

AGREEMENT
Between
SPALDING DEDECKER ASSOCIATES, INC.
and
WALLED LAKE IMPROVEMENT BOARD
NOVI , MICHIGAN
for
PROFESSIONAL ENGINEERING SERVICES

PROJECT: WALLED LAKE IMPROVEMENT STUDY
SDA Proposal No.: PR09-140

This Agreement is effective this 31st day of JUNE, 2009, and is between the WALLED LAKE IMPROVEMENT BOARD, c/o City of Novi, 45175 W Ten Mile Road, Novi, MI 48375, hereinafter referred to as the "LAKE BOARD" and SPALDING DEDECKER ASSOCIATES, INC., 905 South Blvd. East, Rochester Hills, Michigan 48307 (hereafter "ENGINEER").

WITNESSETH:

WHEREAS, the LAKE BOARD has determined to undertake a lake improvement study for Walled Lake with the requested scope of services as defined in the Request for Proposals dated March 20, 2009 (attached hereto as Exhibit A), and

WHEREAS, the ENGINEER desires to provide such services, as set forth below, and in the attached and incorporated Exhibits, under the terms and conditions hereof.

WHEREAS, the LAKE BOARD requires the services of Registered Engineers who are qualified and competent to serve in that capacity and perform the functions and services set forth in MCL 324.30909, and

NOW, THEREFORE, in consideration of the covenants and promises hereinafter set, the LAKE BOARD and ENGINEER mutually agree as follows:

1. General Scope of Services and Term of Agreement:

- a. For and in consideration of payment by the LAKE BOARD as provided in this Agreement, ENGINEER shall perform the services described herein, including the services described in EXHIBITS A and B attached hereto, in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances, and in compliance with all terms and conditions of this Agreement.
- b. Services shall be provided to the LAKE BOARD in the form of a comprehensive Final Report submitted to the LAKE BOARD for formal acceptance. Project deliverables for the Final Report shall be provided in a form as described in EXHIBIT B: II. Project Approach and Scope of Services, items A-H.
- c. The term of this Agreement shall be for engineering consulting services by the ENGINEER for the preparation of a feasibility study for improvements to Walled Lake in Novi, Michigan for the LAKE BOARD. Services under this Agreement will commence approximately June 3, 2009 and will continue as seasonal conditions allow until September 23, 2009 at which time a "draft" Final Report will

be provided to the LAKE BOARD for review. Upon receiving comments related to the "draft" Final Report by the LAKE BOARD, in writing or orally, the ENGINEER shall revise and submit a Final Report to the LAKE BOARD no later than 14 calendar days thereafter for acceptance of the Final Report. Acceptance of the Final Report shall occur no later than the next regularly schedule LAKE BOARD meeting, but no later than 45 calendar days after submittal.

- d. The LAKE BOARD agrees that all documents of the Final Report, including but not limited to: the plans, drawings, or other contracted services are primarily for the use of LAKE BOARD. All documents prepared by the ENGINEER, including tracings, drawings, estimates, specifications, field notes, investigations, studies, reports, computer files, field data, notes, etc., in connection with the performance of its duties under this agreement are instruments of service in respect to this Project, and ENGINEER shall retain ownership and property interest therein (including the right of reuse at the discretion of the ENGINEER) whether or not the Project is completed. The LAKE BOARD acknowledges the Consultant's documents, including electronic files, as instruments of professional service. Nevertheless, the final documents prepared under this Agreement shall become the property of the LAKE BOARD upon completion of the services and payment in full of all monies due to the ENGINEER. The LAKE BOARD shall not reuse or make any modification to the documents without the prior written authorization of the ENGINEER.

2. Payment for Services:

- a. The Lump Sum, Not-to-Exceed Fee for the Walled Lake – Lake Improvement Study (including Laboratory Services) is \$16,115.00. This fee is inclusive of all Employee Wage Rates, Overhead costs, and Direct or Indirect Service Costs associated with furnishing the services described herein.
- b. For services rendered by the ENGINEER, 80% of the fees shall be due and payable no later than 30 days after delivery of the draft report to the LAKE BOARD.
- c. For services rendered by the ENGINEER, 100% of the fees shall be due and payable no later than 30 days after acceptance of the final report by the LAKE BOARD.

