

VLAWMO TECHNICAL COMMISSION MEETING

8:00 AM August 14, 2024

Vadnais Heights City Hall, Council Chambers, 800 County Road E East, Vadnais Heights, MN 55127

Action items: ☀

- I. Call to Order – 8:00am – Chair Tessier
- II. Approval of Agenda ☀
- III. Approval of Minutes (July 10, 2024) ☀
- IV. Administration & Operations
 - A. Financial Report for August and Authorization for Payment– Phil ☀ Pg. 16
 - B. August TEC Report to the Board of Directors – Phil ☀ Pg. 15
- V. Programs- Lauren
 - A. LL2 2024-05 Villas of Wilkinson Lake HOA Smart Irrigation Controllers ☀ Pg. 28
 - B. City of White Bear Lake Curb Cut Raingarden Project Update Pg. 16
 - C. Anticipated additional grant applications ☀ Pg. 17
- VI. Projects - Dawn
 - A. Spent Lime Demonstration project update Pg. 17
 - B. Wilkinson Deep-water Wetland project update Pg. 18
 - C. Tamarack Lake Alum project update Pg. 18
 - D. 4th and Otter Road project update Pg. 18
 - E. Amelia Lake invasive flowering rush treatment update Pg. 24
- VII. Commissioner Reports
- VIII. NOHOA
- IX. Ramsey Soil & Water Conservation Division
- X. St. Paul Regional Water Services
- XI. Public Comment
- XII. Next meetings: TEC: Sept. 11, 2024, Board Meeting: August 28, 2024
- XIII. Adjourn ☀

Upcoming Events: Visit [vlawmo.org/events](https://www.vlawmo.org/events)

Summer BMP tours: August 19, August 20

**Vadnais Lake Area Water Management Organization
Technical Commission (TEC) Minutes
July 10, 2024
Vadnais Heights City Hall, Council Chambers
800 County Road E East, Vadnais Heights, MN 55127**

Commission Members Present:

Gloria Tessier	Gem Lake (GL)
Nick Ousky	Vadnais Heights (VH)
Susan Miller	City of North Oaks (NO)
Andy Nelson	City of Lino Lakes (LL)
Terry Huntrods	City of White Bear Lake (WBL)
Tom Reidesel	White Bear Township (WBT) (alternate)

Absent: Jami Philip (WBT)

Others in attendance: Phil Belfiori, Lauren Sampedro, Brian Corcoran, Nick Voss, Dawn Tanner (VLAWMO staff), Jeremy Erickson (SPRWS)

I. Call to Order

Chair Tessier called the meeting to order at 8:00 am.

II. Approval of Agenda

Administrator Belfiori brought to attention an amended agenda with new action item V. C.

It was moved by Commissioner Miller and seconded by Commissioner Huntrods to approve the amended July 10, 2024 TEC agenda. Vote: all aye. Motion passed.

III. Approval of Minutes (June 12, 2024)

It was moved by Commissioner Miller and seconded by Commissioner Ousky to approve the June 12, 2024 meeting minutes as presented. Vote: all aye. Motion passed.

IV. Administration & Operations

A. July Financial Report and Authorization for Payment

Administrator Belfiori outlined the July financial report as included in the packet. This month VLAWMO received Anoka County Storm Sewer Utility (SSU) fee funds. Ramsey County funds are expected in August. SPRWS provided funds for agreed upon contributions to the Lambert Lake Pond sheet pile effort from 2021 and the MPCA provided reimbursement for the Wilkinson Deepwater wetland project.

It was moved by Commissioner Huntrods and seconded by Commissioner Miller to approve the July Financial Report for payment. Vote: all aye. Motion passed.

B. Nominations open for 2024 Annual Watershed Awards

Voss provided a reminder to the TEC that the nominations are open for the two VLAWMO Watershed Awards for 2024. He noted that staff is requesting TEC assistance to find nominees that tell a story about a community or individual promoting or leading watershed stewardship. Nominations are due in November.

C. Introduction to MN Climate Adaptation Partnership (MCAP) mapping tool

Voss introduced the new mapping tool from the University of Minnesota. He summarized a data-based prediction model that the tool uses to help manage resources for resiliency. He explained it can be used to measure hypothetical scenarios or known problem areas. Commissioner Miller asked if the model is predicting that this area was going to get drier overall in the future. Voss confirmed that some pockets identify both drier and wetter conditions, and this becomes further nuanced depending on the time period that is entered into the tool for the models to express. Commissioner Miller stated there will likely be more consideration for water conservation strategies in the future.

V. Programs

A. LL2 2024-03 Three Oaks Smart Irrigation Controller Application Update

Sampedro introduced the grant application for a smart irrigation controller at a 23 acre neighborhood association. The applicant proposed an irrigation audit to support the irrigation controller and received one bid for the audit and two bids for the controller. The Board of Directors approved the application at the June 2024 Board meeting.

Commissioner Ousky asked about how irrigation heads are strategically placed. Sampedro provided that factors such as slope influence irrigation head placement.

B. LL2 2024-04 City of Vadnais Heights Smart Irrigation Controllers

Sampedro introduced the grant application consisting of smart irrigation controllers to place at the Vadnais Heights City Hall and Koehler Meadows Park. She noted this application is building on a 2023 smart irrigation partnership with the City. Two bids were received for the smart irrigation controllers with flow sensors. Staff recommended approval of the application.

Commissioner Miller asked about the scale and size of systems that fit the “smart” classification. Sampedro provided that different brands and systems accommodate a range of

sizes. Some systems are smaller for residential settings with fewer irrigation zones, while some that have been installed most recently at public properties have multiple zones for irrigation on a larger scale.

Commissioner Miller advocated for encouraging small-scale homeowner installations.

Commissioner Ousky provided a comment that the current smart irrigation system allows for a high degree of adjustment regarding seasonal adjustments and precise rain level.

It was moved by Commissioner Miller and seconded by Commissioner Huntrods to approve LL2 2024-04. Vote: all aye. Motion passed.

C. SHG 2024-09 Redding & Lynch Native Plantings

Sampedro presented a grant application that is the new agenda item V.C. The grant application is for native plantings at a property in Vadnais Heights that drains to Sucker Lake. This is a first phase of a larger project, starting with native plantings and continuing to a downspout rain garden next year. The proposed native plantings include plants such as blazing star, ninebark, beebalm, and hackberry.

Commissioner Miller asked about the support of tree species in the grant program. Sampedro explained that in 2023 staff developed a tree guide that lists specific species that are included in the program.

It was moved by Commissioner Miller and seconded by Commissioner Nelson to approve SHG 2024-09.

VI. Projects

A. Watershed Management Plan update

Tanner explained that the Board authorized the priority issues as recommended by the TEC, that the “initiate” phase of the Plan development has been completed, and the partners at Houston Engineering are continuing into the stage of draft plan development.

B. Spent lime demonstration project update

Tanner provided an update on spent lime loads applied so far. By the end of next week, VLAWMO anticipates that the project will be near completion for spent lime load applied.

C. Wilkinson Deep-water wetland update

Tanner provided an update on project completion and the recent payment made with a final payment anticipated soon. Water quality monitoring is continuing. The eagle chicks have

successfully fledged. With their fledging, the eagle nest monitoring portion of the project is complete. A vegetation enhancement plan is underway with Natural Shore Technologies. That plan will be brought to the TEC at an upcoming meeting.

D. Wilkinson meander preliminary feasibility scope completed/memo from S E H

Tanner explained that the preliminary feasibility has been completed and that the memo from SEH is included in the packet. Ramsey County SWCD is providing financial support for the phase two scope of work that is also included in the packet. That scope will be completed by the end of the year. This work is in preparation for the next round of funding for the 319/priority small watershed program, depending upon final results of the feasibility and design work.

Commissioner Miller commented that some residents have expressed concern on lake levels of Deep Lake downstream of Wilkinson and asked that potential downstream effects be considered. Tanner responded that flow rates will be considered as part of the scope and in line with DNR guidance.

E. Birch Lake AIS hand-pulling completed

Tanner provided an update on Eurasian watermilfoil (EWM) and Curly-leaf pondweed (CLP) removal in Birch Lake, in partnership with BLID and RCSWCD. Eurasian watermilfoil has been greatly reduced in the lake and is now present in sparse patches in the lake and heavier areas in very shallow areas with high cover of native water lilies. CLP expanded this year, likely due to the mild winter conditions. CLP expansion has also been reported in other lakes in Ramsey County. Dive Guys recommended splitting the removal next year into two dates and moving the first day up as early as possible to target CLP and be able to reach remaining EWM areas before the native water lilies have fully grown in.

F. EWM sampling underway for Charley, Deep, and Pleasant Lake and NHIS database update

Tanner introduced this update as a request from the DNR to help determine which hybrid strains of EWM are present in the lakes. There is an ongoing partnership statewide to document hybrid strains to help inform management actions. These samples will become part of that database. The ongoing partnership involved the University of Minnesota and Montana State University. Samples have been sent to the Montana lab for analysis.

Commissioner Huntrods asked about how invasive species can spread on lakes that have no public access. Tanner explained that boats are still likely moving among lakes, even if they are private boats. Turions are very small and can still have spread from the existing boat activity. Tanner acknowledged the importance of preventing spread and detecting new infestations early.

Commissioner Reidesel inquired about the status of purple loosestrife at Birch Lake. Commissioner Huntrods provided that this is no longer a concern at Birch Lake. Tanner added that the weevil beetle population at Birch is appearing to be healthy to keep the purple loosestrife population down.

G. Meet the goats completed and goat grazing underway

Tanner provided a summary of the recent open house event with the City of Vadnais Heights and Scape Goats including arrival of the goats, a wetland walk, projects for kids and families, treats, and a native plant giveaway. Tanner thanked the City for their partnership in hosting this successful event.

VII. Commissioner Reports

None.

VIII. NOHOA

None.

IX. Ramsey Soil & Water Conservation Division

None

X. St. Paul Regional Water Services

Jeremy Erickson provided an update that copper sulfate is being applied to Sucker Lake for zebra mussel control and the new Highland water tower is open for public tours July 20-21

XI. Public Comment

None.

XII. Next Meetings:

Next TEC meeting August 14, 2024. Next BOD meeting August 24, 2024.

XIII. Adjourn

It was moved by Commissioner Miller and seconded by Commissioner Ousky to adjourn the meeting at 8:45 am. Vote: all aye. Motion passed.

Minutes compiled by Nick Voss.

VLAWMO Finance Summary: August 2024

Aug-24		Actual 8/1/24	Actual to Date	2024 Budget (June 2023 Board Approved)	Carry over from 2023 to 2024	Remaining in Budget	2024 Available (Dec. 2023 Board approved)	Act vs. Budget
BUDGET #	INCOME							
5.11	Storm Water Utility	\$617,691	\$673,987	\$1,145,431	\$0	\$471,444	\$1,145,431	59%
5.12	Service Fees			\$1,000	\$0	\$1,000	\$1,000	0%
5.13	Interest + mitigation acct	\$5,019	\$40,432	\$30,000	\$0	(\$10,432)	\$30,000	135%
5.14	Misc. income - WCA admin & other	\$28,150	\$48,290	\$3,000	\$0	(\$45,290)	\$3,000	1610%
5.15	Other Income Grants/loan		\$56,456	\$365,000	\$0	\$308,544	\$365,000	15%
5.16	Transfer from reserves			\$791,380	\$193,062	\$984,442	\$984,442	0%
	TOTAL	\$650,860	\$819,165	\$2,335,811	\$193,062	\$1,709,708	\$2,528,873	35%
EXPENSES								
3.1	Operations & Administration							
3.110	Office - rent, copies, post tel supplies	\$2,159	\$16,201	\$32,239	\$0	\$16,038	\$32,239	50%
3.120	Information Systems	\$1,571	\$13,167	\$33,850	\$0	\$20,683	\$33,850	39%
3.130	Insurance	\$11,329	\$11,329	\$10,050	\$0	(\$1,279)	\$10,050	113%
3.141	Consulting - Audit		\$20,171	\$12,000	\$7,000	(\$1,171)	\$19,000	106%
3.142	Consulting - Bookkeeping	\$45	\$358	\$1,500	\$0	\$1,142	\$1,500	24%
3.143	Consulting - Legal		\$591	\$7,000	\$0	\$6,409	\$7,000	8%
3.144	Consulting - Eng. & Tech.	\$3,239	\$10,067	\$30,000	\$20,000	\$39,933	\$50,000	20%
3.150	Storm Sewer Utility		\$9,571	\$22,500	\$0	\$12,929	\$22,500	43%
3.160	Training (staff/board)	\$449	\$974	\$14,250	\$0	\$13,276	\$14,250	7%
3.170	Misc. & mileage	\$286	\$1,897	\$6,930	\$0	\$5,033	\$6,930	27%
3.191	Administration - staff	\$32,421	\$242,648	\$435,554	\$0	\$192,906	\$435,554	56%
3.192	Employer Liability	\$9,898	\$71,615	\$129,869	\$0	\$58,254	\$129,869	55%
3.2	Monitoring and Studies							
3.210	Lake and Creek lab analysis	\$2,872	\$9,831	\$18,000	\$0	\$8,169	\$18,000	55%
3.220	Equipment		\$120	\$3,000	\$0	\$2,880	\$3,000	4%
3.230	Wetland assessment & management			\$15,000	\$0	\$15,000	\$15,000	0%
3.240	Watershed planning /special study	\$2,439	\$32,191	\$100,000	\$15,000	\$82,809	\$115,000	28%
3.3	Education and Outreach							
3.310	Public Education		\$2,026	\$6,000	\$0	\$3,974	\$6,000	34%
3.320	Comm., Outreach & Marketing	\$939	\$5,699	\$20,000	\$2,000	\$16,301	\$22,000	26%
3.330	Community Blue Ed Grant			\$8,000	\$0	\$8,000	\$8,000	0%
<i>Total Core functions: Ops, Monitoring, Education</i>		<i>\$67,647</i>	<i>\$448,456</i>	<i>\$905,742</i>	<i>\$44,000</i>	<i>\$501,286</i>	<i>\$949,742</i>	<i>47%</i>
Capital Improvement Projects and Programs								
3.4	Subwatershed Activity							
3.410	Gem Lake			\$25,000	\$10,000	\$35,000	\$35,000	
3.420	Lambert Creek		\$11,895	\$90,000	\$0	\$78,105	\$90,000	13%
3.421	Lambert Lake Loan		\$19,284	\$38,569	\$0	\$19,285	\$38,569	50%

3.425	Goose Lake		\$46,856	\$85,000	\$0	\$38,144	\$85,000	55%
3.430	Birch Lake		\$1,150	\$48,000	\$0	\$46,850	\$48,000	2%
3.440	Gilf Black Tam Wilk Amelia	\$5,949	\$105,724	\$345,000	\$60,000	\$299,276	\$405,000	26%
3.450	Pleasant Charley Deep	\$1,320	\$62,721	\$145,000	\$0	\$82,279	\$145,000	43%
3.460	Sucker Vadnais		\$50,035	\$90,000	\$33,000	\$72,965	\$123,000	41%
3.48	Programs							
3.480	Soil Health Grant	\$1,860	\$5,878	\$10,500	\$4,500	\$9,122	\$15,000	39%
3.481	Landscape 1		\$5,000	\$40,000	\$16,263	\$51,263	\$56,263	9%
3.482	Landscape 2/BWSR WBF	\$4,120	\$9,238	\$60,000	\$25,299	\$76,061	\$85,299	11%
3.483	Project Research & feasibility			\$5,000	\$0	\$5,000	\$5,000	0%
3.485	Facilities Maintenanc/ Pub. Ditch Main.	\$56	\$5,849	\$78,000	\$0	\$72,151	\$78,000	7%
3.5	Regulatory							
3.510	Engineer Plan review			\$5,000	\$0	\$5,000	\$5,000	0%
	<i>Total CIP & Program</i>	\$13,305	\$323,630	\$1,065,069	\$149,062	\$890,501	\$1,214,131	27%
	Total of Core Operations & CIP	\$80,952	\$772,086	\$1,970,811	\$193,062	\$1,391,787	\$2,163,873	36%

Fund Balance	7/1/2024	8/1/2024
4M Account	\$351,486	\$928,830
4M Plus Savings	\$246,577	\$247,672
Total	\$598,063	\$1,176,502

Restricted funds	8/1/2024
Mitigation Savings	\$21,026
Term Series	\$300,000

Vadnais Lake Area Water Management Organization
Check Detail

10:46 AM

08/06/2024

July 11 through August 14, 2024

Type	Num	Date	Name	Item	Account	Paid Amount	Original Amount
Check	eft	07/24/2024	US Bank		Checking - 1987		-45.22
				3.142 · Bookkeeping help		-45.22	45.22
TOTAL						-45.22	45.22
Check	5825	08/14/2024	Lauren Sampedro		Checking - 1987		-45.09
				3.170 · Misc. & mileage		-45.09	45.09
TOTAL						-45.09	45.09
Check	5826	08/14/2024	Dawn Tanner		Checking - 1987		-64.32
				3.170 · Misc. & mileage		-64.32	64.32
TOTAL						-64.32	64.32
Check	5827	08/14/2024	Nicholas Voss		Checking - 1987		-179.78
				3.170 · Misc. & mileage		-19.65	19.65
				3.160 · Training (staff/board)		-48.76	48.76
				3.320 · Marketing		-111.37	111.37
TOTAL						-179.78	179.78
Check	5828	08/14/2024	Brian Corcoran		Checking - 1987		-156.78
				3.170 · Misc. & mileage		-156.78	156.78
TOTAL						-156.78	156.78
Check	5829	08/14/2024	RMB Environmental Laboratories, Inc.		Checking - 1987		-3,038.94
				3.210 · Lake & Creek lab analysis		-564.30	564.30
				3.210 · Lake & Creek lab analysis		-58.59	58.59
				3.210 · Lake & Creek lab analysis		-147.35	147.35
				Wilk 319 cash match \$182,137		-196.46	196.46
				3.210 · Lake & Creek lab analysis		-1,431.65	1,431.65
				3.210 · Lake & Creek lab analysis		-564.30	564.30
				3.210 · Lake & Creek lab analysis		-76.29	76.29
TOTAL						-3,038.94	3,038.94
Check	5830	08/14/2024	Houston Engineering, Inc		Checking - 1987		-3,698.00
				Wilk 319 cash match \$182,137		-1,258.50	1,258.50
				3.240 · Watershed Plan Amendment		-2,439.50	2,439.50
TOTAL						-3,698.00	3,698.00
Check	5831	08/14/2024	Barr Engineering Co		Checking - 1987		-4,758.90
				3.440 · Gilfillan Black Tamarack Wilkin		-1,520.00	1,520.00
				3.144 · Eng. & Tech.		-1,022.10	1,022.10

			3.144 · Eng. & Tech.	-2,216.80	2,216.80
TOTAL				<u>-4,758.90</u>	4,758.90
	Check 5832	08/14/2024 SEH	Checking - 1987		-2,754.67
			3.440 · Gilfillan Black Tamarack Wilkin	-2,754.67	2,754.67
TOTAL				<u>-2,754.67</u>	2,754.67
	Check 5833	08/14/2024 City of White Bear Lake	Checking - 1987		-42,319.43
			payroll	-32,421.20	32,421.20
			Administration FICA	-2,322.24	2,322.24
			Administration PERA	-2,431.58	2,431.58
			Insurance Benefit	-4,900.08	4,900.08
			Admin payroll processing	-244.33	244.33
TOTAL				<u>-42,319.43</u>	42,319.43
	Check 5834	08/14/2024 League of MN Cities Insurance Trust P & C	Checking - 1987		-7,907.00
			3.130 · Insurance	-7,907.00	7,907.00
TOTAL				<u>-7,907.00</u>	7,907.00
	Check 5835	08/14/2024 League of MN Cities Insurance Trust WC	Checking - 1987		-3,422.00
			3.130 · Insurance	-3,422.00	3,422.00
TOTAL				<u>-3,422.00</u>	3,422.00
	Check 5836	08/14/2024 Ramsey County	Checking - 1987		-4,120.00
			3.482 · Landscape 2	-4,120.00	4,120.00
TOTAL				<u>-4,120.00</u>	4,120.00
	Check 5837	08/14/2024 Gordon Farmer	Checking - 1987		-1,250.00
			3.480 · Soil Health Grant	-1,250.00	1,250.00
TOTAL				<u>-1,250.00</u>	1,250.00
	Check 5838	08/14/2024 Carrie Gmeinder	Checking - 1987		-560.73
			3.480 · Soil Health Grant	-560.73	560.73
TOTAL				<u>-560.73</u>	560.73
	Check 5839	08/14/2024 Leslie Scherer	Checking - 1987		-48.77
			3.480 · Soil Health Grant	-48.77	48.77
TOTAL				<u>-48.77</u>	48.77
	Check 5840	08/14/2024 Metro - Inet	Checking - 1987		-1,571.00
			IT Support	-1,571.00	1,571.00
TOTAL				<u>-1,571.00</u>	1,571.00
	Check 5841	08/14/2024 carp solutions	Checking - 1987		-1,320.00

			3.450 · Pleasant Charley Deep	-1,320.00	1,320.00
TOTAL				<u>-1,320.00</u>	<u>1,320.00</u>
	Check 5842	08/14/2024 City of Vadnais Heights	Checking - 1987		-2,159.17
			Rent	-1,765.00	1,765.00
			Phone/Internet/Machine Overhead	-315.00	315.00
			Postage	-37.63	37.63
			Copies	-41.54	41.54
TOTAL				<u>-2,159.17</u>	<u>2,159.17</u>
	Check 5843	08/14/2024 Town Law Center, PLLP	Checking - 1987		-219.00
			3.440 · Gilfillan Black Tamarack Wilkin	-219.00	219.00
TOTAL				<u>-219.00</u>	<u>219.00</u>
	Check 5844	08/14/2024 HDR Engineering, Inc.	Checking - 1987		-812.87
			3.320 · Marketing	-812.87	812.87
TOTAL				<u>-812.87</u>	<u>812.87</u>

