RAMSEY COUNTY

Lake McCarrons Shoreline Survey

An Evaluation of 16 Previously Restored Sites

December 2021

To: Capitol Region Watershed District
From: Ramsey County Soil and Water Conservation Division
Date: 3-December-2021
RE: 2021 Lake McCarrons Shoreline Assessment Proposal

Background

Between 2005 and 2020, Capitol Region Watershed District (CRWD) and Ramsey County Soil and Water Conservation Division (RCSWCD, formerly Ramsey Conservation District (RCD)) partnered on 16, parcel specific, shoreline assessment and stabilization projects around Lake McCarrons in Roseville.

Between 2008 and 2011 RCSWCD successfully acquired state funds through the Board of Water and Soil Resources' (BWSR) Native Buffer Program. Combining grant funds between CRWD's Stewardship Grant Fund and RCSWCD's Native Buffer Grant fund, 13 shorelines were stabilized around Lake McCarrons. The remaining 3 shorelines were individual landowners installing stabilization projects through CRWD's Stewardship Grant Program. In addition to designing and managing their own BWSR funded grant programs, RCSWCD provides technical assessment, design, and construction oversight services for CRWD's Stewardship Grant Program.

Methods

On-site assessment of the shoreline stabilization projects installed over the past 17 years occurred in July of 2021. CRWD and RCSWCD staff went to the sites to measure buffer plantings, take inventory of existing plant species, measure erosion along the shoreline, and photograph the sites. Traditional hand measuring tools were used for these assessments. Verification of plant species encountered was completed via desktop analysis following the site visits. Additional desktop analysis was completed using GIS and Computer Aided Drafting software to compare existing conditions to the original installations.

Results

The following pages show an in-depth analysis of the 16 site assessments. Outlined in the site assessments are: original versus current shoreline buffers, existing shoreline bank erosion, original design concepts, recommendations for site improvements, plant species encountered, MNDNR's Score Your Shore assessments, and photographs. A list of the project sites along with a map showing location is included for reference. Lastly, the original design plans for the shoreline stabilization projects are included in the appendix. Not all 16 site plans were recovered for this assessment.

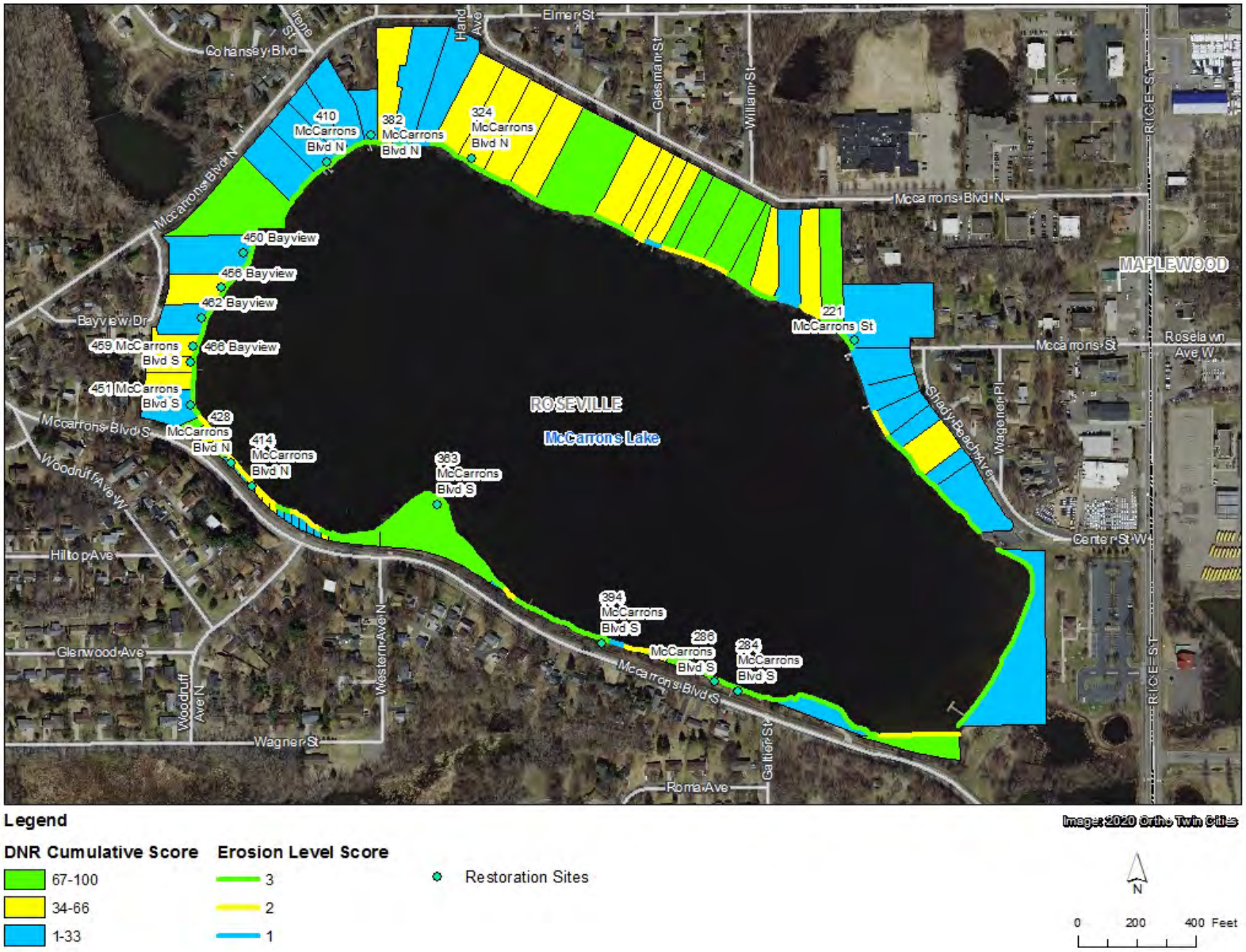
Site Assessment List

	Original Grantee/Landowner		Current Landowner		
Grant #	**Last Name**	**First Name**	**Last Name**	**First Name**	**Address**
09-047	Hanna	Megan/John	Kara	Tomlinson	221 McCarrons St
11-038	Thienes	Mike	Hagar/Schmit	Erica/Adam	284 S. McCarrons Blvd
20-010	Montain	Andrew	Montain	Andrew	286 S. McCarrons Blvd
08-043	Schroeder	William	Sluis	Chris	324 N. McCarrons Blvd
09-051	Sanders	Rick/Sherry	Sanders	Rick/Sherry	363 S. McCarrons Blvd
14-003	Sanders	Rick/Sherry	Sanders	Rick/Sherry	363 S. McCarrons Blvd
09-052	Pardello	Renee	Pardello	Renee	382 N. McCarrons Blvd
14-058	Ingulsrud	Kathy	Ingulsrud	Kathy	394 S. McCarrons Blvd
10-044	Dahlberg	Marlieke	Dahlberg	Marlieke	410 N. McCarrons Blvd
07-015	Fernholz	Molly	Friberg	Josh/Chrisine	414 S. McCarrons Blvd
12-051	Coleman	Patrick	Coleman	Patrick	428 S. McCarrons Blvd
05-005	Johnson	Keith	Grew	Judy	450 Bayview Drive
09-049	Johnson	George/Gloria	Johnson	George & Gloria	451 S. McCarrons Blvd
09-048	Lundell	Bill/Helen	Yorkovich	William/Helen	456 Bayview Dr
10-045	Vaughan	Anne	Nelson	Kimberly	459 S. McCarrons Blvd
04-001	Pierpont	Gordon	Pierpont	Gordon	462 Bayview Drive
09-050	Hilden	Diane	Hilden	Diane	466 Bayview Drive

Completed Project Cost Figures 2004-2021

Grant #	Last	Address	Actual Cost	BWSR Grant	CRWD Grant	Total Grant	Cost Share	Agreements
09-047	Hanna	221 McCarrons St	$ 5,385.00	$ 2,692.50	$ 1,346.25	$ 4,038.75	$ 1,346.25	BWSR & CRWD
11-038	Thienes	284 S. McCarrons Blvd	$ 8,600.00	$ 4,300.00	$ 2,150.00	$ 6,450.00	$ 2,150.00	BWSR & CRWD
20-010	Montain	286 S. McCarrons Blvd	$ 5,061.53	--	$ 4,427.00	$ 4,427.00	$ 634.53	CRWD
08-043	Schroeder	324 N. McCarrons Blvd	$ 14,480.00	$ 1,000.00	$ 1,500.00	$ 2,500.00	$ 11,980.00	BWSR & CRWD
09-051	Sanders	363 S. McCarrons Blvd	$ 44,097.25	$ 22,048.63	$ 11,024.31	$ 33,072.94	$ 11,024.31	BWSR & CRWD
14-003	Sanders	363 S. McCarrons Blvd	$ 8,200.00	--	$ 4,150.00	$ 4,150.00	$ 4,050.00	CRWD
09-052	Pardello	382 N. McCarrons Blvd	$ 2,550.00	$ 1,275.00	$ 637.50	$ 1,912.50	$ 637.50	BWSR & CRWD
14-058	Ingulsrud	394 S. McCarrons Blvd	$ 18,272.76	--	$ 7,888.33	$ 7,888.33	$ 8,674.12	CRWD
10-044	Dahlberg	410 N. McCarrons Blvd	$ 8,845.28	$ 4,422.64	$ 2,211.32	$ 6,633.96	$ 2,211.32	BWSR & CRWD
07-015	Fernholz	414 S. McCarrons Blvd	$ 6,258.00	$ 1,000.00	$ 1,500.00	$ 2,500.00	$ 3,758.00	BWSR & CRWD
12-051	Coleman	428 S. McCarrons Blvd	$ 10,501.50	$ 5,250.75	$ 2,625.38	$ 7,867.13	$ 2,634.37	BWSR & CRWD
05-005	Johnson	450 Bayview Drive	$ 5,831.88	$ 1,000.00	$ 1,500.00	$ 2,500.00	$ 3,331.88	BWSR & CRWD
09-049	Johnson	451 S. McCarrons Blvd	$ 5,750.00	$ 2,875.00	$ 1,437.50	$ 4,312.50	$ 1,437.50	BWSR & CRWD
09-048	Lundell	456 Bayview Dr	$ 6,625.00	$ 3,312.50	$ 1,656.25	$ 4,968.75	$ 1,656.25	BWSR & CRWD
10-045	Vaughan	459 S. McCarrons Blvd	$ 4,900.00	$ 2,450.00	$ 1,225.00	$ 3,675.00	$ 1,225.00	BWSR & CRWD
04-001	Pierpont	462 Bayview Drive	$ 5,155.00	$ 1,000.00	$ 1,500.00	$ 2,500.00	$ 2,655.00	BWSR & CRWD
09-050	Hilden	466 Bayview Drive	$ 2,770.00	$ 1,385.00	$ 692.50	$ 2,077.50	$ 692.50	BWSR & CRWD
			$ 163,283.20	$ 54,012.02	$ 47,471.34	$ 101,474.36	$ 60,098.53	

Site Assessment Location Map



221 McCarrons Street, Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
09-047	2009	Hanna	Megan/John	221 McCarrons St	132923140044

**Landowner has changed since project installation*

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
66	14.55	960	66	18.00	1188	1'	3'

Original Design

The original design for this property included clearing of weedy vegetation along the shoreline. Following the clearing and grubbing of the shoreline 16" bio-logs were installed at the toe of the shoreline slope along with a 14'-15' width of erosion control blanket. Native plantings were installed into the bio-log and through the erosion control blanket.

Recommendations

Supplemental plantings can be added after extensive weeding to increase diversity. Monitor erosion and add rip-rap selectively or a vegetated bio-log if erosion becomes evident. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline.

Plant Species List:

Herbaceous

Common Name	Latin Name	Invasive/Aggressive
Leadplant	*Amorpha canescens*	
Hog Peanut	*Amphicarpaea bracteata*	x
Swamp Milkweed	*Asclepias incarnata*	
Lake Sedge	*Carex lacustris*	
Bottlebrush Grass	*Elymus hystrix*	
Boneset	*Eupatorium perfoliatum*	
Daylily	*Hemerocallis spp*	x
Jewelweed	*Impatiens capensis*	x
Bee Balm	*Monarda spp*	
Reed Canary Grass	*Phalaris arundinacea*	x
Black-Eyed Susan	*Rudbeckia spp*	
Nightshade	*Solanaceae spp*	x
Stinging Nettle	*Urtica dioica*	x

Woody

Common Name	Latin Name	Invasive/Aggressive
Silver Maple	*Acer saccharinum*	
Green Ash	*Fraxinus pennsylvanica*	
Mulberry	*Morus alba*	x
Buckthorn	*Rhamnus cathartica*	x
Siberian Elm	*Ulmus pumila*	x

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
09-047	221 McCarrons St	13/65	20/35	33/100

284 S. McCarrons Blvd, Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
11-038	2011	Thienes	Mike	284 S. McCarrons Blvd	132923420001

**Landowner has changed since project installation*

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
240	10.50	2520	240	5.00	1200	1'	3'

Original Design
This property had existing rip-rap on the shoreline. 16" bio-logs were installed in select areas of the shoreline. Pre-vegetated mats were added along the shoreline. Extensive native plantings were installed between the walking path and the shoreline.

Recommendations
Re-work existing rip-rap to remove concrete while adding new, larger, rock to toe of slope. Add supplemental plantings in a 2'-4' buffer above the rip-rap. Consider planting into the rip-rap as well to further naturalize the shoreline and encourage migration of plants towards the water's edge. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline.

Plant Species List:

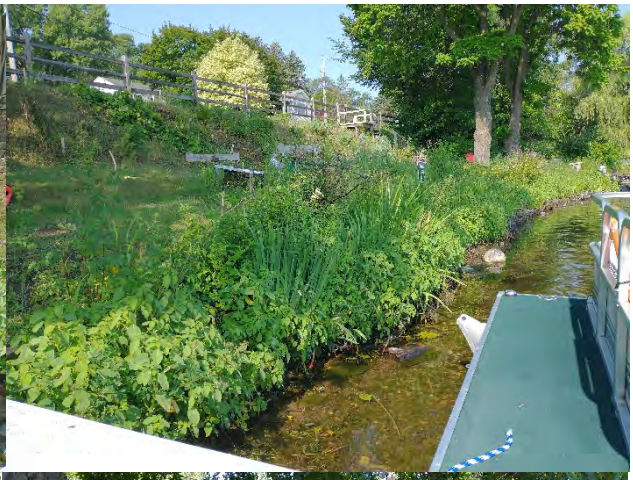
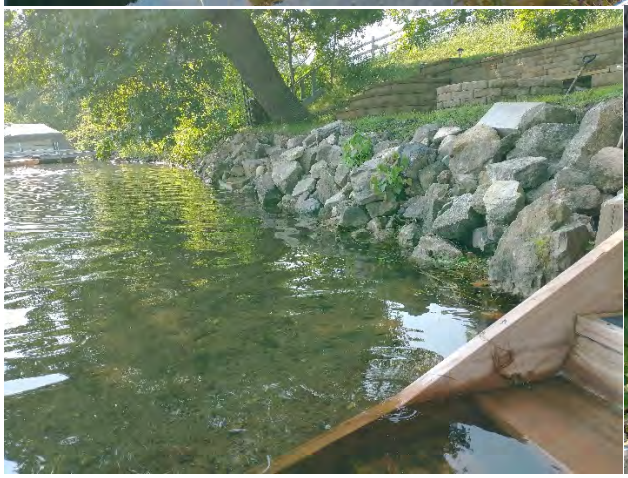
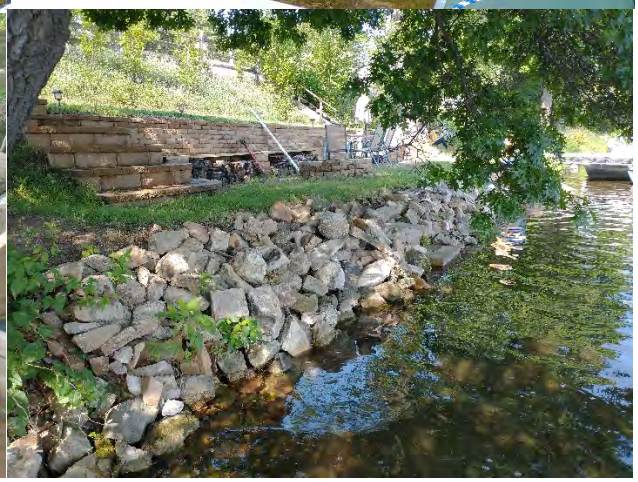
Herbaceous

Common Name	Latin Name	Invasive/Aggressive
Yarrow	*Achillea millefolium*	
Sunflower	*Bidens spp*	
Honeysuckle	*Caprifoliaceae spp*	x
Coneflower	*Echinacea spp*	
Jewelweed	*Impatiens capensis*	x
Iris	*Iris versicolor*	
Bee Balm	*Monarda spp*	
Virginia Creeper	*Parthenocissus quinquefolia*	x
Reed Canary Grass	*Phalaris arundinacea*	x
Buckthorn	*Rhamnus cathartica*	x
Meadow Rue	*Thalictrum spp*	

Woody

Common Name	Latin Name	Invasive/Aggressive
Buttonbush	*Cephalanthus occidentalis*	

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
11-038	284 S. McCarrons Blvd	53/65	27/35	80/100

286 S. McCarrons Blvd, Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
20-010	2020	Montain	Andrew	286 S. McCarrons Blvd	132923420002

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
95	5.00	95	95	15.00	1425	1.5'	2.5'

Original Design
The original design for this property included clearing of weedy vegetation along the shoreline. Following the clearing and grubbing of the shoreline two 12" bio-logs were installed at the toe of the shoreline slope along with a 2'-4' width of erosion control blanket. Native plantings were installed into the bio-log and through the erosion control blanket.

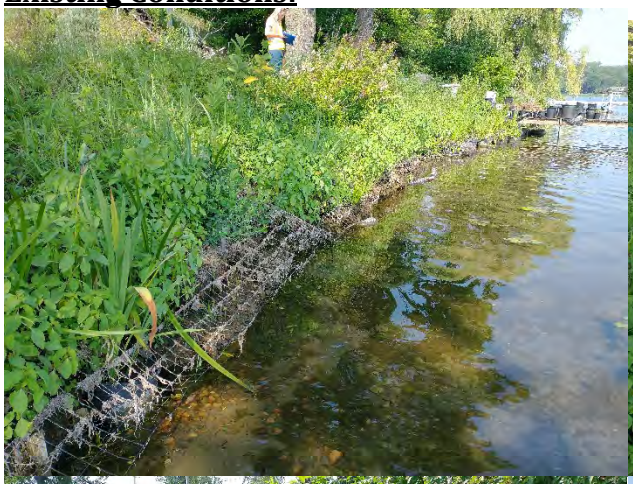
Recommendations
Remove the exclusion and silt fencing if no longer in use, inquire as to purpose of leaving plants in containers in the water rather than planting them. This is a more recent installation and should be monitored. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline.

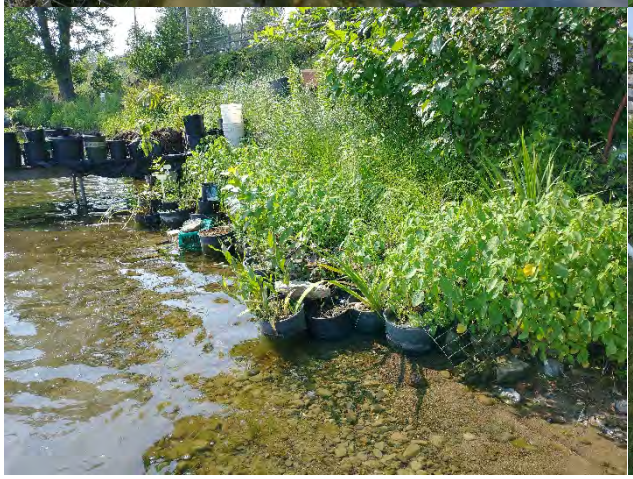
Plant Species List:

Herbaceous

Common Name	Latin Name	Invasive/Aggressive
Milkweed	*Asclepias syriaca*	
Butterflyweed	*Asclepias tuberosa*	
Lake Sedge	*Carex lacustris*	
Bulrush	*Cyperaceae spp*	
Coneflower	*Echinacea spp*	
Jewelweed	*Impatiens capensis*	x
Iris	*Iris versicolor*	
Bee Balm	*Monarda spp*	
Black-Eyed Susan	*Rudbeckia spp*	
Goldenrod	*Solidago spp*	
Prairie Cordgrass	*Spartina pectinata*	
Golden Alexander	*Zizia aurea*	

Existing Conditions:





Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
20-010	286 S. McCarrons Blvd	25/65	17/35	42/100

324 N. McCarrons Blvd, Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
08-043	2008	Schroeder	William	324 N. McCarrons Blvd	132923130035

**Landowner has changed since project installation*

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
100	60.00	6000	100	50.00	5000	1'	2.5'

Original Design
No plans were located for this property. It appears a bio-log was installed along the toe of the shoreline along with a large buffer moving up the steadily sloped shoreline.

Recommendations
Monitor for erosion and add selective rip-rap or bio-log as needed. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline.

Plant Species List:

Herbaceous

Common Name	Latin Name	Invasive/Aggressive
White Snakeroot	*Ageratina altissima*	
Leadplant	*Amorpha canescens*	
Hog Peanut	*Amphicarpaea bracteata*	
Canada Anemone	*Anemonastrum canadense*	
Lake Sedge	*Carex lacustris*	
Coneflower	*Echinacea spp*	
Jewelweed	*Impatiens capensis*	x
Bee Balm	*Monarda spp*	
Reed Canary Grass	*Phalaris arundinacea*	x
Black-Eyed Susan	*Rudbeckia spp*	
Little Bluestem	*Schizachyrium scoparium*	
Goldenrod	*Solidago spp*	
Prairie Cordgrass	*Spartina pectinata*	
Meadow Rue	*Thalictrum spp*	
Culvers Root	*Veronicastrum virginicum*	

Woody

Common Name	Latin Name	Invasive/Aggressive
Green Ash	*Fraxinus pennsylvanica*	
Mulberry	*Morus alba*	x
Willow	*Salix spp*	x

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
08-043	324 N. McCarrons Blvd	29/65	20/35	49/100

363 S. McCarrons Blvd, Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
09-051/14-003	2009/2014	Sanders	Rick	363 S. McCarrons Blvd	132923420017

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
589	32.34	19,050	589	32.34	19,050	.5'	1.5'

Original Design
The original design for this property included clearing of weedy vegetation and turfgrass along the shoreline. Following the clearing and grubbing of the shoreline 12" bio-logs and brush bundles were installed at the toe of the shoreline slope along with a shoreline buffer ranging from 10'-50' in width installed. Native plantings were installed into the bio-log and through the erosion control blanket.

Recommendations
Monitor the shoreline for erosion and add selective rip-rap or bio-logs as needed. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline.

Plant Species List:

Herbaceous

Common Name	Latin Name	Invasive/Aggressive
Leadplant	*Amorpha canescens*	
Milkweed	*Asclepias syriaca*	
Smooth Brome	*Bromus spp*	
Fox Sedge	*Carex vulpinoidea*	
Bulrush	*Cyperaceae spp*	
Tick-Trefoil	*Desmodium canadense*	
Coneflower	*Echinacea spp*	
Fleabane	*Erigeron spp*	
Boneset	*Eupatorium perfoliatum*	
Joe Pye Weed	*Eutrochium purpureum*	
Queen of the Prairie	*Filipendula rubra*	
Heliopsis	*Heliopsis spp*	
Iris	*Iris versicolor*	
Wild Mint	*Mentha arvensis*	
Bee Balm	*Monarda spp*	
Reed Canary Grass	*Phalaris arundinacea*	x
Black-Eyed Susan	*Rudbeckia spp*	

Crown Vetch	*Securigera varia*	x
Goldenrod	*Solidago spp*	
Blue Vervain	*Verbena hastata*	
Culvers Root	*Veronicastrum virginicum*	

Woody

Common Name	Latin Name	Invasive/Aggressive
Dogwood	*Cornus spp*	
Green Ash	*Fraxinus pennsylvanica*	
Mulberry	*Morus alba*	x
Willow	*Salix spp*	

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
09-051	363 S. McCarrons Blvd	58/65	35/35	93/100

382 McCarrons Blvd N., Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
09-052	2009	Pardello	Renee	382 N. McCarrons Blvd	132923240020

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
45	9.00	405	45	8.00	360	3'	4.5'

Original Design
The design consisted of an upland buffer above the timber wall on the east side of the dock. On the west side of the dock a bio-log and buffer were installed. Soil lifts were proposed as an alternate to replace the timber wall, but this installation did not occur.

Recommendations
Remove the existing timber wall. Following removal, re-regrade the shoreline with rip-rap at the toe of the slope. Add a native planting buffer on the newly regraded shoreline above the rip-rap. Consider using a vegetated rip-rap, which eliminates the use of geotextiles beneath the rock, thus allowing vegetation to grow through the rock. An alternative is to install soil lifts at the shoreline. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline.

Plant Species List:

Herbaceous

Common Name	Latin Name	Invasive/Aggressive
Hog Peanut	*Amphicarpaea bracteata*	x
Aster	*Aster spp*	
Penn Sedge	*Carex pensylvanica*	
Fox Sedge	*Carex vulpinoidea*	
Bottlebrush Grass	*Elymus hystrix*	
Daylily	*Hemerocallis spp*	
Coral Bells	*Heuchera spp*	
Jewelweed	*Impatiens capensis*	x
Blazing Star	*Liatris spp*	
Reed Canary Grass	*Phalaris arundinacea*	x
Coneflower	*Ratibida pinnata*	
Little Bluestem	*Schizachyrium scoparium*	

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
09-052	382 N. McCarrons Blvd	9/65	15/35	24/100

394 S. McCarrons Blvd, Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
14-058	2014	Ingulsrud	Kathy	394 S. McCarrons Blvd	132923420008

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
50	36.00	1800	50	36.00	1800	0'	3'

Original Design
The original design for this property included clearing of weedy vegetation along the shoreline. Following clearing and grubbing of the shoreline 12" bio-logs were installed at the shoreline and along the hillside between the shoreline and the walking path. Native plantings were installed through the erosion control blanket from the shoreline to the walking path.

Recommendations
Selectively add plants into and above rip-rap. Add plantings to shaded area under willow tree. The side hill needs extensive weeding. Supplemental native plantings can be added to the hillslope following weeding. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline.

Plant Species List:

Herbaceous

Common Name	Latin Name	Invasive/Aggressive
White Snakeroot	*Ageratina altissima*	
Burdock	*Arctium minus*	x
Creeping Bellflower	*Campanula rapunculoides*	x
Turtlehead	*Chelone spp*	
Coneflower	*Echinacea spp*	
Butter and Eggs	*Linaria vulgaris*	x
Sensitive Fern	*Onoclea sensibilis*	
Reed Canary Grass	*Phalaris arundinacea*	x
Crown Vetch	*Securigera varia*	x
Figwort	*Scrophularia spp*	
Nightshade	*Solanaceae spp*	x

Woody

Common Name	Latin Name	Invasive/Aggressive
Dogwood	*Cornus spp*	
Green Ash	*Fraxinus pennsylvanica*	
Mulberry	*Morus alba*	x
Willow	*Salix spp*	
Lowbush Honeysuckle	*Vaccinium angustifolium*	

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
14-058	394 S. McCarrons Blvd	14/65	4/35	18/100

410 McCarrons Blvd N., Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
07-044	2007	Dahlberg	Marlieke	410 N. McCarrons Blvd	132923240023

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
100	16.90	1690	100	10.00	1000	2'	2.5'

Original Design
The original designs called for the removal of existing turfgrass along the shoreline. This was followed by the installation of a bio-log into the shallow water along the shoreline with a native buffer moving upland. Emergent plantings were proposed between the bio-log and the shoreline.

Recommendations
Selectively add rip-rap and/or bio-logs to existing shoreline. Selectively add plants into and behind rip-rap/bio-log. It does not appear any emergent plantings have survived. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline.

Plant Species List:

Herbaceous

Common Name	Latin Name	Invasive/Aggressive
Bugleweed	*Ajuga spp*	
Leadplant	*Amorpha canescens*	
Common Milkweed	*Asclepias syriaca*	
Sunflower	*Bidens spp*	
Turtlehead	*Chelone spp*	
Jewelweed	*Impatiens capensis*	x
Iris	*Iris versicolor*	
Birdsfoot Trefoil	*Lotus corniculatus*	
Bee Balm	*Monarda spp*	
Smartweed	*Polygonum spp*	x
Black-Eyed Susan	*Rudbeckia spp*	
Crown Vetch	*Securigera varia*	x
Goldenrod	*Solidago spp*	
Blue Vervain	*Verbena hastata*	
Golden Alexander	*Zizia aurea*	

Woody

Common Name	Latin Name	Invasive/Aggressive
Dogwood	*Cornus spp*	

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
10-044	410 N. McCarrons Blvd	9/65	4/35	13/100

414 McCarrons Blvd S., Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
07-015	2007	Friberg*	Josh/Christine*	414 S. McCarrons Blvd	132923310011 132923310012

**Landowner has changed since project installation*

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
75	23.71	1778	75	5.00	375	1'	3'

Original Design
No plans were found for this property. The assumption is a bio-log was optionally installed along the shoreline with a narrow buffer behind.

Recommendations
Selectively add rip-rap and/or bio-logs to existing shoreline. Selectively add plants into and behind rip-rap/bio-log. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline.

Plant Species List:

Herbaceous

Common Name	Latin Name	Invasive/Aggressive
Leadplant	*Amorpha canescens*	
Aster	*Aster spp*	
Hawksbeard	*Crepis tectorum*	x
Joe Pye Weed	*Eutrochium purpureum*	
Jewelweed	*Impatiens capensis*	
Iris	*Iris versicolor*	
Butter and Eggs	*Linaria vulgaris*	x
Sweet Clover	*Melilotus spp*	x
Bee Balm	*Monarda spp*	
Sensitive Fern	*Onoclea sensibilis*	
Reed Canary Grass	*Phalaris arundinacea*	x
Coneflower	*Ratibida pinnata*	
Little Bluestem	*Schizachyrium scoparium*	
Mullein	*Verbascum thapsus*	x
Golden Alexander	*Zizia aurea*	

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
07-015	414 S. McCarrons Blvd	21/65	14/35	35/100

428 S. McCarrons Blvd, Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
12-051	2012	Johnson/Coleman	Sarah/Patrick	428 S. McCarrons Blvd	132923310014 132923310013

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Sq. Feet	Linear Feet	Width	Sq. Feet	Cut-Face Height	Total Bank Height
70	31.43	2200	70	3.00	210	1'	3'

Original Design
The original design for this property included clearing of weedy vegetation along the shoreline. Following the clearing and grubbing of the shoreline 16" bio-logs were installed at the toe of the shoreline slope along with a native planting buffer stretching from the shoreline to the bike path.