3. Insurance and Indemnification:

a. Insurance

Prior to commencing work under this Agreement, ENGINEER agrees to provide to the LAKE BOARD the name of its insurance carrier and proof of the required coverage for this project, which is set forth below:

- 1) Professional Liability/Errors and Omissions Coverage in the minimum amount of \$1,000,000 per occurrence and \$2,000,000 aggregate.
- 2) Commercial General Liability policy in the amount of \$1,000,000 combined single limit per occurrence and aggregate, including contractual liability.
- 3) Comprehensive Automobile Liability Policy to cover bodily injury and property damage arising out of ownership, maintenance or use of any motor vehicle owned, non-owned or hired vehicles in the minimum amount of \$1,000,000 combined single limit per occurrence. No fault coverage complying with statutory requirements of the State of Michigan are also required.

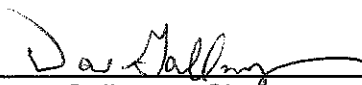
- 4) Workers' Compensation Insurance including Employer's Liability to cover employee injuries or disease compensable under the Workers' Compensation statutes of the State of Michigan Employee's liability coverage shall be in the minimum amount of \$500,000 per occurrence.

b. Indemnification

By signing this Agreement, ENGINEER agrees to indemnify, defend and hold harmless the Lake Board and the Lake Board's agents, from and against any and all claims, loss, liability, damages, costs, and expenses, including, but not limited to, all reasonable fees and charges of attorneys, and other professional services, and other time and expenses incurred by the Lake Board using its own staff and all court or other dispute resolution costs that arise out of and to the extent caused by the negligent acts, errors, or omissions of ENGINEER, its agent, subcontractors, or employees, regardless of whether or not such claim, loss, liability damage, cost, or expense is caused or contributed to, in part, by a party indemnified in the contract.


This document, including any attached constitutes the entire Agreement between SPALDING DEDECKER ASSOCIATES, INC. and the WALLED LAKE IMPROVEMENT BOARD and shall not be amended, altered or changed, except by written authorization executed by both parties.

WALLED LAKE IMPROVEMENT BOARD

BY: 
Dave Galloway, Chairperson


In the presence of: Brian Coburn, Secretary

SPALDING DEDECKER ASSOCIATES, INC.

BY: 
David W. Bluhm, PE, Project Manager



In the presence of:

EXHIBIT A

REQUEST FOR PROFESSIONAL SERVICES

WALLED LAKE--LAKE IMPROVEMENT BOARD

March 20, 2009

I. Introduction

The Walled Lake—Lake Improvement Board is seeking proposals from qualified professional engineering consultants (Consultant) to identify problems with Walled Lake and to present recommendations for lake improvements.

The Lake Board intends to contract with an engineering consulting firm that possess the appropriate skills, experience, resources and reputation to complete the project.

The consulting services will be completed in accordance with all applicable federal, state and local regulations, policies and contractual guidelines. Walled Lake is located partially within the City of Novi and partially within the City of Walled Lake. Two copies of all final data will be delivered to the Lake Board in digital format on a DVD or CD-ROM (one copy for each community), accompanied by eight hard copies of all documents. The Lake Board shall review all deliverables from each associated project task before final acceptance.

II. Project Background

Walled Lake is located in Sections 2 and 3, T. 1 N., R. 8. E., City of Novi, and Sections 34 and 35, T. 2 N., R. 8 E., City of Walled Lake, Oakland County, Michigan and has a total surface area of approximately 644 acres and is largely surrounded by residential properties. The City of Walled Lake passed a resolution on November 18, 2008 and the City of Novi passed a resolution on January 12, 2009 for the establishment of a lake improvement board pursuant to Public Act 451 of 1994, the Natural Resources and Environmental Protection Act, as amended for the improvement of Walled Lake. The purpose of the lake board is to provide for the improvement of Walled Lake to control nuisance growth of invasive aquatic plants in Walled Lake.

III. Scope of Work

The consultant will define tasks that meet the requirements of the “Inland Lake Improvements of the Natural Resources and Environmental Protection Act” Part 309 Public Act 451 of 1994, as amended. To be specific, the services will involve the preparation of the following:

- Engineering feasibility report,
- Economic study report, and
- Estimates of cost (including aquatic vegetation control and water quality assessments).

