



Rice Creek Watershed District

Stormwater Management Grant Program

2024 Application Form

I. APPLICANT INFORMATION

Organization (to be named as Grantee): White Bear Township
 Street Address: 1281 Hammond Road
 City, State, Zip: White Bear Township, MN 55110
 Tax Status: Local Government Tax ID#: 41-6005642
(e.g., local government, non-profit 501(c)(3), private business, etc.)

II. PROJECT CONTACTS

Project Officer: <u>Patrick Christopherson</u>	Financial Officer: <u>Tom Kelly</u>
Title: <u>Clerk/Treasurer</u>	Title: <u>Finance Officer</u>
Telephone: <u>651-747-2768</u>	Telephone: <u>651-747-2760</u>
Fax: _____	Fax: _____
Email: <u>pat.christopherson@whitebeartownship.org</u>	Email: <u>tom.kelly@whitebeartownship.org</u>

III. PROJECT INFORMATION

Project Name: Bellaire Ave Storm Pond
 Location(s) of Project: SE corner of Bellaire Avenue & South Shore Boulevard
 City: White Bear Township State: MN County: Ramsey
 Project Start Date: 6/1/2024 Project Completion Date: 10/30/2024

Project Type (check only those that directly apply):

- Water Quality Treatment Project Stormwater Reuse Irrigation Project
- Peak Runoff Rate Control Project Runoff Volume Control / Flood Storage Project
- Other: Prevent overtopping of pond, reducing maintenance and safety issues

Is a RCWD Rule C permit required for this project? YES NO UNKNOWN

IV. GRANT REQUEST

RCWD Grant Funding Requested: \$ 118000
 Applicant Match Funding Committed: \$ 118000
 State/Other Funding Committed: \$ 0 Source(s): _____
 Total Estimated Project Cost: \$ 236000

Would you be willing to accept grant funding in an amount less than requested? YES NO

V. SIGNATURE OF APPLICANT

I certify that the information contained within this application is true and accurate.

Signature of Project Officer

12/21/2023

Date

VI. Executive Summary / Abstract

Include a brief Executive Summary (100 words or less) that summarizes the main goals and activities of the project and the expected environmental outcomes that will be achieved. Identification of the total amount of funds being requested along with the required match, and how you heard about the program should be included in the Executive Summary. The summaries will be used in the grant review process and on the RCWD website, for projects that are funded.

The goal of the improvements is to alleviate overflow of the existing stormwater pond in Bellaire Park, which is undersized and frequently overtops and flows overland through the park directly into White Bear Lake, creating issues with maintenance, safety and lack of water quality.

The scope of work includes constructing a new stormwater pond in a vacant lot at the SE corner of Bellaire Ave and South Shore Blvd, to prevent overtopping during storm events. White Bear Township purchased the lot to perform the water quality improvements. White Bear Township is requesting \$118,000 out of a project total cost of \$236,000.

VII. Description (10 points)

The RCWD has established guidelines for prioritizing projects based on location. Water quality improvement projects should be located to benefit a RCWD lake classified as either "Protection" or "Restoration" (see Table 2-4 in the RCWD 2020 Watershed Management Plan), and/or a waterbody with an approved Total Maximum Daily Load (TMDL) study or other recognized diagnostic water quality study. Flood storage and runoff rate control projects should focus on reducing peak flood elevations in known regional flood hazard areas and/or documented local problem areas. Describe the specific watershed management, water quality or quantity need(s) that the project will address and its impact on the target water resource within the District.

Name the target waterbody benefitting from this project: White Bear Lake

List and describe the Best Management Practices (BMPs) to be incorporated into this project.

The project includes construction of a new stormwater pond to prevent overtopping events in the existing undersized Bellaire Beach Park pond. This will result in less maintenance, fewer safety issues, and increased water quality.

As part of this project, Rip Rap will also be added.

If applicable, describe how the project impacts or protects RCWD groundwater resources, minimizes impervious surfaces, and/or maximizes infiltration.

There is no impervious area increase or modifications.

