



| JUNE | | | | | | | JULY | | | | | | |
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RCWD BOARD OF MANAGERS REGULAR MEETING AGENDA

Wednesday, June 8, 2016, 9:00 a.m.

Shoreview City Hall Council Chambers
4600 North Victoria Street, Shoreview, Minnesota

Agenda

CALL TO ORDER

ROLL CALL

SETTING OF THE AGENDA

APPROVAL OF MAY 25, 2016 BOARD MEETING MINUTES.

OPEN MIKE

Any RCWD resident may address the Board in his or her individual capacity, for up to three minutes, on any matter not on the agenda. Speakers are requested to come to the podium, state their name and address for the record. Additional comments may be solicited and accepted in writing. Generally, the Board of Managers will not take official action on items discussed at this time, but may refer the matter to staff for a future report or direct that the matter be scheduled on an upcoming agenda.

ITEMS REQUIRING BOARD ACTION

1. Consider RCWD Clean Water Grant Program Applications (Samantha Berger)
 - a. RCWD16-01, Oquist Raingarden planting
 - b. R16-01, Nelson Raingarden application
 - c. R16-02 Detournay Pervious driveway application

2. Consider check register dated June 8, 2016, in the amount of \$451,287.89 prepared by Redpath and Company.

ITEMS FOR DISCUSSION AND INFORMATION

1. District Engineers Update and Timeline
2. Manager's update.

ADJOURNMENT

9:45 a.m. or immediately after the Regular Board meeting will be a special board workshop to tour the Middle Rice Creek Restoration Project with the tour starting at the parking lot on the north side of County Road I, just east of 35W in Arden Hill, 1953 County Rd I, Arden Hills, MN. No Board action will be taken.

**APPROVAL OF MAY 25, 2016
BOARD MEETING MINUTES.**

DRAFT

For Consideration of Approval at the June 8, 2016 Board Meeting.
Use these minutes only for reference until that time.

REGULAR MEETING OF THE RCWD BOARD OF MANAGERS

Wednesday, May 25, 2016

Shoreview City Hall Council Chambers
4600 North Victoria Street, Shoreview, Minnesota

Minutes

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CALL TO ORDER

President Preiner called the meeting to order, a quorum being present, at 9:00 a.m.

ROLL CALL

Present: President Patricia Preiner, 1st Vice-Pres. Barbara Haake, 2nd Vice-Pres. John Waller, Secretary Michael Bradley, and Treasurer Steve Wagamon.

Absent: None.

Staff Present: Administrator Phil Belfiori, Permit Coordinator/Wetland Specialist Nick Tomczik, Lakes and Streams Specialist Matt Kocian, Office Manager Theresa Stasica.

Consultants: District Engineers Mark Deutschman and Greg Bowles, Houston Engineering, Inc. (HEI); and District Attorney Louis Smith from Smith Partners

Visitors: Gene Schommer.

SETTING OF THE AGENDA

There were no changes or additions.

Motion by Manager Haake, seconded by Manager Wagamon, to adopt the agenda as presented. Motion carried 5-0.

READING OF THE MINUTES AND THEIR APPROVAL

Minutes of the May 9, 2016, Board of Managers Workshop. Motion by Manager Wagamon, seconded by Manager Haake, to approve the minutes as presented. Motion carried 5-0.

Minutes of the May 11, 2016, Board of Managers Meeting.

Administrator Belfiori requested the following changes per Smith Partners recommendations:

Addition of lines 212-215 that were inadvertently cut off-

Line 212 recommending the schedule of a landowner information meeting to talk about those reasonable areas for

Line 213 construction with the landowners on June 6th at 6:00 p.m. at Columbus City Hall.

Line 214

Line 215 The Board concurred with the date of June 6, 2016 at 6 p.m.

38

39 Also, line 145: "have" should be "half."

40

41 **Motion by Manager Wagamon, seconded by Manager Waller, to approve the minutes as amended. Motion**
42 **carried 5-0.**

43

44 **PERMIT APPLICATIONS REQUIRING BOARD ACTION**

45 The following applications have been reviewed by the District Engineer and Staff and will be acted upon without
46 discussion in accordance with the Engineer's Recommendation unless a Manager or the Applicant or another
47 interested person requests opportunity for discussion:

48

49 **CONSENT AGENDA**

| 50 | No. | Applicant | Location | Plan Type | Recommendation |
|----|--------|---------------------------------------|------------------|---------------------|----------------|
| 51 | 16-038 | Carepoint Dental | Columbia Heights | Final Site Drainage | CAPROC 6 items |
| 52 | 16-045 | Church of St. Peter of Forest Lake | Forest Lake | Final Site Drainage | CAPROC 7 items |
| 53 | | | | | |

54 **It was moved by Manager Waller and seconded by Manager Bradley, to approve the consent agenda as outlined**
55 **in the above Table of Contents in accordance with RCWD District Engineer's Findings and Recommendations,**
56 **dated May 16, 2016. Motion carried 5-0.**

57

58 **OPEN MIKE – LIMIT 12 MINUTES.** Any RCWD resident may address the Board in his or her individual capacity, for up
59 to three minutes, on any matter not on the agenda. Speakers are requested to come to the podium, state their name and
60 address for the record. Additional comments may be solicited and accepted in writing. Generally, the Board of Managers will
61 not take official action on items discussed at this time, but may refer the matter to staff for a future report or direct that the
62 matter be scheduled on an upcoming agenda.

63 There were no comments made at Open Mike.

64

65 **ADDITIONAL ITEMS REQUIRING BOARD ACTION**

66 **1. Consider Variance Request for Permit 16-042 City of Hugo, 147th Street N./Oneka Lake Boulevard**
67 **Improvements. (Nick Tomczik).**

68 Permit Coordinator/Wetland Specialist Nick Tomczik informed the Board that although the City of Hugo
69 administers the District's rules through an MOA with the District, the District Board still holds the authority
70 to grant variance requests.

71

72 District Engineer Greg Bowles summarized the street project. The Street Project is located within the Egg
73 Lake and the Rice Lake Resources of Concern (ROC). The applicant is proposing to fully meet the water
74 quality treatment for the portion of the project in the Rice Lake ROC, but only provide about 32% of the
75 required treatment in the Egg Lake ROC. This District reviewed only the portion of the project in Egg Lake
76 Resource of Concern (ROC) with respect to the variance criteria. The portion of the project in the Rice Lake
77 ROC will be reviewed by the City of Hugo.

78

79 Permit Coordinator/Wetland Specialist Tomczik informed the Board that he and District Engineer Greg
80 Bowles would read into the record the District Engineer’s evaluation of the variance request by applying the
81 “practical difficulties” test, the policy adopted by the Board.
82

83 Permit Coordinator/Wetland Specialist Tomczik asked: (a) How substantial the variation is in relation to the
84 RCWD Rule requirement(s);

85 District Engineer Greg Bowles replied: the applicant has met the approximately 32% of Water
86 Quality requirements in the Egg Lake ROC via infiltration. TSS will be removed to the extent
87 practicable through the installation of a sump catch basin with a SAFL baffle.
88

89 Permit Coordinator/Wetland Specialist Tomczik asked (b) the effect the variance would have on government
90 services;

91 District Engineer Greg Bowles replied: issuance of a variance for the Street project is not expected
92 to increase flooding (see criteria (c)) or have any negative effect on government services. The
93 variance will generally have a positive effect on governmental services in that the project will repair
94 and maintain City streets.
95

96 Permit Coordinator/Wetland Specialist Tomczik asked (c) whether the variance will effect a substantial
97 change in the character of the watershed resources or will be a substantial detriment to neighboring
98 properties;

99 District Engineer Greg Bowles replied: the District Engineer used three criteria to assess substantial
100 change: 1) water quality, defined the quantity of pollutants such as phosphorus and suspended
101 sediment leaving the site and the potential for degrading water quality downstream; 2) the
102 presence of and potential impact to special and impaired waterbodies as defined by various laws
103 including the Minnesota Pollution Control Agency stormwater program, whether a water body is
104 impaired and related designations including Wild and Scenic or Outstanding Natural Resource Value
105 designations; and 3) flooding.
106

107 Neither Egg nor Rice Lake are listed on the Section 303(d) impaired water list.
108

109 The construction of the project is not expected to cause an adverse impact to Egg Lake. The project
110 is decreasing the impervious surface by 0.272± acres by routing a portion to a BMP which will
111 discharge to Rice Lake, thus reducing the volume of stormwater runoff. Thus, while site stormwater
112 BMPs are not feasible to improve water quality to Egg Lake, the water quality is not expected to
113 decrease.
114

115 None of the other resources identified above are located immediately downstream of the site.
116 The drainage patterns will change slightly, due to installation of storm sewer, which will decrease
117 peak run- off rates and volume to Egg Lake. Based on the submitted HydroCAD modeling, peak
118 runoff rates will be decreased to Rice Lake for all storm events, with a decrease in volume for the 2-
119 year and 10-year rainfall events, and a slight increase for the 100-year rainfall event. An adverse
120 impact analysis is required by Rule as part of the permit process. This variance will cause a positive
121 effect on the neighboring properties by routing storm water to storm sewer rather than alongside
122 the road.
123

124 Permit Coordinator/Wetland Specialist Tomczik asked: (d) whether the practical difficulty can be alleviated
125 by a feasible method other than a variance (economic considerations play a role in the analysis under this
126 factor);

127 District Engineer Greg Bowles replied: an assessment of whether the practical difficulty can be
128 alleviated by a feasible method other than a variance (economic considerations play a role in the
129 analysis under this factor) is necessary. The variance was created by the occurrence of two
130 conditions:

131 a) First condition is the need of the City to maintain the roads and infrastructure within the Egg
132 Lake

133 ROC and the lack of opportunity to provide water quality treatment due to the physical conditions
134 within the project.

135 b) Second condition is the revision of the District's stormwater requirements in 2013.
136 The City documented potential sites within the project area for water quality BMPs within the Egg
137 Lake ROC but all areas were deemed infeasible, and the District Engineer concurs with the
138 assessment.

139
140 Permit Coordinator/Wetland Specialist Tomczik asked: (e) how the practical difficulty occurred, including
141 whether the landowner created the need for the variance; and

142 District Engineer Greg Bowles replied: The District Engineer finds that the current landowner did not
143 cause the situation which lead to the implied practical difficulty. The variance was created by the
144 need for road and infrastructure maintenance and the District stormwater requirements.

145
146 Permit Coordinator/Wetland Specialist Tomczik asked: (f) whether in light of all of the above factors,
147 allowing the variance will serve the interests of justice.

148 District Engineer Greg Bowles replied: This criterion lies largely in the Board's domain as it involves
149 judgments of a non-technical nature. Our criterion for assessing this portion of the practical
150 difficulties standard is the ability or inability of other permit applicants with similar site conditions
151 to comply with the Rule C.6 (c) water quality treatment and BMP siting requirements. Other
152 applicants have had the ability to feasibly meet this requirement onsite because the site constraints
153 presented here were not evident.

154
155 Permit Coordinator/Wetland Specialist Tomczik replied staff and District Engineer would entertain any
156 questions at this time. He also informed the Board that a proposed motion had been made available to the
157 Board before the meeting.

158
159 District Attorney Smith stated the Board has been operating with Hugo exercising the permitting authority
160 under a memorandum of understanding. That MOU expired several years ago so the District is continuing
161 to operate pursuant to its terms. The Board could reassert permitting authority but he thought the District
162 is willing to continue to operate under this agreement and it is his understanding that Hugo is working on
163 updating their local water plan and when they do that it would be appropriate to review and update the
164 MOU.

165
166 Manager Bradley stated they are considering a rule change which would eliminate linear projects from
167 requiring a permit so if that change was current would this project require a permit. Permit
168 Coordinator/Wetland Specialist Tomczik stated potentially it wouldn't because it was his understanding

169 there was no new impervious surface so would not need a permit. District Engineer Bowles stated they are
170 disturbing into the subgrade of the road for utilities so would be considered a reconstruction so it would
171 not be required.

172
173 ***Motion by Manager Waller, seconded by Manager Bradley, that the Board of Managers concurs in the***
174 ***variance to be granted by the City of Hugo for permit file 16-042. Motion carried 5-0.***
175

176 **2. Consider HAB Aquatics Solutions, Inc. pay request #2 for Bald Eagle Lake Alum Treatment**
177 District Administrator Belfiori stated on February 4, 2014 the RCWD Board of Managers awarded a contract
178 to HAB Aquatic Solutions, Inc. to implement the Bald Eagle Lake Alum Project (Resol. No 2014-04). The total
179 contract price was \$878,991.26. Phase 1 of the project, consisting of approximately one-half of the total
180 work, was completed on May 15, 2014. Payment for the 2014 application, totaling \$417,648.14, was
181 approved by the Board and rendered on June 11, 2014. Phase 2 of the project was completed on May 6,
182 2016. HAB has submitted an invoice for services rendered for approximately one-half of the total contract
183 price totaling \$439,456.61. The project engineer has reviewed the invoice and recommended full payment,
184 less 5% retainage, totaling \$417,393.56. The approved 2016 RCWD budget includes \$460,000 in fund 90-06
185 (Bald Eagle Lake TMDL Implementation). Staff is in the process of submitting the Clean Water Partnership
186 (CWP) loan disbursement request documentation for the \$200,000 in loan dollars that was authorized as
187 part of the Board’s previous approval of the CWP loan agreement/work plan.
188

189 ***Motion by Manager Wagamon, seconded by Manager Haake, to approve partial payment to HAB***
190 ***Aquatic Solutions, Inc. for the Bald Eagle Lake Alum Project in the amount of \$417,393.56. Motion carried***
191 ***5-0.***
192

193 **3. Consider Check Register dated 5/25/2016, in the amount of \$306,935.34, prepared by Redpath and**
194 **Company.**

195
196 ***Motion by Manager Wagamon, seconded by Manager Haake, to approve check register dated***
197 ***5/25/2016, in the amount of \$306,935.34, prepared by Redpath and Company. Motion carried 5-0.***
198

199 **ITEMS FOR DISCUSSION AND INFORMATION**

200 **1. Presentation: Lake and stream annual report.**
201 District Administrator Belfiori introduced Lakes and Streams Specialist Kocian.

