

**Minnehaha Creek Watershed District**

**REQUEST FOR BOARD ACTION**

**MEETING DATE:** April 28, 2016

**ITEM TYPE:** Action Consent Discussion

**TITLE:** Authorization of Cost Share Funding – 2016 Spring Non-Homeowner Projects

**RESOLUTION NUMBER:** 16-042

**PREPARED BY:** Brett Eidem

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**TELEPHONE:** (952) 641-4523

**REVIEWED BY:**  Administrator  Counsel  Program Mgr: Telly Mamayek  
 Board Committee  Engineer  Other

**WORKSHOP ACTION:**

<input type="checkbox"/> Advance to Board mtg. Consent Agenda	<input type="checkbox"/> Advance to Board mtg. Consent Agenda with changes
<input type="checkbox"/> Advance to Board mtg. for more discussion	<input type="checkbox"/> Refer to a future workshop (date): _____
<input type="checkbox"/> Return to staff for additional work	<input type="checkbox"/> Refer to taskforce or committee (date): _____
<input type="checkbox"/> No further action requested.	<input type="checkbox"/> Advance to CAC mtg. for recommendation

**PURPOSE or ACTION REQUESTED:**

- 1) At the conclusion of a required public hearing and in consideration of any comments received, order cost-share project funding for projects in Edina and Plymouth;
- 2) Authorize funding of 50 percent of the documented costs of each of the seven projects listed in the attached document, not to exceed \$120,407, contingent on a signed grant and maintenance agreement that includes a project design plan that is mutually agreed upon by the grant recipients and District staff and signage requirements.
- 3) Authorize the Administrator to execute and sign a Cost Share funding and maintenance agreement with each of the property owners listed in the attached document.

**PROJECT/PROGRAM LOCATION:**

District Wide

**PROJECT TIMELINE:**

Summer/Fall 2016

**PROJECT/PROGRAM COST:**

Fund name and number:	Cost Share Grant Program (4005)
Current grant budget:	\$600,000
Amount approved in 2016 to date:	\$7,208.65
Requested amount of funding:	50 percent of the documented costs of each of the seven projects listed in the attached document, not to exceed a total of \$120,407.

**SUMMARY:**

The new cost share grant application schedule the Board approved in January provides a spring and a fall deadline for non-homeowner projects and a June deadline for homeowner projects. This allows us to compare like-projects to each other, and prioritize funding on the projects that have the greatest value. By the spring non-homeowner deadline on March 18, 2016, staff received 8 cost share applications. The 3 cities, 3 churches, one school and one non-profit organization that applied requested a total of \$750,000 in funding.

The eight applications underwent a thorough review process before advancing to the CAC. They were reviewed by cost share staff, an inter-departmental team including planning, project and land management, permitting and education staff, the District engineer and a CAC subcommittee. Following that review one of the applicants (City of Mound) agreed to defer its project until the fall funding round, so it can further develop its proposal. On April 13, 2016, the CAC recommended funding for six of the projects as presented, and changed the recommendation on 1 church project.

In the attached memo, you will find a summary of each of the proposals and their respective funding recommendations. An evaluation scoresheet and plan for each project are also attached. Staff has not recommended more than 50% funding for any of the projects under consideration. This is due to two factors: 1) None of the projects reached the 90/100 point threshold on our evaluation scoresheet, which would have been a historical staff recommendation for 75% funding 2) The review process identified the most cost effective BMPs within larger projects, and scaled down the recommendation to fund the BMPs that can be installed now and make the biggest impact. This reserves funding for the second round of non-homeowner projects in the fall, and allows the potential for future phasing of more BMPs.

Two projects were applied for by cities within the watershed. In accordance with state law and adopted Board policy (Resolution 13-023), a public hearing is required for certain cost share projects involving capital construction. The Edina and Plymouth projects described in the memo involve the construction elements of a project that require each municipality to undertake long term maintenance responsibilities, which triggers the public hearing requirement. Prior to the consideration of funding these two projects (along with the other five), there will be a public hearing and presentation for the two city projects, per the Board adopted public hearing procedure.

**EDUCATION VALUE:**

Staff sees the installation of stormwater best management practices as a powerful avenue to provide citizen engagement and advocacy opportunities where cities and/or its citizens become participants in and advocates for stormwater management and clean water. Staff also sees them as a way to educate the public on actions that can be taken on an individual citizen scale to improve stormwater management, enhance natural resources and green infrastructure, expand the knowledge base of water resources management, and provide educational opportunities through demonstrative projects within the watershed. Through partnering on these projects, we are gaining stormwater management and investment from private property owners on land that we otherwise would not be able to implement projects on alone.

The following is a summary of each project's education and outreach plans.

**City of Edina:**

- Information will be given to residents in the neighborhood on the project
- Master Water Stewards will engage community members through targeted outreach
- Residents will be empowered to keep their own runoff on their property and infiltrate it through
- Tree trench BMPs will be a visible demonstration of stormwater management
- Educational signage will explain what it is and how it is helping the neighborhood

#### City of Plymouth:

- Right of way raingardens will be very visible to those in the neighborhood
- Educational signage off bike path next to raingarden
- Education materials distributed to neighborhood
- West Metro Water Alliance (WMWA) newsletter article

#### Annunciation Church:

- Church has K-8 school attached, and is already involved in outdoor classroom activities
- Will develop water related curriculum and use these BMPs as demonstration/example
- An eagle scout is organizing volunteers to construct with Metro Blooms oversight
- Proposed educational signage, and messaging through social media, church and school channels
- Annual Sept. event where messaging can be organized and delivered, explaining project to community
- Organizer of application is a block leader for an alleyway project in Diamond Lake

#### Bethel Evangelical Lutheran Church:

- Already have a large community garden and is the meeting site for Bancroft Neighborhood Association that so those that use the site will be further engaged about stormwater now, through tours and signage
- This site is about ten blocks from Lake Hiawatha and golf course, and could be tied to future raingarden tours organized by Master Water Stewards, as we have a number of raingardens in this neighborhood, this project being the largest and most cost effective example

#### Field Community School:

- School has developed curriculum to educate students within the school on stormwater runoff (funded by a Cynthia Krieg grant)
- Raingardens will be a visible demonstration of stormwater management between the front entrance the school, the playground and parking lot
- Educational signage will explain raingardens and their benefits
- Strong partnership with other schools and neighborhood groups that share ballfields and facilities
- Many letters of support from the school community and its partners who want to promote this behavior change in the neighborhood and city

#### Metro Blooms:

- Heavy community engagement with neighborhood meetings, block meetings, block leaders engaging neighbors with help of Metro Blooms for education and design
- The behavior change being created by homeowners willing to contribute \$500-\$5,000 for stormwater retrofits to create a green corridor in their alley
- Alleys are all within a few blocks of either Minnehaha Creek or Diamond Lake, and they complement the Nokomis alleyways project and blooming alleys in general, providing additional promotion opportunities

#### Third Church of Christ the Scientist:

- Church is already in partnership with nearby schools on classroom curriculum related to the project, including monitoring wells in the raingardens for students to track capture and infiltration
- Highly visible location 5 blocks from Lake Harriet. Signage, tours will be given to help educate the public
- A case study will be developed by Earth Wizards for educational materials for the church to hand out
- Networking with affiliate 1st church of Christ (Boston) where they will try to get stormwater management attention

For all projects, permanent educational signage would be installed near the project sites on the grantee's property indicating the contribution of funds from the District and also directing people to the MCWD website.

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Resolutions are not final until approved by the Board and signed by the Board Secretary.**

Cost Share Staff, in coordination with the Education and Communications departments, will utilize the projects in outreach to highlight the Cost Share program and the work it's helping fund in the community.

**WATER QUALITY IMPROVEMENT:**

Staff has analyzed all of the proposed projects to identify the water quality improvement of each of these projects. These numbers were discussed with staff, the District Engineer, and CAC.

The following table shows the pollutant reductions we can see from each of the projects:

Project	Vol. Reduction (cf)	TSS Reduction (lbs)	Total P Reduction (lbs)	Project Cost	Funding Recommendation
City of Edina	X	X	X	\$113,000	\$10,000.00
City of Plymouth	13,969	152	0.74	\$25,500	\$12,750.00
Annunciation Church	35,000	545	0.6	\$25,426	\$12,713.00
Bethel Evangelical Church	164,000	836	2	\$100,000	\$26,760.00
Field Community School	1,700	100	0.5	\$27,700	\$13,850.00
MB- Diamond Lake -Lynnhurst Alleyv	77,000	400	1.6	\$101,000	\$10,000.00
3rd Church of Christ	90,000	454	1.5	\$322,000	\$34,334.00

**Totals:** 381,669 2487 6.94 \$714,626 **\$120,407.00**

Total number of projects approved: 7  
 Total number of BMPs installed: up to 46  
 Total cost for construction of these BMPs: \$714,626  
 Total MCWD cost share funding contribution: \$120,407  
 Annual Volume reduction: 381,669 cf  
 Annual Total Suspended Solids reduction: 2,487 lbs.  
 Annual Phosphorus reduction: 6.94 Lbs.

\* This water quality of the City of Edina’s project is not quantifiable due to the fact the subwatershed drains to a landlocked wetland.

**STAFF RECOMMENDATION**

The individual applicants listed in the attached document have applied for funding of 50 percent of the eligible costs for their projects from the Cost Share grant fund, contingent on a signed grant and maintenance agreement that includes a landscape design plan that is mutually agreed upon by the Cost Share recipients and District staff and provision for signage.

Staff recommends funding the projects listed in the attached document at the above amount.

**ATTACHMENTS:**

1. Authorization of Cost Share Funding – 2016 Spring Non-Homeowner Projects
2. Cost Share 2016 Spring Non-Homeowner Project Plans and Evaluation Scoresheets

## RESOLUTION

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**RESOLUTION NUMBER:**    16-042

**TITLE:**    **Authorization of Cost Share Funding – 2016 Spring Non-Homeowner Projects**

WHEREAS, the Cost Share Program was established by the MCWD to provide funding to property owners to design and install best management practices that will provide educational value as well as reduce the volume and increase the quality of stormwater flowing offsite; and

WHEREAS, each of the outlined applicants has submitted proposals for grant funding for the construction of stormwater best management practices,

WHEREAS, the MCWD 2016 budget includes funds for the Cost Share Program which has \$592,791.35 currently available; and

WHEREAS, the above proposals were reviewed by the Citizen Advisory Committee (CAC) on April 13, 2016, and the CAC has recommended approving the proposals and funding in the amount requested; and

WHEREAS, in accordance with Minnesota Statutes section 103B.251 and MCWD Board Resolution 13-023, the District must conduct a public hearing for cost-share projects with construction elements that require a municipality to undertake long term maintenance and the City of Edina and City of Plymouth must undertake long-term maintenance for their respective projects as described in the materials attached to the resolution; and

WHEREAS, in accordance with Minnesota Statutes §103B.251, subdivision 3, the MCWD held a noticed public hearing on approval of funding for the Edina and Plymouth projects on April 28, 2016, at which time all interested parties had the opportunity to speak for and against the Project; and

WHEREAS, no comments from the public were offered;

WHEREAS, the Board of Managers finds that the Project will be conducive to public health and promote the general welfare, and is in compliance with Minnesota Statutes §§103B.205 to 103B.255 and the MCWD's Comprehensive Water Resources Management Plan adopted pursuant to §103B.231;

WHEREAS, a summary of approved 2016 Spring Non-Homeowner Cost Share projects and funding amounts was included in the April 28<sup>th</sup>, 2016 Board of Managers meeting packet information; and

WHEREAS, MCWD staff has reviewed the proposals and the CAC's comments and recommendations, and finds the proposals to be consistent with the goals of the Cost Share Program and recommends funding of 50 percent of the documented costs of each of the seven projects listed in the attached document, not to exceed \$120,407, contingent on a signed grant and maintenance agreement that includes a project design plan that is mutually agreed upon by the grant recipients and District staff and signage requirements, and

NOW, THEREFORE, BE IT RESOLVED that the Minnehaha Creek Watershed District Board of Managers that pursuant to Minnesota Statutes section 103B.251 and the MCWD plan, the MCWD Board of Managers orders the Edina cost-share project with a total estimated cost-share contribution from MCWD of \$10,000 and the Plymouth cost-share project with a total estimated cost-share contribution from the MCWD of \$12,750, and;

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NOW, THEREFORE, BE IT FURTHER RESOLVED, that the MCWD Board of Managers authorizes funding of 50 percent of the documented costs of each of the seven projects as follows:

City of Edina	\$10,000
City of Plymouth	\$12,750
Annunciation Church	\$12,713
Bethel Evangelical Church	\$26,760
Field Community School	\$13,850
Metro Blooms-Diamond Lake-Lynnhurst Alleyway	\$10,000
Third Church of Christ	\$34,334

contingent on a signed grant and maintenance agreement that includes a final project design plan that is mutually agreed upon by the grant recipients and District staff and signage requirements; and

BE IT FINALLY RESOLVED, that the MCWD Board of Managers authorizes the Administrator, with advice and consent of counsel, to sign Cost Share funding and maintenance agreement with each of the property owners as designated herein.

Resolution Number 16-042 was moved by Manager \_\_\_\_\_, seconded by Manager \_\_\_\_\_.  
Motion to adopt the resolution \_\_\_ ayes, \_\_\_ nays, \_\_\_ abstentions. Date: \_\_\_\_\_.

\_\_\_\_\_  
Secretary Date: \_\_\_\_\_



**MEMORANDUM**

DATE: April 25<sup>th</sup>, 2016

TO: MCWD Board of Managers

FROM: Brett Eidem, MCWD Cost Share Grant Administrator

RE: Authorization of Cost Share Funding – 2016 Spring Non-Homeowner Projects

*The MCWD administers a Cost Share program to provide incentive for interested parties to construct projects that will improve water quality. Part of the process in approving projects to receive funding is to have the applications reviewed by the Citizens Advisory Committee (CAC).*

**BUDGET UPDATE**

<b>Cost Share 2016 Budget:</b>	<b>\$600,000</b>
<b>Amount Approved to date in 2016:</b>	<b>\$7,208.65</b>
<b>April Cost Share Requested Amount:</b>	<b>\$120,407</b>

**COST SHARE APPLICATIONS**

The new cost share grant application schedule the Board approved in January provides a spring and a fall deadline for non-homeowner projects and a June deadline for homeowner projects. This allows us to compare like-projects to each other, and prioritize funding on the projects that have the greatest value. We ended up with 8 cost share applications: 3 cities, 3 churches, one school, and one non-profit organization. The total funding request was over \$750,000! The newly adopted program schedule includes a thorough review process this year, that included a cost share staff evaluation of each project, an assembled staff team review and funding recommendations (made of planning, project and land management, permitting and education staff), a District engineer review and recommendations, and a CAC Cost Share subcommittee discussion of the projects, where we made some slight adjustments to the staff recommendations. The CAC reviewed and recommended funding 6 projects as was recommended by others, and changed the recommendation on 1 church project.

In this memo, you will find a summary of each of the proposals received to be considered for Board funding approval, and the current funding recommendation. You will also find attached the packet materials with each project evaluation scoresheet and the main project plans. Staff has not recommended more than 50% funding for any of the projects under consideration. This is due to two factors: 1) None of the projects reached the 90/100 point threshold on our evaluation scoresheet, which would have been a historical staff recommendation for 75% funding 2) The review process identified the most cost effective BMPs within larger projects, and scaled down the recommendation to fund the

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BMPs that can be installed now and make the biggest impact. This reserves funding for the second round of non-homeowner projects in the fall, and allows the potential for future phasing of more BMPs.

**Project #1- City of Edina- Street Reconstruction, Edina**

The City of Edina has applied for funding assistance to implement stormwater BMPs along various streets with their Morningside and White Oaks neighborhood street reconstruction. These BMPs would alleviate flooding to the land locked wetland that the street runoff drains to. This drainage does not directly drain to any other downstream waterbodies (though there may be a groundwater connection to the creek), so the water quality improvement is not consistent with the BMPs the District helped fund with the Arden Park neighborhood street reconstruction. So through staff and District engineer review, this project has mostly demonstrative qualities but not a major benefit to the overall watershed. Because the project has demonstration value and the proposed outreach to residents through Master Water Stewards (an initiative that has already been implemented and we have seen success from in Arden Park), staff concludes that there is District value to providing funding to this project.

The total cost for the construction of tree trenches and other BMPs within the Morningside and White Oaks neighborhood street reconstruction is \$113,000. CAC endorses staff and CAC subcommittee funding recommendation of 50% funding, not to exceed \$10,000.

**Project #2- City of Plymouth- Street Reconstruction, Plymouth**

The City is looking to install 2 rain gardens in a street reconstruction project area to help improve the water quality in this neighborhood. The street runoff drains to a wetland, which discharges to the south and the water ultimately drains to Gleason Lake, which is impaired for excessive nutrients. This project will help to reduce the amount of nutrients getting into the drainage system and ultimately Gleason Lake. The city has identified two locations that have an opportunity to capture a lot of polluted street runoff just before the storm drains, and are also in highly visible areas such as right off a bike path, where they have proposed educational signage. There will also be resident education for the homeowners on the street that the raingardens will be installed. The city is proposing to enhance these raingardens with iron filing sand filters, to further absorb and eliminate more phosphorus than an average raingarden. Although these raingardens are designed to be deeper than your average residential raingarden, they are still only capturing a small amount of the entire drainage area. But unlike Edina’s project, this runoff does eventually get to Gleason Lake, which is impaired for nutrients. We also haven’t cost share funded on a project in Plymouth for a while, and staff finds this to be a cost effective project for pollutant reduction and education within the community.

The total project cost for construction of the two raingardens is \$25,500. CAC endorses staff and CAC subcommittee 50% funding recommendation, not to exceed \$12,750.

**Project #3- Annunciation Church and School- 509 W 54<sup>th</sup> St, Minneapolis**

Annunciation Church and School has proposed a stormwater management plan for the entrance of their church. They are in the process of working on an entire site retrofit design, but are currently focused on this opportunity. They have a group of committed Eagle Scouts that are willing to assist in the labor of excavating the raingardens, and the church school has a strong education curriculum proposed to connect the students to the project. They are proposing to capture runoff from the roof of the church,

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as well as install channel drains to divert the drop off drive into raingardens as well, capturing nearly all of the impervious runoff from this portion of the property. In total, there will be 5 raingardens and three channel drains, all in the front entrance of the church. With Metro Blooms design and oversight (channel drains will be professionally installed), and the volunteer labor, staff and the subcommittee came to the decision that this is a cost effective project in a highly visible area just blocks south of Minnehaha Creek.

The total project cost for construction of the raingardens and channel drains is \$25,426. CAC endorses staff and CAC subcommittee 50% funding recommendation, not to exceed \$12,713.