The following services are to be provided by the Consultant, while not all-inclusive, will each be considered for study and report:

- A. Analyze aquatic weed growth and make recommendations for removal and control. Prepare a map which shows the locations and types of aquatic vegetation, and approximate lake bottom contours. GIS data is available from the City of Novi or Oakland County Water Resource Commissioner's Office to the selected consultant.
- B. Determine the lake water quality with respect to oxygen content and its relationship to fish population; determine possible adverse effects of stratification, and recommend whether aeration and/or other water conditioning is required.
- C. Determine lake water quality using the following listed parameters and recommend appropriate action to improve water quality:
 1. *E. Coli*
 2. Ph
 3. Oxygen concentration
 4. Phosphorus concentration
 5. Nitrogen concentration
 6. Chlorophyll a concentration
 7. Sechi disc Transparency
 8. Theoretical nutrient budget
- D. Evaluate the lake bottom sediments and associated nutrients, and their removal and appropriate disposal.
- E. Investigate alternative methods of lake improvement other than weed control, aeration and dredging, if applicable.
- F. Recommend methods to eliminate or reduce future sediment loading of Walled Lake.
- G. Prepare estimates of costs for each of the above items, individually, with an analysis of effects of proposed assessments on the local units of government and interested landowners and residents.
- H. Submit a schedule for completion based upon a Notice to Proceed.

IV. Proposal Content

The written proposal should focus on the project's specific needs, services to be provided and your specific approach to accomplish the work. The RFP should be presented in 8.5" x 11" format with a minimum font size of 12 and should not exceed fifteen (15) pages.

The information to be included in the proposal is included in Attachment A. It is encouraged to add to your proposal any key elements that are believed to enhance the project's success and best utilize the firm's experience and expertise. The proposal should include a project description and the specific approach, tools, and techniques that will be used to complete this work on schedule. The proposal should be concise and an authorized representative of the Consultant shall sign the proposal.

V. Selection Process

Written proposals submitted by the deadline will be evaluated by the Lake Board based upon the firm's demonstrated ability and specific approaches to best meeting the project needs, including but not limited to: understanding of the project, recent experience with this type of work, experience of the personnel assigned to this project, and compensation for services (cost).

An oral presentation may be required as part of the evaluation process. If an oral presentation is requested, then the project manager and other key team members shall represent the consultant at the presentation.

Based on the written proposal and, if necessary, oral presentation, a consulting firm that best meets the Lake Board's needs will be selected. The Lake Board will initiate an agreement with the selected consultant in terms of the submitted proposal; however, if an agreement cannot be negotiated, then another submitting consultant may be contacted.

The Lake Board reserves the right of not selecting any consultant, rejecting all proposals, or cancelling the project prior to contract execution without any compensation to the selected consultant.

It is the Lake Board's intent to enter into an agreement with the selected consultant to provide services as identified under Paragraph III, "Scope of Work." The Lake Board reserves the right at its sole discretion to delete or modify any services, thereby affecting the project scope, at any time during the design process. The selected consultant will be entitled to appropriate compensation for work provided to date on such deleted or modified facilities without any additional compensation for theoretical "loss of profit."

VI. Contract Terms and Conditions

The work shall be completed under a not-to-exceed cost contract agreement.

Specific contract terms and conditions shall be negotiated with the Lake Board. It is recognized that a single firm may not offer all of the proposed services and that subconsultants may be included in the submittal. All subconsultants shall be subject to Lake Board approval. The Lake Board reserves the right to contract directly with other firms for additional services. Additionally, the Lake Board will not allow mark-up on

work done by an individual subconsultant if the work by that subconsultant exceeds 50 percent of the total consultant cost.

The Lake Board will not compensate for any work done pertaining to the written proposal and/or oral presentation made in response to this solicitation. The contents and commitments in the RFP shall remain firm for 90 calendar days from the submittal due date.

Insurance and Indemnification

The selected consultant will be required to incorporate the Lake Board's insurance requirements and indemnification language into the final contract, as stated herein. The Consultant shall provide the name of the insurance carrier who will provide the required coverage for this project in the proposal.