202
203 Lakes and Streams Specialist Kocian presented the Lake and Stream Annual report to the Board and noted
204 the final report will be distributed to the Board when it is ready.

205
206 Lakes and Streams Specialist Kocian highlighted the methods they use in the monitoring. He stated the
207 monitoring program consists of monitoring many of the lakes and stream in the District, and emphasized
208 those that were monitored in 2015. He stated in 2015 they had 9 lakes and 13 stream sites. Throughout all
209 of the years that were monitored there were 17 lakes and 54 stream sites.

210
211 Lakes and Streams Specialist Kocian stated the reason RCWD monitors is to detect long-term changes in the
212 environment and monitor the health of the water resources. They also monitor to detect short term

213 changes resulting from known environmental changes (both natural and anthropogenic). They also monitor
214 the effectiveness of management actions and to provide data for specific studies or models.

215
216 Lakes and Streams Specialist Kocian stated RCWD staff, Ramsey County Environmental Services and Citizen
217 Assisted Monitoring Program monitors lakes. He noted this year the District is paying Ramsey County for
218 lake monitoring services. He stated there are roughly 12 lakes that are being monitored by citizens.

219
220 Lakes and Streams Specialist Kocian stated Rice Creek Watershed District monitors lakes. They look at
221 water clarity using Secchi Disk and collect water samples and have them analyzed for different things. They
222 monitor the temperature and do plant surveys on some of the lakes. They do measure phosphorus,
223 chlorophyll-a and water clarity using the Secchi Disk.

224
225 Lakes and Streams Specialist Kocian stated they collect profiles. They look at temperature going down
226 through different levels in the lake and they look at dissolved oxygen from the surface to the bottom.

227
228 Lakes and Streams Specialist Kocian stated almost all of the Tier one and Tier two level lakes in the District
229 are monitored plus a couple of Tier three lakes. There is a column on summary sheet indicating whether
230 the lake is impaired and also what grade the lake is at.

231
232 Lakes and Streams Specialist Kocian stated one of the driving factors in determining water quality is the size
233 of the watershed. Lakes with small watershed often receive grade A rating while lakes with larger
234 watershed's such as Peltier, Rice, Long, and Locke lakes generally have worse water quality. The larger the
235 watershed, the larger the runoff being delivered to those lakes.

236
237 Lakes and Streams Specialist Kocian stated some lake examples used in the report are Island, Bald Eagle,
238 Silver and Howard lakes.

239
240 Lakes and Streams Specialist Kocian stated Island Lake received a B in the most recent grading. He stated
241 this lake was the recipient of a 2010 RCWD Stormwater Remediation Cost Share Grant. He reviewed the
242 project with the Board. He noted there was a strong (statistical) improvement in water quality over the
243 past 12 years.

244
245 Lakes and Streams Specialist Kocian stated Bald Eagle Lake was the recipient of the Aluminum Sulfate
246 (alum) treatment project. He reviewed the project with the Board and noted the lake is still listed as
247 impaired and will need to meet the standards for several years before the long term average comes down
248 below the State standards.

249
250 Lakes and Streams Specialist Kocian stated that common carp management was conducted on Silver Lake,
251 leading to improved water quality and more plants. He reviewed the project with the Board and noted
252 netting on the lake was fairly successful and they reduced biomass on the lake by more than fifty percent.
253 He stated Silver Lake was considered impaired but was out of balance ecologically.

254
255 Lakes and Streams Specialist Kocian stated aquatic plants are a critical component of healthy lakes and
256 provide habitat and food for fish, algae-eating zooplankton, ducks. The aquatic plants stabilize lake
257 sediments and use /" lock-up" phosphorus.

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Lakes and Streams Specialist Kocian stated that Howard Lake historically had fair to poor water quality, primarily due to negative impacts of common carp. After carp management by Rice Creek Watershed District and the DNR, water quality has greatly improved. He stated the lake has been delisted and is no longer impaired. He noted Howard Lake is now getting an A grade and used to have a D grade. This is what happens when you successfully manage carp.

Lakes and Streams Specialist Kocian stated other lakes that are considered shallow water lakes are: Oneka Lake and Spring Lake. These lakes have excellent water quality year after year. Lakes and Streams Specialist Kocian stated RCWD contains lakes that span the spectrum of water quality. Some excellent, some poor and many in between.

Manager Haake thanked Lakes and Streams Specialist Kocian for the presentation and stated he has done a good job.

Manager Waller stated he thought the report was excellent and liked the long term trends that are established in the report. He noticed on the maps that there were a lot of grey bodies of water which means they are not being actively monitored. He thought monitoring was very important.

Manager Waller wondered how they are going to establish the codification of maintenance for water quality. He thought inspections needed to be done frequently.

2. Staff Reports

There were no comments.

3. June Calendar

There were no comments.

4. Manager’s Update

There were no comments.

ADJOURNMENT

Motion by Manager Haake, seconded by Manager Wagamon, to adjourn the meeting at 9:49 a.m. Motion carried 5-0.

ITEMS REQUIRING BOARD ACTION

1. Consider RCWD Clean Water Grant Program Applications (Samantha Berger)
 - a. RCWD16-01, Oquist Raingarden planting
 - b. R16-01, Nelson Raingarden application
 - c. R16-02 Detournay Pervious driveway application

MEMORANDUM

Rice Creek Watershed District

Date: June 2, 2016
To: RCWD Board of Managers
From: Samantha Berger, District Technician
Subject: RCWD16-02 Kari Oquist – Raingarden
Clean Water Grant Program Application

RCWD16-02 Kari Oquist

- Location: 8408 Groveland Road, Mounds View
- Project Type: Raingarden (Rice Creek to Long Lake)
- Total Eligible Cost: \$1,428
- RCWD Cost-Share Request: \$714 (50%)

BACKGROUND

This project proposes conversion of a 415 square foot City of Mounds View infiltration basin into a formal, planted raingarden. The raingarden is part of a City effort to reconstruct all of its streets and is required by a RCWD permit from 2015. In 2008, the RCWD came to an understanding with the City that landowners who wished to convert the standard turfgrass infiltration basins to formal raingardens would be eligible for cost-share funding assistance. This raingarden will serve a drainage area of approximately 1.25 acres of impervious surface, intercepting and infiltrating a volume of approximately 12,726 cubic feet of runoff (assuming a 2.8-inch event) prior to making its way to Rice Creek and ultimately Long Lake, which is a Tier 2 waterbody.

Because the City already completed the majority of the work, only the plant materials, mulch, sod cutter, and labor to install them are eligible expenses. The total project cost estimate for this project is \$1,428. The landowner has submitted an application to encumber \$714 in cost-share funding for this project, not to exceed 50% of eligible project expenses.

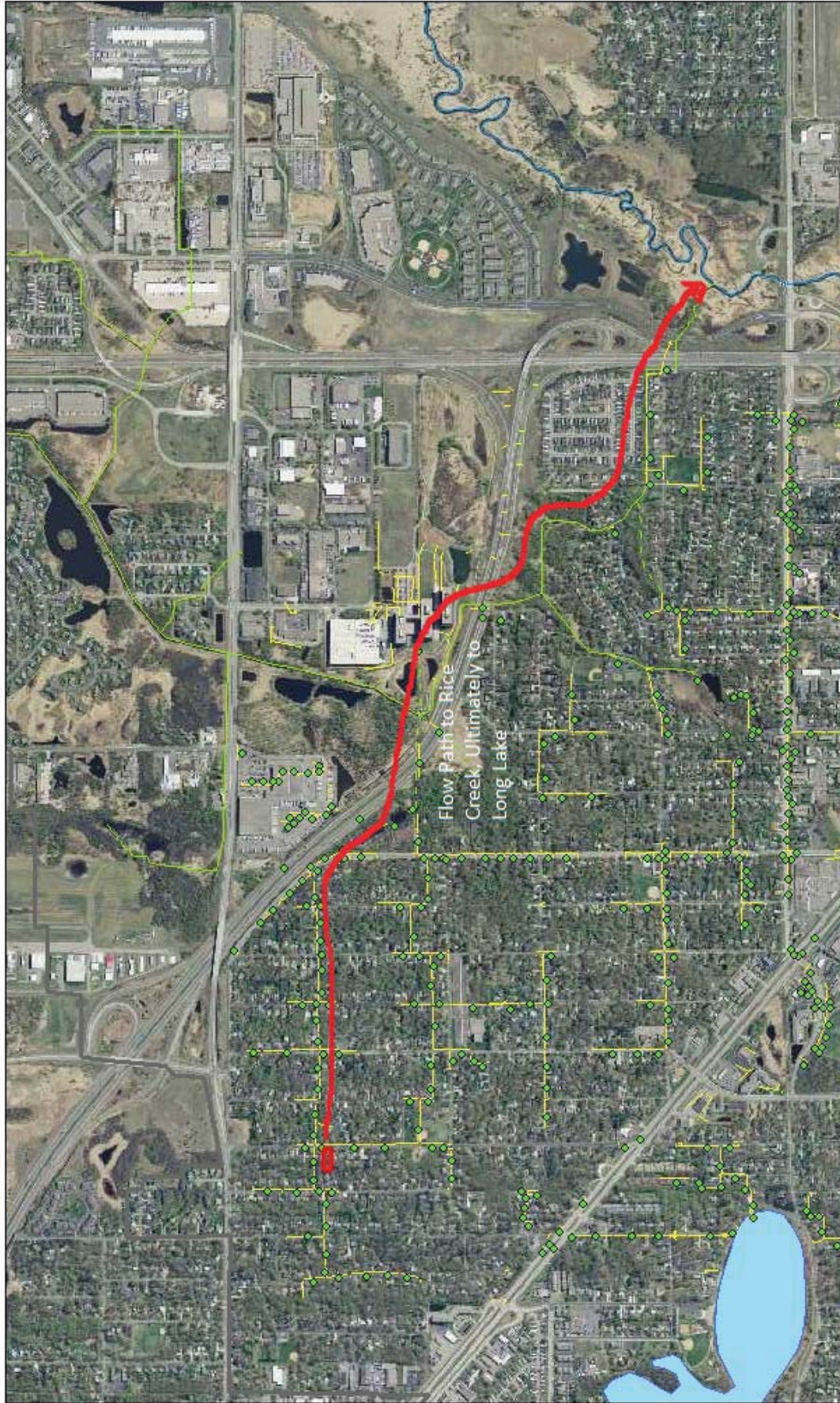
The planting of the existing rain garden will aid in the infiltration and evapotranspiration within the rain garden, while providing pollinator habitat.

This proposal was considered by the RCWD Citizen Advisory Committee at its meeting held on June 1, 2016. The CAC discussed the application and passed a motion recommending that the RCWD Board of Managers approve this project for up to \$714 in cost-share funding, not to exceed 50% of eligible project expenses.

RECOMMENDATION

RCWD's Citizen Advisory Committee and Staff recommend that the RCWD Board of Managers approve RCWD Clean Water Grant Program funds for the Oquist raingarden planting project, up to \$714, not to exceed 50% of eligible project expenses, in accordance with established program guidelines.

Proposed motion: Manager _____ moves to approve RCWD Clean Water Grant Program Contract RCWD16-02 for the Oquist's raingarden planting project, up to \$714 and not to exceed 50% of eligible project expenses, in accordance with established program guidelines.

