

CONSTRUCTION PLAN

PRACTICE(S) STREAMBANK AND SHORELINE STABILIZATION (ATCP 50.88/NRCS 580)

LANDOWNER JEFF AND DEB DAWSON, SHELLEY ROSE

ADDRESS [REDACTED]

LANDOWNER PHONE NO. [REDACTED] COUNTY POLK

TOWNSHIP BALSAM LAKE T 35 N, R 16 E/W 1 Sec. 20

FIELD OFFICE POLK COUNTY LWRD TELEPHONE NO. (715) 485-8699



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LOCATION MAP

NOTICE TO LANDOWNERS AND EXCAVATORS

Any representation made by the USDA, Natural Resources Conservation Service, or the POLK County LCD, as to the approximate location or nonexistence of above or under ground hazards does not relieve the owner of the property or the excavator that is hired to complete construction, from notifying Diggers Hotline of the pending construction. You will be liable for damages resulting from construction activities. (Call Diggers Hotline) Ticket # \_\_\_\_\_

Landowner Acceptance: See WI Jobsheet 819

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_

Checked by: \_\_\_\_\_ Date: \_\_\_\_\_

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

The installed practices comply with applicable NRCS technical standards and specifications. The "redlined" construction plans (as-built drawings) reflect changes made during construction.

Construction Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Job Approval Class (580 - II WAVE HEIGHT)

Sheet 1 of 8

**ESTIMATED QUANTITIES**

ITEM	UNIT	QUANTITY	SHEET NUMBER	WI. CONSTRUCTION SPEC. OR JOB SHEET NUMBER
MOBILIZATION	JOB	1		7 – MOBILIZATION & DEMOBILIZATION
MINOR SHAPING AND GRADING – (approx. 10 C.Y.)	JOB	1	4,5	2 – EXCAVATION
SHORELINE REINFORCEMENT MATTING	S.Y.	70	4,5	5 – CONSTRUCTION SITE POLLUTION CONTROL
EROSION CONTROL BLOC – (INCLUDES STAKES AND ROPE FOR INSTALLATION)	L.F.	216	4,6	5 – CONSTRUCTION SITE POLLUTION CONTROL
DUCKBILL STYLE EARTH ANCHORS – MINIMUM 30” CABLE	EACH	54	5	
NATIVE VEGETATION PLUGS – BLUE JOINT GRASS, FOX SEDGE, AND LITTLE BLUESTEM	EACH	435	4	SEE PAGES 7 & 8 FOR SEEDING DETAILS
NATIVE SEEDING	JOB	1	4	SEE PAGES 7 & 8 FOR SEEDING DETAILS

Quantities are estimated to the neat lines and grades of in-place materials shown on the construction plan unless otherwise stated. Truck yardage, loose fill, shrinkage, etc., must be calculated and compensated for by the contractor preparing a bid or constructing the project.



United States  
Department of  
Agriculture

**Natural Resources  
Conservation Service**

**ESTIMATED QUANTITIES**

CLIENT: DAWSON/ROSE

COUNTY: POLK

Designed	<u>KBP</u>	Date	<u>11/21</u>
Drawn	<u>KBP</u>	Date	<u>11/21</u>
Checked	_____		
Approved	_____		

