

CITY of NOVI CITY COUNCIL

Agenda Item 2
January 24, 2011

SUBJECT: Discussion of potential options for the Meadowbrook Lake Dam Improvement project because easement rights have not been conveyed by the affected property owners.

SUBMITTING DEPARTMENT: Department of Public Services, Engineering Division *ASB* *BTC*

CITY MANAGER APPROVAL: *[Signature]*

BACKGROUND INFORMATION:

An engineering contract was awarded to URS in October 2007 for engineering services related to improvements to Meadowbrook Lake Dam that would address the dam's non-conformance issues and implement recommendations from a 2005 study to address downstream streambank erosion issues. The primary improvement needed involves increasing spillway capacity to prevent dam failure.

During the design phase, staff met with the Meadowbrook Lake Subdivision Association and the four affected individual property owners on several occasions to address their concerns with the design and required easements; however, an agreement could not be reached. In November 2009, City Council directed staff to continue to work with the property owners toward a resolution that would be satisfactory to both sides, but not to proceed with additional design efforts until a resolution could be reached. Additional background is provided in the attached November 10, 2009 memo.

Since November 2009, staff has continued to work with the Association and the engineer hired by the Association, Cliff Seiber, and attempted to work with the individual property owners. Cliff Seiber reviewed the design proposed by URS and made several recommendations to modify the design. The recommendations were reviewed by Troy Naperala, P.E., a hydraulic engineer with URS, at the expense of the Association. URS concluded for several reasons (explained in the attached December 8, 2010 memo) that the design proposed by the Association's engineer could not be recommended.

It was determined through URS's analysis that any project to address the flow capacity of the dam would require easements, including for the dam itself, which is not owned by the City. Because the easements are an essential component of the project, staff requested executed easements from the Association and the four affected property owners (Wilke, Charnas, Wright and Rueben, as shown on the attached map) in a letter dated December 8, 2010, which requested a response by January 14, 2011. Staff only received a reply from the Association. The attached January 13, 2011 letter from and subsequent conversations with the Association indicate that, except for a few minor changes to the easement language, it appears that the Association is likely able to execute the easements for its property; however, the other four property owners have not contacted the City to discuss easements nor did they execute the easements.

Without easements from the four individual property owners to construct the swale, make improvements to the dam, and allow for future maintenance, the project remains at an impasse.

The dam is currently owned by the Association and multiple property owners, but is not owned by the City. The Michigan Department of Environmental Quality (DEQ) currently lists the City as the owner of the dam, although according to the City Attorney, there is no evidence to support that assertion (see February 3, 2010 memo for additional details on ownership).

The lack of spillway capacity continues to be a concern for the City due to the potential impact on downstream properties in the event of a catastrophic failure of the dam.

There are several options that City Council may wish to consider for this project:

- Abandon the project and notify DEQ that the City is not the owner of the dam. This would relieve the City of the maintenance responsibilities for the dam, but would leave those responsibilities with an Association and individual property owners with limited resources to ensure the continued safety of the dam.
- Grant approval to amend the engineering services contract again with URS for additional modeling required to further review the suggestions offered by the engineer retained by the Association. This would continue the iterative process to refine the design further based on input from Association and its engineer to find a mutually agreeable solution. With the number of design iterations and model runs being an unknown, it is difficult to estimate a consultant fee for this option. This process has been ongoing since 2007 without resolution, so continuing it may not result in a resolution.
- Direct staff to reinitiate discussions with the affected property owners toward resolution of the easements. This would be accomplished using staff and could provide a resolution to allow the project to move forward. However, past discussions with the affected residents indicate that the width of the swale is a chief concern, and attempts to communicate with the four individual property owners over the past year have been unsuccessful.

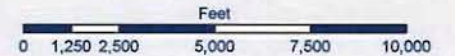
RECOMMENDED ACTION: Discussion of potential options for the Meadowbrook Lake Dam Improvement project because easement rights have not been conveyed by the affected property owners.

	1	2	Y	N
Mayor Landry				
Mayor Pro Tem Gatt				
Council Member Fischer				
Council Member Margolis				