Recommendations
Selectively add rip-rap and/or bio-log to existing shoreline. Selectively add plants into and behind rip-rap/bio-log. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline.

Plant Species List:

Herbaceous

Common Name	Latin Name	Invasive/Aggressive
Yarrow	*Achillea millefolium*	
Hysop	*Agastache spp*	
Leadplant	*Amorpha canescens*	
Pearly Everlasting	*Anaphalis margaritacea*	
Butterfly Weed	*Asclepias tuberosa*	
Sunflower	*Bidens spp*	
Lake Sedge	*Carex lacustris*	
Purple Prairie Clover	*Dalea purpurea*	
Coneflower	*Echinacea spp*	
Fleabane	*Erigeron spp*	
Ox Eye	*Heliopsis helianthoides*	
Jewelweed	*Impatiens capensis*	x
Iris	*Iris versicolor*	
Butter and Eggs	*Linaria vulgaris*	x
Bee Balm	*Monarda spp*	
Reed Canary Grass	*Phalaris arundinacea*	x
Black-Eyed Susan	*Rudbeckia spp*	
Curly Dock	*Rumex crispus*	x

Little Bluestem	*Schizachyrium scoparium*
Goldenrod	*Solidago spp*
Meadow Rue	*Thalictrum spp*
Golden Alexander	*Zizia aurea*

Woody

Common Name	Latin Name	Invasive/Aggressive
Honeysuckle	*Caprifoliaceae spp*	x
Mulberry	*Morus alba*	x
Buckthorn	*Rhamnus cathartica*	x
Sumac	*Rhus spp*	x
Siberian Elm	*Ulmus pumila*	x

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
12-051	428 S. McCarrons Blvd	19/65	4/35	23/100

450 Bayview Drive., Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
05-005	2005	Johnson	Keith	450 Bayview Drive	132923240043

**Landowner has changed since project installation*

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
100	17.42	1742	100	23.00	2300	1'	2'

Original Design
No plans were found for this property. The assumption is a bio-log was optionally installed along the shoreline with a native buffer behind.

Recommendations
Remove the existing box elder and buckthorn. The shoreline is flat and stable. Continue to monitor this site for erosion. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline.

Plant Species List:

Herbaceous

Common Name	Latin Name	Invasive/Aggressive
Leadplant	*Amorpha canescens*	
Swamp Milkweed	*Asclepias incarnata*	
Common Milkweed	*Asclepias syriaca*	
Lake Sedge	*Carex lacustris*	
Canada Thistle	*Cirsium arvense*	x
Boneset	*Eupatorium perfoliatum*	
Joe Pye Weed	*Eutrochium purpureum*	
Sunflower	*Heliopsis spp*	
Sweet Clover	*Melilotus spp*	x
Reed Canary Grass	*Phalaris arundinacea*	x
Little Bluestem	*Schizachyrium scoparium*	
Bulrush	*Scirpoides holoschoenus*	
Cup Plant	*Silphium perfoliatum*	
Goldenrod	*Solidago spp*	

Woody

Common Name	Latin Name	Invasive/Aggressive
Box Elder	*Acer negundo*	x

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
05-005	450 Bayview Drive	0/65	20/35	20/100

451 S. McCarrons Blvd, Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
09-049	2009	Johnson	George & Gloria	451 S. McCarrons Blvd	132923310022

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
107	10.00	1070	107	10.00	1070	.5'	1.5'

Original Design
The existing turfgrass shoreline was proposed for removal. Following removal 12" bio-logs were to be installed along the shoreline with a native buffer behind. A 10' wide rock boat launch areas was proposed for installation through the buffer.

Recommendations
The shoreline is stable and in good condition. Monitor the site for Reed Canary Grass and other aggressive/invasive species. Continue to monitor for erosion. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline.

Plant Species List:

Herbaceous

Common Name	Latin Name	Invasive/Aggressive
Leadplant	*Amorpha canescens*	
Swamp Milkweed	*Asclepias incarnata*	
Common Milkweed	*Asclepias syriaca*	
Lake Sedge	*Carex lacustris*	
Canada Thistle	*Cirsium arvense*	x
Boneset	*Eupatorium perfoliatum*	
Joe Pye Weed	*Eutrochium purpureum*	
Sunflower	*Heliopsis spp*	
Sweet Clover	*Melilotus spp*	x
Reed Canary Grass	*Phalaris arundinacea*	x
Little Bluestem	*Schizachyrium scoparium*	
Bulrush	*Scirpoides holoschoenus*	
Cup Plant	*Silphium perfoliatum*	
Goldenrod	*Solidago spp*	

Woody

Common Name	Latin Name	Invasive/Aggressive
Box Elder	*Acer negundo*	x

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
09-049	451 S. McCarrons Blvd	9/65	15/35	24/100

456 Bayview Drive, Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
09-048	2009	Lundell	Bill/Helen	456 Bayview Drive	132923240028

**Landowner has changed since project installation*

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
112	10.00	1120	112	10.00	1120	1'	2'

Original Design
The turfgrass shoreline was proposed for removal. Following removal 12" bio-logs were to be installed along the shoreline with a native buffer behind. A 6' wide rock boat launch areas was proposed for installation through the buffer.

Recommendations
Extensive weeding is needed to allow for additional native plant establishment. Selectively add rip-rap and/or bio-logs to existing shoreline. Selectively add plants into and behind rip-rap/bio-log. Remove the existing 'T-posts'. Continue to monitor the site for erosion. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline

Plant Species List:

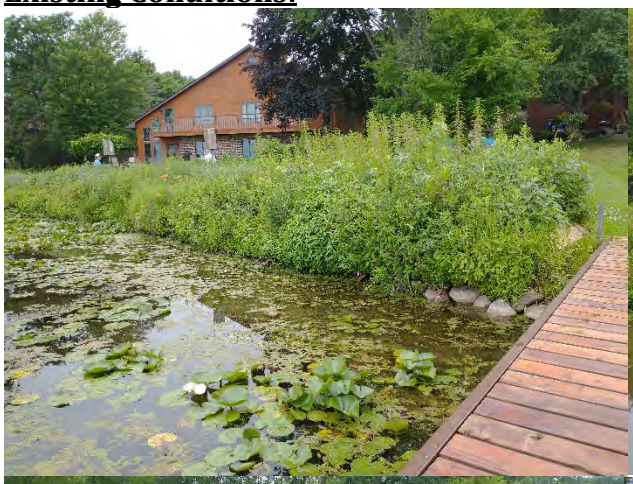
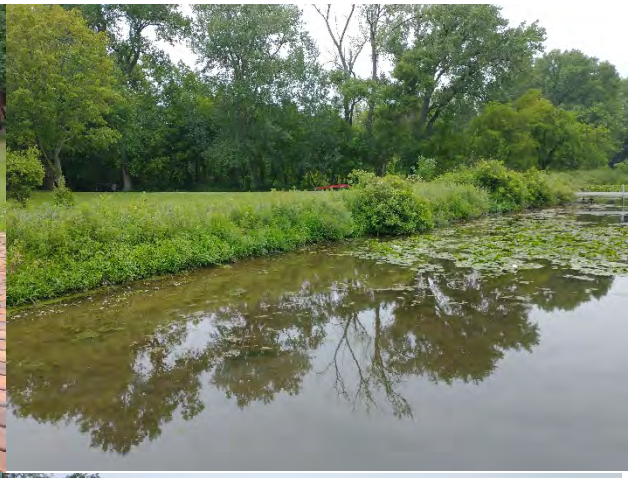
Herbaceous

Common Name	Latin Name	Invasive/Aggressive
Leadplant	*Amorpha canescens*	
Bottlebrush Sedge	*Carex comosa*	
Lake Sedge	*Carex lacustris*	
Canada Thistle	*Cirsium arvense*	
Boneset	*Eupatorium perfoliatum*	
Joe Pye Weed	*Eutrochium purpureum*	
Sunflower	*Heliopsis spp*	
Reed Canary Grass	*Phalaris arundinacea*	x
Smartweed	*Polygonum spp*	x
Bulrush	*Scirpoides holoschoenus*	
Goldenrod	*Solidago spp*	
New England Aster	*Symphyotrichum novae-angliae*	
Wild Grape	*Vitis labrusca*	x

Woody

Common Name	Latin Name	Invasive/Aggressive
Bittersweet	*Celastrus scandens*	
Willow	*Salix Spp*	

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
09-048	456 Bayview Dr	18/65	25/35	43/100

459 S. McCarrons Blvd, Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
10-045	2010	Vaughan	Anne	459 S. McCarrons Blvd	132923310024

**Landowner has changed since project installation*

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
43	11.98	515	43	13.00	559	1'	2'

Original Design
The original design shows the dock on the north side of the shoreline with a native buffer and bio-log stabilizing the shoreline. Currently the dock is on the south side of the shoreline.

Recommendations
Substantial weeding is needed at this site. Increase the buffer into existing mulch area. Remove the exclusion fence. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline

Plant Species List:

Herbaceous

Common Name	*Latin Name*	Invasive/Aggressive
Swamp Milkweed	*Asclepias incarnata*	
Fox Sedge	*Carex vulpinoidea*	
Canada Thistle	*Cirsium arvense*	x
Boneset	*Eupatorium perfoliatum*	
Joe Pye Weed	*Eutrochium purpureum*	
Wild Geranium	*Geranium maculatum*	
Sunflower	*Heliopsis spp*	
Jewelweed	*Impatiens capensis*	x
Reed Canary Grass	*Phalaris arundinacea*	x
Blackeyed susan	*Rudbeckia hirta*	
Bulrush	*Scirpoides holoschoenus*	
Goldenrod	*Solidago spp*	
New England Aster	*Symphyotrichum novae-angliae*	
Cattail	*Typha spp*	x
Blue Vervain	*Verbena hastata*	
Golden Alexander	*Zizia aurea*	

Woody

Common Name	Latin Name	Invasive/Aggressive
Dogwood	*Cornus spp*	

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
10-045	459 S. McCarrons Blvd	29/65	30/35	59/100

462 Bayview Drive, Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
04-001	2004	Pierpont	Gordon	462 Bayview Drive	132923240029

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
110	12.73	1400	110	12.00	1320	1'	1.5'

Original Design
No plans were located for this project. It appears a turfgrass shoreline was removed. Following turf grass removal bio-logs were likely installed along the shoreline with a native buffer installed behind.

Recommendations
The shoreline is in good, stable, condition. Continue to monitor the site for invasive species and erosion. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline

Plant Species List:

Herbaceous

Common Name	Latin Name	Invasive/Aggressive
Swamp Milkweed	*Asclepias incarnata*	
Lake Sedge	*Carex lacustris*	
Turtlehead	*Chelone spp*	
Coneflower	*Echinacea spp*	
Boneset	*Eupatorium perfoliatum*	
Joe Pye Weed	*Eutrochium purpureum*	
Wild Geranium	*Geranium maculatum*	
Sunflower	*Heliopsis spp*	
White Lillies	*Hemerocallis spp*	x
Jewelweed	*Impatiens capensis*	x
Bee Balm	*Monarda spp*	
Smartweed	*Polygonum spp*	x
Broad-leaf Arrowhead	*Sagittaria latifolia*	
Bulrush	*Scirpoides holoschoenus*	
Goldenrod	*Solidago spp*	
New England Aster	*Symphyotrichum novae-angliae*	
Blue Vervain	*Verbena hastata*	

Woody

Common Name	Latin Name	Invasive/Aggressive
Red Osier Dogwood	*Cornus racemosa*	

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
04-001	462 Bayview Drive	13/65	15/35	28/100

466 Bayview Drive, Roseville, MN 55113

Grant Number	Year Installed	Last Name	First Name	Address	PID
09-050	2009	Hilden	Diane	466 Bayview Drive	132923240030

As-Designed Size			Observed Size			Observed Bank Conditions	
Linear Feet	Width	Square Feet	Linear Feet	Width	Square Feet	Cut-Face Height	Total Bank Height
60	15.83	950	60	10.00	600	1.5'	3'

Original Design
The design called for the existing shoreline plants to be preserved. Supplemental native plantings were installed into a bio-log and behind the bio-log. An upland turf area was proposed for conversion to native plantings.

Recommendations
Selectively add rip-rap and/or bio-logs to existing shoreline. Selectively add plants into and behind rip-rap/bio-log. Water levels were low at the time of evaluation. This exposed more soils than typically seen at the shoreline

Plant Species List:

Herbaceous

Common Name	Latin Name	Invasive/Aggressive
Bottlebrush Sedge	*Carex comosa*	
Joe Pye Weed	*Eutrochium purpureum*	
Jewelweed	*Impatiens capensis*	x
Iris	*Iris versicolor*	
Reed Canary Grass	*Phalaris arundinacea*	x
Cattail	*Typha spp*	x
Blue Vervain	*Verbena hastata*	

Woody

Common Name	Latin Name	Invasive/Aggressive
Red Osier Dogwood	*Cornus racemosa*	
Blue Arctic Willow	*Salix purpurea*	

Existing Conditions:

Score Your Shore (SYS):

Grant Number	Address	SYS Upland	SYS Shoreline	SYS Total
09-050	466 Bayview Drive	0/65	35/35	35/100

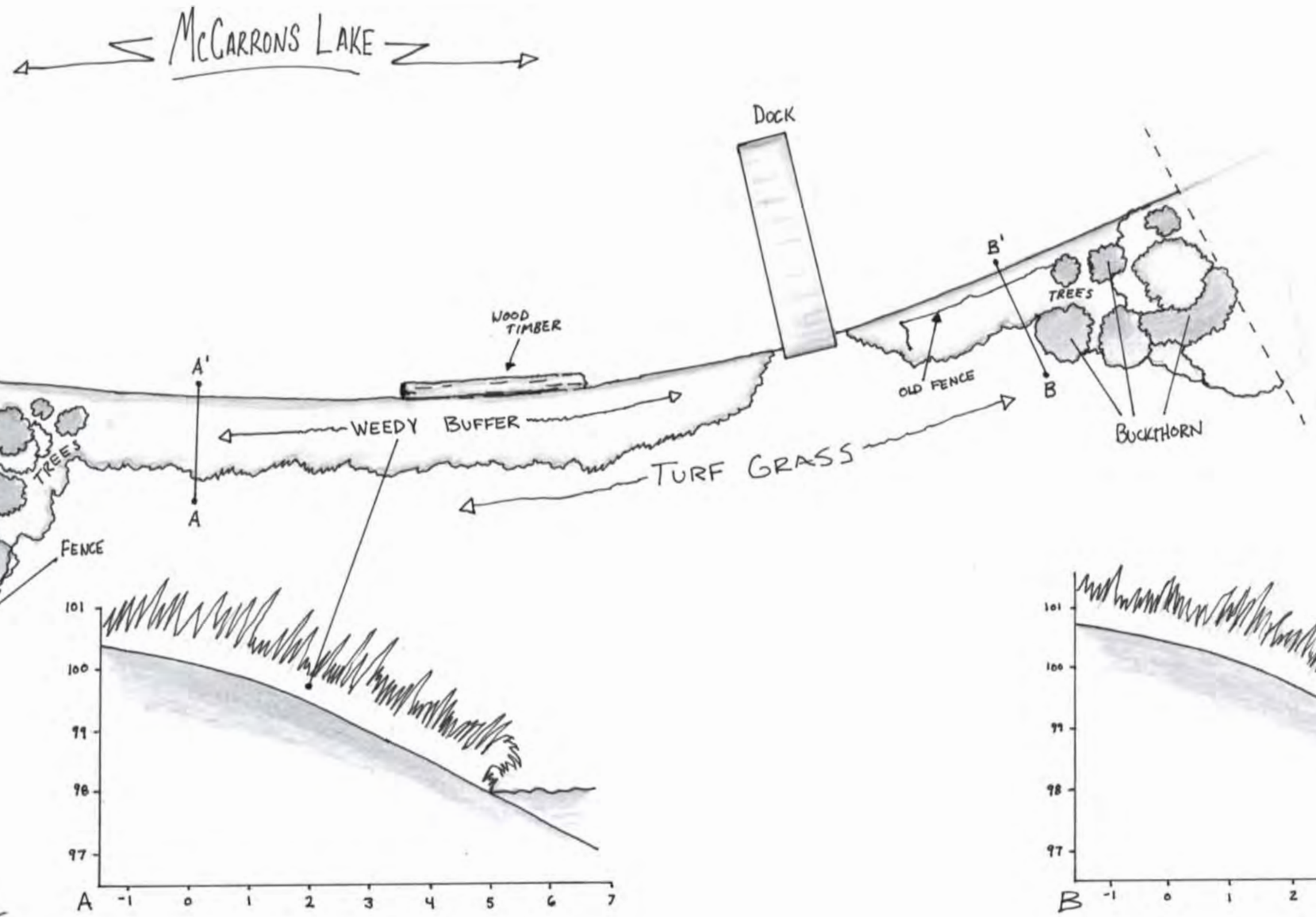
Appendix

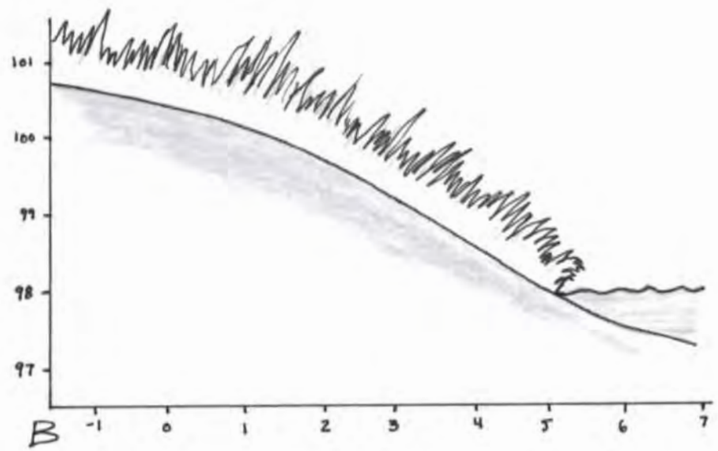
Site Plans

Notes :

- Cut and treat buckthorn, weed trees.
- Treat reed canary grass, invasive plants in weedy buffer. Leave existing natives.
- Remove old fence on North end of property, reuse in restoration if possible.
- Remove wood timber along shore, place in front of biologs as wave break/habitat.

221 McCarrons Street





Shoreline Existing Conditions
Sheet 1 of 3

Megan & John Hanna
221 McCarrons St.
Roseville, MN 55113

Prepared by:
Ramsey Conservation District
August 20, 2008

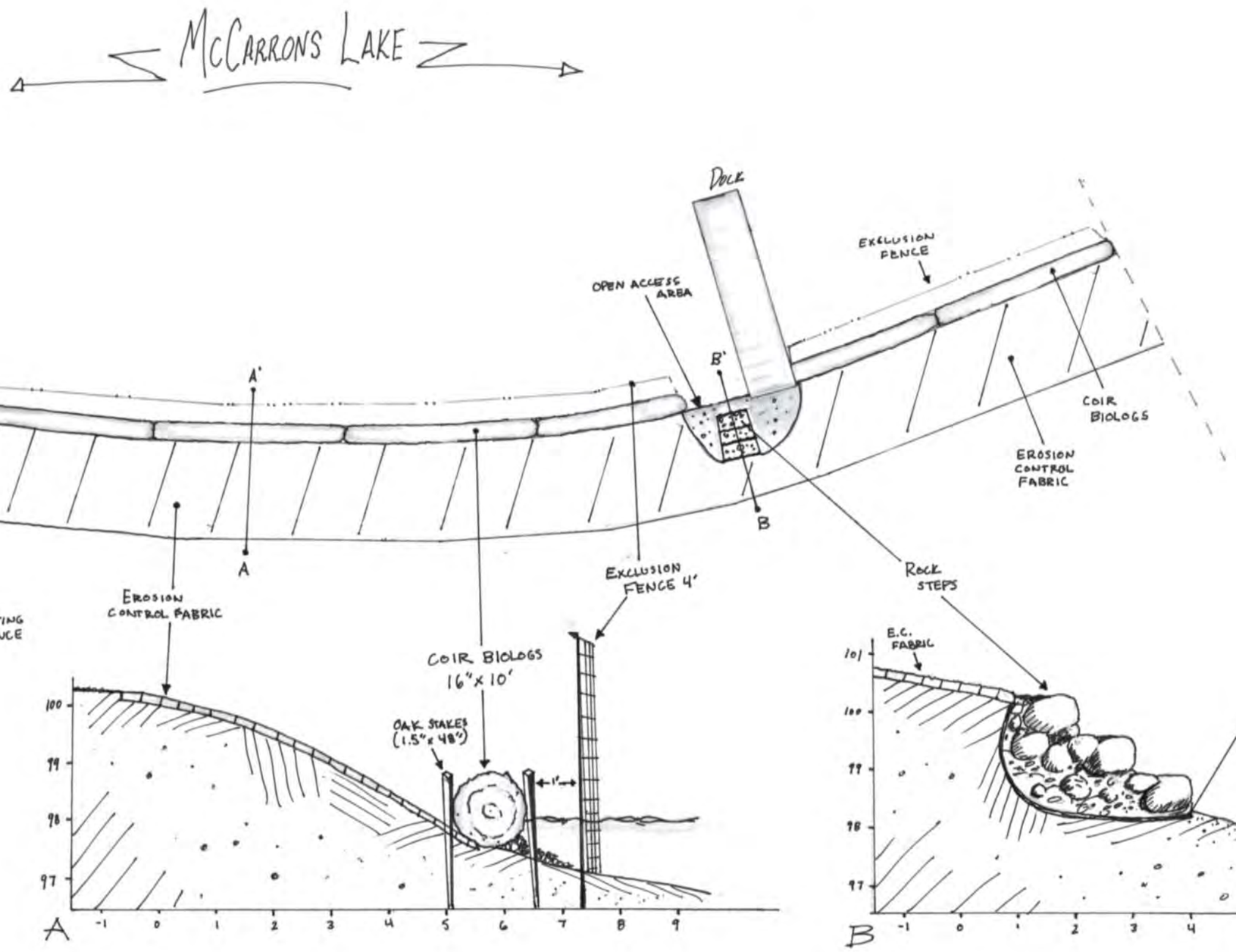
Scale:
0 5 15 25

N

Notes :

- 6 x 3 foot open access area next to dock according to owner's specifications. Rock steps/other access to water to be installed. Permeable Geotextile fabric to be placed underneath rock.
- Erosion control fabric (C125) to be placed over remainder of buffer area in slope area (5-6 feet up from OHWM).
- Coir biologs to be placed and staked (3 ft spacing, both sides) along entire length of shore, except at access. Biologs should be tied to stakes and to each other with natural fiber rope.
- 4 ft herbivory exclusion fence to be installed (using metal t-posts, 5-6 ft spacing) along entire length of biologs (1 ft out from biologs). Secure bottom with metal U staples.

221 McCarrons Street



Shoreline Restoration Plan
Sheet 2 of 3

Megan & John Hanna
221 McCarrons St.
Roseville, MN 55113

Prepared by:
Ramsey Conservation District
August 20, 2008

Scale:

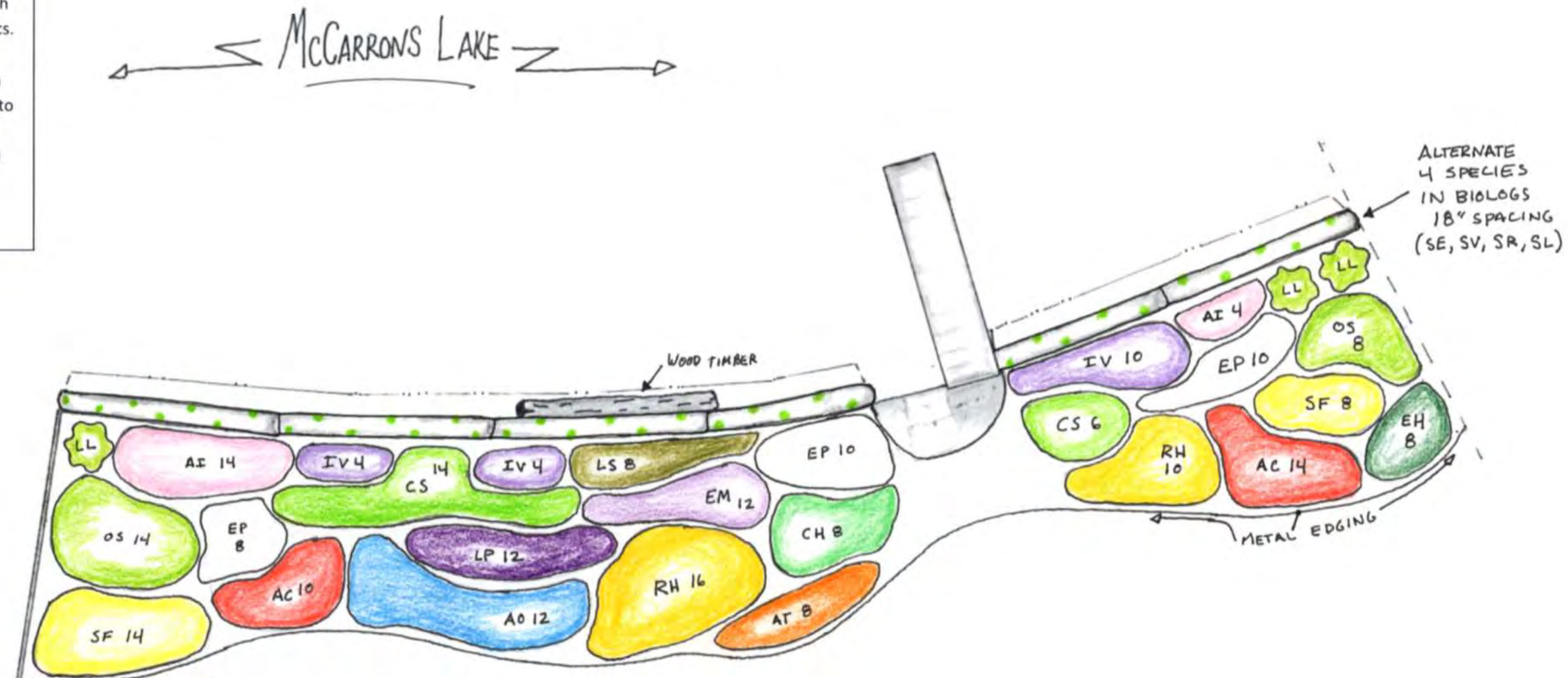
0 5 15 25

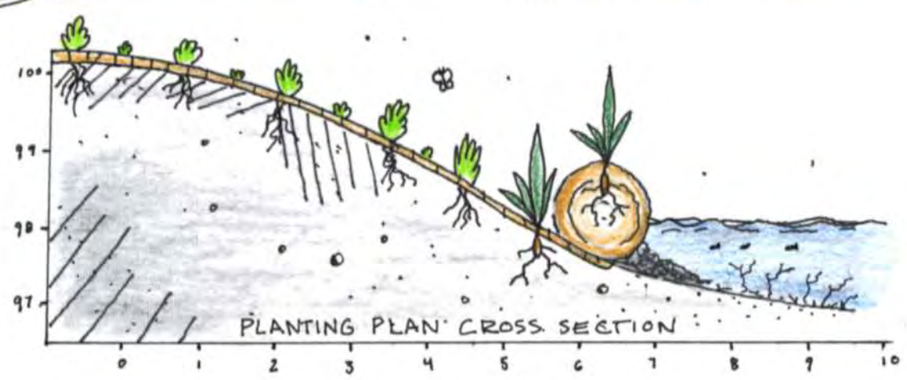
N

Notes :

- Metal edging (1/8 in x 4 in) to be placed along upland edge of buffer.
- Buffer area (mulched, C125) to be planted @ 18 inch on-center spacing (forbs, grasses, sedges) according to plan. Tamarack can be replaced with red osier dogwood per owners' specs.
- Biologs to be planted @18 inch on-center spacing- alternating between planting plug well into biolog and into soil directly behind biolog.
- Buffer area to receive 3-in shredded hardwood mulch.
- See attached for species info.