Drawing Name	<u>WI-005</u>
Date	<u>05/15</u>
Sheet	<u>2 of 8</u>

## CONSTRUCTION NOTES

1. ALL UNDERGROUND HAZARDS AND UTILITIES MUST BE INVESTIGATED PRIOR TO CONSTRUCTION. NOTIFICATION OF AFFECTED UTILITY COMPANIES IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTACT DIGGERS HOTLINE AT LEAST THREE DAYS PRIOR TO START OF CONSTRUCTION.
2. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED WITH POLK COUNTY LWRD PERSONNEL, THE CONTRACTOR, AND THE LANDOWNER PRIOR TO CONSTRUCTION START-UP.
3. THE CONTRACTOR AND/OR LANDOWNER SHALL NOTIFY POLK COUNTY LWRD AT LEAST 3 DAYS PRIOR TO START-UP OF CONSTRUCTION.
4. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH WISCONSIN NRCS CONSTRUCTION SPECIFICATIONS (SEE PROJECT MANUAL).
5. INITIAL SURVEY LAYOUT WILL BE PERFORMED BY POLK COUNTY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADDITIONAL GRADE STAKES DURING CONSTRUCTION AS NECESSARY, OR IF DAMAGED BY THEIR OPERATIONS.
6. ANY MATERIALS MUST BE ON-SITE AT THE TIME OF CONSTRUCTION AND MUST BE APPROVED BY THE ENGINEER/TECHNICIAN PRIOR TO INSTALLATION.
7. ALL DISTURBED AREAS SHALL BE SEEDED AS SOON AS POSSIBLE IN THE CONSTRUCTION SEQUENCE. SEED MIX TAGS SHALL BE DOCUMENTED BY THE TECHNICIAN.
8. EXISTING ROCK ON SHORELINE CAN BE USED TO SUPPLEMENT THE PROPOSED RIPRAP.
9. GEOTEXTILE FILTER FABRIC SHALL CONFORM TO WISCONSIN CONSTRUCTION SPECIFICATION 13. RIP RAP OR AGGREGATE SHALL BE PLACED IN THE MANNER DESCRIBED IN THIS SPECIFICATION AND SHALL ENSURE THAT NO DAMAGE TO THE GEOTEXTILE FABRIC OCCURS.
10. ROCK RIP RAP SHALL BE FURNISHED FROM AN APPROVED QUARRY AND SHALL MEET THE SPECIFICATIONS CONTAINED IN WISCONSIN CONSTRUCTION SPEC 9 WITH REGARDS TO SPECIFIC GRAVITY, ABSORPTION, AND SOUNDNESS. ROCK RIP RAP FROM IGNEOUS OR METAMORPHIC ORIGINS SUCH AS GRANITE, BASALT, AND QUARTZITE MAY BE USED WITHOUT TESTING.
11. ROCK GRADATION MUST BE APPROVED PRIOR TO CONSTRUCTION.
12. EROSION CONTROL BLANKET SHALL BE CLASS 1-TYPE A BIODEGRADABLE. IT SHALL BE INSTALLED AFTER SEEDING AND BEFORE PLANTING OF SHRUBS.
13. EROSION CONTROL MEASURES MAY BE REQUIRED TO ENSURE THAT BONE LAKE DOES NOT RECEIVE SEDIMENT OR OTHER MATERIAL FROM THE PROJECT SITE DURING CONSTRUCTION.
14. AVOID DISTURBANCE OF AQUATIC VEGETATION WHEREVER POSSIBLE.



