

Norfolk Landfill Solar Town of Norfolk 599 Greenwoods Rd E (Rte. 44) Norfolk, Connecticut Map 4 Block 10 Lot 4 Zone: C



KEY PLAN MAP 1"=2000'



Applicant LSE Pyxis LLC 40 Tower Lane, Suite 201 Avon, CT 06001

Owner Town Of Norfolk P.O. Box 592 Norfolk, CT 06058-0592

Prepared By



J.R. Russo & Associates, LLC l Shoham Rd East Windsor, CT 06088 • CT 860.623.0569 • MA 413.785.1158 www.jrrusso.com • info@jrrusso.com

DRAW

SHEET

<u>CIVIL</u> COVER OVERA EXISTIN EXISTIN ARRAY ARRAY EROSIC **DETAILS**.

ING INDEX		
TITLE	SHEET NO.	LATEST REVISION
SHEET · · · · · · · · · · · · · · · · · ·	1 of 8	10-26-2022
LL PLAN·················	· ·2 of 8	10-26-2022
IG CONDITIONS PLAN · · · · · · · · · · · · · · · · · · ·	·3 of 8	10-26-2022
NG CONDITIONS PLAN · · · · · · · · · · · · · · · · · · ·	•4 of 8	10-26-2022
1 SITE PLAN · · · · · · · · · · · · · · · · · · ·	·5 of 8	10-26-2022
2 SITE PLAN · · · · · · · · · · · · · · · · · · ·	· ·6 of 8	10-26-2022
N CONTROL NOTES · · · · · · · · · · · · · · · · · · ·	· 7 of 8	10-26-2022
<u>S</u> ····································	· 8 of 8	10-26-2022







\Acad\2021 Civil 3D\2021-077 Lodestar - 599 Greenwood Rd. E\Russo Drawings\2021-077.dwg



:\Acad\2021 Civil 3D\2021-077 Lodestar - 599 Greenwood Rd. E\Russo Drawings\2021-077.dwg



\Acad\2021 Civil 3D\2021-077 Lodestar - 599 Greenwood Rd. E\Russo Drawings\2021-077.dwg



PERMANENT SEEDING (PS)

SPECIFICATIONS

Time Of Year

Seeding dates in Connecticut are normally April 1 through June 15 and August 15 through October 1. Spring seedings give the best results and spring seedings of all mixes with legumes is recommended. There are two exceptions to the above dates. The first exception is when seedings will be made in the areas of Connecticu't known as the Coastal Slope and the Connecticut River Valley. The Coastal Slope includes the coastal towns of New London, Middlesex, New Haven, and Fairfield counties. In these areas, with the exception of crown vetch (when crown vetch is seeded in late summer, at least 35% of the seed should be hard seed (unscarified), the final fall seeding dates can be extended and additional 15 days. The second exception is frost crack or dormant seeding, the seed is applied during the time of year when no germination can be expected, normally November through February. Germination will take place when weather conditions improve, mulching is extremely important to protect the seed from wind and surface erosion and to provide erosion protection until the seeding becomes established.

Site Preparation

Grade in accordance with the Land Grading measure which is in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

Install all necessary surface water controls.

For areas to be mowed remove all surface stones 2 inches or larger. Remove all other debris such as wire, cable tree roots, pieces of concrete, clods, lumps, or other unsuitable material.

Seed Selection

Basins & Disturbed Areas outside of fenced array: New England Erosion Control/Restoration Mix by New England Wetland Plants Inc. or Approved Equal. Disturbed Areas within fenced area: Northeast Solar Pollinator Buffer Mix – ERNMX–610 by Ernst Conservation Seeds or approved equal.

Seedbed Preparation

Apply topsoil, if necessary, in accordance with the Topsoiling measure which is in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

Apply ground limestone and fertilizer according to soil test recommendations (such as those offered by the University of Connecticut Soil Testing Laboratory or other reliable source).

Where soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10-10-10 or equivalent and limestone at 4 tons per acre or 200 pounds per 1,000 square feet.

Work lime and fertilizer into the soil to a depth of 3 to 4 inches with a disc or other suitable equipment.

Inspect seedbed just before seeding. If the soil is compacted, crusted or hardened, scarify the area prior to seeding.