Insurance

- 1) Professional Liability/Errors and Omissions Coverage in the minimum amount of \$1,000,000 per occurrence and \$2,000,000 aggregate.
- 2) Commercial General Liability policy in the amount of \$1,000,000 combined single limit per occurrence and aggregate, including contractual liability.
- 3) Comprehensive Automobile Liability Policy to cover bodily injury and property damage arising out of ownership, maintenance or use of any motor vehicle owned, non-owned or hired vehicles in the minimum amount of \$1,000,000 combined single limit per occurrence. No fault coverage complying with statutory requirements of the State of Michigan are also required.
- 4) Workers' Compensation Insurance including Employer's Liability to cover employee injuries or disease compensable under the Workers' Compensation statutes of the State of Michigan Employee's liability coverage shall be in the minimum amount of \$500,000 per occurrence.

Indemnification

The Consultant shall agree to indemnify, defend and hold harmless the Lake Board and the Lake Board's agents, from and against any and all claims, loss, liability, damages, costs, and expenses, including, but not limited to, all reasonable fees and charges of attorneys, and other professional services, and other time and expenses incurred by the Lake Board using its own staff and all court or other dispute resolution costs that arise out of and to the extent caused by the negligent acts, errors, or omissions of the Consultant, its agent, subcontractors, or employees, regardless of whether or not such claim, loss, liability damage, cost, or expense is caused or contributed to, in part, by a part indemnified in the contract.

VII. Schedule & Project Contact Information

The following is an anticipated schedule for the RFP process. The Lake Board reserves the right to modify any part of this schedule.

RFP Release:	March 20, 2009
Proposals Due:	April 21, 2009 at 2:00 PM

Board Award: date to be determined in May 2009

Any further questions regarding this project should be directed to:

Brian Coburn, P.E.	City of Novi	bcoburn@cityofnovi.org	248-735-5632
Karen Warren, P.E.	Oakland County WRC	warrenk@oakgov.com	248-858-0598

VIII. Responses

To be considered, eight copies of the RFP must be submitted, in a sealed envelope that is clearly marked with **“Walled Lake Engineering Services”**, to the City of Novi Clerk’s Office no later than **2:00 PM, local prevailing time, April 21, 2009**, and shall be addressed to:

Brian Coburn, P.E., Secretary
Walled Lake Lake Improvement Board
c/o City of Novi Clerk’s Office
45175 W Ten Mile Road
Novi, MI 48375

IX. Disclosure of Contents

All information provided in the RFP will be held in confidence and will not be revealed or discussed with competitors until the deadline for submission of proposals has expired. Section 13(1) (j) of the Michigan Freedom of Information Act, as amended, provides that a public body may exempt from disclosure as a public record a bid or proposal by a person to enter into a contract or agreement, until the time for the public opening of the bids or proposals, or if a public opening is not conducted, until the deadline for submission of bids or proposals has expired.

Attachment A
PROPOSAL CONTENT

Proposals should address the elements identified below. Whenever discussing a particular team member or past project, please identify the associated consultant/subconsultant if different from the prime consultant.

The proposal shall include the following item:

Section 1: Understanding of the Project

Provide a brief statement as to your understanding of the Lake Board and the Engineering Consultant's role. Include a short narrative description of your proposed work plan and the approach to fulfilling the requirements of the engineering feasibility report, economic study report and cost estimates as required under Public Act 451 of 1994, the Natural Resources and Environmental Protection Act, as amended. Specify methods in approaching the project to address the scope of work and discuss the proposed organization and management tools to be used.

Section 2: Related Project Experience

Indicate the experience of recent work similar to the Lake Board's proposed project. Provide descriptions and references for each project that include the project's budget and schedule of completion, delays and any other pertinent information that can be applied towards this project.

Section 3: Personnel to be assigned the Work (Project Team)

Identify the personnel to be assigned to the project along with a description of their experience and qualifications. Also, provide specific information describing the qualifications of other personnel providing administrative and technical support, if any. Identify the office from where the personnel will be working along with the means of communication such as phone, fax, and email during the project.