	1	2	Y	N
Council Member Mutch				
Council Member Staudt				
Council Member Wrobel				

Meadowbrook Lake Dam

Location Map



1 inch = 83,333 feet

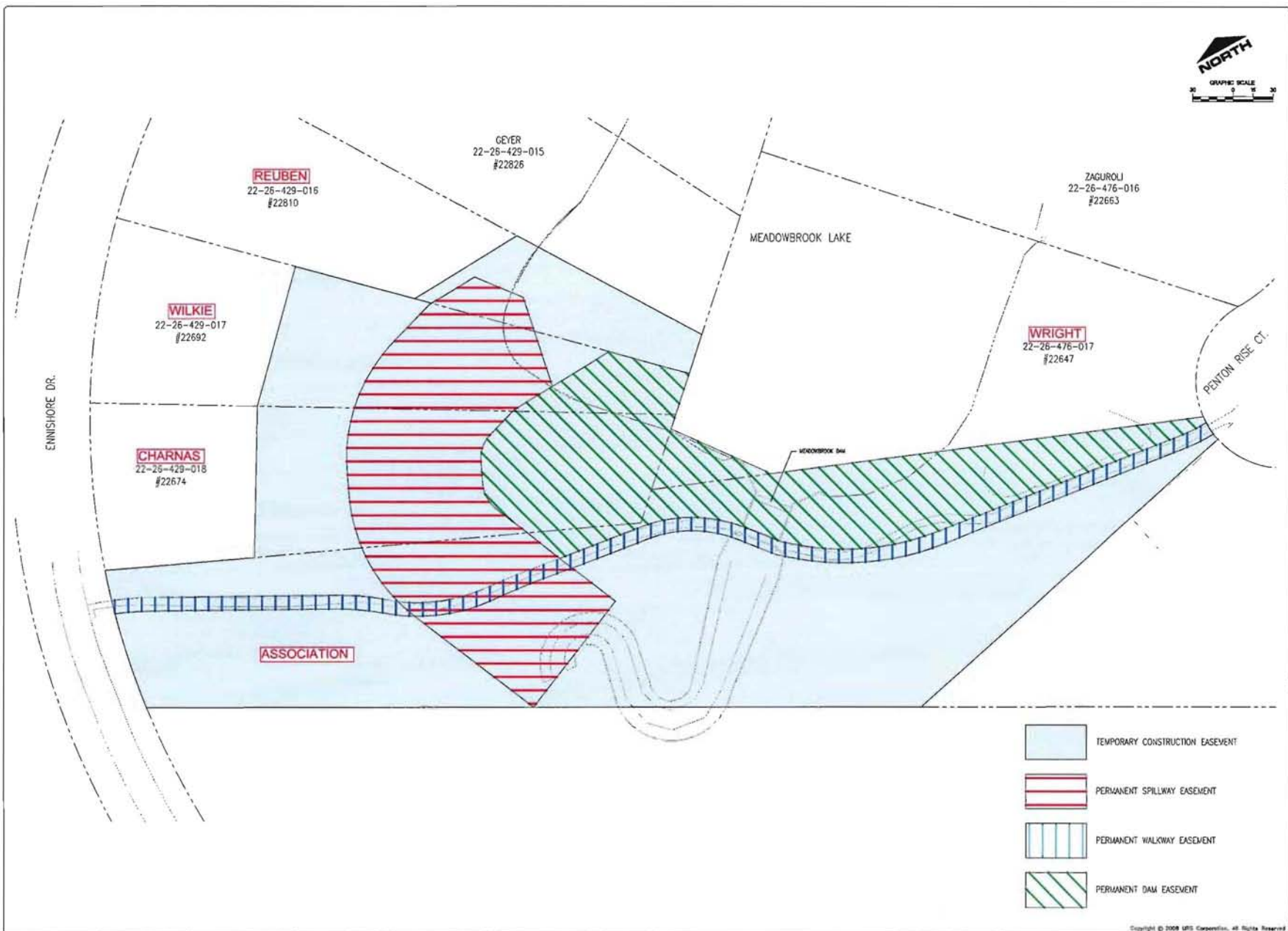






City of Novi
Engineering Division
Department of Public Services
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org

Map Author: Brian Coburn
Date: 1/19/11
Project:
Version #:

MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.



-  TEMPORARY CONSTRUCTION EASEMENT
-  PERMANENT SPILLWAY EASEMENT
-  PERMANENT WALKWAY EASEMENT
-  PERMANENT DAM EASEMENT

DATE	BY	REVISION	NO. CHANGE	DATE	ISSUED FOR	BY WHOM

TRAVERSE CITY, MI
 11800 WOODLAND DR
 49615-1000



NOV, 11

CITY OF NOVI
 MEADOWBROOK DAM
 EASEMENT EXHIBITS

DRAWING
 1

FILE
 13640150

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January 25, 2011

Jim Hayes, P.E.
Dam Safety Program
Land and Water Management Division
Michigan Department of Environmental Quality
P.O. Box 30458
Lansing, MI 48909

Re: Meadowbrook Lake Dam
Ownership of Dam

Dear Mr. Hayes:

The intent of this letter is to provide the MDEQ with contact information for the owner of the Meadowbrook Lake Dam (Dam ID 2199) located in the SE ¼ of Section 26 of the City of Novi. Past Dam Safety Inspection Reports have listed the City of Novi as the Owner/Operator of the dam; however, the City does not actually own any portion of the dam. The Meadowbrook Lake Subdivision Association (Association) and multiple individual property owners own the land encompassing the dam. The City's attorney, Secret Wardle, has confirmed that the City is not the "owner" of the dam, has no control of it, and lacks continuing access to it. For that reason, we request that the MDEQ no longer direct inspection reports to the City.

The City has contacted the Association and individual land owners requesting permanent easements to upgrade and maintain the dam; however no parties have granted or intend to grant any easements. Since the Association has been acting as the intermediary for the entire subdivision, future inspection reports should be directed to the Association as the owner/operator of the dam.

The dam is owned by the following property owners:

- Meadowbrook Lake Subdivision Association - P.O. Box 242, Novi, MI 48376 (parcel 50-22-26-476-018)
- Bennett and Sylvia Wright – 22647 Penton Rise Ct., Novi, MI 48375 (parcel 50-22-26-476-017)
- Costa Charnas – 22674 Ennishore Dr., Novi, MI 48375 (parcel 50-22-26-429-018)
- Christine Wilke Trust – 22692 Ennishore Dr., Novi, MI 48375 (parcel 50-22-26-429-017)

You are welcome to contact our office at 248-347-0454 with any questions regarding this matter.

Sincerely,

DEPARTMENT OF PUBLIC SERVICES

Rob Hayes, P.E.
Director of Public Services/City Engineer

cc: Brian Coburn, PE; Senior Civil Engineer, City of Novi
Ben Croy, PE; Civil Engineer, City of Novi
Tom Schultz; Secret Wardle
Lynn Kocan; Civics Director, Meadowbrook Lake Subdivision Association
Bennett and Sylvia Wright
Costa Charnas
Christine Wilke Trust

DRAFT



Meadowbrook Lake

Subdivision Association

Post Office Box 242

Novi, Michigan 48376

January 13, 2011

Rob Hayes, P.E.
Director of Public Services/City Engineer
City of Novi
Field Services Complex
26300 Delwal Drive
Novi, MI 48375

Dear Mr. Hayes:

We are writing in response to your December 8, 2010 letter regarding the Meadowbrook Lake Dam Improvement Project.

In your letter you indicate that the City will need permanent easements from the Meadowbrook Lake Homeowners Association ("HOA") and from the individual homeowners affected by the project. You also state, "The City cannot proceed further with the design of the project without a commitment to provide the necessary spillway easements."

The HOA and affected individual homeowners have held meetings and discussions regarding the issues raised in your letter. The HOA and the individual homeowners do commit to granting permanent spillway easements for the project.

It is true that the engineer retained by the HOA to review the dam project plans, Cliff Seiber, recently proposed a plan that would reduce the cost of the project for the City and also eliminate any need for spillways over the property of individual homeowners near the dam. That plan was developed because the individual homeowners, just as you and any other homeowner would do, wanted to insure that everything possible was done to minimize the impact of the project to their property.

From your letter, it appears the City will not accept the last plan proposed by Mr. Seiber. Instead, the City maintains that spillways over the individual homeowners' property will be required. The individual homeowners had hoped the City would approve Mr. Seiber's plan. Since the City will not, the individual homeowners, as well as the HOA, will grant permanent easements for a spillway.

The only issue remaining is the exact language of the necessary easements. The easements submitted do not appear to comply fully with statements in your December 8, 2010 letter nor with statements in Mr. Croy's December 15, 2010 letter requesting the easements.

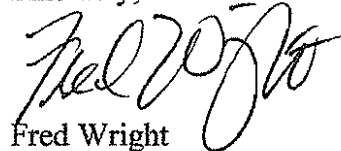
For example, Mr. Croy's letter states with respect to the HOA easements, "Upon completion these easements would make the City responsible for all future maintenance of the dam." However, a review of the easement language indicates only that the City "may" maintain the dam.

Additionally, in your letter you state that during the final design phase, "The City would then make every effort to work with URS to determine if the width of the spillway easement could be reduced ...". However, there is nothing in the easements to reflect that commitment from the City.

We have enclosed for your review Cliff Seiber's response to the City's latest letters and proposed easements and also his suggestions for easement language.

We are prepared to meet with you at your earliest convenience to finalize the easement language. Again, we wish to reiterate that the HOA and the individual homeowners will grant permanent spillway easements to the City for this project.

Sincerely,



Fred Wright
President
Meadowbrook Lake Subdivision Association



Lynn Kocan
Director, Civics
Meadowbrook Lake Subdivision Association

Attachment

cc Ben Croy ✓
Clif Seiber
Costa Charnas
George and Christine Wilke
Lawrence and Portia Reuben
Ben and Sylvia Wright

SEIBER ENGINEERING, PLLC
ENGINEERING CONSULTANTS

CLIF SEIBER, P.E.