Seed Application

Apply selected seed at rates per manufacturer's recommendations uniformly by hand, cyclone seeder, drill, cultipacker type seeder or hydroseeder (slurry including seed, fertilizer). Normal seeding depth is from 0.25 to 0.5 inch. Increase seeding rates by 10% when hydroseeding or frost crack seeding. Seed warm season grasses during the spring period only.

Mulching

See guidelines in the Mulch For Seed measures.

MAINTENANCE

Inspect temporary soil protection area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater during the first growing season.

Where seed has been moved or where soil erosion has occurred, determine The prove of A the Yail SE End her of Seded.

SPECIFICATIONS

Site Preparation Install needed erosion control measures such as diversions, grade stabilization structures, sedimentation basins and grassed waterways in accordance with the approved plan.

Grade according to plans and allow for the use of appropriate equipment for seedbed preparation, seeding, mulch application and mulch anchoring.

Seedbed Preparation

Loosen the soil to a depth of 3–4 inches with a slightly roughened surface. If the area has been recently loosened or disturbed, no further roughening is required. Soil preparation can be accomplished by tracking with a bulldozer, discing harrowing, raking or dragging with a section of chain link fence.

Apply ground limestone and fertilizer according to soil test recommendations (such as those offered by the University of Connecticut Soil Testing Laboratory or other reliable source).

If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10–10–10 or equivalent.

Apply seed uniformly by hand, cyclone seeder, drill, cultipacker type seeder or hydroseeder. The temporary seed shall be Rye (grain) applied at a rate of 120 pounds per acre. Increase seeding rates by 10% when hydroseeding.

See guidelines in the Mulch For Seed measures.

MAINTENANCE

Inspect temporary seeding area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for seed and mulch movement and rill erosion.

Where seed has been moved or where soil erosion has occurred. determine the cause of the failure and repair as needed.

MULCH FOR SEED (MS)

SPECIFICATIONS

Materials

Types of Mulches within this specification include, but are not limited to:

1. Hay: The dried stems and leafy parts of plants cut and harvested, such as alfalfa, clovers, other forage legumes and the finer stemmed, leafy grasses. The average stem length should not be less than 4 inches. Hay that can be windblown should be anchored to hold it in place.

2. Straw: Cut and dried stems of herbaceous plants, such as wheat, barley, cereal rye, or brome. The average stem length should not be less than 4 inches. Straw that can be windblown should be anchored to hold it in place.

3. Cellulose Fiber: Fiber origin is either virgin wood,

post-industrial/pre-consumer wood or post consumer wood complying with materials specification (collectively referred to as "wood fiber"), newspaper, kraft paper, cardboard (collectively referred to as "paper fiber") or a combination of wood and paper fiber. Paper fiber, in particular, shall not contain boron, which inhibits seed germination. The cellulose fiber must be manufactured in such a manner that after the addition to and agitation in slurry tanks with water, the fibers in the slurry become uniformly suspended to form a homogeneous product. Subsequent to hydraulic spraying on the ground, the mulch shall allow for the absorption and percolation of moisture and shall not form a tough crust such that it interferes with seed germination or growth. Generally applied with tackifier and fertilizer. Refer to manufacturer's specifications for application rates needed to attain 80%–95% coverage without interfering with seed germination or plant growth. Not recommended as a mulch for use when seeding occurs outside of the recommended seeding dates.

Tackifiers within this specification include, but are not limited to: Water soluble materials that cause mulch particles to adhere to one another, generally consisting of either a natural vegetable gum blended with gelling and hardening agents or a blend of hydrophilic polymers, resins, viscosifiers, sticking aids and gums. Good for areas intended to be mowed. Cellulose fiber mulch may be applied as a tackifier to other mulches, provided the application is sufficient to cause the other mulches to adhere to one another. Emulsified asphalts are specifically prohibited for use as tackifiers due to their potential for causing water pollution following its application.

Nettings within this specification include, but are not limited to: Prefabricated openwork fabrics made of cellulose cords, ropes, threads, or biodegradable synthetic material that is woven, knotted or molded in such a manner that it holds mulch in place until vegetation growth is sufficient to stabilize the soil. Generally used in areas where no mowing is planned.

Site Preparation

Grade according to plans and allow for the use of appropriate equipment for seedbed preparation, seeding, mulch application and mulch anchoring.