**Project #4- Bethel Evangelical Lutheran Church, 4120 17<sup>th</sup> Ave S, Minneapolis**

Bethel Evangelical Lutheran Church has developed an entire site design for stormwater management, to both reduce their monthly stormwater utility fee and to provide space and a model for the communities they serve and that use their facility weekly. They also have a mission to be stewards to the community and natural resources, as they are within a few blocks of Lake Hiawatha and Minnehaha Creek, providing an example for the community fit in well. Bethel is the site for the Bancroft Neighborhood Association and would partner with the neighborhood group to share best practices in stormwater management and other environmental stewardship strategies (e.g., solar garden) with thousands of surrounding neighbors. As well as their relationships with other church congregations and schools in the neighborhood. One long-term land stewardship partnership with the neighborhood is the community garden on Bethel's site, the constituent group of community gardeners will be natural partners for us in our outreach efforts related to this project. Based on the budget, and a detailed review of the church retrofit design, staff has identified the most cost effective stormwater BMPs, being a channel drain with pretreatment and a large raingarden. This is nearly half of the site's drainage, and the most polluted of the site, that can all be captured in one place. Staff and the subcommittee see this as the best opportunity, and would propose funding this BMP only, waiting on the rest of the project for future phasing. The reasoning for this is partially to be budget conscious, but also uncertainties with the details of those other garden designs, as well as the unknown of if the church can upkeep the maintenance of an entire site retrofit.

The total cost of the channel drain, pretreatment fore bay, and the raingarden is \$53,521. CAC endorses staff and CAC subcommittee 50% funding recommendation, not to exceed \$26,760.

**Project #5- Field Community School, 4645 S 4th Ave, Minneapolis**

Field Community School is just east of 35W and a few blocks N of Minnehaha Creek. They heard about the District and became more educated on water quality issues from visiting and learning about the Parkway Place Townhomes project that was installed last year. They have a very robust education and outreach program tied to the construction of these proposed raingardens, and have already been approved for Cynthia Krieg grant funding to implement. The Field School is a middle school, but they share their facilities, such as gym and ballfield with Hale elementary school and various neighborhood groups. They are proposing to install 4 raingardens near the parking lot and front entrance of the school, capturing nearly 100% impervious runoff. They have also proposed 2 pollinator gardens on the backside

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of the building, but because these facilities are not designed to capture any more runoff than flows to the area under existing conditions, we are not considering funding those. The project is very cost effective in a highly developed area, and with its visibility and strong education and outreach programming, this was one of the strongest applications. We funded 100% of the Cynthia Krieg proposal, which was \$14,350. In the past we have avoided funding more than 75% of the total project costs that request both Cynthia Krieg and Cost Share funding. This is to ensure ownership and investment from the school.

The total project cost for the construction of the four raingardens is \$27,700. CAC endorses staff and CAC subcommittee 50% funding recommendation, not to exceed \$13,850.

**Project #6 Metro Blooms- Diamond Lake and Lynnhurst Alleyways, Minneapolis**

Metro Blooms is proposing to continue alleyway initiatives in a targeted approach. While they are continuing to install stormwater practices along alleys around Lake Nokomis, they started to install with a single alley in Diamond Lake in 2015. They have built awareness and interest in these neighborhoods over time, and are proposing a total of 7 more alley retrofits over the next year in Diamond Lake and Lynnhurst neighborhoods. Over the years, we have seen great value from assisting in the funding of these initiatives. The project includes multiple neighborhood meetings, with residents on the block designated as block captains that help spread interest and organize neighborhood meetings. Metro Blooms works with individual residents to best design their site to reduce their property runoff from getting to the alley, ending up in the storm sewer and into the nearby waterbody, either Diamond Lake or Minnehaha Creek. These practices include redirecting gutters, installing raingardens and permeable paver strips. For this initiative, Metro Blooms has already secured a \$50,000 Hennepin County Green Partners Grant. They have also gotten commitment from the neighborhood to cover a majority of the balance of the project cost. They are asking MCWD to assist with the final \$10,000 needed for the project. This is a great return on investment for both water quality improvement in Minneapolis, as well as reaching a broad audience on a community scale.

The total cost for the 7 alley retrofits is \$101,000. CAC endorses staff and CAC subcommittee 50% funding recommendation, not to exceed \$10,000.

**Project #7 Third Church of Christ the Scientist, 4147 Xerxes Ave S, Minneapolis**

Third Church is working with Earth Wizards, proposing a very unique stormwater retrofit of their site. This project has been broken into 2 phases. The first is focusing on the reconstruction of the parking lot. They are proposing to regrade the parking and retain all runoff from it onsite. In this phase they are also including permeable pavers for the main entrance drop off with educational signage out front. The second phase proposes to have a series of raingardens capture the different roof drainage areas, as well as overflow to each other. There is also a re-use cistern proposed with this phase, capturing further roof runoff. A well thought out education and outreach plan proposes monitoring wells around the site, so nearby school classes can monitor water levels and what a difference the raingardens are making. The church is off Xerxes Ave, just a few blocks west of Lake Harriet, in a fairly visible location. At this point in

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time we are only focusing on and considering cost share funding for phase 1. This includes the parking lot reconstruction that will reduce imperviousness of the property by 17 percent. Under the District Stormwater Management Rule, a project disturbing more than 40 percent of a 1- to 5-acre site that reducing imperviousness of the property by 10 percent or more need not provide stormwater management BMPs.

The total phase 1 project cost is \$259,956. \$191,288 of the project budget is not eligible for funding as it is meeting our rule requirement. The remaining \$68,668 qualifies for cost share funding (remainder of parking lot BMPs above the 10% site impervious reduction). The current funding recommendation is for phase 1 of the project, the parking lot and its associated BMPs only. This does not include the phase 2, building perimeter raingardens and the cistern, which the CAC had seen value in and interest in funding as a future phase. The CAC funding recommendation is 50% of the portion of the large parking lot raingarden going above the 10% site impervious reduction, and the permeable paver section, not to exceed \$34,334.

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Project	Vol. Reduction (cf)	TSS Reduction (lbs)	Total P Reduction (lbs)	CS Eval. Score --/100	Project Cost	Funding Recommendation	Comments
City of Edina	4,500	1270	6.9	70	\$113,000	\$10,000.00	No longer proposing pavers. No outlet for wetland. Pollution reduction is skewed.
City of Mound	X	914	0.64	65	\$60,587	X	No staff funding recommendaiton. Greater opportunity in fall for different project
City of Plymouth	13,969	152	0.74	75	\$25,500	\$12,750.00	Pollutant numbers are not accurate, could be double pollutant removals with iron filings
Annunciation Church	35,000	545	0.6	85	\$25,426	\$12,713.00	50% funding of cost estimate received
Bethel Evangelical Church	164,000	836	2	65	\$100,000	\$26,760.00	Recommending funding only channel drain and raingarden 7, 50%, NTE \$26,760
Field Community School	1,700	100	0.5	85	\$27,700	\$13,850.00	\$27,700 is just RG budget, CynthiaKrieg funding 100% of curriculum. NTE total 75%
MB- Diamond Lake -Lynnhurst Alley	77,000	400	1.6	80	\$101,000	\$10,000.00	\$10k is all they requested funding for
3rd Church of Christ	90,000	454	1.5	80	\$322,000	\$34,334.00	Recommended funding phase 1 parking lot reconstruction (only above SW rule)

**Total Recommended Funding:                   \$120,407.00**

<https://www.google.com/maps/d/edit?authuser=0&hl=en&mid=z4krbUUog2VA.khJ81H24XoT0>

**Cost Share Grant Evaluation Form  
Green Infrastructure Grant**

Name of Reviewer: Brett Eidem  
Date Reviewed: 3/27/2016

**Applicant: City of Edina**

**Project: Morningside Street Reconstruction**

**Total Project Budget: \$150,000**

**Requested Funding: \$75,000**

**Green Infrastructure Grant:** project must result in greater water quality/natural resource improvements.

<b>Organization Type:</b> City		
<b>Are the Goals of Project Clearly Outlined?</b> Yes, minimize localized flooding and improve water quality draining to Manage 1 wetland through demonstrative practices.		
<b>Past History: Has the applicant applied before?</b> Yes, 2015 received \$89,000 in cost share funding, and District has strong focus in Edina		
<i>Project Design (70pts)</i>		
<b>Notes:</b> Project proposes removal of up to 7 lbs of P and reduce runoff to the wetland by an inch. Only thing is this runoff does not leave the wetland. May eventually get to the creek through groundwater. Intent is to minimize wetland flooding onto streets.	20 /45	<b>Water Resource Improvement to MCWD</b>
	5 /5	<b>Innovative Design</b>
	5 /5	<b>Budget Detail</b>
	15 /15	<b>Maintenance Plan</b>
<b>Project Design Total:</b>		<b>45 /70</b>
<i>Education &amp; Outreach (15 pts)</i>		
<b>Notes:</b> Project intent is to minimize flooding, but to do so in a cost effective way and to show demonstration practices to neighborhood. Will follow up with education and outreach with MWS to empower residents to retain runoff on each of their properties as well.	10 /10	<b>Outreach Techniques</b>
	5 /5	<b>Visibility of Demonstration</b>
<b>Education and Outreach Total:</b>		<b>15 /15</b>
<i>Water Resource Prioritization (15 pts)</i>		
<b>Notes:</b> District has a focus and ongoing partnership with Edina to continue to pursue stormwater management beyond regulation. Although this project is not as aligned with District goals or have as great of a water quality improvement as the Arden Park project was.	10 /15	<b>Alignment with District Priorities</b>
<b>Water Resource Prioritization Total:</b>		<b>10 /15</b>
<b>Total:</b>		<b>70 /100</b>
<i>Funding Approval Process</i>	<b>Potential for up to 75% funding</b>	
	<ul style="list-style-type: none"> <li>- project will need Board approval for funding requests over \$5,000</li> <li>- project will require a public hearing if it is over \$50,000, or if the project is funding equipment or requires long term maintenance by a public entity</li> <li>- project will be reviewed and compared to other like projects that met the application deadline</li> <li>- project will be reviewed, and funding will be prioritized by a staff team, our Citizen's Advisory Committee, and lastly the MCWD Board of Managers</li> </ul>	
<i>Reporting</i>	<ul style="list-style-type: none"> <li>- Inspection Report</li> <li>- Opportunities for monitoring</li> <li>- Description and location of outreach techniques used</li> <li>- Number of people engaged and educated on the project Has the project and outreach initiated other efforts on improving water quality and awareness</li> </ul>	

**Comments and Notes:**

Cost Share 2015 Detailed Evaluation Criteria  
Green Infrastructure Grant Evaluation Criteria

**Project Design – 70 points**

- Focus on water quality improvements
  - o Cost benefit of project compared to past funded projects through the Low Impact Development program
  - o Entire site design, with matrix of pollutant removals for overall cost
  - o Reduces flow, promotes infiltration, reduces erosion
  - o Creates habitat and promotes pollinator plants
- Innovation- something we haven't funded before, innovative use of stormwater BMPs, first of its kind in the region/state, multi-functionality, re-use system
- Budget- Detailed cost estimate of project (construction and outreach efforts)
- Maintenance- having a detailed maintenance plan and recommended schedule

**Education and outreach - 15 Points**

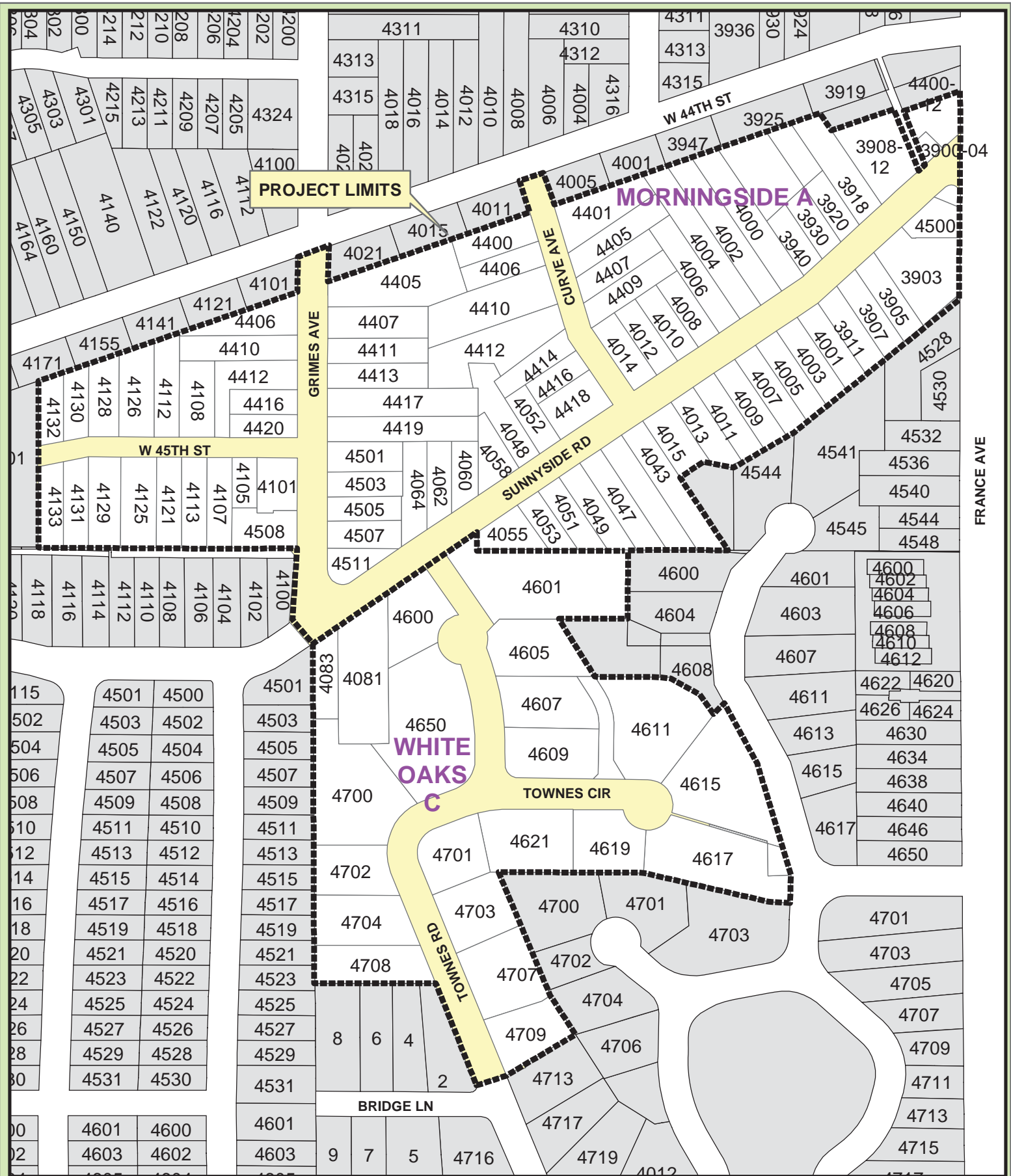
- Monitoring benefits of project overtime
- Visibility of demonstration and education opportunities to engage the public
- Educational signage
- Events hosted to promote project

**Water Resource Prioritization- 15 Points**

- Proximity to Focal Geography of MCWD Initiatives
  - o How can the project complement other District initiatives/future projects
- Proximity to an impaired waterbody
  - o How does project address impairments through BMPs
  - o Prioritize impairments within subwatershed
- Protection of high value resource

**Reporting-** when applicable, required before any phased reimbursement

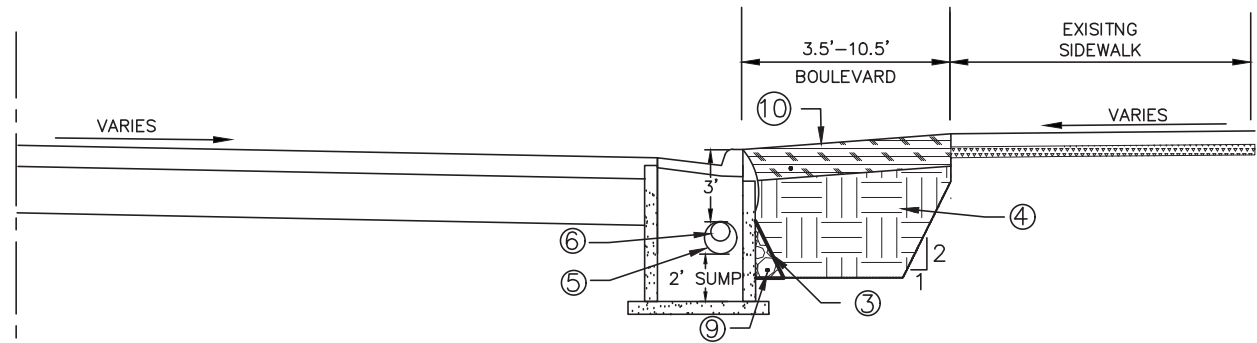
- o Inspection Report
- o Opportunities for monitoring
- o Description of outreach techniques used and their location
- o Number of people educated and engaged on the project
- o Has the project and outreach initiated other efforts on improving water quality and awareness



**2016 Project Area**  
**Morningside A & White Oaks C Neighborhood Roadway Reconstruction**  
**Improvement No: BA-422**