8145 BENNY LANE
WHITE LAKE, MI 48386-3507
Phone No. 248.231.9036
E-mail: cs@seibereng.com

January 11, 2011

Mr. Fred Wright, President
Meadowbrook Lake Subdivision Association
P.O. Box 242
Novi, MI 48376

**Re: Response to the City of Novi Letter of December 8, 2010
Meadowbrook Lake Dam Renovations**

Dear Mr. Wright:

As you have requested, I have reviewed the URS letter of December 8, 2010, and a letter bearing the same date from Rob Hayes, P.E., the Novi Director of Public Services/City Engineer. These letters were written in response to my computer modeling of the Meadowbrook Lake dam and spillway and a sketch plan. This information proposed possible modifications to the URS plans that resulted in less impact and intrusion to the affected properties and homeowners. The following is a summary of my response to those letters and a suggested HOA response to the City.

Project Recent History

As you know, on June 23, 2010, you retained my services for the purpose of reviewing the project plans and related documents, and to opine on possible alternatives that would result in less impact to the affected properties. Since that time I have met with Ben Croy, P.E., the City of Novi staff engineer, several times at his office and once on-site to review the concerns of the homeowners. As a result of those meetings and meetings with the association committee, the URS computer flow models were analyzed and several alternative models were developed to determine the impact of each alternative to the existing 100-year flood elevation of Meadowbrook Lake. A summary of two of the computer models is as follows:

August 10, 2010 Computer Model

On August 10th I created a new computer model of the flood flows that raised the flood elevation of Meadowbrook Lake back to its original height of 837.90. The URS design actually lowered the lake slightly below the 100-year flood elevation. In addition, the URS design provided an overflow spillway width across the lots of 55 feet as measured at the bottom of the channel slope – 75 feet as measured at the top of the bank slope. The computer model indicated that the spillway width located in the park would remain the same as the URS design, however, the remainder of the spillway through the lots would be reduced in width from 55 to 40 feet. The overflow weir at the lake would also be reduced in width from 55 to 45 feet. The depth of the spillway and profile would remain the same as originally proposed.

September 29, 2010 Computer Model

After further discussions with the City staff and the HOA, an additional computer model was developed of the flood flows to determine the potential to completely eliminate the overflow spillway construction across the lots, thereby relying on the existing conditions to convey floodwaters. Two primary changes were made to this model versus the previous model.

1. It increased the flood elevation of Meadowbrook Lake by 0.1 feet as often permitted by the Michigan Department of Natural Resources and Environment (MDNRE).
2. It eliminated the raising of a portion of the berm located on the west side of the dam from its originally proposed 180 feet to 80 feet.

The results of these changes allowed the overflow weir at the lake to be decreased in width from 55 to 45 feet. The spillway improvements across the lots could be eliminated under this scenario. The construction within the park area would remain nearly the same as originally proposed.

URS Letter of December 8, 2010

Upon review of the URS letter of response to the proposed design changes related to the September 29th computer model, I find that I am in agreement with most of what is presented.

Bullet point 1 requires that the spillway area remain clear of obstructions, the lawn cut short, and an easement be provided for this area. I am in full agreement with this point.

Bullet points 2 through 7 discuss the issues relating to raising the Meadowbrook Lake flood elevation by 0.1 feet and the elimination of spillway improvements. Although the MDNRE would likely approve the design, provided the necessary documentation is submitted, it may not be worth the exercise for the relatively small benefit realized. In which case, the design would return to an improved overflow spillway as originally proposed, but with modifications to the width. Therefore, I recommend a design that matches the existing Meadowbrook Lake flood elevation.

Bullet point 8 addresses the overtopping of the 100 feet of the berm that is proposed not to be raised. It suggests that such topping over could result in erosion of the surface and possible failure of the dam. During on-site meetings with Ben Croy and the homeowners, methods of saving more of the existing vegetation and trees next to the lake were discussed. The westerly 100 feet of the westerly berm could be left in its current condition and not raised by the proposed 24-inches of fill provided that the permanent turf reinforcement mat that is being proposed in the spillway is also applied to this 100 foot long area. This change to the plan, while not eliminating the spillway improvements, will have the impact of further reducing the spillway width.

Bullet point 9 is addressed by continuing to include the spillway improvements in the design, but narrowing the width of the spillway.

In summary, I am in agreement with the URS letter with the exception of continuing with the elimination of the berm fill and providing the necessary turf reinforcement. It is noted that URS confirms that the September 29th computer model "would likely meet the spillway capacity requirements for the design flows...".

City of Novi Letter of December 8, 2010

With the inclusion of the overflow spillway in the project and maintaining the existing Meadowbrook Lake flood elevation, much of the comments contained within the letter no longer apply. However, I do take exception to a few comments.

Mr. Hayes states that "If the swale cross-section is made narrower as previously discussed, it would require a deeper cross-section to accommodate the same flow quantity to maintain the flood surface elevation". If he is talking about the base flood surface elevation, the models do not confirm that this is true. In fact, the slight overdesign of the current model actually lowered the base flood elevation of Meadowbrook Lake. There is no evidence in any documents or in the computer model that suggest the size of the spillway was based on a particular size flood event (i.e. 5-year, 10-year 25-year flood). Returning the lake flood elevation to its current elevation and eliminating the above described berm fill will allow some narrowing of the spillway channel and reduce impacts both physical and easement to the homeowners without the need to deepen the channel.

The letter also requires that the HOA and affected homeowners sign the easements as the City has prepared them. Once those easements are submitted "The City would then make every effort to work with URS to determine if the width of the spillway easements could be reduced..." I thought the reason for URS to review the September computer model was to do just that. Once they confirm the width, the easements would be adjusted and executed by the affected parties.

The last issue of the letter relates to the funding. It appears that the City is requesting that all the easements be submitted, and then they will determine if they will fund the project. If they do not, then all parties will have submitted easements for a project that may never be built.

Conclusion

During the summer and fall of 2010, the HOA and homeowners have come a long way in understanding the impacts of the proposed project, and have reached a comfort level where they could provide the easements to the City, subject to minor modifications. Ben Croy has been very cooperative with me and I thought we were getting very close to reaching an agreement and moving ahead with the project. However, the letter from Rob Hayes on December 8th appears to present an ultimatum that completely dismisses everything that has been accomplished over the past six months and requires that everyone sign the original easements or the project is terminated. After all this effort, on your side and on the City's, and when we seemed so close to reaching an agreement that satisfies both sides, that such an ultimatum is now issued is perplexing. This certainly would not be considered negotiating in good faith. If this were to be

January 11, 2011

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the City's position, they could have issued this statement in June before we started all the investigation. Also, I believe that this would have been a much easier and smoother process if the City had the homeowners involved in the project earlier in the design stage.

I recommend that the HOA and the affected property owners submit easements subject to the following conditions:

1. That they specify that the easements will conform to the August 10th computer model that provides a floodplain elevation that matches the existing Meadowbrook Lake elevation and the resultant narrowing of the overflow spillway; and
2. That the City shall be responsible for any future maintenance of the dam and appurtenances; and
3. That the easement stipulate a latest substantial construction commencement date, which if not met renders the easement conveyance terminated, null and void; and
4. That the easement documents will be subject to minor language adjustments (i.e. irrigation pump relocation, irrigation sprinkler head relocation, hold harmless clause, removal of trees, lawn restoration, etc.).