Timing: Applied immediately following seeding. Some cellulose fiber may be applied with seed to assist in marking where seed has been sprayed, but expect to apply a second application of cellulose fiber to meet the requirements of Mulch For Seed in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

Spreading: Mulch material shall be spread uniformly by hand or machine resulting in 80%–95% coverage of the disturbed soil when seeding within the recommended seeding dates. Applications that are uneven can result in excessive mulch smothering the germinating seeds. For hay or straw anticipate an application rate of 2 tons per acre. For cellulose fiber follow manufacture's recommended application rates to provided 80%—95% coverage.

When seeding outside the recommended seeding dates, increase mulch application rate to provide between 95%-100% coverage of the disturbed soil. For hay or straw anticipate an application rate to 2.5 to 3 tons per acre.

When spreading hay mulch by hand, divide the area to be mulched into approximately 1,000 square feet and place 1.5-2bales of hay in each section to facilitate uniform distribution.

For cellulose fiber mulch, expect several spray passes to attain adequate coverage, to eliminate shadowing, and to avoid slippage.

Anchoring: Expect the need for mulch anchoring along the shoulders of actively traveled roads, hill tops and long open slopes not protected by wind breaks.

When using netting, the most critical aspect is to ensure that the netting maintains substantial contact with the underlying mulch and the mulch, in turn, maintains continuos contact with the soil surface. Without such contact, the material is useless and erosion can be expected to occur.

MAINTENANCE

Inspect mulch for seed area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater until the grass has germinated to determine maintenance needs.

Where mulch has been moved or where soil erosion has occurred, determine the cause of the failure and repair as needed.

- of the town staff.

4. In all areas, removal of trees, bushes and other vegetation as well as disturbance of the soil is to be kept to an absolute minimum while allowing proper development of the site. During construction, expose as small an area of soil as possible for as short a time as

- possible.
- codes.

SOIL ERSOION & SEDIMENT CONTROL NOTES

1. All soil erosion and sediment control work shall be done in strict accordance with the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

2. Any additional erosion/sediment control deemed necessary by the engineer during construction, shall be installed by the developer. In addition, the developer shall be responsible for the repair/replacement and/or maintenance of all erosion control measures until all disturbed areas are stabilized to the satisfaction

3. All soil erosion and sediment control operations shall be in place prior to any grading operations and installation of proposed structures or utilities and shall be left in place until construction is completed and/or area is stabilized.

5. The developer shall practice effective dust control per the soil conservation service handbook during construction and until all areas are stabilized or surface treated. The developer shall be responsible for the cleaning of nearby streets of any debris from these construction activities.

All fill areas shall be compacted sufficiently for their intended purpose and as required to reduce slipping, erosion or excess saturation. Fill intended to support buildings, structures, conduits, etc., shall be compacted in accordance with local requirements or

Topsoil is to be stripped and stockpiled in amounts necessary to complete finished grading of all exposed areas requiring topsoil. The stockpiled topsoil is to be located as designated on the plans. Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading or proposed sodding or seeding.

8. Any and all fill material is to be free of brush, rubbish, timber, logs vegetative matter and stumps in amounts that will be detrimental to constructing stable fills. Maximum side slopes of exposed surfaces of earth to be 3:1 or as otherwise specified by local authorities.

9. Soil stabilization should be completed within 5 days of clearing or inactivity in construction.

10. Waste Materials — All waste materials (including wastewater) shall be disposed of in accordance with local, state and federal law. Litter shall be picked up at the end of each work day.

11. The Contractor shall maintain on-site additional erosion control materials as a contingency in the event of a failure or when required to shore up existing BMPs. At a minimum, the on-site contingency materials should include 30 feet of silt fence and 5 straw haybales with 10 stakes.



SOURCE: U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, STORRS, CONNECTICUT

GEOTEXTILE SILT FENCE (GSF) NOT TO SCALE



NOTE: MAY BE USED AS ALTERNATIVE TO GEOTEXTILE SILT FENCE.





MODIFIED RIPRAP APRON (12" THICK) ON 6" GRANULAR BASE (M.02.01) ON MIRAFI 140N FABRIC OR EQUAL



12" BANK RUN GRAVEL ζ - B- BA 12" MODIFIED RIPRAP — MIRAFI 500X FABRIC OR EQUAL RIPRAP SLOPE PROTECTION AT SPILLWAY



NOT TO SCALE

CHECKLIST FOR EF PROJECT: Norfolk Landfill Solar LOCATION: 599 Greenwoods Road East, Norfolk, CT PROJECT DESCRIPTION: Construction of two solar arr PARCEL AREA: 181.0± acres RESPONSIBLE PERSONNEL: Kevin Midea, Lodestar En EROSION AND SEDIMENT CONTROL PLAN PREPARER: CHECKLIST: Work Description Location Date Install	ays hergy (410) 274–2716 J.R. Russo & Asso led Initials	AN 5 ociates, LLC Date Removed	Initials	RUSSO	SURVEYORS•ENGINEERS SERVING CT & MA J.R. Russo & Associates, LLC t Windsor, CT 06088 • CT 860,623.0569 • MA 413.785.1158 www.jrrusso.com • info@jrrusso.com
Install perimeter sediment barriers As shown on plan.					am Rd East
MAINTENANCE OF MEASURES:					ite 201
Location Description or Number		Date	Initials	1 For	e, Sui 060
				parec	ر CT CT
Project Dates:		•			ver von,
Date of groundbreaking for project: Date of final stabilization:					Av
 Conduct a pre-construction meeting on-site requirements of the Stormwater Pollution Conduct a pre-construction meeting on-site requirements of the Stormwater Pollution Conduct a project plans. Clear trees & grub stumps within security for the project plans. Clear trees & grub stumps and spread woody de sediment barriers as shown on plans. Strip topsoil in the vicinity of the proposed suitable amount of topsoil for reuse on-site by sediment barriers (GSF). Construct stormwater management basin. Supracticable. Construct access road. Install foundations and solar panels. Install electrical equipment and distribution 10. Install security fence. Remove silt fence after site is fully stabilized. Construction of this site is anticipated to begin January 2024, pending approvals. Temporary error any soil disturbance and maintained throughout of permanent vegetation. The Contractor shall keep the area of disturbance on exposed soils as soon as practical. All soil ar and maintained in accordance with these plans of Erosion and Sediment Control", as amended. The the plans and shall immediately notify the Engine and shall immediately notify the Engine to keep silt fence functional. In all case accumulated sediment has reached one-half abor material is to be spread and stabilized in areas which are not to be paved or built on. Silt fence (GSF) to insure efficient sediment capture until all aread vegetation has been established. 	e with the contract ontrol Plan. ent of the constru- ence. Stumps out ebris along contou- stormwater mana e in areas shown. eed & mulch to e lines. d mix and mulch to e lines. d mix and mulch to e lines. d mix and mulch to e construction until et to a minimum nd erosion control meas construction until et to a minimum nd erosion control and the "Connection Contractor shall eer of any discrep /replacement/main Accumulated sedi s, deposits shall the ve the ground hei not subject to er e (GSF) is to be r are to remain in as above the eros	as soon as pro as soon as pro 2023 and be co sures shall be in soils have been and establish ve ut DEP Guidelir verify all condit ancies. ntenance of all iment shall be in soion, or to be replaced as nec place and shall ion checks are	the design and as shown on o remain. as intermediate Stockpile I be surrounded tion as soon as acticable. Amplete by installed prior to a stabilized with egetative cover I be installed hes for Soil ions noted on erosion control removed as en the fence. This used in areas essary to be maintained stabilized and	RE BY: CJC/TAC	CHK: Ten Contraction Contracti
POST CONSTRUCTION The property owner shall be responsible for perf maintenance schedule: 1. Inspect stormwater management basins an by vac-truck. Repair eroded areas and re- bottom to remove accumulated sediment ereduction is observed. Mow basins on a real DP OF BASIN LEV.=PER PLAN	MAINTENANCE No forming the following and the following applace riprap and every 10 years or gular basis to pre	OTES: ing post constru- e of hydrocarbo vegetation as ro when significant vent woody gro	uction ns and remove equired. Dredge t volume wth.	Norfolk Landfill S	599 Greenwoods Rd E (Rte. Norfolk, CT Map4 Block 10 Lot 4 Zone
5" TOPSOIL					
AFI 500-X FABRIC				 	
-	500-X FABRIC				
				7-	<u>DATE</u> -12-22
				As JOE	SCALE Shown NUMBER
				20	21-077

7 of 8



Acad\2021 Civil 3D\2021-077 Lodestar - 599 Greenwood Rd. E\Russo Drawings\2021-077.dwg