221 McCarrons Street



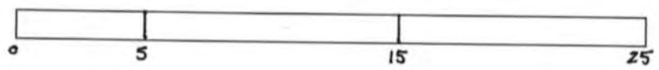


Shoreline Planting Plan
Sheet 3 of 3

Megan & John Hanna
221 McCarrons St.
Roseville, MN 55113

Prepared by:
Ramsey Conservation District
August 20, 2008

Scale:



221 McCarrons Street

Megan & John Hanna				Moisture Zone Key:				
221 McCarrons St.				ud - upland-dry: dry, well-drained soils				
Roseville, MN 55113				um - upland-mesic: soil is moist, but not wet				
Shoreline				w - soil is wet, occassionally standing water				
				s - shallow water most of the time				
Suggested Plantlist for Lakeshore Stabilization				**Total:**	**293**			
				(Buffer)	249			
Plants for:				(Biologs)	44			
70		**Biolog/Emergent plants**						
	Key	*Scientific*	Common:	Moisture:	Native Habitat:	Flower:	Period:	Height:
8	LS	*Carex lacustris*	Lake Sedge	s,w,um	marsh, swamp, lake edge	Green	May-June	24-36"
18	IV	*Iris versicolor*	Blue Flag Iris	s,w	marsh, peatland, lake edge	Blue	June-July	24-36"
11	SL	*Sagittaria latifolia*	Common Arrowhead	s, w	lake edge, marsh	White	July-Aug	24-42"
11	SE	*Sparganium eurycarpum*	Giant Bur-reed	s,w	lake edge, marsh	Green	June-July	24-60"
11	SV	*Scirpus validus*	Softstem Bulrush	s,w	marsh, swamp, lake edge	Brown	July-Aug	36-108"
11	SR	*Eleocharis palustris*	Spike Rush	s,w,um	wetland, wet prairie	Brown	August	6-24"
Plants for:								
101		**Wet Soils**						
70		**Wildflowers**						
		Scientific	Common:	Moisture:	Native Habitat:	Flower:	Period:	Height:
18	AI	*Asclepias incarnata*	Swamp Milkweed	w,um	prairie, marsh, lake edge	Lavender	June-Aug	36-48"
12	EM	*Eupatorium maculatum*	Joe Pye Weed	w,um	wet prairie, marsh, swamp	Purple	July-Sept	24-48"
28	EP	*Eupatorium perfoliatum*	Boneset	w,um	prairie, marsh, swamp	White	June-Aug	24-42"
12	LP	*Liatris pychnostachya*	Praire Blazing Star	w,um	prairie, marsh, lake edge	Purple	July-Sept	24-36"
3		**Trees**						
3	LL	*Larix Laricina*	Tamarack		wet prairie, marsh, swamp	green	Spring	up to 25'
28		**Grasses**						
8	CH	*Carex hystericina*	Porcupine sedge	w	marsh, swamp, lake edge	Green	May-June	24-36"
20	CS	*Carex stricta*	Tussock Sedge	s,w,um	swamp, marsh, peatland	Green	May-June	24-36"
Plants for:								
122		**Moist to Dry Soils**						
114		**Wildflowers**						
		Scientific	Common:	Moisture:	Native Habitat:	Flower:	Period:	Size:
12	AO	*Aster oolentangiensis*	Sky-blue Aster	um,ud	prairie, savanna, woodland	Blue	Aug-Oct	18-36"
8	AT	*Asclepias tuberosa*	Butterfly Weed	ud	prairie, savanna	Orange	June-Sept	12-24"
26	RS	*Rudbeckia hirta*	Black Eyed Susan	um,ud	prairie, savanna	Yellow	June-Oct	24-36"
24	AC	*Aquilegia canadensis*	Columbine	um,ud	woodland, forest	Red	May-July	24-36"
22	OS	*Onoclea sensibilis*	Sensitive Fern	w,um	forest, swamp	Green		12-24"
22	SF	*Solidago flexicaulis*	Zig-zag Goldenrod	um	woodland, forest	Yellow	Aug-Sept	12-36"
8		**Grasses**						
8	EH	*Elymus hystrix*	Bottlebrush Grass	w,um,ud	forest, woodland, lake edge	Green	June-July	24-48"

Shoreline Existing Conditions
Sheet 1 of 3

Nina Ward
250 N McCarrons Blvd
Roseville, MN 55113

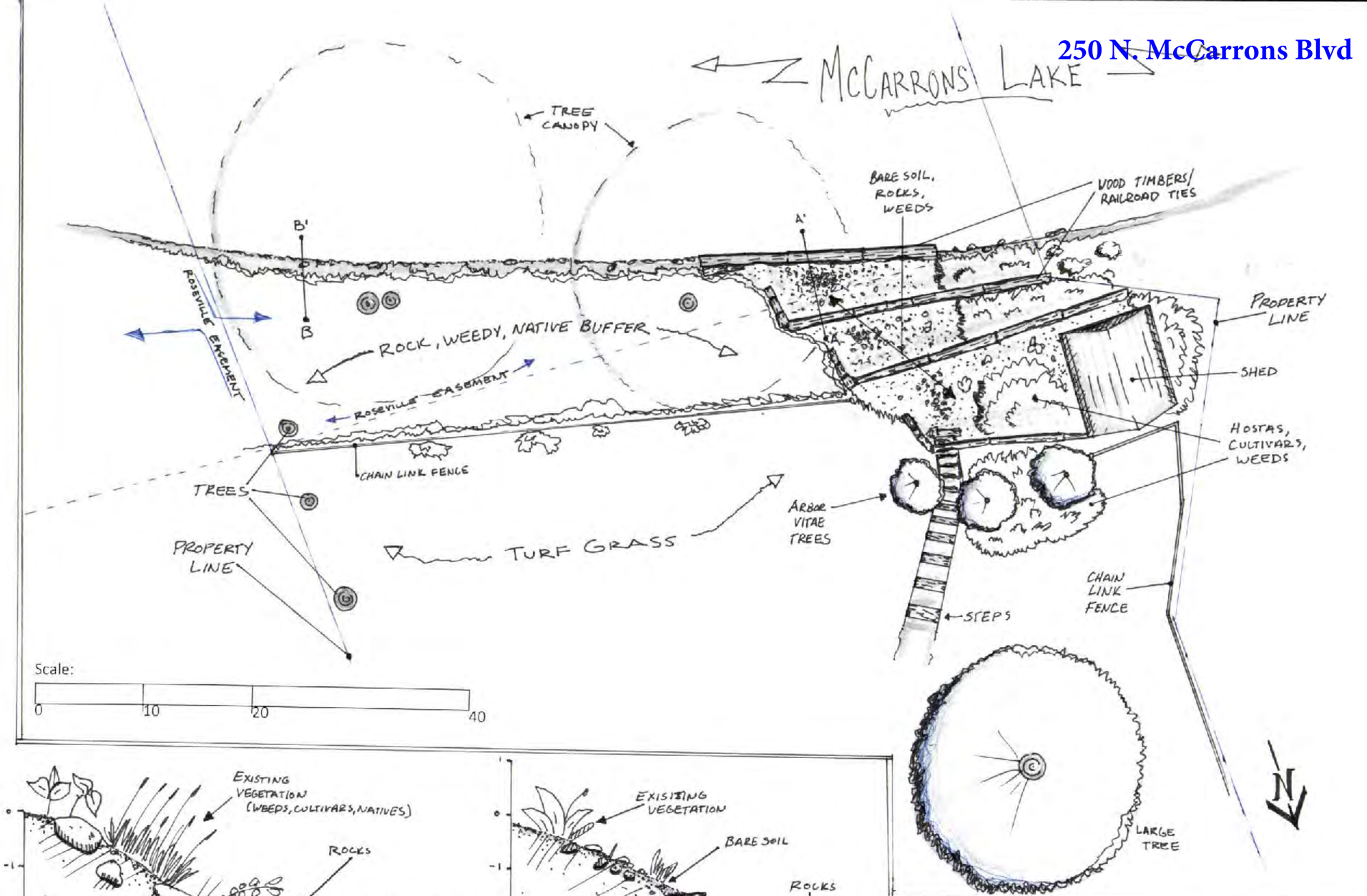
1425 Paul Kirkwold Drive
Highway 96 & Hamline Ave
Arden Hills, MN 55112
(651) 266-7270

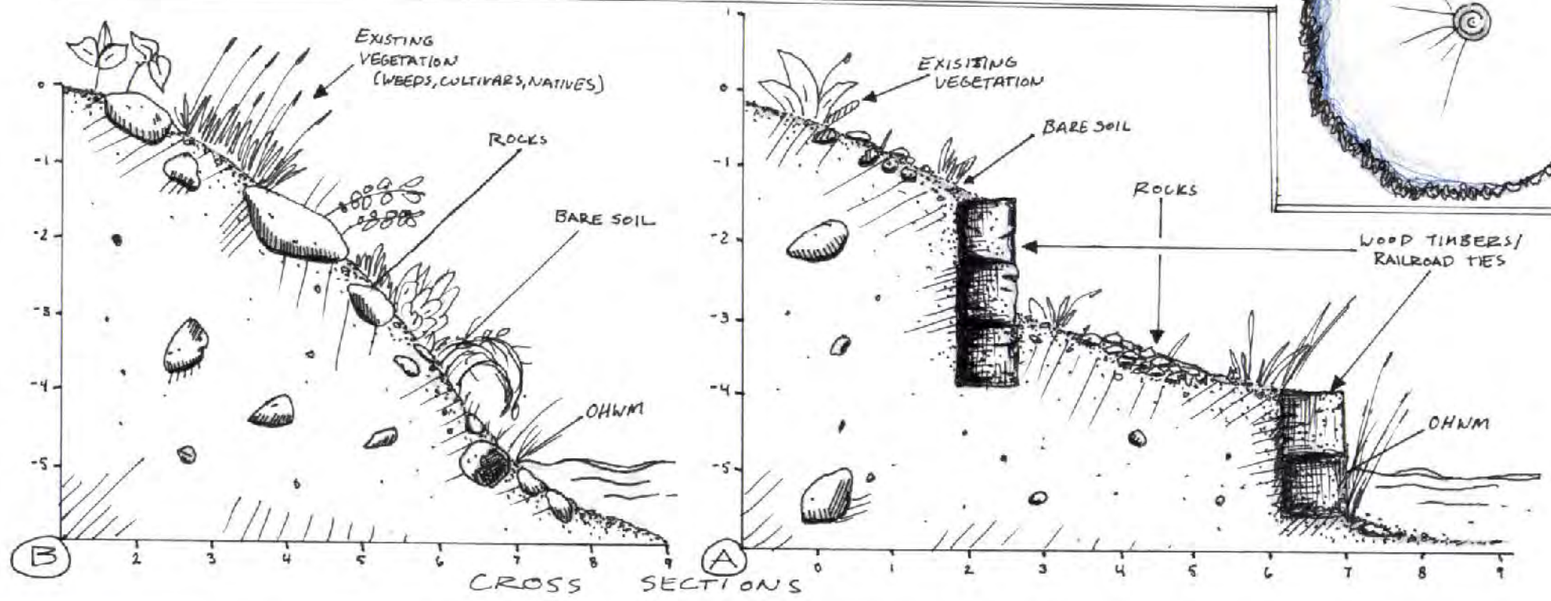
Prepared by:
Ramsey Conservation District
September 16, 2008

Notes :

- Cut and treat weed trees.
- Treat reed canary grass, creeping bellflower, and other invasive plants in area below fence and arbor vitae trees.
- Leave stands of existing natives where possible.
- Secure existing woodtimbers/ retaining walls.
- Prune trees where appropriate.

250 N. McCarrons Blvd





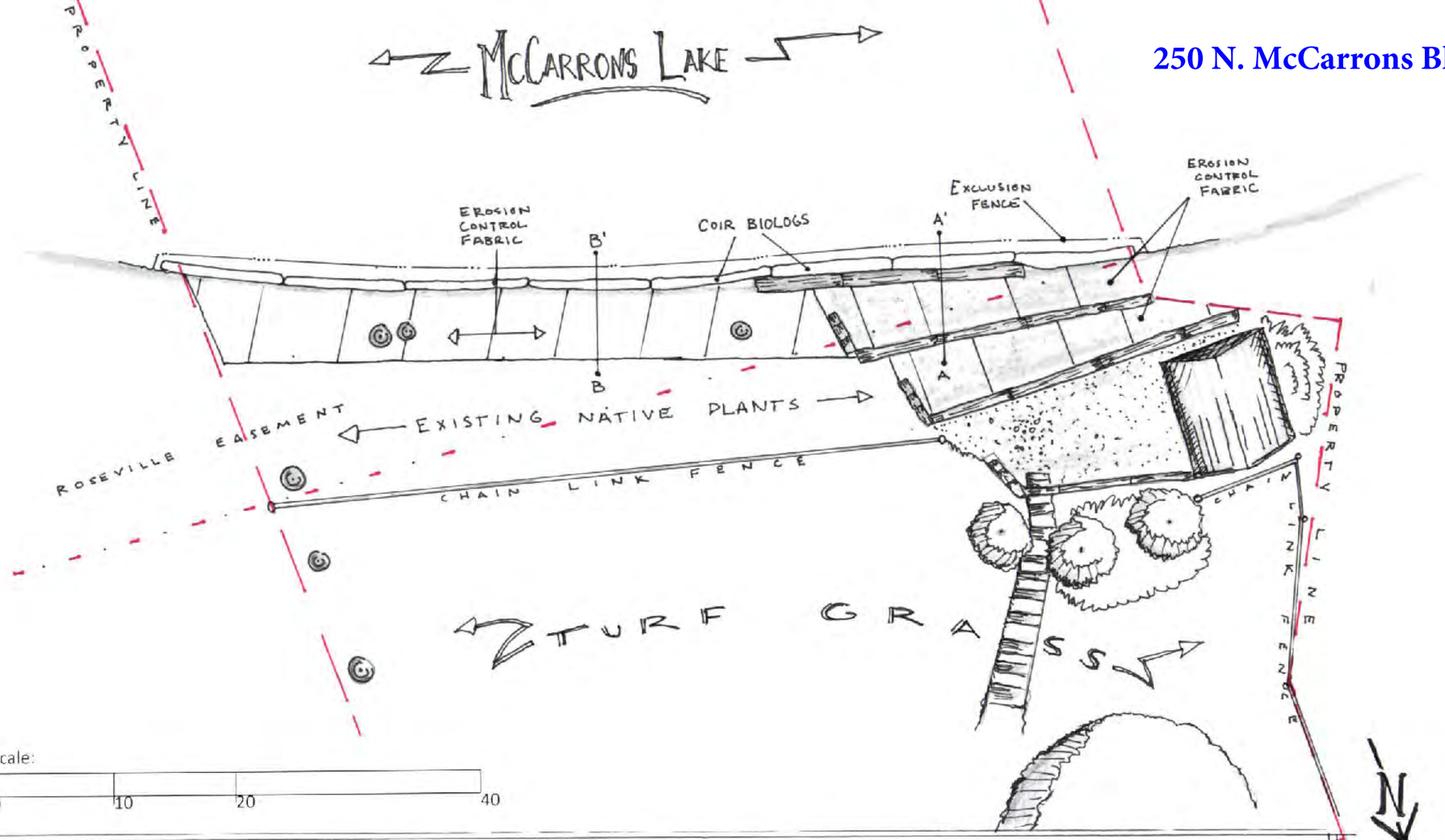
Shoreline Restoration Plan
Sheet 2 of 3

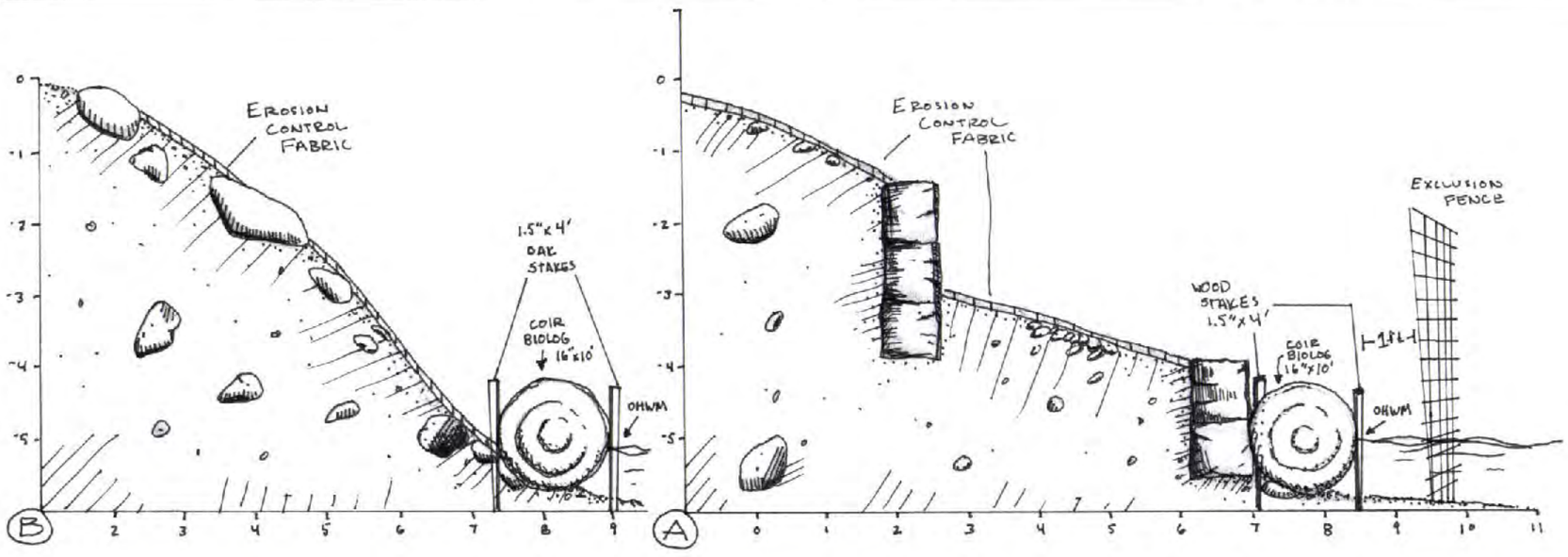
Nina Ward
250 N McCarrons Blvd
Roseville, MN 55113

1425 Paul Kirkwold Drive
Highway 96 & Hamline Ave
Arden Hills, MN 55112
(651) 266-7270

Prepared by:
Ramsey Conservation District
September 16, 2008

250 N. McCarrons Blvd





Notes :

- Coir biologs to be placed and staked (3ft spacing) along entire length of shore. Tie biologs together and to stakes.
- 4 ft herbivory exclusion fence to be installed (using metal T-posts, 5-6 ft spacing) along entire length of biologs (1 ft out from biologs).
- Install erosion control fabric where possible along buffer zone of shore (5-7 ft above Ordinary High Water Mark, OHWM) and in eroding/prone areas.
- Wood timber terrace area on west side of property to be prepped (remove invasive plants, till) and seeded with "No Mow" native grass mix and covered with erosion control fabric.

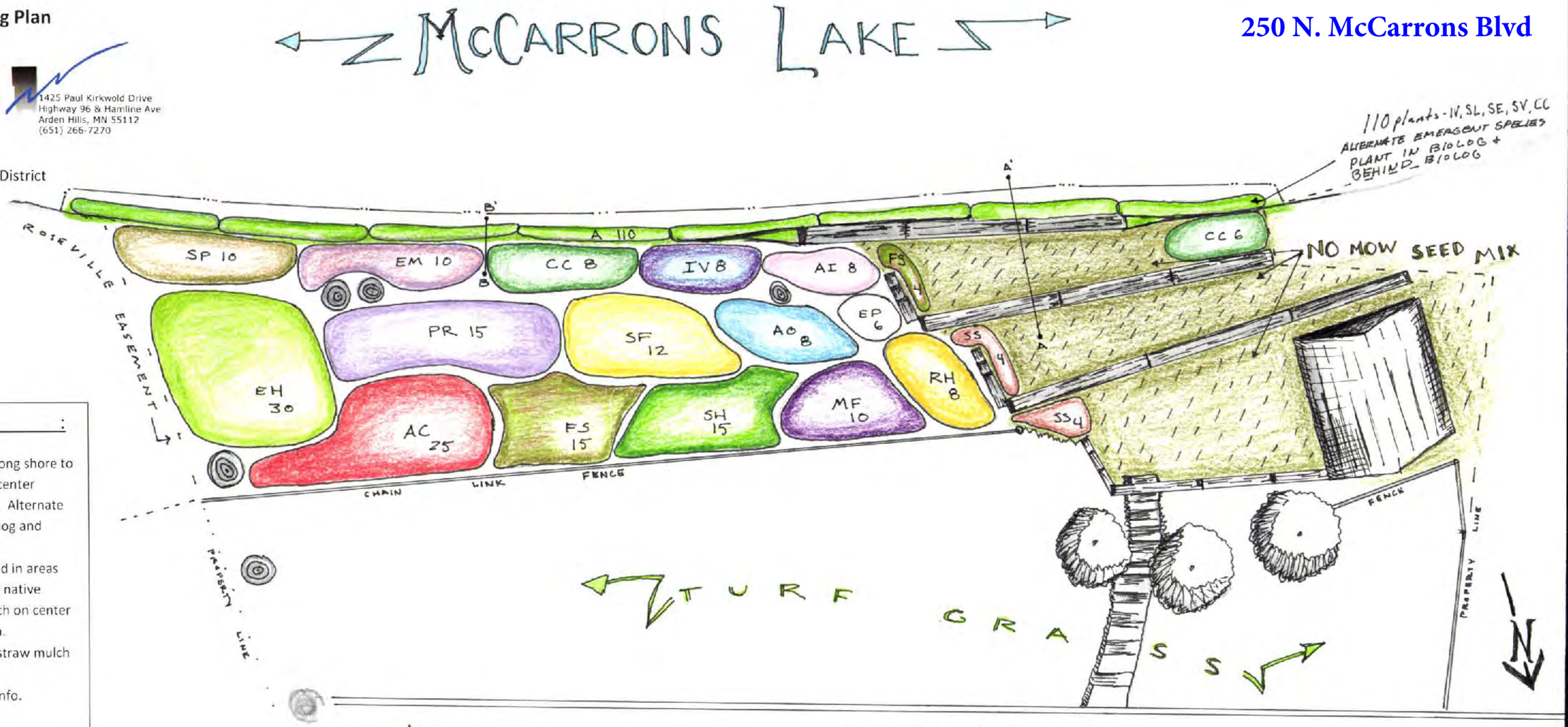
Shoreline Planting Plan
Sheet 3 of 3

Nina Ward
250 N McCarrons Blvd
Roseville, MN 55113

1425 Paul Kirkwold Drive
Highway 96 & Hamline Ave
Arden Hills, MN 55112
(651) 266-7270

Prepared by:
Ramsey Conservation District
September 16, 2008

250 N. McCarrons Blvd

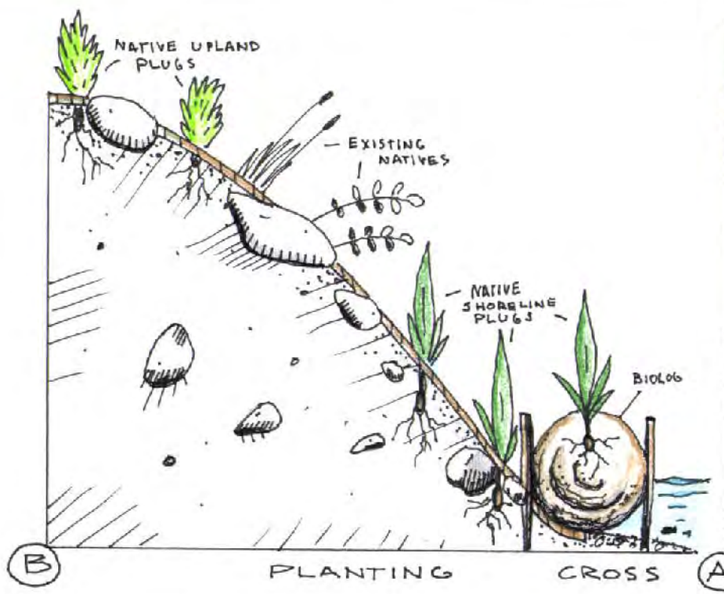


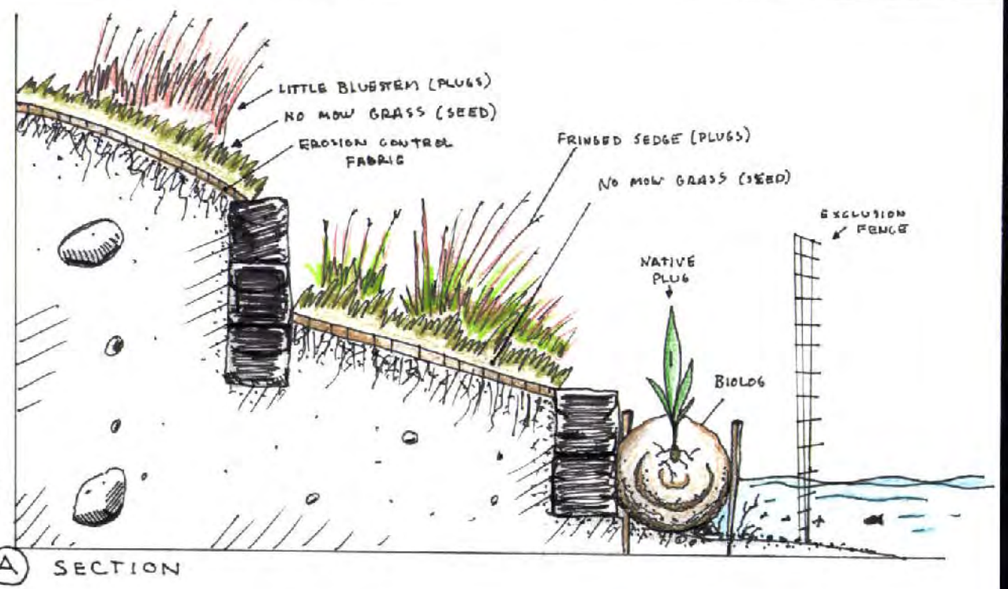
Notes :

- Buffer area and biologs along shore to be planted @ 18 inch on-center spacing according to plan. Alternate plantings directly into biolog and directly behind biologs.
- Upland areas to be planted in areas where there is no existing native vegetation (approx. 36 inch on center spacing) according to plan.
- Planting areas to receive straw mulch where appropriate.
- See attached for species info.

Scale:

0 5 10 20





284 S. McCarrons Blvd

Buttonbush

15'-0"

Bush Honeysuckle

River Birch

Red Osier Dogwood

Winterberry,
Nannyberry,
Highbush Cranberry
or Pagoda Dogwood

Existing Smooth Brome Areas
(supplement with potted
native flowers over time)

Bush Honeysuckle

Buttonbush

18-in Biologs

Pre-vegetated Mats
(River Bulrush,
Lake Sedge)

6'-0"

SIDEWALK

Snowberry or
Newjersey tea

Bush Honeysuckle

Buttonbush

Red Osier Dogwood

River Birch

Buttonbush

Winterberry,
Nannyberry,
Highbush Cranberry
or Pagoda Dogwood

CONCEPT

Ramsey County
Shoreline Buffer

THIENES RESIDENCE
284 S. McCarrons Blvd
Roseville, MN

prepared by:
Ramsey Conservation District
in association with:
Association of Metropolitan Soil and Water Conservation Districts
ANOKA - CARVER - HENNEPIN - RAMSEY - SCOTT - WASHINGTON
and the
USDA - Natural Resource Conservation Service

N

0 5 10 20
SCALE IN FEET

284 S. McCarrons Blvd

CM 7000 Coir Geotextile
6.5 ft x 60 ft strip

4 RED-OSIER DOGWOOD - Cornus sericea
8 BROWN-EYED SUSAN - Rudbeckia triloba
4 BUTTONBUSH - Cephalanthus occidentalis
10 LITTLE BLUESTEM - Schizachyrium scoparium
5 CARDINAL FLOWER - Lobelia cardinalis
8 TURTLEHEAD - Chelone glabra
11 FOX SEDGE - Carex vulpinoidea
6 MARSH MILKWEED - Asclepias incarnata
8 SWITCHGRASS - Panicum virgatum
26 PRAIRIE CORDGRASS - Spartina pectinata

11 MARSH MILKWEED - Asclepias incarnata
14 FOX SEDGE - Carex vulpinoidea
4 MEADOW SWEET - Spiraea alba
7 PRAIRIE BLAZINGSTAR - Liatris pycnostachya
7 BOTTLEBRUSH SEDGE - Carex comosa
18 LITTLE BLUESTEM - Schizachyrium scoparium
7 MARSH MILKWEED - Asclepias incarnata
6 CARDINAL FLOWER - Lobelia cardinalis
8 BUSH HONEYSUCKLE - Diervilla lonicera
7 BROWN-EYED SUSAN - Rudbeckia triloba
15 FOX SEDGE - Carex vulpinoidea
5 BUTTONBUSH - Cephalanthus occidentalis

Existing Northern Catalpa

7 Eg
7 At
9 Rt
16 Dl
1 Bn
11 Pv
51 Co
12 Rt
9 At

SIDEWALK

11 LITTLE BLUESTEM - Schizachyrium scoparium
4 HIGH BUSH CRANBERRY - Viburnum trilobum

Allow AMERICAN HAZEL - Corylus americana to spread. Remove GREEN ASH - Fraxinus pennsylvanica and SIBERIAN ELM - Ulmus siberica seedlings.

