- PROPOSED FENCE LINE WALL TYPE PROPOSED WALL ---- PROPOSED SETBACK LINE — — PROPOSED EASEMENT LINE

SIDEWALK TYPE PROPOSED SIDEWALK

PROPOSED ZONING BOUNDARY 888 PROPOSED RIP RAP PROPOSED SIGN POST PROPOSED LIGHT POLE PROPOSED UTILITY POLE 0 -(B PROPOSED GUY POLE

PROPOSED CATCH BASIN PROPOSED DRAIN MANHOLE PROPOSED FLARED END PROPOSED SEWER MANHOLE PROPOSED WATER MANHOLE

PROPOSED WATER GATE VALVE PROPOSED CURB STOP PROPOSED WELL LOCATION PROPOSED ELECTRIC MANHOLE

PROPOSED HYDRANT

DHH PROPOSED HAND HOLE PROPOSED TRANSFORMER PAD (1) PROPOSED TELEPHONE MANHOLE C×3 PROPOSED CONTROLLER CABINET

o GG PROPOSED GAS GATE SIZE & TYPE PROPOSED DRAIN LINE SIZE & TYPE PROPOSED SEWER LINE SIZE & TYPE PROPOSED WATER LINE

> DSED GAS LINE OSED ELECTRIC LINE OSED CABLE T.V. & TELEPHONE

OSED SEPTIC SYSTEM LOCATION OSED WETLAND REPLICATION AREA

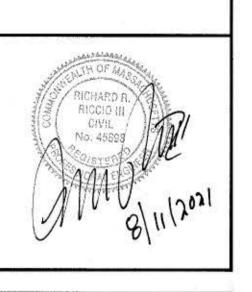
OSED SILTATION CONTROL DSED LIMIT OF CLEARING NG STRUCTURE TO BE

CIELD -NGINEERING CO., INC. CONSULTING ENGINEERS

11D INDUSTRIAL DRIVE P.O. BOX 1178 MATTAPOISETT, MA 02739 TEL: (508) 758-2749 FAX: (508) 758-2849

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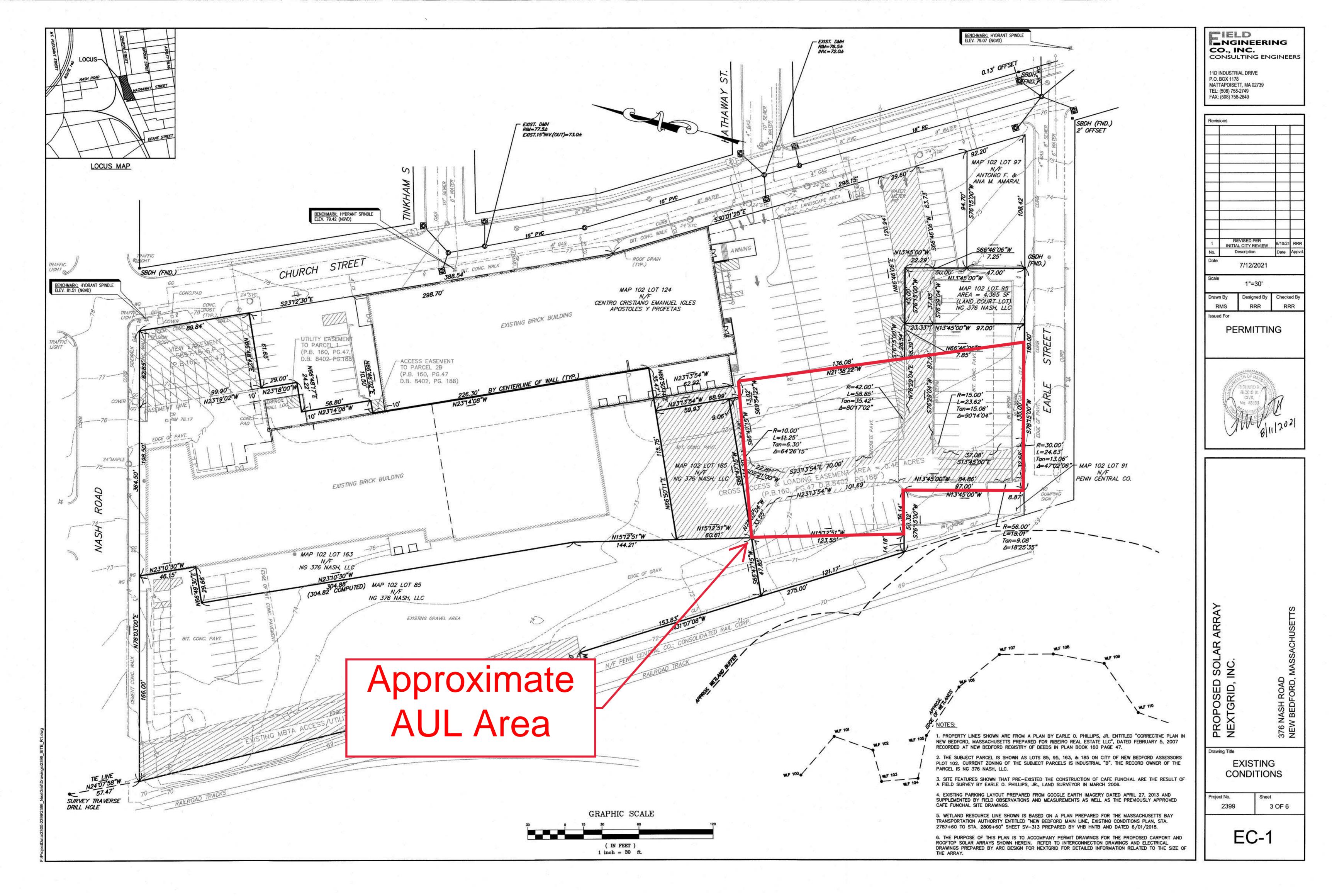
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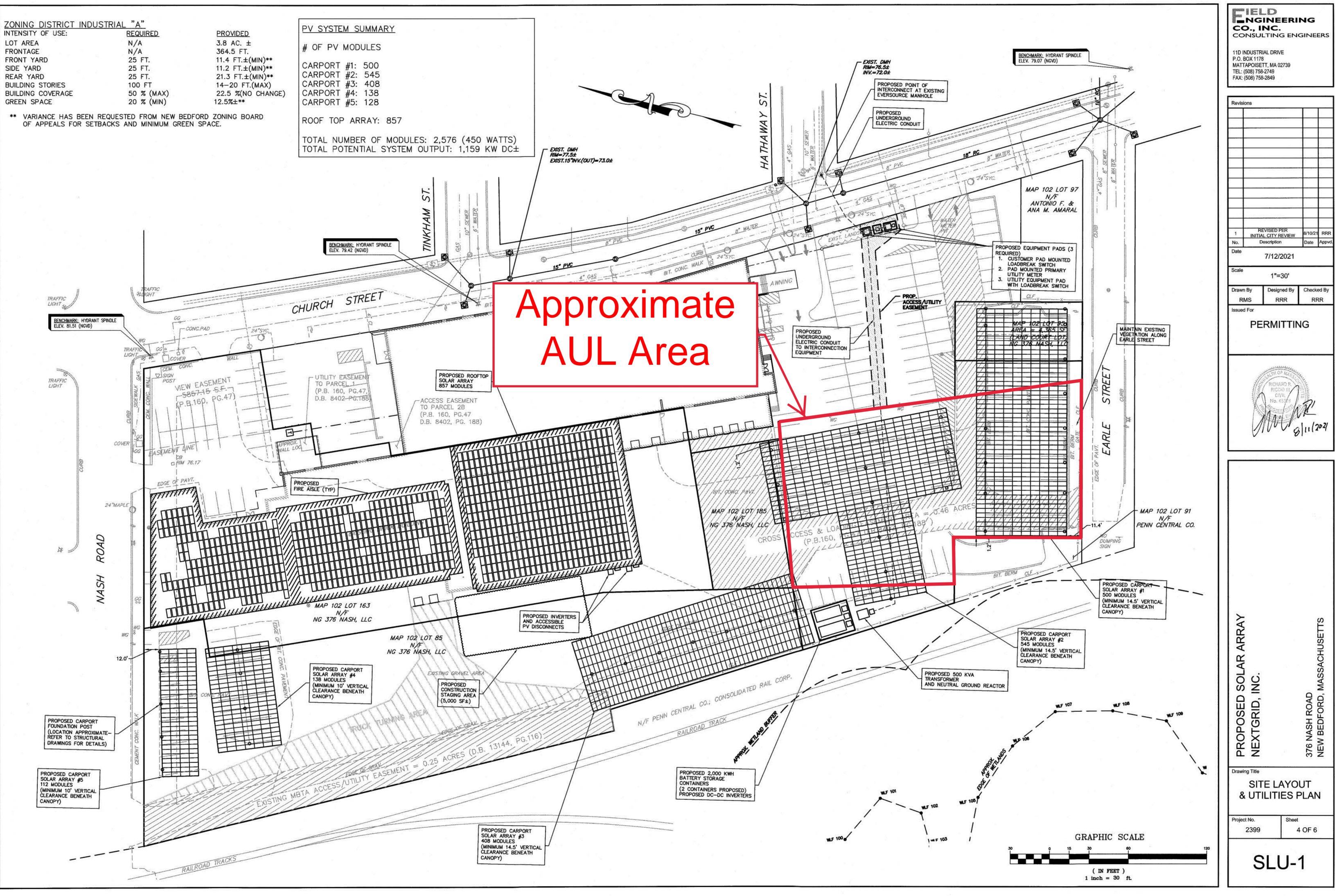