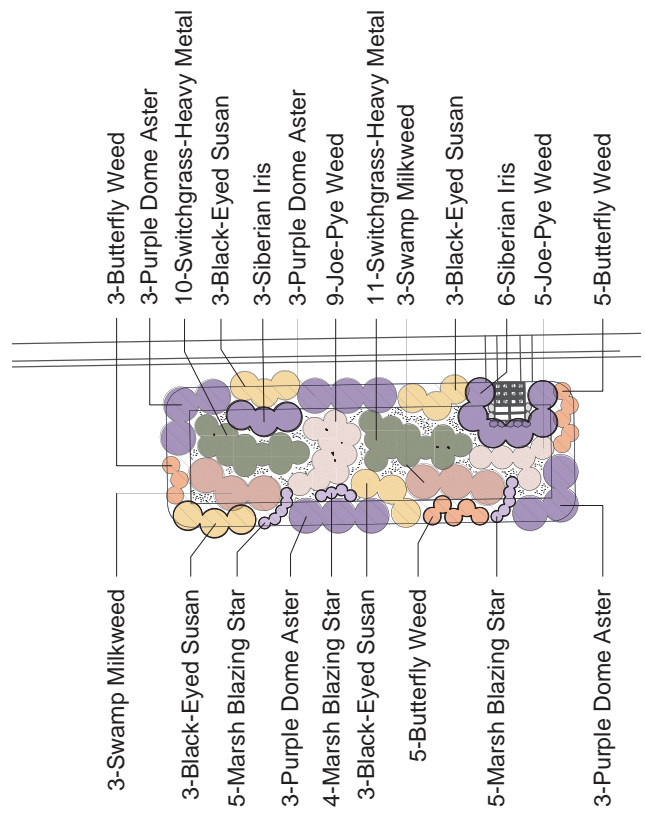


Flow Path to Rice Creek, Ultimately to Long Lake

Qquist Application
8408 Groveland Road
Mounds View, MN

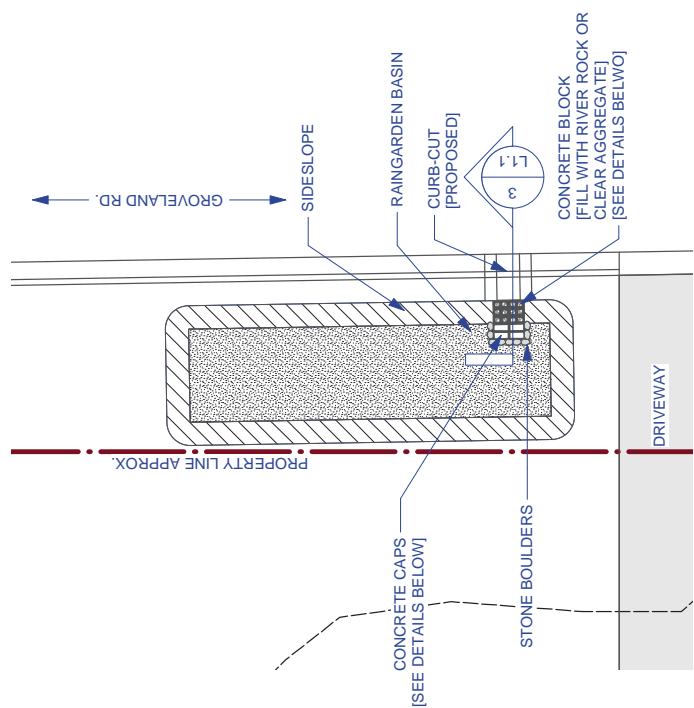
- Legend**
- Qquist Property
 - ◆ strm_stru
 - ◆ Sbrm_size
 - ◆ strm_pipe
 - rowd_waterbodies
 - Private Constructed Channel
 - Private Natural Waterway
 - Public - Municipal
- RCWD_Watercourses**
- Owner**
- Public Watercourse
 - Public Ditch

2 PLANTING PLAN
Scale: 3/32" = 1'-0"

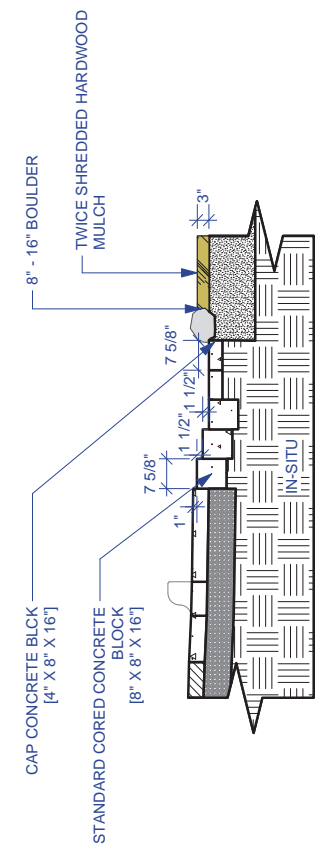


| Quantity | Latin Name | Common Name |
|----------|------------------------------------------|-------------------------|
| 101 | | 8 |
| 12 | <i>Aster novae-angliae</i> 'Purple Dome' | Purple Dome Aster |
| 21 | <i>Panicum virgatum</i> 'Heavy Metal' | Switchgrass-Heavy Metal |
| 14 | <i>Eupatorium purpureum</i> | Joe-Pye Weed |
| 6 | <i>Asclepias incarnata</i> | Swamp Milkweed |
| 13 | <i>Asclepias tuberosa</i> | Butterfly Weed |
| 12 | <i>Rudbeckia hirta</i> | Black-Eyed Susan |
| 14 | <i>Liatris spicata</i> | Marsh Blazing Star |
| 9 | <i>Iris sibirica</i> | Siberian Iris |

1 RAINGARDEN LAYOUT
Scale: 3/32" = 1'-0"



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





LAB Landscape Design LLC

address: 147 Tenth Street, St. Paul, Minnesota 55101

email: chuck@outdoorlab.net phone: 651-202-3662

Project Manager: Chuck Hanna
 Job Name: Oquist Residence
 Street Address: 8408 Groveland Road
 City, State, Zip: Moundsview, MN 55112
 Telephone (home): _____
 Telephone (cell): _____
 Job Description: Raingarden

Proposal Date: April 12, 2016
 Revised Date: May 12, 2016
 Bill To: Same
 Street Address: _____
 City, State, Zip: _____
 Email Address: _____

| Item | Description | Unit | Qty | Unit Price | Total |
|---------|--------------------------------------------------------------|------|-----|---------------------|-------------------|
| Demo | Remove existing sod from Raingarden Basin, move to back yard | LS | 1 | \$275.00 | \$ 275.00 |
| Install | Install 101 - 2" Native Plugs | Each | 101 | \$2.50 | \$ 252.50 |
| Install | Install Chilton Flagstone Steppers for inlet splash block. | LS | 1 | \$250.00 | \$ 250.00 |
| Install | Install 6" Chilton Wall Stone to create sump at inlet | LS | 1 | \$125.00 | \$ 125.00 |
| Install | Install sod in back yard as per instruction of home owner | LS | 1 | \$200.00 | \$ 200.00 |
| Install | 5 Cubic Yard Double Shredded Hardwood Mulch | CY | 5 | \$65.00 | \$ 325.00 |
| | | | | Sub-Total | \$1,427.50 |
| | | | | MN Sales tax | \$0.00 |
| | | | | New Total | \$1,427.50 |

Outdoor Lab Landscape Design LLC, Project Manager Date

Client's Signature D

The undersigned agrees to the scope of work, price, and payment terms described above.
 Payment Terms: Net 30 Days

Plant materials are subject to availability and substitutions may be made as necessary. All trees and woody plant materials are warranted for one year from the date of the projects completion. Warranty does not cover lack of proper care, animal, vehicle, storm, drought, vandalism or human caused damage. Outdoor Lab Landscape Design LLC proposes to furnish material and labor complete in accordance with the above description of work to be completed and cost estimate. All work is to be completed in a workman like manner according to standard practices. Any alteration or deviation from the above description of work to be completed involving additional cost will be executed only upon written order and will be charged over and above this estimate. All labor and material is conclusively accepted as satisfactory unless expressed in writing within 60 days of performance. All agreements are contingent upon strikes, accidents or delays beyond our control. Damage to driveways, underground structures (wires, cables, irrigation) is the responsibility of the party accepting this agreement. Measures shall be taken on the part of Outdoor Lab Landscape Design, LLC to ensure the site is prepared to prevent foreseeable damage due to weather during the installation period. Any delays or damage to landscaped area due to weather may be charged over and above this estimate. This agreement gives consent to Outdoor Lab the use of photograph of work completed by Outdoor Lab for training, literature and marketing of Outdoor Lab

PLEASE TAKE NOTICE; ANY PERSON OR COMPANY SUPPLYING LABOR OR MATERIALS FOR THIS IMPROVEMENT TO YOUR PROPERTY MAY FILE A LIEN AGAINST YOUR PROPERTY IF THAT PERSON OR COMPANY IS NOT PAID FOR THE CONTRIBUTIONS. UNDER MINNESOTA LAW, YOU HAVE THE RIGHT TO PAY PERSONS WHO SUPPLIED LABOR, EQUIPMENT, OR MATERIALS FOR THIS IMPROVEMENT DIRECTLY AND DEDUCT THIS FROM OUR CONTRACTORS PRICE, OR WITHHOLD THE AMOUNTS DUE THEM FROM US UNTIL 120 DAYS AFTER THE COMPLETION OF THE IMPROVEMENT UNLESS WE GIVE YOU A LIEN WAIVER SIGNED BY PERSONS WHO SUPPLIED ANY LABOR OR MATERIAL FOR THE IMPROVEMENT AND WHO GAVE YOU TIMELY NOTICE.



Clean Water Grant Program Project Screening Form

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| Project / Landowner Name: Kari Oquist | Affected Water Body: Long lake |
| Project Address: 8408 Groveland | City: Mounds View |
| County: <input type="checkbox"/> ANOKA <input checked="" type="checkbox"/> RAMSEY <input type="checkbox"/> HENNEPIN <input type="checkbox"/> WASHINGTON | Project Type(s): rain garden planting |
| Application Date: 5-23-2016 | Project Effective Life: 5 |
| Violation or Permit Requirement: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | Reviewer: Sam Berger |

Projects are screened for potential grant eligibility based on the following criteria. (0 = low, 10 = high)

1. Connectivity to Water Body

a. Is the project tributary to a PCA-listed impaired water (not mercury) or a RCWD Tier I or Tier II waterbody?
 (NO) 0 1 2 3 4 (YES, within subwatershed) 5 6 7 8 (YES, direct connection) 9 10

b. If NO, is the project tributary to a lake, stream, ditch, or DNR-Protected Water Wetland (PWW)?
 (NO) 0 1 (YES, within subwatershed) 2 3 4 (YES, direct connection) 5 6

2. Contributing Watershed Characteristics: Surface type draining to the project.

0% impervious 0 1 2 3 4 5 6 7 8 9 10
 50% impervious
 100% impervious

Comments: Constructed as part of Mounds View street project, treating over 1 acre of street

3. Volume Reduction: Implements controls to reduce and/or minimize the rate and volume of water that drains off the property.

No Infiltration/Filtration 0 1 2 3 4 5 6 7 8 9 10
 Filtration
 Infiltration

Comments: _____

4. Erosion and Sediment Control: Implements controls that minimize erosion and/or sedimentation and pollutants to downstream waters.

No erosion 0 1 2 3 4 5 6 7 8 9 10
 No sediment capture
 Visible Erosion Sediment Capture

Comments: Sediment capture occurring, but no formal inlet sump such as a rain guardian

5. Wildlife Habitat Improvement: Creates or improves wildlife and or pollinator habitat through native plantings or other restoration efforts.

Not connected to wildlife corridor 0 1 2 3 4 5 6 7 8 9 10
 Connected to wildlife corridor

Comments: _____

6. Public Outreach: Willingness of applicant to allow signage, tours and site visits. Publically visible site. Diversity of practices.

Low public visibility 0 1 2 3 4 5 6 7 8 9 10
 Moderate public visibility
 High public visibility

Comments: located in front yard

Total Score: 35
Minimum Eligibility = 30

MEMORANDUM

Rice Creek Watershed District

Date: June 2, 2016
To: RCWD Board of Managers
From: Samantha Berger, District Technician
Subject: R16-01 Kathy Nelson – Rain Garden
RCWD Clean Water Grant Program Application

R16-01 Kathy Nelson

- Location: 3475 Siems Court, Arden Hills,
- Project Type: Rain Garden-Drainage Swale (Lake Johanna)
- Total Eligible Project Cost: \$12,361
- RCWD Cost-Share Recommendation: \$5,000 (40%)

BACKGROUND

This project proposes the installation of a driveway drain, drainage swale, and rain garden located on a shoreline property off Lake Johanna in Arden Hills. The project will provide water quality treatment and volume control for the applicant's steep driveway and the roof of the applicant and the neighbor that were otherwise untreated and were beginning to erode. RCWD staff supports the recommendations expressed by the Conservation District and thinks the project would be a good fit for the Clean Water Grant program. Ultimately, the project will drain to Lake Johanna, a Tier I water body in the Rice Creek Watershed District's Watershed Management Plan.

The applicant's landscaper, Savannah Designs completed a bid for the project at \$12,361. The bid included additional items that would not be considered as part of the cost-share. In addition, the Conservation District provided a bid in the amount of \$11,553.51. The project will help to treat runoff from a .80-inch rain event and will treat a total of 5,479 sq. ft. of impervious surface. The existing conditions are a steep slope that has eroded and is causing sediment transport into the lake. Ultimately, this project will help to eliminate a volume of 8,083 cubic-ft (83% reduction), 64 lbs. of Total Suspended Solids (80% reduction), and .15 lbs. of Total Phosphorous (76% reduction) per year.

The Ramsey Conservation District approves of the project bid that the landowner has obtained for the project. The applicant will submit an application to encumber up to \$5,000 in cost-share funding for this project, not to exceed 50% of eligible project expenses.

This proposal was considered by the RCWD Citizen Advisory Committee at its meeting held on June 1, 2016. The CAC discussed the application and passed a motion recommending that the RCWD Board of Managers approve this project for up to \$5,000 in cost-share funding, not to exceed 50% of eligible project expenses.

RECOMMENDATION

RCWD's Citizen Advisory Committee and Staff recommend that the RCWD Board of Managers approve Clean Water Grant funds for the Nelson's rain garden project.

MEMORANDUM

Rice Creek Watershed District

Proposed motion: Manager _____ moves to approve RCWD Clean Water Grant Program Contract R16-01 for the Nelson’s rain garden project, up to \$5,000 and not to exceed 50% of eligible project expenses, in accordance with established program guidelines.