### CONSTRUCTION NOTES

CLIENT: TOM & NANCY FUDALI

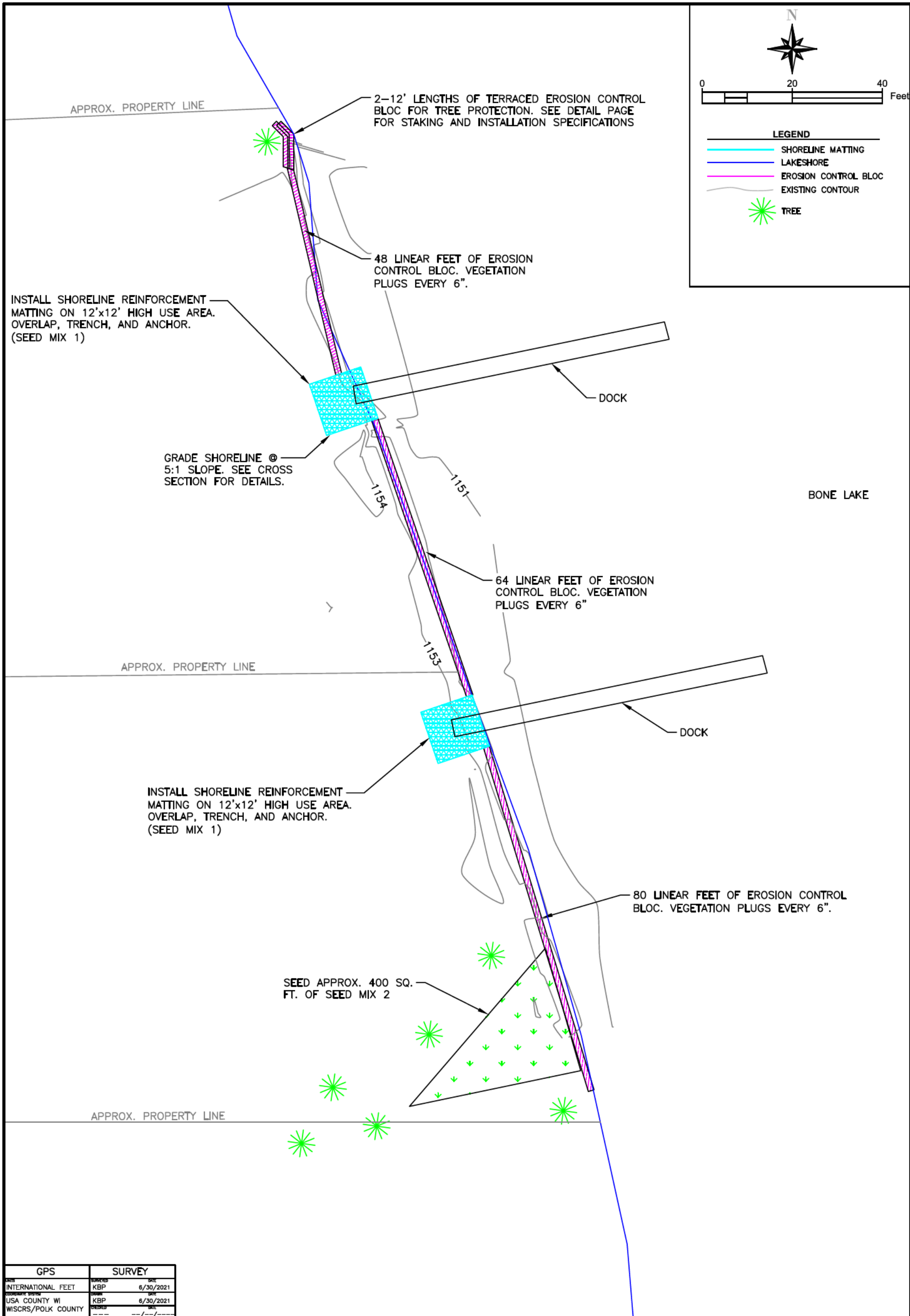
COUNTY: POLK

	Date
Designed <u>KBP</u>	<u>11/21</u>
Drawn <u>KBP</u>	<u>11/21</u>
Checked _____	
Approved _____	

Drawing Name

Date

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GPS	SURVEY	
UNIT	BY	DATE
INTERNATIONAL FEET	KBP	6/30/2021
COORDINATE SYSTEM	BY	DATE
USA COUNTY WI	KBP	6/30/2021
WISCONS/POLK COUNTY	BY	DATE