Vadnais Lake Area Water Management Organization
Custom Transaction Detail Report
 June 1 through August 1, 2024

10:44 AM
 08/06/2024
 Accrual Basis

Type	Date	Num	Name	Memo	Account	Clr	Split	Amount	Balance
Jun 1 - Aug 1, 24									
Credit Card Charge	06/04/2024		Google*SVCAPPS_VLAWM		US Bank CC	✓ WEB		42.00	42.00
Credit Card Charge	06/10/2024		adobe *photography plan		US Bank CC	✓ Software		9.99	51.99
Credit Card Charge	06/12/2024		US Post Office	monitoring supplies	US Bank CC	✓ 3.220 - Equipment		25.84	77.83
Transfer	06/20/2024			Funds Transfer	US Bank CC	✓ Checking - 1987		-1,160.27	-1,082.44
Credit Card Charge	06/21/2024		Prairie Restorations	plant for remnent	US Bank CC	✓ 3.485 - Facilities & Maintenance		14.91	-1,067.53
Credit Card Charge	06/25/2024		Adobe "Creative Cloud		US Bank CC	✓ Software		32.50	-1,035.03
Credit Card Charge	07/02/2024		ESRI	ArcGIS yearly fee	US Bank CC	✓ IT Systems - Hardware		819.00	-216.03
Credit Card Charge	07/02/2024		Google*SVCAPPS_VLAWM		US Bank CC	✓ WEB		42.00	-174.03
Credit Card Charge	07/08/2024		adobe *photography plan		US Bank CC	✓ Software		9.99	-164.04
Credit Card Charge	07/09/2024		US Post Office	aquatic veg testing	US Bank CC	3.210 - Lake & Creek lab analysis		16.44	-147.60
Credit Card Charge	07/16/2024		MN Association of Gov. Communicators	nick webinar	US Bank CC	3.320 - Marketing		15.00	-132.60
Credit Card Charge	07/18/2024		pdl ccapsconf3	Dawn 2024 WR Conf.	US Bank CC	3.160 - Training (staff/board)		400.00	267.40
Credit Card Charge	07/23/2024		Ace Hardware	roundup	US Bank CC	3.485 - Facilities & Maintenance		29.94	297.34
Credit Card Charge	07/23/2024		Ace Hardware	5 gal buckets	US Bank CC	3.485 - Facilities & Maintenance		25.96	323.30
Credit Card Charge	07/25/2024		hologram	account refill	US Bank CC	3.210 - Lake & Creek lab analysis		30.00	353.30
								353.30	353.30
Jun 1 - Aug 1, 24									

Vadnais Lake Area Water Management Organization
Profit & Loss
 July 11 through August 14, 2024

10:49 AM

08/06/2024

Cash Basis

Jul 11 - Aug 14, 24

Ordinary Income/Expense	
Income	
Misc.	28,150.00
5.1 · Income	
5.11 · Storm Water Utility	617,691.40
5.13 · Interest	5,019.14
Total 5.1 · Income	622,710.54
Total Income	650,860.54
Gross Profit	650,860.54
Expense	
3.1 · Administrative/Operations	
3.110 · Office	
Copies	41.54
Phone/Internet/Machine Overhead	315.00
Postage	37.63
Rent	1,765.00
Total 3.110 · Office	2,159.17
3.120 · Information Systems	
IT Support	1,571.00
Total 3.120 · Information Systems	1,571.00
3.130 · Insurance	11,329.00
3.142 · Bookkeeping help	45.22
3.144 · Eng. & Tech.	3,238.90
3.160 · Training (staff/board)	448.76
3.170 · Misc. & mileage	285.84
3.191 · Employee Payroll	
payrol	32,421.20
Total 3.191 · Employee Payroll	32,421.20
3.192 · Employer Liabilities	
Admin payroll processing	244.33
Administration FICA	2,322.24
Administration PERA	2,431.58
Insurance Benefit	4,900.08
Total 3.192 · Employer Liabilities	9,898.23
Total 3.1 · Administrative/Operations	61,397.32
3.2 · Monitoring and Studies	
3.210 · Lake & Creek lab analysis	2,872.48
3.240 · Watershed Plan Amendment	2,439.50
Total 3.2 · Monitoring and Studies	5,311.98
3.3 · Education and Outreach	
3.320 · Marketing	939.24
Total 3.3 · Education and Outreach	939.24

3.4 · Capital Imp. Projects/Programs	
3.440 · Gilfillan Black Tamarack Wilkin	
Wilk 319 cash match \$182,137	1,454.96
3.440 · Gilfillan Black Tamarack Wilkin - Other	4,493.67
Total 3.440 · Gilfillan Black Tamarack Wilkin	<u>5,948.63</u>
3.450 · Pleasant Charley Deep	1,320.00
Total 3.4 · Capital Imp. Projects/Programs	<u>7,268.63</u>
3.48 · Programs	
3.480 · Soil Health Grant	1,859.50
3.482 · Landscape 2	4,120.00
3.485 · Facilities & Maintenance	55.90
Total 3.48 · Programs	<u>6,035.40</u>
Total Expense	<u>80,952.57</u>
Net Ordinary Income	<u>569,907.97</u>
Net Income	<u><u>569,907.97</u></u>

TEC Report to Board - August 2024

Programs & Projects	Effort Level	Completion Date	Comments				
	LOW						
	MED						
	HIGH						
Projects				Administration & Operation			
E. Vadnais Lake Subwatershed Resiliency Study	HIGH	ongoing	Staff are working with the City of Vadnais Heights on Phase 2 of the E. Vadnais Lake Subwatershed Resiliency Study, which includes further investigation of the recommended BMPs identified in the study. SEH has completed additional field services and design work that is under staff review.	Audit	LOW	2024	
Oak Knoll Pond/Wood Lake	LOW	2024	Spent lime applications complete; monitoring ongoing and report from Barr anticipated.	Budget	LOW	for 2025 budget	The Board approved 2025 budget at the 6/26 meeting.
Polar Lake Park Reuse Study	MED	Mid Late 2024	Study approved by VLAWMO Board in April. Discussions with WBT on possible grant application development ongoing.	Personnel /HR	MED	ongoing	Training and professional development continues for staff
MPCA 319 /Wilkinson Lake BMPs	MED	2024	Eagle monitoring completed (2 chicks fledged); WQ monitoring ongoing, final pay request expected by Aug. Board, enhancement underway with NST. Planning underway for next round grant project.	SSU	MED	ongoing	The approved 2024 SSU certifications have been submitted to Anoka and Ramsey County.
Pleasant Lake Carp Management	LOW	ongoing	Planning for 2025 underway.	Strategic /watershed planning	HIGH	2023-2025	Draft phase underway.
Tamarack Alum Project	MED	2024	Discussions underway with Barr Engineering and RC Parks to consider a possible alternative contractor.				
Programs				FINANCIAL SUMMARY as of 8/1/2024			
City/Township MS4	LOW	July	New roots display promoted to MS4 partners for support in Minimum Control Measure #1.				
Education/Outreach	LOW	June-Aug	White Bear Lake summer school program visit completed. New neighborhood spotlight article featuring a lo-mow lawn.	4M Account (1.10)	4M Plus (1.23)	Total	
Website	HIGH	Aug - Sept	New website renovation in progress. Launch expected 9/24. Expression of new Watershed Management Plan phases, updates, and survey results posted on existing website.	\$928,830	\$247,672	\$1,176,502	
WAV	MED	July - August	July and August Neighborhood tour series promoting water-friendly landscaping and VLAWMO Landscape Grant program. Local BMP Leaders effort now active, helping facilitate conversations and welcome prospective grant applicants into the mindset of sustainable landscaping. BMP Leaders help supplement staff consultations with residents, providing a space to learn and strategize and make applying for a VLAWMO grant more efficient.				
Cost Share & BWSR WBIF	HIGH	ongoing	The public continues to show interest in projects and the VLAWMO grant programs. Funding for all grant programs is almost fully allocated for the year, with the Soil Health Grant Program funding unavailable for the rest of 2024. Site visits continue including visits to close out awarded grant projects. Discussion with HOAs on smart irrigation controllers is ongoing. Continuing to work on potential projects for the BWSR WBIF grant program with partners, including curb cut raingardens in White Bear Lake and a water quality project at the White Bear Lake Sports Center.				
GIS	MED	ongoing	Updating the online GIS viewer as needed and creating maps for the new website.				
Monitoring	MED	ongoing	2024 season underway				
WCA	HIGH	ongoing	Administering WCA as needed.				

Budget Summary	Actual Expense YTD	2024 Budget "working"	Remaining in Budget	% YTD
Operations	\$448,456	\$949,742	\$501,286	47%
CIP	\$323,630	\$1,214,131	\$890,501	27%
Total	\$772,086	\$2,163,873	\$1,391,787	36%

TEC Staff Memo – August 14, 2024

IV. Administration & Operations

A. August Financial Report and Consider Authorization for Payment

Please find the August financial report and authorization to pay bills in the ePacket for consideration and approval.

B. August TEC Report to the Board of Directors

Please find the August TEC report to the Board attached in the ePacket for review and approval.

V. Programs

A. LL2 2024-05 Villas of Wilkinson Lake HOA Smart Irrigation Controllers

The Villas of Wilkinson Lake Homeowners' Association (HOA) submitted a Landscape Level 2 grant application to install smart irrigation controllers that serve 51 homes in an 18-acre neighborhood in North Oaks. The HOA had an irrigation audit completed and found several areas needing improvement, such as leaky seals on irrigation heads, irrigation heads watering areas beyond turfgrass, and inefficient irrigation head placement. The application proposes to install three smart irrigation controllers and implement improvements from the irrigation audit to reduce groundwater use. Newer-technology Hunter smart irrigation controllers with flow sensors and weather-based sensors will be installed to reduce water use. The HOA has monitored water usage from 2020-2023, which will allow VLAWMO staff to review groundwater usage changes after smart irrigation controllers are installed. Three bids were received for the project and the total estimated cost is based on the lowest bid of \$35,465.00. Staff recommends approval of LL2 2024-05 in the amount of 50% of eligible project expenses, not to exceed \$17,732.50 in accordance with program guidelines and available budget.

B. City of White Bear Lake Curb Cut Raingarden Project Update

VLAWMO is currently partnering with the City of White Bear Lake and Ramsey County Soil and Water Conservation Division (RCSWCD) on a curb cut raingarden project to occur in concert with the City's 2024 Pavement Rehabilitation Project. Staff worked with the City to notify residents of the opportunity to receive a curb cut raingarden with the street project and developed a list of interested residents. Based on interest and survey work on where curb cut raingardens are feasible, the City is currently pursuing five curb cut raingardens. RCSWCD completed initial designs for the five possible curb cut raingardens and gave the residents an opportunity to provide feedback on the plant choices, which are included in the TEC packet. The project is expected to go out for bid on 8/7, with bids due August 20th. A Landscape Level 2 grant application is expected to be received after the bidding process is complete on August 20th. Staff anticipate the grant application

will be brought to the August 28th Board meeting to meet the goal of fall 2024 construction. Staff will provide another update at the September TEC meeting.

C. Anticipated Additional Grant Applications

Staff are currently working with additional grant applicants to finalize materials for the TEC's consideration. Staff expect the application materials to be ready after the packet is prepared, which will be emailed to TEC members ahead of the August 14th TEC meeting.

VI. Projects

A. Spent Lime Demonstration project update

The full dose (8 deep and 14 shallow loads) was completed in July. A final request for payment is anticipated at the time of packet preparation. Monitoring is ongoing, and Barr Engineering will be preparing a report explaining results. VLAWMO is appreciative of the partnership with the City of White Bear Lake, residents living around the pond/lake, and the WBL Water Department for their support, site access, and collaboration.

A final request for payment is being prepared by Barr Engineering for Erosion Works at the time of packet preparation. That request will be authorized with the payment of the bills. The payment request will either be included in the financial statement or walked up at the time of the TEC meeting.

Aerial photo from NearMap of a deep-water application of spent lime on Oak Knoll Pond



B. Wilkinson Deep-water Wetland project update

A final request for payment including minor remaining punch list items and retainage is anticipated at the time of packet preparation. Water quality monitoring is ongoing, site enhancement with NST is underway, and HEI is preparing a project video for the August Board and September TEC meetings. Grant reporting for the first half of 2024 is complete and submitted/received by MPCA.

C. Tamarack Lake Alum project update

VLAWMO, Barr, and RCSWCD staff met onsite during July to discuss a possible alternative protocol for project completion. Barr Engineering is preparing a recommendation for the August Board meeting.

D. 4th and Otter Road project update

The 4th and Otter restoration area that helps to support the IESF filter that treats water flowing into Birch Lake has been underway since fall 2018. It is now in its 6th

year. Since 2018, the site has had:

- Site-wide buckthorn removal with volunteers, UMN students, work crews
- CPL grant-funded seeding in partnership with the City of WBL, and with volunteer work by UMN students
- CPL grant-funded enhancement in partnership with the City of WBL, and with volunteer work by UMN students
- Follow-up buckthorn maintenance-level removal and garlic mustard/Japanese hedge parsley seasonal removal

The site is transformed from a buckthorn thicket that was impassable, through bare soil that remained with patchy understory invasive plants, to a healthy native plant community that requires only periodic patchy invasive species removal. This year, the native plants are especially showy and have widely established throughout the site.

2018: Buckthorn thicket



Complete buckthorn removal and native planting focal area



**Japanese hedge parsley and creeping Charlie infestations
that took over after buckthorn was removed**



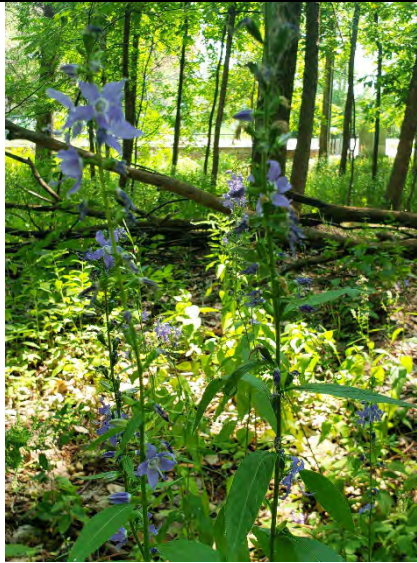
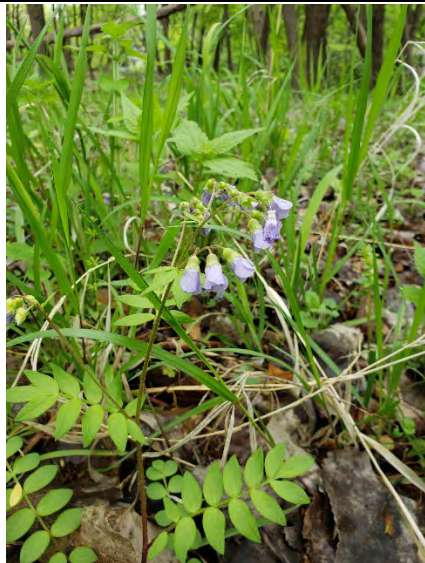
2024: The same focal area with bottlebrush and wild rye native grasses with a high diversity of forbs



Jacob's ladder

American bellflower

Coneflower



E. Amelia Lake invasive flowering rush treatment update

When VLAWMO conducted onsite stakeholder meetings for the Amelia SLMR development in 2022, a large infestation of flowering rush was detected in a wetland that is part of the large Minnesota Land Trust property on the south side of the lake. The infested wetland is part of a connected chain of ponds that leads to Amelia Lake.

Prior to that meeting, VLAWMO and RCSWCD had been checking the Amelia Lake flowering rush area (now in its 4th year of 5 years recommended by MN DNR) that had been detected historically by MN DNR and USGS. Flowering rush was no longer present in the lake. However, the large infestation in the nearby wetland—which is the largest known in either Anoka or Ramsey Counties—had the potential to re-infest the lake.

RCSWCD has been treating the infestation over the past 2 years. VLAWMO committed funds to help with reseeding the area once the flowering rush had been removed. The extent of the infestation has meant that additional treatments and a focus on hand-pulling was needed this year. The site has not been ready for reseeding yet (but may possibly be next year). VLAWMO appreciates the partnership and intensive efforts that RCSWCD staff and interns have dedicated to removing this high-priority invasive species.

2022: Flowering rush infestation detected during Amelia Lake SLMR prep



2023: Treatment by RCSWCD



2024: Handpulling effort by RCSWCD



LL2 Grant Application



Submit completed application to:

Lauren Sampedro

lauren.sampedro@vlawmo.org

Applicant Information:

Organization Name:	Villas of Wilkinson Lake Homeowners Association
Project Contact:	Jennifer Morris, Community Manager
Address:	PO Box 10816
City/Township, State, Zip:	White Bear Lake, MN 55110
Phone:	651-429-2223 - office ; 612-226-0523 - cell
Email:	vwlhoa@advtm.com

Project Summary:

ESTIMATED TOTAL PROJECT COST (\$)	35,465.00
AMOUNT REQUESTED	35,465.00 \$17,732.50
EXPECTED PROJECT COMPLETION (Month, Year)	Summer of 2024

PROJECT TYPE:

- Water Quality Treatment
- Stormwater Rate and Volume Control
- Groundwater Conservation
- Other

If other, please describe the proposed project: Smart Irrigation Controller Installation

Project Background:

Describe the project location and water resources that will benefit from the project.	Villas of Wilkinson Lake is made up of 51 homes plus common space for a total of approximately 18 acres irrigated. In 2023 an irrigation audit was conducted. The audit identified many areas in need of improvement. Installation of smart controllers will save 30-40% in water usage, easily identify leaks and monitor more effectively.
What issues will be addressed with this project?	

Project Background: Continued

<p>Provide estimated water quality results, stormwater rate/volume reduction, or groundwater conservation benefits associated with the project.</p>	<p>Included is a water usage report to provide data on how much water has been used /cost from 2020-2023.</p> <p>Within research and contractor recommendations, installing the recommended smart controllers are expected to result in reduction of groundwater usage between 30-40%.</p> <p>Smart controllers will also aid in reduction of overall maintenance expenditures.</p>
<p>Describe the public education and outreach efforts or signage planned for the project.</p>	<p>White Bear Township has proven to be a great resource for information and directed us to the EPA Watersense information.</p> <p>Once the project is completed, the Association would welcome to assist/advertise the results with those that express interest.</p>
<p>List or describe any partnerships or other forms of support for the project, including external funding sources.</p>	<p>The Association works collaboratively with White Bear Township and the master Association, NOHOA. The Association works with other sub-Associations in North Oaks in efforts to better serve the community.</p>

Project Specifications:

<p>TOTAL PROPERTY AREA (Acres)</p>	<p>18 acres</p>	<p>Total PROJECT SIZE (Sq Ft)</p>	<p>N/A</p>
<p>IMPERVIOUS AREA DRAINING TO PROJECT (Sq Ft):</p>	<p>N/A</p>	<p>PERVIOUS AREA DRAINING TO PROJECT (Sq Ft):</p>	<p>N/A</p>

Required Attachments:

- ⇒ Detailed final plan set of the proposed project that includes the estimated, quantitative outcomes of the project.
- ⇒ At least 2 bids for construction of proposed project.
- ⇒ Detailed project budget estimate with itemized materials and costs that equal the total project cost.

Wilkinson Lake

2024 Irrigation Smart Controller Bids

	Horticulture Services	Prescription Landscape	Williston Irrigation
Product Type	Weathermatic	RainBird ESP	Hunter HCC Hydrowise
Wire System	2-wire	2-wire	
Master Valve / Flow Sensors	YES	YES	YES
Total Premium	\$ 39,716.07	\$ 91,125.39	\$35,465.00



Proposal

Customer:

Villas of Wilkinson Lake Home Owners'
Association
29 Phoebe Lane
Saint Paul, MN 55127

Salesperson: David Eddy

Proposal #: 60997

Service Includes:

Irrigation controller upgrade per the recommendations of Craig Otto:

For the **Kestrel Court** system with 24 zones:

- Install (1) Rainbird ESP-LXIVM 2-Wire Controllers
- Install (1) Master Valves & Flow Meters.
- Replace (24) Hunter Decoders with Rainbird Decoders
- Replace (24) solenoids with DC Latching Solenoids
- Install (1) Rainbird IQ Card and Set Up Central Control.

- (1) Each Rainbird ESPLXIVM
- (25) Each DC Latching Solenoid
- (1) EA Pig Tail Power Cord
- (1) Each Irrigation Supplies
- (1) EA IQ 4G Cellular Communication Cartridge w/ 1 Year of Service (USA)
- (25) EA Rain Bird FD-101 Field Decoder 1 station 1 Solenoid
- (25) EA King DryConn DBYN-600 Direct Bury Silicone Tube with Yellow Nut (Bag of 2)
- (50) Each Wire Nut
- (1) Each Rainbird FS150B Flow Sensor
- (1) Each 1-1/2" Flo-Span Coupling
- (1) EA Rain Bird Flow Decoder SD210Turf
- (1) Each 12" Standard Valve Box
- (1) EA Hunter PGV Globe/Angle Valve Plastic 1-1/2 in. w/ Flow Control FIPT x FIPT
- (1) EA Rain Bird FD-101 Field Decoder 1 station 1 Solenoid
- (1) EA King DryConn DBYN-600 Direct Bury Silicone Tube with Yellow Nut (Bag of 2)
- (2) Each Wire Nut
- (1) Each 10" Round Valve Box
- (1) Each 1-1/2" Flo-Span Coupling
- (3) Each 1-1/2" PVC Fitting

- (1) Each 9-Volt Battery
- (1) Each Wireless Rain Sensor

Time and Materials Approximate Price: \$26,608.21

*Price includes materials, delivery and labor to complete the project. Price does not include applicable sales tax. Owner may pay by credit or debit card but is responsible for all transaction fees charged to Prescription Landscape for the processing of the transaction by credit or debit card.