Existing SILVER MAPLE - Acer saccharinum

15 INDIAN GRASS - Sorgastrum nutans
6 COMMON SNOWBERRY - Symphoricarpos albus

SHORELINE BUFFER PLAN WEST

Ramsey County
Shoreline Buffer

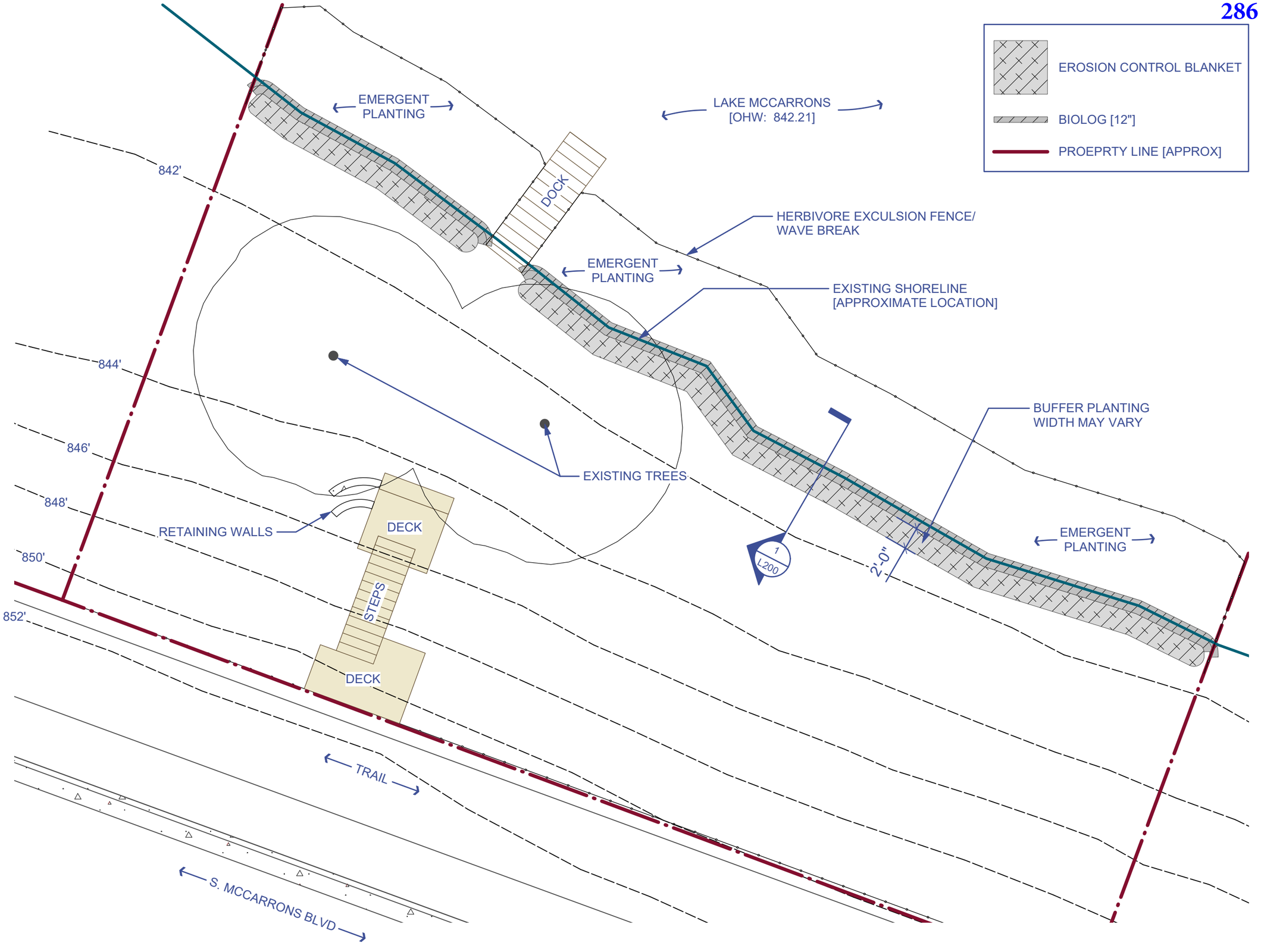
THIENES RESIDENCE
284 S. McCarrons Blvd
Roseville, MN

N

0 5 10 20
SCALE IN FEET

prepared by:
Ramsey Conservation District
in association with:
Association of Metropolitan Soil and Water Conservation Districts
ANOKA - CARVER - HENNEPIN - RAMSEY - SCOTT - WASHINGTON
and the
USDA - Natural Resource Conservation Service

286 S. McCarrons Blvd



RAMSEY COUNTY
Parks & Recreation
651-266-7274

PROJECT: ANDREW MONTAIN
LOCATION:
286 S. MCCARRONS BLVD
ROSEVILLE, MN 55113

WATERSHED DISTRICT
CAPITOL REGION
WATERSHED DISTRICT

DESIGNER: JL
DATE: 4/15/20
REVISION: 8/1/2019
REVISION:
REVISION:
REVISION:
REVISION:
CHECKED BY: BO

NOTES:
-ELEVATIONS ARE APPROXIMATE
-SIZE AND SHAPE OF RAINGARDEN MAY VARY
-MAINTAIN SQUARE FEET AND PONDING DEPTH
-UTILITY LOCATIONS ARE APPROXIMATE, CONFIRM UTILITY LOCATIONS PRIOR TO WORK

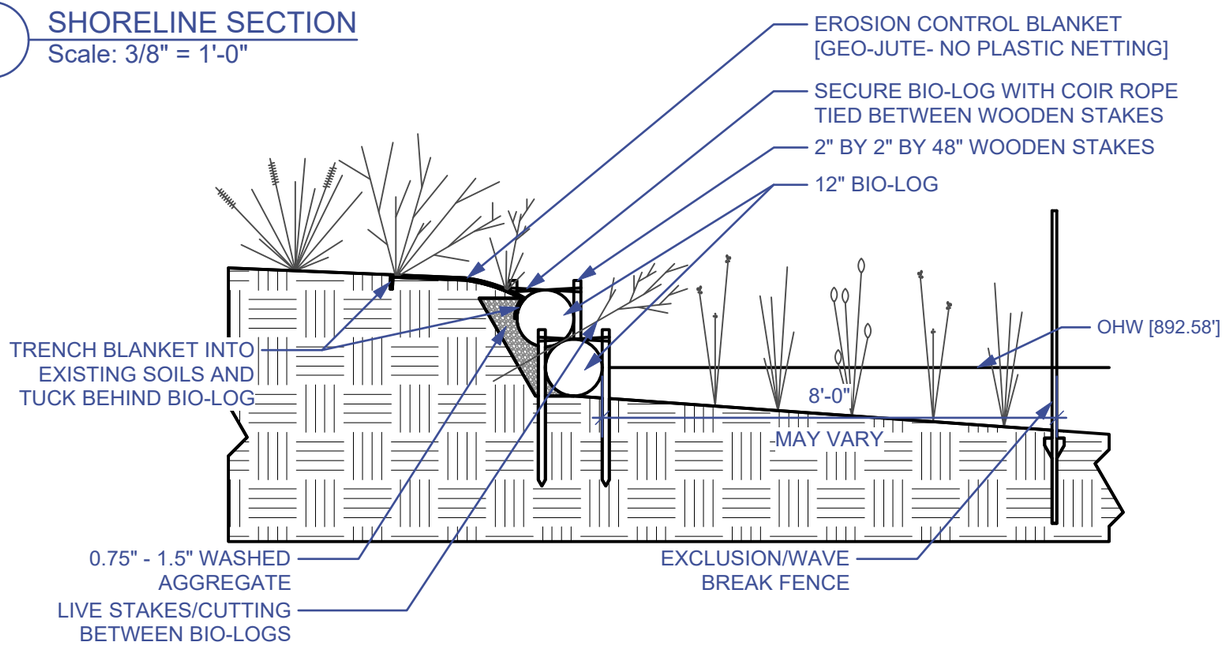
SCALE: 1" = 8'-0"

SITE PLAN

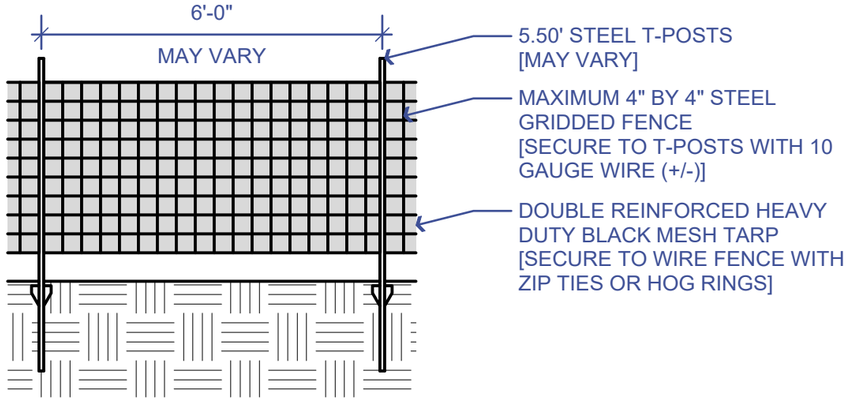
L100

286 S. McCarrons Blvd

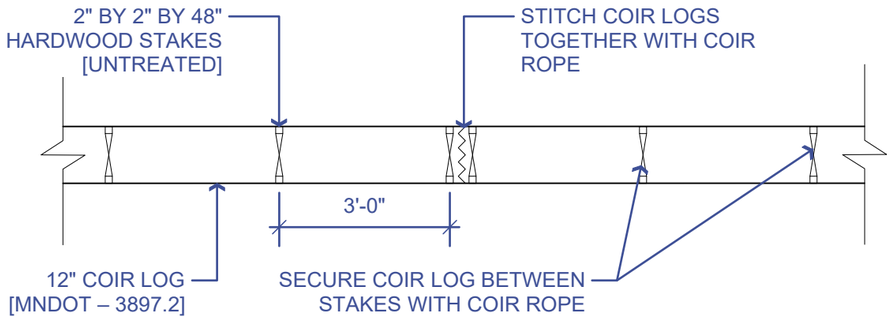
1 SHORELINE SECTION
Scale: 3/8" = 1'-0"



2 HERBIVORE EXCLUSION/WAVE FENCE DETAIL
Scale: 3/8" = 1'-0"



3 COIR LOG INSTALLATION PLAN VIEW
Scale: 3/8" = 1'-0"



Common Name	Scientific Name
Grasses, Sedges & Rushes	
Sweet flag	*Acorus calamus*
Water sedge	*Carex aquatilis*
Slough sedge	*Carex atherodes*
Bebb's Sedge	*Carex bebbii*
Bottlebrush Sedge	*Carex comosa*
Caterpillar Sedge	*Carex crinita*
Porcupine Sedge	*Carex hystricina*
Lake Sedge	*Carex lacustris*
Common Hop Sedge	*Carex lupulina*
Pointed-Broom Sedge	*Carex scoparia*
Awl Fruit Sedge	*Carex stipata*
Tussock Sedge	*Carex stricta*
Fox Sedge	*Carex vulpinoidea*
Creeping Spikerush	*Eleocharis palustris*
Soft Rush	*Juncus effusus*
Green Bulrush	*Scirpus atrovirens*
Woolgrass	*Scirpus cyperinus*
Forbs & Ferns	
Sweet Flag	*Acorus americanus*
Water Plantain	*Alisma subcordatum*
Canada Anemone	*Anemone canadensis*
Swamp Milkweed	*Asclepias incarnata*
Turtlehead	*Chelone glabra*
Joe Pye Weed	*Eupatorium maculatum*
Boneset	*Eupatorium perfoliatum*
Grass Leaf Goldenrod	*Euthamia graminifolia*
Blue Bottle Gentian	*Gentiana andrewsii*
Sneezeweed	*Helenium Autumnale*
Northern Blue Flag Iris	*Iris versicolor*
Meadow Blazing Star	*Liatris ligulistylis*
Prairie Blazing Star	*Liatris pychnostachya*
Dense Blazing Star	*Liatris spicata*
Cardinal Flower	*Lobelia cardinalis*
Great Blue Lobelia	*Lobelia siphilitica*
Monkey Flower	*Mimulus ringens*
Sensitive Fern	*Onoclea sensibilis*
Mountain Mint	*Pycnanthemum virginianum*
Riddell's Goldenrod	*Solidago ridellii*
New England Aster	*Symphyotricum novae-angliae*
Blue Vervain	*Verbena Hastata*
Golden Alexanders	*Zizia aurea*
Shrubs	
False Indigo	*Amorpha fruticosa*
Chokeberry	*Aronia melanocarpa*
Red Osier Dogwood	*Cornus sericea*
White Meadowsweet	*Spiraea alba*

RAMSEY COUNTY
Parks & Recreation
651-266-7274

PROJECT: ANDREW MONTAIN
LOCATION:
286 S. MCCARRONS BLVD
ROSEVILLE, MN 55113

WATERSHED DISTRICT
CAPITOL REGION
WATERSHED DISTRICT

DESIGNER: JL
DATE: 4/15/20
REVISION: 8/1/19
REVISION:
REVISION:
REVISION:
REVISION:
CHECKED BY: BO

NOTES:
-ELEVATIONS ARE APPROXIMATE
-SIZE AND SHAPE OF RAINGARDEN MAY VARY
-MAINTAIN SQUARE FEET AND PONDING DEPTH
-UTILITY LOCATIONS ARE APPROXIMATE, CONFIRM UTILITY LOCATIONS PRIOR TO WORK

SCALE: 3/8" = 1'-0"

SITE DETAILS

L200

363 S. McCarrons Blvd

Scale:

0 30 60 120

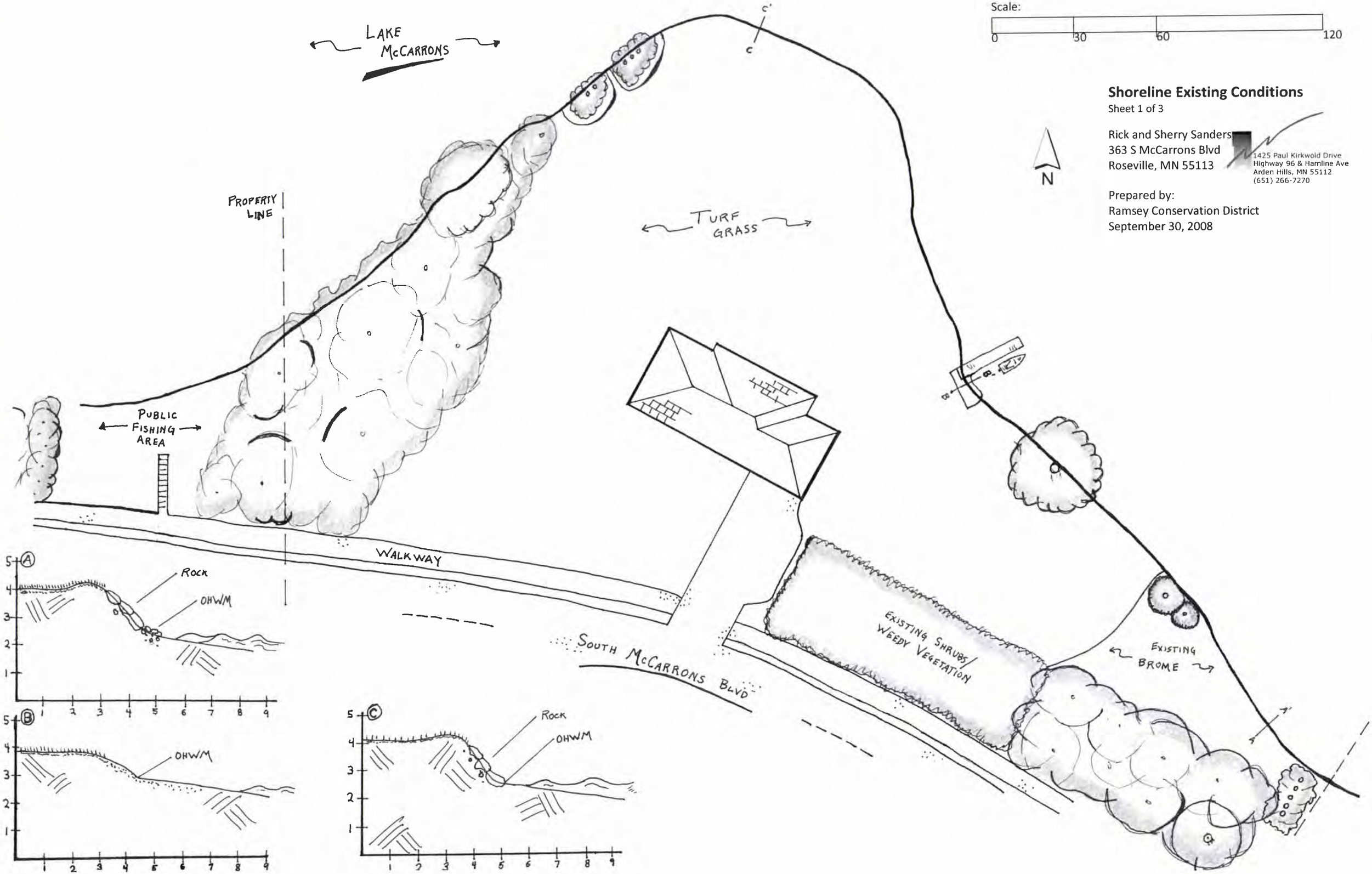
Shoreline Existing Conditions

Sheet 1 of 3

Rick and Sherry Sanders
363 S McCarrons Blvd
Roseville, MN 55113

1425 Paul Kirkwold Drive
Highway 96 & Hamline Ave
Arden Hills, MN 55112
(651) 266-7270

Prepared by:
Ramsey Conservation District
September 30, 2008



363 S. McCarrons Blvd

Scale:

0 30 60 120

N

Shoreline Restoration Plan

Sheet 2 of 3

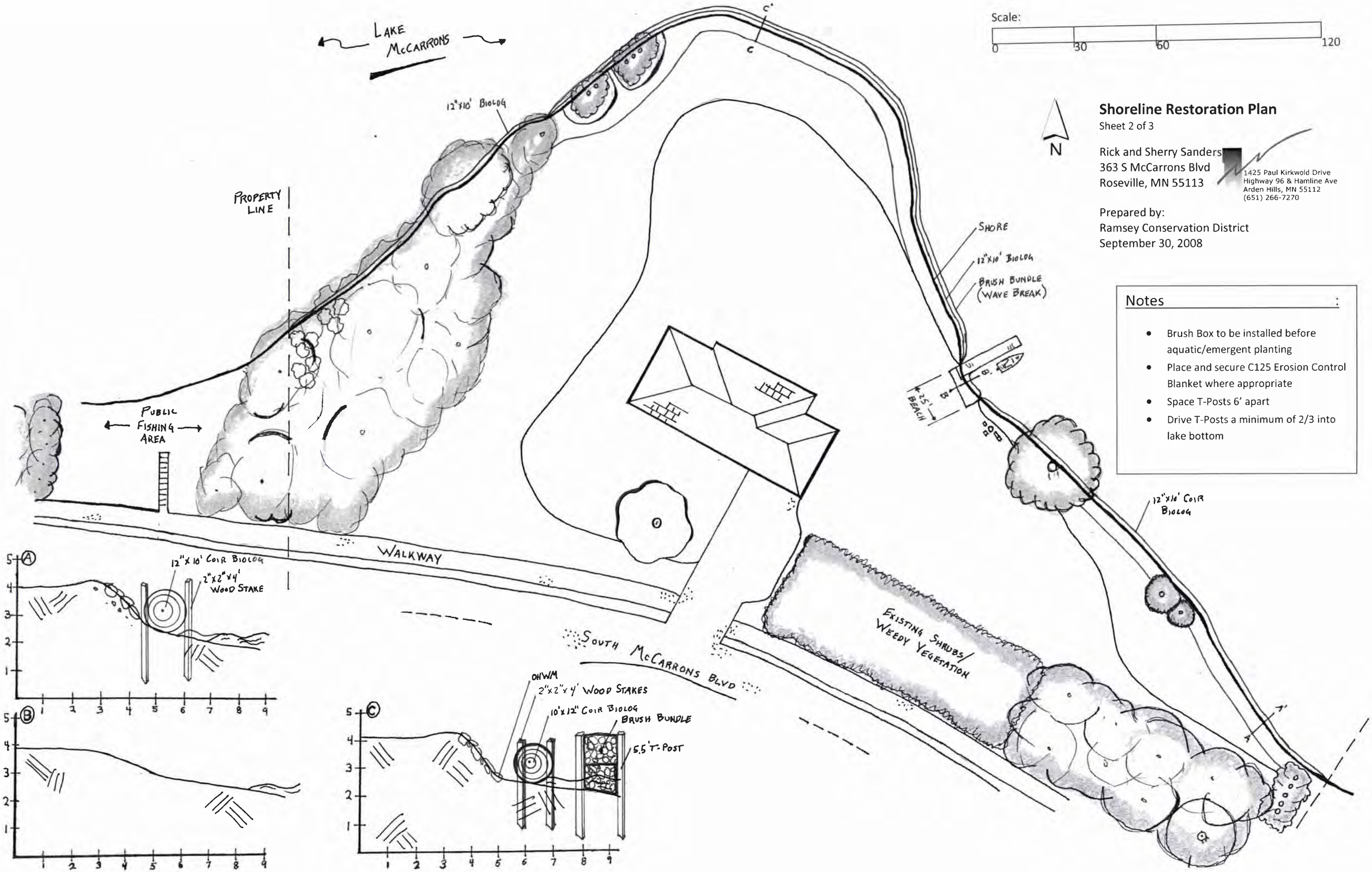
Rick and Sherry Sanders
363 S McCarrons Blvd
Roseville, MN 55113

1425 Paul Kirkwold Drive
Highway 96 & Hamline Ave
Arden Hills, MN 55112
(651) 266-7270

Prepared by:
Ramsey Conservation District
September 30, 2008

Notes :

- Brush Box to be installed before aquatic/emergent planting
- Place and secure C125 Erosion Control Blanket where appropriate
- Space T-Posts 6' apart
- Drive T-Posts a minimum of 2/3 into lake bottom



363 S. McCarrons Blvd

Scale:

0 — 30 — 60 — 120

Shoreline Planting Plan

Sheet 3 of 3

N

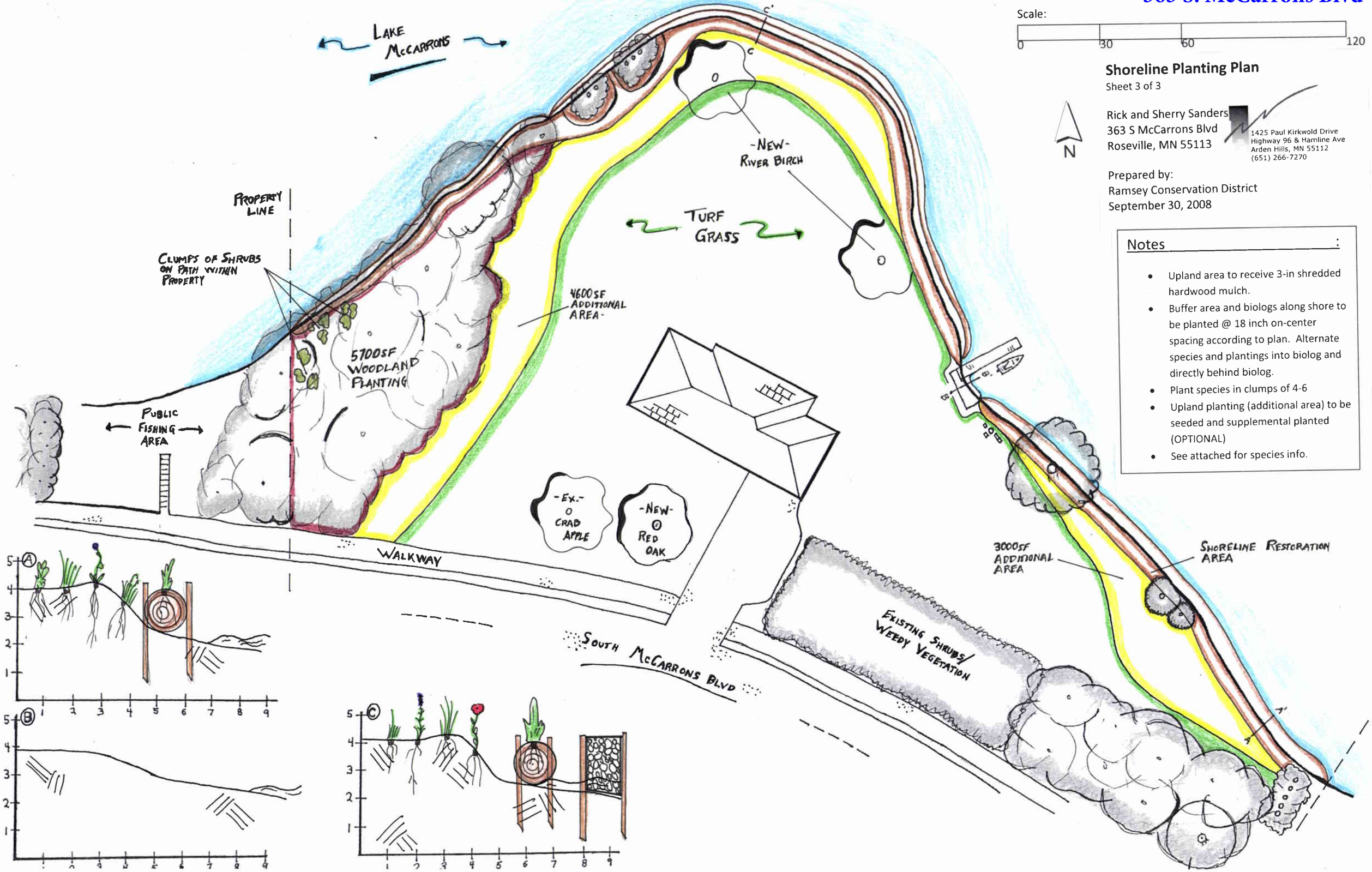
Rick and Sherry Sanders
363 S McCarrons Blvd
Roseville, MN 55113

1425 Paul Kirkwold Drive
Highway 96 & Hamline Ave
Arden Hills, MN 55112
(651) 266-7270

Prepared by:
Ramsey Conservation District
September 30, 2008

Notes :

- Upland area to receive 3-in shredded hardwood mulch.
- Buffer area and biologs along shore to be planted @ 18 inch on-center spacing according to plan. Alternate species and plantings into biolog and directly behind biolog.
- Plant species in clumps of 4-6
- Upland planting (additional area) to be seeded and supplemental planted (OPTIONAL)
- See attached for species info.



Shoreline Existing Conditions

Sheet 1 of 3

Renee Pardello
382 N McCarrons Blvd
Roseville, MN 55113

Ramsey Conservation District
1425 Paul Kirkwold Drive
Highway 96 & Hamline Ave
Arden Hills, MN 55112
(651) 266-7270

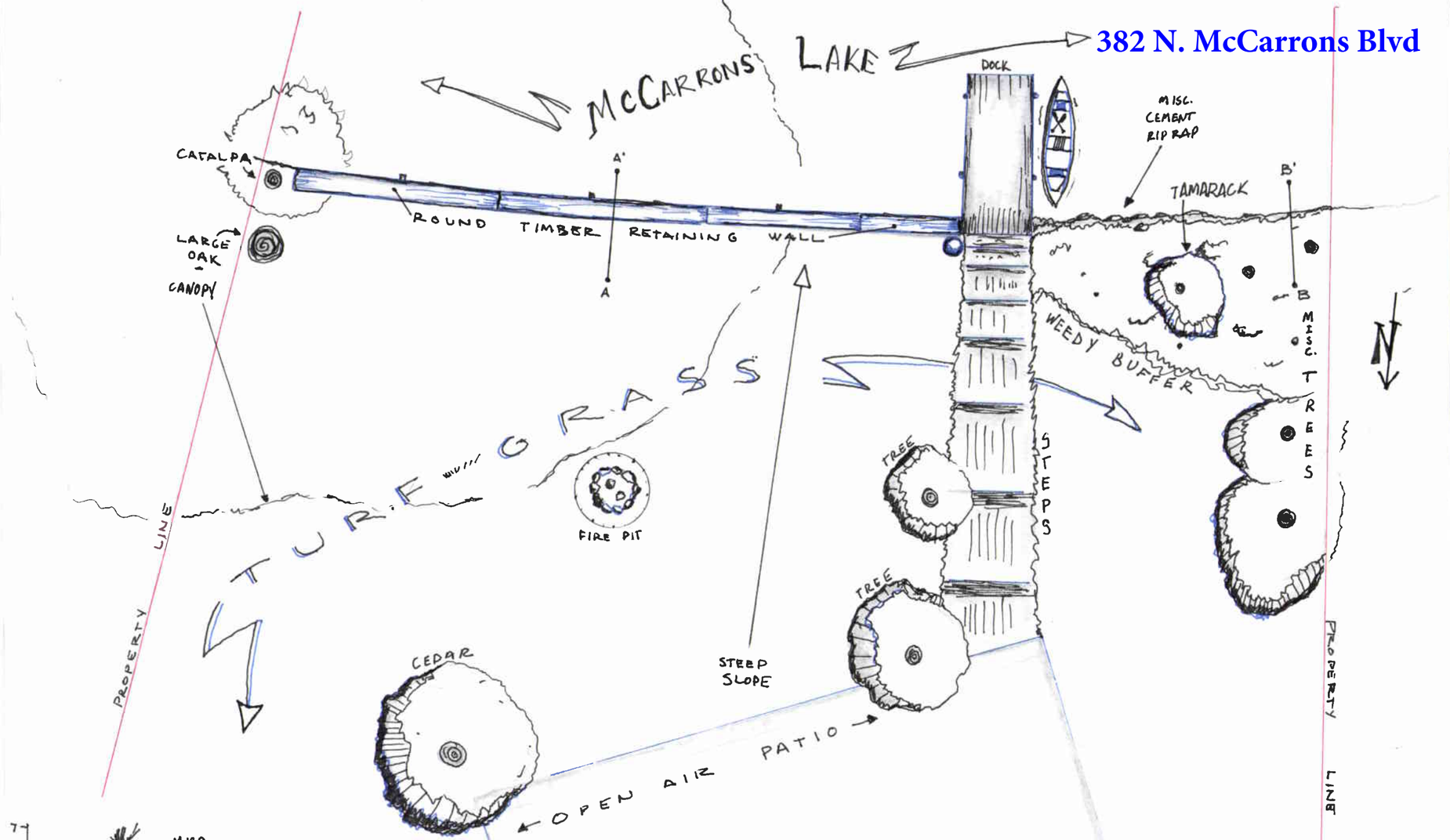
Prepared by:
Ramsey Conservation District
October 8, 2008

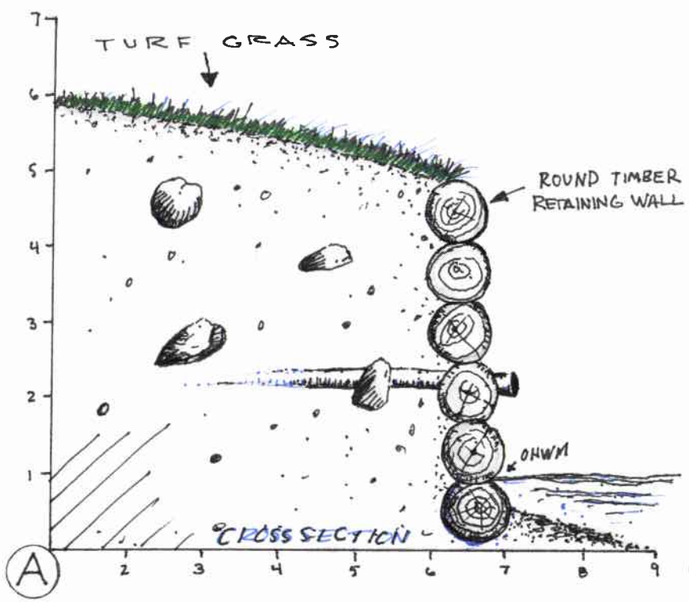
Notes :

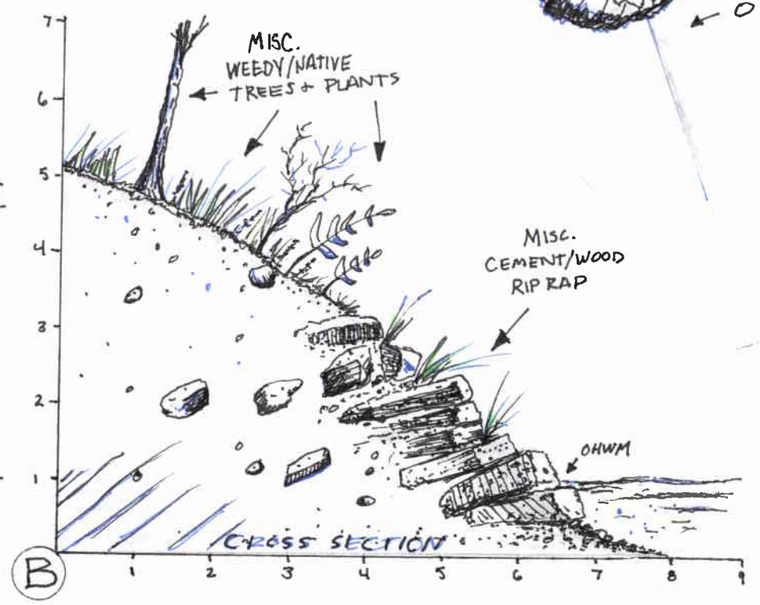
- Cut and treat buckthorn and other weed trees. Prune/leave natives and desirable trees (catalpa, tamarack, oak, cedar, etc.)
- Treat turf grass, reed canary grass, and other invasive plants in planting area.
- Leave stands of existing natives where possible.
- On west shore past dock, move cement rip-rap/large rocks from shore 2-3 feet out into water to create wave break, or discard. Grade shore area to prepare for planting.