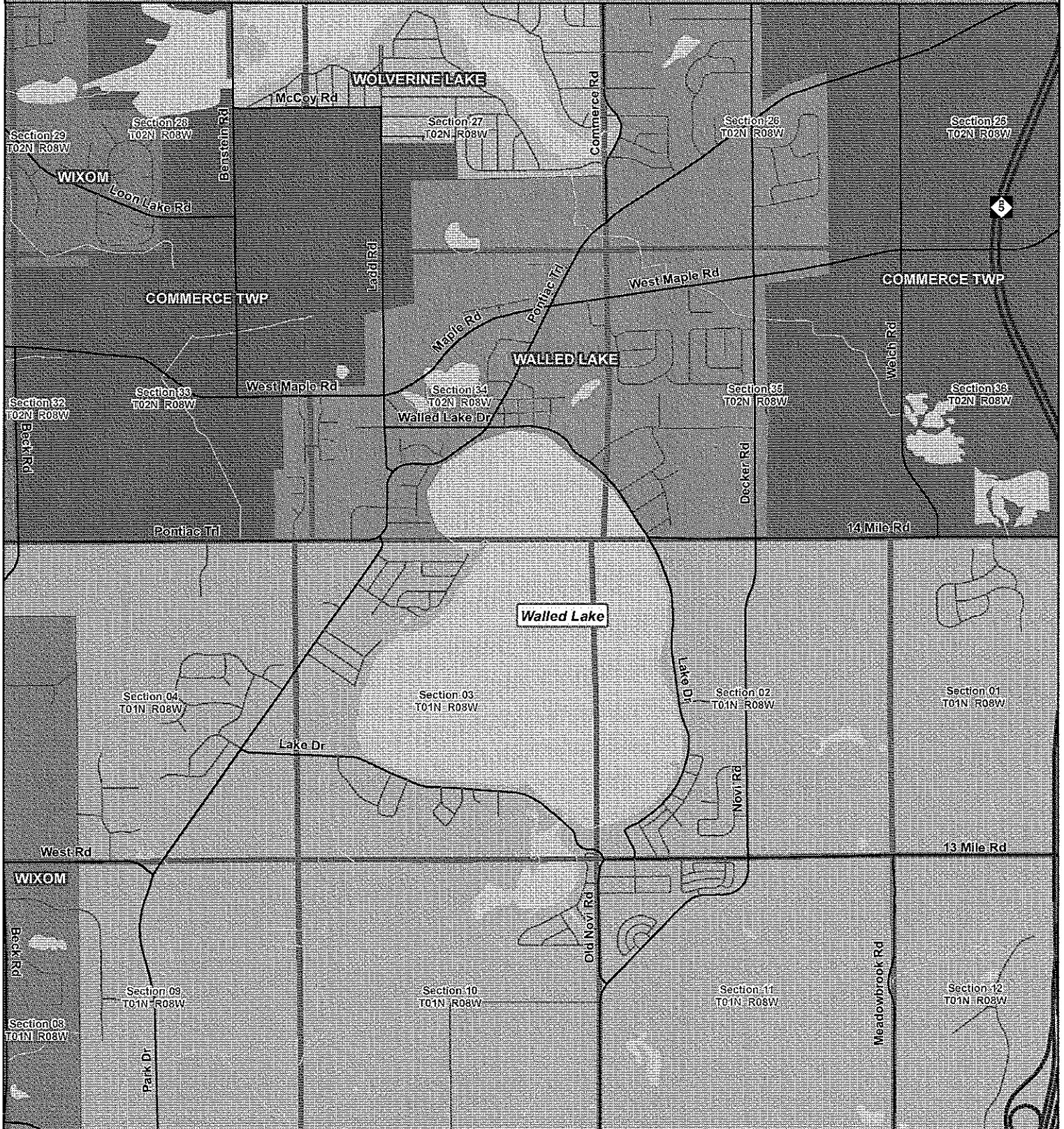
Section 4: Compensation for Services (Fee)

Provide an estimate of hours necessary to complete the services outlined in the scope of work. Provide the proposed method for compensation including employee wage rates, overhead and other direct costs associated to furnishing the services quoted as lump sum, not to exceed maximum cost.