File Name  
WI-014A

06/2018

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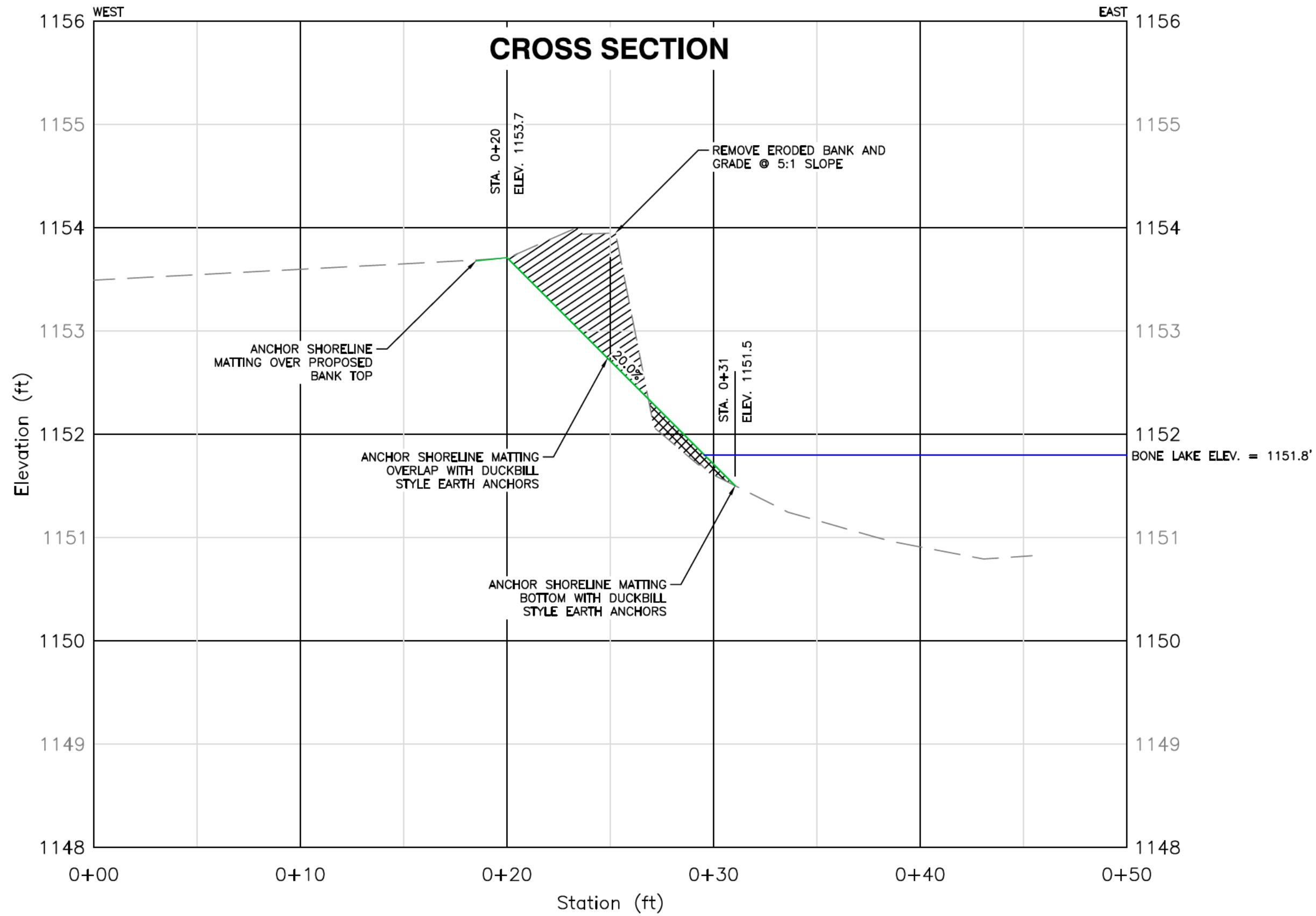