Signature _____ **Date** _____

Print Name _____

Terms and Conditions

RESPONSIBILITY FOR DAMAGES: Property damaged caused by Contractor’s negligence shall be Contractor’s responsibility, except that in no event shall Contractor be responsible or liable for any costs or damages, including consequential or incidental damages, which may arise in any way from the services or information provided herein. The Owner shall report all damages to the Contractor within forty-eight (48) hours after discovery of such damage and permit the Contractor the opportunity to review the damages and determine how to make repairs. Owner shall not have the right to hire someone else to do any repair work without first providing written notice via certified, return receipt mail to Contractor and giving Contractor a maximum of thirty (30) days to perform repairs, or a time period that is mutually agreed upon in writing by the Owner and Contractor. This Service Agreement and Contract constitutes the sole obligation of Contractor.

PRICING: Pricing is Valid for 90 days.



Proposal

Customer:

Villas of Wilkinson Lake Home Owners'
Association
29 Phoebe Lane
Saint Paul, MN 55127

Salesperson: David Eddy

Proposal #: 60951

Service Includes:

Irrigation controller upgrade per the recommendations of Craig Otto:

For the **Osprey Court** system with 48 zones:

- Install (1) Rainbird ESP-LXIVM 2-Wire Controllers
- Install (1) Master Valves & Flow Meters.
- Replace (48) Hunter Decoders with Rainbird Decoders
- Replace (48) solenoids with DC Latching Solenoids
- Install (1) Rainbird IQ Card and Set Up Central Control.

- (1) Each Rainbird ESPLXIVM
- (49) Each DC Latching Solenoid
- (1) EA Pig Tail Power Cord
- (1) Each Irrigation Supplies
- (1) EA IQ 4G Cellular Communication Cartridge w/ 1 Year of Service (USA)
- (49) EA Rain Bird FD-101 Field Decoder 1 station 1 Solenoid
- (49) EA King DryConn DBYN-600 Direct Bury Silicone Tube with Yellow Nut (Bag of 2)
- (96) Each Wire Nut
- (1) Each Rainbird FS150B Flow Sensor
- (1) Each 1-1/2" Flo-Span Coupling
- (1) EA Rain Bird Flow Decoder SD210Turf
- (1) Each 12" Standard Valve Box
- (1) EA Hunter PGV Globe/Angle Valve Plastic 1-1/2 in. w/ Flow Control FIPT x FIPT
- (1) EA Rain Bird FD-101 Field Decoder 1 station 1 Solenoid
- (1) EA King DryConn DBYN-600 Direct Bury Silicone Tube with Yellow Nut (Bag of 2)
- (2) Each Wire Nut
- (1) Each 10" Round Valve Box
- (1) Each 1-1/2" Flo-Span Coupling

- (3) Each 1-1/2" PVC Fitting
- (1) Each 9-Volt Battery
- (1) Each Wireless Rain Sensor

Time and Materials Approximate Price: \$38,731.87

*Price includes materials, delivery and labor to complete the project. Price does not include applicable sales tax. Owner may pay by credit or debit card but is responsible for all transaction fees charged to Prescription Landscape for the processing of the transaction by credit or debit card.

Signature _____ **Date** _____

Print Name _____

Terms and Conditions

RESPONSIBILITY FOR DAMAGES: Property damaged caused by Contractor’s negligence shall be Contractor’s responsibility, except that in no event shall Contractor be responsible or liable for any costs or damages, including consequential or incidental damages, which may arise in any way from the services or information provided herein. The Owner shall report all damages to the Contractor within forty-eight (48) hours after discovery of such damage and permit the Contractor the opportunity to review the damages and determine how to make repairs. Owner shall not have the right to hire someone else to do any repair work without first providing written notice via certified, return receipt mail to Contractor and giving Contractor a maximum of thirty (30) days to perform repairs, or a time period that is mutually agreed upon in writing by the Owner and Contractor. This Service Agreement and Contract constitutes the sole obligation of Contractor.

PRICING: Pricing is Valid for 90 days.



Proposal

Customer:

Villas of Wilkinson Lake Home Owners'
Association
29 Phoebe Lane
Saint Paul, MN 55127

Salesperson: David Eddy

Proposal #: 60996

Service Includes:

Irrigation controller upgrade per the recommendations of Craig Otto:

For the **Phoebe Lane** system with 21 zones:

- Install (1) Rainbird ESP-LXIVM 2-Wire Controllers
- Install (1) Master Valves & Flow Meters.
- Replace (21) Hunter Decoders with Rainbird Decoders
- Replace (21) solenoids with DC Latching Solenoids
- Install (1) Rainbird IQ Card and Set Up Central Control.

- (1) Each Rainbird ESPLXIVM
- (44) Each DC Latching Solenoid
- (1) EA Pig Tail Power Cord
- (1) Each Irrigation Supplies
- (1) EA IQ 4G Cellular Communication Cartridge w/ 1 Year of Service (USA)
- (22) EA Rain Bird FD-101 Field Decoder 1 station 1 Solenoid
- (22) EA King DryConn DBYN-600 Direct Bury Silicone Tube with Yellow Nut (Bag of 2)
- (44) Each Wire Nut
- (1) Each Rainbird FS150B Flow Sensor
- (1) Each 1-1/2" Flo-Span Coupling
- (1) EA Rain Bird Flow Decoder SD210Turf
- (1) Each 12" Standard Valve Box
- (1) EA Hunter PGV Globe/Angle Valve Plastic 1-1/2 in. w/ Flow Control FIPT x FIPT
- (1) EA Rain Bird FD-101 Field Decoder 1 station 1 Solenoid
- (1) EA King DryConn DBYN-600 Direct Bury Silicone Tube with Yellow Nut (Bag of 2)
- (2) Each Wire Nut
- (1) Each 10" Round Valve Box
- (1) Each 1-1/2" Flo-Span Coupling

- (3) Each 1-1/2" PVC Fitting
- (1) Each 9-Volt Battery
- (1) Each Wireless Rain Sensor

Total Prescription
Bid for
Neighborhood:
\$91,125.39

Time and Materials Approximate Price: \$25,785.31

*Price includes materials, delivery and labor to complete the project. Price does not include applicable sales tax. Owner may pay by credit or debit card but is responsible for all transaction fees charged to Prescription Landscape for the processing of the transaction by credit or debit card.

Signature _____ **Date** _____

Print Name _____

Terms and Conditions

RESPONSIBILITY FOR DAMAGES: Property damaged caused by Contractor's negligence shall be Contractor's responsibility, except that in no event shall Contractor be responsible or liable for any costs or damages, including consequential or incidental damages, which may arise in any way from the services or information provided herein. The Owner shall report all damages to the Contractor within forty-eight (48) hours after discovery of such damage and permit the Contractor the opportunity to review the damages and determine how to make repairs. Owner shall not have the right to hire someone else to do any repair work without first providing written notice via certified, return receipt mail to Contractor and giving Contractor a maximum of thirty (30) days to perform repairs, or a time period that is mutually agreed upon in writing by the Owner and Contractor. This Service Agreement and Contract constitutes the sole obligation of Contractor.

PRICING: Pricing is Valid for 90 days.



HORTICULTURE SERVICES

2930 Quant Ave

Stillwater, MN 55082
651-433-4338

info@horticultureservices.com
www.horticultureservices.com

Proposal

Customer Purchase Order	Proposal No.	Date
	12906	1/12/2024
Job	Account No.	Terms
Wilkinson Lake Irrigation	738	

Submitted To:

Wilkinson Lake Irrigation
2 Osprey Court
North Oaks, MN 55127

We propose to furnish the following scope of work. To be billed upon completion, applicable sales tax not included.

This proposal is for the installation of the Weathermatic SmartLink irrigation management system with flow sensor master valves on all three irrigation systems at Wilkinson Lake.

The proposal is split in to three sections below, one for each system.

Each individual system includes:

- A Weathermatic 2-Wire controller
- A wireless Weather Sensor
- A Weathermatic Internet Aircard with Flow Sensor Support
- Zone valve decoders for each zone in the system
- A Flow Sensor Master Valve (FSMV)

Much of the expense of this project is from the necessary swapping out of zone decoders. The existing zone decoders are not compatible with Weathermatic controllers, so the existing zone decoders will need to be swapped out with Weathermatic zone decoders.

Given the scale of the project, we are applying a discount on the decoder materials to help Wilkinson Lake with the project.

Following the installation of the Weathermatic irrigation systems, the Weathermatic SmartLink Service Plan will need to be activated in order to use the internet-connected functionality.

This service plan is a continuing annual subscription plan. It has two available tiers:

- Baseline Service Plan with Flow Sensor support: \$432 per year
- Add on the continual warranty: An additional \$72 per year

NOTE: Each controller will need its own individual service plan.

While people have mixed feelings on warranty plans like this, we do recommend the Weathermatic warranty. HS doesn't get any kickback for it, we just think it is a real benefit for our clients. For the additional \$72 per year, the warranty covers ALL parts of the system up to twice in a 12-month period, for ANY reason. If any part is struck by lightning, vandalized, etc, you will get that new part at no charge. The only expense would be the labor involved to install it.

IMPORTANT NOTE:

In order for the flow sensor master valve to work on the Osprey system the controller will need to be relocated so it is at the irrigation water source box near address 2 Osprey. If electrical service is not currently available at the Osprey system irrigation source box, Wilkinson Lake will need to have an electrician or Xcel (or both) do what is needed to have an electrical outlet available at the Osprey water source box to power the irrigation controller.

The price for the rest of the labor and materials needed to install the new Osprey irrigation controller at the Osprey irrigation source box is included in this proposal.

Controller – Weathermatic - Osprey

This section contains the pricing and details for converting the Osprey irrigation system to the Weathermatic 2-wire system with flow sensor master valve.

NOTE: Wilkinson Lake will need to ensure there is electrical service to the Osprey irrigation water source box.

Description	Quantity Unit	Price
Controller, Weathermatic SL9648T 2-Wire, w/ Aircard and Weather Sensor	1.00 Ea	4,056.00
Weathermatic 2-Wire Zone Valve Decoder SLDEC1	49.00 Ea	11,581.51
Labor - Decoder Installs	16.00 HR	2,386.00
HS Applied Decoder Discount	1.00 Ea	-3,517.31
Labor - Additional Controller Install Labor	3.00 HR	421.78
Flow Control Weathermatic - 1.5" PVC Flow Sensor Assembly	1.00 Ea	1,307.57
Labor - Flow Sensor Master Valve Installation	6.00 HR	901.73

Subtotal	\$17,137.28
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Controller – Weathermatic - Kestrel

This section contains the pricing and details for converting the Kestrel irrigation system to the Weathermatic 2-wire system with flow sensor master valve.

Description	Quantity Unit	Price
Controller, Weathermatic SL9648T 2-Wire, w/ Aircard and Weather Sensor	1.00 Ea	4,056.00
Weathermatic 2-Wire Zone Valve Decoder SLDEC1	25.00 Ea	5,908.93
Labor - Decoder Installs	8.00 HR	1,193.00
HS Applied Decoder Discount	1.00 Ea	-1,758.65
Labor - Flow Sensor Master Valve Installation	6.00 HR	901.73
Flow Control Weathermatic - 1.5" PVC Flow Sensor Assembly	1.00 Ea	1,307.57

Subtotal	\$11,608.58
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Controller – Weathermatic - Phoebe

This section contains the pricing and details for converting the Phoebe irrigation system to the Weathermatic 2-wire system with flow sensor master valve.

Description	Quantity Unit	Price
Controller, Weathermatic SL9648T 2-Wire, w/ Aircard and Weather Sensor	1.00 Ea	4,056.00
Weathermatic 2-Wire Zone Valve Decoder SLDEC1	22.00 Ea	5,199.86
Labor - Decoder Installs	7.00 HR	1,043.87
HS Applied Decoder Discount	1.00 Ea	-1,538.82
Flow Control Weathermatic - 1.5" PVC Flow Sensor Assembly	1.00 Ea	1,307.57
Labor - Flow Sensor Master Valve Installation	6.00 HR	901.73

Subtotal	\$10,970.21
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Total Price	\$39,716.07
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Accepted:

Wilkinson Lake Irrigation

Date

Terms & Conditions

WILLISTON IRRIGATION

Job: Villas Of Wilkinson

Job location: North Oaks

Description of the work: Install Smart controllers and flow meters.

- Install a Hunter HCC Hydrowise controller and flow meter on Kestrel.
Install 24 decoders.
- Install a Hunter HCC Hydrowise controller and flow meter on Phoebe.
Install 21 decoders.
- Install a Hunter HCC Hydrowise controller and flow meter on Osprey.
Install 46 decoders.
- Created a map of the sprinkler system.

Note: All controllers will come with wi/fi. They will be outdoor controllers with locks.

Sprinkler cost: \$35,465

Irrigation Box / Install also approved

Jennifer Morris on behalf of the Board of Directors

7/22/24

P.O. Box 64
Cedar, MN 55011

763-286-9781
Info@willistonirrigation.com

V.A. Villas of Wilkinson Lake HOA Smart Irrigation Controllers LL2 2024-05 Grant Application

Lauren Sampedro
TEC Meeting
8/14/2024



LL2 2024-05 Location Aerial



Bid Summary



2024 Irrigation Smart Controller Bids

	Horticulture Services	Prescription Landscape	Williston Irrigation
Product Type	Weathermatic	RainBird ESP	Hunter HCC Hydrawise
Wire System	2-wire	2-wire	
Master Valve / Flow Sensor	YES	YES	YES
Total Premium	\$ 39,716.07	\$ 91,125.39	\$35,465.00

RAMSEY COUNTY
 RAMSEY COUNTY SWCD
 2015 VAN DYKE STREET
 MAPLEWOOD, MN 55109
 651-266-7280
 www.ramseycounty.us

PROJECT:
 WBL CURB-CUTS '24 - 1789 3RD ST

LOCATION:
 1789 3RD ST
 WHITE OAK LAKE, MN 55110

WATERSHED DISTRICT:

DESIGNER: BRIAN T. OLSEN
DATE: 7/25/2024
PAST REVISION:
PAST REVISION:
PAST REVISION:
CHECKED BY:
TAA:

NOTES:

- ELEVATIONS ARE APPROXIMATE
- UTILITY LOCATIONS ARE APPROXIMATE
- CONTAIN LOCATIONS PRIOR TO WORK
- CONTRACTOR ACQUIRE NECESSARY PERMITS PRIOR TO START
- EXCAVATE WITH TRACKED EQUIPMENT ONLY
- SIZE AND SHAPE OF PROJECT MAY VARY, VERIFY CHANGES WITH ASAWCD STAFF PRIOR TO INSTALL
- ORIGINAL SHEET SIZE 11" X 17"

SCALE: 1" = 10' 0"

N

SITE PLAN

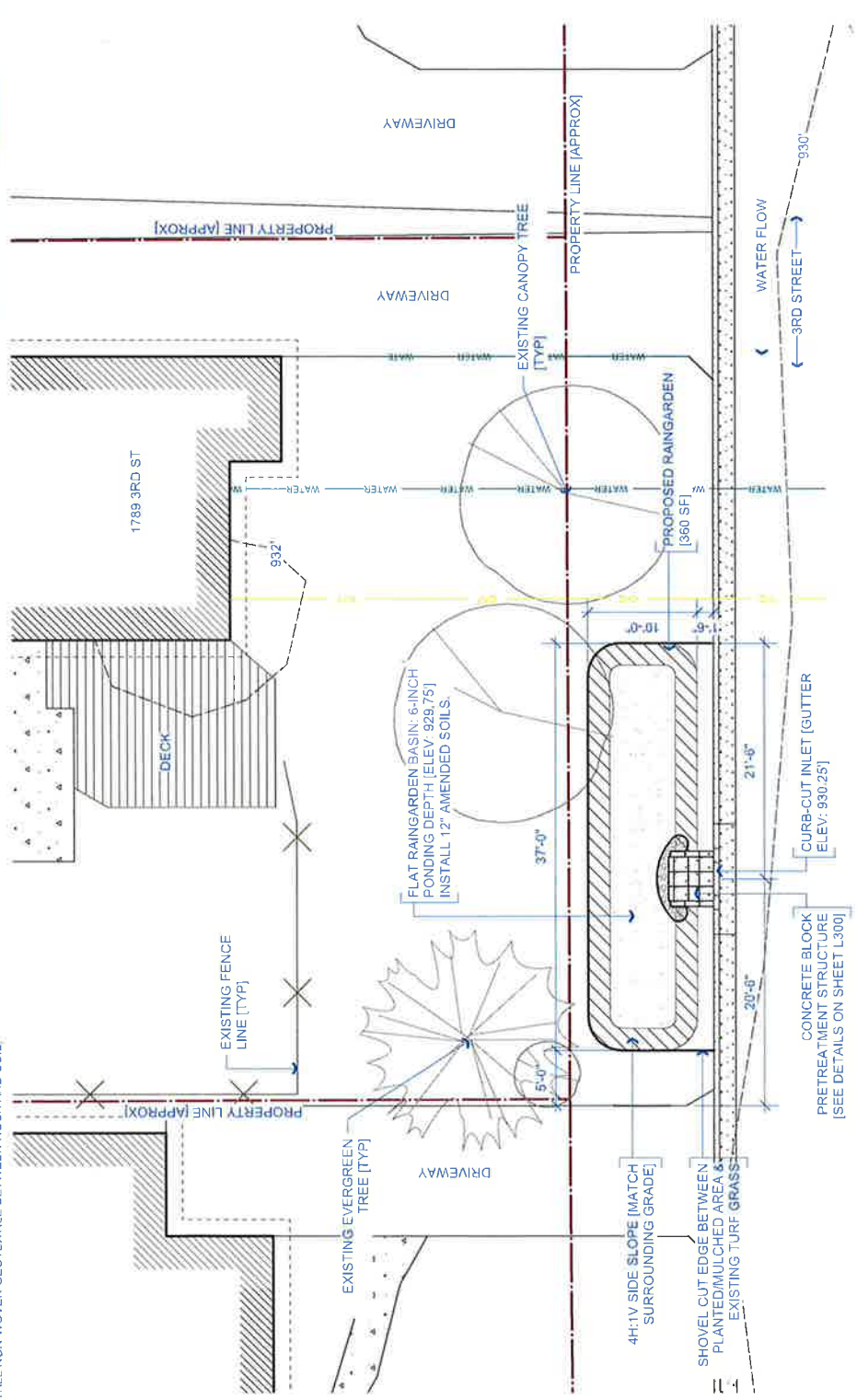
L100

PLAN LEGEND:

- MIXED SIZE ROCK (4'-6" OR EQUAL)
- FLAT RAINGARDEN BASIN
- RAINGARDEN 4H:1V SIDE SLOPES
- PARCEL BOUNDARY (APPROX)
- 2' CONTOUR ELEVATION

8. SEE LAYOUT PLAN FOR CURB-CUT OPENING, & RAINGARDEN BASIN ELEVATIONS AND DIMENSIONS.
9. INSTALL 2'-3" HARDWOOD MULCH OVER ENTIRE RAINGARDEN & PLANTING AREA.
10. FOR ALL AREAS WITH EXISTING LAWN/TURF/VEGETATION, AREAS SHOULD BE SCRAPED OF VEGETATION OR SPRAYED WITH HERBICIDE TO KILL EXISTING VEGETATION. MINIMUM 1-2 APPLICATIONS TO EFFECTIVELY KILL ALL COMPETING VEGETATION.
11. PRESERVE ALL EXISTING TREES & SHRUBS UNLESS OTHERWISE DIRECTED BY LANDOWNER.
12. CONSTRUCTION MATERIALS TO BE STORED UNDER TREE CANOPIES OR DRIVEN IN TRUCKS/LOADERS.
13. CONTRACTOR TO SEED ALL AREAS OF DISTURBED SOIL OUTSIDE PROJECT LIMITS WITH FESCUE SEED OR SIMILAR UPON COMPLETION OF PROJECT.
14. CONTRACTOR TO POT-HOLE UTILITIES NEAR/WITHIN PROJECT AREA TO VERIFY DEPTH AND LOCATION PRIOR TO MACHINE EXCAVATION AS NEEDED.