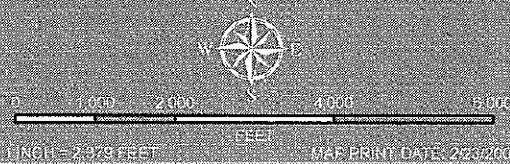
Attachment B
Location Map

Walled Lake Location Map

Walled Lake - Lake Improvement Board



CITY OF NOVI
 ENGINEERING DIVISION
 45175 W TEN MILE ROAD
 NOVI, MI 48375-3024
 (248) 547-0444
 MAP AUTHOR: CHRIS BLOUGH
 CITY GIS MANAGER



MAP INTERPRETATION NOTICE
 Map information depicted is not intended to represent a substitute for any official primary source. This map was prepared in accordance with National Map Accuracy Standards and uses the most recent accurate survey available to the people of the City of Novi. Boundary inaccuracies and area calculations are approximately and should not be considered as survey measurements performed by a licensed professional surveyor as defined in Michigan Public Act 132 of 1976 as amended. Please contact the City GIS Manager for information on accuracy and liability information related to this map.

EXHIBIT B - Understanding of the Project

II. PROJECT APPROACH AND SCOPE OF SERVICES

As outlined in the Request for Professional Services, the following items, while not all inclusive, will be defined as the basic criteria for preparing the engineering feasibility report, an economic study report, and estimates of cost:

A. Analyze aquatic weed growth and make recommendations for control and/or removal of the weeds. Prepare a map which shows the locations and types of aquatic vegetation, and approximate lake bottom contours.

The SDA Team, through ASTI Environmental, will send qualified professionals to record the general concentrations of the plant species growing in Walled Lake. It is recommended that this field plant study be completed in the summer of 2009 to adequately record and classify the plant species density. Should time be a key element for the Lake Study, our office is prepared to provide this service sooner, but it should be noted that state permitting for weed management may require that the weed study results be provided during the period of high concentrations (summer months). We are prepared to discuss the issue of timing for the weed study either during consultant interviews or at your convenience. Access to the lake will be coordinated through the Lake Board liaison.

All information from the lake visits will be documented according to the Department of Environmental Quality (DEQ) Procedures for Aquatic Vegetation Surveys. A map of the occurrence of submergent and emergent (occurring in the littoral zone and adjacent wetlands) vegetation by species will be documented in individual Aquatic Vegetation Assessment Sites (AVAS) throughout the lake. The information collected will be used to develop recommendations for the control and/or removal of the aquatic weeds.

Aquatic weed control alternatives that will be considered include, but are not limited to, an herbicide treatment program and mechanical weed harvesting. SDA will investigate the West Road City of Novi-owned properties near the Walled Lake Treatment Plant as an alternative for storing and drying weeds from weed harvesting operations to reduce odors near residential properties.

The Institute for Fisheries Research Lake Inventory digitized contours will be utilized for the approximate lake bottom contours. The dataset, known as the Digital Water Atlas v1.0, developed under the Digital Water Atlas Project will be incorporated with the City of Novi and City of Walled Lake GIS dataset and will be utilized to develop the AVAS and lake contour maps.

B. Determine the lake water quality with respect to oxygen content and its relationship to fish population; determine possible adverse effects of stratification, and recommend whether aeration and/or other water conditioning is required.

The SDA Team, through ASTI Environmental, will perform profile sampling for oxygen concentration (dissolved oxygen) within Walled Lake. This will be measured at the water sampling locations (method and location

EXHIBIT B - Understanding of the Project

described in C. below), as well as one additional oxygen profile sampling the deeper area of Walled Lake to establish the relationship between oxygen content and stratification.

Temperature is an important water quality variable, as it controls both the amount of dissolved oxygen (DO) that can be held in solution and the metabolic rate and reproductive activities of aquatic organisms. Water holds less oxygen in solution with increased temperature, and higher temperatures increase metabolic activity in fish and invertebrates. This, in turn, increases their demand for DO. Fish and other aquatic organisms can therefore suffer metabolic stress at high temperatures.