**PLAN VIEW**

OWNER: DAWSON/ROSE

COUNTY: POLK

	By	Date
Designed	KBP	11/21
Drawn	KBP	11/21
Checked		
Approved		

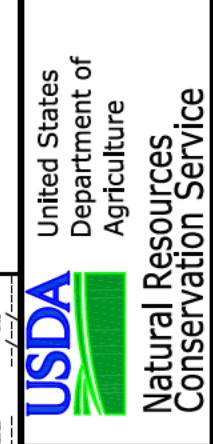


Designed	KBP	Date	11/21
Drawn	KBP		
Checked			
Approved			

**SHORELINE MATTING CROSS SECTION**

OWNER: DAWSON/ROSE

COUNTY: POLK



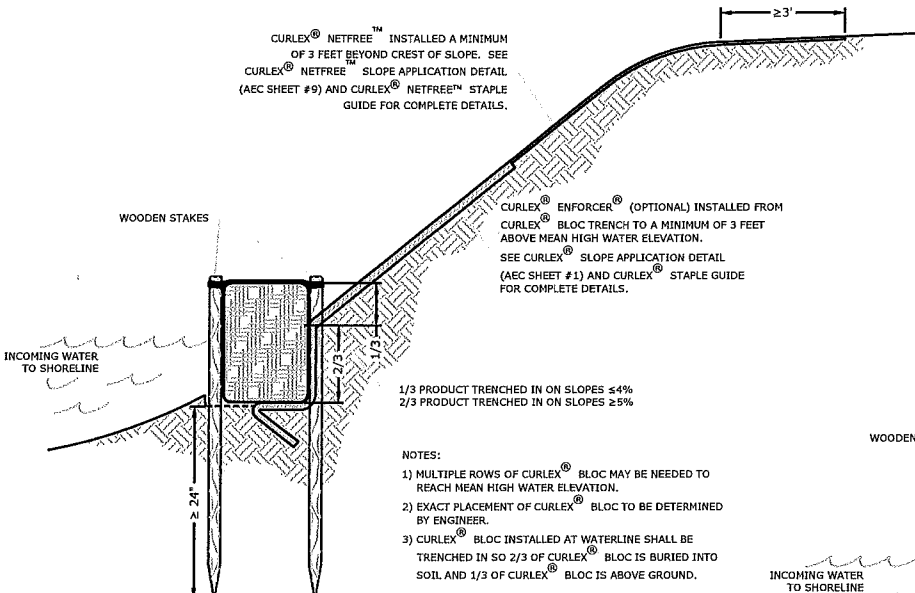
GPS	SURVEY
INTERNATIONAL FEET	KBP
USA COUNTY WI	6/30/2021
WISCONS/POLK COUNTY	6/30/2021

File Name  
WI-014A

06/2018

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CURLEX<sup>®</sup> NETFREE<sup>™</sup> INSTALLED A MINIMUM OF 3 FEET BEYOND CREST OF SLOPE. SEE CURLEX<sup>®</sup> NETFREE<sup>™</sup> SLOPE APPLICATION DETAIL (AEC SHEET #9) AND CURLEX<sup>®</sup> NETFREE<sup>™</sup> STAPLE GUIDE FOR COMPLETE DETAILS.



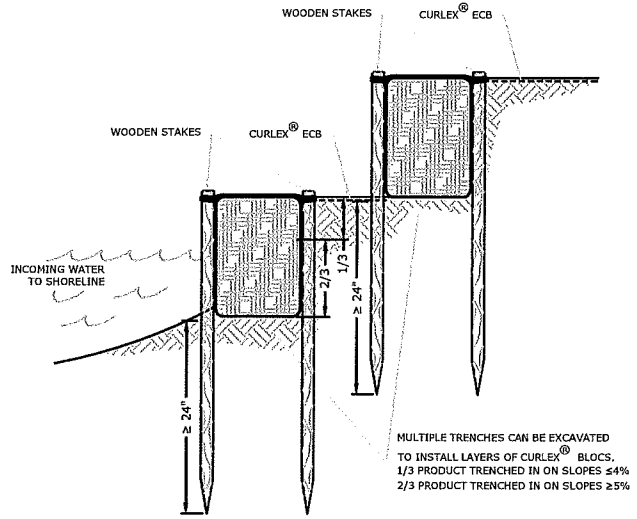
CURLEX<sup>®</sup> BLOC SHORELINE CROSS SECTION DETAIL  
NO SCALE

1/3 PRODUCT TRENCHED IN ON SLOPES ≤4%  
2/3 PRODUCT TRENCHED IN ON SLOPES ≥5%

NOTES:

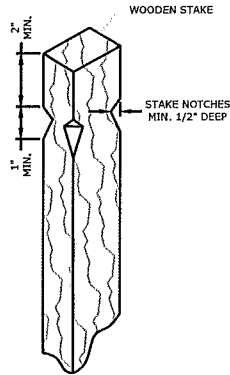
- 1) MULTIPLE ROWS OF CURLEX<sup>®</sup> BLOC MAY BE NEEDED TO REACH MEAN HIGH WATER ELEVATION.
- 2) EXACT PLACEMENT OF CURLEX<sup>®</sup> BLOC TO BE DETERMINED BY ENGINEER.
- 3) CURLEX<sup>®</sup> BLOC INSTALLED AT WATERLINE SHALL BE TRENCHED IN SO 2/3 OF CURLEX<sup>®</sup> BLOC IS BURIED INTO SOIL AND 1/3 OF CURLEX<sup>®</sup> BLOC IS ABOVE GROUND.