Ramsey Conservation District



To: RCWD Advisory Committee
From: Joe Lochner: Conservation Design Specialist
Date: 26-May-16
Re: Kathy Nelson Cost Share Application

Project:

347 Siems Ct
Arden Hills, MN 55112
Raingarden

Material & Labor Estimate: \$12,361.00

Cost Share Request: \$5,000.00

Background:

The proposed raingarden is located on the lake side of a residential property on Lake Johanna in Arden Hills. Current drainage areas include runoff from the roof and driveway as well as the south neighbor's roof. The runoff from this drainage area is concentrated through an area between the properties and has severely eroded a swale which carries stormwater to the lake. Large amounts of sediment are being lost and entering the lake with each storm event.

In this design, stormwater is conveyed by the existing swale. The existing swale will be reshaped and reinforced with rock. The swale will terminate into a large raingarden where infiltration of stormwater will occur. A channel drain, along with catch basins and drain tile at the existing downspouts, will direct stormwater to this swale, and, eventually the raingarden.

Total impervious area treated by proposed raingarden is 5,479 square feet. The raingarden will capture the 0.80" storm event. Once established, this raingarden will be an effective measure to treat stormwater that would otherwise runoff into the Lake Johanna.

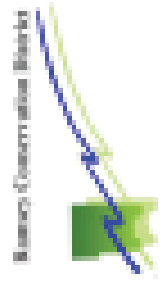
Recommendation:

It is my recommendation that this project be awarded cost share in the amount of \$5,000.00 or 50% of the eligible project costs, whichever is less.

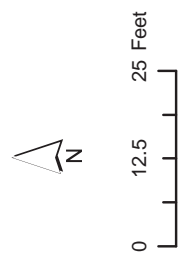
Pollution Reductions:

| | <i>Before</i> | <i>After</i> | <i>Reduction</i> | <i>Red. %</i> |
|-------------------|---------------|--------------|------------------|---------------|
| Volume (cu-ft/yr) | 9,755 | 1,672 | 8,083 | 83% |
| TSS (lbs/yr) | 81.24 | 16.33 | 64.91 | 80% |
| TP (lbs/yr) | 0.2010 | 0.0475 | 0.1535 | 76% |

EXHIBIT A: Site Drainage

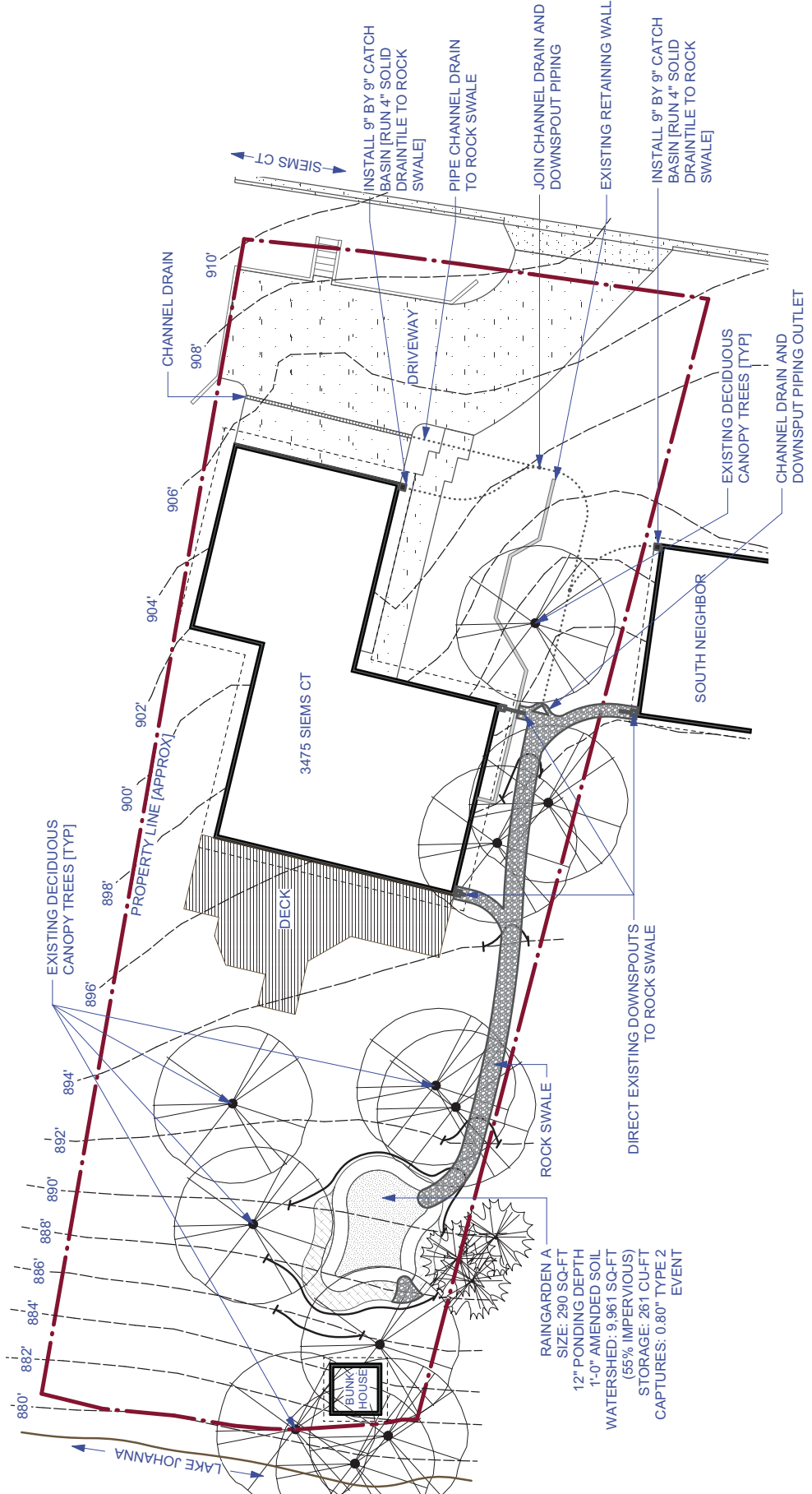


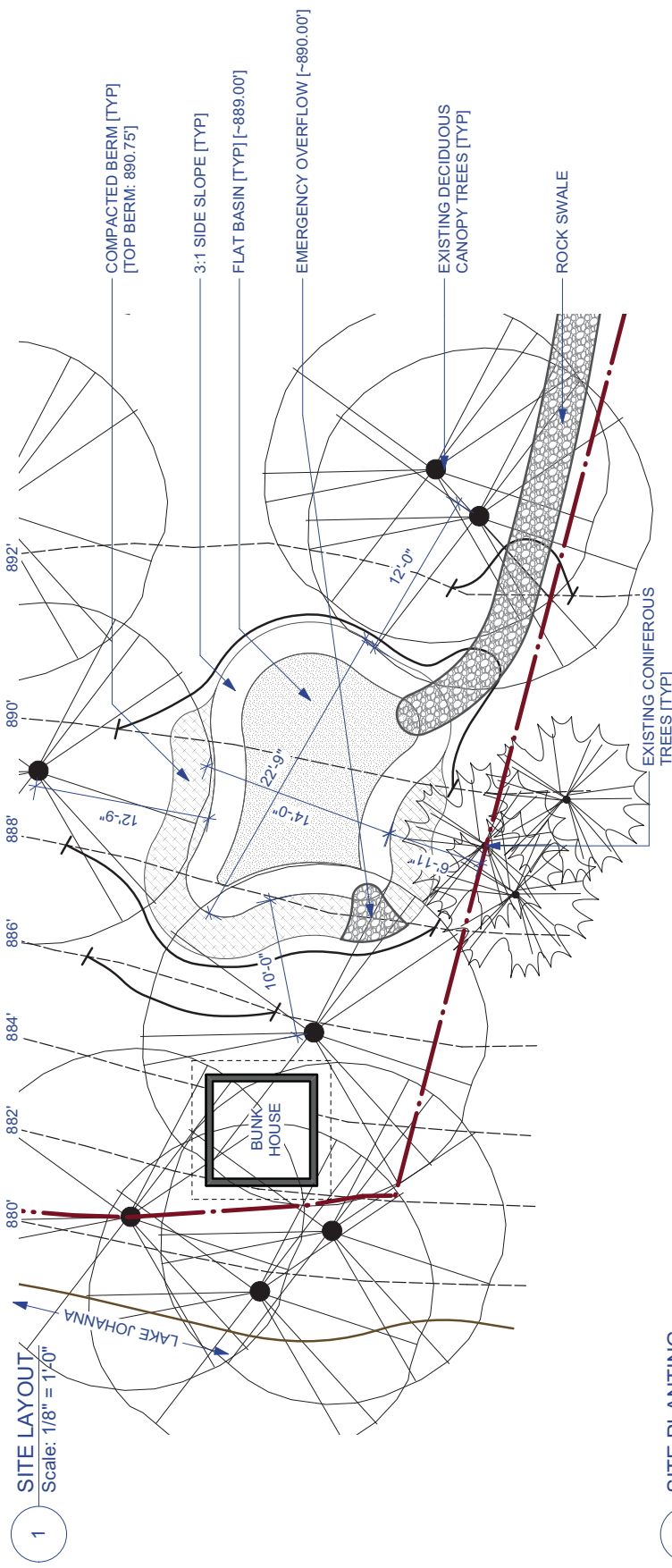
Kathy Nelson
 3475 Siems Ct,
 Arden Hills, MN 55112
 651-363-0414
 kmn0414@gmail.com



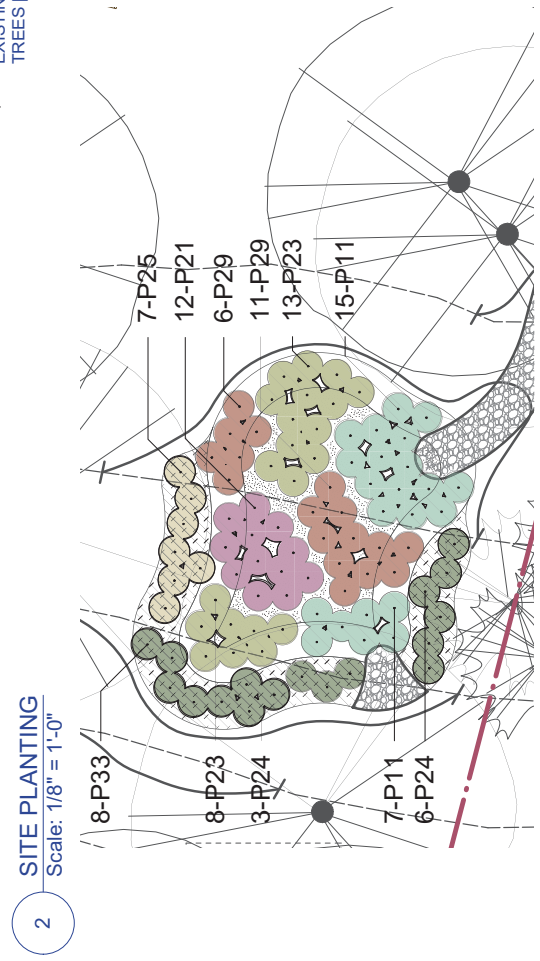
- ↑ SITE WATERFLOW
- CONTOUR (2)

- Legend**
- WATERSHED
 - PARCEL LINE
 - BMP

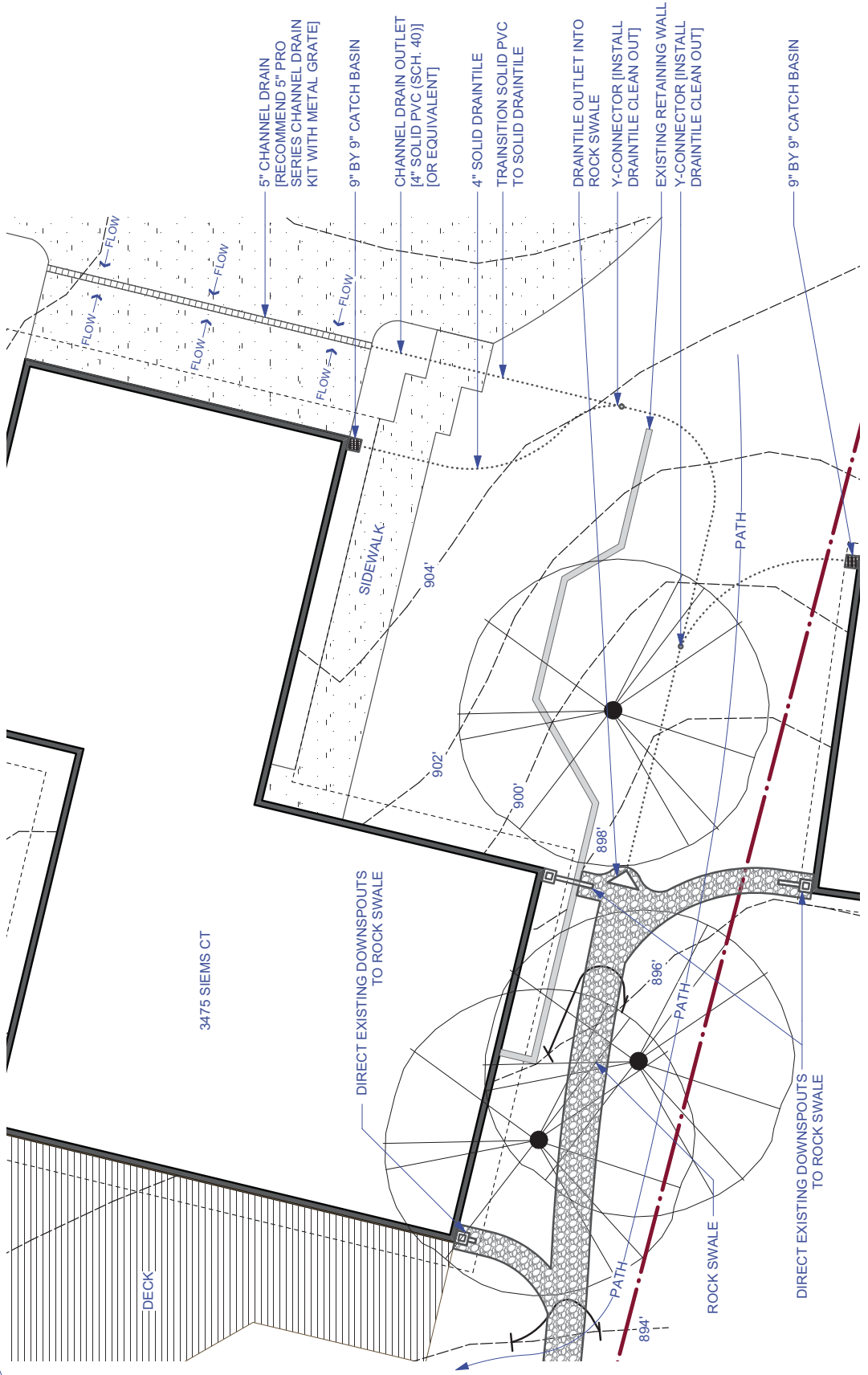




| ID | Quantity | Latin Name | Common Name |
|-----|----------|---------------------------|----------------------|
| 7 | 96 | | |
| P11 | 22 | Carex bebbii | Bebb's Sedge |
| P29 | 17 | Lobelia cardinalis | Cardinal Flower |
| P23 | 21 | Onoclea sensibilis | Sensitive Fern |
| P21 | 12 | Liatris pycnostachya | Prairie Blazing Star |
| P24 | 9 | Matteuccia struthiopteris | Ostrich Fern |
| P25 | 7 | Geranium maculatum | Wild Geranium |
| P33 | 8 | Plemionium reptans | Jacob's Ladder |



1 SITE LAYOUT
Scale: 1/8" = 1'-0"



Ramsey
Conservation District
RAMSEY CONSERVATION DISTRICT
1425 PAUL KIRKWOOD DR
ARDEN HILLS, MN 55112
651-266-7274
www.ramseyconservation.org

PROJECT: KATHY NELSON
LOCATION:
347 SIEMS CT
ARDEN HILLS, MN 55112
WATERSHED DISTRICT:
RICE CREEK WATERSHED DISTRICT



DESIGNER: JL
DATE: 5/11/16
REVISION:
REVISION:
REVISION:
REVISION:
CHECKED BY: JL
TAA: JL

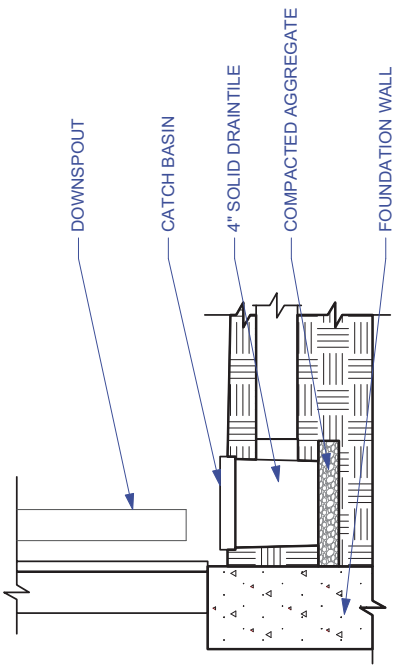
NOTES:
-ELEVATIONS ARE APPROXIMATE
-RAIN GARDEN SHAPE MAY VARY
-MAINTAIN SPECIFIED DEPTH AND SQ-FT

SCALE: 1" = 8'-0"

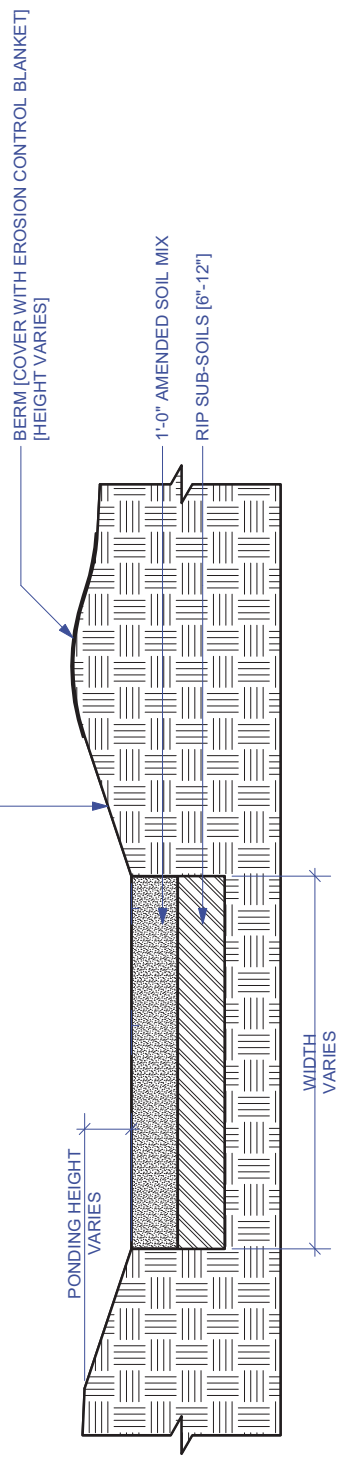
SITE LAYOUT

L1.3

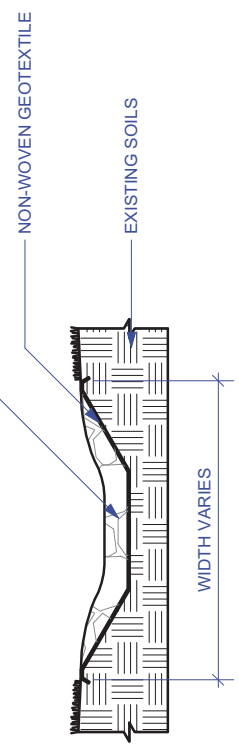
1 CATCH BASIN
Scale: 1" = 1'-0"



2 RAINGARDEN
Scale: 3/4" = 1'-0"



3 ROCK SWALE
Scale: 3/4" = 1'-0"



Ramsey Conservation District MATERIAL & COST ESTIMATE

Kathy Nelson
3475 Siems Ct
Arden Hills, MN 55112
Raingarden

Date: 11-May-16

| Materials: Raingarden A | | | | | |
|--------------------------------------------------------------|------|-------|-----------|-------------|----------------------------------|
| Item | Qty | Unit | Unit Cost | Amount | Potential Source |
| Soil Amendment (75% Sand, 25% Leaf Compost- MNDOT Grade II) | 5.5 | cu-yd | \$ 23.00 | \$ 126.50 | NRG, Windscapes, MN Mulch & Soil |
| Twice-Shredded Hardwood Mulch (3" depth) | 4.0 | cu-yd | \$ 27.00 | \$ 108.00 | Hedberg, Frador, Local Supplier |
| Aggregate: River Rock (Mixed size, 1.5" - 6") | 6 | cu-yd | \$ 30.00 | \$ 180.00 | Hedberg, Frador, Local Supplier |
| Geotex 401 (or Mirfani 140N: Non-woven geotextile, or equal) | 400 | sq-ft | \$ 0.07 | \$ 28.00 | Brock White, (651) 647-0950 |
| C125 (6.6' x 108', or equal) | 200 | sq-ft | \$ 0.13 | \$ 26.00 | Brock White, (651) 647-0950 |
| 5' NDS Pro Series Channel Drain Kit (w/Metal Grate) | 8 | each | \$ 60.00 | \$ 480.00 | Menards, Homedepot, Lowes, etc |
| 6" Netting Pegs (bio-stakes) | 0.25 | box | \$ 74.00 | \$ 18.50 | Brock White, (651) 647-0950 |
| Trench Grate: Concrete (Quikrete 5000 or similar: 80# bag) | 18 | bag | \$ 4.60 | \$ 82.80 | Brock White, (651) 647-0950 |
| Concrete | 10 | ln-ft | \$ 40.00 | \$ 400.00 | Concrete Contractor |
| Catch Basin- 9" x 9" | 2 | each | \$ 26.60 | \$ 53.20 | Menards, Homedepot, Lowes, etc |
| Draintile, Solid- 4" | 100 | ln-ft | \$ 0.60 | \$ 60.00 | Menards, Homedepot, Lowes, etc |
| 4 in. x 10 ft. PVC Sch. 40 DWV Plain End Pipe | 2 | each | \$ 18.50 | \$ 37.00 | Menards, Homedepot, Lowes, etc |
| Y Connector- 4" | 2 | each | \$ 6.28 | \$ 12.56 | Menards, Homedepot, Lowes, etc |
| Coupling- 4" | 2 | each | \$ 1.87 | \$ 3.74 | Menards, Homedepot, Lowes, etc |
| Leaf Guard- 4" | 1 | each | \$ 5.21 | \$ 5.21 | Menards, Homedepot, Lowes, etc |
| Draintile Clean Out | 2 | each | \$ 100.00 | \$ 200.00 | Contractor |
| Yard Repairs, etc | 1 | each | \$ 250.00 | \$ 250.00 | Contractor |
| Materials Subtotal | | | | \$ 2,071.51 | |

| Plants: Raingarden A | | | | | |
|----------------------|-----|------|-----------|-----------|-----------------------|
| Item | Qty | Unit | Unit Cost | Amount | Potential Source |
| Native Plant: 4" Pot | 96 | each | \$ 4.50 | \$ 432.00 | Native Plant Supplier |
| Plants Subtotal | | | | \$ 432.00 | |

| Labor: Raingarden A | | | | | |
|---------------------------------------------------------------------------|------|-------|-------------|-------------|---------------------------------|
| Item | Qty | Unit | Unit Cost | Amount | Potential Source |
| Mobilization | 1.00 | job | \$ | \$ 500.00 | Landscape/Excavation Contractor |
| Deliveries | 4.00 | each | \$ 75.00 | \$ 300.00 | Landscape/Excavation Contractor |
| Disposal | 1.00 | job | \$ 250.00 | \$ 250.00 | Landscape/Excavation Contractor |
| Grading (Tracked Equipment Only - no wheeled vehicles in excavation area) | 6 | hrs | \$ 100.00 | \$ 600.00 | Landscape/Excavation Contractor |
| Soil Haul-away (create berms before soil haul-away) | 20.0 | cu-yd | \$ 40.00 | \$ 800.00 | Landscape/Excavation Contractor |
| Material Installation (4 person crew/ 10hr day) | 3.00 | job | \$ 2,200.00 | \$ 6,600.00 | Landscape/Excavation Contractor |
| Subtotal | | | | \$ 9,050.00 | |

| Project Total: Raingarden A | |
|-----------------------------|--------------|
| Materials Estimate: | \$ 2,071.51 |
| Plants Estimate: | \$ 432.00 |
| Labor Estimate: | \$ 9,050.00 |
| Project A Estimate: | \$ 11,553.51 |
| :-10% | \$ 10,398.16 |
| :+10% | \$ 12,708.86 |

Estimate



Steve & Kathy Nelson
3475 Siems Court
St. Paul, MN 55112-3639

Environmentally
Appropriate
Landscape Design

| DATE | ESTIMATE # |
|-----------|------------|
| 5/23/2016 | 2487 |

| DESCRIPTION | UNIT | QTY | COST | AMOUNT | LABOR | TOTAL |
|--------------------------------------------------------------------------------------|--------------------|--------------|----------------------|----------------------------------------------|---------------------|----------------------|
| I. SOUTH FRONT WALLS: | | | | | | |
| Remove and haul old shrubs (allowance) | per job | 1 | 0.00 | 0.00 | 600.00 | 600.00 |
| Timber demolition & disposal | per job | 1 | 0.00 | 0.00 | 2,176.00 | 2,176.00 |
| Anchor Diamond 6' block walls (472 SF) | per job | 1 | 18,536.00 | 18,536.00 | 0.00 | 18,536.00 |
| Subtotal | | | | | | 21,312.00 |
| II. DRIVEWAY WALL: | | | | | | |
| Timber demolition & disposal | per job | 1 | 0.00 | 0.00 | 1,765.00 | 1,765.00 |
| Anchor Diamond 6' block walls (354 SF) | per job | 1 | 12,215.00 | 12,215.00 | 0.00 | 12,215.00 |
| -alternate without steps (300 SF) - \$ 10,352.00 | | | | | | |
| Subtotal | | | | | | 13,980.00 |
| III. PERMEABLE DRIVEWAY: | | | | | | |
| Remove & haul existing asphalt driveway | per job | 1 | 3,287.00 | 3,287.00 | 0.00 | 3,287.00 |
| Permeable county pavers | per job | 1 | 22,090.00 | 22,090.00 | 0.00 | 22,090.00 |
| Subtotal | | | | | | 25,377.00 |
| IV. CONCRETE WORK: | | | | | | |
| Garage slab, apron and exposed aggregate walk | per job | 1 | 8,388.00 | 8,388.00 | 0.00 | 8,388.00 |
| Options: floor drain, sealer, 2" foam insulation under garage floor | | | | | | |
| Subtotal | | | | | | 8,388.00 |
| V. RAIN GARDEN: | | | | | | |
| Excavate & shape | per job | 1 | 300.00 | 300.00 | 300.00 | 600.00 |
| Boulders (Ton) | TON | 2 | 110.00 | 220.00 | 178.00 | 398.00 |
| Plantings | plugs | 100 | 2.50 | 250.00 | 125.00 | 375.00 |
| Subtotal | | | | | | 1,373.00 |
| VI. CATCH BASIN & DRAINTILE ON NEIGHBOR'S LOT: | | | | | | |
| Pipe & catch basins | per job | 1 | 300.00 | 300.00 | 500.00 | 800.00 |
| Subtotal | | | | | | 800.00 |
| VII. LANDSCAPE PLANTINGS: | | | | | | |
| Plants & mulch in walls | per job | 1 | 2,000.00 | 2,000.00 | 1,000.00 | 3,000.00 |
| Subtotal | | | | | | 3,000.00 |
| Not included: electric, permits, lawn repair and asphalt. | | | | | | |
| A downpayment of 1/2 required before work is scheduled. Balance due upon completion. | | | | TOTAL \$12,361 \$74,230.00 | | |