Oxygen concentration readings in Walled Lake will determine the lake's natural aeration function. We are not aware of any current mechanical aeration system being actively used in Walled Lake. Based on oxygen concentration testing results, we will make recommendations with regard to the lake's natural aeration production ability. Our past experience with Walled Lake indicates that due to the more shallow areas along the southwest and wind/wave action, these areas would experience greater oxygen mixing. Should oxygen concentrations be determined inadequate, the SDA Team will evaluate and make recommendations with regard to mechanical aeration of Walled Lake. The use of aeration through air injection (diffuser) systems introduces oxygen by causing the water in the cold bottom water layer to rise, pulling this water into the warm surface layer. When the colder water reaches the lake surface, it flows across the surface and eventually sinks, mixing with the warmer water. Eventually, the entire lake becomes nearly equal in temperature with oxygen distributed throughout. The equal temperature throughout the lake reduces the nutrient draw from the sediments in the lake. This method is more effective in deeper lakes due to the stratification of the lake temperature. This evaluation will include system type, location, and general system design.

C. Determine the lake water quality using the following listed parameters and recommend appropriate action to improve water quality.

Water samples are proposed to be taken from seven locations in Walled Lake representative of varying lake conditions. These samples will be taken at major inlet locations, the lake's outlet point, and areas with expected high aquatic weed concentrations. One sampling event is proposed which will be taken during the summer months, either in late June or during the month of July.

Samples will be collected in a controlled fashion and delivered to a third party testing laboratory for analysis. Brighton Analytical Laboratories, an experienced local testing laboratory, will provide testing for the water samples. Brighton Analytical Laboratory will test for the following listed parameters:

1. *E. Coli*
2. *Ph*
3. *Oxygen concentration*
4. *Phosphorous concentration*
5. *Nitrogen concentration*
6. *Chlorophyll a concentration*
7. *Secchi disc transparency*



EXHIBIT B - Understanding of the Project

8. *Theoretical nutrient budget*

Dissolved oxygen (DO), conductivity, pH, and temperature will be measured in the field using a Yellow Springs Incorporated (YSI) Model 566 MPS (Multi Probe System) hand-held, multi-parameter meter. Water clarity will be measured using a Secchi disk. Water quality grab samples will be collected at mid-depth within the water column at each sampling point using a Van Dorn bottle and stored on ice until delivered to Brighton Analytical Laboratory for chemical analysis for *E. coli*, total phosphorus, nitrite + nitrate, ammonia-nitrogen, and total Kjeldahl nitrogen, and chlorophyll *a*.

The results from each parameter will then be mapped and utilized to develop conclusions and recommendations regarding the existing water quality of Walled Lake.

D. Evaluate the lake bottom sediments and associated nutrients, and their removal and appropriate disposal.

Lake bottom characteristics will be analyzed by probing the lake bottom in 10 locations to determine the top of weeds, top of sediment, and natural lake bottom and will be performed in the shallower sections of the Lake. Identifying the sediment depths will help to determine the locations of greatest sediment loading and areas of potential sediment removal.

SDA will research and document sediment and nutrient loading sources and locations for use in recommendations for sediment removal and for future elimination or reduction (discussed later).

Laboratory testing of lake sediment samples, which includes testing for metals and hazardous materials, will only be necessary should the Lake Study determine that lake dredging is necessary for the proper disposal of dredged materials. It is recommended that any sampling/testing parameters be identified and budgeted based on specific dredging needs. Nutrient testing is unnecessary since most aquatic plants are free floating and get their nutrients directly from the water column.

There are a number of available options for sediment load reduction in Walled Lake of both biological and mechanical nature. These include the introduction of microbes, which has been successfully used to break down organic matter and control algae and weed populations in lakes. While lake dredging will be considered in our report, we do not believe that it will ultimately prove to be a feasible alternative from a cost or lake accessibility perspective. Several mechanical dredging options do exist however, including hydraulic dredging, which essentially vacuums the sediments for collection without substantial suspension of solids. A suitable sediment dewatering location would also be identified along with a proper disposal site.

E. Investigate alternative methods of lake improvement other than weed control, aeration and dredging, if applicable.

SDA will provide alternative methods of lake improvement that address the concerns of the Walled Lake Improvement Board and its residents. Such methods to consider include an education program such as the Michigan Department of Environmental Quality Cooperative Lakes Monitoring Program. Self imposed



EXHIBIT B - Understanding of the Project

restrictions may also be developed that will benefit the lake water quality such as: limited use of phosphorus based fertilizers, encourage the raking of leaves adjacent to shoreline (to prevent the leaves from being blown into the lake), restricted yard waste burning, irrigation schedules, and the development of neighborhood environmental awareness programs. A vegetative buffer zone should also be considered as a best management practice (BMP).