CURLEX<sup>®</sup> ENFORCER<sup>®</sup> (OPTIONAL) INSTALLED FROM CURLEX<sup>®</sup> BLOC TRENCH TO A MINIMUM OF 3 FEET ABOVE MEAN HIGH WATER ELEVATION. SEE CURLEX<sup>®</sup> SLOPE APPLICATION DETAIL (AEC SHEET #1) AND CURLEX<sup>®</sup> STAPLE GUIDE FOR COMPLETE DETAILS.

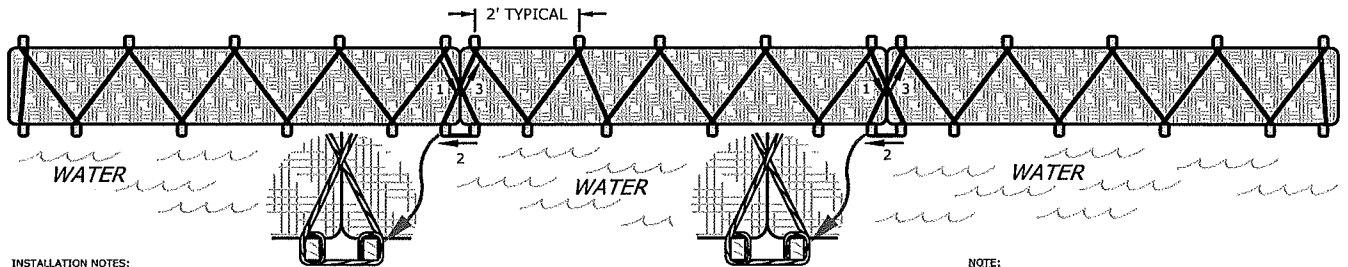


MULTIPLE CURLEX<sup>®</sup> BLOC BANK CROSS SECTION DETAIL  
NO SCALE

MULTIPLE TRENCHES CAN BE EXCAVATED TO INSTALL LAYERS OF CURLEX<sup>®</sup> BLOC. 1/3 PRODUCT TRENCHED IN ON SLOPES ≤4% 2/3 PRODUCT TRENCHED IN ON SLOPES ≥5%



STAKE NOTCHING DETAIL  
NO SCALE



CURLEX<sup>®</sup> BLOC STAKING AND ROPING DETAIL  
NO SCALE

INSTALLATION NOTES:

- 1) NON-STRETCHING ROPE WHEN WET.
- 2) 1 1/8" X 1 1/8" X 48" WOODEN STAKES ARE RECOMMENDED.
- 3) POUND STAKES TIGHTLY NEXT TO CURLEX<sup>®</sup> BLOC LEAVING APPROXIMATELY 4" OF STAKE ABOVE SURFACE OF CURLEX<sup>®</sup> BLOC.
- 4) INSTALL ROPE ACCORDING TO DRAWING (ENSURE ROPE IS WRAPPED TIGHTLY IN STAKE NOTCHES).
- 5) KNOT OFF ROPE TO STAKE AT LEAST EVERY 25 FEET OF ROPE.
- 6) POUND DOWN STAKES FLUSH WITH SURFACE OF CURLEX<sup>®</sup> BLOC. AFTER ALL IS INSTALLED TO TIGHTEN ROPES.
- 7) ABUT ADJOINING CURLEX<sup>®</sup> BLOCs TIGHTLY AND SECURE WITH STAKES AND ROPE ACCORDING TO DRAWING.
- 8) INCORPORATION OF LIVE PLANTS INTO AND AROUND CURLEX<sup>®</sup> BLOCs IS COMMON. ENSURE SUFFICIENT MOISTURE IS AVAILABLE FOR TARGET SPECIES SELECTED. USE PLANTING IRON TO CREATE HOLE IN CURLEX<sup>®</sup> BLOC THEN PLACE PLUG DEEP INTO CURLEX<sup>®</sup> BLOC. TYPICALLY, PLUGS ARE INSTALLED IN A STAGGERED PATTERN ALONG THE LENGTH OF THE CURLEX<sup>®</sup> BLOC.
- 9) 8' LONG CURLEX<sup>®</sup> BLOC SHOWN. ADJUST STAKING AND ROPING PATTERN ACCORDINGLY IF USING 4' LONG CURLEX<sup>®</sup> BLOCs.