3637 Trading Post Trail South - Afton, Minnesota 55001
651 436-6049 info@savannadesigns.com



Clean Water Grant Program Project Screening Form

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Project / Landowner Name: Kathy Nelson | Affected Water Body: Lake Johanna |
| Project Address: 347 Siems Ct | City: Arden Hills |
| County: <input type="checkbox"/> ANOKA <input checked="" type="checkbox"/> RAMSEY <input type="checkbox"/> HENNEPIN <input checked="" type="checkbox"/> WASHINGTON | Project Type(s): Infiltration Basin |
| Application Date: 5/26/16 | Project Effective Life: 10 |
| Violation or Permit Requirement: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | Reviewer: Joe Lochner |

Projects are screened for potential grant eligibility based on the following criteria. (0 = low, 10 = high)

1. Connectivity to Water Body

a. Is the project tributary to a PCA-listed impaired water (not mercury) or a RCWD Tier I or Tier II waterbody?
 (NO) 0 1 2 3 4 5 6 7 8 9 10
(YES, within subwatershed) (YES, direct connection)

b. If NO, is the project tributary to a lake, stream, ditch, or DNR-Protected Water Wetland (PWW)?
 (NO) 0 1 2 3 4 5 6
(YES, within subwatershed) (YES, direct connection)

2. Contributing Watershed Characteristics: Surface type draining to the project.

0% impervious 0 1 2 3 4 5 6 7 8 9 10
50% impervious 100% impervious

Comments: _____

3. Volume Reduction: Implements controls to reduce and/or minimize the rate and volume of water that drains off the property.

No Infiltration/Filtration 0 1 2 3 4 5 6 7 8 9 10
Filtration Infiltration

Comments: _____

4. Erosion and Sediment Control: Implements controls that minimize erosion and/or sedimentation and pollutants to downstream waters.

No erosion 0 1 2 3 4 5 6 7 8 9 10
No sediment capture Visible Erosion Sediment Capture

Comments: _____

5. Wildlife Habitat Improvement: Creates or improves wildlife and or pollinator habitat through native plantings or other restoration efforts.

Not connected to wildlife corridor 0 1 2 3 4 5 6 7 8 9 10
Connected to wildlife corridor

Comments: _____

6. Public Outreach: Willingness of applicant to allow signage, tours and site visits. Publically visible site. Diversity of practices.

Low public visibility 0 1 2 3 4 5 6 7 8 9 10
Moderate public visibility High public visibility

Comments: _____

Total Score: 35
Minimum Eligibility = 30

MEMORANDUM

Rice Creek Watershed District

Date: June 2, 2016
To: RCWD Board of Managers
From: Samantha Berger, District Technician
Subject: R16-02 Emmanuel Detournay – Pervious driveway
RCWD Clean Water Grant Program Application

R16-02 Emmanuel Detournay

- Location: 2000 Skillman Ave
- Project Type: Pervious Driveway (Little Lake Johanna)
- Total Eligible Project Cost: \$22,837
- RCWD Cost-Share Recommendation: \$5,000 (21%)

BACKGROUND

This project proposes the installation of a pervious driveway off 2000 Skillman Ave in Roseville. In the past, the District has shied away from funding pervious pavers since generally a cheaper alternative, such as rain garden, could provide the same amount of treatment. In this case however, a rain garden could not be feasibly designed to provide the same amount of volume and area capture, therefore, the pervious pavers seemed like an appropriate solution to manage nearly all of the runoff coming from the property. The landowner applied for funding for a raingarden last year, but their application was denied due to the fact that treatment was being provided through existing infrastructure. The landowner is environmentally aware and ultimately hopes to treat all the water that leaves his property through the use of best management practices.

The installation of a pervious driveway in this location is beneficial due to the fact that the runoff generated in this area ultimately feeds into RCD 4, a tiled section of the public drainage system. This system is known to have major volume constraints, so anytime volume can be contained on site this will ultimately benefit the overall watershed that leads into Little Lake Johanna, a Tier II water body in the RCWD Watershed Management Plan. Little Lake Johanna is impaired for nutrients.

RCWD staff supports the recommendations expressed by the Conservation District and is curious to see whether the Board thinks that this type of project would be a good fit for the Clean Water Grant program since in the past we generally haven't considered funding these types of projects. Looking at the volume and pollutant reductions, we are seeing a 1934 cubic-ft (98% reduction) in volume, 12.3 lbs. (99% reduction) in TSS, and .27 lbs (100% reduction) in TP. The project will help to treat runoff from a 2-inch rain event and will treat a total of 3,204 sq. ft. of which 30% is impervious surface.

The applicant's landscaper, Nelco Landscaping completed a bid for the project at \$22,837. The Ramsey Conservation District approves of the project bid that the landowner has obtained for the project. The applicant will submit an application to encumber up to \$5,000 in cost-share funding for this project, not to exceed 50% of eligible project expenses. In addition, the landowner will be paying for maintenance of the permeable driveway on to two times a year.

This proposal was considered by the RCWD Citizen Advisory Committee at its meeting held on June 2, 2016. The CAC discussed the application at length questioning why the raingarden would not be feasible in this location. Staff indicated that the slope was such that there was not room to capture the same amount runoff. One member felt that we were giving too much funding for the project and that we were funding a project that would simply beautify the property. Staff feels that this project is

MEMORANDUM

Rice Creek Watershed District

reducing volume in an area prone to flooding and feels that the project would be successful in this area of the District. Overall the CAC passed a motion to approve the project. Motion carried 4-2.

RECOMMENDATION

RCWD's Citizen Advisory Committee and Staff recommend that the RCWD Board of Manager's approve Clean Water Grant Program funds for the Detournay permeable driveway. Staff would kindly like to ask for the Board of Manager's opinion on permeable projects moving forward since these types of projects come up rather frequently. Staff will only bring these projects forward when another, cheaper BMP such as a raingarden are not feasible onsite.

Proposed motion: Manager _____ moves to approve RCWD Clean Water Grant Program Share Contract R16-02 for the Detournay's pervious driveway project, up to \$5,000 and not to exceed 50% of eligible project expenses, in accordance with established program guidelines.



To: RCWD Advisory Committee
From: Michael Schumann: Natural Resources Specialist
Date: 31-May-16
Re: Emmanuel Detournay Residence

Project:

Emmanuel Detournay
 2000 Skillman Ave W
 Roseville, MN 55113
Project Type: Permeable Driveway

Material & Labor Estimate: \$22,837.16
Cost Share Request: \$5,000.00

Background:

The landowner’s goal is to reconstruct the driveway, installing a permeable paver system in order to capture and mitigate stormwater on-site. Currently, stormwater runoff from the roof and front lawn areas drain to the existing driveway, where it is then directly conveyed to the street and nearest catch basin, untreated. The conventional stormwater systems within this neighborhood and residential area have the potential to be overwhelmed, due to an increase of contributing drainage area, greater than the system’s capacity. The residential site is located within the Lower Rice Creek Sub-Watershed. Runoff from the site is directly connected to Little Lake Johanna via existing storm sewer conveyance.

In this design, the majority of the driveway will be reconstructed into a permeable driveway system, maximizing runoff capture from the site’s contributing drainage area. The existing subgrade soils are a Sandy Silt Loam or better, allowing for an existing undisturbed subgrade infiltration rate of 0.50 in/hr or greater. To maximize storage capture, infiltration and performance, the permeable system profile will be excavated to a depth of 18 inches, and replaced with layers of clean-washed aggregate of various size and porosities. Furthermore, the system will overflow by up-welling to the surface, through the pavers, at the lowest point of the system. The components of this design feature will allow for a minimum ponding depth of 6 inches, and to properly allow the system to overflow if and when storage capacity is reached. In addition, the overflow outlet will drain to a pervious area.

Total catchment area treated by the proposed project is 3,204 square feet. As proposed, the permeable driveway system will have the storage capacity of 231.0 cubic feet, capturing a 2.0” storm event. Once constructed, the subject project will be an effective measure to both keep and treat stormwater onsite. Alternative BMPs were evaluated for feasibility on-site; however, none were plausible for equal or greater benefit.

Currently, there are no other best management practices to treat stormwater, within the immediate drainage area.

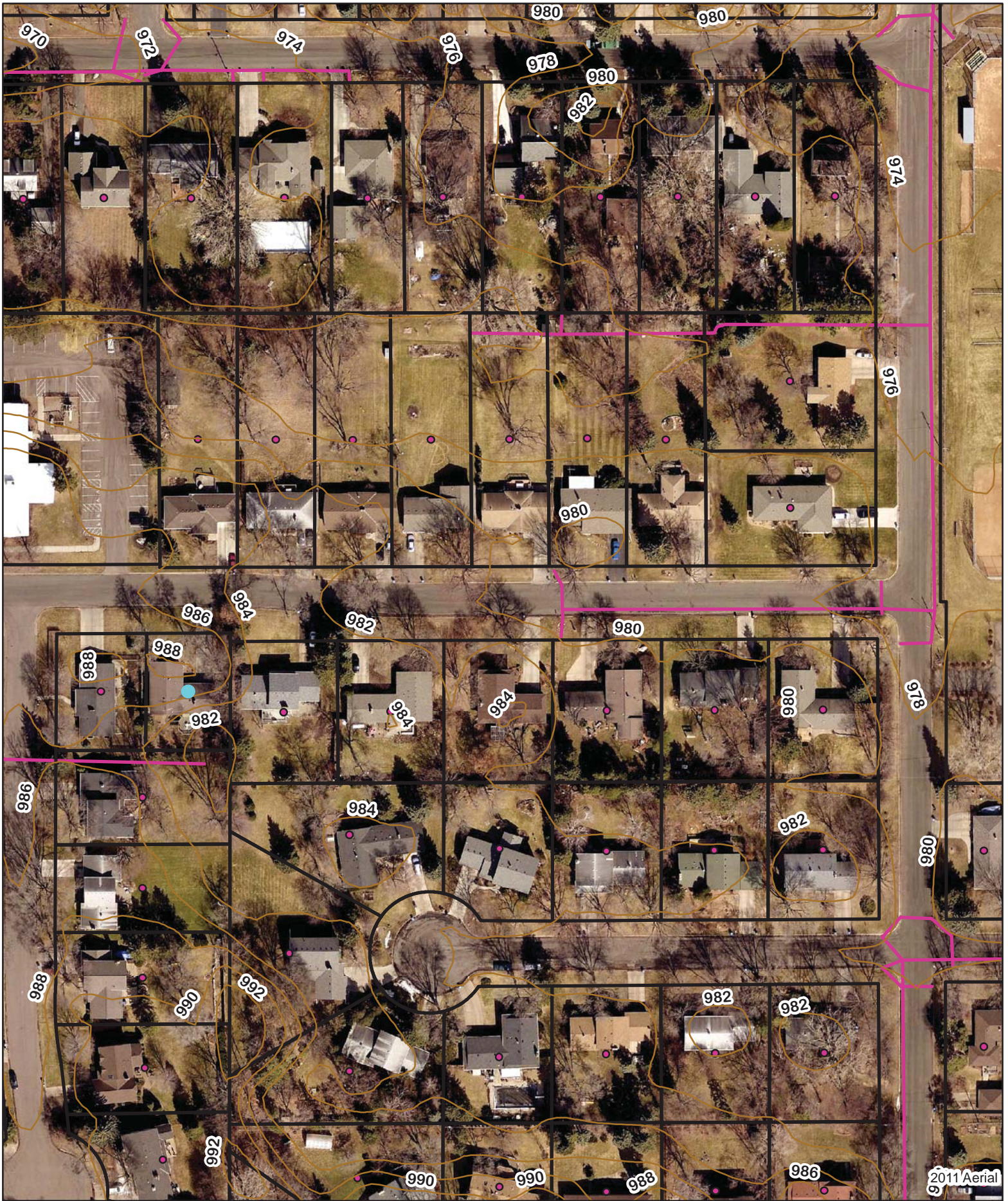
Recommendation:





It is my recommendation that this project be awarded cost share in the amount of \$5,000.00 or 50% of the eligible project costs, whichever is less.