These programs also offer the most important aspect available to any organizations that share common goals, and that is networking. The Board will be able to make contact with other associations and lake improvement boards that have already implemented some of the programs and projects that the residents may be considering.

The SDA Team will define and refine these available options in our discussions with lake stakeholders and the Lake Board and provide detailed recommendations for implementation consideration.

F. Recommend methods to eliminate or reduce future sediment loading of Walled Lake.

The SDA Team will evaluate the sources of sediment loading, which includes an evaluation of the contributing watershed, review of the major inlets, and other direct and indirect sediment and nutrient load sources. Once the sources of sediments and their effects are researched and understood, we will recommend known methods to minimize and reduce future sediment loading.

Such considerations may include a street sweeping program, catch basin sump clean-out program, encouraging/enforcing proper construction runoff control measures for new development, educational materials for residents for the use of low phosphorous fertilizer and its application, and working with local sources of fertilizer to ensure they carry environmentally friendly products. As indicated in Section E above, the SDA Team will define and refine these available options in our discussions with lake stakeholders and the Lake Board and provide detailed recommendations for implementation consideration.

G. Prepare cost estimate for each of the above items, individually, with an analysis of effects of proposed assessments on the local units of government and interested landowners and residents.

Based on the findings in our field studies, testing, and research, the SDA Team will prepare a description of available and recommended lake management improvement programs and provide preliminary cost estimates for the implementation of each program. Recommendations will include both short and long term management program options. Estimates will include construction costs, design effort (where necessary), permitting, construction engineering (where necessary), as well as other program management costs. Where program recommendations exceed year one, inflationary adjustment will be included in cost estimates to allow the Lake Board to accurately develop yearly assessment district budgets.

EXHIBIT B - Understanding of the Project



The SDA Team will evaluate and develop the methodology for the distribution of program costs based on direct lake parcel and lake frontage benefit units. These two benefit methods will be presented to the Lake Board for review and consideration. Proposed individual program costs will be spread based on the benefit unit methodology selected by the Lake Board. It should be noted that other options for benefit determination are available based on legal access rights to Walled Lake. While not included in the scope of this proposed study, they are described in more detail in Section IV, item 2 under Other Services.

H. Submit a schedule for completion based upon a Notice to Proceed.

SDA proposes to complete and deliver a draft final report to the Walled Lake Improvement Board 16 weeks after authorization to begin work. Work can begin immediately upon authorization and execution of a contract for services. This schedule is generally defined as follows:

Task	Description	Duration
1.	Documentation Research, Lake Parcels, and Frontage Evaluation	Weeks 1-4
2.	Field Research, Water, Sediment Sampling (seasonal)	Weeks 5-6
3.	Analytical Testing	Weeks 7-8
4.	Draft Recommendations, Cost Estimates, Assessment District preparation and draft report.	Weeks 9-12
5.	Meet with Walled Lake Imp. Board to review Preliminary Report	Week 13
6.	Final report revisions and issuance.	Weeks 14-16

Please note that time sensitive activities (outlined in Section A above) may necessitate the adjustment of timing. We are prepared to work with the Walled Lake Improvement Board to meet their scheduled needs.

VALUE ADDED SERVICES - Included

1. The SDA Team will facilitate a meeting to present preliminary findings to the Walled Lake - Lake Improvement Board prior to issuance of the Lake Study Report. During this meeting we will present preliminary findings based on documentation research, field testing, preliminary Lake Improvement program findings, and costs and benefit unit evaluations.
2. The SDA Team will attend the Assessment District Public Hearing to present our final report findings and recommendations. In our prior experience we have found that presentation of the report from an unbiased entity helps to diffuse the oftentimes contentious issues behind proposed Lake Improvements and their assessments.
3. SDA is prepared to develop a Web-Based Project Portal as a pro-active communication tool for the Lake Board, municipalities, and the resident stakeholders and will discuss the merits of implementing a Project Portal with the Lake Board.