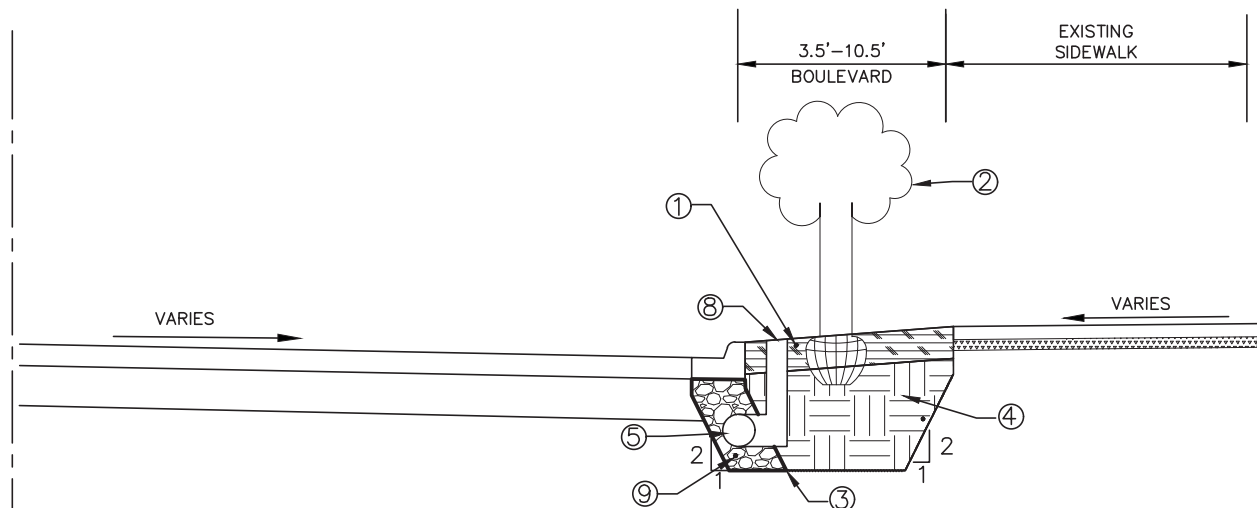






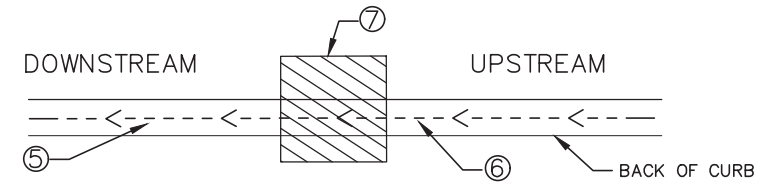
**TYPICAL TREE TRENCH SECTION A**

NTS



**TYPICAL TREE TRENCH SECTION B**

NTS



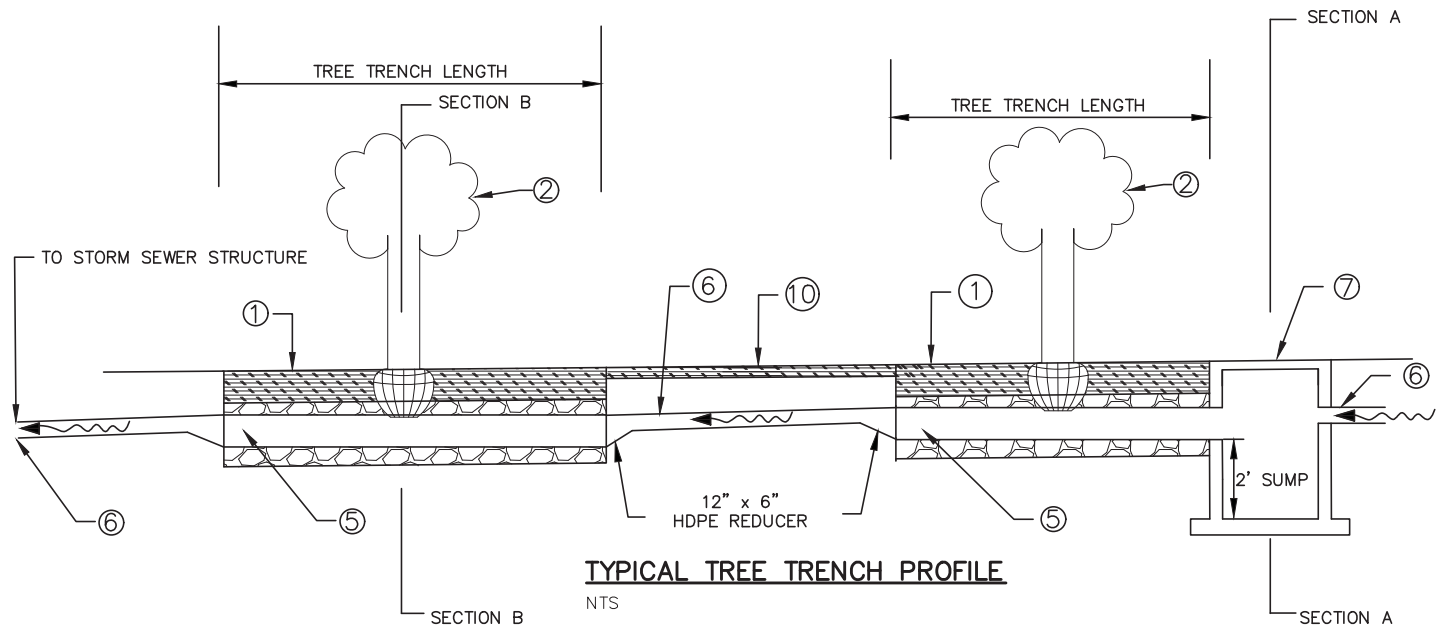
**TYPICAL PLAN VIEW**

NTS

**KEYED NOTES**

- ① 12" ORGANIC TOPSOIL BORROW (EDINA MODIFIED) WITH SEED MIXTURE 25-151
- ② DECIDUOUS TREE 2.5" B&B. SEE SUMMARY TABLE LOWER RIGHT THIS SHEET
- ③ MNDOT CAT. 6 STRAW/COCONUT 3S EROSION CONTROL BLANKET
- ④ 24"-36" OF 2" CRUSHED ROCK WASHED WITH ORGANIC TOPSOIL BORROW (EDINA MODIFIED)
- ⑤ 12" HDPE PERF. DRAIN PIPE, LAID FLAT
- ⑥ 6" SOLID PVC SUMP DRAIN PIPE
- ⑦ TYPE "BB" CATCH BASIN SPECIAL (W/SUMP) W/ NEENAH R-3067V GRATE
- ⑧ 6" SUMP DRAIN CLEAN OUT
- ⑨ 2" CRUSHED WASHED ROCK
- ⑩ 6" ORGANIC TOPSOIL BORROW (EDINA MODIFIED) WITH SEED MIXTURE

TREE TRENCH LOCATION AND DIMENSION SUMMARY					
ADDRESS	STREET	LENGTH (FT)	WIDTH (FT)	SQ. FT.	INLET TYPE
4411	GRIMES AVE.	15	10	150	CATCH BASIN INLET
4419	GRIMES AVE.	15	10	150	CLEAN OUT
4507	GRIMES AVE.	20	10	200	CATCH BASIN INLET
4511	GRIMES AVE.	20	10	200	CLEAN OUT
4013	SUNNYSIDE RD.	25	6.5	162.5	CATCH BASIN INLET
4047-1	SUNNYSIDE RD.	18	8	144	CLEAN OUT
4047-2	SUNNYSIDE RD.	18	8	144	CATCH BASIN INLET
4053	SUNNYSIDE RD.	30	8	240	CATCH BASIN INLET
4601-1	SUNNYSIDE RD.	16	8	128	CLEAN OUT
4601-2	SUNNYSIDE RD.	16	8	128	CATCH BASIN INLET
4058	SUNNYSIDE RD.	22	5.5	121	CATCH BASIN INLET
4060	SUNNYSIDE RD.	22	5.5	121	CLEAN OUT
4511-1	SUNNYSIDE RD.	25	5	125	CLEAN OUT
4511-2	SUNNYSIDE RD.	25	5	125	CATCH BASIN INLET
4418-1	CURVE AVE.	20	3.5	70	CLEAN OUT
4418-2	CURVE AVE.	20	3.5	70	CATCH BASIN INLET
TOTAL				2,279	



**TYPICAL TREE TRENCH PROFILE**


NTS

TREE TRENCH PLANTING SUMMARY					
ADDRESS	STREET	PLANT	QUANTITY	SIZE	ROOT
4411	GRIMES AVE.	NORTHERN PIN OAK	1	2.5"	B&B
4419	GRIMES AVE.	PRAIRIE EXPEDITION AMERICAN ELM	1	2.5"	B&B
4507	GRIMES AVE.	SWAMP WHITE OAK	1	2.5"	B&B
4511	GRIMES AVE.	SWAMP WHITE OAK	1	2.5"	B&B
4013	SUNNYSIDE RD.	SWAMP WHITE OAK	1	2.5"	B&B
4047-1	SUNNYSIDE RD.	SWAMP WHITE OAK	1	2.5"	B&B
4047-2	SUNNYSIDE RD.	SWAMP WHITE OAK	1	2.5"	B&B
4053	SUNNYSIDE RD.	PRAIRIE EXPEDITION AMERICAN ELM	1	2.5"	B&B
4601-1	SUNNYSIDE RD.	GREENSPIRE LINDEN	1	2.5"	B&B
4601-2	SUNNYSIDE RD.	GREENSPIRE LINDEN	1	2.5"	B&B
4058	SUNNYSIDE RD.	PRAIRIE EXPEDITION AMERICAN ELM	1	2.5"	B&B
4060	SUNNYSIDE RD.	GREENSPIRE LINDEN	1	2.5"	B&B
4511-1	SUNNYSIDE RD.	PRAIRIE EXPEDITION AMERICAN ELM	1	2.5"	B&B
4511-2	SUNNYSIDE RD.	PRAIRIE EXPEDITION AMERICAN ELM	1	2.5"	B&B
4418-1	CURVE AVE.	SWAMP WHITE OAK	1	2.5"	B&B
4418-2	CURVE AVE.	SWAMP WHITE OAK	1	2.5"	B&B

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DRAWN BY:	KM			
DESIGNER:	KM/JC			
CHECKED BY:	TM			
DESIGN TEAM				
NO.	BY	DATE	REVISIONS	

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

  
 SIGNATURE: **TOBY MUSE, PE**  
 PRINTED NAME: **TOBY MUSE, PE**  
 Lic. No. **43364**  
 Date: **2/26/2016**


 PHONE: 952.912.2600  
 10901 RED CIRCLE DRIVE #300  
 MINNETONKA, MN 55343-9302  
 www.sehinc.com



**MORNINGSIDE A / WHITE OAKS C  
ROADWAY RECONSTRUCTION**

**MISCELLANEOUS  
DETAILS**

FILE NO. EDINA 132875	<b>6</b>
DATE: 2/26/16	<b>44</b>



**Cost Share Grant Evaluation Form**  
**Green Infrastructure Grant**

Name of Reviewer: Brett Eidem  
 Date Reviewed: 3/28/2016

**Applicant: City of Plymouth**

**Project: 2016 Street Recon**

**Total Project Budget:\$25,500**

**Requested Funding: \$19,125**

**Green Infrastructure Grant:** project must result in greater water quality/natural resource improvements.

<b>Organization Type:</b> City		
<b>Are the Goals of Project Clearly Outlined?</b> Yes. Capture and infiltrate as many pollutants off the road as possible through iron enhanced raingardens on RoW of residential neighborhood that drains to Gleason Lake.		
<b>Past History: Has the applicant applied before?</b> Not that I know of		
<i>Project Design (70pts)</i>		
<b>Notes:</b> The raingardens are designed to capture street runoff, in a way that will get a pollutant reductions beyond an average raingarden. Although they are taking impervious runoff (50,000sf), they are only sized to take a portion of it (MIDS P reduction > 1 lb) The city has 28 other raingardens in RoW and visuals of others that the city has well maintained.	30 /45	<b>Water Resource Improvement to MCWD</b>
	5 /5	<b>Innovative Design</b>
	5 /5	<b>Budget Detail</b>
	15 /15	<b>Maintenance Plan</b>
<b>Project Design Total:</b>		<b>55 /70</b>
<i>Education &amp; Outreach (15 pts)</i>		
<b>Notes:</b> Being in the RoW, these RGs are going to be very visible to those in the neighborhood. The proposed educational signage off the nearby bike path is in a great location to catch people’s attention and bring awareness, as well as education materials to neighborhood and West Metro Water Alliance (WMWA) newsletter write up.	10 /10	<b>Outreach Techniques</b>
	5 /5	<b>Visibility of Demonstration</b>
<b>Education and Outreach Total:</b>		<b>15 /15</b>
<i>Water Resource Prioritization (15 pts)</i>		
<b>Notes:</b> Drains to Gleason Lake, which is impaired for nutrients. Besides that, does not tie into other District initiatives, but does continue to strengthen partnership with city.	5 /15	<b>Alignment with District Priorities</b>
<b>Water Resource Prioritization Total:</b>		<b>5 /15</b>
<b>Total:</b>		<b>75 /100</b>
<i>Funding Approval Process</i>	<b>Potential for up to 75% funding</b>	
	<ul style="list-style-type: none"> <li>- project will need Board approval for funding requests over \$5,000</li> <li>- project will require a public hearing if it is over \$50,000, or if the project is funding equipment or requires long term maintenance by a public entity</li> <li>- project will be reviewed and compared to other like projects that met the application deadline</li> <li>- project will be reviewed, and funding will be prioritized by a staff team, our Citizen’s Advisory Committee, and lastly the MCWD Board of Managers</li> </ul>	
<i>Reporting</i>	<ul style="list-style-type: none"> <li>- Inspection Report</li> <li>- Opportunities for monitoring</li> <li>- Description and location of outreach techniques used</li> <li>- Number of people engaged and educated on the project Has the project and outreach initiated other efforts on improving water quality and awareness</li> </ul>	

**Comments and Notes:**

Cost Share 2015 Detailed Evaluation Criteria  
Green Infrastructure Grant Evaluation Criteria

**Project Design – 70 points**

- Focus on water quality improvements
  - o Cost benefit of project compared to past funded projects through the Low Impact Development program
  - o Entire site design, with matrix of pollutant removals for overall cost
  - o Reduces flow, promotes infiltration, reduces erosion
  - o Creates habitat and promotes pollinator plants
- Innovation- something we haven't funded before, innovative use of stormwater BMPs, first of its kind in the region/state, multi-functionality, re-use system
- Budget- Detailed cost estimate of project (construction and outreach efforts)
- Maintenance- having a detailed maintenance plan and recommended schedule

**Education and outreach - 15 Points**

- Monitoring benefits of project overtime
- Visibility of demonstration and education opportunities to engage the public
- Educational signage
- Events hosted to promote project

**Water Resource Prioritization- 15 Points**

- Proximity to Focal Geography of MCWD Initiatives
  - o How can the project complement other District initiatives/future projects
- Proximity to an impaired waterbody
  - o How does project address impairments through BMPs
  - o Prioritize impairments within subwatershed
- Protection of high value resource

**Reporting-** when applicable, required before any phased reimbursement

- o Inspection Report
- o Opportunities for monitoring
- o Description of outreach techniques used and their location
- o Number of people educated and engaged on the project
- o Has the project and outreach initiated other efforts on improving water quality and awareness



Figure 2: Ponderosa Reconstruction Area – Location map in relation to area lakes.