Provide drawings, maps and/or schematics which graphically illustrate the location and conceptual design of the project. **(Attach separate sheets.)**

Describe how long-term operation and maintenance of the project will be accomplished.

The Township will inspect the pond according to the schedule required by the MS4 General Permit of once per permit term for stormwater ponds.

Based upon inspection results, repair, replacement or maintenance needs will be identified to restore the pond for proper operation and to prevent negative environmental impacts.

VIII. Prioritization (15 points)

How does the project support existing regional planning efforts such as the RCWD Watershed Management Plan, municipal surface water management plans, TMDLs, or other recognized diagnostic studies? Is the project included on the Member Community Project List (Appendix G) within the RCWD Watershed Management Plan? Please provide citations where possible.

The project is included under the RCWD Watershed Management Plan Appendix G, section 4.3.6.

The project supports goals in the White Bear Township Surface Water Management Plan:

Section 4.0.1 Lakes Goal-Protect and preserve the quality of local lakes

Section 4.0.7 Water Quantity Goal-Control the rate of storm water runoff from development to reduce downstream flooding and erosion

IX. Targeting (15 points)

Describe the critical pollution or flooding sources and risks addressed by this project. Explain why the proposed project is the most cost-effective and feasible means to attain the expected resource benefits. Has a formal analysis been conducted to substantiate this position?

The existing stormwater pond at Bellaire Beach Park is undersized, frequently overtopping and flowing overland through the park into White Bear Lake. This creates safety, water quality and maintenance issues.

An analysis of 5 storm pond scenarios was done to compare combinations of additional ponding and pipe-upsizing for the purpose of preventing overtopping events.

Expanding the pond within the same park boundaries directly reduces the park area and is undesirable. Analysis of building an additional pond in a vacant lot across from the park was done. It shows that peak discharges would be lowered, and overtopping can be prevented during 2- and 5- year storms in a cost effective and feasible manner if a new pond is constructed on the vacant lot and the outlet pipes in the existing pond are upsized from 15" to 27".

X. Measurable Outcomes (20 points)

Provide a detailed estimate and description of the anticipated pollutant reduction, stormwater rate/volume reduction, groundwater withdrawal reduction, and/or other environmental or natural resource benefits associated with the project. Describe the methods and cite the sources (i.e. P8 model, HydroCAD, XP-SWMM, MIDS, MN Stormwater Manual, etc.) used to calculate or estimate the pollutant reductions and/or hydrologic outcomes. **(Mandatory for RCWD to consider your proposal!)**

The proposed improvements were modeled in HydroCAD, showing reduced peak total and overflow discharges from the existing Bellaire Park pond during storm events. In addition, overtopping would not occur during 2- and 5-year storms.

Existing Conditions	2-year	5-year	10-year	50-year	100-year
Peak Secondary (Overflow) Discharges (cfs)	5.36	14.94	23.39	53.74	77.18
Total Peak Discharges (cfs)	13.37	23.35	32.03	62.99	86.78
Proposed Conditions (New pond and upsized outlet pipe)	2-year	5-year	10-year	50-year	100-year
Peak Secondary (Overflow) Discharges (cfs)	0.00	0.00	5.47	31.78	55.02
Total Peak Discharges (cfs)	12.90	19.35	27.64	56.98	81.84

Describe the strategy for monitoring and/or evaluating the results or effectiveness of the project, including how success will be defined and measured.

The existing and proposed ponds will be inspected by the Township per the MS4 schedule. Instances of overtopping in the existing pond will be compared to rainfall totals to determine if the results from the HydroCAD model are being met.

XI. Cost-Effectiveness (20 points)

Provide a detailed budget that lists each item for which funding is being requested. You must also list the sources of required local matching contributions. Why is this the most cost-effective approach to solving the problem? Have other alternatives been explored? **(Attach separate sheets if needed.)**

A cost estimate is attached. Five stormwater pond design scenarios were investigated for improving the existing Bellaire Park pond, including upsizing the existing outlet pipe, two scenarios for installing a new stormwater pond in a vacant lot across from Bellaire Park, and two scenarios for installing large ponds that are bigger than the vacant lot but provide retention of larger storm events.