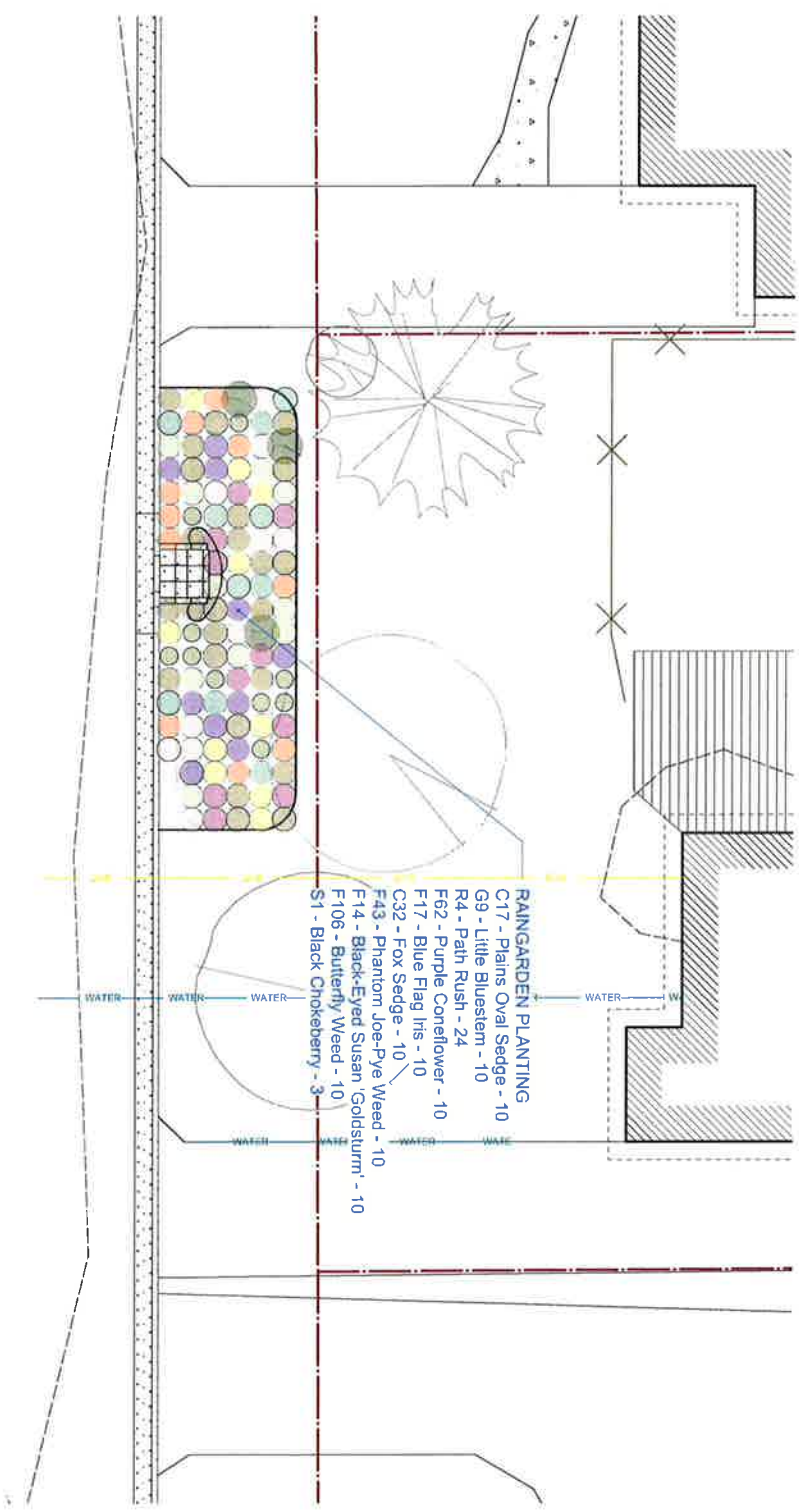
1. ELEVATIONS ARE APPROXIMATE, EXACT ELEVATION OF BASIN/OVERFLOW, ETC, MAY VARY DEPENDING ON FINAL GRADE OF RAINGARDEN.
2. EXCAVATE RAINGARDEN AREA, LOOSEN UNDERLYING SOILS 6'-12" TO REMOVE COMPACTION & PROMOTE INFILTRATION, AND INSTALL 1" DEEP AMENDED SOILS IN RAINGARDEN BASIN AREA.
3. GRADE OUT BASIN & SIDE SLOPES PER PLANS, CONTRACTOR TO ENSURE RAINGARDEN BASIN IS FLAT IN ALL DIRECTIONS AND SIDE SLOPES ARE NO GREATER THAN 4H:1V BEFORE PLACEMENT OF MULCH, ROCK AND PLANT MATERIAL.
4. PROVIDE 1.5" WIDE SETBACK FROM BACK OF CURB TO BEGINNING OF SIDE SLOPE - PITCH TOWARDS RAINGARDEN.
5. CONCRETE CURB OPENING HAS PREVIOUSLY BEEN INSTALLED BY THE CITY OF WHITE OAK. MAKE EXISTING CURB OPENING MATCH TO PLAN.
6. INSTALL CONCRETE PAVER STEP DOWN AND SUMP STRUCTURE PER PLANS AND DETAILS PROVIDED.
7. INSTALL MIXED SIZE ROCK (4'-6" RIVER ROCK OR EQUAL) SPLASH AREA AROUND SUMP STRUCTURE, INSTALL NON-WOVEN GEOTEXTILE BETWEEN ROCK AND SOIL.



PLANT SCHEDULE					
ID	Qty	Latin Name	Common Name	Size	Spacing (ft)
C17	10	Carex brevior	Plains Oval Sedge	4" Pot	1.5
C32	10	Carex vulpinoidea	Fox Sedge	4" Pot	2
F14	10	Rudbeckia hirta 'Goldsturm'	Black-Eyed Susan 'Goldsturm'	4" Pot	2
F17	10	Iris versicolor	Blue Flag Iris	4" Pot	2
F43	10	Eupatorium 'Phantom'	Phantom Joe-Pye Weed	4" Pot	2
F62	10	Echinacea purpurea	Purple Coneflower	4" Pot	2
F106	10	Asclepias tuberosa	Butterfly Weed	4" Pot	2
G9	10	Schizachyrium scoparium	Little Bluestem	4" Pot	2
R4	24	Juncus tenuis	Path Rush	4" Pot	2
S1	3	Aronia melanocarpa	Black Chokeberry	2 Gallon	3
107		TOTAL PLANTS			

NATIVE PLANTING NOTES:

1. SEE PLANT SCHEDULE FOR SPECIES, SIZE & SPACING RECOMMENDATIONS.
2. PLANTING PLAN LAYOUTS FOR REPRESENTATION PURPOSES ONLY AND DOES NOT REFLECT ACTUAL SPECIES LAYOUT. PLANT FORMS & GRASSES IN GROUPS OF SAME SPECIES TO BE PLANTED IN GROUPS OF 4. KEEP 90° PLACEMENT TO WIDEBACK OF RAINGARDEN AWAY FROM THE CURBLINE OF ROAD.
3. PLANT SHRUBS IN GROUPS OF 4. KEEP 90° PLACEMENT TO WIDEBACK OF ROAD.
4. FINAL SPECIES LIST AND QUANTITIES TO BE SUBMITTED TO RGSWCD STAFF FOR FINAL APPROVAL PRIOR TO INSTALLATION.
5. INSTALL PLUGS THROUGH MULCH LAYER.
6. ENSURE SPECIES ARE LOCATED IN AREAS OF RAINGARDEN THAT MATCH THEIR PREFERRED GROWING CONDITIONS. KEEP DRIER SPECIES IN SIDE SLOPE & DRIER AREAS. SPECIES THAT PREFER MORE MOISTURE TO BE LOCATED IN RAINGARDEN BASIN AREAS.
7. CONSIDER FULL-GROWTH PLANT HEIGHT WHEN LAYING OUT SPECIES. TALLER SPECIES TO BE LOCATED FURTHER AWAY FROM ROADWAY IN BACK OF GARDEN.
8. PROJECT LAYOUT, TOTAL AREA, AND MATERIALS MAY VARY WITH RGSWCD STAFF APPROVAL.



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MALEWOOD, MN 55109
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VLAWMO

DESIGNER: BRIAN T. OLSEN
DATE: 7/25/2024
PAST REVISION:
PAST REVISION:
PAST REVISION:
PAST REVISION:
CHECKED BY:
TAA:

NOTES:
-CALL GOMPER ONE TO MARK UTILITIES BEFORE DIGGING
-SEE PLANT SCHEDULE FOR SPECIES, SIZE & SPACING
-PLANT LOCATION MAY VARY
-PLANT SUBSTITUTIONS MUST BE APPROVED BY RGSWCD STAFF
-ORIGINAL SHEET SIZE: 11"x17"

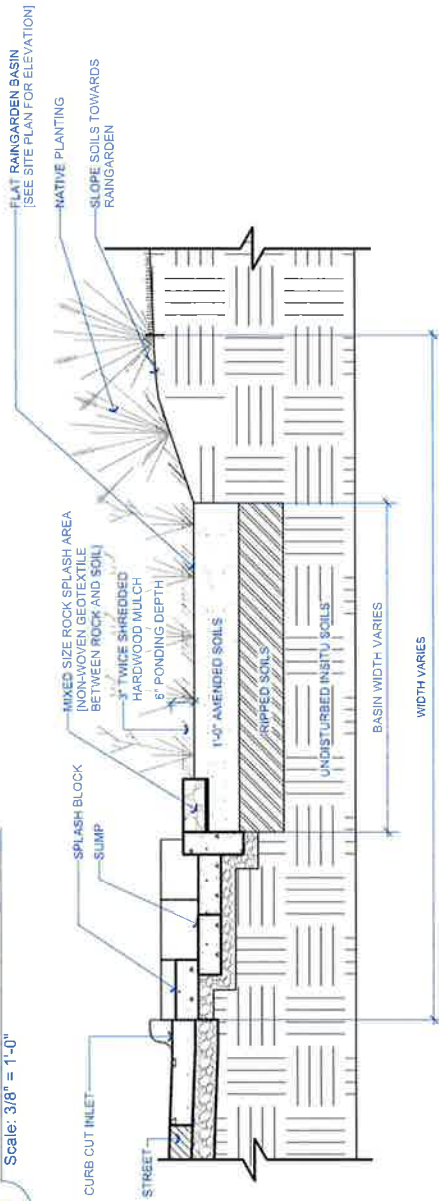
SCALE: 1"=10' 0"

N

PLANTING PLAN

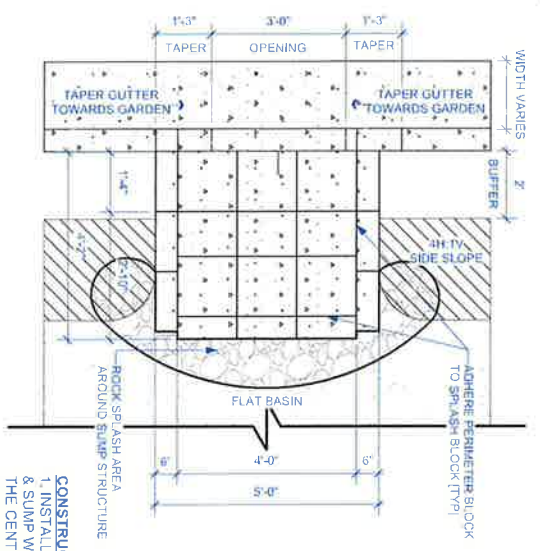
L200

1 CURB-CUT RAINGARDEN SECTION
Scale: 3/8" = 1'-0"



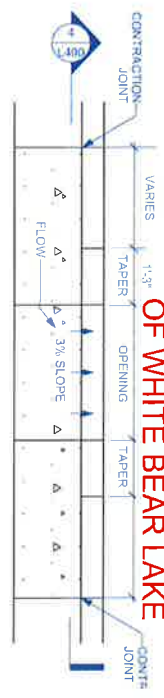
- CURB-CUT RAINGARDEN NOTES:**
1. EXCAVATE RAINGARDEN TO 1'-9" BELOW GUTTER. SCARIFY AN ADDITIONAL 6" BEFORE BACKFILLING WITH AMENDED SOILS.
 2. THE PLANTING MEDIUM AND EROSION CONTROL BLANKET SHALL BE PLACED IN SUCH A WAY AS TO LIMIT THE AMOUNT OF COMPACTION OF THE SUB-SOILS.
 3. OFFSET SPLASH PAD FROM CURB CUT OPENING IN DIRECTION OF WATER FLOW ON STREET.
 4. NO GEOTEXTILE TO BE USED BETWEEN NATIVE AND ENGINEERED SOILS
 5. OWNER/CONTRACTOR TO PROVIDE ALL GSOC LOCATIONS PRIOR TO COMPLETING ANY EXCAVATION.

1 SPLASH BLOCK STEP DOWN & SUMP: PLAN VIEW
Scale: 3/8" = 1'-0"



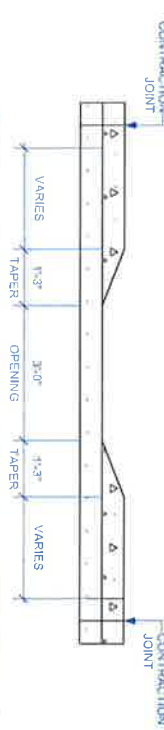
CONSTRUCTION NOTE:
1. INSTALL SPLASH BLOCK STEP DOWN & SUMP WITH A 3" OFFSET FROM THE CENTER OF CURB CUT OPENING. OFFSET 3" FROM CENTER TOWARDS DOWNSLOPE SIDE, CONSISTENT WITH DIRECTIONAL WATER FLOW

3 CURB CUT DETAIL [PLAN]
Scale: 3/8" = 1'-0"



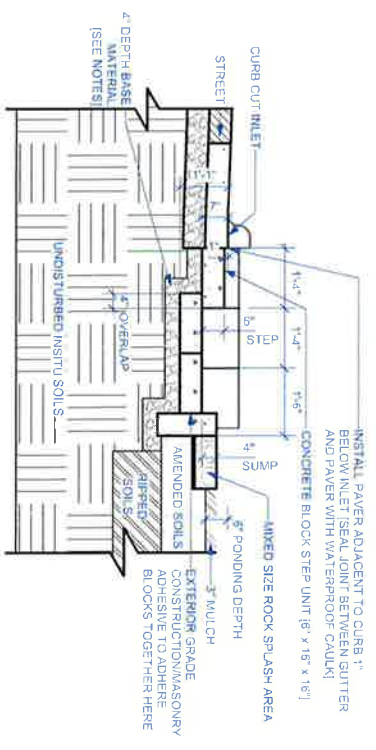
CURB-CUTS PREVIOUSLY COMPLETED BY THE CITY OF WHITE BEAR LAKE

4 CURB CUT DETAIL [SECTION]
Scale: 3/8" = 1'-0"

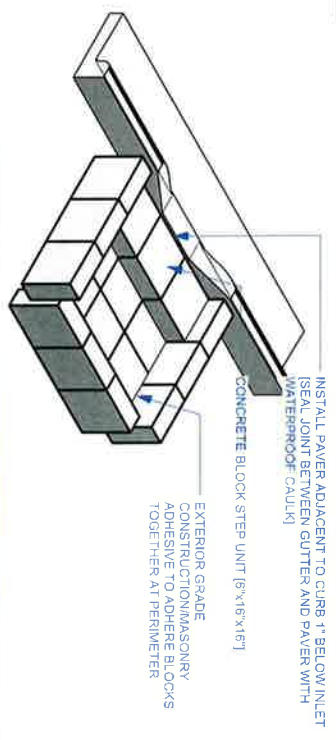


NOTES:
1. CONCRETE CURB OPENING WORK HAS PREVIOUSLY BEEN COMPLETED BY THE CITY OF WHITE BEAR LAKE. EXACT DIMENSIONS & LOCATION ON SITE MAY VARY, SITE VERIFY.

2 SPLASH BLOCK STEP DOWN & SUMP: SECTION-ELEVATION/ISOMETRIC VIEW
Scale: 3/8" = 1'-0"



NOTES:
1. EXAGGATE RAIN GARDEN TO 1'-9" BELOW GUTTER.
2. INSTALL AND COMPACT BASE MATERIAL (WASHED SAND, WASHED AGGREGATE OR APPROVED ALTERNATE).
3. INSTALL PAVEMENT AND SPLASH BLOCK TO A FINISHED HEIGHT OF 1" BELOW THE CURB-CUT INLET.
4. SEAL JOINT BETWEEN GUTTER AND PAVEMENT WITH WATERPROOF CAULK.



<p>RAMSEY COUNTY RAMSEY COUNTY SWCD 2015 VAN DYKE STREET MAPLEWOOD, MN 55109 651-266-7280 www.ramseycounty.us</p>	<p>PROJECT: WBL CURB-CUTS 2A LOCATION: WHITE BEAR LAKE, MN 55110</p>
	<p>WATERSHED DISTRICT: VLAWMO</p>
<p>DESIGNER: BRIAN T. OLSEN DATE: 7/23/2024 PAST REVISION: PAST REVISION: PAST REVISION: PAST REVISION: CHECKED BY: TAA:</p>	<p>NOTES: -CONTACT GOMPER STANT ON CALL TO CONSULT WITH? LOCATIONS: HIGH TO WORK. -EQUIPMENT WITH TRACTOR EQUIPMENT ONLY. -MAINTAIN SQUARE FEET AND DEPTH SUBMITTALS TO CONSTRUCTION DEPT. AND MATERIALS MUST BE APPROVED PRIOR TO INSTALLATION. -ORIGINAL SHEET: 2/21/18/17P</p>
<p>SCALE:</p>	<p>SITE DETAILS: CURB-CUT & PRE-TREATMENT</p>
<p>L400</p>	

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 MAPLEWOOD, MN 55109
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PROJECT:
 WBL CURB-CUTS '24 - 1847 BIRCH LAKE AVE
LOCATION:
 1847 BIRCH LAKE AVE
 WHITE BEAR LAKE, MN 55110
WATERSHED DISTRICT:

VLAWMO

DESIGNER: BRIAN T. OLSEN
DATE: 7/25/2024
PAST REVISION:
PAST REVISION:
PAST REVISION:
CHECKED BY:
TAA:

NOTES:
 - ELEVATIONS ARE APPROXIMATE
 - UTILITY LOCATIONS ARE APPROXIMATE
 - CONFIRM LOCATIONS PRIOR TO WORK
 - CONTRACTOR ACQUIRE NECESSARY PERMITS PRIOR TO START
 - EXCAVATE WITH TRACKED EQUIPMENT ONLY
 - SIZE AND SHAPE OF PROJECT MAY VARY, VERIFY CHANGES WITH RCSWCD STAFF PRIOR TO INSTALL
 - ORIGINAL SHEET SIZE: 11'x17'

SCALE: 1"=10' 0"

N

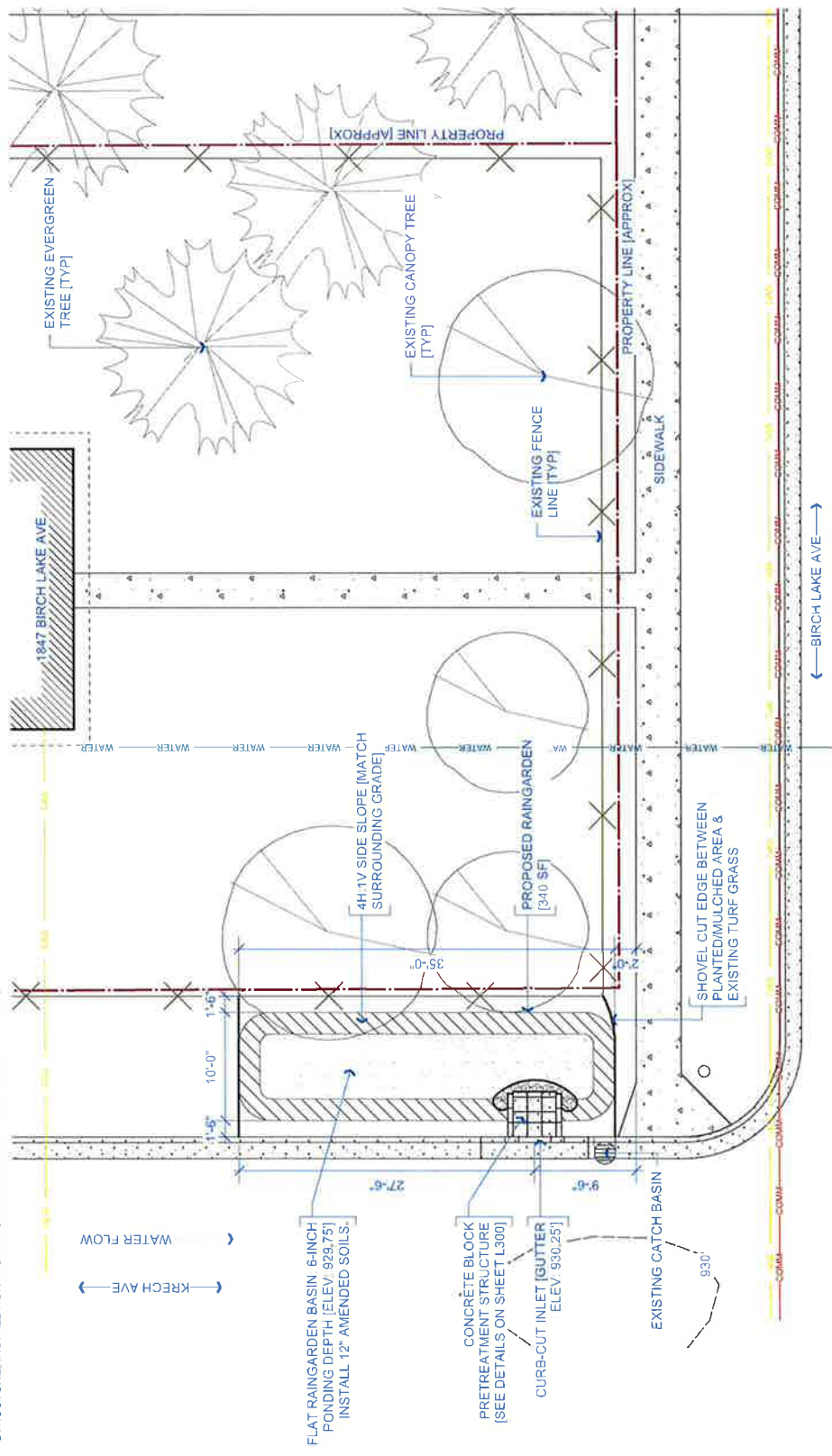
SITE PLAN

L100

PLAN LEGEND:

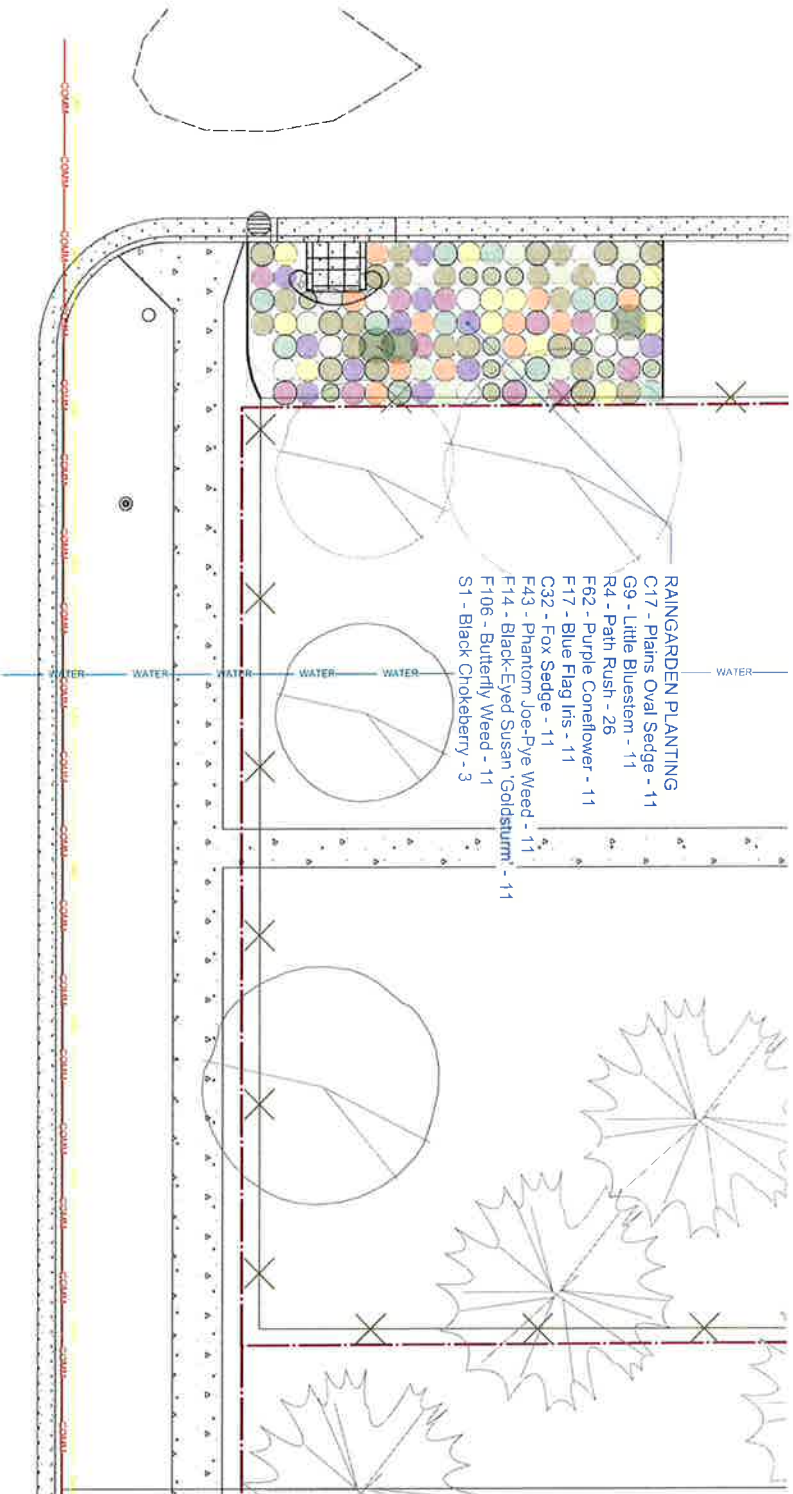
- MIXED SIZE ROCK (4"-6" OR EQUAL)
- FLAT RAINGARDEN BASIN
- RAINGARDEN 4H:1V SIDE SLOPES
- PARCEL BOUNDARY (APPROX)
- 2' CONTOUR ELEVATION

- PROJECT NOTES:**
- ELEVATIONS ARE APPROXIMATE. EXACT ELEVATION OF BASIN/OVERFLOW, ETC, MAY VARY DEPENDING ON FINAL GRADE OF RAINGARDEN.
 - EXCAVATE RAINGARDEN AREA, LOOSEN UNDERLYING SOILS 6-12" TO REMOVE COMPACTION, & PROMOTE INFILTRATION, AND INSTALL 1" DEEP AMENDED SOILS IN RAINGARDEN BASIN AREA.
 - GRADE OUT BASIN & SIDE SLOPES PER PLANS, CONTRACTOR TO ENSURE RAINGARDEN BASIN IS FLAT IN ALL DIRECTIONS AND SIDE SLOPES ARE NO GREATER THAN 4H:1V BEFORE PLACEMENT OF MULCH, ROCK AND PLANT MATERIAL.
 - PROVIDE 1.5' WIDE SETBACK FROM BACK OF CURB TO BEGINNING OF SIDE SLOPE --PITCH TOWARDS RAINGARDEN.
 - CONCRETE CURB OPENING HAS PREVIOUSLY BEEN INSTALLED BY THE CITY OF WHITE BEAR LAKE. EXACT LOCATION MAY VARY.
 - INSTALL CONCRETE FAVER STEP DOWN AND SUMP STRUCTURE PER PLANS AND DETAILS PROVIDED.
 - INSTALL MIXED SIZE ROCK (4"-6" RIVER ROCK OR EQUAL) SPLASH AREA AROUND SUMP STRUCTURE. INSTALL NON-WOVEN GEOTEXTILE BETWEEN ROCK AND SOIL.
 - SEE LAY-OUT PLAN FOR CURB-CUT OPENING, & RAINGARDEN BASIN ELEVATIONS AND DIMENSIONS.
 - INSTALL 2-3" HARDWOOD MULCH OVER ENTIRE RAINGARDEN & PLANTING AREA.
 - FOR ALL AREAS WITH EXISTING LAWN/TURF/VEGETATION, AREAS SHOULD BE SCRAPED OR VEGETATION OR SPRAYED WITH HERBICIDE TO KILL EXISTING VEGETATION, MINIMUM 1-2 APPLICATIONS TO EFFECTIVELY KILL ALL COMPETING VEGETATION.
 - PRESERVE ALL EXISTING TREES & SHRUBS UNLESS OTHERWISE DIRECTED BY LANDOWNER.
 - NO CONSTRUCTION MATERIALS TO BE STORED UNDER TREE CANOPIES OR DRIVEN IN THE RAINGARDEN BASIN.
 - CONTRACTOR TO SEED ALL AREAS OF DISTURBED SOIL OUTSIDE PROJECT LIMITS WITH FESCUE SEED OR SIMILAR UPON COMPLETION OF PROJECT.
 - CONTRACTOR TO POT-HOLE UTILITIES NEAR/WITHIN PROJECT AREA TO VERIFY DEPTH AND LOCATION PRIOR TO MACHINE EXCAVATION AS NEEDED.



PLANT SCHEDULE					
ID	Qty	Latin Name	Common Name	Size	Spacing (ft)
C17	11	Carex brevior	Plains Oval Sedge	4" Pot	1.5
C32	11	Carex vulpinoidea	Fox Sedge	4" Pot	2
F14	11	Rudbeckia hirta 'Goldsturm'	Black-Eyed Susan 'Goldsturm'	4" Pot	2
F17	11	Iris versicolor	Blue Flag Iris	4" Pot	2
F43	11	Eupatorium 'Phantom'	Phantom Joe-Pye Weed	4" Pot	2
F62	11	Echinacea purpurea	Purple Coneflower	4" Pot	2
F106	11	Asclepias tuberosa	Butterfly Weed	4" Pot	2
G9	11	Schizachyrium scoparium	Little Bluestem	4" Pot	2
R4	26	Juncus tenuis	Path Rush	4" Pot	2
S1	3	Aronia melanocarpa	Black Chokeberry	2 Gallon	3
117		TOTAL PLANTS			

- NATIVE PLANTING NOTES:**
1. SEE PLANT SCHEDULE FOR SPECIES, SIZE & SPACING RECOMMENDATIONS.
 2. PLANTING PLAN LAYOUT IS FOR REPRESENTATION PURPOSES ONLY AND DOES NOT REFLECT ACTUAL SPECIES LAYOUT. PLANT FORMS & GRASSES IN GROUPS OF SAME SPECIES IN PLANTING LAYOUT FOR EASIER IDENTIFICATION & MAINTENANCE.
 3. SPECIES IN PLANTING LAYOUT ARE TO BE PLANTED TO MIDDLE/BACK OF RAINGARDEN UNLESS OTHERWISE NOTED.
 4. FINAL SPECIES LIST AND QUANTITIES TO BE SUBMITTED TO RCMWD STAFF FOR FINAL APPROVAL PRIOR TO INSTALLATION.
 5. INSTALL PLUGS THROUGH MULCH LAYER.
 6. ENSURE SPECIES ARE LOCATED IN AREAS OF RAINGARDEN THAT MATCH THEIR PREFERRED GROWING CONDITIONS. KEEP DRIER SPECIES IN SIDE SLOPE & DRIER AREAS. SPECIES THAT PREFER MORE MOISTURE TO BE LOCATED IN RAINGARDEN GAIN AREAS.
 7. CONSIDER FULL-GROWTH PLANT HEIGHT WHEN LAYING OUT SPECIES. TALLER SPECIES TO BE LOCATED FURTHER AWAY FROM ROADWAY IN BACK OF GARDEN.
 8. PROJECT LAYOUT, TOTAL AREA, AND MATERIALS MAY VARY WITH RCMWD STAFF APPROVAL.



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2015 VAN DYKE STREET
MAPLEWOOD, MN 55109
651-266-7280
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PROJECT:
WBL CURB CUTS 94+ - 1847 BIRCH LAKE AVE
LOCATION:
1847 BIRCH LAKE AVE
WHITE BEAR LAKE, MN 55110
WATERSHED DISTRICT:
VLAWMO

DESIGNER: BRIAN T. OLSEN
DATE: 7/25/2024
PAST REVISION:
PAST REVISION:
PAST REVISION:
PAST REVISION:
CHECKED BY:
TAA:

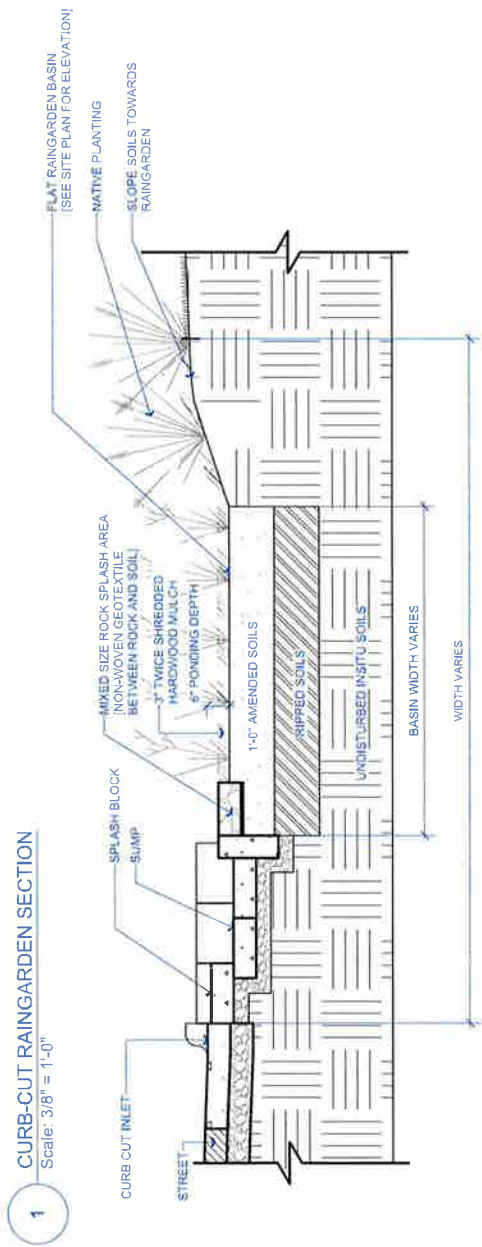
NOTES:
CALL CORRECTION TO WALK UTILITIES
SHOW ORIGIN
SEE PLANT SCHEDULE FOR SPECIES
VEG & SPACING
PLANT LOCATIONS MAY VARY
PLANT SUBSTITUTIONS MUST BE
APPROVED BY RCMWD STAFF
ORIGINAL SHEET SIZE 11"x17"

SCALE: 1"=10' 0"

N

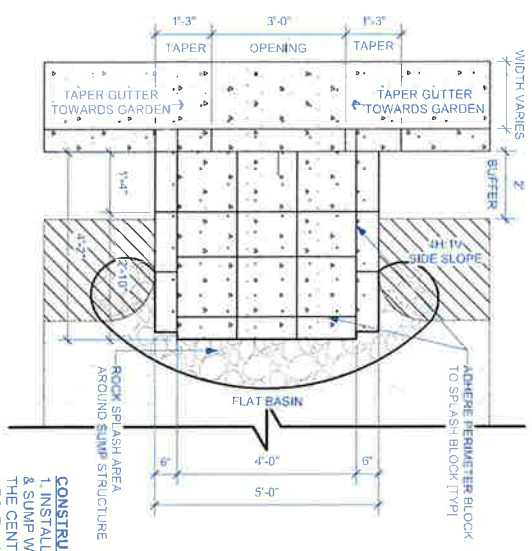
PLANTING PLAN

L200



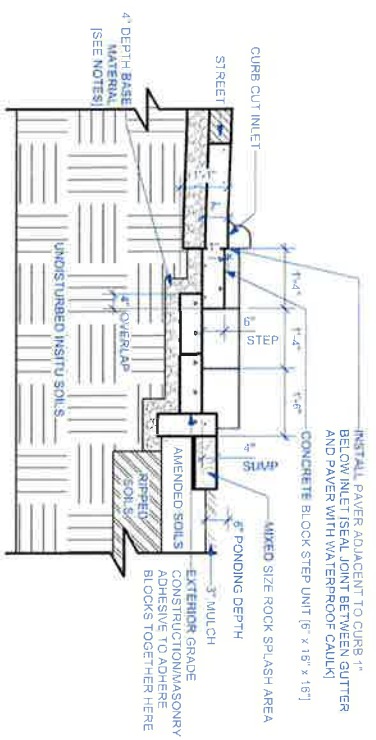
- CURB-CUT RAINGARDEN NOTES:**
1. EXCAVATE RAINGARDEN TO 1'-9" BELOW GUTTER. SCARIFY AN ADDITIONAL 6" BEFORE BACKFILLING WITH AMENDED SOILS.
 2. THE PLANTING MEDIUM AND EROSION CONTROL BLANKET SHALL BE PLACED IN SUCH A WAY AS TO LIMIT THE AMOUNT OF COMPACTION OF THE SUB-SOILS.
 3. OFFSET SPLASH PAD FROM CURB CUT OPENING IN DIRECTION OF WATER FLOW ON STREET.
 4. NO GEOTEXTILE TO BE USED BETWEEN NATIVE AND ENGINEERED SOILS
 5. OWNER/CONTRACTOR TO PROVIDE ALL GSOC LOCATIONS PRIOR TO COMPLETING ANY EXCAVATION.

1 SPLASH BLOCK STEP DOWN & SUMP: PLAN VIEW
Scale: 3/8" = 1'-0"



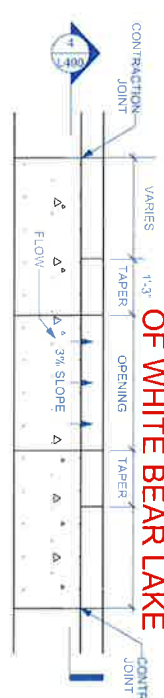
CONSTRUCTION NOTE:
1. INSTALL SPLASH BLOCK STEP DOWN & SUMP WITH A 3" OFFSET FROM THE CENTER OF CURB CUT OPENING. OFFSET 3" FROM CENTER TOWARDS DOWN SLOPE SIDE, CONSISTENT WITH DIRECTIONAL WATER FLOW

2 SPLASH BLOCK STEP DOWN & SUMP: SECTION-ELEVATION/ISOMETRIC VIEW
Scale: 3/8" = 1'-0"



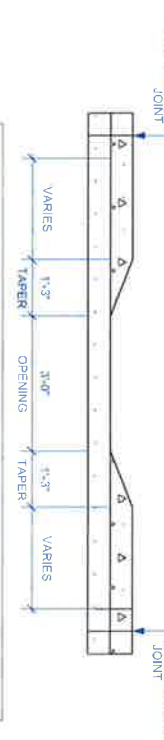
NOTES:
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2. INSTALL PAVEMENT BASE MATERIAL (WASHED SAND, WASHED AGGREGATE)
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4. SEAL JOINT BETWEEN GUTTER AND PAVEMENT WITH WATERPROOF CAULK

3 CURB CUT DETAIL [PLAN]
Scale: 3/8" = 1'-0"

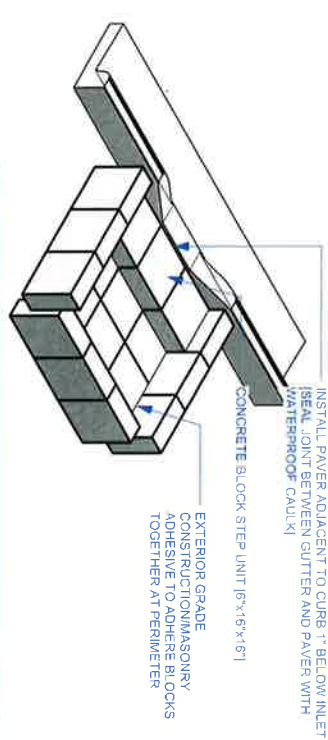


COMPLETED BY THE CITY OF WHITE BEAR LAKE

4 CURB CUT DETAIL [SECTION]
Scale: 3/8" = 1'-0"



NOTES:
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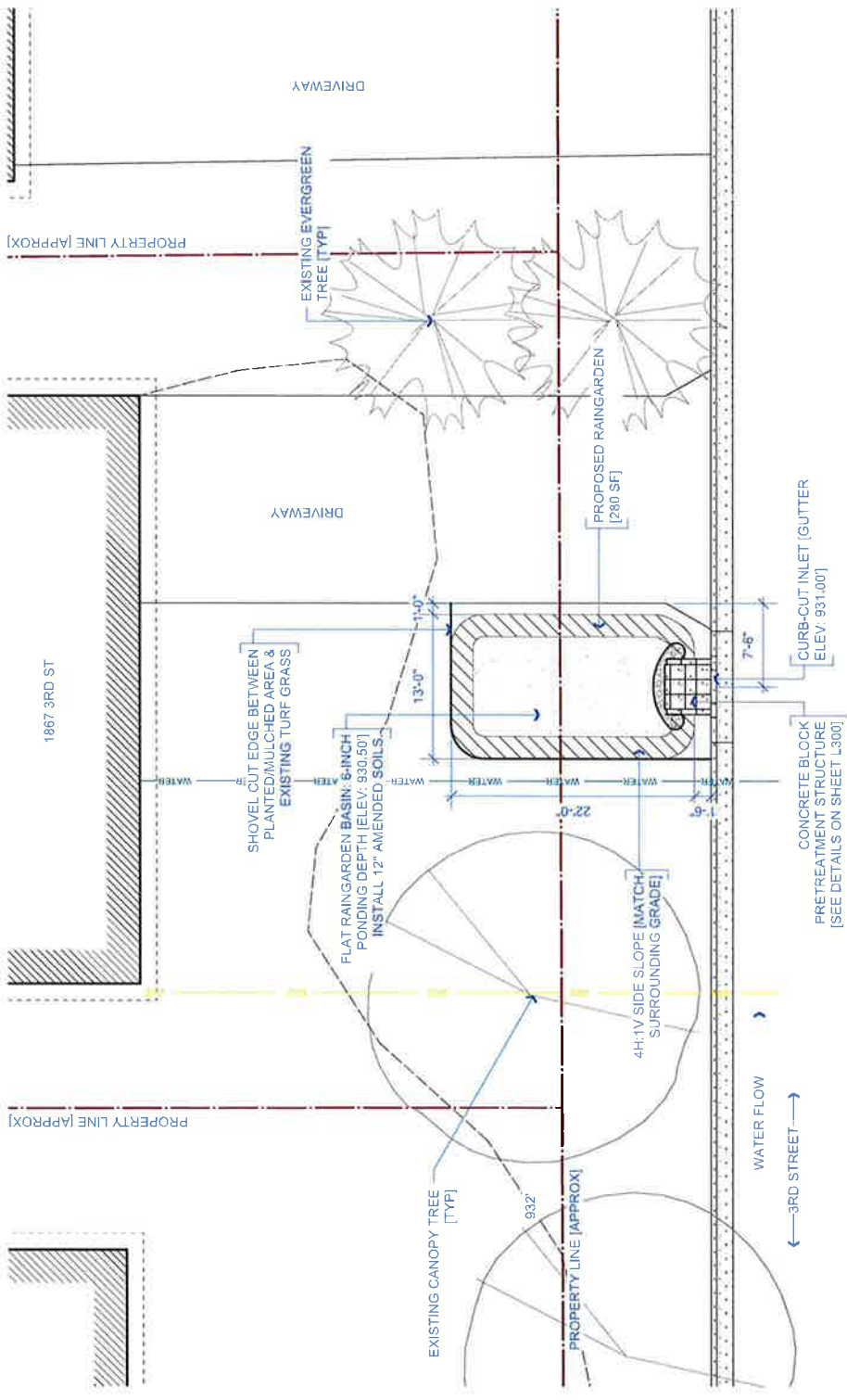
<p>RAMSEY COUNTY RAMSEY COUNTY SWCD 2015 VAN DYKE STREET MAPLEWOOD, MN 55109 651-266-7280 www.ramseycounty.us</p>	<p>PROJECT: WRI CURB CUTS 2A LOCATION: WHITE BEAR LAKE, MN 55110</p>
	<p>WATERSHED DISTRICT: VLAWMO</p>
<p>DESIGNER: BRIAN T. OLSEN DATE: 7/23/2024 PAST REVISION: PAST REVISION: PAST REVISION: PAST REVISION: CHECKED BY: TAA:</p>	<p>NOTES: -CONTACT GOMEN STATE ONE CALL TO CONFIRM UTILITY LOCATIONS PRIOR TO WORK -EXCAVATE WITH TRACKED EQUIPMENT ONLY -ADD ANY SQUARE FEET AND DEPTH SUBSTITUTIONS TO CONSTRUCTION DESIGN AND MATERIALS MUST BE APPROVED PRIOR TO INSTALLATION -ORIGINAL SHEET: 042-11-0137</p>
<p>SCALE:</p>	<p>SITE DETAILS: CURB-CUT & PRE-TREATMENT</p>
<p>L400</p>	

PLAN LEGEND:

	MIXED SIZE ROCK (4'-6" OR EQUAL)
	FLAT RAINGARDEN BASIN
	RAINGARDEN 4H:1V SIDE SLOPES
	PARCEL BOUNDARY (APPROX)
	2' CONTOUR ELEVATION