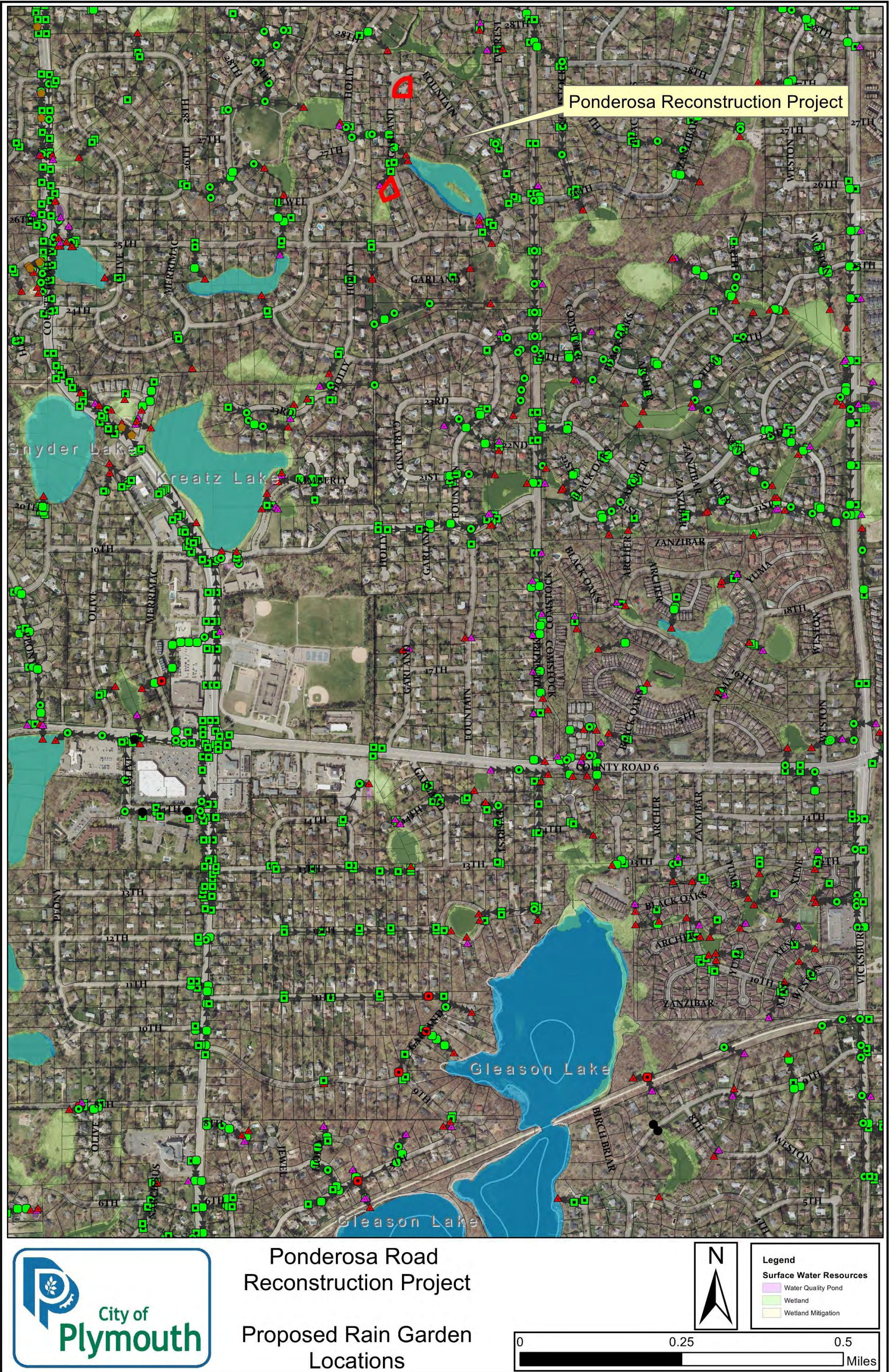


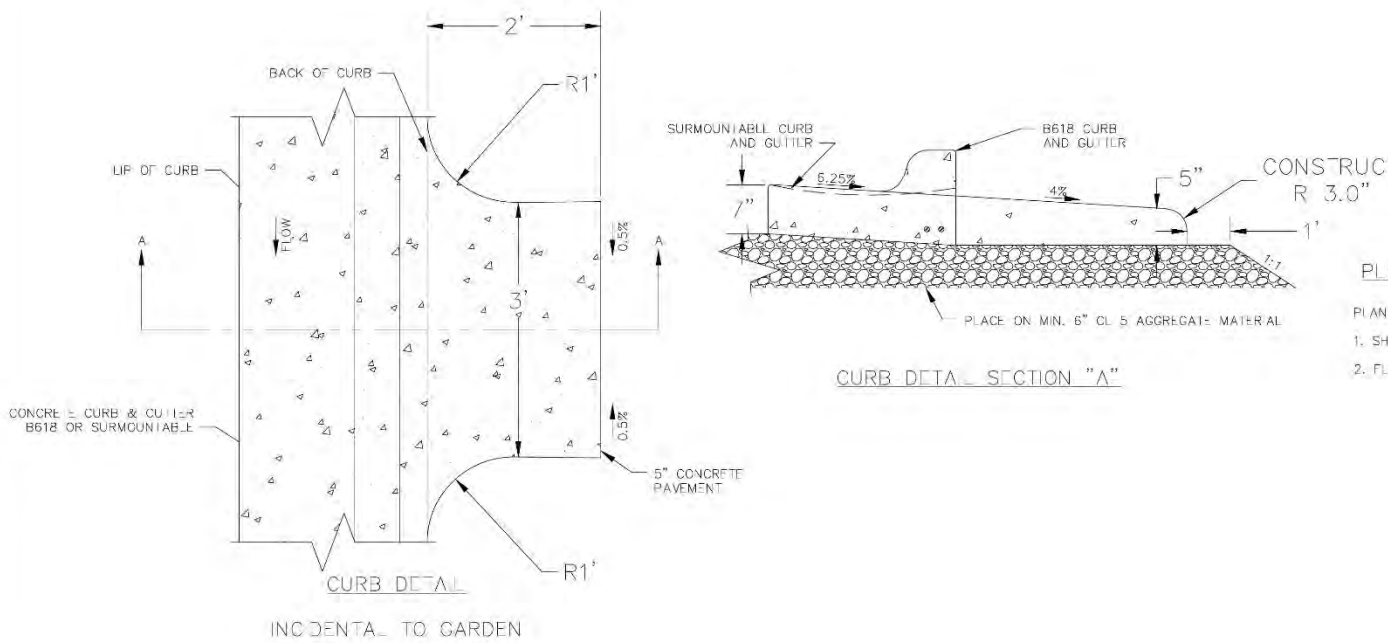
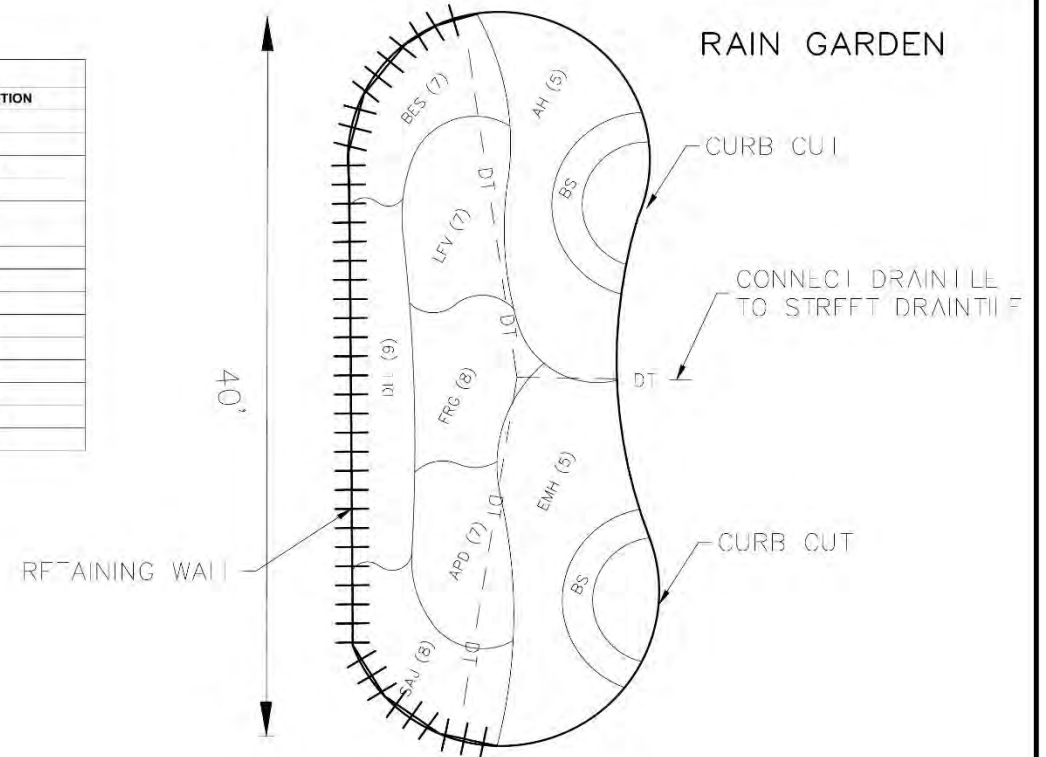


Figure 3: Project design cross section concept

**GENERAL NOTES:**

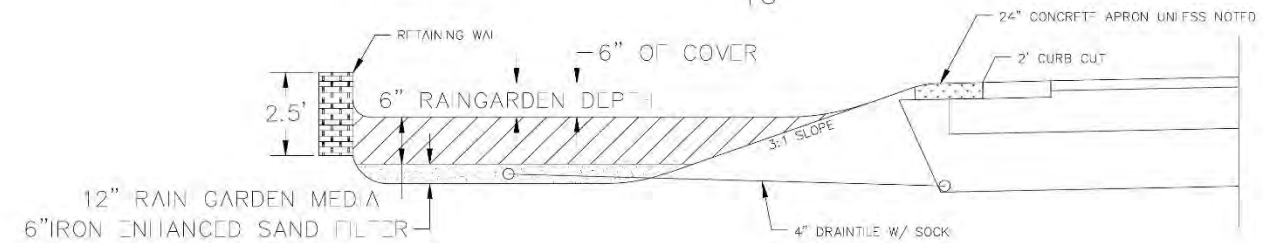
1. THERE SHALL BE 2 (1 SHALLOW DEPTH & 1 TYPICAL DEPTH) RAINGARDENS INSTALLED WITH LOCATION TO BE DETERMINED IN THE FIELD BY ENGINEER.
2. CURB CUTS INCLUDE CONCRETE APRON.
3. CONTRACTOR SHALL INSTALL 2" STRIP OF SOD BETWEEN RAINGARDEN AND CURB AND GUTTER.
4. INSTALL DRAINTILE AT 1/3 OF TOTAL LENGTH OF RAINGARDEN. CONNECT DRAINTILE TO CATCH BASIN (FOR TYPICAL DEPTH INSTALLATION) OR DRAINTILE UNDER CURB.
5. EXCAVATE AS SHOWN BELOW 10 INS ALL RAINGARDEN.
6. RAINGARDEN MEDIA SHALL CONSIST OF 80% ASTM C-33 CONSTRUCTION SAND & 20% ORGANIC MATERIAL.
7. ENHANCED SAND FILTER SHALL CONSIST OF IRON FILINGS HOMOGENEOUSLY MIXED AT 5% INTO C-33 SAND.
8. IRON MUST BE AT LEAST 90% ELEMENTAL IRON WITH SIZE DISTRIBUTION EQUAL TO C-33 SAND.
9. ALL RAINGARDENS WILL BE MULCHED WITH 3" SHREDDED HARDWOOD.
10. USE STEEL EDGING.
11. CONTRACTOR SHALL EMPLOY MEANS TO AVOID SOIL COMPACTION WITHIN THE GARDEN.
12. ASSUME WIDTH OF EACH RAIN GARDEN TO BE 8' WIDE.
13. INSTALL DRAINTILE CLEANOUTS WITH PLASTIC CAP AT END OF EACH RUN.
14. DRAINTILE FITTINGS ARE INCIDENTAL.
15. ADD SEMI-CIRCLE OF BEBB'S SEDGE AT ALL CONCRETE APRONS ENTERING THE GARDEN.
16. BEBB'S SEDGE MUST BE LOCATED A MINIMUM OF 2' AWAY FROM APRON.

RAIN GARDEN PLANTING ABBREVIATIONS	
PLANT NAME	ABBREVIATION
SHRUBS: GALLON POTS	
ANNABELLE HYDRANGEA	AH
EMERALD MOUND HONEYSUCKLE	EMH
VIBURNUM 'BAILY COMPACT' (V. TRILOBUM)	VBC
PERENNIALS: 4" POTS	
SEDUM 'AUTUMN JOY'	SAJ
LIATRIS 'FLORISTAN VIOLET'	LFV
DAYLILY 'LEMON LOLLYPOP'	DLL
BLUE FLAG IRIS (IRIS VERSICOLOR)	IRIS
BLACK-EYED SUSAN 'GOLDSTRUM'	BES
ASTER 'ALMA POTSCHKE' (A. NOVAE-ANGLIAE)	AAP
ASTER 'PURPLE DOME'	APD
FEATHER REED GRASS 'KARL FORESTER'	FRG
BEBB'S SEDGE	BS
LITTLE BLUESTEM	LB

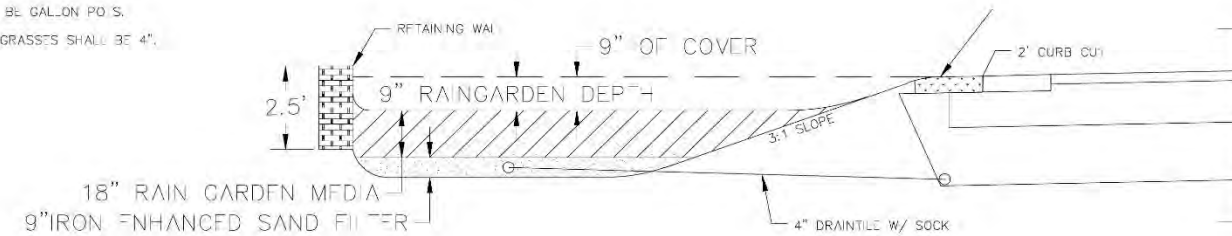


**PLANTING DETAILS**

- PLANTING DETAIL NOTES:
1. SHRUBS SHALL BE GALLON POTS.
  2. FLOWERS AND GRASSES SHALL BE 4".



TYPICAL SHALLOW RAIN GARDEN DETAIL



TYPICAL RAIN GARDEN DETAIL



Figure 4: Photos of project area pre-construction



2800 Garland Lane N



2625 Garland Lane N



Figure 5: Examples of past rain gardens installed in the City of Plymouth





**Cost Share Grant Evaluation Form**  
**Community Engagement Grant**

Name of Reviewer: Brett Eidem  
 Date Reviewed: 3-28-2016

**Applicant: Annunciation Church**

**Project: Main Entrance SW Retrofit, 509 W 54<sup>th</sup> St, Minneapolis**

**Total Project Budget: \$25,426-questionable**

**Requested Funding: \$19,069**

**Community Engagement Grant:** must be designed to produce greater public awareness of ways to improve water quality. These projects use a stormwater BMP as a demonstration to educate the public to build community capacity to grow knowledge and support of stormwater management in the community.

<b>Organization Type:</b> Church		
<b>Are the Goals of Project Clearly Outlined?</b> Yes, there is a larger SW retrofit in the works, but this project had funding behind design and an eagle scout willing to take on the labor with his troop		
<b>Past History: Has the applicant applied before?</b> No		
<i>Project Design (30pts)</i>		
<b>Notes:</b> Project is proposed to capture runoff from roof, sidewalks and drive of main entrance to church. Annual Reductions up to 545 lbs TSS and .6 lbs P for 16,022 sf impervious proposed to be captured through RGs and trench drains.	10 /10	<b>Water Resource Improvement to MCWD</b>
	0 /5	<b>Innovative Design</b>
	5 /5	<b>Budget Detail</b>
	10 /10	<b>Maintenance Plan</b>
<b>Project Design Total:</b>		<b>25 /30</b>
<i>Education &amp; Outreach (60 pts)</i>		
<b>Notes:</b> An eagle scout is organizing volunteers to construct, with MB oversight. Church has K-8 school attached, and is already involved in outdoor classroom activities. Has shown interest in curriculum and using this demonstration as example. Proposed educational signage, and messaging through social media, church and school channels. Annual Sept. event where messaging can be organized and delivered explaining project to community.	20 /20	<b>Influence within Community</b>
	25 /25	<b>Outreach Techniques</b>
	10 /10	<b>Visibility of Demonstration</b>
	0 /5	<b>Leveraging Other Grant Funds</b>
<b>Education and Outreach Total:</b>		<b>55 /60</b>
<i>Water Resource Prioritization (10 pts)</i>		
<b>Notes:</b> At Diamond Lake Rd and Lyndale. Tina Peterson is who submitted application. She is also a block captain for the Diamond Lake Alleyway project. Project is two blocks from the creek.	5 /10	<b>Alignment with District Priorities</b>
<b>Water Resource Prioritization Total:</b>		<b>5 /10</b>
<b>Total:</b>		<b>85 /100</b>
<i>Funding Approval Process</i>	<b>Potential for up to 75% funding, not to exceed \$100,000</b>	
	<ul style="list-style-type: none"> <li>- project will need Board approval for funding requests over \$5,000 and a public hearing if it is over \$50,000</li> <li>- project will be reviewed and compared to other like projects that met the application deadline</li> <li>- project will be reviewed by a staff team, our Citizen’s Advisory Committee, and the MCWD Board of Managers</li> </ul>	
<i>Reporting</i>	<b>Required for all Community Engagement projects, needed before phased reimbursement is released</b>	
	<ul style="list-style-type: none"> <li>- Description and location of outreach techniques used</li> <li>- Number of people engaged and educated on the project</li> <li>- Has the project and outreach initiated other efforts on improving water quality and awareness</li> <li>- Opportunities for monitoring</li> <li>- Inspection Form</li> </ul>	

**Comments and Notes:**

Cost Share 2015 Detailed Evaluation Criteria  
Community Engagement Grant Evaluation Criteria

**Project Design- 30 Points**

- Water resource impact to MCWD (cost benefit)
  - o Proposed project captures greater than 50% of site runoff
  - o Reduces flow, promotes infiltration, reduces erosion
  - o Creates habitat and promotes pollinator plants
  - o Entire site design, with detailed breakdown of BMPs and correlating removals of each
- Innovation- something we haven't funded before, innovative use of stormwater BMPs, first of its kind in the region/state, multi-functionality, re-use system
- Budget- Detailed cost estimate of project (construction and outreach efforts)
- Maintenance- having a detailed maintenance plan and recommended schedule

**Education and Outreach- 60 Points**

- Influence within Community
  - o Delineating who within the organization will execute education and outreach efforts
  - o Partnerships
    - Schools, other organizations- establishing classroom curriculum around water quality education
    - Collaborations- working with other organizations on the same water quality project
  - o Community Capacity- Does the project encourage community involvement or service by local citizens?
- Outreach Techniques
  - o Educational Signage- Project specific/ Connections to other District Efforts
  - o Host an Event-utilizing partnerships to host an event that incorporates stormwater management awareness and creates a foundation for building community capacity to impact the problem of water pollution
  - o Innovative Outreach Techniques- Use of cutting edge technology, something we haven't funded before, first of its kind in the region/state, utilizing social media
- Visibility- How easily can passersby understand what the project is and how it works
- Leveraging other funds- is project utilizing other grant dollars or resources to accomplish project goals

**Water Resource Prioritization- 10- Points**

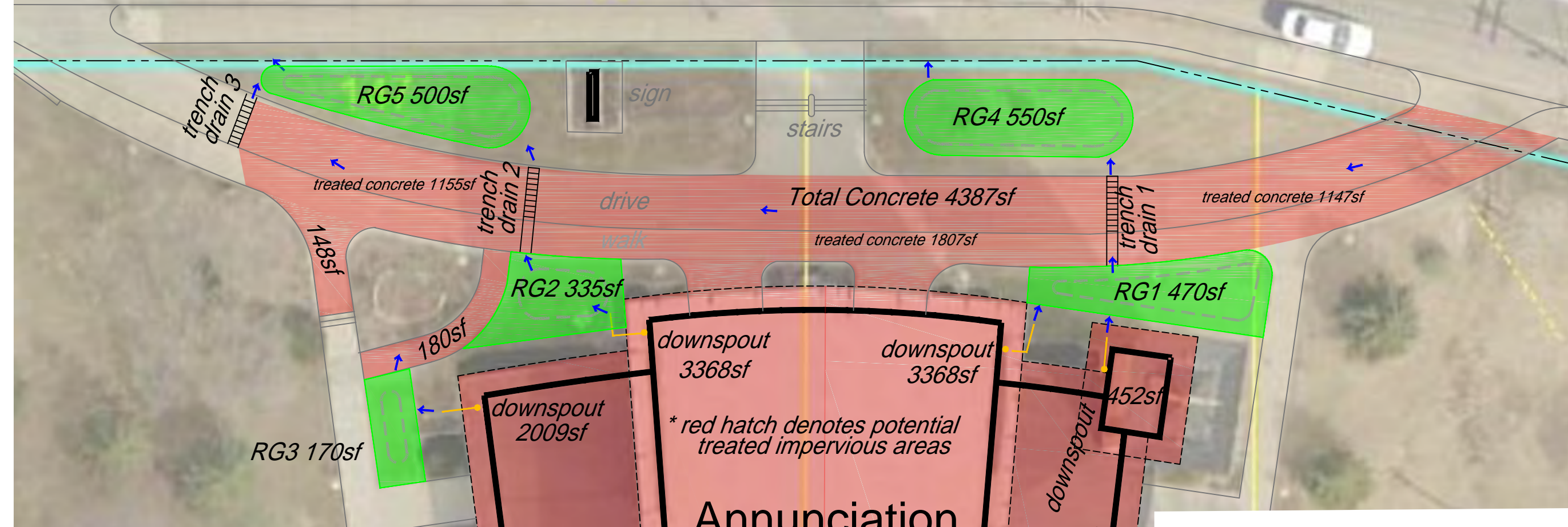
- Proximity to Focal Geography of MCWD Initiatives
  - o How can the project complement other District initiatives/future projects
- Proximity to an impaired waterbody
  - o How does project address impairments through BMPs or education
- Protection of high value resource

**Reporting- Required for Community Engagement projects**

- o Description of outreach techniques used and their location
- o Number of people educated and engaged on the project
- o Has the project and outreach initiated other efforts on improving water quality and awareness
- o Opportunities for monitoring
- o Inspection Report



# Diamond Lake Road West

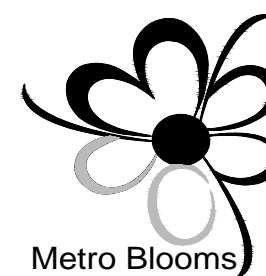
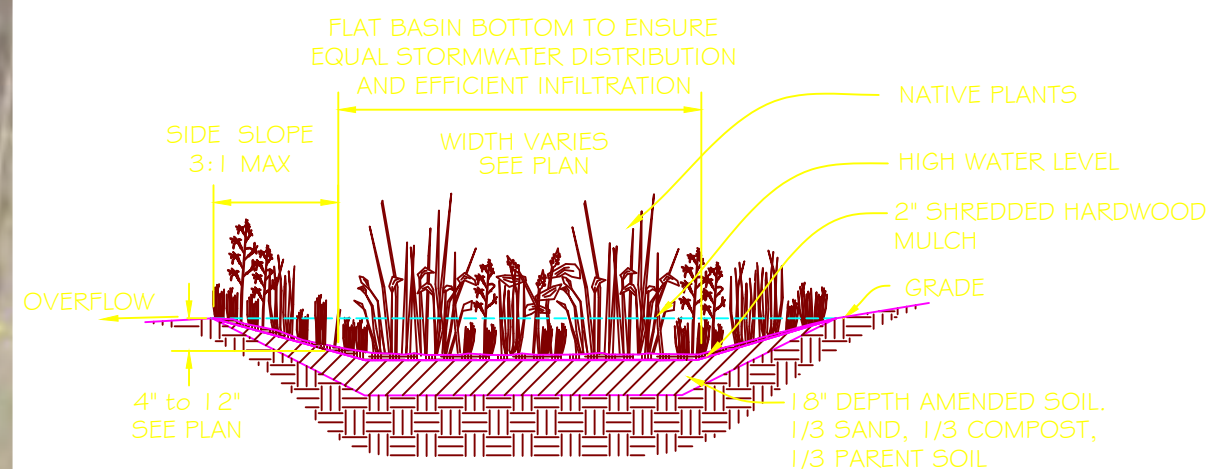


## NOTES

- POTENTIAL TREATED IMPERVIOUS AREA
- CHURCH = 11,307 SF  
WALKS/DRIVE = 4,715 SF
- TOTAL = 16,022 SF
- PROPOSED RAINGARDENS ALL TO BE 6" DEEP
- RG1 = 470 SF -  
RG2 = 335 SF -  
RG3 = 170 SF -  
RG4 = 550 SF -  
RG5 = 500 SF -
- TOTAL PROPOSED RGs 2,025 SF
- TRENCH DRAINS - NDS Dura Slope w/ metal pedestrian friendly grate or equivalent.
- TRENCH DRAIN 1 (16') CONVEYS OVERFLOW FROM RG1 AND CAPTURES RUNOFF FROM 1,147 SF OF DRIVE AND SIDEWALK
- TRENCH DRAIN 2 (16') CONVEYS OVERFLOW FROM RG2 AND CAPTURES RUNOFF FROM 1,807SF OF DRIVE AND SIDEWALK
- TRENCH DRAIN 3 (10') CAPTURES 1,155 SF OF DRIVE AND SIDEWALK

## Annunciation Church

\* red hatch denotes potential treated impervious areas



**Cost Share Grant Evaluation Form**  
**Community Engagement Grant**

Name of Reviewer: Brett Eidem  
 Date Reviewed: 3/29/2016

**Applicant:** Bethel Evangelical Lutheran Church  
**Project:** SW Retrofit, 4120 17<sup>th</sup> ave S, Minneapolis  
**Total Project Budget:** \$100,000  
**Requested Funding:** \$

**Community Engagement Grant:** must be designed to produce greater public awareness of ways to improve water quality. These projects use a stormwater BMP as a demonstration to educate the public to build community capacity to grow knowledge and support of stormwater management in the community.