Upsizing the existing pond in the park directly reduces the park area and is not desirable. The proposed improvements greatly increase storage, reduce peak and overflow runoff rates, prevent overtopping of the pipe during 2- and 5- year storms, and will improve water quality. The proposed pond takes up the entire vacant lot, and cannot be made any larger.

XII. Project Readiness (10 points)

Please describe the anticipated timeline for implementing this project. What steps have been taken to ensure that the project can be implemented according to this timeline? Are any permits needed?

The project is anticipated for Summer 2024 construction. The Township has already purchased the vacant lot where the proposed pond will be located. A permit is required under Rule D (Erosion and Sediment Control Plans), for which the Township will apply.

XIII. Engagement Opportunities (10 points)

Demonstrate any potential for public engagement, education and demonstration and describe what methods will be used to ensure that the purpose and success of the project are made known to the public. Applicants must incorporate a public engagement component into the project.

Neighboring residents will be contacted during planning and construction of the project. The Township is interested in installing a permanent project sign, partnering with RCWD on determining the appropriate language.

**BELLAIRE AVENUE POND
WHITE BEAR TOWNSHIP
ENGINEER'S PRELIMINARY ESTIMATE OF COST**

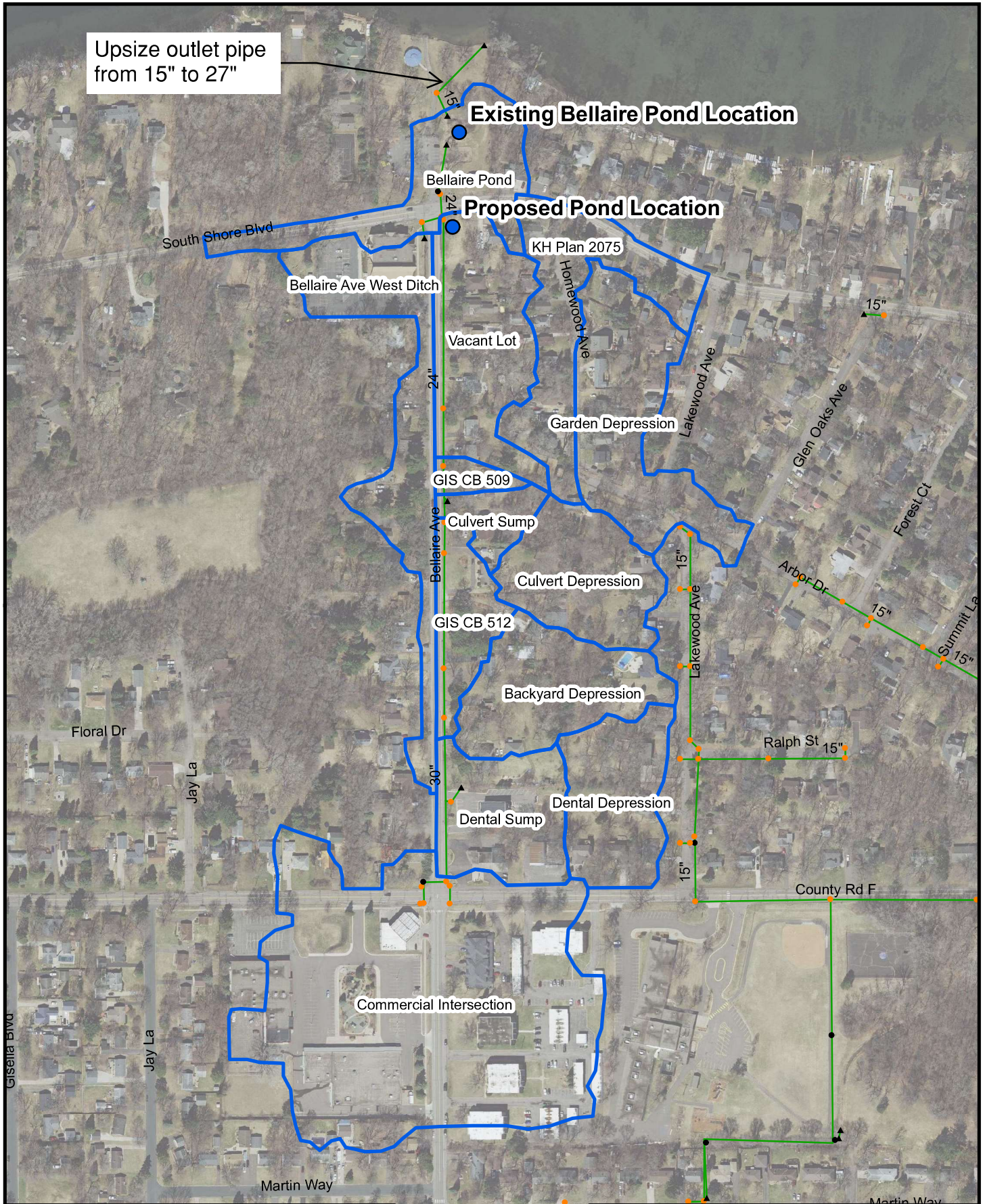
DRAINAGE IMPROVEMENTS

1	LS	MOBILIZATION	\$	10,000
1	LS	TRAFFIC CONTROL	\$	4,000
1	EA	TREE REMOVAL	\$	1,500
188	LF	REMOVE SEWER PIPE (STORM)	\$	4,000