Scale:

0 5 10 20







Shoreline Restoration Plan

Sheet 2 of 3

Renee Pardello
382 N McCarrons Blvd
Roseville, MN 55113

Ramsey Conservation District
1425 Paul Kirkwold Drive
Highway 96 & Hamline Ave
Arden Hills, MN 55112
(651) 266-7270

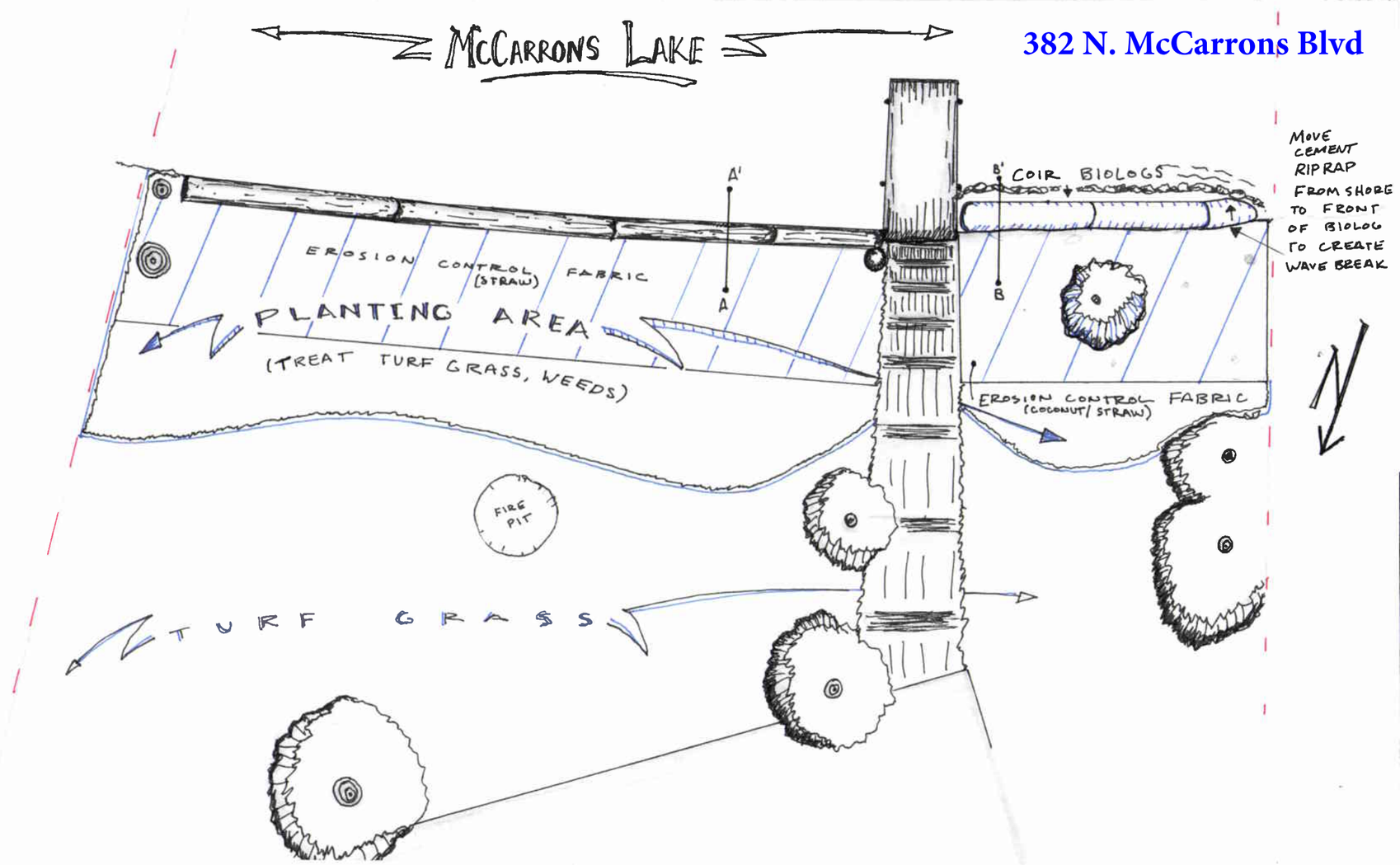
Prepared by:
Ramsey Conservation District
October 8, 2008

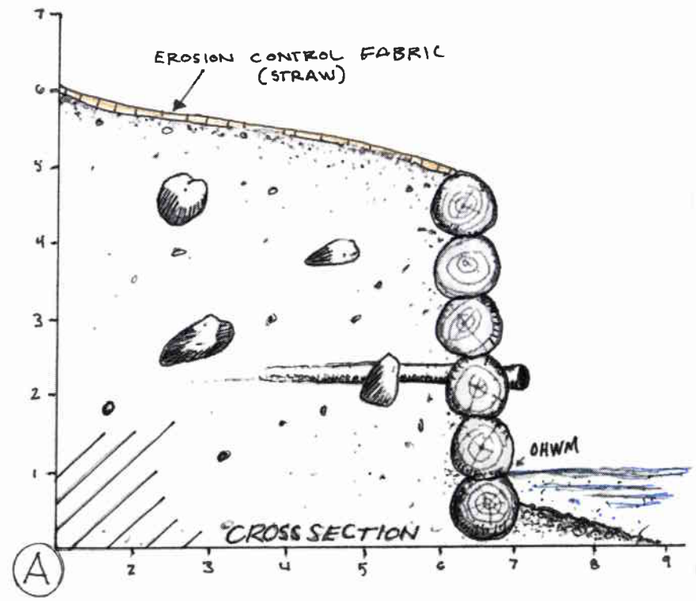
Notes :

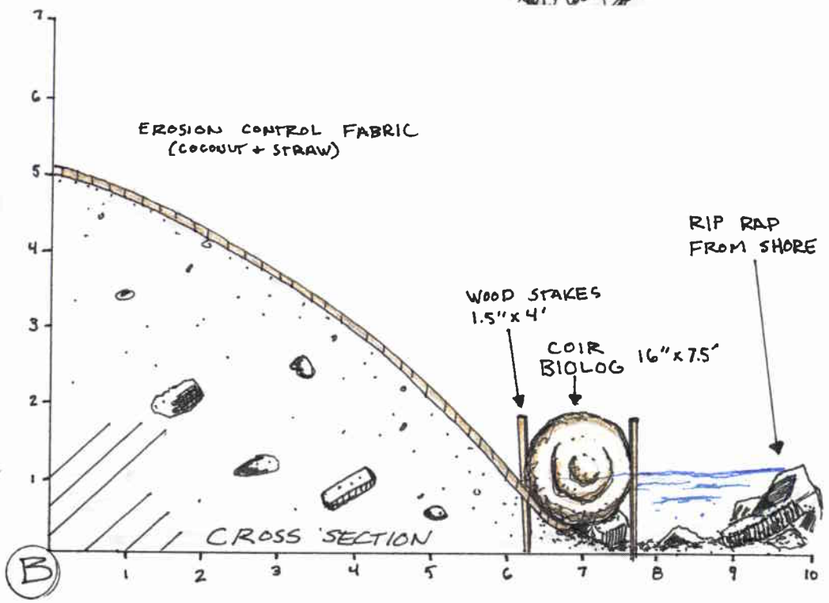
- Install straw erosion control fabric above round timber retaining wall. Install coconut-straw erosion control fabric along buffer zone of shore (5-7 ft above Ordinary High Water Mark, OHWM) on west shore past dock.
- Coir biologs to be placed and staked (3ft spacing) along west end of shore, with edge of erosion control fabric tucked underneat. Tie biologs together and to stakes.
- 4 ft herbivory exclusion fence to be installed (using metal T-posts, 5-6 ft spacing) along entire length of biologs (1 ft out from biologs).

Scale:

0 5 10 20







Shoreline Planting Plan

Sheet 3 of 3

Renee Pardello
382 N McCarrons Blvd
Roseville, MN 55113

Ramsey Conservation District
1425 Paul Kirkwold Drive
Highway 96 & Hamline Ave
Arden Hills, MN 55112
(651) 266-7270

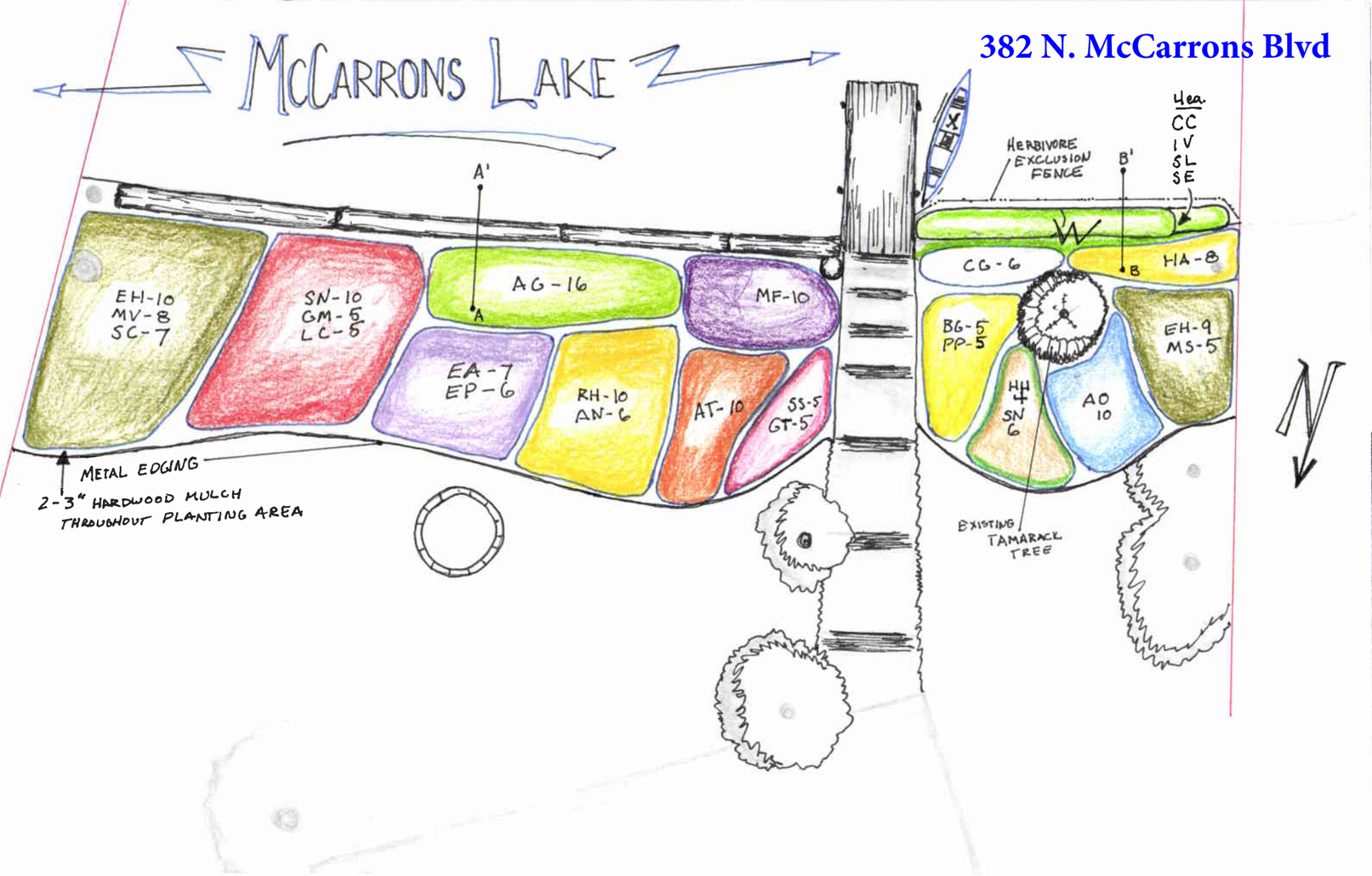
Prepared by:
Ramsey Conservation District
October 8, 2008

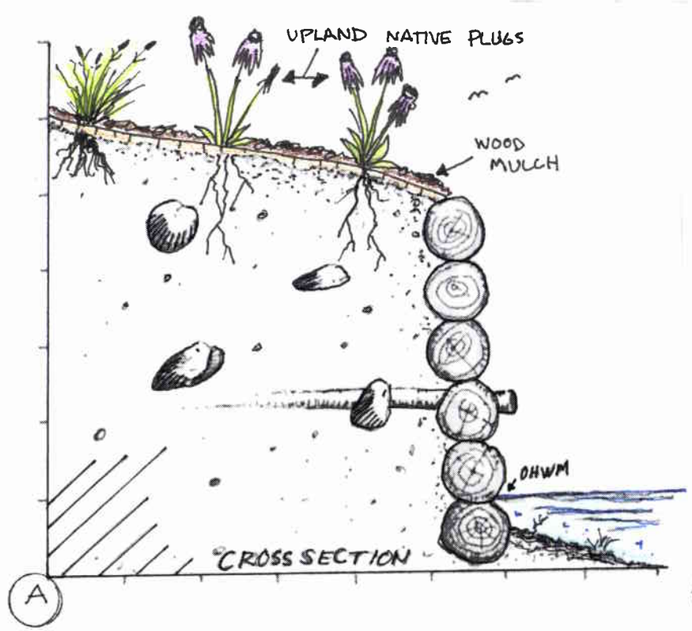
Notes :

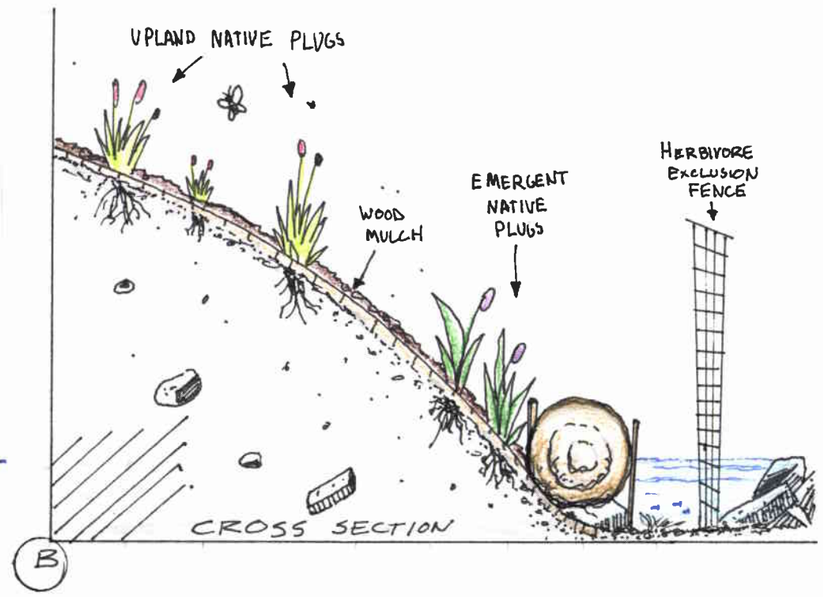
- Install straw erosion control fabric above round timber retaining wall. Install coconut-straw erosion control fabric along buffer zone of shore (5-7 ft above Ordinary High Water Mark, OHWM) on west shore past dock.
- Coir biologs to be placed and staked (3ft spacing) along west end of shore, with edge of erosion control fabric tucked underneath. Tie biologs together and to stakes.
- 4 ft herbivory exclusion fence to be installed (using metal T-posts, 5-6 ft spacing) along entire length of biologs (1 ft out from biologs).

Scale:

0 5 10 20







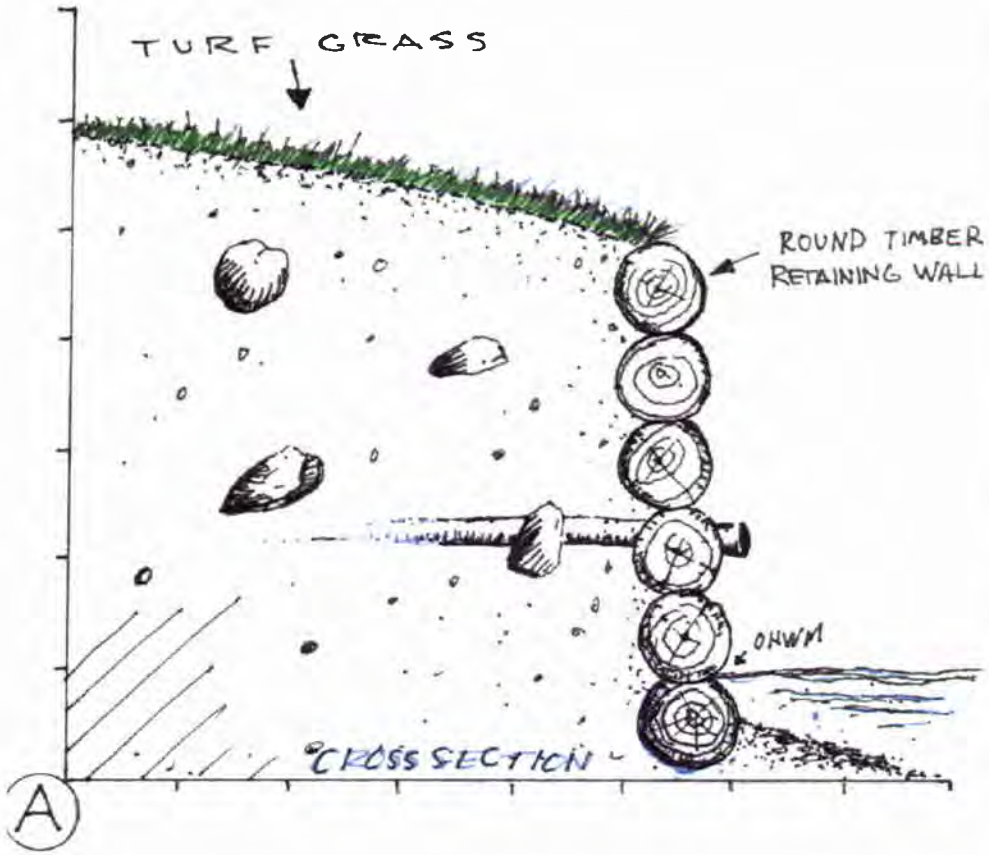
Shoreline Restoration Alternative- Soil Lift

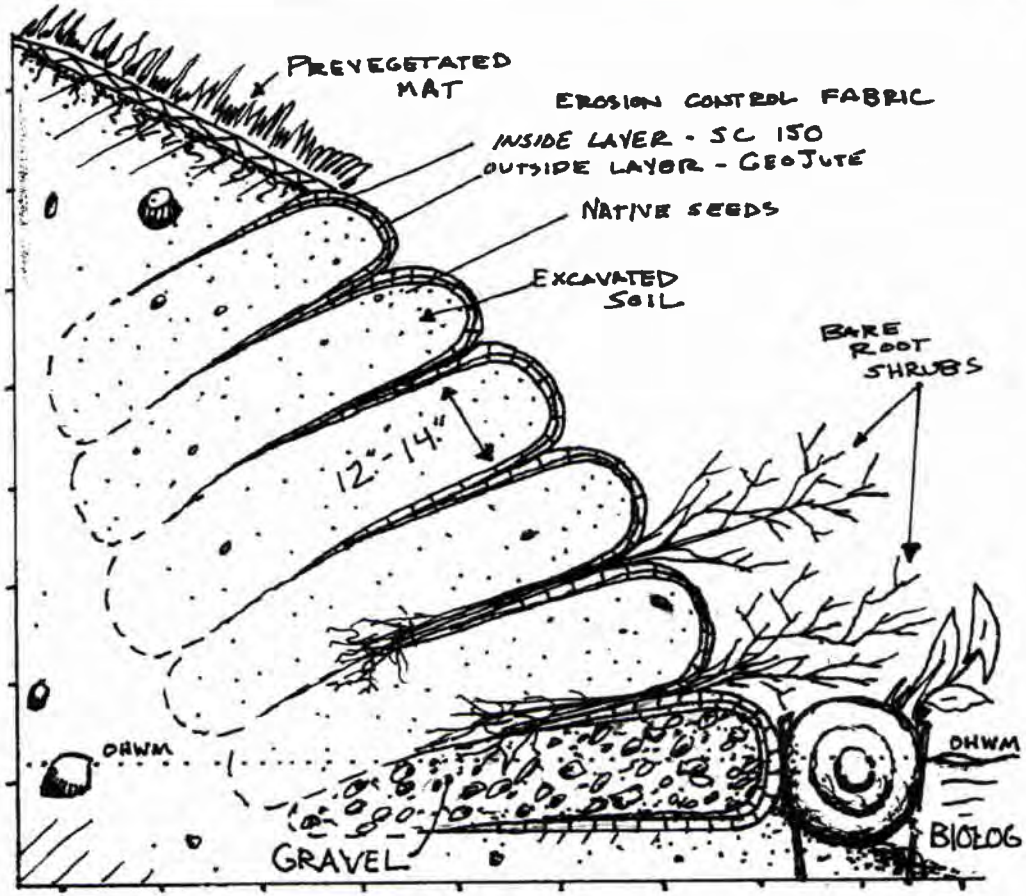
382 N. McCarrons Blvd

Ramsey Conservation District
1425 Paul Kirkwold Drive
Highway 96 & Hamline Ave
Arden Hills, MN 55112
(651) 266-7270

DNR Permits will be required. Construction should be done during the winter or when water levels are low, or contain work area.

1. Remove round timber retaining wall. Treated timber should be disposed of properly.
2. Excavate bank zone along shore.
3. First lift contains clean gravel. Wrap gravel with Straw/Coconut biodegradable erosion control fabric, covered by GeoJute fabric. Compress gravel and secure fabric and lift with wooden stakes through layers.
4. Lay bare root shrubs and/or dormant cuttings on top of lift and erosion control fabric.
5. Upper lifts contain soil that was excavated. Place layers of erosion control fabric down, fill with soil, compact to 12" -14", seed with native seed, pull over erosion control fabric layers, secure with wood stakes. Repeat this step until desired bank height is reached.
6. A prevegetead mat or erosion control blanket covering seeded soil should be placed at the top of the lift. Supplement with plugs.
7. Shrub plantings should be placed between layers only where roots can reach OHWM/saturated soil.

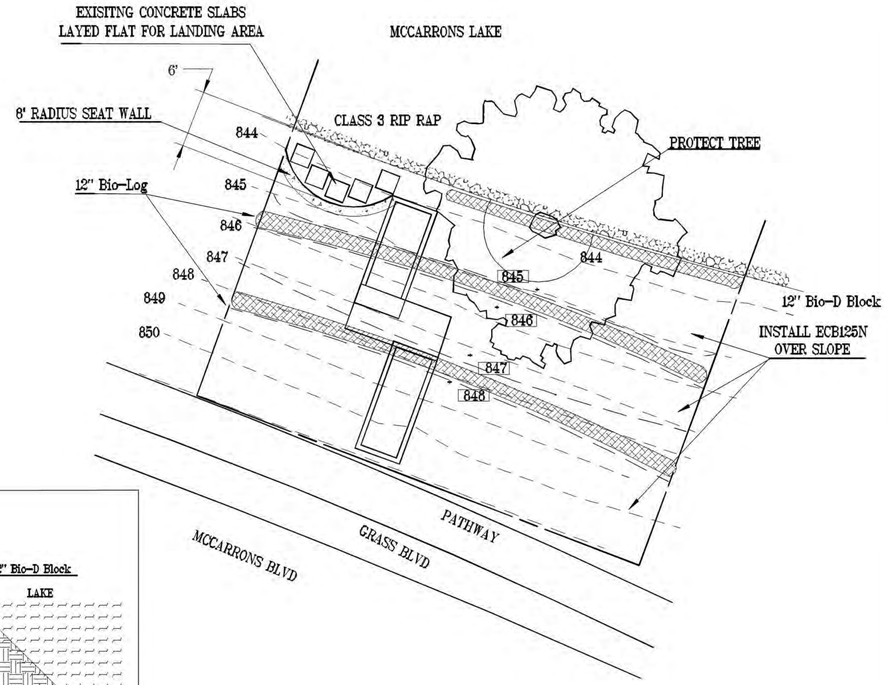


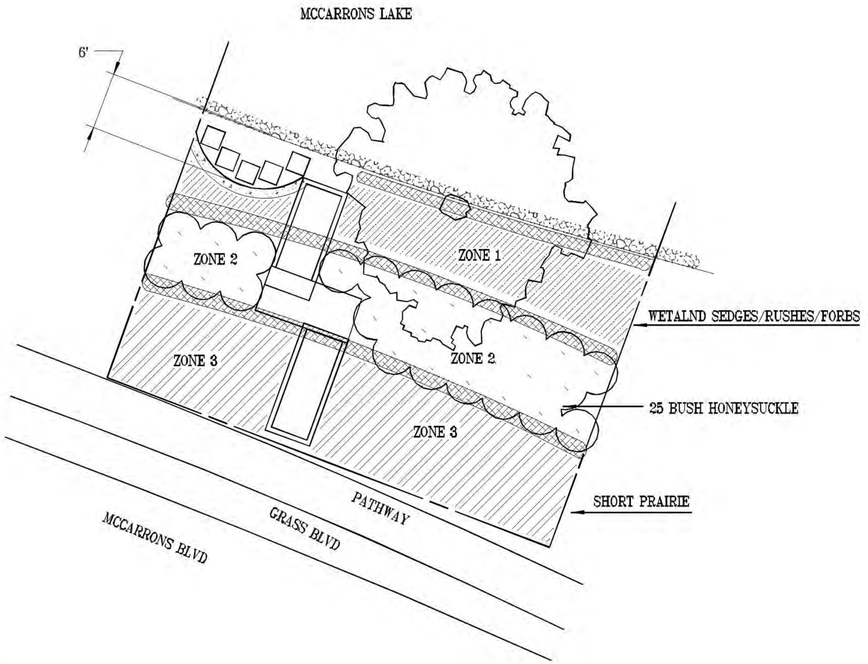


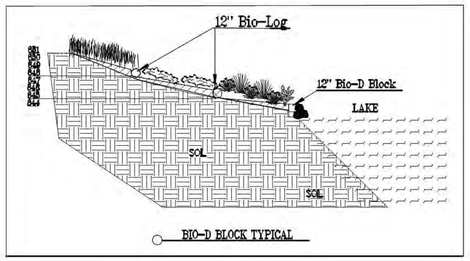
SOIL LIFT

382 N. McCarrons Blvd

Renee Pardello				Moisture Zone Key:				
382 N McCarrons Blvd				ud - upland-dry: dry, well-drained soils				
Roseville, MN 55113				um - upland-mesic: soil is moist, but not wet				
Shoreline/Upland Restoration				w - soil is wet, occassionally standing water				
				s - shallow water most of the time				
Suggested Plantlist for Lakeshore Stabilization/Upland Restoration				**Total:**	**194**			
	Key	**Plants for:**						
16	***W***	**Emergent zone**						
		Scientific	Common:	Moisture:	Native Habitat:	Flower:	Period:	Height:
4	CC	*Calamagrostis canadensis*	Bluejoint Grass	w,um	prairie, marsh, swamp	Green	July-Sept	36-72"
4	IV	*Iris versicolor*	Blue Flag Iris	s,w	marsh, peatland, lake edge	Blue	June-July	24-36"
4	SL	*Sagittaria latifolia*	Common Arrowhead	s, w	lake edge, marsh	White	July-Aug	24-42"
4	SE	*Sparganium eurycarpum*	Giant Bur-reed	s,w	lake edge, marsh	Green	June-July	24-60"
178		**Upland-Shade/Partial Shade**						
117		**Wildflowers**						
10	AT	*Asclepias tuberosa*	Butterfly Weed	ud	prairie, savanna	Orange	June-Sept	12-24"
6	AN	*Aster novae-angliae*	New England Aster	w,um	prairie, marsh, swamp	Blue	Aug-Oct	24-48"
10	AO	*Aster oolentangiensis*	Sky-blue Aster	um,ud	prairie, savanna, woodland	Blue	Aug-Oct	18-36"
6	CG	*Chelone glabra*	Turtlehead	w	lake edge, peatland	White	July-Oct	24-36"
7	EA	*Echinacea angustifolia*	Purple Coneflower	um,ud	prairie, savanna	Purple	July-Aug	24-36"
6	EP	*Echinacea pallida*	Pale Purple Coneflower	um,ud	prairie, savanna	Purple	July-Aug	24-36"
5	GM	*Geranium maculatum*	Wild Geranium	um	savanna, woodland, forest	Violet	May-June	12-24"
5	GT	*Geum triflorum*	Prairie-smoke	um,ud	dry prairie, woodland	Purple	April-June	6-12"
8	HA	*Helenium autumnale*	Sneezeweed	w,um	swamp, lake edge	Yellow	July-Oct	30-48"
4	HH	*Heliopsis helianthoides*	Ox-eye	w,um,ud	prairie, savanna, lake edge	Yellow	July-Sept	18-48"
5	LC	*Lobelia cardinalis*	Cardinal Flower	w,um	prairie, marsh, lake edge	Red	July-Oct	24-48"
5	MS	*Matteuccia struthiopteris*	Zig-zag Goldenrod	um	forest, swamp	Green		48"
8	MV	*Mertensia virginica*	Bluebells	um, ud	forest, savanna	Blue	May-June	12-24"
10	MF	*Monarda fistulosa*	Wild Bergamot	um,ud	prairie, savanna, woodland	Lavender	July-Aug	36-48"
5	PP	*Pulsatilla patens*	Pasque Flower	ud	prairie, savanna	Lavender	April-May	6"
10	RH	*Rudbeckia hirta*	Black Eyed Susan	um,ud	prairie, savanna	Yellow	June-Oct	24-36"
7	SC	*Sanguinaria canadensis*	Bloodroot	um,ud	woodland, forest, lake edge	white	April-May	3-9"
61		**Grasses**						
16	AG	*Andropogon gerardii*	Big Bluestem	um,ud	prairie, savanna, woodland	Purple	July-Sept	36-72"
5	BG	*Bouteloua gracilis*	Blue Grama	um,ud	prairie, savanna	Purple	July-Sept	6-12"
19	EH	*Elymus hystrix*	Bottlebrush Grass	w,um,ud	forest, woodland, lake edge	Green	June-July	24-48"
5	SS	*Schizachyrium scoparium*	Little Bluestem	um,ud	prairie, savanna, woodland	Amber	July-Sept	18-36"
16	SN	*Sorghastrum nutans*	Indian Grass	w,um	prairie, savanna, woodland	Amber	July-Sept	48-72"







1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO BEGINING AND WORK. THE DESIGNER OF RECORD SHALL BE NOTIFIED OF ANY DISCREPANCIES.

2. THE CURRENT EDITION OF MnDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION SHALL GENERALLY APPLY TO THIS PROJECT.

3. UNDERGROUND UTILITIES SHOWN ON THIS AND FOLLOWING SHEETS ARE BASED ON BEST AVAILABLE INFORMATION. THESE PLANS ARE NOT INTENDED TO SERVE AS A SUBSTITUTE FOR FIELD VERIFICATION OF ALL UTILTY LOCATIONS AND DEPTHS.

4. CONTACT GOPHER ONE CALL (811) PRIOR TO ANY WORK BEGINS.

5. IT IS THE CONTRACTOR RESPOSIBILITY TO PROVIDE APPROVED WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL WHICH IS NOT DESIRABLE TO BE INCORPORATED TO BE INCORPORATED INTO THIS PROJECT.

6. DURING CONSTRUCTION , THE CONTRACTOR SHALL USE ALL MEANS NECESARY TO CONTROL DUST FROM ALL WAORK AND STAGING AREAS. DUST CONTROL MEASURES SHALL BE IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS AND APPROVED BY THE OWNERS.

7. EROSION CONTROL MEASURES NECCESARY TO PROTECT AGAINST SILTATION, EROSION CONTROL AND DUST POLLUTION SHALL COMPLY WITH SOIL EROSION REQUIREMENTS OF THE STATE OF MN CODE AND ALL LOCAL ORDINACES.

8. CONSTRUCTION ACTIVITIES SHALL PRESERVE AND PROTECT EXISITNG STRUCTURES, UTILITIES, FENCES, TREES AND SHRUBS TO REMAIN AND OTHER EXISTING FEATURES TO REMAIN DURING CONSTRUCTIONS. DAMAGE DUE TO CONSTRUCTION SHALL BE REAPIRED TO ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

9. SPECIFIC DETAILS AND NOTES SHALL TAKE PRECEDENCE OVER STANDARD DETAILS AND NOTES.

10. CONTRACTOR SHALL ENSURE THE CONSTRUCTION SITE DRAINS PROPERLY DURING CONSTRUCTION.

11. CONTRACTOR SHALL COORDINATE ACCESS AND EMERGENCY ROUTES WITH OWNERS PRIOR TO ANY CONSTRUCTION.

12. CONTRACTOR TO COORDINATE PLACEMENT OF ALL STORAGE AND STAGING AREAS WITH OWNERS PRIOR TO CONSTRUCTION.

13. CONTRACTOR TO OBTAIN NECESSARY PERMITS FROM THE CITY OF WOODBRUY AND OTHER LGAS.

14. ALL GRADES TO SLOPE AWAY FROM ADJACENT BUILDINGS AND STRUCTURES

15. CONTRACT MUST PROTECT AGAINST COMPACTION OF RAINGARDEN BASIN, BIO-SWALES AND PROPOSED PLANTING AREAS. ALL EXCVATION SHOULD BE PREFORMED FROM OUTSIDE OF ANY PROPOSED PLANTING AREAS.

outdoor LAB Landscape Design LLC
address: 147 Tenth Street, St. Paul, Minnesota 55101
email: chuck@outdoorlab.net phone: 651-202-3662

N

SCALE IN FEET
0 5 10 20

INGULSRUD LAKESHORE
MCCARRONS LAKE
ROSEVILLE, MN

SCALE 1" = 10'
DATE 9/14/14
DRAWING #

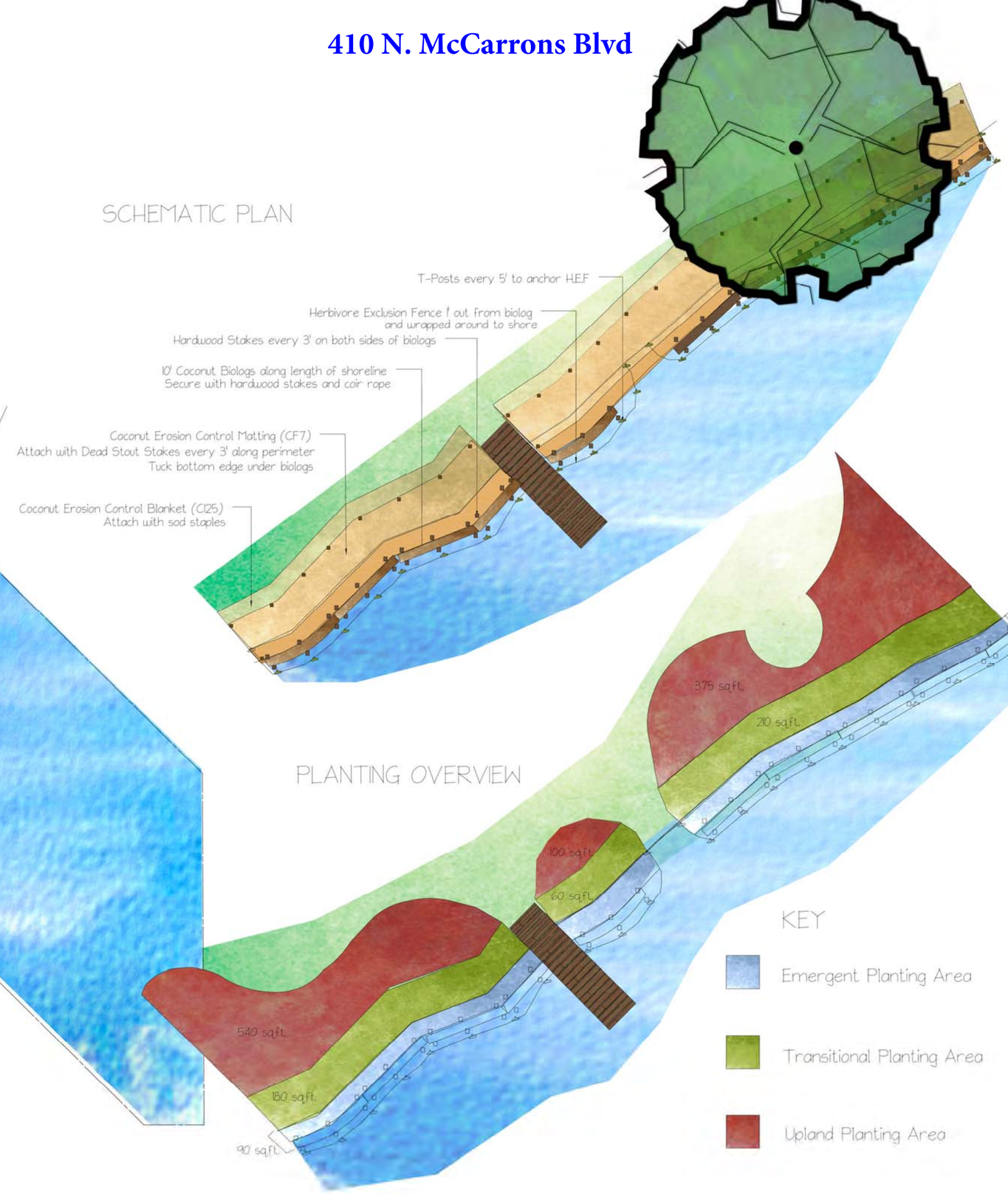
Powered by DynaSCAPE®

410 N. McCarrons Blvd

SITE LAYOUT

0' 10' 20' 40' 80'

SCHEMATIC PLAN

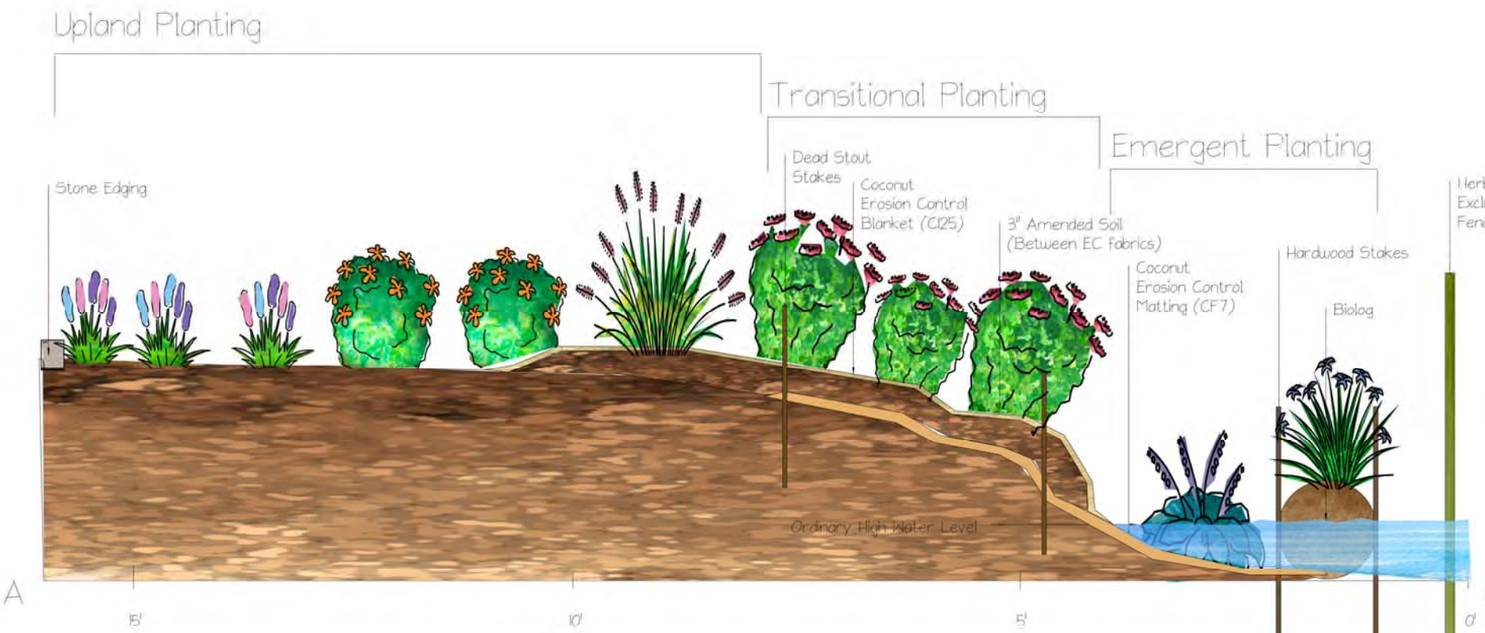


PLANTING OVERVIEW

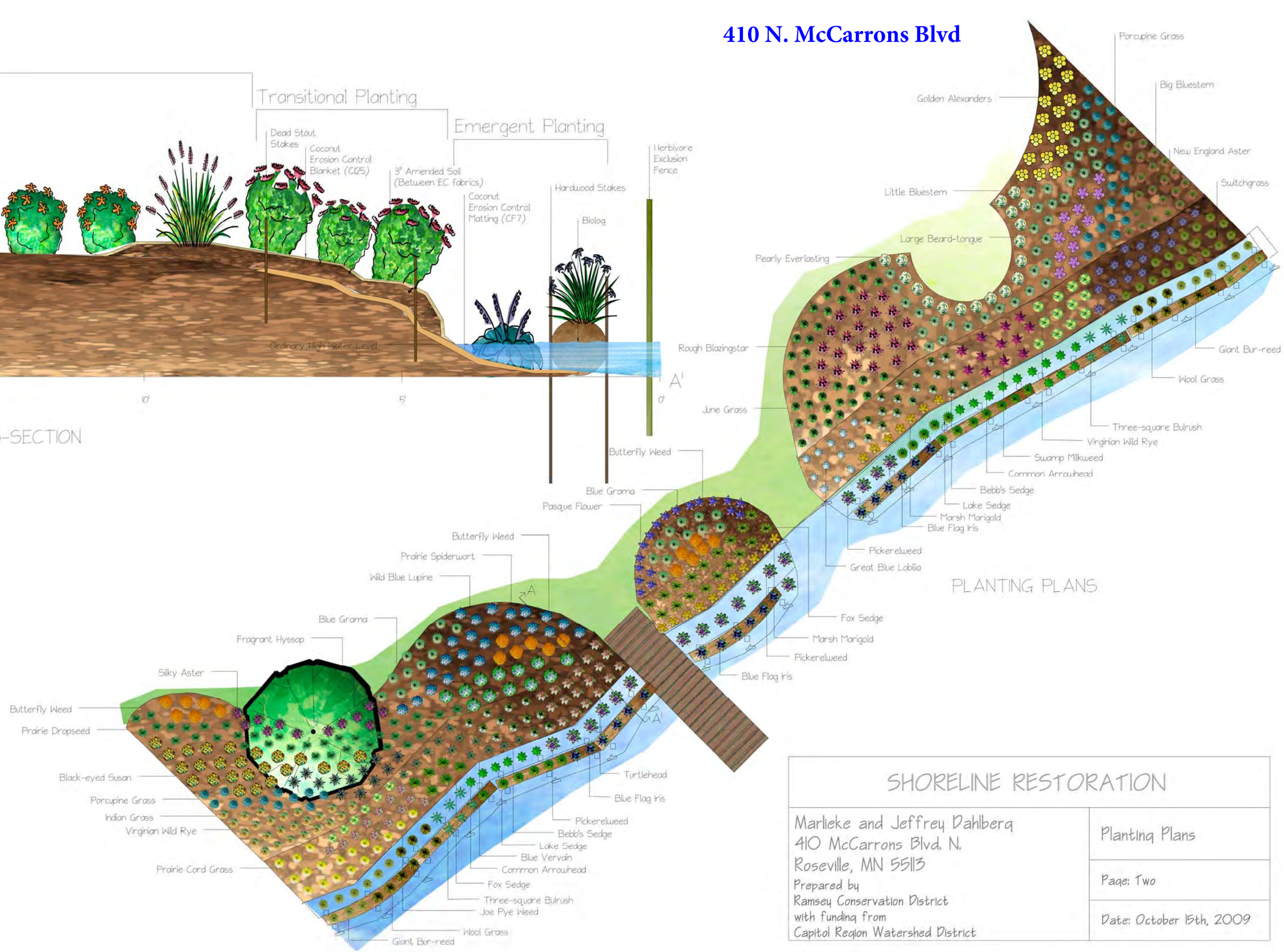
SHORELINE RESTORATION

Marlieke and Jeffrey Dahlberg 410 McCarrons Blvd. N. Roseville, MN 55113 Prepared by Ramsey Conservation District with funding from Capitol Region Watershed District	Design Overview
	Page: One
	Date: October 15th, 2009

410 N. McCarrons Blvd



SHORELINE CROSS-SECTION



PLANTING PLANS

SHORELINE RESTORATION

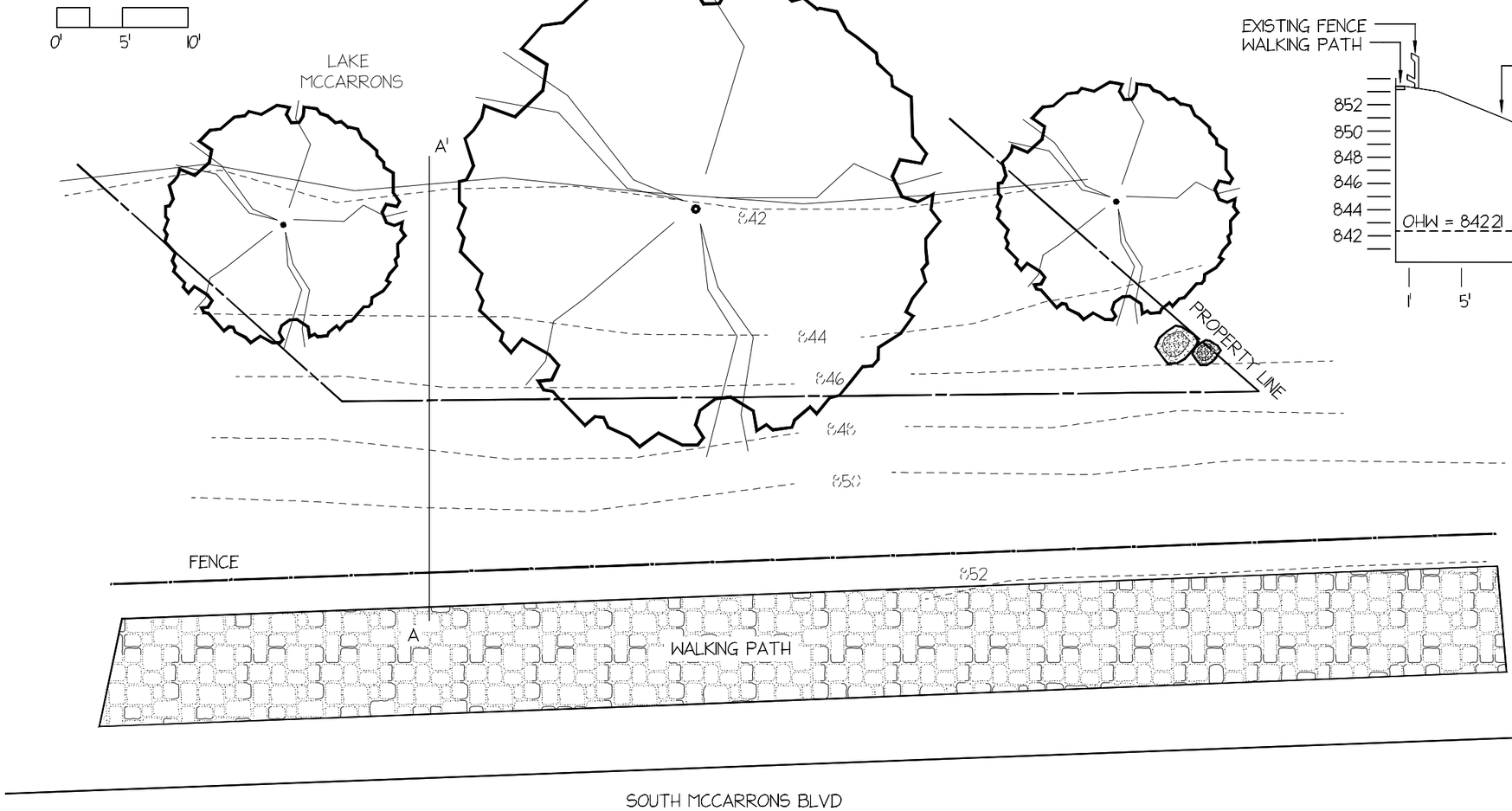
Marlieke and Jeffrey Dahlberg 410 McCarrons Blvd. N. Roseville, MN 55113 Prepared by Ramsey Conservation District with funding from Capitol Region Watershed District	Planting Plans
	Page: Two
	Date: October 15th, 2009

Dahlberg							
Roseville							
Suggested Plantlist for Lakeshore Stabilization							
			Moisture Zone Key:				
			ud - upland-dry: dry, well-drained soils				
			um - upland-mesic: soil is moist, but not wet				
			w - soil is wet, occassionally standing water				
			s - shallow water most of the time				
Emergent Planting							
# Needed	Scientific	Common:	Moisture:	Native Habitat:	Flower:	Period:	Height:
18	Carex lacustris	Lake Sedge	s,w,um	marsh, swamp, lake edge	Green	May-June	24-36"
18	Iris versicolor	Blue Flag Iris	s,w	marsh, peatland, lake edge	Blue	June-July	24-36"
18	Pontederia cordata	Pickerelweed	s, w	lake edge, marsh	Violet	July-Aug	24-36"
18	Sagittaria latifolia	Common Arrowhead	s, w	lake edge, marsh	White	July-Aug	24-42"
18	Scirpus cyperinus	Wool Grass	s,w,um	marsh, swamp, lake edge	Brown	June-July	36-48"
12	Scirpus pungens	Three-square Bulrush	s,w	marsh, pond, lake edge	Brown	June-July	24-48"
18	Sparganium eurycarpum	Giant Bur-reed	s,w	lake edge, marsh	Green	June-July	24-60"
Transitional Planting							
# Needed	Scientific	Common:	Moisture:	Native Habitat:	Flower:	Period:	Height:
	Wildflowers						
12	Asclepias incarnata	Swamp Milkweed	w,um	prairie, marsh, lake edge	Lavender	June-Aug	36-48"
18	Aster novae-angliae	New England Aster	w,um	prairie, marsh, swamp	Blue	Aug-Oct	24-48"
18	Caltha palustris	Marsh Marigold	w	swamp, peatland	Yellow	April-June	6-24"
18	Chelone glabra	Turtlehead	w	lake edge, peatland	White	July-Oct	24-36"
12	Eupatorium maculatum	Joe Pye Weed	w,um	wet prairie, marsh, swamp	Purple	July-Sept	24-48"
12	Lobelia siphilitica	Great Blue Lobelia	w,um	marsh, peatland, swamp	Blue	July-Oct	20-30"
12	Verbena hastata	Blue Vervain	w,um	prairie, marsh, swamp	Blue	June-Sept	36-48"
	Grasses						
30	Carex bebbii	Bebb's Sedge	w,um	marsh, swamp, lake edge	Green	May-June	24-36"
24	Carex vulpinoidea	Fox sedge	w,um	swamp, marsh, lake edge	Green	May-June	12-36"
18	Elymus virginicus	Virginian Wild Rye	w, um	wet prairie, woodland	Green	June, July	24-48"
18	Panicum virgatum	Switchgrass	w,um,ud	prairie, swamp, lake edge	Purple	June-Oct	36-60"
18	Spartina pectinata	Cord Grass	w,um	prairie, marsh, lake edge	Yellow	Aug-Oct	48-72"

410 N. McCarrons Blvd

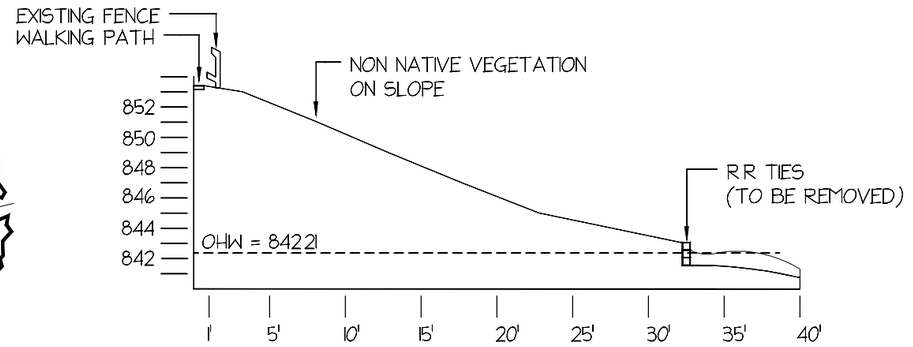
Upland Planting							
# Needed	Scientific	Common:	Moisture:	Native Habitat:	Flower:	Period:	Height:
	Wildflowers						
12	Agastache foeniculum	Fragrant Hyssop	um,ud	prairie, savanna	Blue	June-Oct	24-40"
18	Anaphalis margaritacea	Pearly Everlasting	um,ud	prairie, savanna, woodland	White	July-Sept	6-18"
24	Asclepias tuberosa	Butterfly Weed	ud	prairie, savanna	Orange	June-Sept	12-24"
12	Aster sericeus	Silky Aster	um,ud	prairie, savanna	Bluish	Aug-Oct	6-24"
24	Liatris aspera	Rough Blazing Star	um,ud	prairie, savanna, woodland	Purple	July-Sept	18-36"
24	Lupinus perennis	Wild Blue Lupine	um,ud	prairie, savanna	Blue	May-July	18-24"
12	Penstemon grandiflorus	Large Beard-tongue	ud	prairie, savanna, woodland	Lavender	May-June	18-48"
18	Pulsatilla patens	Pasque Flower	ud	prairie, savanna	Lavender	April-May	6"
24	Rudbeckia hirta	Black Eyed Susan	um,ud	prairie, savanna	Yellow	June-Oct	24-36"
12	Tradescantia bracteata	Prairie Spiderwort	um,ud	prairie, savanna	Blue	June-Aug	18-30"
18	Zizia aurea	Golden Alexanders	w,um	prairie, savanna, woodland	Yellow	May-July	24"
	Grasses						
24	Andropogon gerardii	Big Bluestem	um,ud	prairie, savanna, woodland	Purple	July-Sept	36-72"
24	Bouteloua gracilis	Blue Grama	um,ud	prairie, savanna	Purple	July-Sept	6-12"
36	Koeleria macrantha	June Grass	um,ud	prairie, savanna, woodland	Green	June-July	12-24"
36	Schizachyrium scoparium	Little Bluestem	um,ud	prairie, savanna, woodland	Amber	July-Sept	18-36"
24	Sorghastrum nutans	Indian Grass	w,um	prairie, savanna, woodland	Amber	July-Sept	48-72"
36	Sporobolus heterolepis	Prairie Dropseed	um,ud	prairie, savanna	Green	Aug-Oct	18-36"
36	Stipa spartea	Porcupine Grass	ud	prairie, savanna, woodland	Purple	June-July	36-48"
	Trees						
1	Betula nigra	River Birch	w, um, ud	canopy tree	green	mid-spring	up to 70'

EXISTING CONDITIONS



EXISTING CROSS SECTION

428 S. McCarrons Blvd



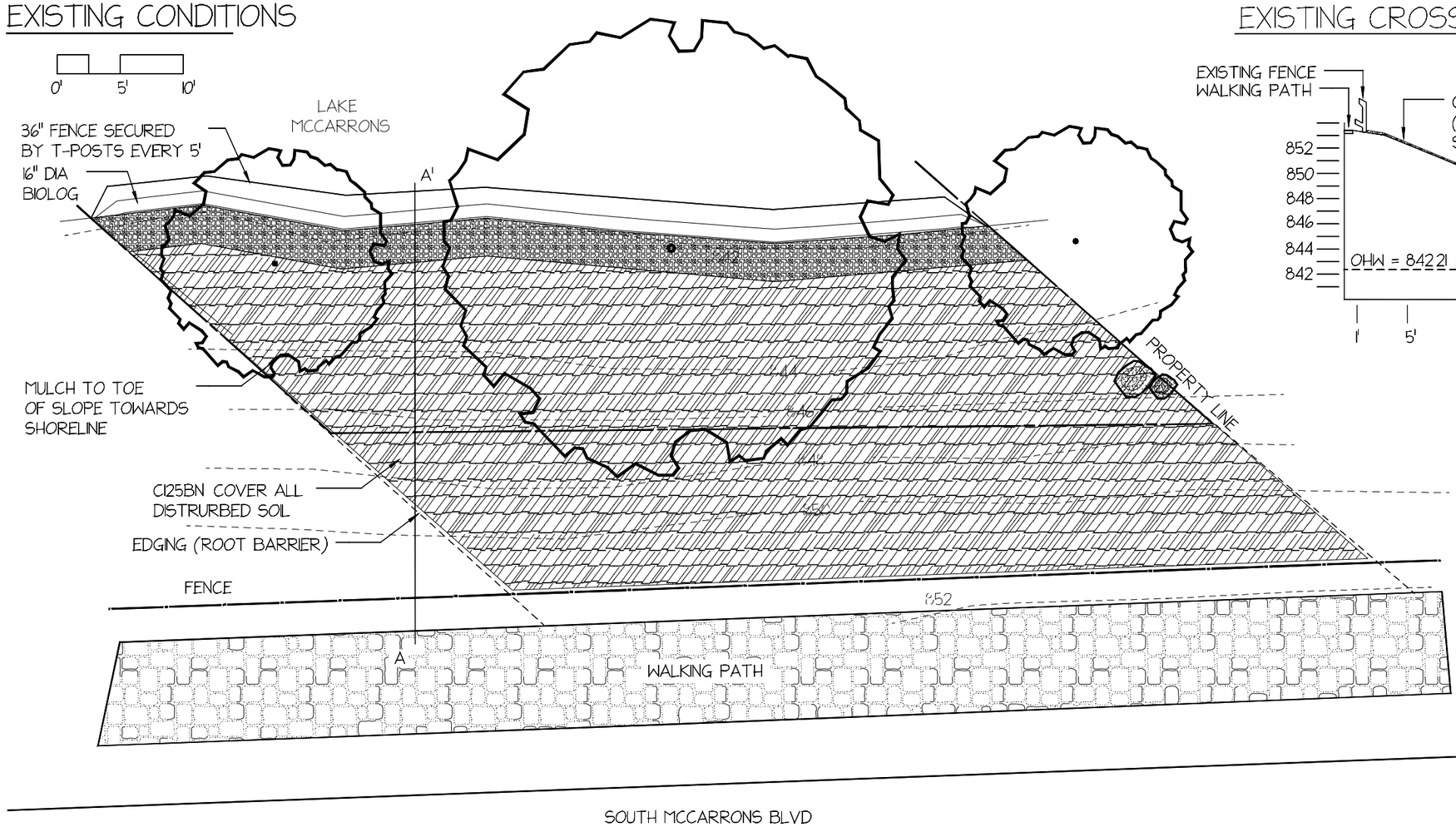
NOTES
-CALL GOPHER ONE 48 HOURS PRIOR TO ANY DIGGING (651-454-0002)
-CALL THE RCD WITH ANY QUESTIONS
-WORK WITHIN EASEMENT MUST BE APPROVED BY CITY

SHORELINE RESTORATION

PATRICK COLEMAN
428 SOUTH MCCARRONS BLVD, ROSEVILLE 55113

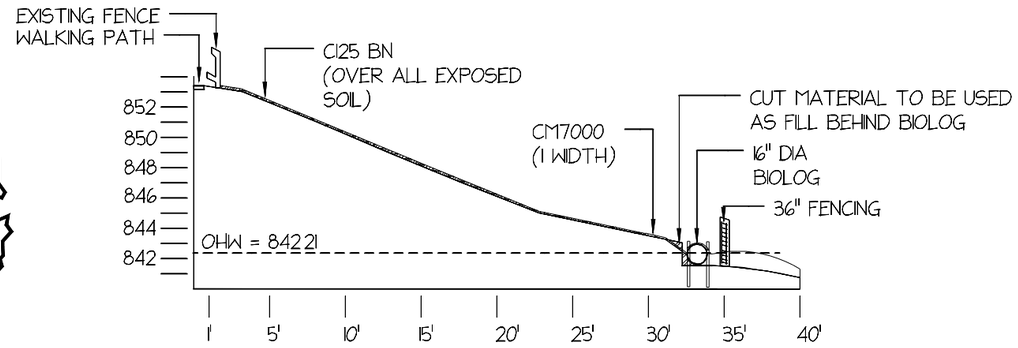
FUNDED BY: CAPITOL REGION WATERSHED DISTRICT (CRWD) BOARD OF WATER AND SOIL RESOURCES (BWSR)	PAGE 1 of 3
	DATE 26-JUL-11
	SCALE 1" = 10'
PROVIDED BY: RAMSEY CONSERVATION DISTRICT (RCD)	ORIGINAL 11" x 17"