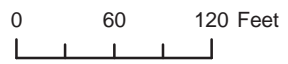
Pollution Reductions:

| | <i>Before</i> | <i>After</i> | <i>Reduction</i> | <i>Red. %</i> |
|-------------------|---------------|--------------|------------------|---------------|
| Volume [cu-ft/yr] | 1,985.00 | 20.61 | 1,964.39 | 98.96% |
| TSS [lbs/yr] | 12.33 | 0.003 | 12.32 | 99.97% |
| TP [lbs/yr] | 0.27 | 0.00 | 0.27 | 100.00% |

Supervisors: Paul Gardner, Margaret Behrens, Mara Humphrey, Carrie Wasley, Gwen Willems,



-  2ft Contour
-  Parcel Point
-  Parcel Poly
-  RV Pipes



DETOURNAY RESIDENCE
 2000 SKILLMAN AVE W
 ROSEVILLE 55113
 [RCWD]





Ramsey Conservation District

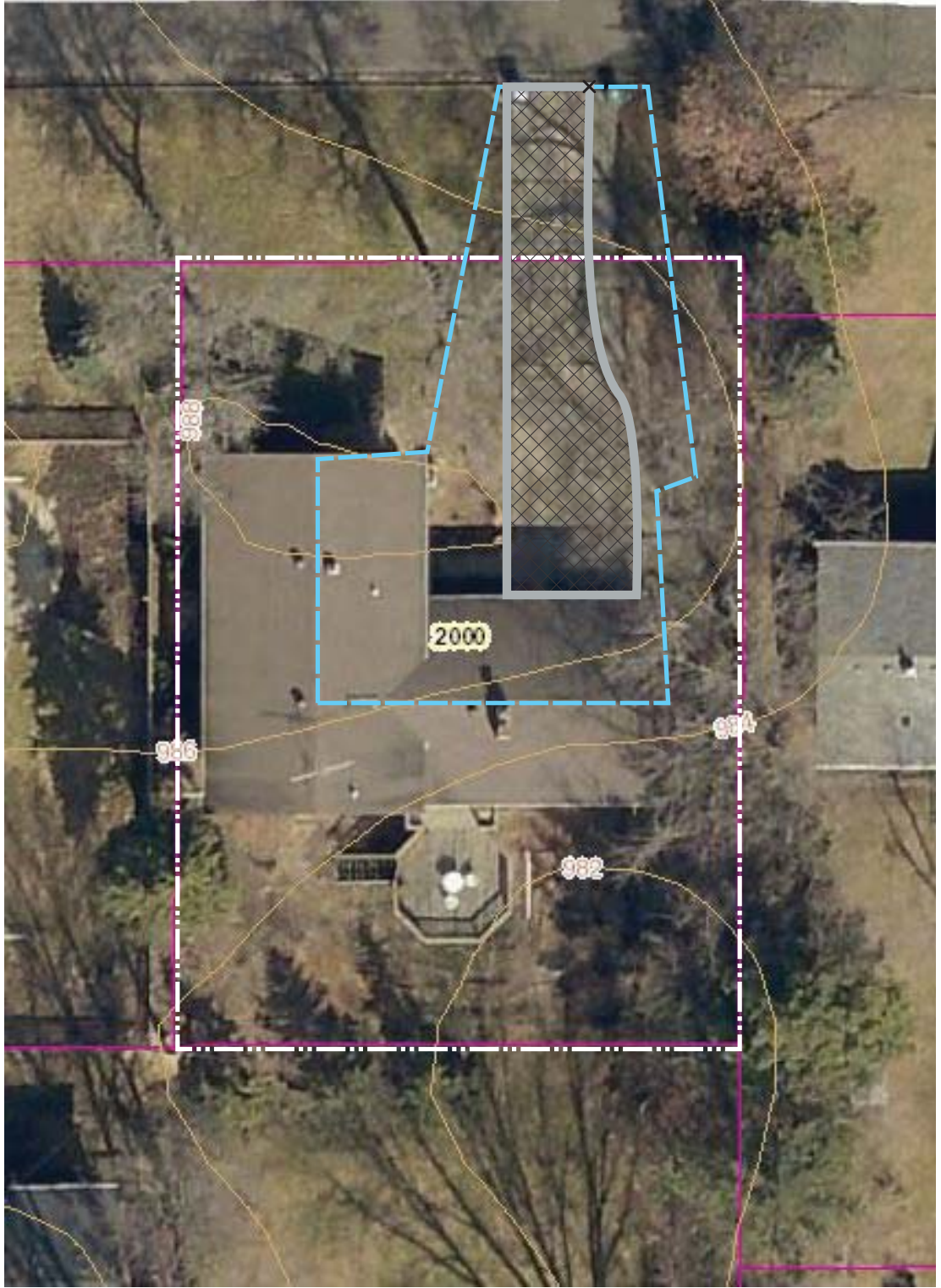


2011 Aerial

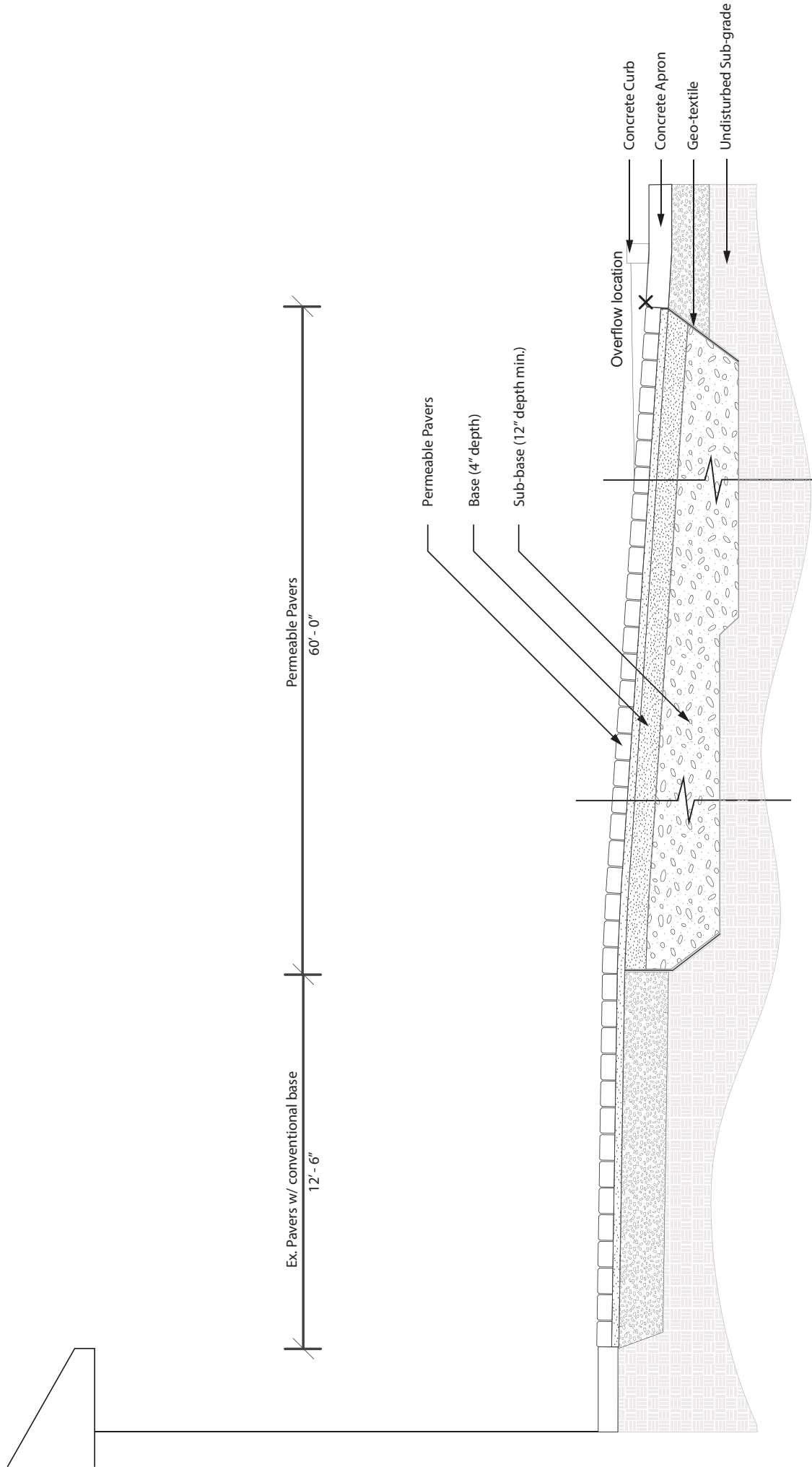
Area Calculations

- Catchment Area = 3,204 sq ft
- Roof Area = 954 sq ft
- Sidewalk Area = 30 sq ft
- Grass Area = 1193 sq ft
- Proposed Permeable Driveway = 1027 sq ft

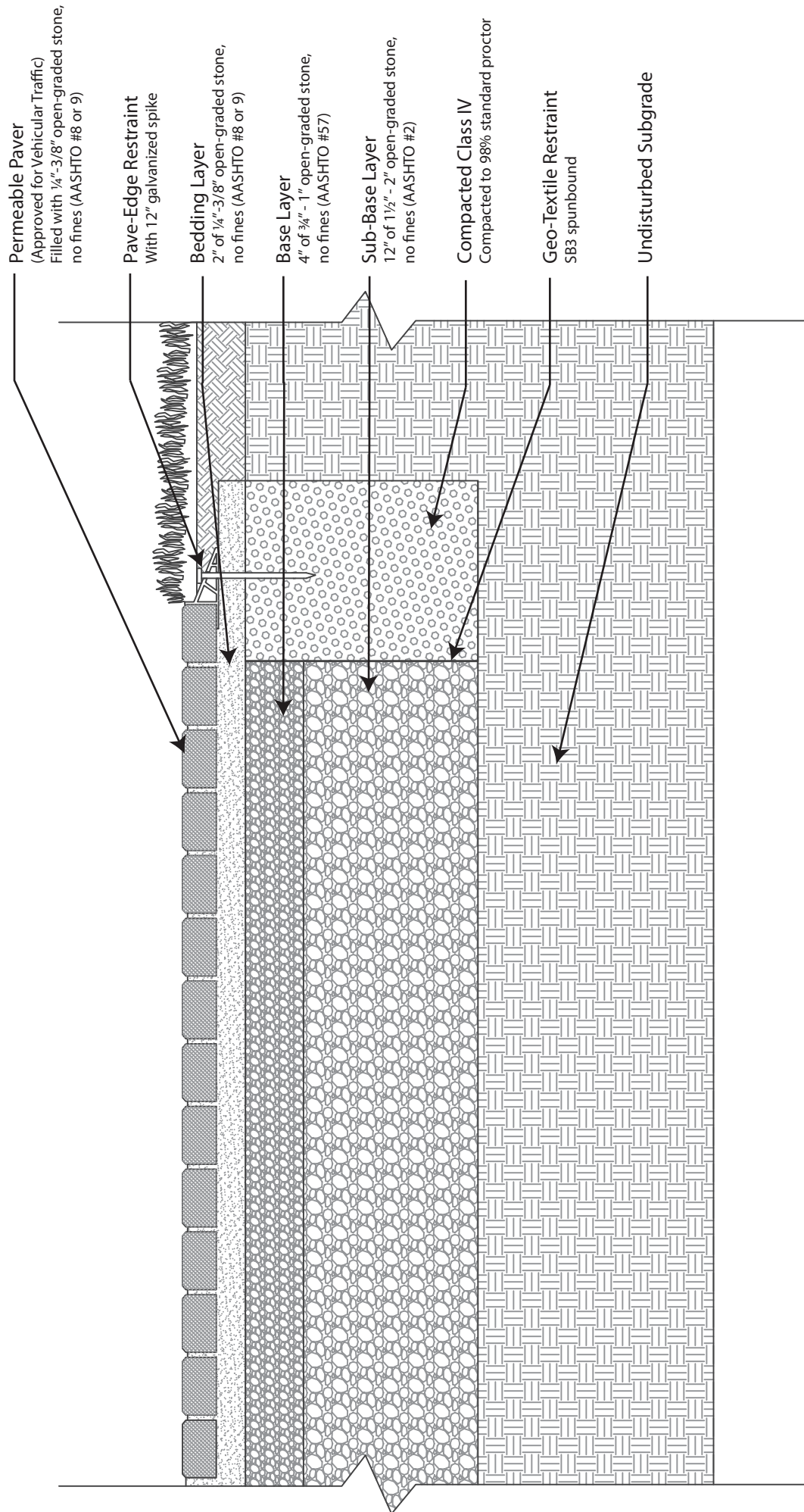
- Legend
-  Catchment Boundary
 -  Proposed Permeable Driveway
 -  Property Boundary
 -  Overflow location



1 Catchment Map
2000 Skillman Ave W, Roseville - No Scale



1 Permeable Driveway - Longitudinal Section
 2000 Skillman Ave W, Roseville - No Scale



Permeable Driveway - Cross Section TYP.