440	LF	SILT FENCE TYPE MS	\$	1,400
1,265	CY	POND EXCAVATION	\$	51,000
125	CY	COMMON EMBANKMENT (CV)	\$	2,500
2	EA	24" RC PIPE APRON	\$	6,000
2	EA	27" RC PIPE APRON	\$	7,000
62	LF	24" RC PIPE SEWER	\$	9,000
188	LF	27" RC PIPE SEWER	\$	30,000
2	EA	CONNECT TO EXISTING STORM SEWER	\$	4,000
440	LF	CHAIN LINK SAFETY FENCE	\$	25,000
1	EA	FENCE GATE	\$	5,000
110	CY	FINE FILTER AGGREGATE (CV)	\$	7,300
110	CY	FILTER TOPSOIL BORROW	\$	7,300
0.25	ACRE	SEEDING	\$	1,800
20	CY	RIP RAP	\$	2,000
CONSTRUCTION COST			\$	178,800
+10% CONTINGENCIES			\$	17,880
SUBTOTAL WITH CONTINGENCIES			\$	196,680
ENGINEERING, LEGAL, FISCAL, AND ADMINISTRATION (20%)			\$	39,320
SUBTOTAL WITH ENGINEERING, LEGAL, FISCAL, AND ADMINISTRATION			\$	236,000

TOTAL ESTIMATED PROJECT COST **\$ 236,000**

RCWD COST-SHARE FUNDS REQUESTED **\$ 118,000**

The estimated costs are according to average prices received on similar projects in other areas. The actual costs for this project will be determined through a bidding process and can vary with market conditions at the time of the bid.



Upsize outlet pipe from 15" to 27"

Existing Bellaire Pond Location

Proposed Pond Location

Bellaire Pond

KH Plan 2075

South Shore Blvd

Bellaire Ave West Ditch

Vacant Lot

Garden Depression

GIS CB 509

Culvert Sump

Culvert Depression

GIS CB 512

Backyard Depression

Dental Depression

Dental Sump

Commercial Intersection

County Rd F

Martin Way

Floral Dr

Jay La

Gisella Blvd

Jay La

Homeewood Ave

Lakewood Ave

Glen Oaks Ave

Forest Ct

Arbor Dr

Summit La

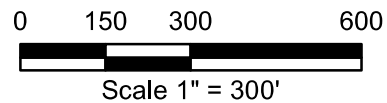
Ralph St

Lakewood Ave

Martin Way

Figure 1: Drainage Area Map

Date: 05/25/2022
 By: RJH
 Check:



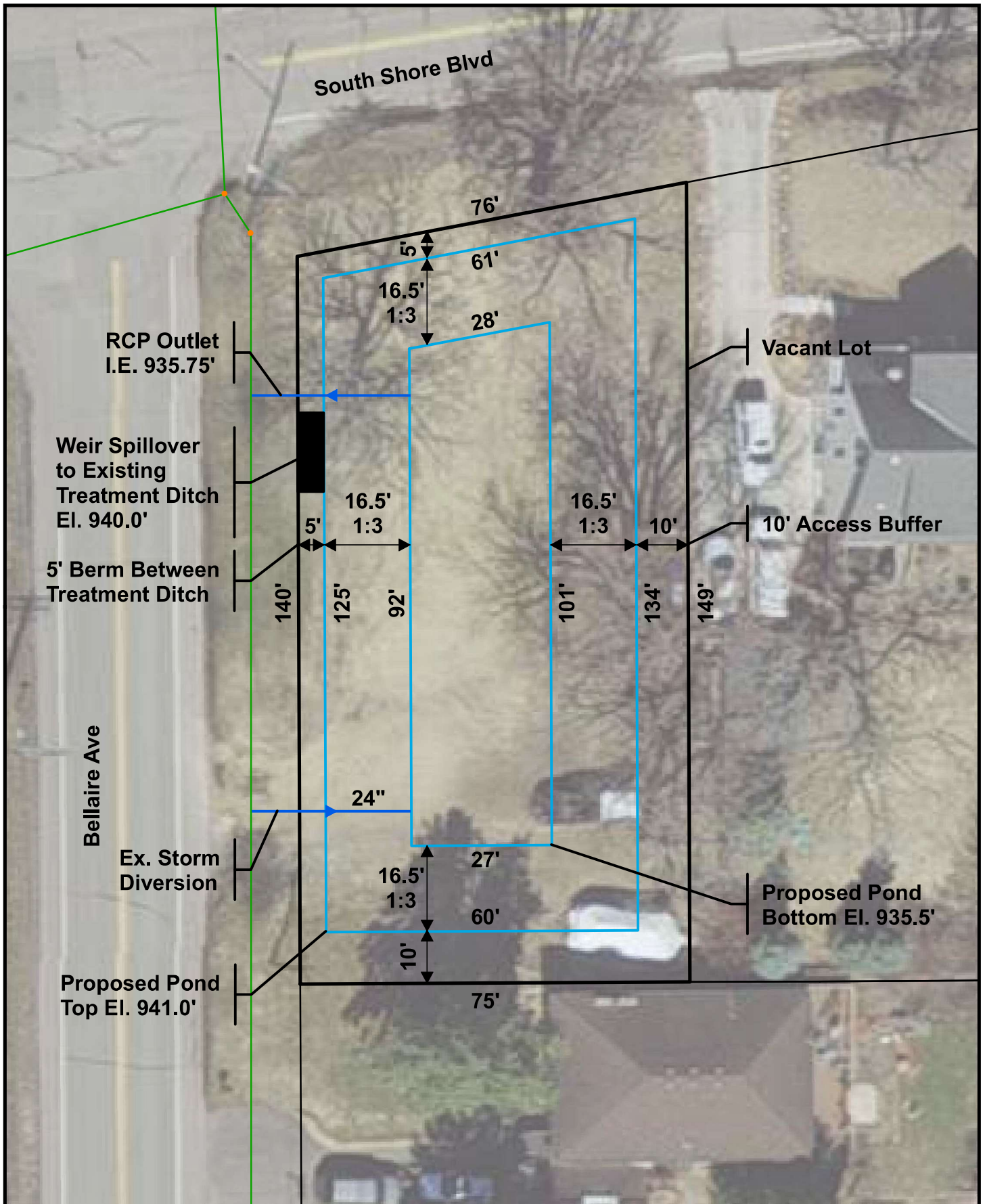


Figure 3: Potential Pond Layout

Date: 05/25/2022
 By: RJH
 Check:

