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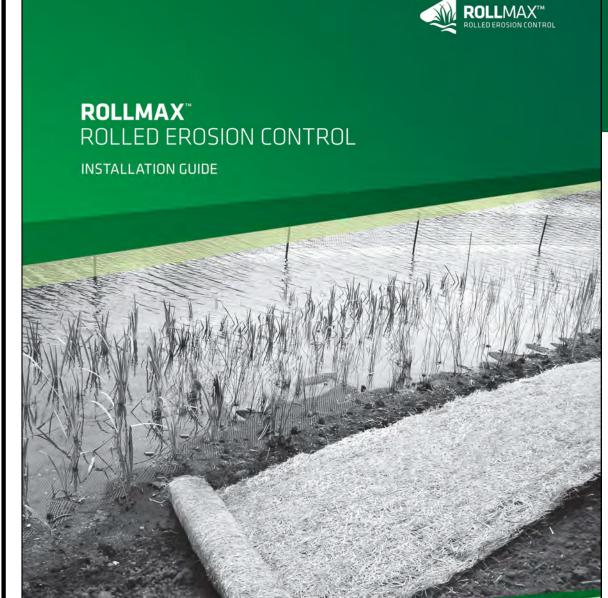
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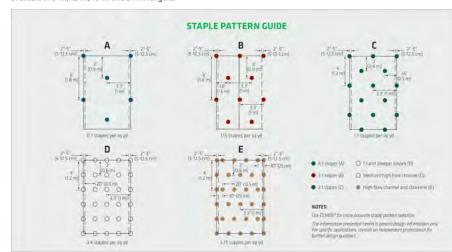


performance-guaranteed erosion control solutions. For more We are the industry leader when it comes to providing products has kept our customers on solid ground. Our short-term and long-term Erosion Control Blankets (ECBs) and Turf Reinforcement Mats (TRMs) keep you one step

ahead of just about any erosion challenge. North American Green provides everything you need to know for quick, accurate erosion control installation tailored to your site. From start to finish, the North American Green® RollMax extensive research and field-proven techniques to ensure project success. The following pages offer instructions and guidelines for several scenarios you may encounter during the installation of the RollMax System.



reinforcement solutions. We have developed integrated systems and products with the sole objective to ensure absolute customer satisfaction. Our products are backed by the most thorough quality assurance practices in the industry. In addition, we provide comprehensive design assistance for every North American Green system. For additional installation assistance with the RollMax System, please visit www.nagreen.com, e-mail info@nagreen.com, or call 800-772-2040 and we will be happy to put you in touch with an erosion control specialist

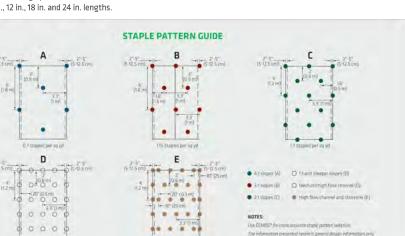


Installation Made Easy

erosion control products can't function to their full potential hold, try our 12 in. and 18 in. rebar staples, our 12 in. plastic without proper installation and anchoring. North American Green supplies a wide variety of fastener options for nearly every application and soil type.

For use in cohesive soils, wire staples are a cost-effective means to fasten RollMax™ System Rolled Erosion Control Products (RECPs). Available in 6 in., 8 in., 10 in. and 12 in. lengths, our U-shaped staples reach various depths to ensure adequate pull-out resistance. For installation using our handy Pin Pounder installation tool, 6 in. V-top staples or 6 in. circle

top pins are available. Our biodegradable BioStakes® are available in 4 in. and 6 in. lengths and provide an environmentally friendly alternative to metal staples. For an even more durable, deeper reaching yet all-natural anchoring option, our wood EcoStakes® are available in 6 in., 12 in., 18 in. and 24 in. lengths.



anchors. The earth anchors reach deep into the soil strata to

earth anchors are designed for durability and holding power

Proper staple patterns must be used to achieve optimal

results in RECP installation. We recommend the following

general stapling patterns as guidance for use with our RECPs

as seen in (Figure 1). Site-specific staple pattern recommen-

dations based on soil type and severity of application may

be acquired through our Erosion Control Materials Design

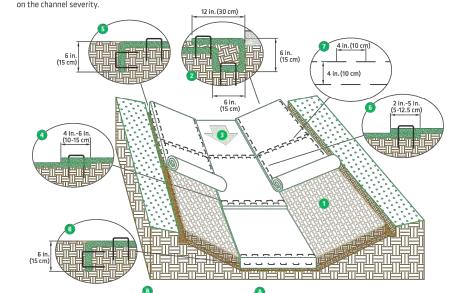
Software (ECMDS®), www.ecmds.com.

under extreme hydraulic stresses and adverse soil conditions.

offer enhanced anchoring in the worst conditions. Our variety of

Channel Installation

 $The following channel \ guide \ outlines \ general \ recommendations for installing \ RollMax \ System \ temporary \ and/or \ permanent \ RECPs \ in \ Application \ App$ concentrated flow applications. Consult the staple pattern guide (Figure 1) for fastener spacing recommendations based



f necessary to allow staples to secure the critical points along the channel surface.

CHANNEL INSTALLATION STEPS 1. Prepare soil before installing RECPs, including any necessary application of lime, fertilizer and seed. 2. Begin at the top of the channel by anchoring the RECPs in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench with approximately 12 in. (30 cm) of RECPs extended beyond the upslope portion of the trench. For supplemental scour protection. use RevetMax" System ShoreMax" Mat at the channel/ culvert outlet as needed. Anchor the RECPs with a row of 6. Adjacent RECPs must be overlapped approximately 2 instaples/stakes approximately 12 in. (30 cm) apart in the bottom of the trench. Backfill and compact the trench after 7. In high flow channel applications a staple check slot is stapling. Apply seed to the compacted soil and fold the remaining 12 in, (30 cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with

apart across the width of the RECPs. 3. Roll center RECPs in direction of water flow in bottom of channel. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil

as shown in the staple pattern guide.

surface by placing staples/stakes in appropriate locations

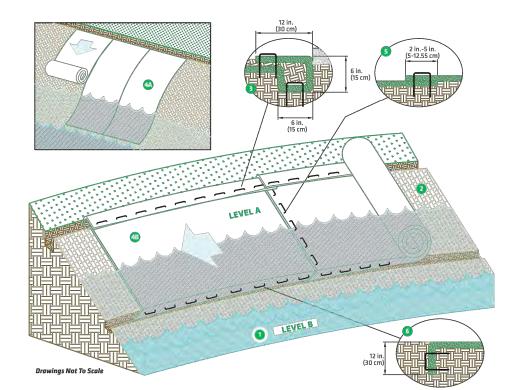
 Place consecutive RECPs end-over-end (shingle style) with a 4 in.-6 in. (10-15 cm) overlap. Use a double row of staples staggered 4 in. (10 cm) apart and 4 in. (10 cm) on center to secure RECPs. 5. Full-length edge of RECPs at top of side slopes must be anchored with a row of staples/stakes approximately

12 in. (30 cm) apart in a 6 in. (15 cm) deep x 6 in. (15 cm) wide french. Backfill and compact the trench after stapling. 5 in. (5-12 5 cm) (depending on RECP type) and stapled." recommended at 30 to 40 ft (9-12 m) intervals. Use a 4 in. (10 cm) on center over entire width of the channel. a row of staples/stakes spaced approximately 12 in. (30 cm)

8. The terminal end of the RECPs must be anchored with a

Shoreline Installation

Below are recommendations for installing RollMax System temporary and/or permanent RECPs along shoreline and stream bank applications. Consult the staple pattern guide (Figure 1) for fastener spacing recommendations based on the bank severity.



SHORELINE/STREAMBANK INSTALLATION STEPS 1. For easier installation, lower water level from Level A to

Level B before installation to allow bottom trenching.

row of staples/stakes approximately 12 in. (30 cm) apart in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench. Backfill and compact the trench after stapling.

may be necessary to properly secure the RECPs.

2. Prepare soil before installing RECPs, including any necessary 5. The edges of all horizontal and vertical seams must be application of lime, fertilizer and seed. 3. Begin at the top of the shoreline by anchoring the RECPs in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench with approxiportion of the trench. Anchor the RECPs with a row of staples/stakes approximately 12 in. (30 cm) apart in the bottom of the trench. Backfill and compact the trench

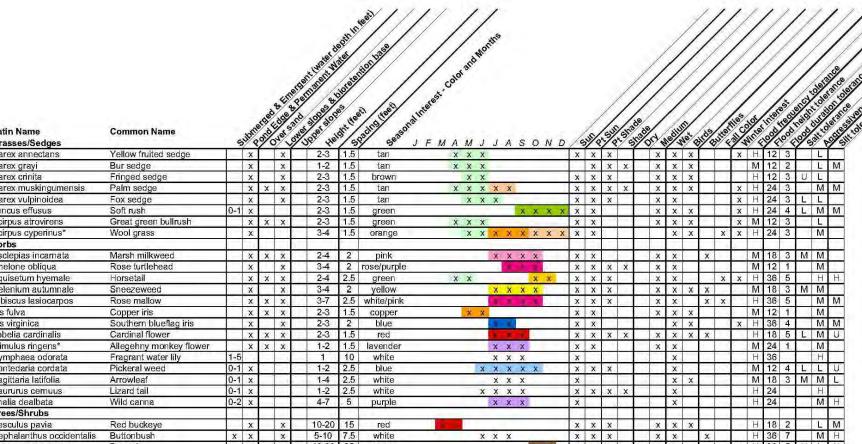
after stapling. Apply seed to the compacted soil and fold the remaining 12 in. (30 cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately

12 in. (30 cm) apart across the width of the RECPs. 4. Roll RECPs either (A) down the shoreline for long banks (top to bottom) or (B) horizontally across the shoreline slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.

stapled with an approximately 2 in.-5 in. (5-12.5 cm) overlap. In streambank applications, seam overlaps should be shingled in the predominant flow direction. mately 12 in. (30 cm) of RECPs extended beyond the upslope 6. The edges of the RECPs at or below normal water level must be anchored by placing the RECPs in a 12 in. (30 cm) deep x 6 in. (15 cm) wide anchor trench. Anchor the RECPs with a row of staples/stakes spaced approximately 12 in. (30 cm) apart in the trench. Backfill and compact the trench after stapling (stone or soil may be used as backfill). For installa-

tion at or below normal water level, use of a ShoreMax Mat on top of the RECP or geotextile may be recommended. Bottom anchor trench can be eliminated when using a ShoreMax Mat over RECP along the bottom edge. NOTE: In adverse soil conditions longer staples/stakes or earth anchors may

be necessary to properly secure the RECPs.



NORTH AMERICAN GREEN*

FOREBAY BERM PLANTINGS AQUATIC PLANT SPECIES CAN INCLUDE BUT NOT LIMITED TO SOFT RUSH, HORSETAIL RUSH, WATER HYACINTH, WIL CANNA, ARROWLEAF, WATER LILY, PICKEREL WEED, BLUE FLAG IRIS, FANWORT OR A MIXTURE OF ANY OF THESE; SPECIMENS SHOULD BE PLANTED ON A 12" MAXIMUM SPACING GRID, 2 QUART MIN. PLANT CONTAINER SIZE

PLANT SPACING DIAGRAM -PLANT CENTER -PLANT ROW —PLANT SPACING

PLANT SPACING TABLE

		<u> </u>
SPACING "D"	ROW "A"	NUMBER OF PLANTS/SQ.FT
30"	26"	0.160
24"	20.8"	0.25
18"	15.6"	0.450
15"	13.0"	0.640
12"	10.4"	1.00
10"	8.66"	1.44
8"	6.93"	2.25

Local Ecotype Rule: Plants of Missouri or Southern Illinois ecotype are required Must use a minimum of 5 grass/sedge species and 8 forb species for each BMP. It is recommended that this list be provided to landscape contractors/buyers in case substitutions are required. Each species must consist of between 5% - 15% of the total plant count for each BMP. Refer to Planting, Water, and Mulch Requirements for Stormwater BMP's for plant sizes and irrigation requirements

Biodegradable erosion blanket must be used on slopes greater than 10%. Erosion blankets must be coarse to allow varying leaf sizes (examples include Geojute, Curlex #1 and NorthAmerican Green S75 single net straw blanket, or equivalent)

perimental for practice and/or limited availability in commercial trade