<b>Organization Type:</b> Church		
<b>Are the Goals of Project Clearly Outlined?</b> Yes, reduce runoff and stormwater utility fee, while fulfilling their mission to be stewards of the community and the environment.		
<b>Past History: Has the applicant applied before?</b> No, but staff has met with them onsite and discussed plan for over a year.		
<i>Project Design (30pts)</i>		
<b>Notes:</b> Project proposes to have larger pollutant reductions than any other church, but some of the design is vague. I feel that the parking lot raingarden should get funded, as that is exactly what we are looking for in cost effectiveness. But some of the other gardens need to be further developed. Entire site reduction- 2 lbs P, just parking lot, 1 lb P.	10 /10	<b>Water Resource Improvement to MCWD</b>
	5 /5	<b>Innovative Design</b>
	5 /5	<b>Budget Detail</b>
	5 /10	<b>Maintenance Plan</b>
<b>Project Design Total:</b>		<b>25 /30</b>
<i>Education &amp; Outreach (60 pts)</i>		
<b>Notes:</b> They already have a large community garden and are proposing great outreach through more than just stormwater with their stewardship strategies. Site for Bancroft Neighborhood Association.	15 /20	<b>Influence within Community</b>
	10 /25	<b>Outreach Techniques</b>
	10 /10	<b>Visibility of Demonstration</b>
	0 /5	<b>Leveraging Other Grant Funds</b>
<b>Education and Outreach Total:</b>		<b>35 /60</b>
<i>Water Resource Prioritization (10 pts)</i>		
<b>Notes:</b> Project is about 10 blocks from Lake Hiawatha and golf course. Many cost share projects in close proximity in this area. MWS have discussed leading a garden tour this could be incorporated with.	5 /10	<b>Alignment with District Priorities</b>
<b>Water Resource Prioritization Total:</b>		<b>5 /10</b>
<b>Total:</b>		<b>65 /100</b>
<i>Funding Approval Process</i>	<b>Potential for up to 75% funding, not to exceed \$100,000</b>	
	<ul style="list-style-type: none"> <li>- project will need Board approval for funding requests over \$5,000 and a public hearing if it is over \$50,000</li> <li>- project will be reviewed and compared to other like projects that met the application deadline</li> <li>- project will be reviewed by a staff team, our Citizen's Advisory Committee, and the MCWD Board of Managers</li> </ul>	
<i>Reporting</i>	<b>Required for all Community Engagement projects, needed before phased reimbursement is released</b>	
	<ul style="list-style-type: none"> <li>- Description and location of outreach techniques used</li> <li>- Number of people engaged and educated on the project</li> <li>- Has the project and outreach initiated other efforts on improving water quality and awareness</li> <li>- Opportunities for monitoring</li> <li>- Inspection Form</li> </ul>	

**Comments and Notes:**

This project scored low for the lack of detail overall. However, I have met with congregation and now their passion for this project. There is no parking lot construction. This is solely a stormwater retrofit and has great pollution reduction potential. I recommend funding at least the large parking lot raingarden, and potentially one other. But would need to see more detail to which is next best option, and a cost estimate broken down by garden. Also will work with assigning a MWS to help with outreach plan.

Cost Share 2015 Detailed Evaluation Criteria  
Community Engagement Grant Evaluation Criteria

**Project Design- 30 Points**

- Water resource impact to MCWD (cost benefit)
  - o Proposed project captures greater than 50% of site runoff
  - o Reduces flow, promotes infiltration, reduces erosion
  - o Creates habitat and promotes pollinator plants
  - o Entire site design, with detailed breakdown of BMPs and correlating removals of each
- Innovation- something we haven't funded before, innovative use of stormwater BMPs, first of its kind in the region/state, multi-functionality, re-use system
- Budget- Detailed cost estimate of project (construction and outreach efforts)
- Maintenance- having a detailed maintenance plan and recommended schedule

**Education and Outreach- 60 Points**

- Influence within Community
  - o Delineating who within the organization will execute education and outreach efforts
  - o Partnerships
    - Schools, other organizations- establishing classroom curriculum around water quality education
    - Collaborations- working with other organizations on the same water quality project
  - o Community Capacity- Does the project encourage community involvement or service by local citizens?
- Outreach Techniques
  - o Educational Signage- Project specific/ Connections to other District Efforts
  - o Host an Event-utilizing partnerships to host an event that incorporates stormwater management awareness and creates a foundation for building community capacity to impact the problem of water pollution
  - o Innovative Outreach Techniques- Use of cutting edge technology, something we haven't funded before, first of its kind in the region/state, utilizing social media
- Visibility- How easily can passersby understand what the project is and how it works
- Leveraging other funds- is project utilizing other grant dollars or resources to accomplish project goals

**Water Resource Prioritization- 10- Points**

- Proximity to Focal Geography of MCWD Initiatives
  - o How can the project complement other District initiatives/future projects
- Proximity to an impaired waterbody
  - o How does project address impairments through BMPs or education
- Protection of high value resource

**Reporting- Required for Community Engagement projects**

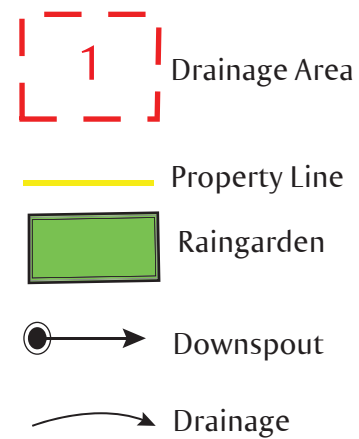
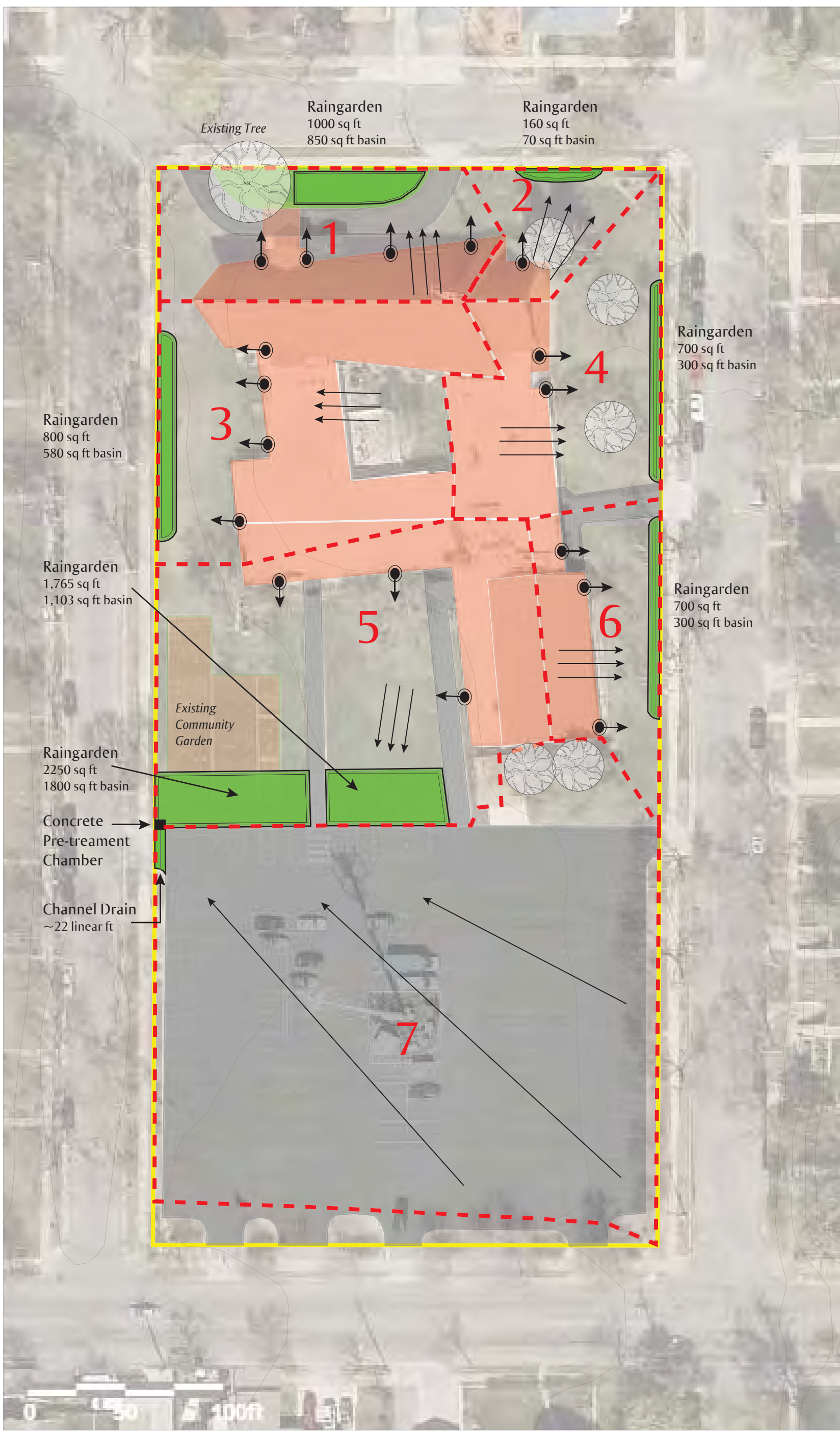
- o Description of outreach techniques used and their location
- o Number of people educated and engaged on the project
- o Has the project and outreach initiated other efforts on improving water quality and awareness
- o Opportunities for monitoring
- o Inspection Report



Please Note:

This is a concept plan delineating the distinct drainage areas for this property. Raingarden size is proposed based on computer software modeling of the drainage area with raingarden sq ft to ascertain the effectiveness of each garden during 1.25" rain events and a 30" annual volume of runoff. The size of each garden represents the minimum size to meet a water quality goal of capturing and infiltrating over 90% of runoff volume.

The goal of this plan is not to design the exact detailed shape and location of each garden. The goal of this plan is to show size of needed raingardens to adequately meet water quality goals.



## Bethel Evangelical Lutheran Church

4120 17th Ave S

Minneapolis, MN 55407

Stormwater Drainage Map

prepared by: A Novak @ Metro Blooms



1

RAINGARDEN - 1000 sq ft		
IMPERVIOUS to BMP: 6,330 sq ft / .145 acre		
building -	4,012 sq ft / .092 acre	The implementation of this raingarden would be within the existing vegetated area existing in the center of a passenger drop off driveway. The area includes a large existing tree so the size of the garden may be limited by the existence of tree roots. Feasibility of a raingarden in this area would therefore need further investigation. Should this drop off area need to be replaced, it would be a great opportunity to implement a raingarden in this location, as the existing tree would likely need to be removed in order to replace the driveway.
parking/drive -	2,318 sq ft / .053 acre	
IMPERVIOUS TREATED:		
4.4%		
RUNOFF REDUCTION: 96%		
volume:	1.25" rain event - 4,516 gal	
	30" avg yr - 102,983 gal	
phosphorous:	1.25" rain event - .012 lbs	
	30" avg yr - .26243 lbs	
sediment:	1.25" rain event - 2.78 lbs	
	30" avg yr - 62 lbs	

2

RAINGARDEN - 160 sq ft			
IMPERVIOUS to BMP: 830 sq ft / .019 acre			
building -	830 sq ft / .019 acre	The implementation of this raingarden would be to capture runoff from existing downspouts on the Northeast section of roof. This section of roof has downspouts that be difficult, if not impossible, to connect to other downspouts for the adjacent roof areas. This drainage area is small and would only require a small raingarden to capture most rain events. It would be an opportunity to add a raingarden area to match other plantings with bigger water quality benefit and ensure capture for this area of roof that would otherwise be difficult.	
IMPERVIOUS TREATED:			
~1%			
RUNOFF REDUCTION: 96%			
volume:	1.25" rain event - 642 gal		
	30" avg yr - 15,021 gal		
phosphorous:	1.25" rain event - .00115 lbs		
	30" avg yr - .027 lbs		
sediment:	1.25" rain event - .177 lbs		
	30" avg yr - 4.14 lbs		

3

RAINGARDEN - 800 sq ft			
IMPERVIOUS to BMP: 9,554 sq ft / .219 acre			
building -	9,554 sq ft / .219 acre	The implementation of this raingarden would be to capture runoff from existing downspouts on the west central sections of roof. This section of roof is substantial at 11% of the total impervious surface for the site. The garden location would be highly visible and could be a beautiful addition to the landscaping of the site.	
IMPERVIOUS TREATED:			
11%			
RUNOFF REDUCTION: 96%			
volume:	1.25" rain event - 6935 gal		
	30" avg yr - 155280 gal		
phosphorous:	1.25" rain event - .001238 lbs		
	30" avg yr - .277 lbs		
sediment:	1.25" rain event - 2 lbs		
	30" avg yr - 43 lbs		

**Bethel Evangelical Lutheran Church**

4120 17th Ave S

Minneapolis, MN 55407

Stormwater Drainage Map

prepared by: A Novak @ Metro Blooms



4

RAINGARDEN - 370 sq ft		
IMPERVIOUS to BMP: 5,062 sq ft / .137 acre		
building -	4,012 sq ft / .113 acre	The implementation of this raingarden would be for the capture of runoff conveyed via downspouts on the east central side of the building. There is also a small section of sidewalk that would be captured.
sidewalk -	450 sq ft / .01 acre	
IMPERVIOUS TREATED:		
5.75%		
RUNOFF REDUCTION: 90% annually		
volume:	1.25" rain event - 4,129 gal	
	30" avg yr - 90522 gal	
phosphorous:	1.25" rain event - .0079 lbs	
	30" avg yr - .156 lbs	
sediment:	1.25" rain event - 2.78 lbs	
	30" avg yr - 1.4 lbs	

5

RAINGARDEN - 1,765 sq ft		
IMPERVIOUS to BMP: 10,304 sq ft / .236 acre		
building -	7,772 sq ft / .178 acre	The implementation of this raingarden would serve to capture runoff from sections of the west central roof. It is diagrammed as a matching garden area for the larger raingarden loacted due west .
sidewalk -	2,532 sq ft / .058 acre	
IMPERVIOUS TREATED:		
11.7 %		
RUNOFF REDUCTION: 100% annually		
volume:	1.25" rain event - 7,338 gal	
	30" avg yr - 153,283 gal	
phosphorous:	1.25" rain event - .01446 lbs	
	30" avg yr - .28197 lbs	
sediment:	1.25" rain event - 2.67 lbs	
	30" avg yr - 52 lbs	

6

RAINGARDEN - 370 sq ft		
IMPERVIOUS to BMP: 3,162 sq ft / .0725 acre		
building -	2,562 sq ft / .058 acre	The implementation of this raingarden would serve to capture runoff from existing downspouts on the south western sections of roof. The garden location would be highly visible and could be a beautiful addition to the landscaping of the site.
sidewalk -	600 sq ft / .014 acre	
IMPERVIOUS TREATED:		
3.6%		
RUNOFF REDUCTION: 96% annually		
volume:	1.25" rain event - 2,395 gal	
	30" avg yr - 54,982 gal	
phosphorous:	1.25" rain event - .00463 lbs	
	30" avg yr - .1047 lbs	
sediment:	1.25" rain event - .815 lbs	
	30" avg yr - 18.5 lbs	

## Bethel Evangelical Lutheran Church

4120 17th Ave S

Minneapolis, MN 55407

Stormwater Drainage Map

prepared by: A Novak @ Metro Blooms



RAINGARDEN - 2,250 sq ft	
IMPERVIOUS to BMP: 52,000 sq ft / 1.19 acre	
parking -	52,000 sq ft / 1.19 acre
IMPERVIOUS TREATED:	
60%	
RUNOFF REDUCTION: 96%	
volume:	1.25" rain event - 33,707 gal
	30" avg yr - 662,924 gal
phosphorous:	1.25" rain event - .005868 lbs
	30" avg yr - 1.0842 lbs
sediment:	1.25" rain event - 35 lbs
	30" avg yr - 656 lbs

The implementation of this raingarden, with the installation of a channel drain and pre-treatment sediment chamber, would capture runoff from most of the parking lot, which constitutes 60% of the property. This is the largest drainage area on the property with the highest percentage of impervious surface. This would likely be the first priority for a project at the Bethel Church.

TOTAL PROPERTY - 141,672 sq ft / 3.25 acre	
TOTAL IMPERVIOUS: 87,900 / 2 acre	
building -	30,000 sq ft / .68 acre
parking / drive -	52,000 sq ft / 1.19 acre
sidewalk -	3582 sq ft / .08 acre
drive -	2,318 sq ft / .053 acre
TOTAL PERVIOUS: 53,772 sq ft / 1.25 acre	
turf / landscaping -	49,306 sq ft / 2.147 acre
community garden -	4,466 sq ft / .103



EARTH WIZARDS

# Proposal

## Balancing Urban Development and Water Conservation

**Client Name:** Bethel Evangelical Lutheran Church  
**Project Name:** Stormwater Capture (Metro Blooms Design)  
**Jobsite Address:** 4120 17th Avenue South Minneapolis, MN 55407  
**Estimate ID:** EST299274  
**Date:** Mar 25, 2016

**Billing Address:** 4120 17th Avenue South Minneapolis, MN 55407  
**Drawing #:** 2

### Channel Drain - Parking Lot Entrance \$19,125.18

Installation of Heavy Duty Customized Channel Drain to Allow Parking Lot Runoff to Enter Rain Garden to the North (must be customized as the existing asphalt surface drains to the south)

1	Lump Sum	Channel Trough	\$2,224.69
1	Lump Sum	Channel Grate	\$2,780.87
100	Hours	ECO FLEET	\$5,128.00
100	Hours	ECO Install Crew	\$6,600.00
1	Lump Sum	Rental Equipment	\$556.17
1	Lump Sum	Lumber, Wood Forms	\$489.43
20	Each	Rebar - 20' lengths	\$244.80
2	Each	Concrete - Short Load	\$1,101.22

### Contingency Budget ~ 5% \$3,750.00

The contingency budget allows for changes in material pricing or quantity changes. Any changes will be authorized by the designated Church representative before such work is completed.

1	Lump Sum	Contingency Budget	\$3,750.00
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### Rain Garden 7 \$31,541.18

Rain Garden receiving parking lot runoff. 1,800 sf basin area.

27	Cubic Yards	Turf Removal - Disposal Fee	\$600.75
127	Cubic Yards	Excavated Soil - Disposal Fee	\$1,412.24
46	cy	Rain Garden Soil - 80/20 Blend (Sand/Compost)	\$1,407.14
14	CY	Mulch, Double Shredded Hardwood	\$770.84
5	Yard	Soil - Topsoil (Screened)	\$91.75



0.5 Pounds	Seed, grass	\$21.42
5 Ea	Delivery - \$150.00	\$834.25
0.5 Weekly	Portable Bathroom	\$111.24
5 Hrs	Stacy - Project Layout and Supervise	\$444.95
140 Hours	ECO Install Crew	\$9,240.00
140 Hours	ECO Equipment Fleet	\$7,179.20
1 Lump Sum	Rental Equipment	\$1,112.35
6 Hours	Design, Plant	\$533.94
375 Plugs	Native Plants - Plug	\$918.75
375 Pots, small	Native, Plants - Pots, Small 3.5"	\$2,295.00
60 Hours	Planting Labor	\$2,550.60
20 Hours	Earth Wizards Dumptruck	\$555.60
20 Hours	Dumptruck Driver	\$1,105.20
4 Hrs	Stacy - Project Layout and Supervise	\$355.96

### Rain Garden 5

**\$13,072.70**

Rain garden receives runoff from SW portion of the building and lawn area. 1103 sf basin area.

15 Cubic Yards	Turf Removal - Disposal Fee	\$333.75
41 Cubic Yards	Excavated Soil - Disposal Fee	\$455.92
36 cy	Rain Garden Soil - 80/20 Blend (Sand/Compost)	\$1,101.24
11 CY	Mulch, Double Shredded Hardwood	\$605.66
5 Yard	Soil - Topsoil (Screened)	\$91.75
0.25 Pounds	Seed, grass	\$10.71
5 Ea	Delivery - \$150.00	\$834.25
40 Hours	ECO Install Crew	\$2,640.00
4 Hours	Design, Plant	\$355.96
250 Plugs	Native Plants - Plug	\$612.50
250 Pots, small	Native, Plants - Pots, Small 3.5"	\$1,530.00
30 Hours	Planting Labor	\$1,275.30
12 Hours	Earth Wizards Dumptruck	\$333.36
12 Hours	Dumptruck Driver	\$663.12
40 Hours	ECO FLEET	\$2,051.20
2 Hrs	Stacy - Project Layout and Supervise	\$177.98

### Forebay

**\$2,855.34**

A customized concrete forebay to capture sediment and debris. Dimensions are approximately 36" wide by 24" depth into the rain garden with a removable metal grate.

12 Hours	ECO Install Crew - 2 guys x 12 hours - 4 PERSON CREW	4 PERSON CREW	\$792.00
12 Hours	ECO FLEET		\$615.36
1 EA	Concrete - Short Load - Anything less than 3 yards to be at the short load rate	Anything less than 3 yards to be at the short load rate	\$550.61
1 Lump sum	Wood forms		\$428.25
4 Hours	ECO Install Crew	4 PERSON CREW	\$264.00
4 Hours	ECO FLEET		\$205.12
<b>Subtotal</b>			\$70,344.40
<b>Taxes</b>			\$0.00
<b>Estimate Total</b>			<b>\$70,344.40</b>

Estimate authorized by: \_\_\_\_\_  
Company Representative

Estimate approved by: \_\_\_\_\_  
Customer Representative

Signature Date: \_\_\_\_\_

Signature Date: \_\_\_\_\_

**Cost Share Grant Evaluation Form**  
**Community Engagement Grant**

Name of Reviewer: \_\_\_\_\_ Brett Eidem \_\_\_\_\_  
 Date Reviewed: \_\_\_\_\_ 3-29-2016 \_\_\_\_\_

**Applicant: Field Community School**

**Project: Raingarden retrofit, 4645 4<sup>th</sup> Ave S, Minneapolis**

**Total Project Budget: \$41,900**

**Requested Funding: \$**

**Community Engagement Grant:** must be designed to produce greater public awareness of ways to improve water quality. These projects use a stormwater BMP as a demonstration to educate the public to build community capacity to grow knowledge and support of stormwater management in the community.

<b>Organization Type: School</b>		
<b>Are the Goals of Project Clearly Outlined?</b> Yes, they have a strong curriculum based approach to stormwater and want to have demonstration practices onsite, while reducing runoff and protecting the environment		
<b>Past History: Has the applicant applied before?</b> Received a Cynthia Krieg grant in 2016 for \$14,000 for this curriculum development		
<i>Project Design (30pts)</i>		
<b>Notes:</b> Project is proposing to capture a large amount of impervious surface (25,000 sf) with 4 raingardens (total 1,700 cf storage), 100 lbs TSS removed, 0.5 lbs P removed annually (estimate). There are also pollinator gardens incorporated into the design, but do not have the same water quality improvement.	10 /10	<b>Water Resource Improvement to MCWD</b>
	0 /5	<b>Innovative Design</b>
	5 /5	<b>Budget Detail</b>
	10 /10	<b>Maintenance Plan</b>
<b>Project Design Total:</b>		<b>25 /30</b>
<i>Education &amp; Outreach (60 pts)</i>		
<b>Notes:</b> Great outreach plan, but they have also received Cynthia Krieg funding to implement curriculum and signage for project. Strong partnership to other schools and neighborhood groups that share ball fields and facilities. Many will be engaged by this project. Many letters of support from the community.	20 /20	<b>Influence within Community</b>
	25 /25	<b>Outreach Techniques</b>
	10 /10	<b>Visibility of Demonstration</b>
	0 /5	<b>Leveraging Other Grant Funds</b>
<b>Education and Outreach Total:</b>		<b>55 /60</b>
<i>Water Resource Prioritization (10 pts)</i>		
<b>Notes:</b> Within 4 blocks of creek, and also a strong partner with Parkway Place Townhomes.	5 /10	<b>Alignment with District Priorities</b>
<b>Water Resource Prioritization Total:</b>		<b>5 /10</b>
<b>Total:</b>		<b>85 /100</b>
<i>Funding Approval Process</i>	<b>Potential for up to 75% funding, not to exceed \$100,000</b> - project will need Board approval for funding requests over \$5,000 and a public hearing if it is over \$50,000 - project will be reviewed and compared to other like projects that met the application deadline - project will be reviewed by a staff team, our Citizen’s Advisory Committee, and the MCWD Board of Managers	
<i>Reporting</i>	<b>Required for all Community Engagement projects, needed before phased reimbursement is released</b> - Description and location of outreach techniques used - Number of people engaged and educated on the project - Has the project and outreach initiated other efforts on improving water quality and awareness - Opportunities for monitoring - Inspection Form	

**Comments and Notes:**

I would recommend funding 50%-75% of the raingardens, but with no water quality improvement to the pollinator gardens, I would leave that out of the cost share approval. Cost of RGs- \$27,700

75% of RGs- \$20,775

50% of RGs- \$13,850

Cost Share 2015 Detailed Evaluation Criteria  
Community Engagement Grant Evaluation Criteria

**Project Design- 30 Points**

- Water resource impact to MCWD (cost benefit)
  - o Proposed project captures greater than 50% of site runoff
  - o Reduces flow, promotes infiltration, reduces erosion
  - o Creates habitat and promotes pollinator plants
  - o Entire site design, with detailed breakdown of BMPs and correlating removals of each
- Innovation- something we haven't funded before, innovative use of stormwater BMPs, first of its kind in the region/state, multi-functionality, re-use system
- Budget- Detailed cost estimate of project (construction and outreach efforts)
- Maintenance- having a detailed maintenance plan and recommended schedule

**Education and Outreach- 60 Points**

- Influence within Community
  - o Delineating who within the organization will execute education and outreach efforts
  - o Partnerships
    - Schools, other organizations- establishing classroom curriculum around water quality education
    - Collaborations- working with other organizations on the same water quality project
  - o Community Capacity- Does the project encourage community involvement or service by local citizens?
- Outreach Techniques
  - o Educational Signage- Project specific/ Connections to other District Efforts
  - o Host an Event-utilizing partnerships to host an event that incorporates stormwater management awareness and creates a foundation for building community capacity to impact the problem of water pollution
  - o Innovative Outreach Techniques- Use of cutting edge technology, something we haven't funded before, first of its kind in the region/state, utilizing social media
- Visibility- How easily can passersby understand what the project is and how it works
- Leveraging other funds- is project utilizing other grant dollars or resources to accomplish project goals

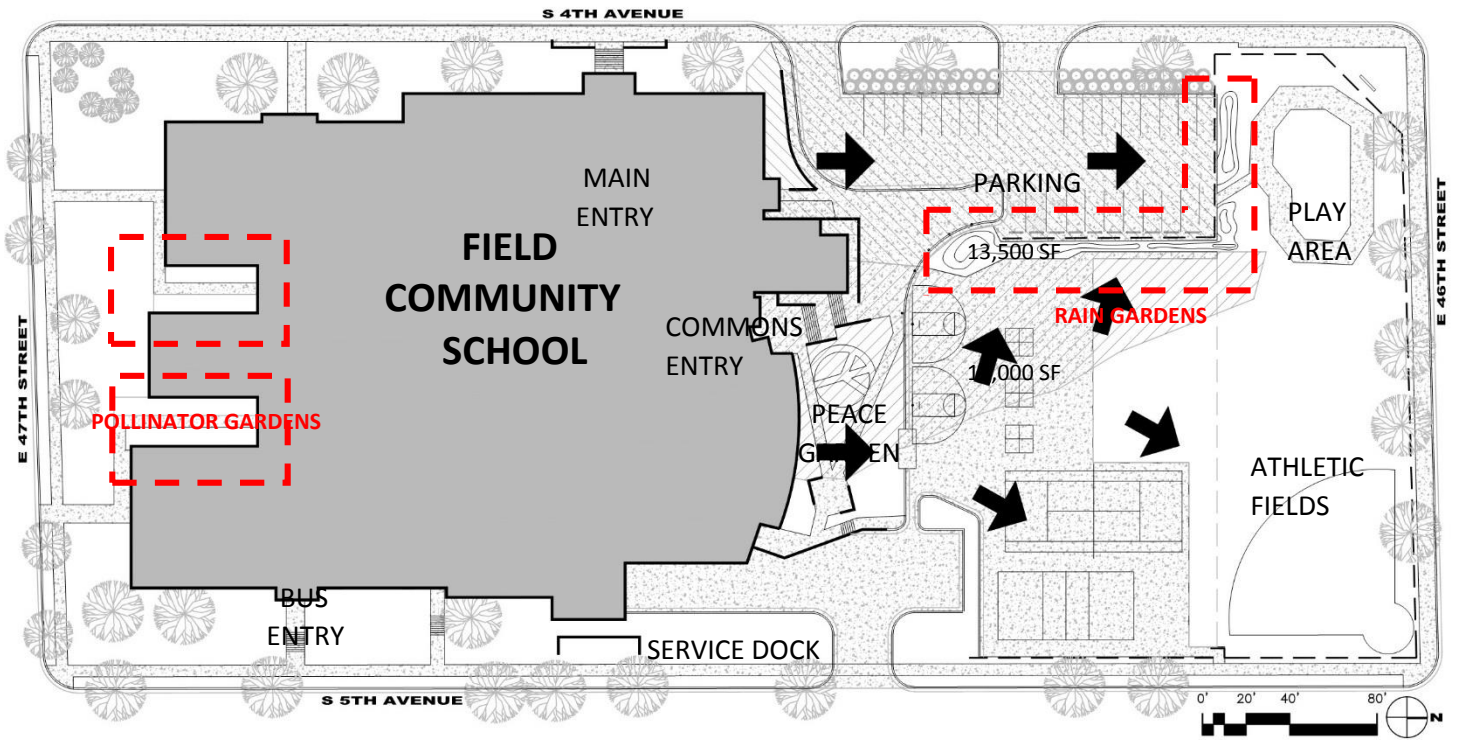
**Water Resource Prioritization- 10- Points**

- Proximity to Focal Geography of MCWD Initiatives
  - o How can the project complement other District initiatives/future projects
- Proximity to an impaired waterbody
  - o How does project address impairments through BMPs or education
- Protection of high value resource

**Reporting- Required for Community Engagement projects**

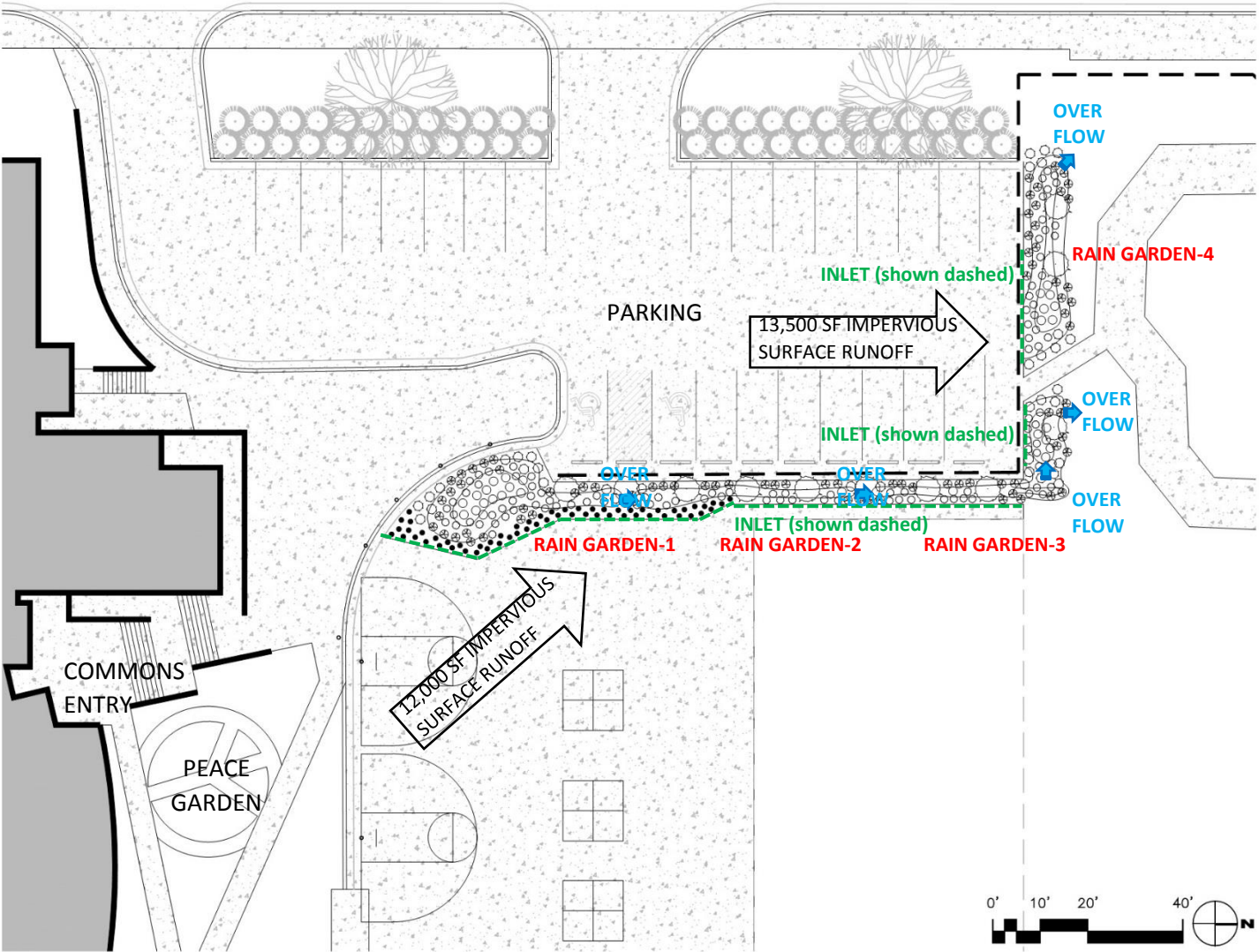
- o Description of outreach techniques used and their location
- o Number of people educated and engaged on the project
- o Has the project and outreach initiated other efforts on improving water quality and awareness
- o Opportunities for monitoring
- o Inspection Report

CONCEPT DESIGN



SITE AREA CALCULATIONS					
	EXISTING	AREA (SF)	PROPOSED	AREA (SF)	COMMENTS
TOTAL SITE AREA	173,500	SF	173,000	SF	
IMPERVIOUS SUFACES					
BUILDING	56,000	SF	56,000	SF	
ASPHALT/ CONCRETE	58,830	SF	49,580	SF	INCLUDES SIDEWALKS, PARKING AREAS AND ASPHALT COURT/PLAY AREAS
PERVIOUS SUFACES					
TURF &/OR LANDSCAPED	58,670	SF	64,020	SF	
PROPOSED POLLINATOR GARDENS			1,700	SF	
PROPOSED RAINGARDENS			1,700	SF	