EXISTING CONDITIONS



EXISTING CROSS SECTION

428 S. McCarrons Blvd



NOTES

-CALL GOPHER ONE 48 HOURS PRIOR TO ANY DIGGING (651-454-0002)
-CALL THE RCD WITH ANY QUESTIONS
-WORK WITHIN EASEMENT MUST BE APPROVED BY CITY
-PREPARE PROJECT AREA BY REMOVING EXISTING TURF AND OTHER VEGETATION BY USING A WATER SAFE HERBICIDE
-WAIT 2 WEEKS AND RESPRAY ANY GREEN AREAS (REPEAT IF NEEDED)
-INSTALL BIOLOG WITH 2" X 2" X 48" HARDWOOD STAKES
-INSTALL CM7000 WITH 2' DIAGNAL CUT STAKES AND TUCK UNDER BIOLOG
-INSTALL C125BN OVER ALL DISTURBED SOIL AND SECURE PER MANUFACTURE'S SPECS
-INSTALL EDGING AS A ROOT BARRIER AROUND PROJECT
-OWNER CAN ADD A DOCK/ACCESS AT OWN DISCRETION

SHORELINE RESTORATION

PATRICK COLEMAN
428 SOUTH MCCARRONS BLVD, ROSEVILLE 55113

FUNDED BY: CAPITOL REGION WATERSHED DISTRICT (CRWD) BOARD OF WATER AND SOIL RESOURCES (BWSR)	PAGE 2 of 3
	DATE 26-JUL-11
	SCALE 1" = 10'
PROVIDED BY: RAMSEY CONSERVATION DISTRICT (RCD)	ORIGINAL 11" x 17"

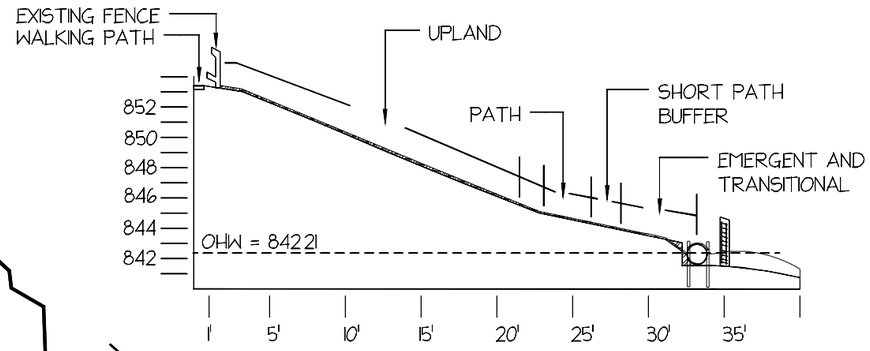
EXISTING CONDITIONS

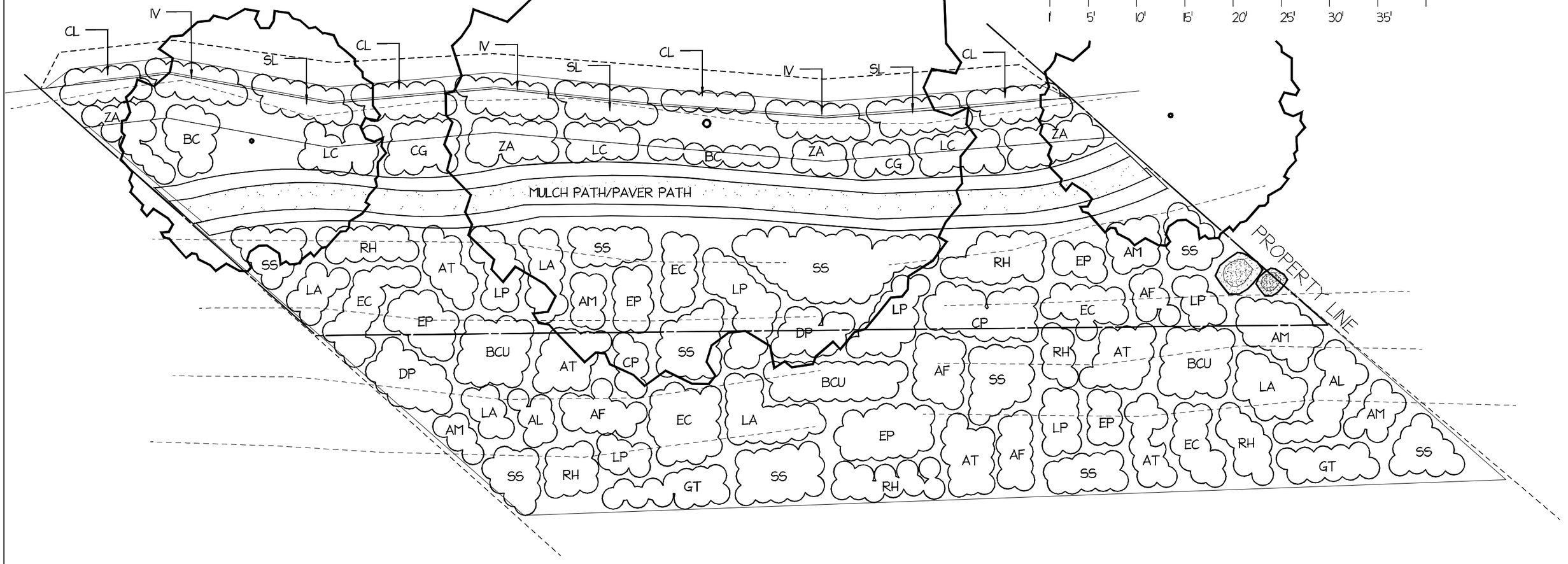
0' 33' 66'

LAKE MCCARRONS

EXISTING CROSS SECTION

428 S. McCarrons Blvd





NOTES
- PLANT UPLAND PLUGS AT 18" ON CENTER SPACING THROUGH BLANKET/MULCH
- PLANT EMERGENT PLANTS BEHIND BIOLOG AT 18" ON CENTER SPACING
- WATER IMMEDIATELY AFTER PLANTING
- ENSURE PLANTS GET 1" OF WATER PER WEEK DURING THE FIRST GROWING SEASON
- MONITOR OFTEN AND WEED AS NEEDED

SHORELINE RESTORATION

PATRICK COLEMAN
428 SOUTH MCCARRONS BLVD, ROSEVILLE 55113

FUNDED BY: CAPITOL REGION WATERSHED DISTRICT (CRWD) BOARD OF WATER AND SOIL RESOURCES (BWSR) PROVIDED BY: RAMSEY CONSERVATION DISTRICT (RCD)	PAGE 3 of 3
	DATE 26-JUL-11
	SCALE 1" = 66'
	ORIGINAL 11" x 17"

Ramsey Conservation District
PLANT SCHEDULE

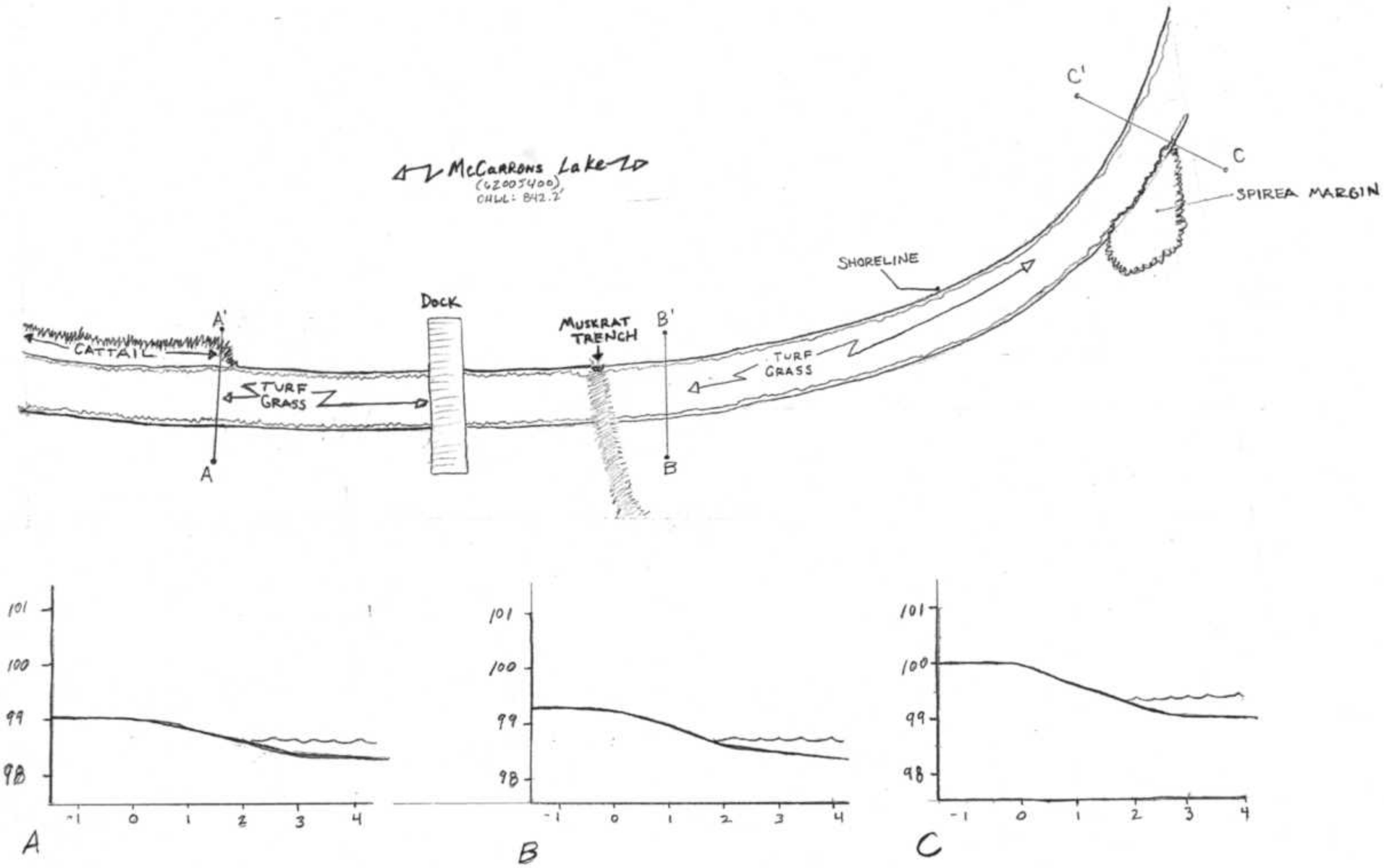
Patrick Coleman
528 McCarrons Blvd South
Roseville, MN 55113
Shoreline Restoration

Total Plants:
LF: 70
SF: 2,200
Date: 6-Sep-11

Aquatic

Qty:	Key:	Scientific:	Common:	Flower:	Period:	Height:	Size:	Spacing:
25	AF	Agastache foeniculum	Fragrant Hyssop	Blue	June-Oct	24-40"	Plug	18" o.c.
42	AM	Anaphalis margaritacea	Pearly Everlasting	White	July-Sept	6-18"	Plug	18" o.c.
60	AT	Asclepias tuberosa	Butterfly Weed	Orange	June-Sept	12-24"	Plug	18" o.c.
21	AL	Aster laevis	Smooth Aster	Blue	July-Oct	20-30"	Plug	18" o.c.
50	BCU	Bouteloua curtipendula	Side Oats Grama	Red	July-Sept	18-30"	Plug	18" o.c.
17	BC	Bromus ciliatus	Fringed brome	Green	June-July	24-36"	Plug	18" o.c.
6	BK	Bromus kalmii	Kalm's Brome	Green	June-July	24-36"	Plug	18" o.c.
24	CL	Carex lacustris	Lake Sedge	Green	May-June	24-36"	4" Pot	18" o.c.
18	CG	Chelone glabra	Turtlehead	White	July-Oct	24-36"	Plug	18" o.c.
25	CP	Coreopsis palmata	Stiff Tickseed	Yellow	June-July	12-24"	Plug	18" o.c.
27	DP	Dalea purpurea	Purple Prairie Clover	Purple	June-July	12-24"	Plug	18" o.c.
49	EP	Echinacea purpurea	Purple Confeflower	Purple	July-Aug	24-36"	Plug	18" o.c.
63	EC	Elymus canadensis	Canada Wild Rye	Green	July-Aug	24-36"	Plug	18" o.c.
22	GT	Geum triflorum	Prairie-smoke	Purple	April-June	6-12"	Plug	18" o.c.
30	IV	Iris versicolor	Blue Flag Iris	Blue	June-July	24-36"	4" Pot	18" o.c.
6	LC	Lespedeza capitata	Bush Clover	White	July-Oct	24-36"	Plug	18" o.c.
55	LA	Liatris aspera	Rough Blazing Star	Purple	July-Sept	18-36"	Plug	18" o.c.
12	LC	Lobelia cardinalis	Cardinal Flower	Red	July-Oct	24-48"	Plug	18" o.c.
55	LP	Lupinus perennis	Wild Blue Lupine	Blue	May-July	18-24"	Plug	18" o.c.
61	RH	Rudbeckia hirta	Black Eyed Susan	Yellow	June-Oct	24-36"	Plug	18" o.c.
30	SL	Sagittaria latifolia	Common Arrowhead	White	July-Aug	24-42"	4" Pot	18" o.c.
145	SS	Schizachyrium scoparium	Little Bluestem	Amber	July-Sept	18-36"	Plug	18" o.c.
6	SSP	Solidago speciosa	Showy Goldenrod	Yellow	Aug-Oct	24-48"	Plug	18" o.c.
6	VS	Verbena stricta	Hoary Vervain	Blue	June-Sept	12-24"	Plug	18" o.c.
40	ZA	Zizia aurea	Golden Alexanders	Yellow	May-July	24"	Plug	18" o.c.
895								

451 S. McCarrons Blvd



Shoreline Existing Conditions

Sheet 1 of 3

George Johnson
451 McCarrons Blvd S
Roseville, MN 55113

Prepared by:
Ramsey Conservation District
July 19, 2008

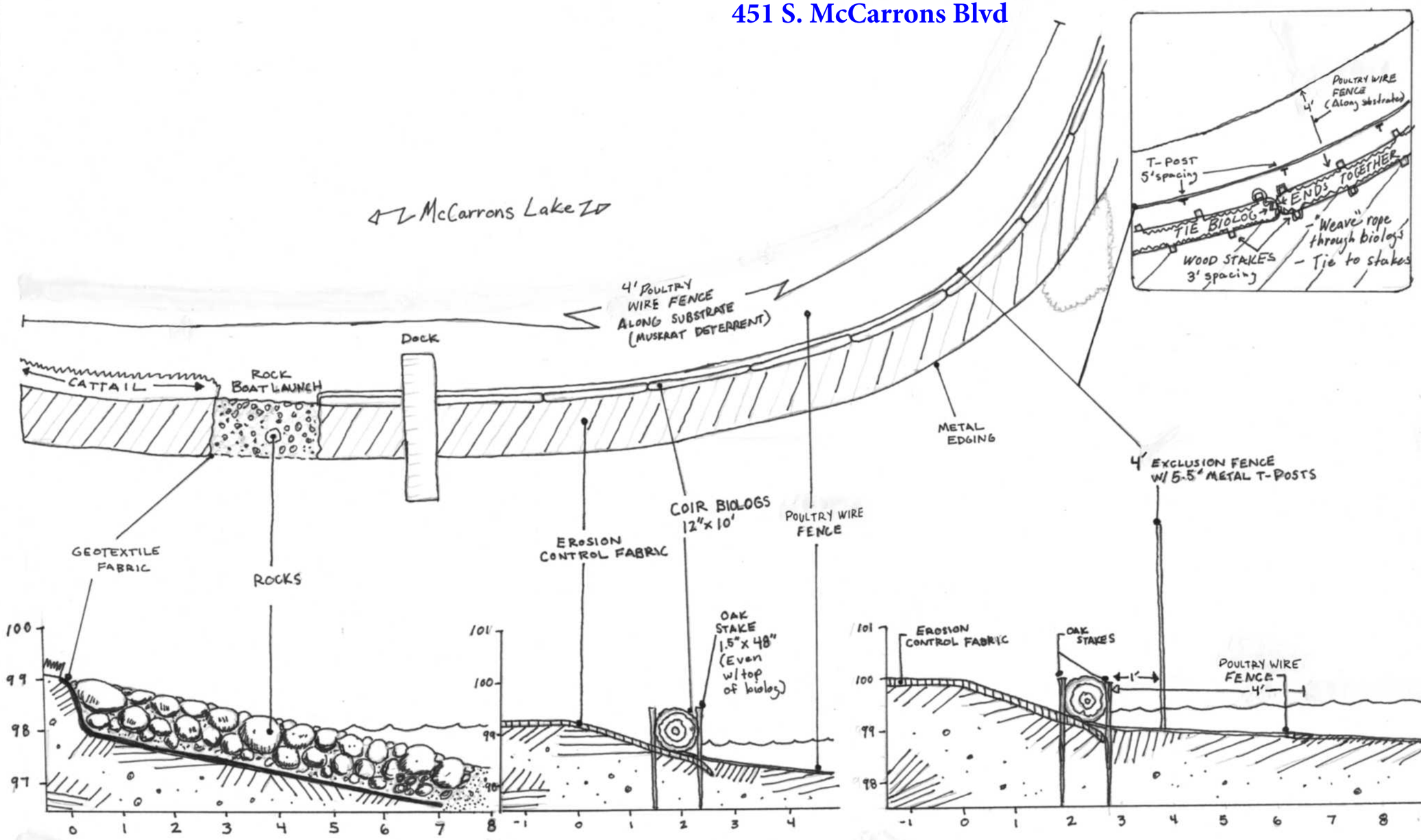
Scale:

0 5' 20' 40' 50'

451 S. McCarrons Blvd

Notes :

- 5 x 10 ft rock boat launch to be installed next to cattail. Permeable Geotextile fabric to be placed underneath rock.
- Erosion control fabric (C125) to be placed over remainder of buffer area.
- Metal edging (1/8 in x 4 in) to be placed along upland edge of buffer.
- 4 ft poultry wire fence to be laid along substrate out from biologs to deter muskrat tunneling.
- Coir biologs to be placed and staked (3 ft spacing) along entire length of shore, except at cattail stand and rock boat launch on North edge of property.
- 4 ft herbivory exclusion fence to be installed (using metal t-posts, 5-6 ft spacing) along entire length of biologs (1 ft out from biologs).



Shoreline Restoration Plan

Sheet 2 of 3

George Johnson
451 McCarrons Blvd S
Roseville, MN 55113

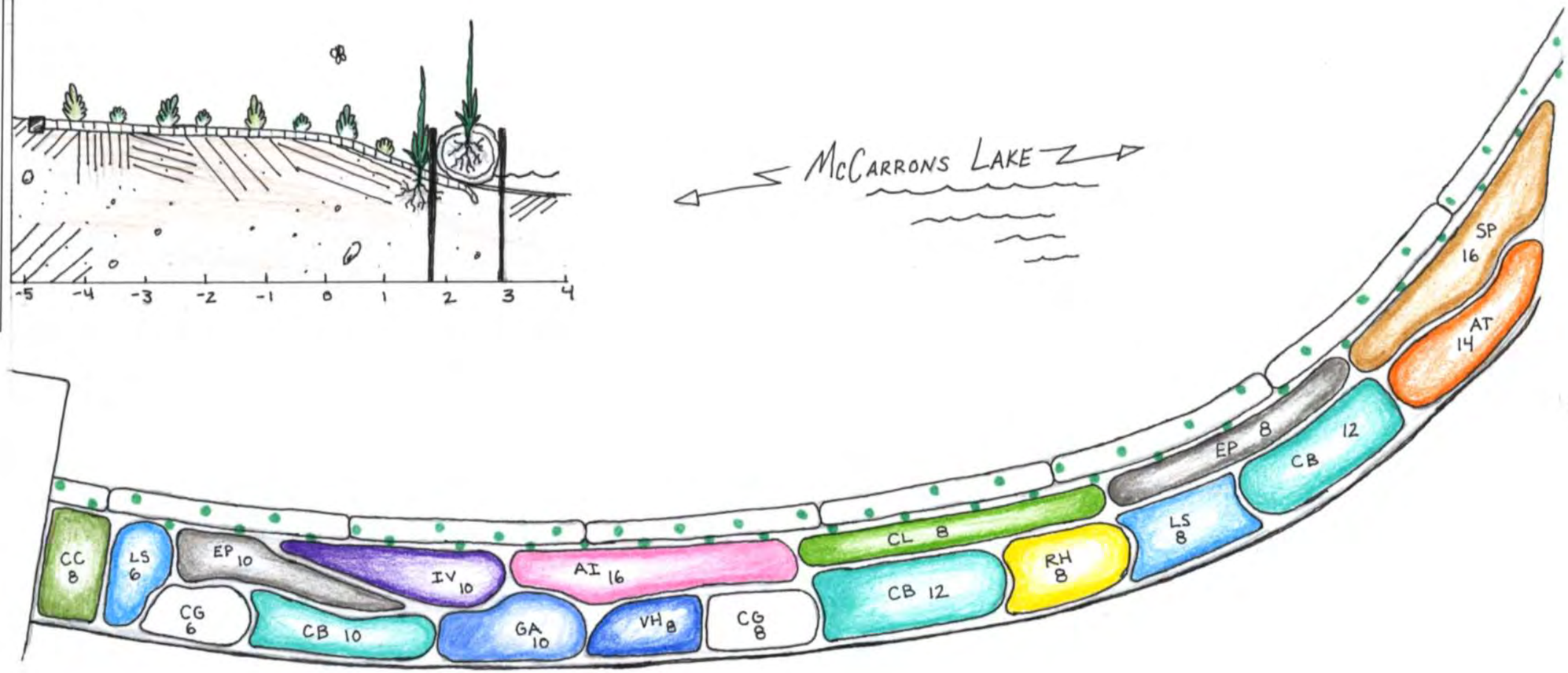
Prepared by:
Ramsey Conservation District
July 19, 2008

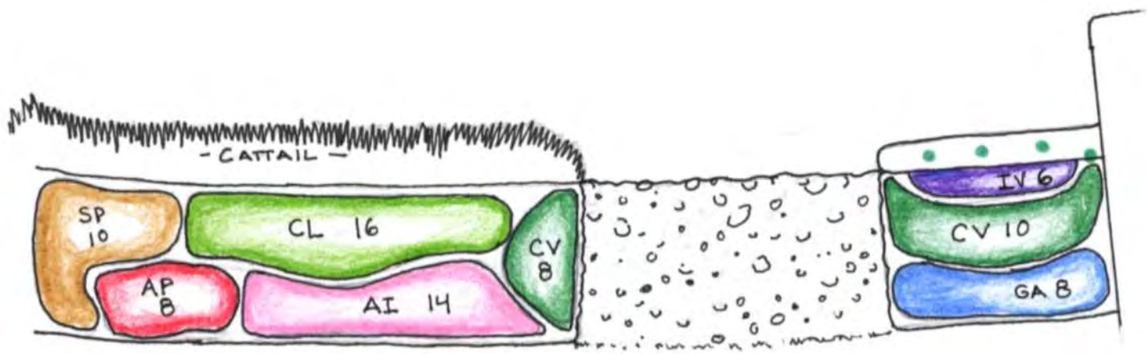
Scale: 0 5' 20' 40' 50'

451 S. McCarrons Blvd

Notes :

- Buffer area (mulched, C125) to be planted @ 18 inch on-center spacing (forbs, grasses, sedges) according to plan.
- Biologs to be planted @18 inch on-center spacing- alternating between planting plug well into biolog and into soil directly behind biolog.
- Buffer area to receive 3-in shredded hardwood mulch.
- See attached for species info.





Shoreline Planting Plan
Sheet 3 of 3

George Johnson
451 McCarrons Blvd S
Roseville, MN 55113

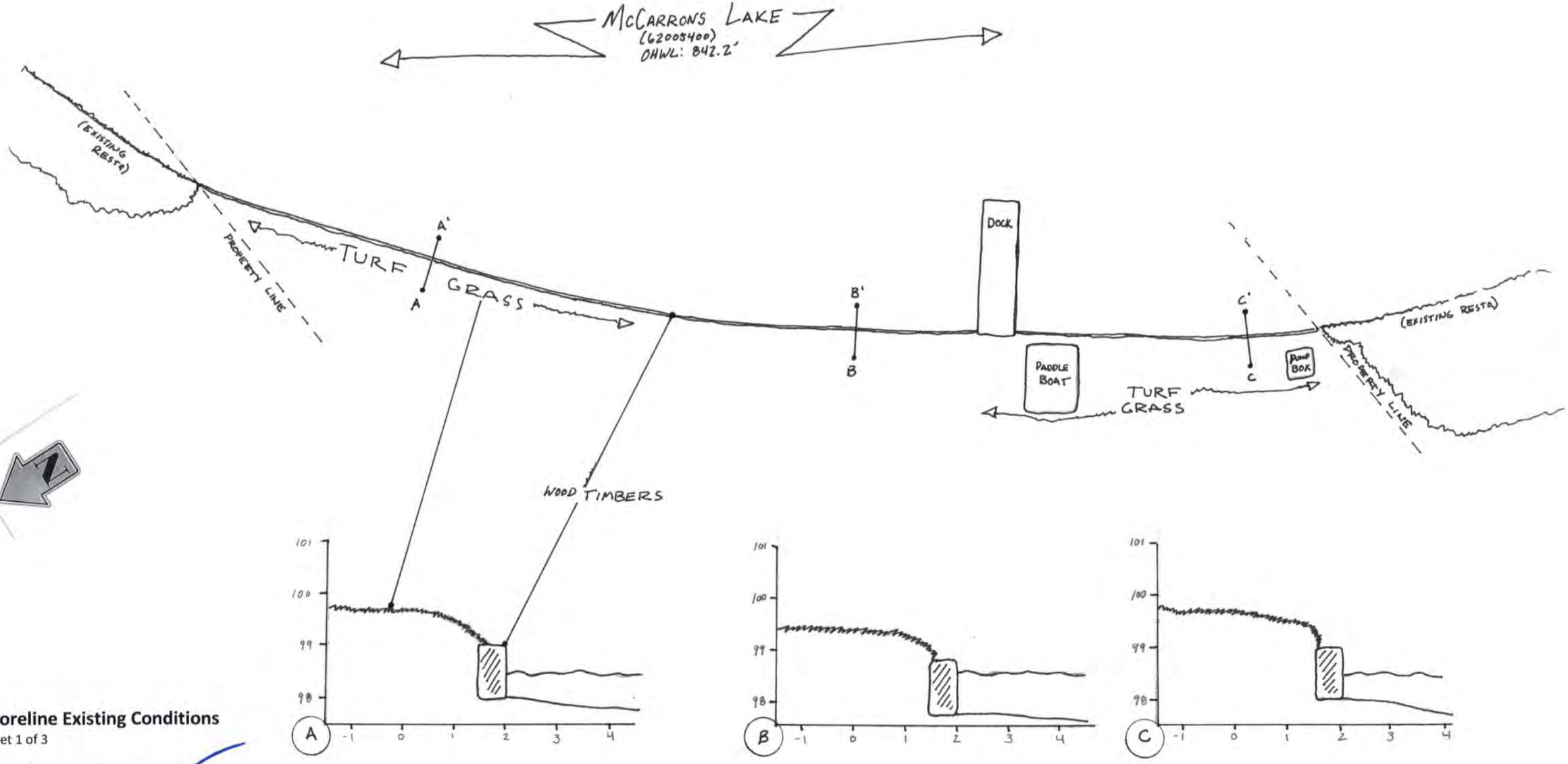
Prepared by:
Ramsey Conservation District
July 19, 2008

Scale:

0 1' 5' 10' 20' 25'

451 S. McCarrons Blvd

George Johnson				Moisture Zone Key:				
451 McCarrons Blvd S				ud - upland-dry: dry, well-drained soils				
Roseville, MN 55113				um - upland-mesic: soil is moist, but not wet				
				w - soil is wet, occassionally standing water				
				s - shallow water most of the time				
Suggested Plantlist for Lakeshore Stabilization				**Total:**	**318**			
				(Buffer)	258			
Plants for:				(Biologs)	60			
108		**Biolog/Emergent plants**						
	Key	*Scientific*	Common:	Moisture:	Native Habitat:	Flower:	Period:	Height:
20	CC	*Carex comosa*	Bottlebrush Sedge	s,w,um	marsh, peatland, lake edge	Green	May-June	24-42"
36	CL	*Carex lacustris*	Lake Sedge	s,w,um	marsh, swamp, lake edge	Green	May-June	24-36"
28	IV	*Iris versicolor*	Blue Flag Iris	s,w	marsh, peatland, lake edge	Blue	June-July	24-36"
12	SL	*Sagittaria latifolia*	Common Arrowhead	s, w	lake edge, marsh	White	July-Aug	24-42"
12	SA	*Scirpus pungens*	Three-square Bulrush	s,w	marsh, pond, lake edge	Brown	June-July	24-48"
Plants for:								
188		**Wet Soils**						
110		**Wildflowers**						
		Scientific	Common:	Moisture:	Native Habitat:	Flower:	Period:	Height:
30	AI	*Asclepias incarnata*	Swamp Milkweed	w,um	prairie, marsh, lake edge	Lavender	June-Aug	36-48"
8	AP	*Aster puniceus*	Red-stemmed aster	w	marsh, swamp	Violet	Aug-Oct	18-60"
14	CG	*Chelone glabra*	Turtlehead	w	lake edge, peatland	White	July-Oct	24-36"
18	EP	*Eupatorium perfoliatum*	Boneset	w,um	prairie, marsh, swamp	White	June-Aug	24-42"
18	GA	*Gentiana andrewsii*	Bottle Gentian	w,um	prairie, marsh, lake edge	Blue	Aug-Oct	18-30"
14	LS	*Lobelia siphilitica*	Great Blue Lobelia	w,um	marsh, peatland, swamp	Blue	July-Oct	20-30"
8	VH	*Verbena hastata*	Blue Vervain	w,um	prairie, marsh, swamp	Blue	June-Sept	36-48"
78		**Grasses**						
34	CB	*Calamagrostis canadensis*	Bluejoint Grass	w,um	prairie, marsh, swamp	Green	July-Sept	36-72"
18	CV	*Carex vulpinoidea*	Fox sedge	w,um	swamp, marsh, lake edge	Green	May-June	12-36"
26	SP	*Spartina pectinata*	Cord Grass	w,um	prairie, marsh, lake edge	Yellow	Aug-Oct	48-72"
Plants for:								
22		**Moist to Dry Soils**						
22		**Wildflowers**						
		Scientific	Common:	Moisture:	Native Habitat:	Flower:	Period:	Size:
14	AT	*Asclepias tuberosa*	Butterfly Weed	ud	prairie, savanna	Orange	June-Sept	12-24"
8	RH	*Rudbeckia hirta*	Black Eyed Susan	um,ud	prairie, savanna	Yellow	June-Oct	24-36"