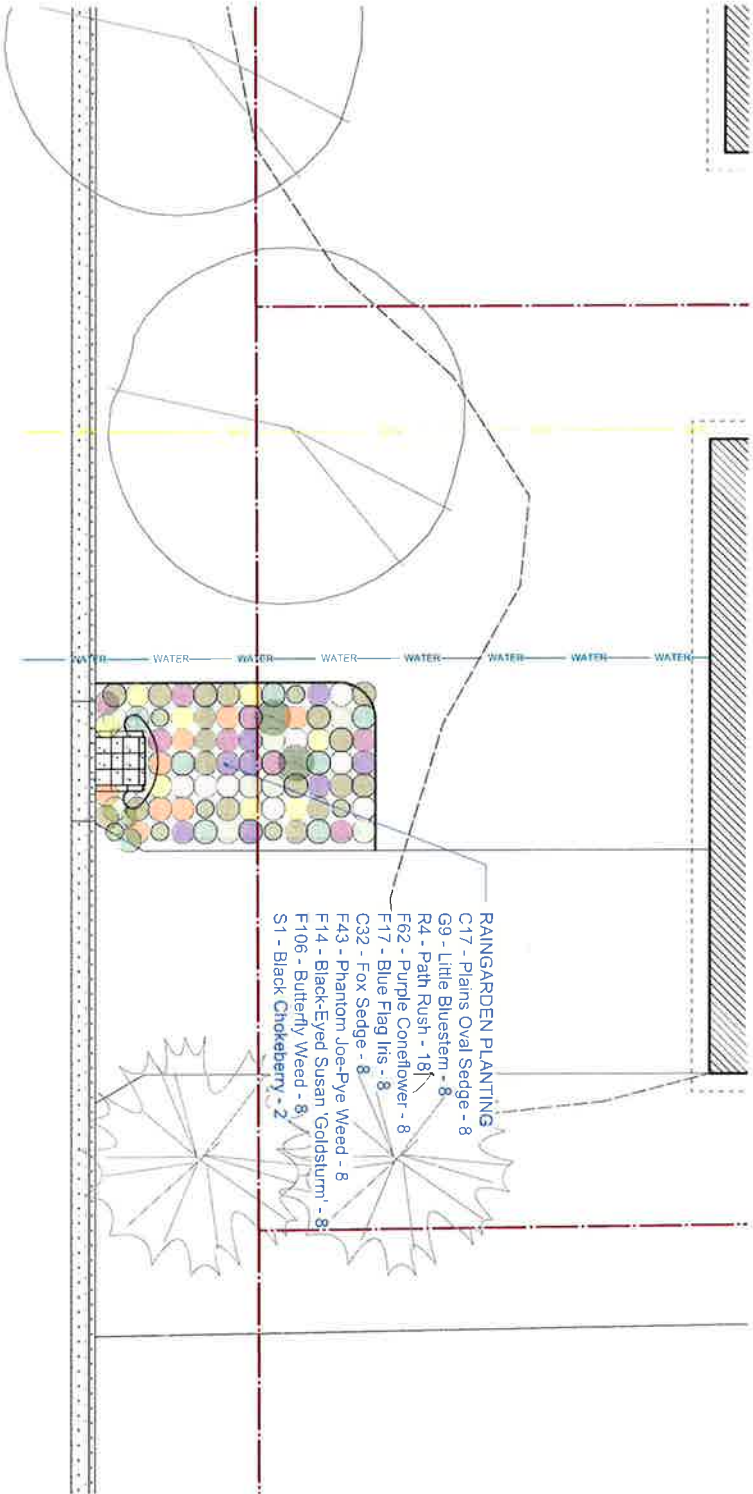
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- ELEVATIONS ARE APPROXIMATE. EXACT ELEVATION OF BASIN/OVERFLOW, ETC., MAY VARY DEPENDING ON FINAL GRADE OF RAINGARDEN.
- EXCAVATE RAINGARDEN AREA, LOOSEN UNDERLYING SOILS 6-12" TO REMOVE COMPACTION & PROMOTE INFILTRATION, AND INSTALL 1" DEEP AMENDED SOILS IN RAINGARDEN BASIN AREA.
- GRADE OUT BASIN & SIDE SLOPES PER PLANS. CONTRACTOR TO ENSURE RAINGARDEN BASIN IS FLAT IN ALL DIRECTIONS AND SIDE SLOPES ARE NO GREATER THAN 4H:1V BEFORE PLACEMENT OF MULCH, ROCK AND PLANT MATERIAL.
- PROVIDE 1'-5" WIDE SETBACK FROM BACK OF CURB TO BEGINNING OF SIDE SLOPE - PITCH TOWARDS RAINGARDEN.
- CONCRETE CURB OPENING HAS PREVIOUSLY BEEN INSTALLED BY THE CITY OF WHITE BEAR LAKE. EXACT LOCATION MAY VARY.
- INSTALL CONCRETE PAVER STEP DOWN AND SUMP STRUCTURE PER PLANS AND DETAILS PROVIDED.
- INSTALL MIXED SIZE ROCK (4'-6" RIVER ROCK OR EQUAL) SPLASH AREA AROUND SUMP STRUCTURE. INSTALL NON-WOVEN GEOTEXTILE BETWEEN ROCK AND SOIL.



PLANT SCHEDULE					
ID	Qty	Latin Name	Common Name	Size	Spacing (ft)
C17	8	Carex brevoir	Plains Oval Sedge	4" Pot	1.5
C32	8	Carex vulpinoidea	Fox Sedge	4" Pot	2
F14	8	Rudbeckia hirta 'Goldsturm'	Black-Eyed Susan 'Goldsturm'	4" Pot	2
F17	8	Iris versicolor	Blue Flag Iris	4" Pot	2
F43	8	Eupatorium 'Phantom'	Phantom Joe-Pye Weed	4" Pot	2
F62	8	Echinacea purpurea	Purple Coneflower	4" Pot	2
F106	8	Asclepias tuberosa	Butterfly Weed	4" Pot	2
G9	8	Schizanthus scoparium	Little Blueslem	4" Pot	2
R4	18	Juncus tenuis	Path Rush	4" Pot	2
S1	2	Aronia melanocarpa	Black Chokeberry	2 Gallon	3
84		TOTAL PLANTS			

- NATIVE PLANTING NOTES:**
1. SEE PLANT SCHEDULE FOR SPECIES, SIZE & SPACING RECOMMENDATIONS.
 2. PLANTING PLAN LAYOUT IS FOR REPRESENTATION PURPOSES ONLY AND DOES NOT REFLECT ACTUAL SPECIES LAYOUT. PLANT FORMS & GRASSES IN GROUPS OF SAME SPECIES IN QUANTITIES OF 39 FOR EASIER IDENTIFICATION & MAINTENANCE.
 3. PLANT SHRUBS IN GROUPS OF 1-3. KEEP SHRUB PLACEMENT TO MIDDLE/BACK OF RAINGARDEN AREA FROM THE CURB/LINE OF ROAD.
 4. PLANTS BEING INSTALLED MUST BE SUBMITTED TO ROSWID STAFF FOR FINAL APPROVAL PRIOR TO INSTALLATION.
 5. INSTALL PLUGS THROUGH MULCH LAYER.
 6. ENSURE SPECIES ARE LOCATED IN AREAS OF RAINGARDEN THAT MATCH THEIR PREFERRED GROWING CONDITIONS. KEEP DRIER SPECIES IN SIDE SLOPE & DRIER BASIN AREAS.
 7. CONSIDER FULL-GROWTH PLANT HEIGHT WHEN LAYING OUT SPECIES. TALLER SPECIES TO BE LOCATED FURTHER AWAY FROM ROADWAY IN BACK OF GARDEN.
 8. PROJECT LAYOUT, TOTAL AREA, AND MATERIALS MAY VARY WITH ROSWID STAFF APPROVAL.



- RAINGARDEN PLANTING**
- C17 - Plains Oval Sedge - 8
 - G9 - Little Blueslem - 8
 - R4 - Path Rush - 18
 - F62 - Purple Coneflower - 8
 - F17 - Blue Flag Iris - 8
 - C32 - Fox Sedge - 8
 - F43 - Phantom Joe-Pye Weed - 8
 - F14 - Black-Eyed Susan 'Goldsturm' - 8
 - F106 - Butterfly Weed - 8
 - S1 - Black Chokeberry - 2

RAMSEY COUNTY

RAMSEY COUNTY SWCD
2015 VAN DYKE STREET
MAPLEWOOD, MN 55109
651-266-7280
www.ramseycounty.us

PROJECT:
W9, CURB CUTS 24 - 1807 3RD ST

LOCATION:
1867 3RD ST
WHITE BAY LAK, MN 55110

WATERSHED DISTRICT:
VLAWMO

DESIGNER: BRIAN T. OLSEN

DATE: 7/23/2024

PAST REVISION:

PAST REVISION:

PAST REVISION:

PAST REVISION:

CHECKED BY:

TAA:

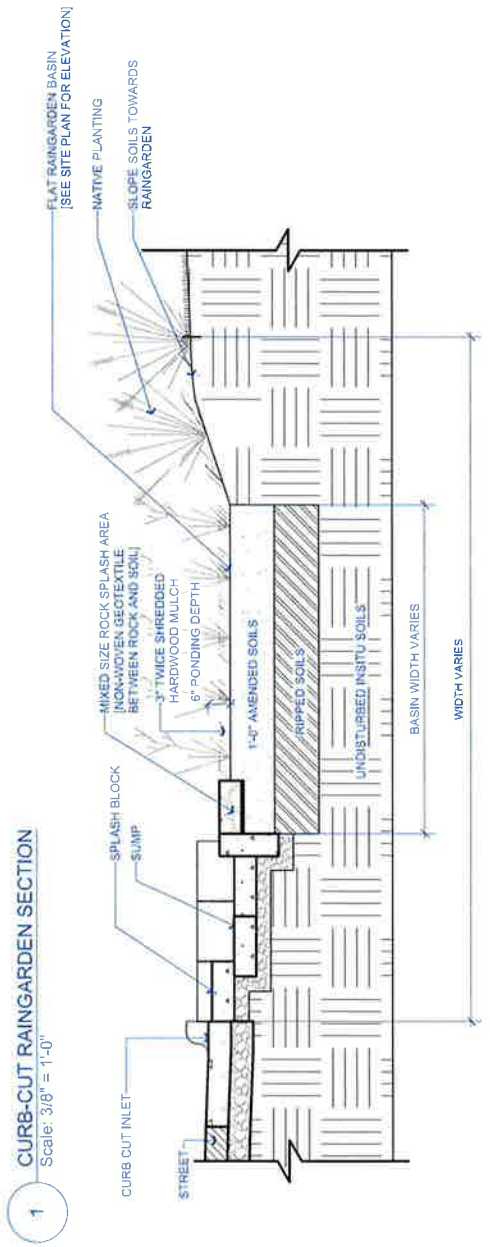
NOTES:
CALC ENGINEER TO MARK UTILITIES
SIGNAL DESIGN
SEE PLANT SCHEDULE FOR SPECIES
SIZE & SPACING
PLANT SPECIES MAY VARY
PLANT SPECIFICATIONS MUST BE
APPROVED BY ROSWID STAFF
ORIGINAL SHEET SEE: 11-117

SCALE: 1" = 10' 0"

PLANTING PLAN

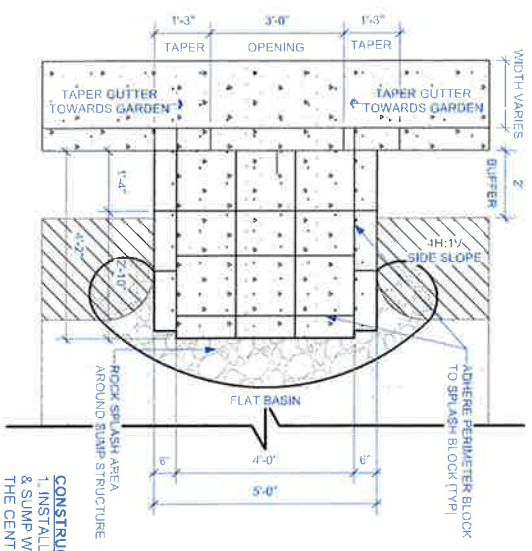
L200

N



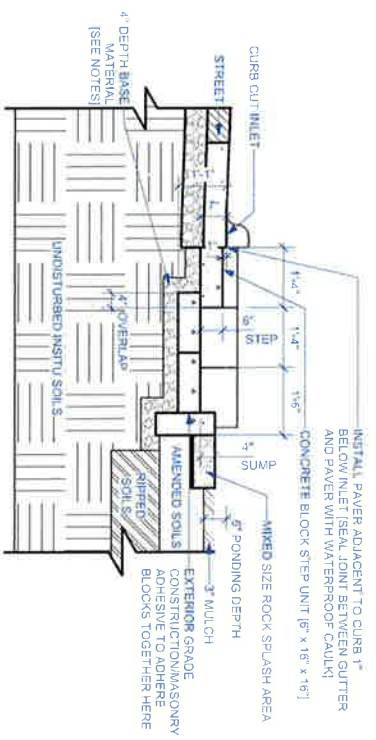
- CURB-CUT RAIN GARDEN NOTES:**
1. EXCAVATE RAIN GARDEN TO 1'-9" BELOW GUTTER. SCARIFY AN ADDITIONAL 6" BEFORE BACKFILLING WITH AMENDED SOILS.
 2. THE PLANTING MEDIUM AND EROSION CONTROL BLANKET SHALL BE PLACED IN SUCH A WAY AS TO LIMIT THE AMOUNT OF COMPACTION OF THE SUB-SOILS.
 3. OFFSET SPLASH PAD FROM CURB CUT OPENING IN DIRECTION OF WATER FLOW ON STREET.
 4. NO GEOTEXTILE TO BE USED BETWEEN NATIVE AND ENGINEERED SOILS
 5. OWNER/CONTRACTOR TO PROVIDE ALL GSOC LOCATIONS PRIOR TO COMPLETING ANY EXCAVATION.

1 SPLASH BLOCK STEP DOWN & SUMP: PLAN VIEW
Scale: 3/8" = 1'-0"

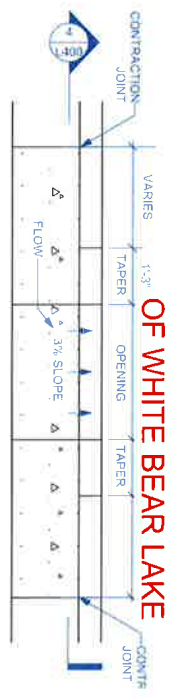


CONSTRUCTION NOTE:
1. INSTALL SPLASH BLOCK STEP DOWN & SUMP WITH A 3\"/>

2 SPLASH BLOCK STEP DOWN & SUMP: SECTION-ELEVATION/ISOMETRIC VIEW
Scale: 3/8" = 1'-0"

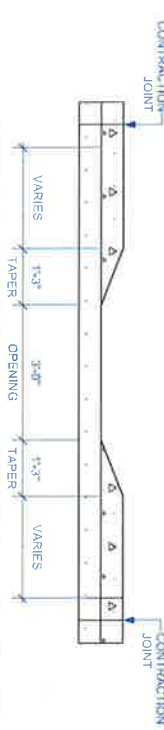


3 CURB CUT DETAIL [PLAN]
Scale: 3/8" = 1'-0"

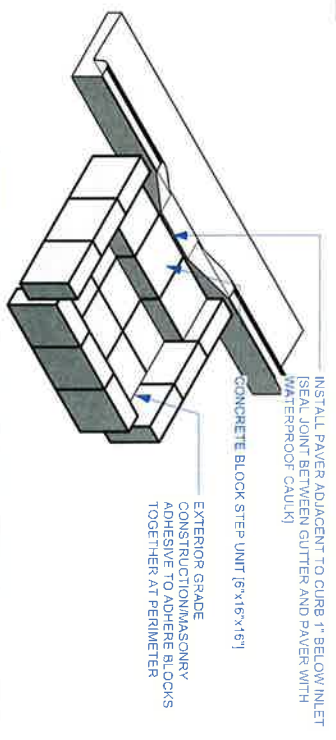


CURB-CUTS PREVIOUSLY COMPLETED BY THE CITY OF WHITE BEAR LAKE

4 CURB CUT DETAIL [SECTION]
Scale: 3/8" = 1'-0"



NOTES:
1. CONCRETE CURB OPENING WORK HAS PREVIOUSLY BEEN COMPLETED BY THE CITY OF WHITE BEAR LAKE. EXACT DIMENSIONS & LOCATION ON SITE MAY VARY. SITE VERIFY.



NOTES:
1. EXCAVATE RAIN GARDEN TO 1'-9\"/>

<p>RAMSEY COUNTY RAMSEY COUNTY SWCD 2015 VAN DYKE STREET MAPLEWOOD, MN 55109 651-266-7280 www.ramseycounty.us</p>	<p>PROJECT: WHITE BEAR LAKE 2A</p> <p>LOCATION: WHITE BEAR LAKE, MN 55110</p>
	<p>WATERSHED DISTRICT: </p> <p>DESIGNER: BRANT T. OLSEN DATE: 7/23/2024 PAST REVISION: PAST REVISION: PAST REVISION: CHECKED BY: TAA:</p>
<p>NOTES: - CONTRACTOR COMPLETE STATE ONE CALL TO CONFIRM UTILITY LOCATIONS PRIOR TO WORK. - EVALUATE WITH THOUGHTFUL EQUIPMENT USE. - MINIMIZE SQUARE FEET AREA PERFORM DISTURBANCE TO CONSTRUCTION DESIGN AND MATERIALS STORAGE. - APPROVED UNDER 10/10/19 DECLARATION - ORIGINAL SHEET: 2021-11-21-17</p>	
<p>SCALE:</p>	
<p>SITE DETAILS: CURB-CUT & PRE-TREATMENT</p>	
<p>L400</p>	

PROJECT NOTES:

- ELEVATIONS ARE APPROXIMATE. EXACT ELEVATION OF BASIN/OVERFLOW, ETC., MAY VARY DEPENDING ON FINAL GRADE OF RAINGARDEN.
- EXCAVATE RAINGARDEN AREA, LOOSEN UNDERLYING SOILS 6-12" TO REMOVE COMPACTION & PROMOTE INFILTRATION, AND INSTALL 1" DEEP AMENDED SOILS IN RAINGARDEN BASIN AREA.
- GRADE OUT BASIN & SIDE SLOPES PER PLANS; CONTRACTOR TO ENSURE RAINGARDEN BASIN IS FLAT IN ALL DIRECTIONS AND SIDE SLOPES ARE NO GREATER THAN 4H:1V BEFORE PLACEMENT OF MULCH, ROCK AND PLANT MATERIAL.
- PROVIDE 1.5" WIDE SETBACK FROM BACK OF CURB TO BEGINNING OF SIDE SLOPE - PITCH TOWARDS RAINGARDEN.
- CONCRETE CURB OPENING HAS PREVIOUSLY BEEN INSTALLED BY THE CITY OF WHITE BEAR LAKE. EXACT LOCATION MAY VARY.
- INSTALL CONCRETE PAVEMENT STEP DOWN AND SUMP STRUCTURE PER PLANS AND DETAILS PROVIDED.
- INSTALL MIXED SIZE ROCK (4-6" RIVER ROCK OR EQUAL) SPASH AREA AROUND SUMP STRUCTURE. INSTALL NON-WOVEN GEOTEXTILE BETWEEN ROCK AND SOIL.
- SEE LAYOUT PLAN FOR CURB-CUT OPENING, & RAINGARDEN BASIN ELEVATIONS AND DIMENSIONS.
- INSTALL 2-3" HARDWOOD MULCH OVER ENTIRE RAINGARDEN & PLANTING AREA.
- FOR ALL AREAS WITH EXISTING LAWN/TURF/VEGETATION, AREAS SHOULD BE SCRAPPED OF VEGETATION OR SPRAYED WITH HERBICIDE TO KILL EXISTING VEGETATION. MINIMUM 1-2 APPLICATIONS TO EFFECTIVELY KILL ALL COMPETING VEGETATION.
- PRESERVE ALL EXISTING TREES & SHRUBS UNLESS OTHERWISE DIRECTED BY LANDOWNER.
- NO CONSTRUCTION MATERIALS TO BE STORED UNDER TREE CANOPIES OR DRIVEN IN THE RAINGARDEN BASIN.
- CONTRACTOR TO SEED ALL AREAS OF DISTURBED SOIL OUTSIDE PROJECT LIMITS WITH FESCUE SEED OR SIMILAR UPON COMPLETION OF PROJECT.
- CONTRACTOR TO POthOLE UTILITIES NEARBY WITHIN PROJECT AREA TO VERIFY DEPTH AND LOCATION PRIOR TO MACHINE EXCAVATION AS NEEDED.

PLAN LEGEND:

- MIXED SIZE ROCK (4-6" OR EQUAL)
- FLAT RAINGARDEN BASIN
- RAINGARDEN 4H:1V SIDE SLOPES
- PARCEL BOUNDARY (APPROX)
- 2' CONTOUR ELEVATION

PROJECT NOTES:

- ELEVATIONS ARE APPROXIMATE
- UTILITY LOCATIONS ARE APPROXIMATE
- CONFIRM LOCATIONS PRIOR TO WORK
- CONTRACTOR ACQUIRE NECESSARY PERMITS PRIOR TO START
- EXCAVATE WITH TRACKED EQUIPMENT ONLY
- SIZE AND SPHERE OF PROJECT MAY VARY
- VERIFY CHANGES WITH RESWCD STAFF PRIOR TO INSTALL
- ORIGINAL SHEET SIZE: 11'x17'

DESIGNER: BRIAN T. OLSEN

DATE: 7/25/2024
 PAST REVISION:
 PAST REVISION:
 PAST REVISION:
 CHECKED BY:
 TAA:

NOTES:

- ELEVATIONS ARE APPROXIMATE
- UTILITY LOCATIONS ARE APPROXIMATE
- CONFIRM LOCATIONS PRIOR TO WORK
- CONTRACTOR ACQUIRE NECESSARY PERMITS PRIOR TO START
- EXCAVATE WITH TRACKED EQUIPMENT ONLY
- SIZE AND SPHERE OF PROJECT MAY VARY
- VERIFY CHANGES WITH RESWCD STAFF PRIOR TO INSTALL
- ORIGINAL SHEET SIZE: 11'x17'

SCALE: 1"=10'-0"

SCALE: 1"=10'-0"

RAMSEY COUNTY

RAMSEY COUNTY SWCD
 2015 VAN DYKE STREET
 MAPLEWOOD, MN 55109
 651-266-7280
 www.ramseycounty.us

PROJECT:
 V&B CURB CUTS 24 - 1883 2ND ST
 LOCATION:
 1883 2ND ST
 WHITE BEAR LAKE, MN 55110
 WATERSHED DISTRICT:
VLAWMO

DESIGNER: BRIAN T. OLSEN

DATE: 7/25/2024
 PAST REVISION:
 PAST REVISION:
 PAST REVISION:
 CHECKED BY:
 TAA:

NOTES:

- ELEVATIONS ARE APPROXIMATE
- UTILITY LOCATIONS ARE APPROXIMATE
- CONFIRM LOCATIONS PRIOR TO WORK
- CONTRACTOR ACQUIRE NECESSARY PERMITS PRIOR TO START
- EXCAVATE WITH TRACKED EQUIPMENT ONLY
- SIZE AND SPHERE OF PROJECT MAY VARY
- VERIFY CHANGES WITH RESWCD STAFF PRIOR TO INSTALL
- ORIGINAL SHEET SIZE: 11'x17'

SCALE: 1"=10'-0"

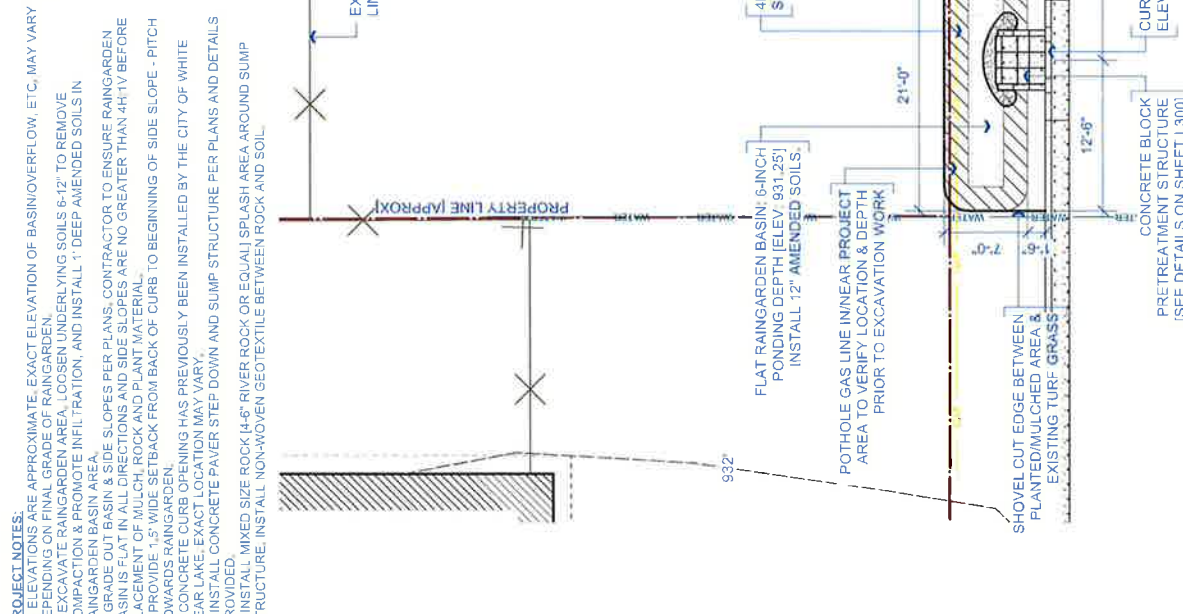
SCALE: 1"=10'-0"

RAMSEY COUNTY

RAMSEY COUNTY SWCD
 2015 VAN DYKE STREET
 MAPLEWOOD, MN 55109
 651-266-7280
 www.ramseycounty.us

PROJECT: V&B CURB CUTS 24 - 1883 2ND ST

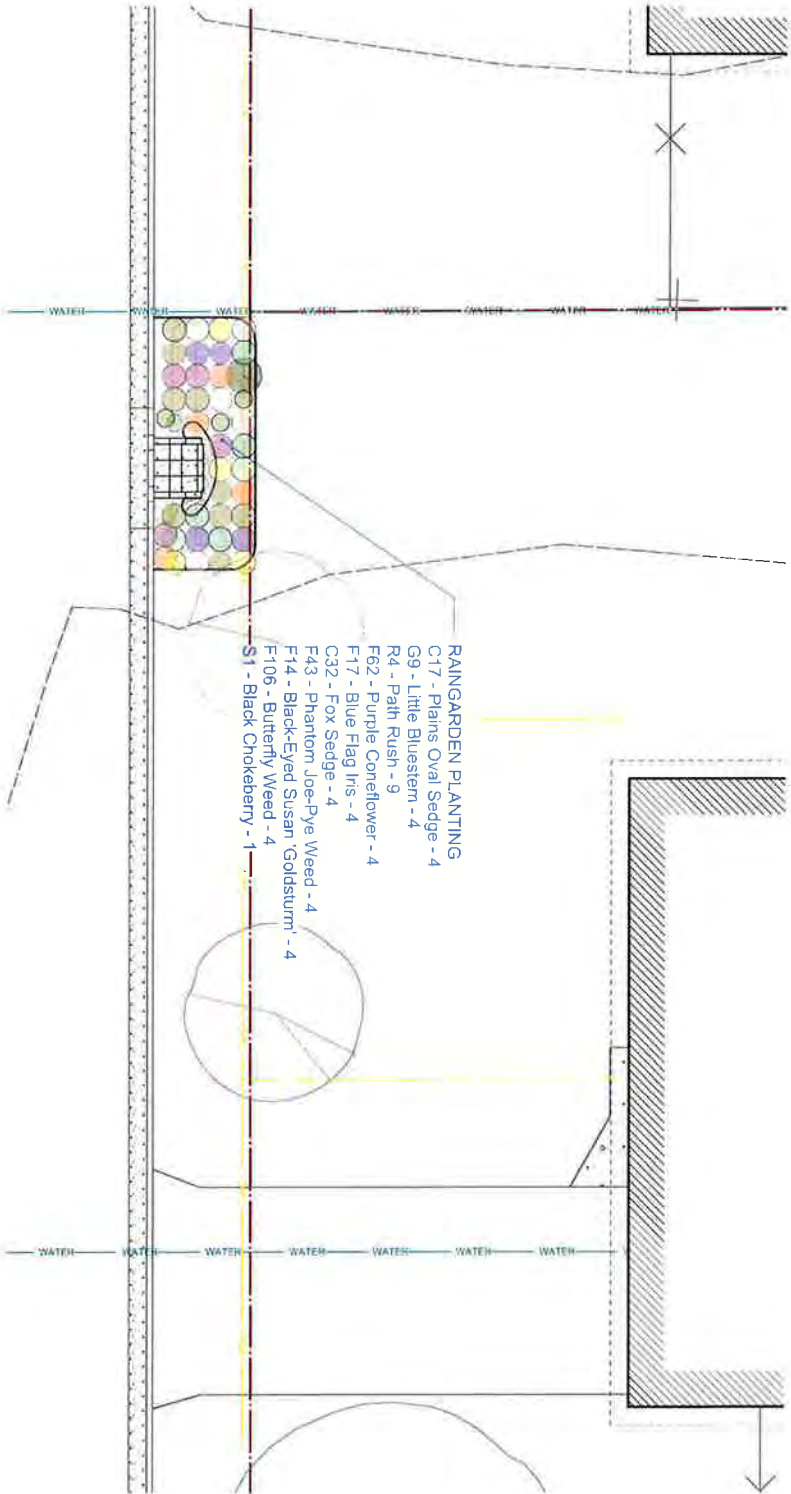
LOCATION:
 1883 2ND ST
 WHITE BEAR LAKE, MN 55110
 WATERSHED DISTRICT:
VLAWMO



PLANT SCHEDULE					
ID	Qty	Latin Name	Common Name	Size	Spacing (ft)
C17	4	Carex breviflor	Plains Oval Sedge	4" Pot	1.5
C32	4	Carex vulpinoidea	Fox Sedge	4" Pot	2
F14	4	Rudbeckia hirta 'Goldsturm'	Black-Eyed Susan 'Goldsturm'	4" Pot	2
F17	4	Iris versicolor	Blue Flag Iris	4" Pot	2
F43	4	Eupatorium 'Phantom'	Phantom Joe-Pye Weed	4" Pot	2
F62	4	Echinacea purpurea	Purple Coneflower	4" Pot	2
F106	4	Schizachyrium scoparium	Butterfly Weed	4" Pot	2
G9	4	Little Bluestem	Little Bluestem	4" Pot	2
R4	9	Juncus tenuis	Path Rush	4" Pot	2
S1	1	Aronia melanocarpa	Black Chokeberry	2 Gallon	3
42		TOTAL PLANTS			

NATIVE PLANTING NOTES:

1. SEE PLANT SCHEDULE FOR SPECIES, SIZE & SPACING RECOMMENDATIONS.
2. PLANTING PLAN SHOWS PLANT REPRESENTATION TO REPRESENT QUANTITIES. DOES NOT REFLECT ACTUAL SPECIES LAYOUT. PLANT FORMS & GRASSES IN GROUPS OF SAME SPECIES IN QUANTITIES OF 3-9 FOR EASIER IDENTIFICATION & MAINTENANCE.
3. PLANT SHRUBS IN GROUPS OF 1-3. KEEP SHRUB PLACEMENT TO MIDDLE/BACK OF RAINGARDEN AWAY FROM THE CURB/LINE OF ROAD.
4. FINAL SPECIES LIST AND QUANTITIES TO BE SUBMITTED TO ROSWOD STAFF FOR FINAL APPROVAL PRIOR TO INSTALLATION.
5. INSTALL PLUGS THROUGH MULCH LAYER.
6. ENSURE SPECIES ARE LOCATED IN AREAS OF RAINGARDEN THAT MATCH THEIR PREFERRED GROWING CONDITIONS. KEEP DRIER SPECIES IN SIDE SLOPE & DRIER BASIN AREAS. SPECIES THAT PREFER MORE MOISTURE TO BE LOCATED IN RAINGARDEN BASIN AREAS.
7. CONSIDER FULL-GROWTH PLANT HEIGHT WHEN LAYING OUT SPECIES. TALLER SPECIES TO BE LOCATED FURTHER AWAY FROM ROADWAY IN BACK OF GARDEN.
8. PROJECT LAYOUT, TOTAL AREA AND MATERIALS MAY VARY WITH ROSWOD STAFF APPROVAL.



RAMSEY COUNTY

RAMSEY COUNTY SWCD
2015 VAN DYKE STREET
MAPLEWOOD, MN 55109
651-266-7280
www.ramseycounty.us

VLAWMO

DESIGNER: BRIANT OLSEN
DATE: 7/25/2024
PAST REVISION:
PAST REVISION:
PAST REVISION:
PAST REVISION:
CHECKED BY:
TAA:

NOTES:

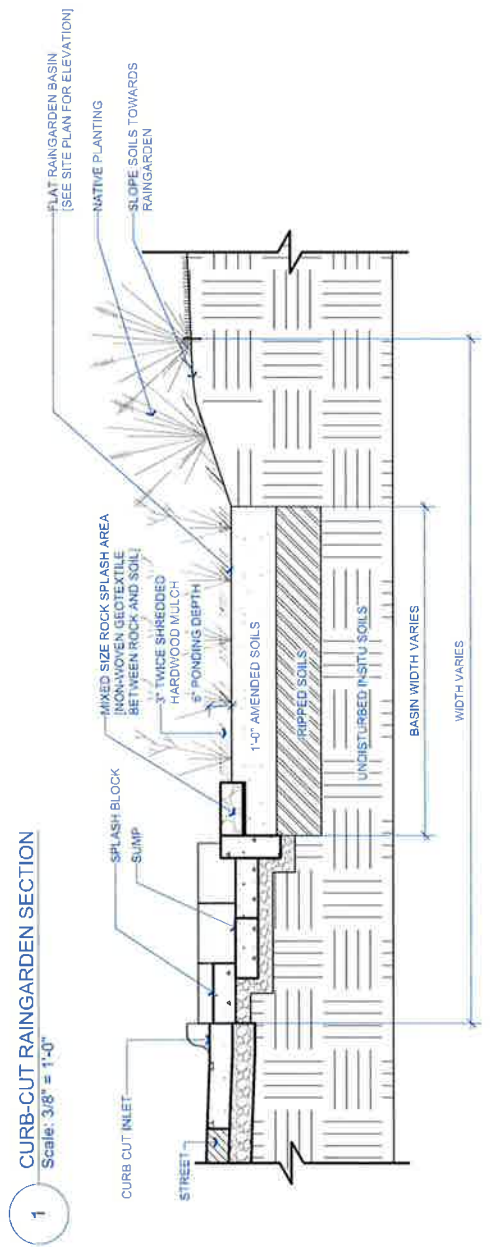
- CAU COOPER ONE TO MARK UTILITIES BEFORE DIGGING
- SEE PLANIT SCHEDULE FOR SPECIES, SIZE & SPACING
- PLANT LOCATION MAY VARY
- PLANT SUBSTITUTIONS MUST BE APPROVED BY RCD STAFF
- ORIGINAL SHEET SIZE: 11"X17"

SCALE: 1" = 10' 0"

N

PLANTING PLAN

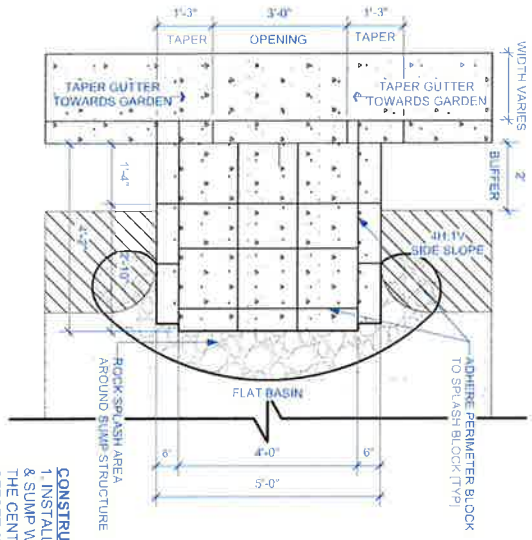
L200



- CURB-CUT RAINGARDEN NOTES:**
1. EXCAVATE RAINGARDEN TO 1'-9" BELOW GUTTER. SCARIFY AN ADDITIONAL 6" BEFORE BACKFILLING WITH AMENDED SOILS.
 2. THE PLANTING MEDIUM AND EROSION CONTROL BLANKET SHALL BE PLACED IN SUCH A WAY AS TO LIMIT THE AMOUNT OF COMPACTION OF THE SUB-SOILS.
 3. OFFSET SPLASH PAD FROM CURB CUT OPENING IN DIRECTION OF WATER FLOW ON STREET.
 4. NO GEOTEXTILE TO BE USED BETWEEN NATIVE AND ENGINEERED SOILS
 5. OWNER/CONTRACTOR TO PROVIDE ALL GSOC LOCATIONS PRIOR TO COMPLETING ANY EXCAVATION.

1

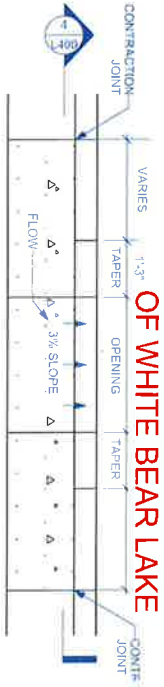
SPLASH BLOCK STEP DOWN & SUMP. PLAN VIEW
Scale: 3/8" = 1'-0"



CONSTRUCTION NOTE:
1. INSTALL SPLASH BLOCK STEP DOWN & SUMP WITH A 3" OFFSET FROM THE CENTER OF CURB CUT OPENING. OFFSET 3" FROM CENTER TOWARDS DOWNSLOPE SIDE, CONSISTENT WITH DIRECTIONAL WATER FLOW

3

CURB CUT DETAIL (PLAN)
Scale: 3/8" = 1'-0"



CURB-CUTS PREVIOUSLY COMPLETED BY THE CITY OF WHITE BEAR LAKE

4

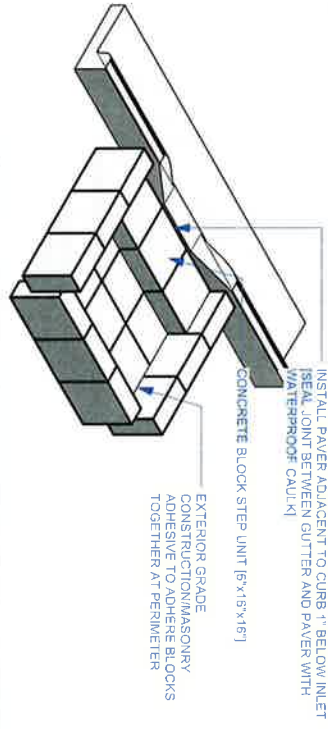
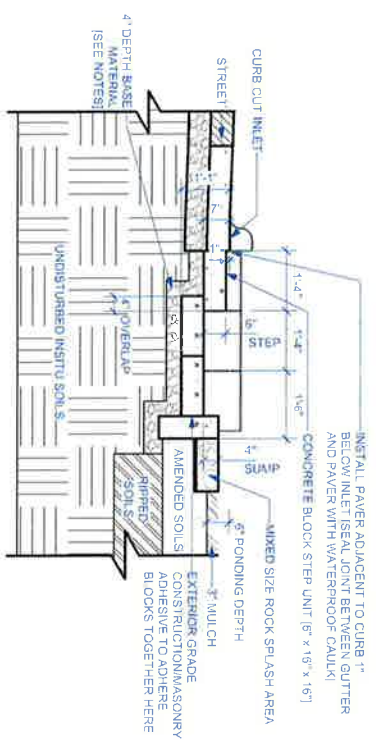
CURB CUT DETAIL (SECTION)
Scale: 3/8" = 1'-0"



NOTES:
1. CONCRETE CURB OPENING WORK HAS PREVIOUSLY BEEN COMPLETED BY THE CITY OF WHITE BEAR LAKE. EXACT DIMENSIONS & LOCATION ON SITE MAY VARY. SITE VERIFY.

2

SPLASH BLOCK STEP DOWN & SUMP. SECTION-ELEVATION/ISOMETRIC VIEW
Scale: 3/8" = 1'-0"



NOTES:
1. EXCAVATE RAIN GARDEN TO 1'-3" BELOW GUTTER.
2. INSTALL AND COMPACT BASE MATERIAL (WASHED SAND, WASHED AGGREGATE OR APPROVED ALTERNATE).
3. INSTALL PAVEMENT AND SPLASH BLOCK TO A FINISHED HEIGHT OF 1" BELOW THE CURB CUT INLET.
4. SEAL JOINT BETWEEN GUTTER AND PAVEMENT WITH WATERPROOF CAULK.