CONCEPT DESIGN

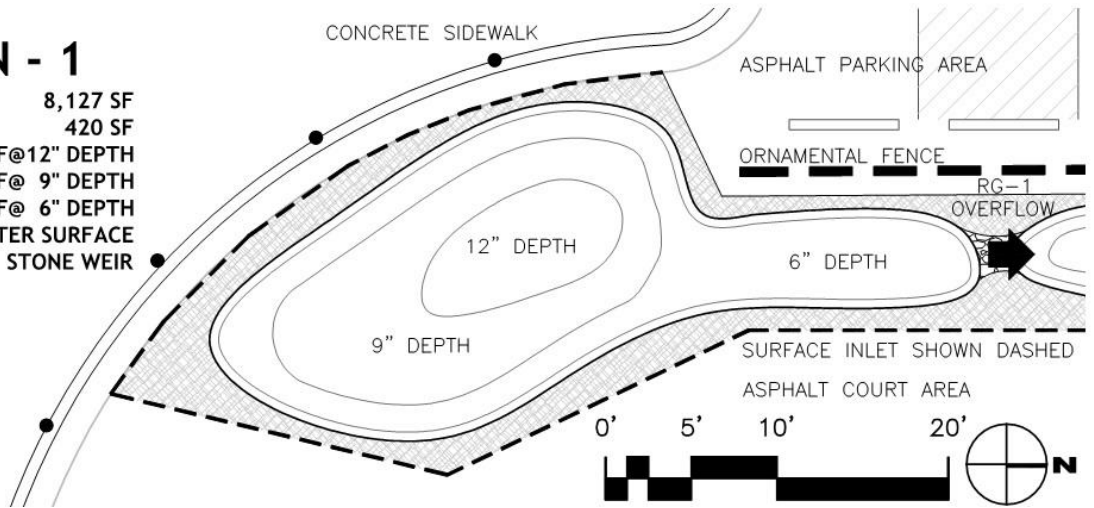




**RAIN GARDEN DESIGN**

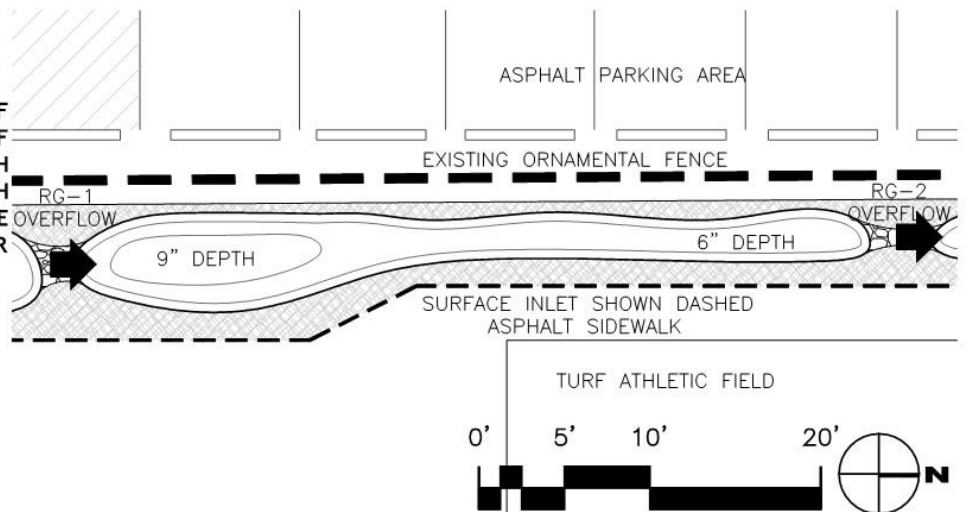
**RAIN GARDEN - 1**

IMPERVIOUS DRAINAGE: 8,127 SF  
 INFILTRATION AREA: 420 SF  
 PONDING DEPTH: 55 SF@12" DEPTH  
 ZONED PONDING 115 SF@ 9" DEPTH  
 250 SF@ 6" DEPTH  
 INTLET TYPE: PERIMETER SURFACE  
 OUTLET TYPE: STONE WEIR



**RAIN GARDEN - 2**

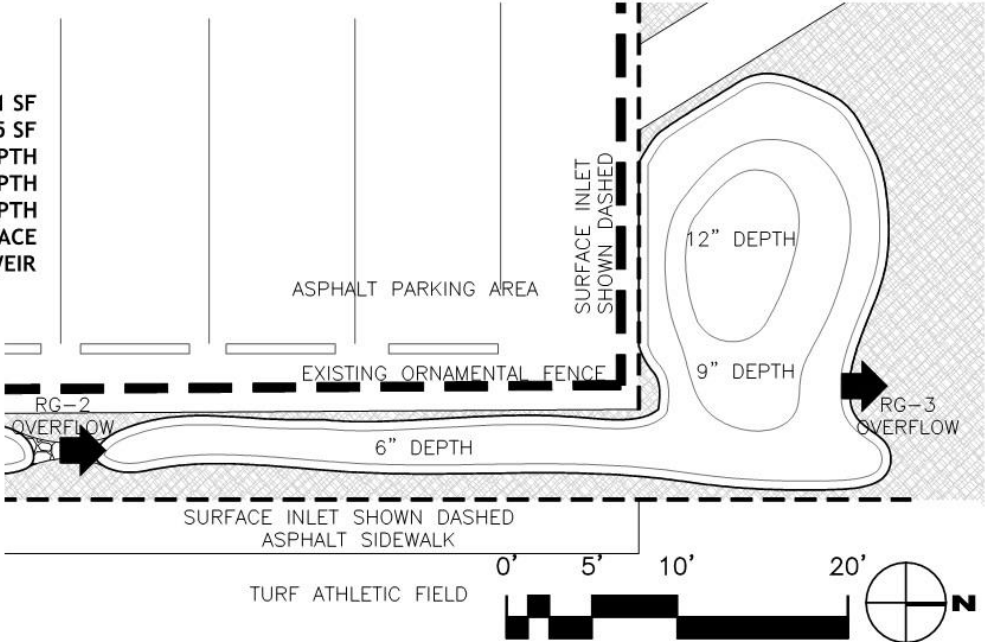
IMPERVIOUS DRAINAGE: 2,872 SF  
 INFILTRATION AREA: 150 SF  
 PONDING DEPTH: 30 SF@ 9" DEPTH  
 ZONED PONDING 120 SF@ 6" DEPTH  
 INTLET TYPE: PERIMETER SURFACE  
 OUTLET TYPE: STONE WEIR



**RAIN GARDEN DESIGN**

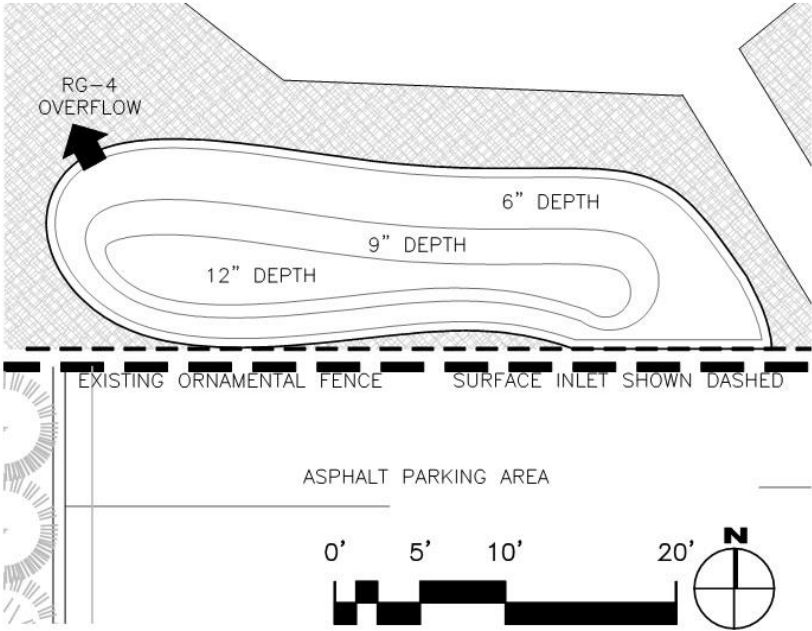
### RAIN GARDEN - 3

IMPERVIOUS DRAINAGE: 7,781 SF  
 INFILTRATION AREA: 365 SF  
 PONDING DEPTH: 60 SF@12" DEPTH  
 ZONED PONDING 125 SF@ 9" DEPTH  
 180 SF@ 6" DEPTH  
 INTLET TYPE: PERIMETER SURFACE  
 OUTLET TYPE: STONE WEIR



### RAIN GARDEN - 4

IMPERVIOUS DRAINAGE: 6,720 SF  
 INFILTRATION AREA: 370 SF  
 PONDING DEPTH: 75 SF@12" DEPTH  
 ZONED PONDING 110 SF@ 9" DEPTH  
 185 SF@ 6" DEPTH  
 INTLET TYPE: PERIMETER SURFACE  
 OUTLET TYPE: STONE WEIR





**Cost Share Grant Evaluation Form**  
**Community Engagement Grant**

Name of Reviewer: Brett Eidem  
 Date Reviewed: 3-30-2016

**Applicant: Metro Blooms**

**Project: Diamond Lake/ Lynnhurst Alleyway project**

**Total Project Budget: \$101,000**

**Requested Funding: \$10,000**

**Community Engagement Grant:** must be designed to produce greater public awareness of ways to improve water quality. These projects use a stormwater BMP as a demonstration to educate the public to build community capacity to grow knowledge and support of stormwater management in the community.

<b>Organization Type: Non profit, neighborhood organized</b>		
<b>Are the Goals of Project Clearly Outlined? Reduce residential runoff to 3 diamond lake and 4 lynnhurst alleys through BMPs</b>		
<b>Past History: Has the applicant applied before? Yes, Metro Blooms also received Cynthia Krieg funding for this outreach (as well as many other alleyway initiatives)</b>		
<i>Project Design (30pts)</i>		
<b>Notes:</b> In total, proposed projects (17 perm. pavement systems, 27 raingardens, 22 native plantings) capture 33,052 sf of impervious surface and reduce TP to Minnehaha Creek by 1.6 lbs/year, TSS by 400 lbs/year and reduce runoff by 583,500 gallons per year. Homeowners will learn how to maintain and most have already attended a raingarden workshop or at least educational meeting and one on one design time with MB. Maybe not the most cost effective project, but is very cost effective in requested funding.	10/10	<b>Water Resource Improvement to MCWD</b>
	0 /5	<b>Innovative Design</b>
	5 /5	<b>Budget Detail</b>
	10 /10	<b>Maintenance Plan</b>
<b>Project Design Total:</b>		<b>25 /30</b>
<i>Education &amp; Outreach (60 pts)</i>		
<b>Notes:</b> Heavy community engagement with these projects. Neighborhood meetings, block meetings, block leaders engaging neighbors with help of Metro Blooms for education and design. It is impressive to see ¾ of a residential block willing to contribute anywhere from \$500-\$5,000 for stormwater retrofits to create a green corridor in their alley.	20 /20	<b>Influence within Community</b>
	20 /25	<b>Outreach Techniques</b>
	5 /10	<b>Visibility of Demonstration</b>
	5 /5	<b>Leveraging Other Grant Funds</b>
<b>Education and Outreach Total:</b>		<b>50 /60</b>
<i>Water Resource Prioritization (10 pts)</i>		
<b>Notes:</b> Alleys are all within a few blocks of either the creek or Diamond Lake. They complement and are going to be promoted in conjunction with Nokomis alleyways and blooming alleys in general.	5 /10	<b>Alignment with District Priorities</b>
<b>Water Resource Prioritization Total:</b>		<b>5 /10</b>
<b>Total:</b>		<b>80 /100</b>
<i>Funding Approval Process</i>	<b>Potential for up to 75% funding, not to exceed \$100,000</b>	
	<ul style="list-style-type: none"> <li>- project will need Board approval for funding requests over \$5,000 and a public hearing if it is over \$50,000</li> <li>- project will be reviewed and compared to other like projects that met the application deadline</li> <li>- project will be reviewed by a staff team, our Citizen’s Advisory Committee, and the MCWD Board of Managers</li> </ul>	
<i>Reporting</i>	<b>Required for all Community Engagement projects, needed before phased reimbursement is released</b>	
	<ul style="list-style-type: none"> <li>- Description and location of outreach techniques used</li> <li>- Number of people engaged and educated on the project</li> <li>- Has the project and outreach initiated other efforts on improving water quality and awareness</li> <li>- Opportunities for monitoring</li> <li>- Inspection Form</li> </ul>	

**Comments and Notes:**

H.O. Contribution- \$41,116

Henn. County Grant (approved)- \$50,000

MCWD Request- \$10,000

Cost Share 2015 Detailed Evaluation Criteria

Community Engagement Grant Evaluation Criteria

**Project Design- 30 Points**

- Water resource impact to MCWD (cost benefit)
  - o Proposed project captures greater than 50% of site runoff
  - o Reduces flow, promotes infiltration, reduces erosion
  - o Creates habitat and promotes pollinator plants
  - o Entire site design, with detailed breakdown of BMPs and correlating removals of each
- Innovation- something we haven't funded before, innovative use of stormwater BMPs, first of its kind in the region/state, multi-functionality, re-use system
- Budget- Detailed cost estimate of project (construction and outreach efforts)
- Maintenance- having a detailed maintenance plan and recommended schedule

**Education and Outreach- 60 Points**

- Influence within Community
  - o Delineating who within the organization will execute education and outreach efforts
  - o Partnerships
    - Schools, other organizations- establishing classroom curriculum around water quality education
    - Collaborations- working with other organizations on the same water quality project
  - o Community Capacity- Does the project encourage community involvement or service by local citizens?
- Outreach Techniques
  - o Educational Signage- Project specific/ Connections to other District Efforts
  - o Host an Event-utilizing partnerships to host an event that incorporates stormwater management awareness and creates a foundation for building community capacity to impact the problem of water pollution
  - o Innovative Outreach Techniques- Use of cutting edge technology, something we haven't funded before, first of its kind in the region/state, utilizing social media
- Visibility- How easily can passersby understand what the project is and how it works
- Leveraging other funds- is project utilizing other grant dollars or resources to accomplish project goals

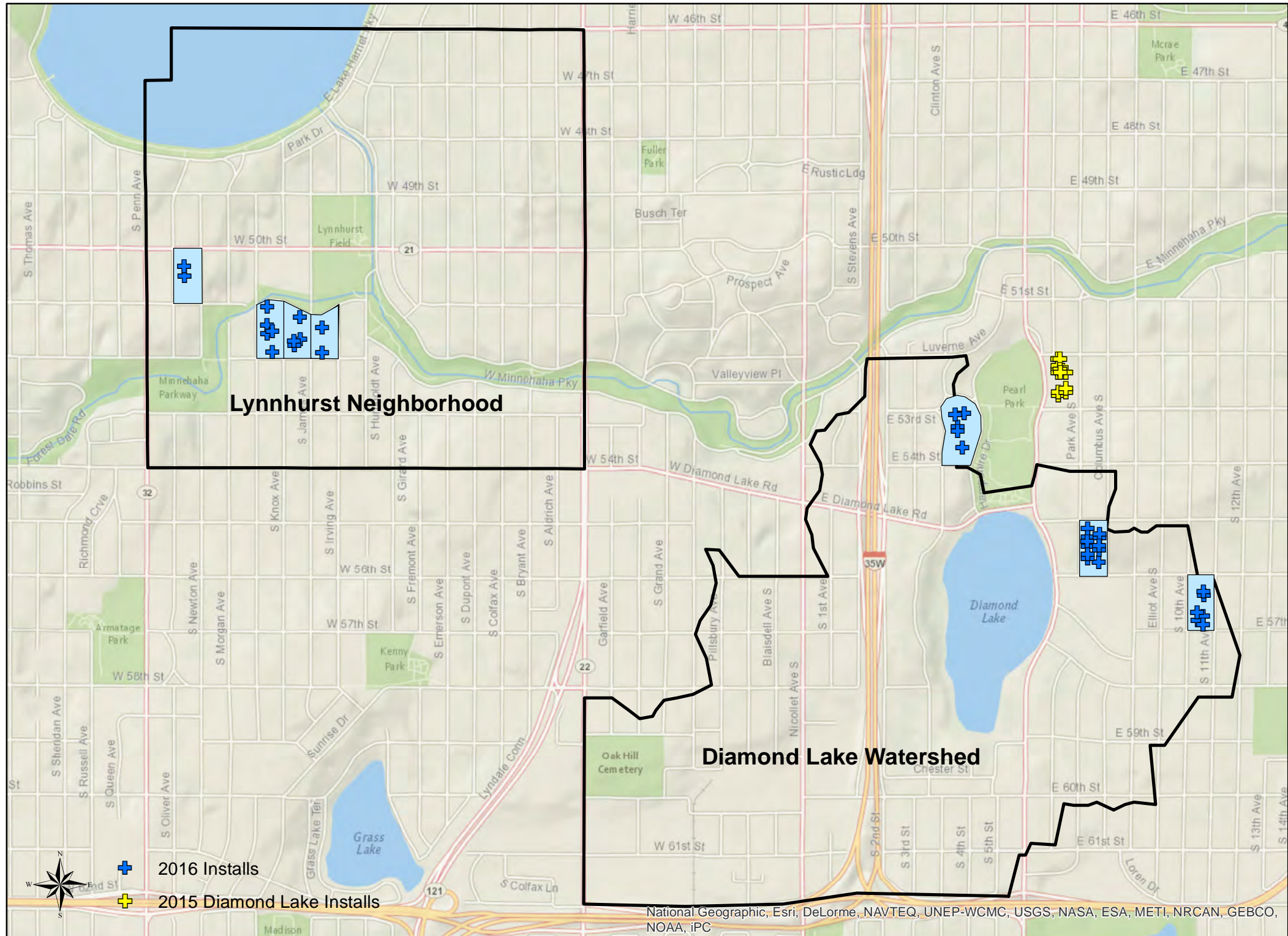
**Water Resource Prioritization- 10- Points**

- Proximity to Focal Geography of MCWD Initiatives
  - o How can the project complement other District initiatives/future projects
- Proximity to an impaired waterbody
  - o How does project address impairments through BMPs or education
- Protection of high value resource

**Reporting- Required for Community Engagement projects**

- o Description of outreach techniques used and their location
- o Number of people educated and engaged on the project
- o Has the project and outreach initiated other efforts on improving water quality and awareness
- o Opportunities for monitoring
- o Inspection Report

# 2016 Diamond Lake & Lynnhurst Blooming Alley Installations



# Blooming Alleys

## Project Cost

ADDRESS: Diamond Lake Subwatershed & Lynnhurst Neighborhood

PROJECT: Diamond Lake & Lynnhurst Blooming Alleys

<b>CONSTRUCTION MATERIALS &amp; LABOR</b>				<b>QTY</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Amount</b>
<b>Permeable Pavement Sections</b>			1532	sq ft	\$ 30.65	\$ 46,955.80	
- J.L. This installs							
<b>Permeable Pavement Walkway</b>			63	sq ft	\$ 38.65	\$ 2,434.95	
- J.L. This installs							
<b>Permeable Pavement Additional Costs</b>						\$ 1,500.00	
- Curves require additional cuts, extra material, membrane between garage & driveway, etc.							
<b>Contractor Mobilization</b>			6	Alley	\$ 400.00	\$ 2,400.00	
- J.L. This charges flat mobilization rate/alley							
<b>Raingardens</b>			2366	sq ft	\$ 5.00	\$ 11,830.00	
- Conservation Corps to install							
<b>Native Plantings</b>			1519	sq ft	\$ 4.00	\$ 6,076.00	
- Conservation Corps to install							
<b>Downspout Redirection &amp; Gutters</b>						\$ 7,200.00	
<b>Materials &amp; Labor Subtotal</b>						<b>\$ 78,396.75</b>	
<b>DESIGN, PROJECT MANAGEMENT, &amp; CONSTRUCTION OVERSIGHT</b>				<b>QTY</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Amount</b>
<b>Permeable Pavement Design/Oversight</b>			17	flat fee	\$ 260.00	\$ 4,420.00	
<b>Raingarden Design/Oversight</b>			25	flat fee (per 150 sq. ft.)	\$ 300.00	\$ 7,500.00	
<b>Native Planting Design/Oversight</b>			12	flat fee (per 150 sq. ft.)	\$ 200.00	\$ 2,400.00	
<b>Project Management</b>			35	flat fee/property	\$ 240.00	\$ 8,400.00	
<b>Design &amp; Oversight Subtotal</b>						<b>\$ 22,720.00</b>	
<b>Project Total</b>						<b>\$101,116.75</b>	

Homeowner Contribution (40%)	\$41,116.75
Hennepin County Grant (Approved)	\$50,000.00
<b>MCWD Request</b>	<b>\$10,000.00</b>



**Cost Share Grant Evaluation Form**  
**Community Engagement Grant**

Name of Reviewer: \_\_\_\_\_ Brett Eidem \_\_\_\_\_  
 Date Reviewed: \_\_\_\_\_ 3-28-2016 \_\_\_\_\_

**Applicant: 3<sup>rd</sup> Church of Christ the Scientist**

**Project: SW Retrofit**

**Total Project Budget: \$322,000**

**Requested Funding: 50%**

**Community Engagement Grant:** must be designed to produce greater public awareness of ways to improve water quality. These projects use a stormwater BMP as a demonstration to educate the public to build community capacity to grow knowledge and support of stormwater management in the community.