Shoreline Existing Conditions
Sheet 1 of 3

Bill & Helen Lundell
456 Bayview Dr.
Roseville, MN 55113

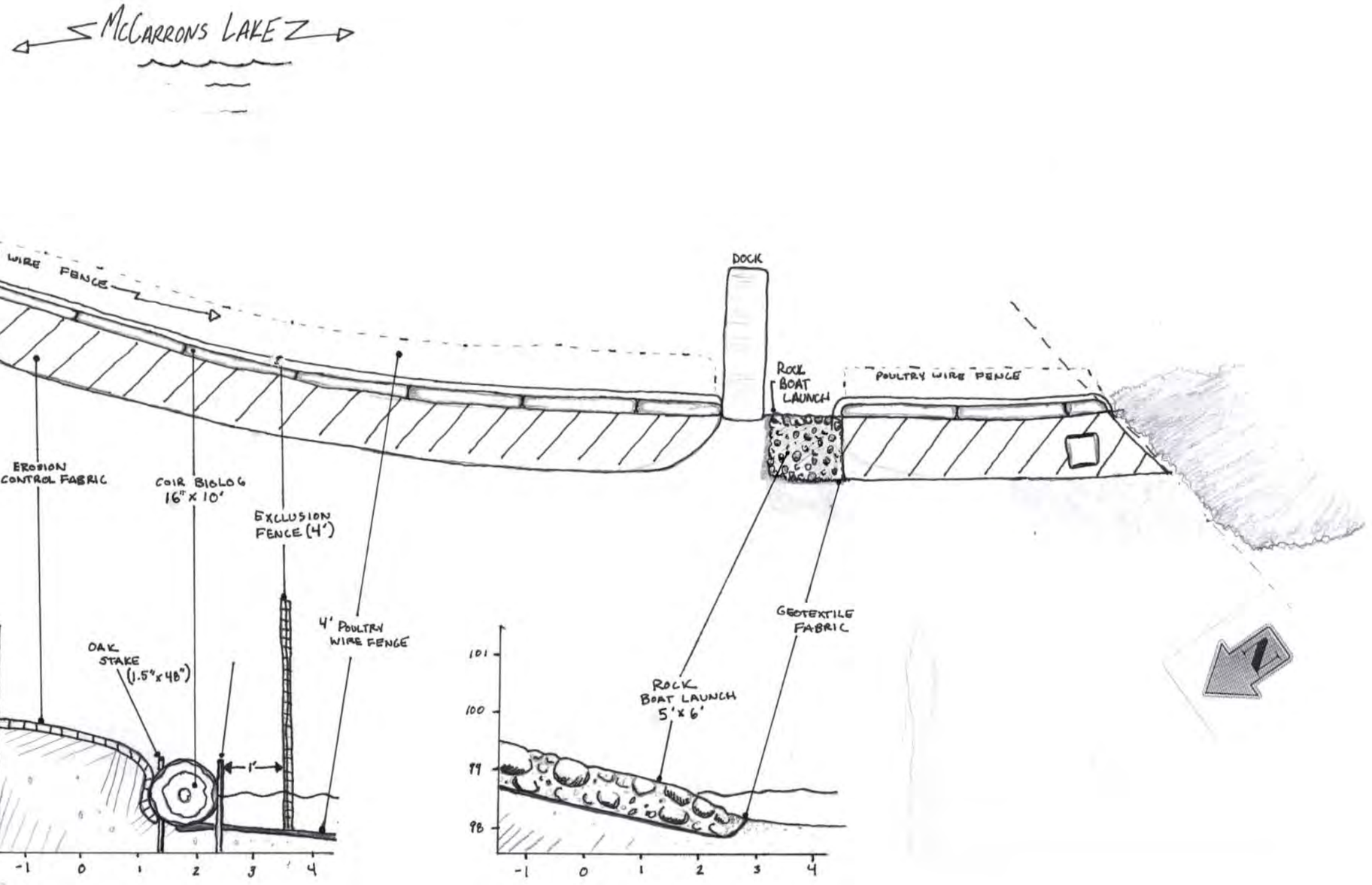
1425 Paul Kirkwold Drive
Highway 96 & Hamline Ave
Arden Hills, MN 55112
(651) 266-7270

Prepared by:
Ramsey Conservation District
August 12, 2008

Scale:

0 5' 20' 40' 50'

456 Bayview Dr



Notes :

- 5 x 6 ft rock access to be installed next to dock. Permeable Geotextile fabric to be placed underneath rock.
- Erosion control fabric (C125) to be placed over remainder of buffer area.
- Metal edging (1/8 in x 4 in) to be placed along upland edge of buffer.
- 4 ft poultry wire fence to be laid along substrate out from biologs to deter muskrat tunneling. Secure bottom with metal U staples.
- Wood timbers along shore to be removed and replaced with biologs.
- Coir biologs to be placed and staked (3 ft spacing) along entire length of shore, except at rock access and dock.
- 4 ft herbivory exclusion fence to be installed (using metal t-posts, 5-6 ft spacing) along entire length of biologs (1 ft out from biologs). Secure bottom with metal U staples.

Shoreline Restoration Plan

Sheet 2 of 3

Bill & Helen Lundell
456 Bayview Dr.
Roseville, MN 55113

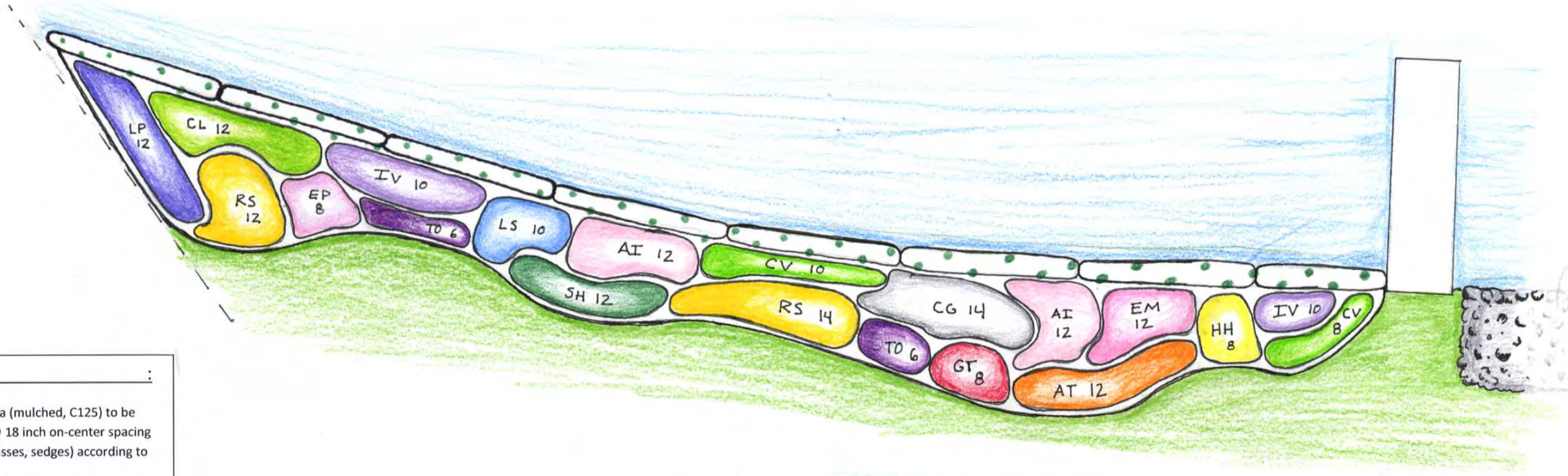
1425 Paul Kirkwold Drive
Highway 96 & Hamline Ave
Arden Hills, MN 55112
(651) 266-7270

Prepared by:
Ramsey Conservation District
August 12, 2008

Scale:

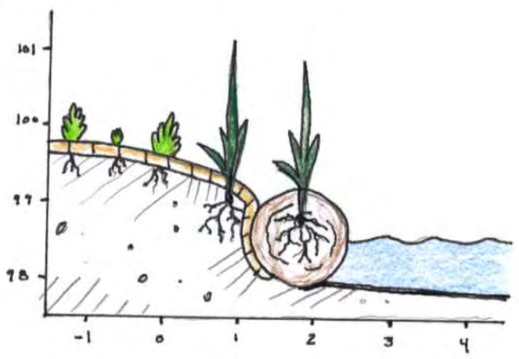
0 5' 20' 40' 50'

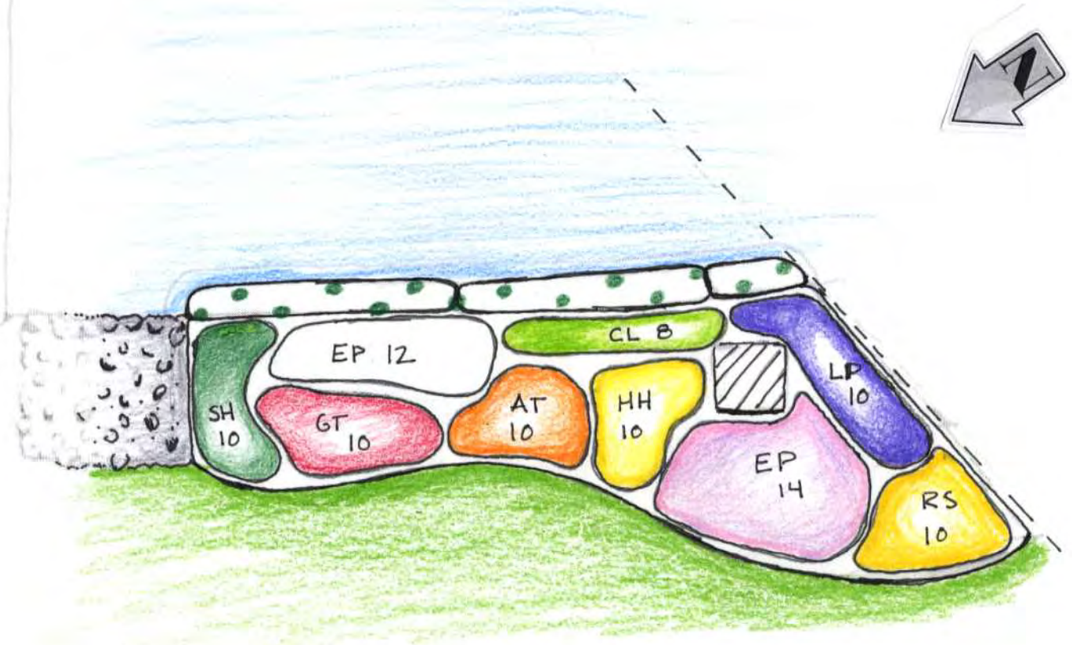
456 Bayview Dr



Notes :

- Buffer area (mulched, C125) to be planted @ 18 inch on-center spacing (forbs, grasses, sedges) according to plan.
- Biologs to be planted @18 inch on-center spacing- alternating between planting plug well into biolog and into soil directly behind biolog.
- Buffer area to receive 3-in shredded hardwood mulch.
- See attached for species info.





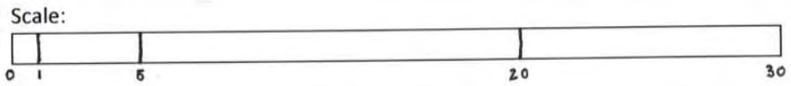
Shoreline Planting Plan
Sheet 3 of 3

Bill & Helen Lundell
456 Bayview Dr.
Roseville, MN 55113

1425 Paul Kirkwold Drive
Highway 96 & Hamline Ave
Arden Hills, MN 55112
(651) 266-7270

Prepared by:
Ramsey Conservation District
August 12, 2008

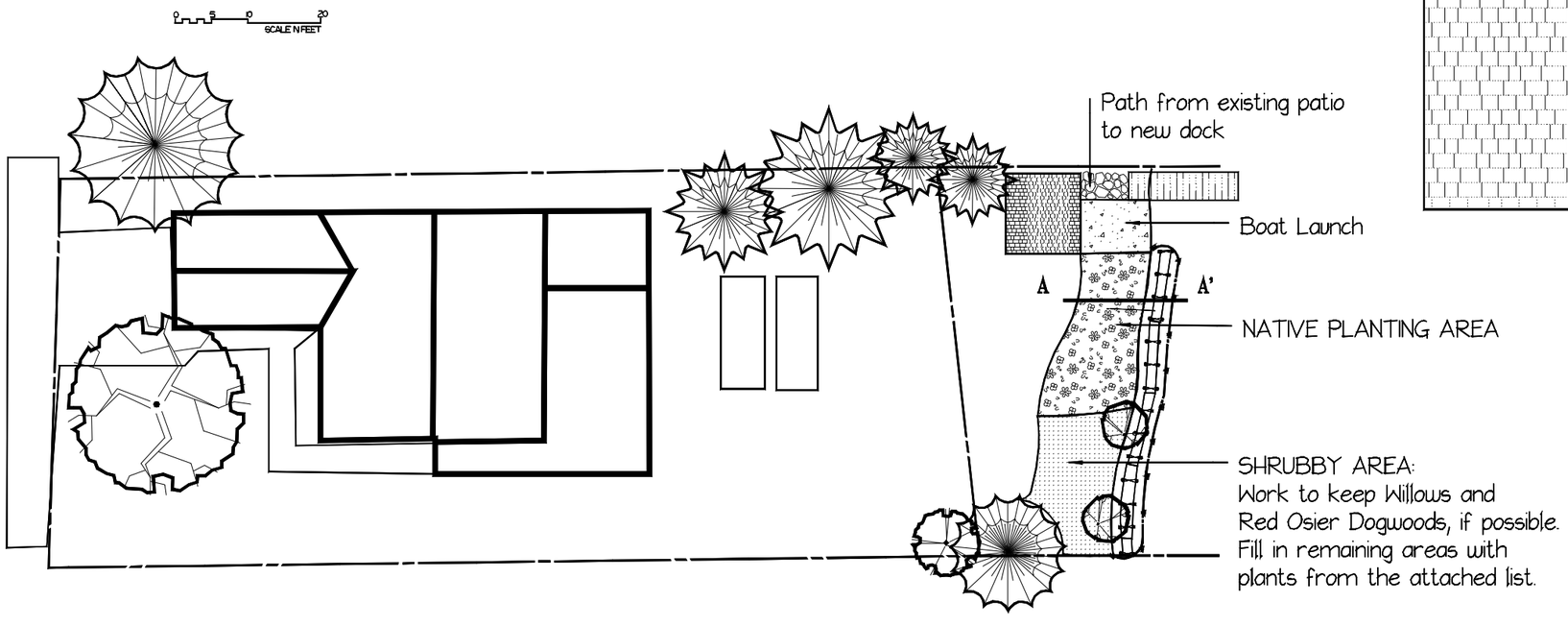
Scale:



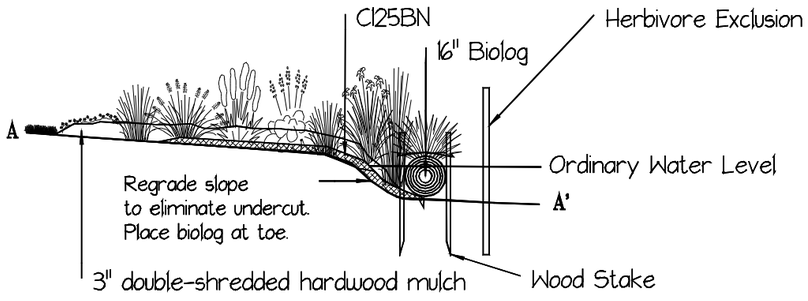
Bill & Helen Lundell				Moisture Zone Key:				
456 Bayview Drive				ud - upland-dry: dry, well-drained soils				
Roseville, MN 55113				um - upland-mesic: soil is moist, but not wet				
Shoreline				w - soil is wet, occassionally standing water				
				s - shallow water most of the time				
Suggested Plantlist for Lakeshore Stabilization				**Total:**	**366**			
				(Buffer)	302			
Plants for:				(Biologs)	64			
104		**Biolog/Emergent plants**						
	Key	*Scientific*	Common:	Moisture:	Native Habitat:	Flower:	Period:	Height:
36	CL	*Carex lacustris*	Lake Sedge	s,w,um	marsh, swamp, lake edge	Green	May-June	24-36"
36	IV	*Iris versicolor*	Blue Flag Iris	s,w	marsh, peatland, lake edge	Blue	June-July	24-36"
16	SL	*Sagittaria latifolia*	Common Arrowhead	s, w	lake edge, marsh	White	July-Aug	24-42"
16	SA	*Scirpus pungens*	Three-square Bulrush	s,w	marsh, pond, lake edge	Brown	June-July	24-48"
Plants for:								
112		**Wet Soils**						
94		**Wildflowers**						
		Scientific	Common:	Moisture:	Native Habitat:	Flower:	Period:	Height:
24	AI	*Asclepias incarnata*	Swamp Milkweed	w,um	prairie, marsh, lake edge	Lavender	June-Aug	36-48"
12	EM	*Eupatorium maculatum*	Joe Pye Weed	w,um	wet prairie, marsh, swamp	Purple	July-Sept	24-48"
14	CG	*Chelone glabra*	Turtlehead	w	lake edge, peatland	White	July-Oct	24-36"
12	EP	*Eupatorium perfoliatum*	Boneset	w,um	prairie, marsh, swamp	White	June-Aug	24-42"
22	LP	*Liatris pychnostachya*	Praire Blazing Star	w,um	prairie, marsh, lake edge	Purple	July-Sept	24-36"
10	LS	*Lobelia siphilitica*	Great Blue Lobelia	w,um	marsh, peatland, swamp	Blue	July-Oct	20-30"
18		**Grasses**						
18	CV	*Carex vulpinoidea*	Fox sedge	w,um	swamp, marsh, lake edge	Green	May-June	12-36"
Plants for:								
150		**Moist to Dry Soils**						
128		**Wildflowers**						
		Scientific	Common:	Moisture:	Native Habitat:	Flower:	Period:	Size:
22	EP	*Echinacea purpurea*	Purple Coneflower	um,ud	prairie, savanna	Purple	July-Aug	24-36"
22	AT	*Asclepias tuberosa*	Butterfly Weed	ud	prairie, savanna	Orange	June-Sept	12-24"
36	RS	*Rudbeckia hirta*	Black Eyed Susan	um,ud	prairie, savanna	Yellow	June-Oct	24-36"
18	HH	*Heliopsis helianthoides*	Oxeye	w,um,ud	prairie, savanna, lake edge	Yellow	June-Oct	24-42"
12	TO	*Tradescantia occidentalis*	Prairie Spiderwort	um,ud	prairie, savanna	Blue	June-Aug	18-30"
18	GT	*Geum triflorum*	Prairie-smoke	um,ud	dry prairie, woodland	Purple	April-June	6-12"
22		**Grasses**						
22	SH	*Sporobolus heterolepis*	Prairie Dropseed	um,ud	prairie, savanna	Green	Aug-Oct	18-36"

459 S. McCarrons Blvd

Plan Overview



Shoreline Restoration Cross-section



Shoreline Restoration

Anne Vaughan

459 McCarrons Blvd. S

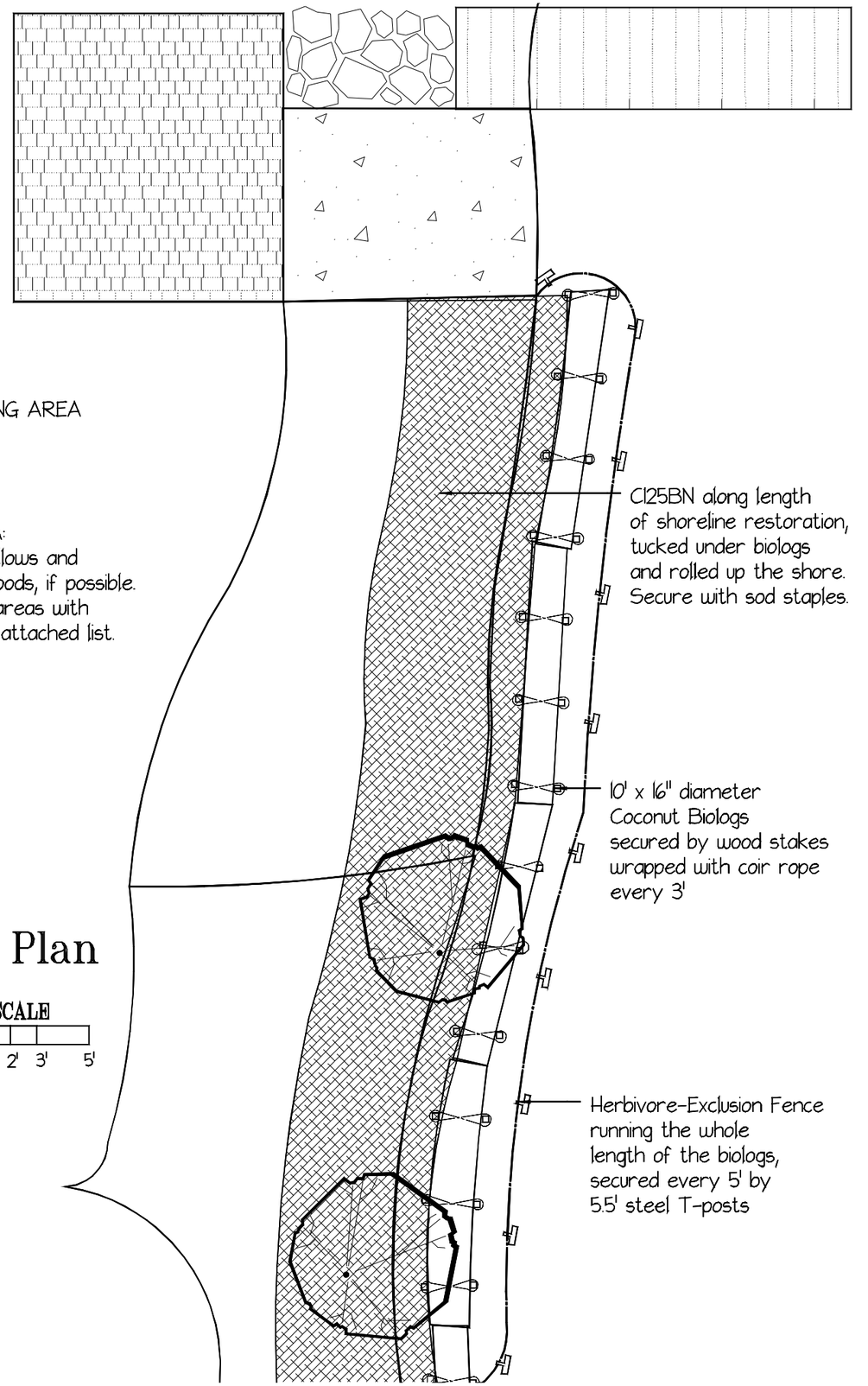
client: Roseville, MN 55113

scale	date	revision
1" = 20'	June 7th, 2010	First
drawn by: Ramsey Conservation District	funded by: Capitol Region Watershed District	drawing #: 1 of 2

Erosion Control Plan

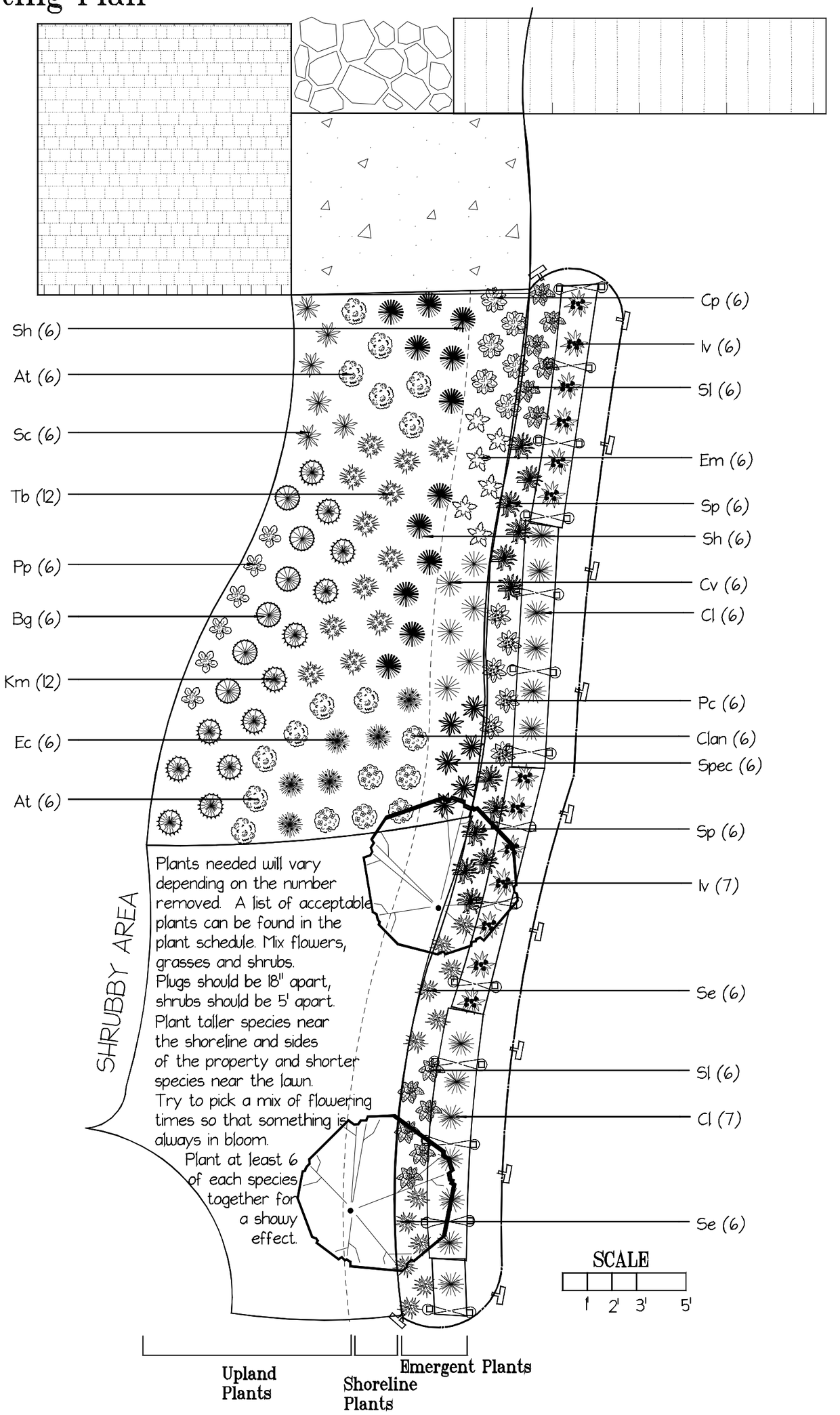
SCALE

1' 2' 3' 5'



459 S. McCarrons Blvd

Planting Plan



Shoreline Restoration

Anne Vaughan

459 McCarrons Blvd. S

client: **Roseville, MN 55113**

scale	date	revision
1" = 4'	June 7th, 2010	First
drawn by: Ramsey Conservation District	funded by: Capitol Region Watershed District	drawing #: 2 of 2

SHORELINE PLANTING PLAN

(SHEET 3 OF 3)

DIANE HILDEN
466 BAYVIEW DR.
ROSEVILLE, MN 55113

PREPARED BY:
RAMSEY CONSERVATION DISTRICT
SEPTEMBER 26TH, 2008

NOTES:

- BIOLOG PLANTS SHOULD BE PLANTED AT 18" INTERVALS
- ALL PLANTINGS SHOULD BE SPREAD WITH 3" OF SHREDDED HARDWOOD MULCH
- SHORELINE PLANTS SHOULD BE PLANTED 12" APART AND PLACED BY SPECIES ACCORDING TO THE PLANTING PLAN.

CROSS-SECTION

466 Bayview Dr

LAWN

EXISTING PLANTING

EXISTING PLANTING

13 11 12 11 13

EXISTING SHORELINE PLANTS

10 7 9 5 8 5 6 8 4 2 1 3 1

REEDS & CATTAILS

3" = 16'

8 4 16

Hilden				Moisture Zone Key:				
Roseville				ud - upland-dry: dry, well-drained soils				
				um - upland-mesic: soil is moist, but not wet				
				w - soil is wet, occassionally standing water				
				s - shallow water most of the time				
Drawing Reference #	**# Needed**	***Scientific***	**Common:**	**Moisture:**	**Native Habitat:**	**Flower:**	**Period:**	**Height:**
Shoreline Plants	138							
	66	**Grasses**						
3	6	*Carex lacustris*	Lake Sedge	s,w,um	marsh, swamp, lake edge	Green	May-June	24-36"
4	18	*Eleocharis palustris*	Spike Rush	s,w,um	wetland, wet prairie	Brown	August	6-24"
2	12	*Scirpus pungens*	Three-square Bulrush	s,w	marsh, pond, lake edge	Brown	June-July	24-48"
8	18	*Carex vulpinoidea*	Fox sedge	w,um	swamp, marsh, lake edge	Green	May-June	12-36"
9	12	*Panicum virgatum*	Switchgrass	w,um,ud	prairie, swamp, lake edge	Purple	June-Oct	36-60"
	72	**Wildflowers**						
6	18	*Asclepias incarnata*	Swamp Milkweed	w,um	prairie, marsh, lake edge	Lavender	June-Aug	36-48"
7	12	*Aster pilosus*	Frost Aster	w,um	wet to dry prairie	White	Aug-Oct	16-24"
5	18	*Helenium autumnale*	Sneezeweed	w,um	swamp, lake edge	Yellow	July-Oct	30-48"
10	12	*Zizia aurea*	Golden Alexanders	w,um	prairie, savanna, woodland	Yellow	May-July	24"
1	12	*Iris versicolor*	Blue Flag Iris	s,w	marsh, peatland, lake edge	Blue	June-July	24-36"
Upland Plants	18							
	6	**Grasses**						
11	6	*Schizachyrium scoparium*	Little Bluestem	um,ud	prairie, savanna, woodland	Amber	July-Sept	18-36"
	12	**Wildflowers**						
12	6	*Asclepias tuberosa*	Butterfly Weed	ud	prairie, savanna	Orange	June-Sept	12-24"
13	6	*Pulsatilla patens*	Pasque Flower	ud	prairie, savanna	Lavender	April-May	6"