NOTE:

TRENCHING OF CURLEX<sup>®</sup> BLOC IS OPTIONAL FOR INLET OR OUTLET PROTECTION, PERIMETER CONTROL, RUNOFF DIVERSION AND FILTERING APPLICATIONS. SAND BAGS, OR OTHER WEIGHTED OBJECTS, MAY BE PLACED ACROSS THE TOP OF THE CURLEX<sup>®</sup> BLOC IN LIEU OF STAKES AND ROPE UPON APPROVAL OF THE ENGINEER.

**SEEDING DATES**

TIME PERIOD	DATES			TYPE OF SEEDING
Spring	April 15	through	June 1	Permanent
Summer	June 2	through	see WI-710 pg. 2	Temporary *
Late Summer	August 1	through	August 22	Permanent
Fall	August 23	through	see WI-710 pg. 2	Temporary *
Late Fall	November 1	through	snow cover	Dormant
Winter	snow cover	through	April 14	Frost Seed Not Allowed

**MATERIALS**

If no soil test is available, apply a minimum of 150 pounds of 20-10-10 fertilizer per acre. This is equivalent to 30 pounds nitrogen (N), 15 pounds phosphate (P205), and 15 pounds potash (K20) per acre. Apply two tons/ac of 80-89 lime or equivalent. (see page 2 for equivalent)

\* Seed a temporary cover crop of Oats at a rate of 64 pounds/acre. (2 Bushels/acre)  
 A permanent seeding shall be completed during the next acceptable time period following a temporary seeding.

**MINIMUM PURE LIVE SEED (PLS)<sup>1</sup> RATE PER ACRE AND TOTAL POUNDS OF SEED NEEDED**

SEEDING MIX <u>1</u>			LOCATION ACRES <u>0.1</u>			SEEDING MIX <u>2</u>			LOCATION ACRES <u>0.02</u>		
SPECIES	RATE	POUNDS	SPECIES	RATE	POUNDS	SPECIES	RATE	POUNDS	SPECIES	RATE	POUNDS
Fox Sedge	0.3	.03	Indiangrass	1.5	.03	Indiangrass	1.5	.03	Indiangrass	1.5	.03
Canada Wildrye	3.0	.30	Fowl Mannagrass	0.1	.002	Fowl Mannagrass	0.1	.002	Fowl Mannagrass	0.1	.002
Prairie Cordgrass	2.5	.25	Big Bluestem	2.0	.04	Big Bluestem	2.0	.04	Big Bluestem	2.0	.04
Canada Milkvetch	0.1	.01	Bottlebrush Sedge	0.2	.01	Bottlebrush Sedge	0.2	.01	Bottlebrush Sedge	0.2	.01
Red Clover	0.1	.01	Cardinal Flower	0.03	.0006	Cardinal Flower	0.03	.0006	Cardinal Flower	0.03	.0006
Birdsfoot Trefoil	0.2	.02	Smooth Blue Aster	0.25	.005	Smooth Blue Aster	0.25	.005	Smooth Blue Aster	0.25	.005
			Mountain Mint	0.05	.001	Mountain Mint	0.05	.001	Mountain Mint	0.05	.001
			Culver's Root	0.01	.0002	Culver's Root	0.01	.0002	Culver's Root	0.01	.0002
			Foxglove Beardtongue	0.2	.004	Foxglove Beardtongue	0.2	.004	Foxglove Beardtongue	0.2	.004
			Common Ironweed	0.3	.006	Common Ironweed	0.3	.006	Common Ironweed	0.3	.006
			Canada Milkvetch	0.2	.004	Canada Milkvetch	0.2	.004	Canada Milkvetch	0.2	.004
			White Ladino Clover	0.2	.004	White Ladino Clover	0.2	.004	White Ladino Clover	0.2	.004


1. PLS = (% Germination X % Purity)  
 \*\* Companion Crop

Total % Germination may also be termed Total % Viable Seed on a tag. If a tag only shows % Germination, the user must include percentage of the seed that germinated during the lab test (% Germination) plus the percentage of hard and/or dormant seed. Hard seed and dormant seed are seeds that are still capable of germinating and producing a plant but did not germinate under the conditions of the test in the lab.

Additional native seeds may be required by permitting agencies. These additions are allowed. Seed mixture shall meet all requirements of the WI weed laws. Species identified as restricted or prohibited by law shall not be planted. Certified seed shall be used, and the seeding rates will be based on pure live seed. For dormant seedings, increase the seeds per square foot by 15%.

**SEEDBED PREPARATION**

Seedbed preparation shall immediately follow construction activities. Prepare a fine, firm seedbed to a minimum depth of three inches. A seedbed is considered firm when a footprint penetrates less than 1/4 inch deep.

 United States Department of Agriculture Natural Resources Conservation Service	<b>NATIVE SPECIES SEEDING ESTABLISHMENT</b>		Date Designed <u>KBP</u> <u>11/21</u>	File Name WI-710
	CLIENT: <u>DAWSON/ROSE</u>		Date Drawn <u>KBP</u> <u>11/21</u>	Date 12/2019
	COUNTY: <u>POLK</u>		Checked _____	Sheet 7 of 8
			Approved _____	

**SEEDING**

Inoculate legumes with the specific inoculum for the species in accordance with the manufacturer's recommendations. When using a hydroseeder, five times the recommended rate of inoculant shall be added to the hydroseeder. Inoculant shall not be mixed with liquid fertilizer.

Seed may be broadcast or drilled as appropriate to the site.  
Seed, fertilize, and lime as soon as possible after construction.  
Seeding perpendicular to direction of flow is required to limit erosion.  
Seed grasses and legumes no more than 1/4 inch deep.  
Consider seeding at a lower rate and making 2 passes to ensure more uniform distribution.

**TEMPORARY SEEDING OPTIONS**

Select one of the following species for temporary cover if:

- 1) The required seeds or plant stock are not available or the normal permanent seeding period for the species has passed
  - Forage Sorghum - 1/2 bushel per acre (May 15-July 15)
  - Sorghum - Sudangrass Hybrid - 1 bushel per acre (May 15-July 15)
  - Sudangrass - 1 bushel per acre (May 15-July 15)
  - Winter Wheat - 2 bushels per acre (Aug 1-Oct 1)
  - Winter Cereal Rye - 2 bushels per acre (Aug 1-Oct 15)
  - Oats - 2 bushels per acre (Apr 1-Sept 1)
  - Annual Ryegrass - 20 Pounds per acre (Apr 1-Sept 1)

- 2) Triazine herbicide carryover will not allow establishment of permanent cover immediately.
  - Forage Sorghum - 1/2 Bushel per acre (May 15-July 15)
  - Sorghum - Sudangrass Hybrid - 1 Bushel per acre (May 15-July 15)
  - Sudangrass - 1 Bushel per acre (May 15-July 15)

**DORMANT SEEDING**

Seed is broadcast and incorporated, no-tilled, or drilled into the seedbed. Seedbed preparations and conditions are similar to conventional seeding.

**MULCHING**

(Mulching is required.)

(Mulching is not required.)

Mulching shall be done immediately after seedbed preparation and seeding. Mulch shall be applied immediately after final grading for areas seeded at a later date.

Mulch material shall be relatively free of disease, pesticides, chemicals, noxious weed seeds, and other pests and pathogens.

Spread straw and hay mulch uniformly and at the rate of 1.5-2.0 tons per acre (60-70 bales). This application results in a layer of 6 to 7 stems, 1 to 2 inches thick, and provides a minimum 70% ground cover. Some soil surface can be seen after the application. Crimping (disking), wood cellulose fiber, tackifiers, netting, pinning, or other acceptable methods of anchoring will be used if needed to hold the mulch in place.

If other mulch materials are used, the rate of application shall meet the manufacturer's recommendations.

Two (2) tons/ac of 80-89 lime or equivalent from UW-EXT A3671

Lime Quality	Tons/AC.
40-49	3.9
50-59	3.2
60-69	2.7
70-79	2.3
90-99	1.9
100+	1.6



United States Department of Agriculture

Natural Resources Conservation Service

**NATIVE SPECIES SEEDING ESTABLISHMENT**

CLIENT: DAWSON/ROSE

COUNTY: POLK

Designed	KBP	Date	11/21
Drawn	KBP	Date	11/21
Checked			
Approved			

File Name	WI-710
Date	12/2019
Sheet	8 of 8