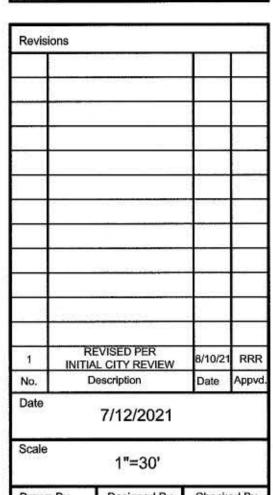
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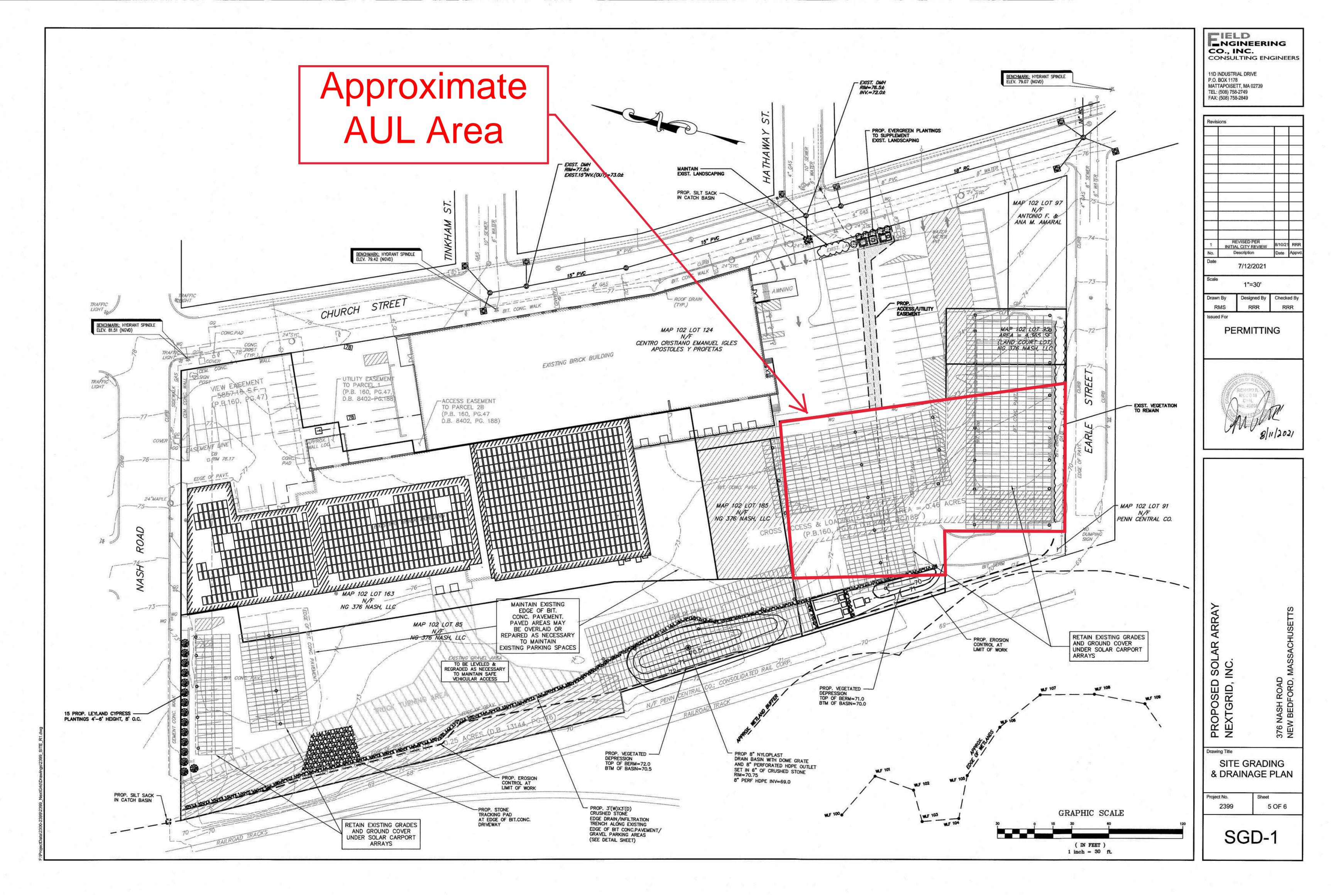
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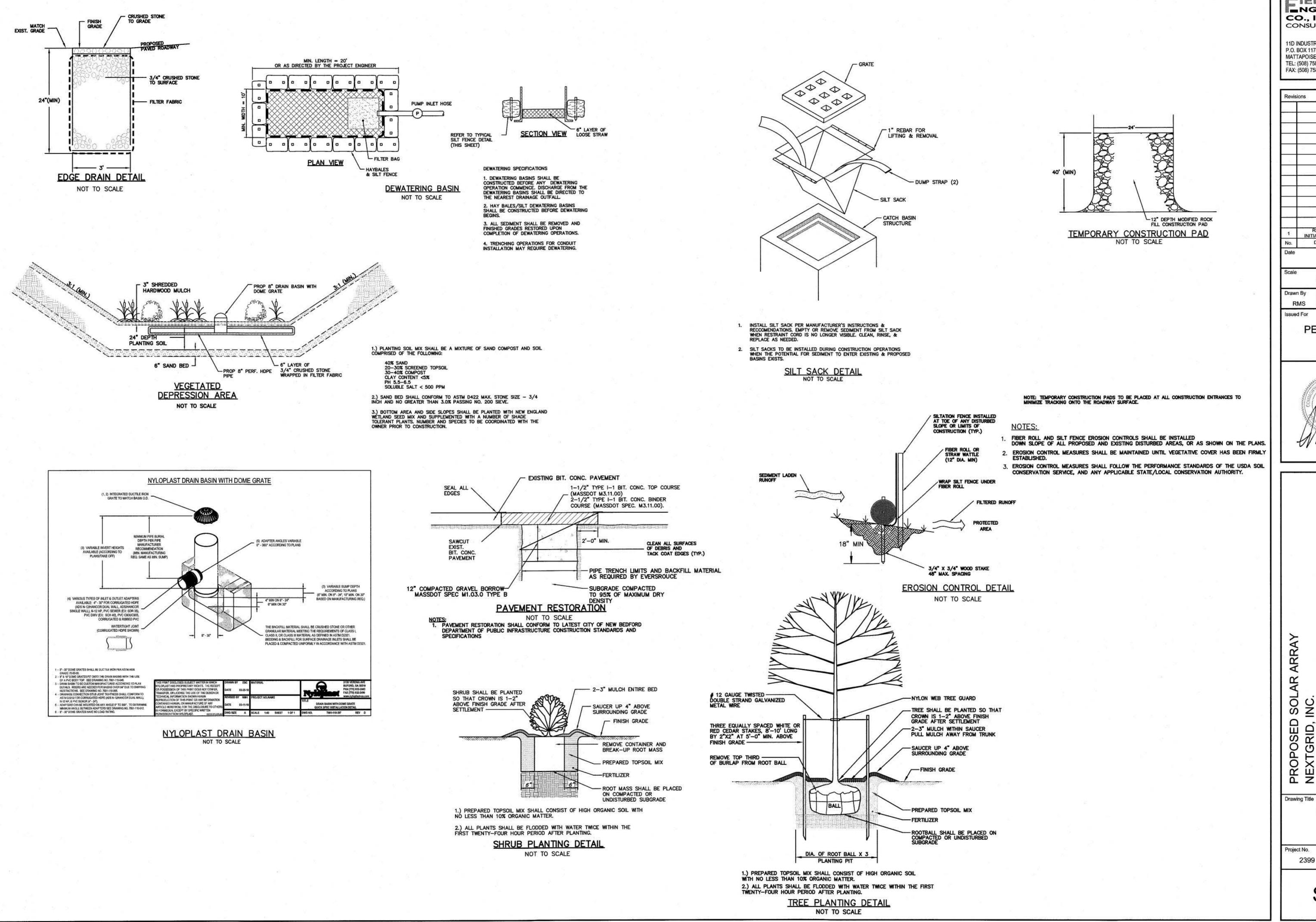
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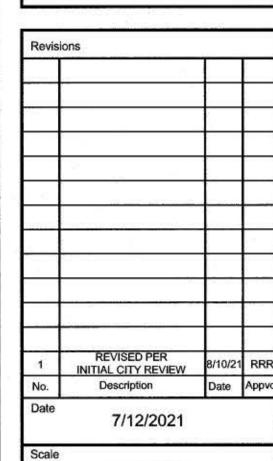






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AS NOTED Checked By Designed By

PERMITTING

SOLAR, PROPOSED NEXTGRID, I

> DETAIL SHEET

Project No. Sheet 2399 6 OF 6

SD-1