2000 Skillman Ave W, Roseville - No Scale

1501 Brooks Ave E.
 Maplewood, MN 55109
 Phone # 6512695238
 nelcolandscaping.com

| Date | Estimate # |
|----------|------------|
| 4/6/2016 | 643 |

| Name / Address |
|--------------------------------------------------------------------------------|
| Christine & Emmanuel Detournay 2000 Skillman Ave. W. Roseville, MN 55113 |

| Project |
|---------|
| |

| | Service/Materi... | Description | Qty | Total |
|--------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------|------|----------------|
| Driveway Reconstruction: | Concrete Removal | Removal of the rest of the existing driveway 1050 sf total | 17.5 | 1,050.00 |
| | Soil removal | Excavate for proposed paver drive 840sf 21" depth (3.125" pavers + 2" bedding layer + 4" subbase layer + 12" base layer) | 70 | 3,500.00 |
| | Triax Geogrid TX140 | 13.1' x 246' | 0.5 | 1,104.50 |
| | 8 oz Non-Woven B... | 8 oz fabric surrounding excavated area on sides of drainage material | 0.5 | 349.20 |
| | 1.5" St. Cloud Grani... | 12" of base layer | 40 | 4,995.00 |
| | 3/4" St. Cloud Grani... | 4" subbase layer | 13.5 | 1,517.07 |
| | 3/8" St. Cloud Grani... | 2" bedding and joint layer | 8.5 | 1,061.44 |
| | Eco Dublin | Pavers 720sf w/ 5% for cuts | 756 | 8,419.95 |
| | PermEdge | Edging surrounding drive | 16 | 640.00 |
| | Delivery | Paver delivery Sales Tax | 1 | 200.00 0.00 |

NO LIABILITY OR WARRENTIES ON ANY MATERIALS OR LABOR UNLESS OTHERWISE NOTED

Payments will be made to the order of Nelco Landscaping, unless otherwise instructed.

TERMS AND CONDITIONS:

See Terms and Conditions. Any modifications must be in writing signed by Nelco Landscaping and the owner(s) of the property that this Estimate pertains to.

| | | | | |
|------------|--|--|--------------|-------------|
| | | | Total | \$22,837.16 |
| Signature: | | | Date: | |



Clean Water Grant Program Project Screening Form

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Project / Landowner Name: Emmanuel Detournay | Affected Water Body: Little Lake Johanna |
| Project Address: 2000 Skillman Avenue W | City: Roseville |
| County: <input type="checkbox"/> ANOKA <input checked="" type="checkbox"/> RAMSEY <input type="checkbox"/> HENNEPIN <input type="checkbox"/> WASHINGTON | Project Type(s): Permeable Driveway |
| Application Date: 05/11/2016 | Project Effective Life: 20-25 years |
| Violation or Permit Requirement: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | Reviewer: Michael Schumann |

Projects are screened for potential grant eligibility based on the following criteria. (0 = low, 10 = high)

1. Connectivity to Water Body

a. Is the project tributary to a PCA-listed impaired water (not mercury) or a RCWD Tier I or Tier II waterbody?

(NO) 0 1 2 3 4 5 6 7 8 9 10 (YES, direct connection)

b. If NO, is the project tributary to a lake, stream, ditch, or DNR-Protected Water Wetland (PWW)?

(NO) 0 1 2 3 4 5 6 (YES, direct connection)

2. Contributing Watershed Characteristics: Surface type draining to the project.

0% impervious 0 1 2 3 4 5 6 7 8 9 10 100% impervious

Comments: _____

3. Volume Reduction: Implements controls to reduce and/or minimize the rate and volume of water that drains off the property.

No Infiltration/Filtration 0 1 2 3 4 5 6 7 8 9 10 Infiltration

Comments: Captures and Infiltrates 231 cu-ft / 2.0" storm event

4. Erosion and Sediment Control: Implements controls that minimize erosion and/or sedimentation and pollutants to downstream waters.

No erosion 0 1 2 3 4 5 6 7 8 9 10 Visible Erosion Sediment Capture

Comments: Captures 99% of sediment and pollutants from contributing drainage area.

5. Wildlife Habitat Improvement: Creates or improves wildlife and or pollinator habitat through native plantings or other restoration efforts.

Not connected to wildlife corridor 0 1 2 3 4 5 6 7 8 9 10 Connected to wildlife corridor

Comments: _____

6. Public Outreach: Willingness of applicant to allow signage, tours and site visits. Publically visible site. Diversity of practices.

Low public visibility 0 1 2 3 4 5 6 7 8 9 10 High public visibility

Comments: _____

Total Score: 32
Minimum Eligibility = 30

ITEMS REQUIRING BOARD ACTION

2. Consider check register dated June 8, 2016, in the amount of \$451,287.89 prepared by Redpath and Company.

Rice Creek Watershed District
Check Register
May 26, 2016 - June 8, 2016
To Be Approved at the June 8, 2016 Board Meeting

| Check # | Date | Payee | Description | Amount | |
|----------------|-------------|---------------------------------|-----------------------------|---------------------|-----------------------|
| 20950 | 05/25/16 | Assurant Employee Benefits | Employee Benefits | \$668.78 | Issued 5/25/16 |
| 20951 | 05/25/16 | HAB Aquatic Solutions, LLC | Contracted Services-Pay #2 | 417,393.56 | Issued 5/25/16 |
| 20952 | 05/25/16 | Integra Telecom, Inc. (reissue) | Professional Services | 80.35 | Issued 5/25/16 |
| 20953 | 05/25/16 | Integra Telecom, Inc. (reissue) | Telecommunications | 816.25 | Issued 5/25/16 |
| 20954 | 06/08/16 | Comcast | Telecommunications | 138.77 | |
| Dir.Dep. | 06/15/16 | June 15th Direct Deposits | June 15th Direct Deposits | 19,522.96 | |
| EFT | 06/15/16 | Internal Revenue Service | 06/15 Federal Withholding | 6,793.83 | |
| EFT | 06/15/16 | Minnesota Revenue | 06/15 State Withholding | 1,110.07 | |
| EFT | 06/15/16 | ING Retirement Services | 06/15 Deferred Compensation | 835.00 | |
| EFT | 06/15/16 | PERA | 06/15 PERA | 3,928.32 | |
| Total | | | | \$451,287.89 | |

ITEMS FOR DISCUSSION AND INFORMATION

1. District Engineers Update and Timeline



Date Prepared: 2-Jun-16
Prepared by: G. Monson & C. Otterness

District Engineer - Monthly Project Report May 2016 Rice Creek Watershed District



| Project Name | Estimated Budget | Cost to Date | Remaining Budget | Project Complete / Transfer Funds? | Estimated Progress Based on Work Completed | Estimated Progress Based Upon Percent Budget Expended | Within Budget? (Y/N) | District Billed for Change in Services? (Y/N) | Initial Target Completion Date | Revised Target Completion Date | Items of Interest / Concern |
|-----------------------------------------------------|------------------|--------------|------------------|------------------------------------|--------------------------------------------|-------------------------------------------------------|----------------------|-----------------------------------------------|--------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Browns Preserve Restoration | \$115,000 | \$50,151 | \$64,850 | N | 50.0% | 43.6% | Y | N/A | 31-Dec-15 | N/A | A controlled burn was completed in early May. |
| Hansen Park Phase 2 - Regulatory | \$52,000 | \$55,029 | (\$3,029) | N | 95.0% | 105.8% | N | N | 31-Jan-16 | 3/15/2016 | We have addressed comments from the COE and will soon be submitting final plans to the DNR. |
| RCD 4 Historical Review Memorandum | \$29,100 | \$13,639 | \$15,461 | N | 50.0% | 46.9% | Y | N/A | 0-Jan-00 | N/A | We are continuing to develop the historical review memorandum and determine the as-constructed and subsequently improved condition of the public drainage system. |
| 2014-2015 Annual CWPMP Report | \$23,700 | \$20,128 | \$3,572 | N | 95.0% | 84.9% | Y | N/A | 31-Dec-15 | 4/1/2016 | We have completed the report and submitted it to the District staff for review. |
| RCD 2.3.5 Drainage Proceedings | \$17,600 | \$5,267 | \$12,333 | N | 30.0% | 29.9% | Y | N/A | 31-Dec-16 | N/A | Modification of the RCD 2 impoundment was ordered by the Board of Managers on April 27. The next steps for this task order include updating the historical review memorandum and completing a public hearing for correction of the public drainage system record. |
| ACD 53-62 Branch 2 Repair Memo | \$36,400 | \$17,140 | \$19,260 | N | 45.0% | 47.1% | Y | N/A | 31-Dec-16 | N/A | We are continuing analysis of the repair profile. A draft repair report is being prepared. A wetland delineation was completed and wetland impacts are being assessed. |
| Analyzing Wetland Mitigation / Wetland Bank Options | \$24,000 | \$21,347 | \$2,653 | N | 90.0% | 88.9% | Y | N/A | 1-Apr-16 | N/A | A draft memorandum has been completed and is currently being reviewed by District staff |
| JD 2 Branch 1 Repair Memo | \$26,500 | \$4,631 | \$21,869 | N | 20.0% | 17.5% | Y | N/A | 30-Jun-16 | N/A | We have completed a field survey and will begin preparing plan sheets containing the existing and ACSIC profiles. |
| Stormwater Reuse Study | \$63,800 | \$23,831 | \$39,969 | N | 35.0% | 37.4% | Y | N/A | 15-Nov-16 | N/A | We have finalized a memorandum describing criteria for identifying locations for water reuse projects. |
| Halls Marsh Feasibility | \$9,500 | \$8,893 | \$607 | Y | 100.0% | 93.6% | Y | N/A | 28-Feb-16 | N/A | A meeting was held with the landowner and City of Mahtomedi staff. HEI is coordinating continued investigation of site conditions with the City. |
| District-Wide Model Annual Maintenance | \$10,000 | \$2,507 | \$7,493 | N | 25.0% | 25.1% | Y | N/A | 31-Dec-16 | N/A | We are continuing with updates to various models and data products. |
| Bald Eagle Lake Water Management District Charge | \$3,500 | \$522 | \$2,978 | N | 15.0% | 14.9% | Y | N/A | 31-Dec-15 | N/A | HEI will prepare a charge certification memorandum in August. |
| ARJD 1 Branch 4 Repair | \$15,100 | \$6,381 | \$8,719 | N | 40.0% | 42.3% | Y | N/A | 1-Oct-16 | N/A | A permit from Anoka County has been acquired for completion of the proposed outlet construction. A quote package has been prepared and is currently being reviewed by District staff. |



**District Engineer - Monthly Project Report May 2016
Rice Creek Watershed District**



Date Prepared: 2-Jun-16
Prepared by: G. Monson & C. Otterness

| Project Name | Estimated Budget | Cost to Date | Remaining Budget | Project Complete / Transfer Funds? | Estimated Progress Based on Work Completed | Estimated Progress Based Upon Percent Budget Expended | Within Budget? (Y/N) | District Billed for Change in Services? (Y/N) | Initial Target Completion Date | Revised Target Completion Date | Items of Interest / Concern |
|--------------------------------------------------------------|------------------|--------------|------------------|------------------------------------|--------------------------------------------|-------------------------------------------------------|----------------------|-----------------------------------------------|--------------------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACD 31 and 46 Repair Plans and Const. Obs | \$220,000 | \$63,984 | \$156,016 | N | 25.0% | 29.1% | Y | N/A | 31-Dec-17 | N/A | Construction plans and specifications for the repair of the drainage systems are nearly complete. A public information meeting regarding the area proposed for construction will be held on June 6. Permitting for wetland impacts is in progress. |
| ARJD 1 Branch 5 Repair | \$14,700 | \$6,420 | \$8,280 | N | 40.0% | 43.7% | Y | N/A | 1-Oct-16 | Y | We are continuing to prepare a project quote package. |
| Minor Amendment to WMP | \$23,700 | \$3,835 | \$19,865 | N | 10.0% | 16.2% | Y | N/A | 1-Jul-16 | Y | We are beginning to prepare revised draft modifications to the plan text. |
| Hansen Park Project - Phase 4 Final Design | \$71,100 | \$55,860 | \$15,240 | N | 80.0% | 78.6% | Y | N/A | 1-Aug-16 | Y | Draft final plans and specifications have been completed and reviewed by District staff. |
| Peltier Lake Drawdown Public Outreach and Regulatory | \$21,000 | \$5,241 | \$15,759 | N | 25.0% | 25.0% | Y | N/A | 0-Jan-00 | Y | HEI is continuing coordination with the DNR and St. Paul Regional Water Services. Next steps include initiating a public outreach meeting and preparing a DNR permit. |
| Certification of ACD 31 & 46 WMD Charges | \$8,700 | \$1,655 | \$7,045 | N | 20.0% | 19.0% | Y | N/A | 31-Dec-16 | Y | The appeal to the ACD 46 WMD charge has been resolved. Next steps include updating the charge tables with parcel modifications and certifying the charge to Anoka County in September. |
| Permit Viewer / Permit Database Maintenance | \$5,500 | \$128 | \$5,372 | N | 2.0% | 2.3% | Y | N/A | 31-Dec-16 | Y | The Permit Viewer application and Database are updated periodically as GIS layers are updated or added. |
| Drainage System Viewer and Portal Operations and Maintenance | \$5,000 | \$345 | \$4,655 | N | 7.0% | 6.9% | Y | N/A | 31-Dec-16 | Y | The document listing is updated quarterly, and drainage system layers updated as new data is developed. |
| Hydro Viewer Maintenance | \$5,000 | \$239 | \$4,761 | N | 5.0% | 4.8% | Y | N/A | 31-Dec-16 | Y | We continue to update the web viewer throughout the year as modeling and GIS data is updated. |

Values in red are either potential budget concerns or changes in schedule.

The "overage" for those projects shown as "over budget" is not billed to the District. The cost to date column reflects HEI's actual internal cost. Projects are considered within budget if \pm 10%.



District Engineer
 Monthly Progress Report (Actual & Estimated Progress)
 Through May 2016