RAMSEY COUNTY

RAMSEY COUNTY SWCD
2015 VAN DYKE STREET
MAPLEWOOD, MN 55109
651-266-7280
www.ramseycounty.us

PROJECT:
WBL CURB CUTS 72A
LOCATION:
WHITE BEAR LAKE, MN 55110

WATERSHED DISTRICT:



DESIGNER: BRIAN T. OLSEN
DATE: 7/23/2024
PAST REVISION:
PAST REVISION:
PAST REVISION:
PAST REVISION:
CHECKED BY:
TAA:

NOTES:
- CONTACT DOMINIC STATE ONE CALL TO DETERMINE UTILITY LOCATIONS. PROVIDE WORK EXCAVATE WITH TRACKED EQUIPMENT ONLY.
- MAINTAIN SQUARE FEET AND DEPTH QUANTITIES TO CONSTRUCTION BESSA AND MATERIALS QUANTITIES APPROVED PRIOR TO INSTALLATION.
- OPTIONAL SHEET SIZE: 11" x 17"

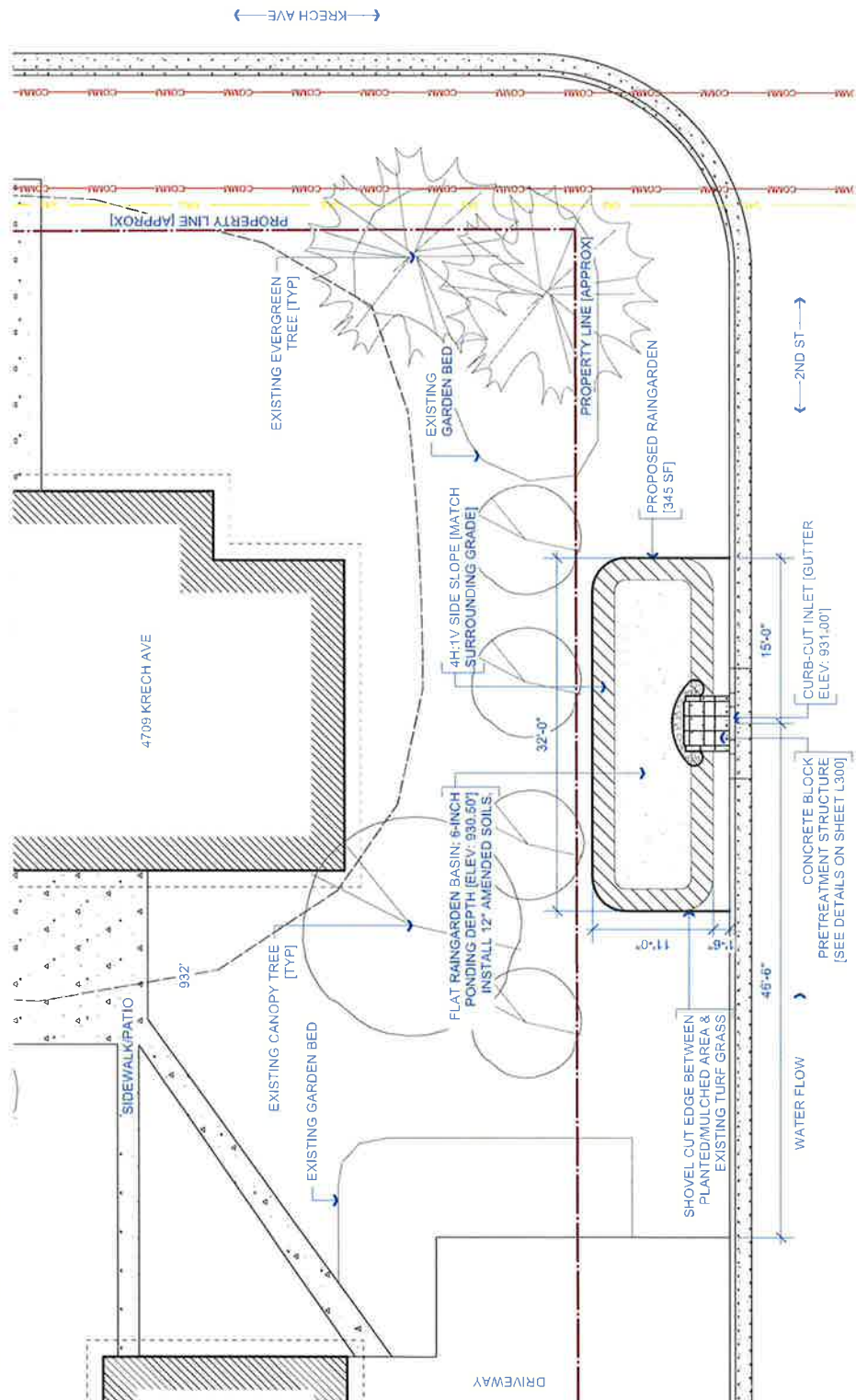
SCALE:
SITE DETAILS: CURB-CUT & PRE-TREATMENT
L400

PLAN LEGEND:

-  MIXED SIZE ROCK [4"-6" OR EQUAL]
-  FLAT RAINGARDEN BASIN
-  RAINGARDEN 4H:1V SIDE SLOPES
-  PARCEL BOUNDARY (APPROX)
-  2' CONTOUR ELEVATION

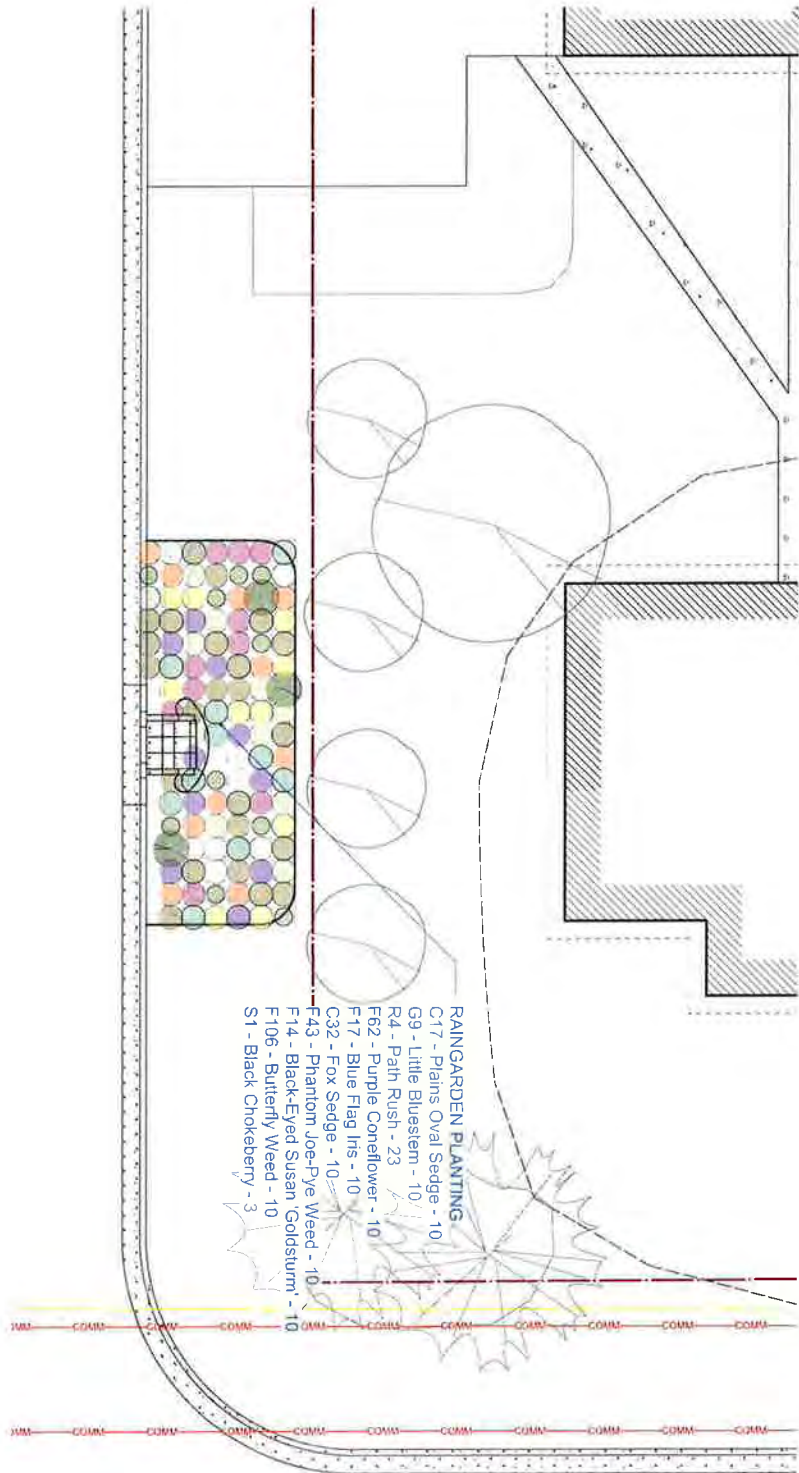
8. SEE LAYOUT PLAN FOR CURB-CUT OPENING, & RAINGARDEN BASIN ELEVATIONS AND DIMENSIONS.
9. INSTALL 2'-3" HARDWOOD MULCH OVER ENTIRE RAINGARDEN & PLANTING AREA.
10. FOR ALL AREAS WITH EXISTING LAWN/TURF/VEGETATION: AREAS SHOULD BE SCRAPED OF VEGETATION OR SPRAYED WITH HERBICIDE TO KILL EXISTING VEGETATION. MINIMUM 1-2 APPLICATIONS TO EFFECTIVELY KILL ALL COMPETING VEGETATION.
11. PRESERVE ALL EXISTING TREES & SHRUBS UNLESS OTHERWISE DIRECTED BY LANDOWNER.
12. NO CONSTRUCTION MATERIALS TO BE STORED UNDER TREE CANOPIES OR DRIVEN IN THE RAINGARDEN BASIN.
13. CONTRACTOR TO REMOVE ALL AREAS OF DISTURBED SOIL OUTSIDE PROJECT LIMITS WITH FESCUE SEED OR SIMILAR UPON COMPLETION OF PROJECT.
14. CONTRACTOR TO PATCH/POTHOLE UTILITIES NEAR/WITHIN PROJECT AREA TO VERIFY DEPTH AND LOCATION PRIOR TO MACHINE EXCAVATION AS NEEDED.

1. ELEVATIONS ARE APPROXIMATE, EXACT ELEVATION OF BASIN/OVERFLOW, ETC., MAY VARY DEPENDING ON FINAL GRADE OF RAINGARDEN.
2. EXCAVATE RAINGARDEN AREA, LOOSEN UNDERLYING SOILS 6"-12" TO REMOVE COMPACTION & PROMOTE INFILTRATION, AND INSTALL 1" DEEP AMENDED SOILS IN RAINGARDEN BASIN AREA.
3. GRADE OUT BASIN & SIDE SLOPES PER PLANS, CONTRACTOR TO ENSURE RAINGARDEN BASIN IS FLAT IN ALL DIRECTIONS AND SIDE SLOPES ARE NO GREATER THAN 4H:1V BEFORE PLACEMENT OF MULCH, ROCK AND PLANT MATERIAL.
4. PROVIDE 1.5' WIDE SETBACK FROM BACK OF CURB TO BEGINNING OF SIDE SLOPE - PITCH TOWARDS RAINGARDEN.
5. CONCRETE CURB OPENING HAS PREVIOUSLY BEEN INSTALLED BY THE CITY OF WHITE BEAR LAKE EXCEPT FOR THE 14" WIDE CURB CUT.
6. INSTALL CONCRETE PAVEMENT STEP DOWN AND SUMP STRUCTURE PER PLANS AND DETAILS PROVIDED.
7. INSTALL MIXED SIZE ROCK 14"-6" RIVER ROCK OR EQUAL SPLASH AREA AROUND SUMP STRUCTURE, INSTALL NON-WOVEN GEOTEXTILE BETWEEN ROCK AND SOIL.



PLANT SCHEDULE					
ID	Qty	Latin Name	Common Name	Size	Spacing (ft)
C17	10	Carex brevoir	Plains Oval Sedge	4" Pot	1.5
C32	10	Carex vulpinoidea	Fox Sedge	4" Pot	2
F14	10	Rudbeckia hirta 'Goldsturm'	Black-Eyed Susan 'Goldsturm'	4" Pot	2
F17	10	Iris versicolor	Blue Flag Iris	4" Pot	2
F43	10	Eupatorium 'Phantom'	Phantom Joe-Pye Weed	4" Pot	2
F62	10	Echinacea purpurea	Purple Coneflower	4" Pot	2
F106	10	Asclepias tuberosa	Butterfly Weed	4" Pot	2
G9	10	Schizachyrium scoparium	Little Bluestem	4" Pot	2
R4	23	Juncus tenuis	Path Rush	4" Pot	2
S1	3	Aronia melanocarpa	Black Chokeberry	2 Gallon	3
106		TOTAL PLANTS			3

- NATIVE PLANTING NOTES:**
1. SEE PLANT SCHEDULE FOR SPECIES, SIZE & SPACING RECOMMENDATIONS.
 2. PLANTING PLAN LAYOUT IS FOR REPRESENTATION PURPOSES ONLY AND DOES NOT REFLECT ACTUAL SPECIES LAYOUT. PLANT FORMS & GRASSES IN GROUPS OF SAME SPECIES IN QUANTITIES OF 249 FOR EASIER IDENTIFICATION & MAINTENANCE.
 3. PLANT SHRUBS IN GROUPS OF 1-3. KEEP SHRUB PLACEMENT TO MIDDLEBACK OF RAINGARDEN AWAY FROM THE CURB-LINE OF ROAD.
 4. FINAL SPECIES LIST AND QUANTITIES TO BE SUBMITTED TO RGSWCD STAFF FOR FINAL APPROVAL PRIOR TO INSTALLATION.
 5. INSTALL PLUGS THROUGH MULCH LAYER.
 6. ENSURE SPECIES ARE LOCATED IN AREAS OF RAINGARDEN THAT MATCH THEIR PREFERRED GROWING CONDITIONS. KEEP DRIER SPECIES IN SIDE SLOPE & DRIER AREAS. SPECIES THAT PREFER MORE MOISTURE TO BE LOCATED IN RAINGARDEN BASIN AREAS.
 7. CONSIDER FULL-GROWTH PLANT HEIGHT WHEN LAYING OUT SPECIES. TALLER SPECIES TO BE LOCATED FURTHER AWAY FROM ROADWAY IN BACK OF GARDEN.
 8. PROJECT LAYOUT, TOTAL AREA AND MATERIALS MAY VARY WITH RGSWCD STAFF APPROVAL.



RAMSEY COUNTY
RAMSEY COUNTY SWCD
2015 VAN DYKE STREET
MAPLEWOOD, MN 55109
651-266-7280
www.ramseycounty.us

PROJECT:
WBL CURB CUTS 74 - 4709 KIRCH AVE
4709 KIRCH AVE
LOCATION:
WHITE RIVER LAKE, MN 55110
WATERSHED DISTRICT:
VLAWMO

DESIGNER: BRIAN T. OLSEN
DATE: 7/25/2024
PAST REVISION:
PAST REVISION:
PAST REVISION:
CHECKED BY:
TAA:

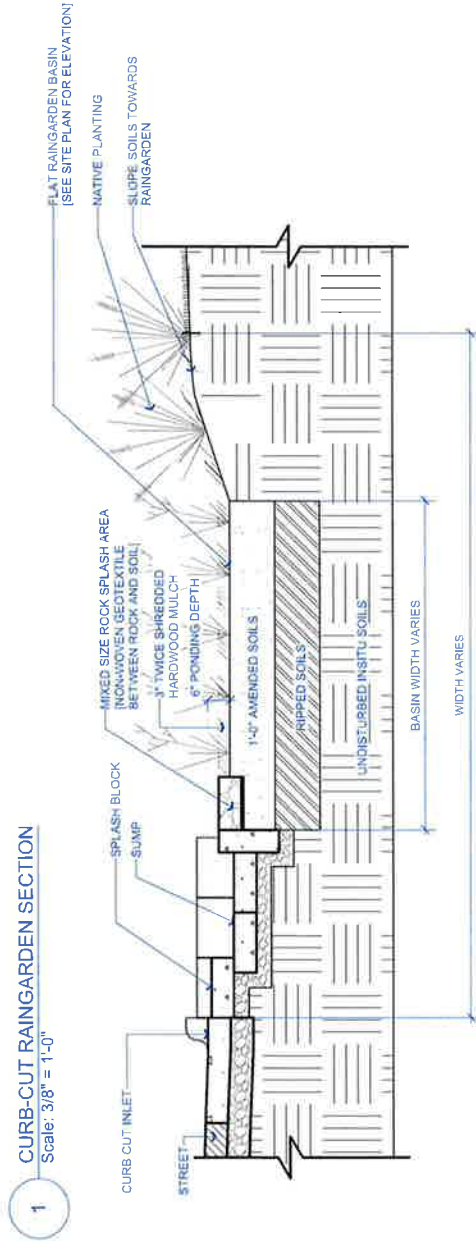
NOTES:
CALL NUMBER ONE TO MARK DETAILS BEFORE DIGGING.
SEE PLANT SCHEDULE FOR SPECIES, SIZE & SPACING.
PLANT LOCATION MAY VARY.
PLANT SUBSTITUTIONS MUST BE APPROVED BY RSD STAFF.
DIMENSIONAL SHEET SIZE: 11"x17"

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

N

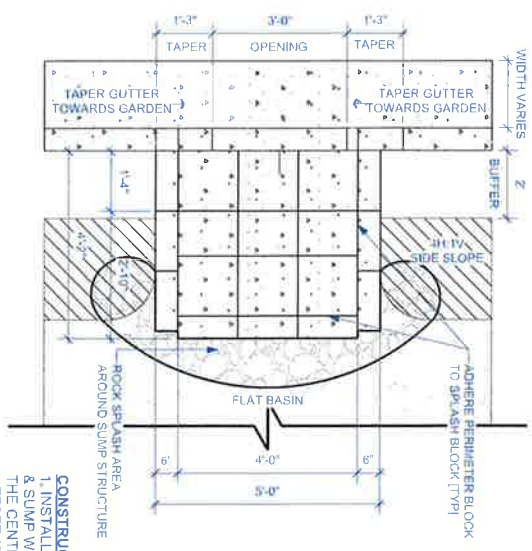
PLANTING PLAN

L200



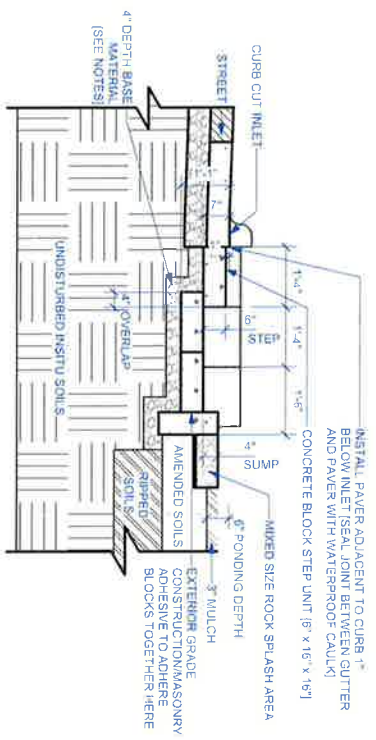
- CURB-CUT RAIN GARDEN NOTES:**
1. EXCAVATE RAIN GARDEN TO 1'-9" BELOW GUTTER. SCARIFY AN ADDITIONAL 6" BEFORE BACKFILLING WITH AMENDED SOILS.
 2. THE PLANTING MEDIUM AND EROSION CONTROL BLANKET SHALL BE PLACED IN SUCH A WAY AS TO LIMIT THE AMOUNT OF COMPACTION OF THE SUB-SOILS.
 3. OFFSET SPLASH PAD FROM CURB CUT OPENING IN DIRECTION OF WATER FLOW ON STREET.
 4. NO GEOTEXTILE TO BE USED BETWEEN NATIVE AND ENGINEERED SOILS
 5. OWNER/CONTRACTOR TO PROVIDE ALL GSOE LOCATIONS PRIOR TO COMPLETING ANY EXCAVATION.

1 SPLASH BLOCK STEP DOWN & SUMP: PLAN VIEW
Scale: 3/8" = 1'-0"

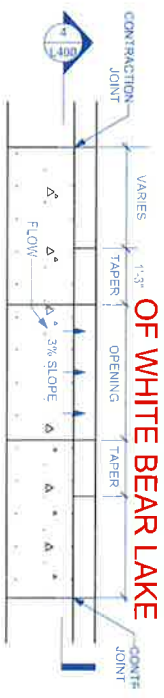


CONSTRUCTION NOTE:
1. INSTALL SPLASH BLOCK STEP DOWN & SUMP WITH A 3" OFFSET FROM THE CENTER OF CURB CUT OPENING. OFFSET 3" FROM CENTER TOWARDS DOWNSLOPE SIDE, CONSISTENT WITH DIRECTIONAL WATER FLOW

2 SPLASH BLOCK STEP DOWN & SUMP: SECTION-ELEVATION/ISOMETRIC VIEW
Scale: 3/8" = 1'-0"

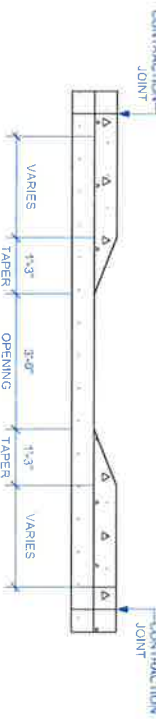


3 CURB CUT DETAIL [PLAN]
Scale: 3/8" = 1'-0"

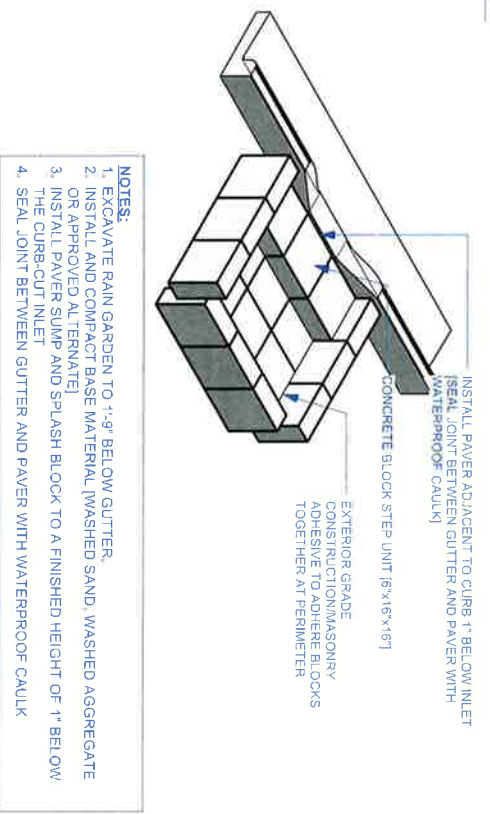


COMPLETED BY THE CITY OF WHITE BEAR LAKE

4 CURB CUT DETAIL [SECTION]
Scale: 3/8" = 1'-0"



NOTES:
1. CONCRETE CURB OPENING WORK HAS PREVIOUSLY BEEN COMPLETED BY THE CITY OF WHITE BEAR LAKE. EXACT DIMENSIONS & LOCATION ON SITE MAY VARY, SITE VERIFY.



NOTES:
1. EXCAVATE RAIN GARDEN TO 1'-9" BELOW GUTTER.
2. INSTALL AND COMPACT BASE MATERIAL (WASHED SAND, WASHED AGGREGATE OR APPROVED ALTERNATE)
3. INSTALL PAVEMENT SUMP AND SPLASH BLOCK TO A FINISHED HEIGHT OF 1" BELOW THE CURB-CUT INLET
4. SEAL JOINT BETWEEN GUTTER AND PAVEMENT WITH WATERPROOF CAULK

RAMSEY COUNTY

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2015 VAN DYKE STREET
MAPLEWOOD, MN 55109
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PROJECT:
WBL CURB CUTS 2A
LOCATION:
WHITE BEAR LAKE, MN 55110

WATERSHED DISTRICT:



DESIGNER: BRIAN T. OLSEN
DATE: 7/23/2024
PAST REVISION:
PAST REVISION:
PAST REVISION:
PAST REVISION:
CHECKED BY:
TAA:

NOTES:
CONTRACT FORMER STATE ONE CALL TO COMPLETION OCCASIONS: 800-451-7000
WORK
EQUIPMENT WITH TRACKED EQUIPMENT ONLY
MINIMUM SQUARE FEET AND DEPTH SUBSTITUTION TO CONSTRUCTION DESIGN AND MATERIALS MUST BE APPROVED PRIOR TO INSTALLATION
GENERAL SHEET: SET 11 1/17"

SITE DETAILS: CURB-CUT & PRE-TREATMENT

L400