<b>Organization Type:</b> Church		
<b>Are the Goals of Project Clearly Outlined?</b> Yes, SW retrofit to alleviate drainage issues and become a more sustainable community. Direct engagement tied to project		
<b>Past History: Has the applicant applied before?</b> No, but has been working with Cost share staff since 2014.		
<i>Project Design (30pts)</i>		
<b>Notes:</b> Large RG replacing a large portion of parking spaces, 4 interconnected gardens with proposed monitoring wells, permeable pavers and a cistern to capture and re-use/infiltrate approximately 80% of site (1.2 acre) and 97% of impervious surface (42,000 sf)	10 /10	<b>Water Resource Improvement to MCWD</b>
	5 /5	<b>Innovative Design</b>
	5 /5	<b>Budget Detail</b>
	10 /10	<b>Maintenance Plan</b>
<b>Project Design Total:</b>		<b>30 /30</b>
<i>Education &amp; Outreach (60 pts)</i>		
<b>Notes:</b> kiddy corner from school that there is already a partnership with, and 5 blocks from Harriet. Signage, tours, case study, networking with affiliate 1 <sup>st</sup> church of Christ (Boston) and monitoring wells and classroom curriculum to be built from project.	15 /20	<b>Influence within Community</b>
	20 /25	<b>Outreach Techniques</b>
	10 /10	<b>Visibility of Demonstration</b>
	0 /5	<b>Leveraging Other Grant Funds</b>
<b>Education and Outreach Total:</b>		<b>45 /60</b>
<i>Water Resource Prioritization (10 pts)</i>		
<b>Notes:</b> Drains to Lake Harriet. Project will utilize MWS to help with monitoring, tours and curriculum. But project does not tie in with other projects.	5 /10	<b>Alignment with District Priorities</b>
<b>Water Resource Prioritization Total:</b>		<b>5 /10</b>
<b>Total:</b>		<b>80 /100</b>
<i>Funding Approval Process</i>	<b>Potential for up to 75% funding, not to exceed \$100,000</b> <ul style="list-style-type: none"> <li>- project will need Board approval for funding requests over \$5,000 and a public hearing if it is over \$50,000</li> <li>- project will be reviewed and compared to other like projects that met the application deadline</li> <li>- project will be reviewed by a staff team, our Citizen’s Advisory Committee, and the MCWD Board of Managers</li> </ul>	
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**Comments and Notes:**

A very expensive project for the pollutant reductions. There is also a great educational opportunity here with the proposed outreach and classroom curriculum. I would compare the value of the outreach outcomes of this project to Field School. But this project is much more expensive with a parking lot reconstruction. There are additional benefits to the monitoring wells, re-use cistern and pavers as other BMPs, but where do we draw the line for demonstration value? With budget we will need to pick and choose what parts of this project we want to fund.

Cost Share 2015 Detailed Evaluation Criteria  
Community Engagement Grant Evaluation Criteria

**Project Design- 30 Points**

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# PROJECT FEATURES

Designed for a 2 Inch Rain event

## Two Main Drainage Areas:

**AREA 1:** Building (80%) and Lawn Areas (west and south) to be treated with an interconnected series of 4 rain gardens

**AREA 2:** Building (20%), Church Main Entrance and Existing Impervious Parking Lot to be treated with an underground storage system, permeable paver arrival court and rain gardens

## Treatment System/Educational Summary:

- 6 Rain Gardens
- 6 Concrete Forebays for Sediment Capture
- Permeable Paver Arrival Court
- Underground Storage Chamber System
- 3 Educational Signs at key locations around site
- 2 Educational Testing Wells for Post-Treatment Water
- 6 Educational Access ports for Testing Infiltration Rates







**PHASE 1: PARKING LOT RECONSTRUCTION WITH RAIN GARDEN, PERMEABLE PAVER ENTRY AND NATIVE VEGETATIVE BUFFER**

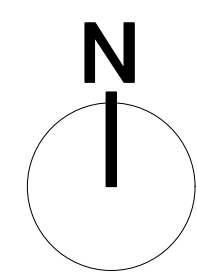
\* Pavement, ex: 29,199 sf

\* Parking lot rain gardens and vegetative buffer: 6,068 sf (20.7% impervious reduction)

\* Permeable pavers: 1,067 sf (additional 3.7% impervious reduction)

## LEGEND

-  Direction of Surface Water Flow
-  Inlet/Catch Basin
-  Rain Garden Connection Piping
-  Forebay/Cleanout
-  Educational Signage
-  Above Ground Cistern



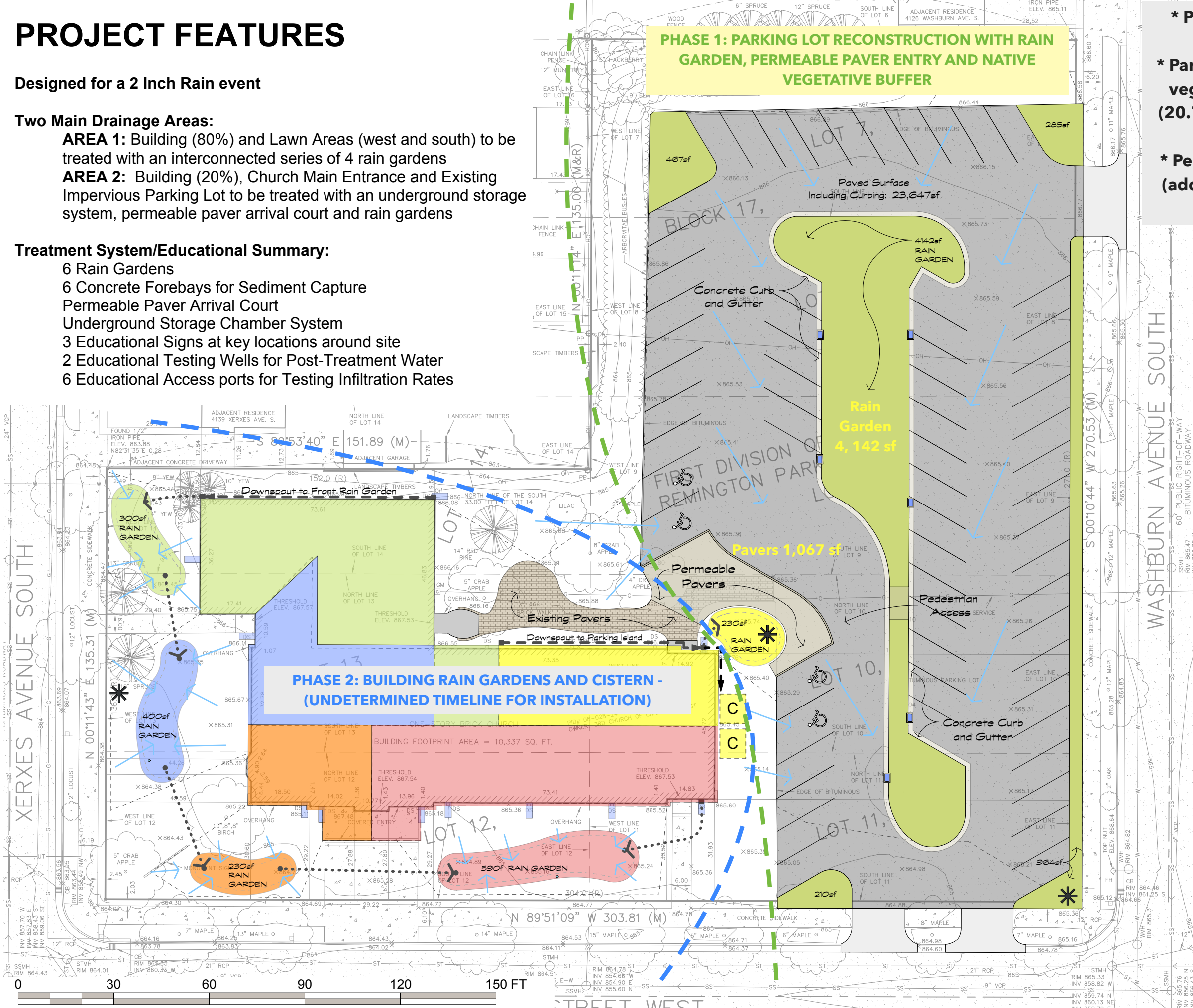
# Third Church of Christ Scientist

## WATERWISE: A Stormwater Retrofit

4147 Xerxes Avenue South, Minneapolis, Minnesota 55410

EARTH WIZARDS, INC. smart pavements, landscapes, lakes & streams, design & planning  
1071 County Highway 10, Minneapolis, Minnesota 55432 T (763)784-3833 www.earthwizards.com

LS-1	Date	2/6/2014	Sheet	1 of 2
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**PHASE 2: BUILDING RAIN GARDENS AND CISTERN - (UNDETERMINED TIMELINE FOR INSTALLATION)**

Pavers 1,067 sf

Rain Garden 4,142 sf

300sf RAIN GARDEN

400sf RAIN GARDEN

230sf RAIN GARDEN

590sf RAIN GARDEN

210sf

364sf

Paved Surface Including Curbing: 23,647sf

Concrete Curb and Gutter

Permeable Pavers

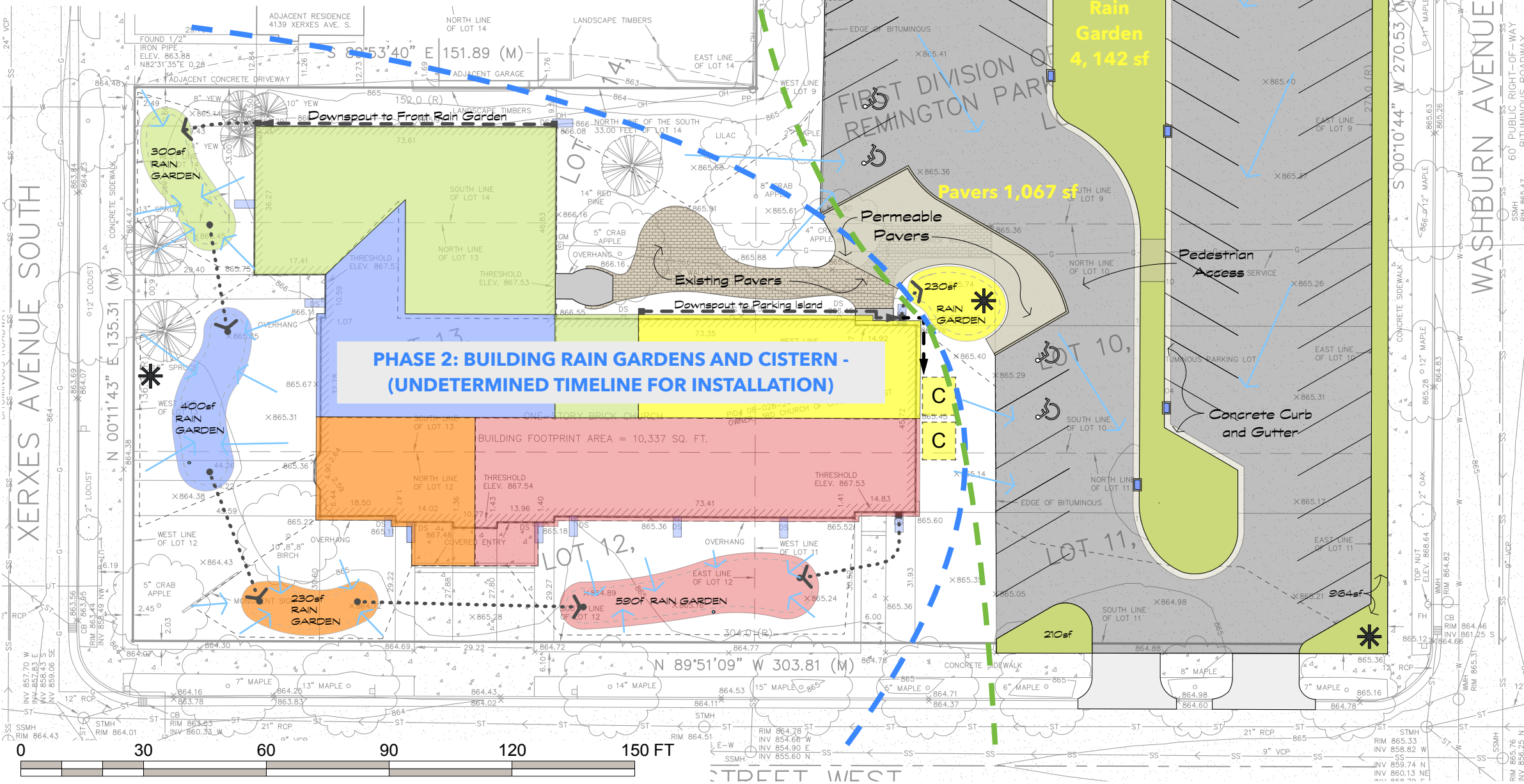
Existing Pavers

Pedestrian Access

Concrete Curb and Gutter

Downspout to Front Rain Garden

Downspout to Parking Island







EARTH WIZARDS

# Proposal

## Balancing Urban Development and Water Conservation

**Client Name:** Third Church of Christ, Scientist  
**Project Name:** Third Church of Christ, Scientist: Stormwater Retrofit  
**Jobsite Address:** 4147 Xerxes Avenue South Minneapolis, MN 55410  
**Billing Address:** 4147 Xerxes Avenue South Minneapolis, MN 55410  
**Estimate ID:** EST302439  
**Date:** Mar 17, 2016

<b>Parking Lot Retrofit</b>	<b>\$106,770.75</b>
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The existing asphalt parking lot will be reclaimed. Some of this material will be stockpiled to allow for subcutting of underlying subsoils to alter the drainage flow pattern of the lot. Once the subgrade is established, the reclamings will be replaced as the base for the new asphalt parking lot. To control sediment entering the rain garden, perimeter curb gutter will be installed with six openings. These openings will have stone forebays constructed to capture sediment and will provide an easy visual inspection when cleanout is needed. The rain garden will be excavated approximately 18" with 12" of amended soils and both larger and smaller plantings.

1	Each	Reclaiming	\$4,894.33
1	Lump sum	Striping	\$917.69
1	Lump sum	Rental Equipment	\$1,468.30
168	Hours	BASE Crew - Reclaim, Subcut, Rough and Finish Grade	\$12,894.00
160	Hours	PAVE Crew	\$11,592.00
168	Hours	BASE FLEET	\$6,432.72
160	Hours	PAVE FLEET	\$11,131.20
180	Hours	Dumptruck - Tandem	\$5,000.40
90	Hours	Dumptruck - Triaxle	\$2,596.50
270	Hours	DRIVER Dumptruck	\$14,920.20
700	Tons	Dump - Asphalt, Concrete, Stone	\$3,892.00
200	Cubic Yards	Dump - Soil	\$2,224.00
500	Tons	Asphalt LV3	\$28,140.00
3	Weekly	Portable Bathroom	\$667.41

<b>Rain Garden and Vegetative Buffer</b>	<b>\$115,852.23</b>
------------------------------------------	---------------------

22	Hourly	Design - Elevations & Staking	\$1,884.30
470	Linear Feet	Concrete Curb/Gutter	\$10,983.90

90	Hours	ITO - Trucking	\$9,910.80
1	Lump sum	Excavator	\$611.79
515	Hours	ECO Install Crew	\$33,990.00
28	Hours	ECO Planting Lead	\$1,719.20
68	Hours	ECO Planting Labor	\$2,697.56
515	Hours	ECO FLEET	\$26,409.20
320	Cubic Yards	Dump - Soil	\$3,558.40
2	Tons	Stone, wallstone - natural for forebays	\$859.44
28	Tons	Class V Base Aggregate (under Curbing)	\$513.80
270	cy	Rain Garden Soil - 80/20 Blend (Sand/Compost)	\$8,259.30
41	cy	Mulch, Double Shredded Hardwood	\$2,257.46
1	Lump sum	Plants, Large	\$5,035.77
1	Lump sum	Plants, Plugs	\$1,888.41
1	Lump sum	Plantings, Perimeter	\$3,776.82
6	Ea	Delivery	\$667.38
1	Ea	Delivery - Clam	\$278.09
1	Tons	Stone - Flagging for Forebay Bottom	\$550.61

### Permeable Paver Entry

**\$32,258.20**

Drop-off court entry of permeable pavers with under drain to rain garden. 18" excavation with 12" of 1.5" granite, 3" of 3/8" granite and standard permeable paver such as Interlock Eco.

168	Hours	ECO Install Crew	\$11,088.00
1	Lump Sum	Rental Equipment	\$278.09
0.5	Weekly	Portable Bathroom	\$111.24
5	Hrs	Stacy - Project Layout and Supervise	\$444.95
168	Hours	ECO FLEET	\$8,615.04
87	Cubic Yards	Dump - Soil	\$967.44
80	Tons	Granite 1.5" Clear	\$3,551.20
24	Tons	Granite 3/8" Clear	\$998.40
1067	Square Feet	Paver, Permeable	\$5,729.79
0.33	Roll	Geotextile, Tensor Grid (or similar)	\$121.13
330	square yards	Geotextile, woven	\$132.00
1	Lump sum	Paver sealant	\$122.36
1067	Square foot	Credit for asphalt/labor install	-\$3,265.02
6	Ea	Delivery - \$150.00	\$1,071.18
40	Linear feet	Edging, paver restraint	\$90.00

20 Hours

ITO (Independent Truck Operator)

\$2,202.40

**Educational Programming**

**\$5,000.00**

Design, supplies, installation of monitoring wells. Budget allowance for water quality testing and technical advisor for 3 year monitoring study.

6 Hours	Design - Complimentary	\$0.00
4 Each	Monitoring Wells	\$400.00
3 Years	Budget for Testing (lab or equipment for science class)	\$2,100.00
1 Lump sum	Technical Advisor	\$1,500.00
20 Each	Earth Wizards' Rain Garden Manual	\$1,000.00

**Subtotal** \$259,881.18

**Taxes** \$74.98

**Estimate Total** **\$259,956.16**

Estimate authorized by: \_\_\_\_\_  
Company Representative

Estimate approved by: \_\_\_\_\_  
Customer Representative

Signature Date: \_\_\_\_\_

Signature Date: \_\_\_\_\_