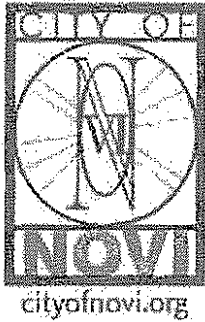
If you have any questions regarding the comments contained in this letter, please contact me.

Sincerely,

SEIBER ENGINEERING, PLLC

A handwritten signature in black ink, appearing to read "Clif Seiber", written in a cursive style.

Clif Seiber, P.E.



MEMORANDUM

TO: ROB HAYES, P.E.; DIRECTOR OF PUBLIC SERVICES ^{RPH}
FROM: BRIAN COBURN, P.E.; SENIOR CIVIL ENGINEER ^{BC}
SUBJECT: MEADOWBROOK LAKE DAM ENGINEERING CONTRACT
DATE: NOVEMBER 10, 2009

*11/12/09
To: Mayor & City
Council Members*

Will be looking at whether to

pay what's owed and scratch

An engineering contract was awarded to URS on October 8, 2007 for design and construction engineering services related to modifications to Meadowbrook Lake Dam. The project was developed to address non-conformance issues identified in a dam safety report from Michigan Department of Environment Quality (DEQ) and to implement recommendations from a 2005 study to address downstream streambank erosion issues. The project requires easements from four property owners and the Meadowbrook Lake Homeowner's Association (HOA) as well as a permit from the DEQ.

provide unless there is sign of an end to this easement to all.

Engineering staff have been working with the HOA for the past two years to complete the design of a project that meets the goals identified by the city from the two reports and conforms to the expectations of the impacted property owners. After four public information meetings and correspondence with the HOA on multiple occasions, staff continues to work with the association property owners to secure the required easements (see Rob Hayes' September 3, 2009 memo for additional information).

[Signature]

The original scope of the engineering contract with URS included the design of the project, obtaining the permit from DEQ, preparing the exhibits for the required easements, and attendance at one public information meeting. A contract amendment in the amount of \$10,900 was approved by City Council on October 20, 2008 to include: modeling and analysis of the Nine Mile culvert downstream of the dam, additional meetings with DEQ staff and residents, additional topographical survey to reconstruct the sidewalk on HOA property, and reimbursement for the DEQ permit application fee.

The project to date has required multiple iterations of the design and easement exhibits, four public information meetings, and additional time from the consultant to respond to HOA questions, issues, and correspondence. The consultant is requesting additional fees for the design phase of the project for the additional scope of work that has been performed. Because the additional scope could not be defined, in lieu of bringing multiple fee increase requests to City Council, Engineering directed URS to proceed on a time-and-materials basis.

These additional engineering costs can be offset by the construction phase fees, which were previously awarded but may not be needed for some time. Therefore, staff recommends amending the engineering phase services to increase the design phase fees in the amount of \$16,845 for the additional scope needed to finish the design, prepare requested exhibits for the HOA and property owners, and to cover the completed services identified above, including public meetings, permitting and design revisions (see URS letter dated October 5, 2009).

The additional design fees would supplant a portion of the previously awarded construction phase fee of \$17,100. The future construction phase fees would be appropriated and awarded at the time of construction contract award based on the fee schedule provided in the newly adopted engineering consultant agreement.

Engineering staff has provided additional information to the HOA (see Rob Hayes' October 20, 2009 letter) in response to the attached September 9, 2009 letter from the HOA. It is anticipated that staff will meet again with the Association to determine how the project should proceed. If additional design efforts are required as a result of the meeting, another amendment to the engineering contract will be required to include the additional scope. The DEQ permit has been issued for the project and if the project proceeds as designed, minimal additional design effort would be required to prepare the project for bidding.

The contract amendment for additional fees is being prepared for consideration by City Council on the November 23, 2009 agenda.

cc: Ben Croy, PE; Civil Engineer
Kathy Smith-Roy, Finance Director



October 5, 2009

Mr. Brian Coburn, P.E.
City of Novi
Department of Public Service
26300 Delwal Drive
Novi, MI 48375

Reference: Meadowbrook Lake Dam Project – Additional Services

Dear Mr. Coburn:

The following proposal is based on our agreed scope of services to complete Phase I of the Meadowbrook Lake Dam Project. The additional work includes:

- Neighborhood and project meetings
- Permitting
- Additional Design

We estimate the fee to complete Phase I of the work will be \$2,900. This would bring our total contract for design services to approximately \$67,630. The breakdown of our contract is as follows:

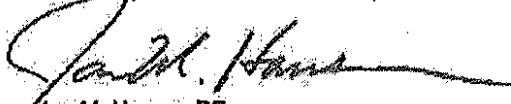
Approved Contract	\$50,785
Paid to Date	\$55,230
Unbilled	\$8,000
Additional Services	\$2,900
Permit Fee	\$1,500

Total Additional Services \$16,845

If you have any questions, please feel free to contact me at (248) 204-4140. We appreciate your consideration of our submittal and look forward to working with you to complete the project.

Sincerely,

URS Corporation – Great Lakes, Inc.


Jan M. Hauser, PE
Vice President / Water Resources

URS Corporation
27777 Franklin Road, Suite 2000
Southfield, Michigan 48034
Tel: 248.204.5900
Fax: 248.204.5901
www.urscorp.com

MEMORANDUM



TO: CLAY PEARSON, CITY MANAGER
FROM: ROB HAYES, P.E., DIRECTOR OF PUBLIC SERVICES
SUBJECT: MEADOWBROOK DAM IMPROVEMENT PROJECT UPDATE
DATE: SEPTEMBER 3, 2009

*RPH 9/3/09
For Mayor's City Council Meeting
Background on work in progress,
may need to defer if arrangements/
access cannot be made.
CHW*

The Meadowbrook Lake Dam Improvement project was authorized in the FY 2007/2008 budget with an original goal of providing additional storm storage in the lake to decrease storm flow impacts downstream that would reduce streambank erosion and sedimentation. As part of the design process, we also identified two major dam deficiencies that must be addressed: 1) the primary spillway's inability to pass flow resulting from a 100-year storm; and, 2) the earthen embankment's insufficient height to prevent overtopping and severe downstream flooding during a 100-year storm event.

Since late 2007, the Engineering Division has worked to complete the project's design based on the amended scope described above, but has yet to receive complete cooperation from the Meadowbrook Lake Homeowners' Association and two residential parcel owners regarding easements. Most of the construction work would be completed on private property; therefore easements are required for MDEQ permitting and project construction.

Between early 2008 and April 2009, a series of meetings was held with the Association leadership and residents to present the scope of the project, discuss the anticipated impacts to private property, and emphasize the need for easements. Although many objections to granting easements have been resolved (by limiting tree removal and improving the existing pathway through the Association's park), several remain, such as the location and size of a drainage swale on park property that would serve as the dam's auxiliary spillway, and the language to be incorporated in the easement documents.

During site visits and at the most recent meeting with the Association in late April, some residents asked why the City felt it had a responsibility to make the planned improvements, which (coupled with the stalemate over easements) prompted us to review our files to definitively determine ownership and long-term maintenance responsibilities for the dam, and to subsequently ask for assistance from the City Attorney's office (see attached letter from Tom Schultz and accompanying cover letter from Rob Hayes to the Association). In short, our finding is that the City of Novi is under no legal obligation to improve or maintain the dam; however, our position remains that the public would significantly benefit from the project's completion should the necessary easements be granted.

The Association held a meeting this past Monday to discuss the project and presumably the City's letters referenced above. To date, we have not received a response from the Association's leadership.

Please let me know if you require any additional information relative to this matter.

cc: Pam Antill, Assistant City Manager
Tom Schultz, City Attorney
Brian Coburn, Sr. Civil Engineer



August 31, 2009

Lynn Kocan, Civics Director
Meadowbrook Lake Subdivision Association
PO Box 242
Novi, MI 48376

Re: Meadowbrook Lake Dam Improvement Project

CITY COUNCIL

Mayor
David B. Lantry

Mayor Pro Tem
Bob Gall

Tony K. Margolis

Andrew Mulch

Kathy Crawford

Dave Staudl

Brian Burke

Director of Public Services
City Engineer
Rob Hayes

Dear Ms. Kocan:

In response to residents' questions about the City's responsibility for the Meadowbrook Lake Dam, we had the City Attorney review file information to determine the history of the dam, and to identify ownership and long-term maintenance responsibilities. The attached letter from Tom Schultz confirms that the dam is owned by the Meadowbrook Lake Subdivision Association. The letter also states that under the Michigan Dam Safety Act, the subdivision is responsible for the maintenance, inspection and structural integrity of the dam.

Despite not having ownership of or responsibility for the dam, the City has historically made improvements to both the dam and Meadowbrook Lake in the overall interest of the City and property owners downstream. Our studies indicate that, according to the Michigan Dam Safety Act requirements, the dam is deficient in two major areas: 1) the weir (part of the concrete structure) has insufficient capacity to convey the 100-year flood, which means that during a 100-year storm, areas around and upstream of the lake will become flooded; and, 2) the earthen dam lacks proper freeboard (the distance between the top of the earthen dam and the high water elevation), which means that the earthen dam could fail during a 100-year storm and damage properties and threaten lives downstream of the dam.

The proposed project will correct both deficiencies, but in order for the project to begin, we will need easements from the affected property owners and the association. The City has budgeted \$350,000 for the construction of the project with no costs to be borne by the residents or the association. We believe that we can work together to address the outstanding concerns of the property owners and the association to make the project a viable venture that will greatly benefit the public.

Please feel free to contact me at 248-347-0454 with any questions or concerns.

Sincerely,

DEPARTMENT OF PUBLIC SERVICES


Rob Hayes, P.E.
Director of Public Services/City Engineer

Enclosure

Department of Public Services
Field Services Complex
26300 Delwood Drive
Novi, Michigan 48375
248.735.5640
248.735.5659 fax

cityofnovi.org

SECRET
SW
WARDLE

August 27, 2009

39703 Northwestern Highway
P.O. Box 3010
Farmington Hills, MI 48333-3010
Tel: 248-851-2500
Fax: 248-851-2153
www.secretwardle.com

Thomas R. Schultz
Direct: 248-539-2817
tschultz@secretwardle.com

Rob Hayes, City Engineer
City of Novi
45175 W. Ten Mile Road
Novi, MI 48375

Re: *Meadowbrook Lake Dam Improvement Project*

Dear Mr. Hayes:

You have asked us address the City's rights and/or obligations with regard to a proposed project to improve the dam at the south end of Meadowbrook Lake. The City is concerned that the weir in its current condition and configuration has insufficient capacity to handle a 100-year storm, and that there is a chance that the dam would be breached or overtopped in the even of such a storm, causing flooding downstream. The proposed improvements include replacing the weir and building a "spillway" on its western edge. The weir is on property owned by the Meadowbrook Lake Association; the proposed spillway would be largely on adjacent private lots. You estimate the cost of the improvements at approximately \$350,000.

You have proposed to the Meadowbrook Lake Association that the City undertake the improvements to the weir and take a permanent easement to allow the improved weir to be maintained by the City in the future. You have also approached the private property owners for temporary and permanent easements to construct the spillway. It appears that the Association is unconvinced of the need for the improvements, and some of the private property owners have raised questions about the effectiveness of the design of the proposed improvements. So, no easements have been obtained to do the work.

You have provided us with some historical documents from the City involving the initial construction of, and later improvements to, the Meadowbrook Lake Dam that is part of the Meadowbrook Lake Subdivision. You have asked us to confirm ownership of the dam and indicate who has the responsibility for its maintenance.

Ownership of the Dam

The lake area (identified as an "easement" on the plat) and the dam are owned by the Meadowbrook Lake Subdivision Association. The Meadowbrook Lake Subdivision restrictions confirm this in no uncertain terms (see Paragraph 8[f]):

Mr. Rob Hayes
August 27, 2009
Page 2

"The Meadowbrook Lake and Park are private facilities whereby the Village of Novi has no responsibility whatsoever concerning the control of the water level, improvement, or maintenance thereof and that such responsibility is solely that of the property owners of the Meadowbrook Lake Subdivision, and/or the Association, and is so acknowledged."

Past improvement projects have confirmed this. In order to complete the recent lake dredging project, the City sought and secured approval of the Association. And in connection with the "Middle Rouge River Improvements" in the mid-1980s, which involved improvements to the dam and drainage course, the City secured *temporary* easements from the Association (and certain individual lot owners) allowing it to conduct the work on the dam, though it did secure a permanent easement for the drain improvements south of the dam.

No City Obligation to Conduct the Dam Improvements

We understand that in connection with the earlier improvement projects, the City formally determined that the work done on the lake and/or dam would result in some public benefit, which allowed the City to expend public funds in connection with the improvements. We are not aware of any *obligation* on the part of the City to do so, however. As the owner of the dam, the obligation to maintain it falls to the Association, as noted above, not the City. Again, we are aware of no permanent easement that would allow the City to conduct work on the dam in the normal course.

a. Dam Safety Act

Under the Michigan Dam Safety Act, MCL 324.31501 *et seq.*, the "owner" of a dam is required to submit inspection reports prepared by a licensed engineer (with certain exceptions) regarding the condition of the dam on certain intervals—basically three, four, and five years. MCL 324.31518(1). "Owner" is defined in the act as "a person who owns, leases, controls, operates, maintains, manages, or proposes to construct a dam." MCL 324.31504(5).

If an owner does not submit an inspection report and make the required investigations, either the MDEQ or "a person who would have life or property threatened by a breach of the dam" can do so (and recover their costs of doing so). MCL 324.31518(6). If the MDEQ finds that a condition exists which endangers a dam, it "shall order the owner to take actions that the department considers necessary to alleviate the danger." Under MCL 324.31518(7), if the MDEQ finds an owner to be in violation of the act, it can take various action, including instituting a civil suit and/or criminal action. MCL 324.31525.

Mr. Rob Hayes
August 27, 2009
Page 3

As I understand it, the City has submitted reports to the MDEQ on occasion in the past and/or requested inspections of the dam and received reports from the inspection. It is not clear to us the basis or authority upon which the City has done so. You have asked whether the City is obligated to make such reports in the future. For the reasons stated above—the City is not an “owner” of the dam, has no control of it, and lacks continuing access to it—we conclude that the City does not have such a continuing obligation and that the MDEQ could not order the City to undertake the improvements now being discussed, although it appears possible that the Association, as the owner of the dam, could be ordered to do so. We also recommend that the Association be so notified so that it may meet what appears to be its obligation under the statute.

b. Responsibility to Downstream Owners

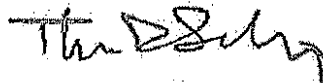
We obviously can't advise the Association of its obligations to protect downstream owners from the release of water from the dam in a negligent manner. We would suggest that, however, that if the Association has not already done so it should investigate its obligations to the downstream property owners to avoid causing damage as a result of its maintenance of the dam.

Summary

The project as proposed appears to have public benefit, which is what would permit the City to participate as it has in the past. Acquiring a permanent easement to undertake long-term maintenance of the improvements is an appropriate manner of proceeding. In the event the City is ultimately unable to reach agreement on access to complete the project, however, we suggest that appropriate steps be undertaken to confirm with the MDEQ that the City has no ownership of the weir or dam and no authority to undertake the inspections required of to make needed improvements. The Association should be apprised of such notice, for purposes of its further inquiries/correspondence regarding the dam.

I trust this answers your inquiries. If you have any questions, please do not hesitate to call.

Very truly yours,



Thomas R. Schultz

TRS/jes
Enclosure

Mr. Rob Hayes
August 27, 2009
Page 4

cc: Clay Pearson, City Manager
Pamela Antil, Assistant City Manager
Maryanne Cornelius, City Clerk

1286513



Meadowbrook Lake

Subdivision Association

Post Office Box 242
Novi, Michigan 48376

September 9, 2009

Mr. Rob Hayes, City Engineer
City of Novi
45175 West Ten Mile Road
Novi, Michigan 48375

Subject: Meadowbrook Lake Dam Reconstruction Project

Dear Mr. Hayes:

The Meadowbrook Lake Subdivision Association Board of Directors met and reviewed your letter of August 31, 2009. We acknowledge that in the past the City has assumed responsibility for improvements and maintenance of this water retention area that impacts many residents in Novi, as many projects approved by the City have occurred upstream impacting the flow into and out of Meadowbrook Lake.

We realize our park is a flood plain; even with the new design, the park will continue to flood. Of most concern to those residents immediately impacted by the reconstruction project is the swale:

- During the November 2008 meeting with the homeowners, we were told that the swale would "hardly be noticeable." However, the swale slope is not gradual as we were led to believe, but rather has a severe slope with a flat bottom spanning 55 feet. What the residents now foresee is a huge ditch/spillway that will prevent their use and enjoyment of their property and certainly decrease their property values *significantly*.
- The residents conducted their own topographical survey and are concerned that the pitch of the swale from the lake to the stream will be deficient and that there will be standing water in their yards.
- There have been only 2-3 major floods in the last 30 years, with some minor overflows (2-3 times) throughout the year. Currently, the water flows naturally across the area of the proposed swale; however, there is no permanent marker on the residents' properties after the water recedes.

We have the following questions:

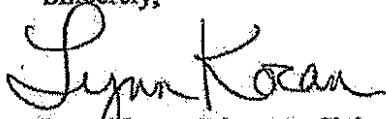
1. Your letter stated the Meadowbrook Lake dam has several deficiencies according to the Michigan Dam Safety Act requirements. Has the city been given a directive to complete these improvements with a date certain for completion or is the City being proactive with this project? Has there been flooding downstream that this project is proposing to address?
2. We were told an improvement to the dam gates would be made allowing for improved manual operation to increase or decrease water flow. Because of this improvement, can the proposed swale be approached differently and reduced in size or, ideally, eliminated from the plan so no residential personal property is negatively impacted?

We would appreciate a more definitive plan that addresses the swale and topography as well as the following:

1. Clarify proposed elevation changes to impacted property via two different perspectives (engineering drawings to scale and an elevation drawing to scale).
2. Clearly identify the impact to the trees, the park, and the path. Just as the DEQ now feels many more trees can be saved than originally thought, we're hopeful there is a better design of the swale area reducing any impact to property values.

Without a definitive plan, we are working with assumptions and ideas that have changed several times. We are hopeful there is a mutually beneficial outcome for the residents of Meadowbrook Lake Subdivision as well as those residents in the City of Novi who are upstream and downstream from us.

Sincerely,



Lynn Kocan, Director, Civics
Meadowbrook Lake Subdivision Association

cc City of Novi City Council Members

✓ Ben Croy

Brian Coburn

Gus and Eileen Charnas, 22674 Ennishore Drive

George and Chris Wilke, 22692 Ennishore Drive

Lawrence and Portia Reuben, 22810 Ennishore Drive

Ben and Sylvia Wright, 22647 Penton Rise Court



October 20, 2009

Lynn Kocan, Civics Director
Meadowbrook Lake Subdivision Association
PO Box 242
Novi, MI 48376

Re: Meadowbrook Lake Dam Improvement Project

CITY COUNCIL

Mayor
David B. Landry

Mayor Pro Tem
Bob Galt

Terry K. Margolis

Andrew Mutch

Kathy Crawford

Dave Staudt

Brian Bürkè

Director of Public Services/
City Engineer
Rob Hayes

Dear Ms. Kocan:

The Association's September 9, 2009 letter to us indicated that the residents and others affected by this project require additional explanation of the specific design components of this project. Therefore, this letter and enclosed information are being provided to clarify the issues discussed in the Association's letter. We have enclosed plans with additional details of the project area to help explain the proposed grading. We are also updating the plan to more clearly show the proposed tree removals, and will forward to you once complete.

Realizing that the proposed emergency overflow swale remains a major concern of the residents, we have discussed the potential for alternate designs that do not involve a swale. However, we have not yet identified a feasible, cost-comparable alternative. We have enclosed a set of scale cross-sections that may help the residents better visualize how the swale will look once constructed. As shown on the drawing, the swale will not resemble a ditch, but rather a wide, shallow depression with gradual slopes on either side. The attached cross-sections show that only minor grading is proposed over the majority of the area to be impacted, keeping the swale as shallow as possible. The most significant grading occurs adjacent to the earthen dam, and only involves a maximum change in grade of about two feet.

We have also enclosed a profile of the proposed swale showing it will have a 2% slope from the lake to the outlet, which is similar to the existing flow path but with a consistent slope designed to prevent the standing water that now occurs at several locations.

The improvements being proposed to the underflow gates on the dam are independent of the design of the swale. The gates are only used to lower the lake level to perform maintenance and do not provide any benefit for flood control, which is the primary function of the swale.

The dam's deficiencies we have been referring to are based on the statements provided in the State's inspection reports. The inspection reports list the deficiencies and provide direction to mitigate each deficiency, but the report does not stipulate a date by which the improvements must be complete. Furthermore, the proposed improvements are in response to these known deficiencies, and do not stem from past downstream flooding events. The improvements are being proposed to eliminate the potential for catastrophic flooding downstream in the event of dam failure.


Department of Public Services
Field Services Complex
26300 Delwa Drive
Novi, Michigan 48375
248.735.5640
248.735.5659 fax

cityofnovi.org

We hope that this letter and enclosed information have addressed the questions from your recent correspondence. However, please feel free to contact me at 248-347-0454 with any further questions or concerns that you may have in regard to this matter.

Sincerely,

DEPARTMENT OF PUBLIC SERVICES



Rob Hayes, P.E.
Director of Public Services/City Engineer

Enclosure

LOCATION MAP

Meadowbrook Lake Dam Improvements



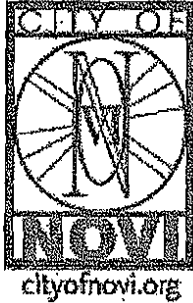
CITY OF NOVI



CITY OF NOVI, MICHIGAN



MEMORANDUM



TO: CLAY PEARSON, CITY MANAGER
FROM: ROB HAYES, DIRECTOR OF PUBLIC SERVICES/CITY ENGINEER
SUBJECT: MEADOWBROOK LAKE DAM IMPROVEMENT PROJECT
DATE: DECEMBER 8, 2010

*12/9/10
To: Mayor
Council Members*

FYI

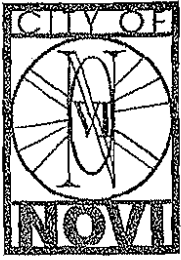
The review of an alternate design, as submitted by the Meadowbrook Lake Subdivision Association, was completed by our engineer for the project, URS. The enclosed letter was mailed to the Association today along with the letter from URS's engineer that summarizes his review and recommendations. For the reasons stated in the attached letters, staff is unable to recommend implementation of the alternate design presented by the Association.

*||**

The letter states that under any alternative, the secondary spillway will require easements either for the physical improvement of the swale or flowage easements for the alternative presented by the Association. It is necessary to seek easements from the property owners before moving forward with this project. The easements will be sent next week and we are requesting that executed easement be returned by mid-January. At that time, we can make a determination on how to proceed with final design and construction of the project.

*←**

cc: Brian Coburn, Engineering Manager
Ben Croy, Civil Engineer



December 8, 2010

Lynn Kocan, Civics Director
Meadowbrook Lake Subdivision Association
PO Box 242
Novi, MI 48376

CITY COUNCIL

Mayor
David B. Landry

Mayor Pro Tem
Bob Gatt

Terry K. Margolis

Andrew Mutch

Kathy Crawford

Dave Staudt

Justin Fischer

City Manager
Clay J. Pearson

Director of Public Services/
City Engineer
Rob Hayes

Re: Meadowbrook Lake Dam Improvement Project

Dear Ms. Kocan:

As requested by the Meadowbrook Lake Subdivision Association, the City has worked with its engineering consultant, URS, to evaluate an alternate auxiliary spillway design provided by the Association's consultant, Cliff Seiber. URS's engineers have completed their review and their recommendations can be found in the attached letter.

Based on the evaluation performed by URS and for the reasons stated in the attached letter, the City cannot recommend implementation of the revised design proposed by Cliff Seiber. The City believes that the original spillway designed by URS is the best alternative to meet the project goals. This design was selected following a review of various channel widths and depths to arrive at the proposed cross-section. If the swale cross-section is made narrower as previously discussed, it would require a deeper cross-section to accommodate the same flow quantity to maintain the flood surface elevation. Several iterations of the swale width and depth were modeled before URS made its recommendation for the design. This iterative process could continue indefinitely without finding a better solution and while incurring additional costs.

The common theme between the original URS design, the revised Seiber design, or any other design iteration, is the need for permanent easements from the Association and from the property owners. The City cannot proceed further with the design of the project without a commitment to provide the necessary spillway easements. For this reason, the City will be requesting that the affected property owners and the Association provide easements at this time.

As you know, we lack funding to complete the final design of the project. If easements were granted by the Association and the affected property owners, we would present a request to City Council to fund the final design of the project. The City would then make every effort to work with URS to determine if the width of the spillway easements could be reduced, although this would most likely result in a deeper depression within the swale to provide the same flow quantity required. In the event that a narrower design is found to be acceptable, the City would approach all easement grantors to consider modified easements.

Department of Public Services
Field Services Complex
26300 Delwal Drive
Novi, Michigan 48375
248.735.5640
248.735.5659 fax

cityofnovi.org

Within the next week, the City will mail the easement documents to each property owner for review and execution. The easement language has been revised to incorporate the feedback we received from the property owners. We request that the executed documents be returned to the City by January 14, 2011. At that time, the City will determine how the project will proceed, which is primarily dependent upon the receipt of the easements.

Once we receive the final invoice from URS, we expect to refund approximately \$300 in unused funds submitted by the Association for the review of the revised design.

Please feel free to contact us at 248-347-0454 with any further questions or concerns that you may have in regard to this matter.

Sincerely,

DEPARTMENT OF PUBLIC SERVICES



Rob Hayes, P.E.
Director of Public Services/City Engineer

Enclosure

cc: Fred Wright



December 8, 2010

City of Novi
Field Services Complex
26300 Delwal Drive
Novi, Michigan 48375

Dear Mr. Croy:

**RE: Meadowbrook Lake Dam Modifications and Auxiliary Spillway
Recommendations from Clif Seiber**

The City of Novi requested that URS review and comment on an alternate auxiliary spillway configuration proposed by the Meadowbrook Lake Homeowners Association (HOA) Engineering Consultant Clif Seiber of Seiber Engineering P.L.L.C. Throughout this letter this design is referred to as the "revised design" and the URS design is referred to as the "original design." The revised design differs from the original design in three significant ways:

- The defined auxiliary spillway from the lake to the river has been eliminated.
- The revised design increases the water surface elevation by 0.1 ft.
- The width of the spillway entrance has been reduced from 55 ft to 45 ft.

These changes have several positive impacts on the project that are described in a September 28, 2010 email from Clif Seiber to Ben Croy. In addition to these positive impacts there are also negative impacts on certain aspects of the project. The negative impacts of the revised design are described below:

- The auxiliary spillway area will need to remain clear of obstructions and the grass cut short. Thus, this scenario (as with all others) will require a flowage easement. Limiting construction to a reduced area will not negate this requirement.
- The design raises the water surface elevation of Meadowbrook Lake 0.1 feet, indicating that the design has less conveyance than the original. The applicable state regulations (Part 31) indicate that any increase in the upstream grade line requires additional documentation. While a 0.1 ft rise may ultimately be allowable by the state, URS does not feel that it is good practice to increase the flood elevation. This change will result in additional upstream flooding.
- When implementing a project that may raise the water surface elevation an engineer is required to certify that the proposed project does not cause a harmful interference as defined by Part 31. Additionally, if the rise goes beyond the project owner's property all upstream property owners will need to be notified. Furthermore, if the MDNRE determines that a harmful interference will occur the permit will be denied.
- The City would need to conduct an additional study to determine the impact of the 0.1 ft rise of water surface elevation on upstream land owners. Without such a study the City would not be in a position to determine if the rise in water surface



elevation caused a harmful interference with upstream properties. Without such a study the plans could not be sealed by a professional engineer.

- If the MDNRE approves a rise in water surface elevation and the City is willing to certify that the project does not cause a harmful interference the dam will need to be raised an additional 0.1 feet to provide adequate freeboard.
- The design does not provide a consistently sloped auxiliary spillway channel to convey flows back to the river. At large flows this difference between the designs will be minimal; however, at smaller (and more frequent) flows this will result in standing water in the area between the lake and river.
- The revised design results in greater flows through the auxiliary spillway area than currently occurs and results in a greater water surface elevation. While this area will not have flow in it more frequently, the combination of greater flow rates and higher water surface elevations will lead to the perception that the flooding is worse under the revised design.
- The revised design allows for flow to overtop a portion of the earthen dam. Since the dam is not designed to overtop this may lead to erosion of the soil surface during high flows which could result in dam failure.
- The revised design does not include erosion control fabric in the auxiliary spillway. High flows in this area will result in high shear stresses from flow velocity and water depth. The erosion control fabric is needed to reduce the potential for erosion.

Overall, the alternate design, if approved by the MDNRE, would likely meet the spillway capacity requirements for the design flows but will not provide low flow routing back to the river, may lead to erosion (which could cause dam failure) and will increase the water surface elevation (which would require further study by the City). Thus, while the MDNRE spillway capacity requirements will be met, the flooding situation for the residents near the spillway will be worsened (e.g. greater flows and higher water surface elevations) and the impacts of the 0.1 feet increase in water surface elevation upstream of the dam will need to be evaluated and quantified prior to permit submittal. Because of these reasons we do not think that it is a suitable long term solution for increasing spillway capacity.

Please feel free to call and discuss this review in greater detail.

Sincerely,
URS Corporation

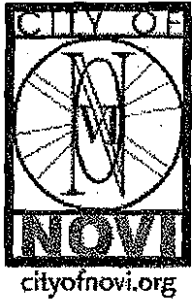
Troy Naperala

cc: J Hauser - URS

URS Corporation
10850 Traverse Highway, Suite 3365
Traverse City, MI 49684
Tel: 231.932.7592
Fax: 231.932.7594

2.4.10
To: Mayor & City Council
MP

MEMORANDUM



TO: CLAY PEARSON, CITY MANAGER
FROM: ROB HAYES, PE; DIRECTOR OF PUBLIC SERVICES *RH*
SUBJECT: MEADOWBROOK LAKE DAM UPDATE
DATE: FEBRUARY 3, 2010

This memo is to provide an update on our discussion with the Meadowbrook Lake Subdivision Association since this item was last addressed at the November 23, 2009 City Council meeting. The Engineering Division has continued to discuss the project with Lynn Kocan, Civics Director for the Association. As part of the discussions, the attached draft letter to the Department of Environmental Quality (DEQ) was provided to the Association for review and comment. The letter was intended to clarify the ownership of the dam with the DEQ to ensure that the Association and the individual property owners, who truly own the dam (which includes the earthen embankment and the spillway), receive notifications from the DEQ. The letter also explains to the DEQ that the project they had reviewed and discussed with the City and our consultants on several occasions will not occur because we have been unable to obtain easements.

The enclosed January 19, 2010 letter from the Association was sent in response to the draft DEQ letter stating the Association's opinion that the City does "have easements, control and continuing access to the dam." The letter goes on to cite several examples to support this opinion. City Attorney Tom Schultz has reviewed these claims in the enclosed January 28, 2010 letter and is unable to find legal support that the City has existing easements, or other rights, over the dam or spillway on the privately owned parcels or lot 128, which is owned by the Association. In 1984, The Association granted the City a 35-foot easement along the west side of the river through the parcel south of lot 128 (downstream of the dam), which is limited to the purpose of "constructing, operating, maintaining, and or repairing a drainage ditch across and through" the property. The plat indicates a 100-foot wide drainage easement over lot 128; however, the plat does not show a dam or spillway, the easement is a private easement that is not accessible without some other right of access, and it is unclear that the plat gives the City any rights. The review by the Attorney was unable to find other permanent easements associated with previous construction projects relating to Meadowbrook Lake or the dam. In fact, there is evidence that all previous work was accomplished using temporary easements granted specifically for that project. As recommended by the City Attorney, we will meet with the Association to discuss in further detail the legal basis for their assertions about the City's easements, control and continuing access to the dam.

It is clear from discussions with the Association that they are willing to continue working toward a solution. However, it is our understanding that the individual property owners are not interested and are no longer willing to discuss the preferred alternative for the project that includes the improvement of the existing low area through their properties to address flow deficiencies with the dam.

The existing design has been reviewed to determine if any parts of the project could be completed using existing easements. The only component that has potential would be the stream bank work downstream of the dam located within the existing 35-foot permanent easement. An easement through the Association's park to access this drainage easement

would be required to complete the work. The spillway and the swale are located on private property without dedicated easements; therefore the replacement of the valves on the spillway would not be possible without additional easements. The stream bank work is approximately \$22,000 part of the overall \$300,000 project, but with restoration of the work area and access to the site through the Association's park (which would have been included in part with the larger project), that cost would be as high as \$40,000. The stream bank work would address minor issues downstream of the dam, but would fail to address the more significant capacity issue associated with the dam.

The next step, should the City decide to continue to pursue this project, would be to reopen the feasibility study that was completed in March 2008 at the onset of the project. This would be required to study the next best alternative in more detail, reexamine the other alternatives, and perhaps identify additional alternatives based on what is now known. A consultant with expertise in this area would be required to review the alternatives, revise construction cost estimates and revise the model to reflect the current conditions. We estimate the cost of re-visiting the feasibility study to be approximately \$15,000.

As was done previously, the Association would be involved in the discussion of the alternatives and an agreement on easements would be required to move the project forward. The selected alternative would then require additional design and permitting prior to construction. We estimate the cost of the additional design and permitting to be approximately \$35,000. Therefore, the total cost to develop and design a different alternative would be approximately \$50,000.

We are looking for direction on how best to proceed.

cc: Pam Antil, Assistant City Manager
Tom Schultz, City Attorney
Brian Coburn, PE Senior Civil Engineer
Ben Croy, PE Civil Engineer

December 22, 2009

Jim Hayes, P.E.
Dam Safety Program
Land and Water Management Division
Michigan Department of Environmental Quality
P.O. Box 30458
Lansing, MI 48909

Re: Meadowbrook Lake Dam
Ownership of Dam

Dear Mr. Hayes:

The intent of this letter is to provide the MDEQ with contact information for the owner of the Meadowbrook Lake Dam (Dam ID 2199) located in the SE ¼ of Section 26 of the City of Novi. Past Dam Safety Inspection Reports have listed the City of Novi as the Owner/Operator of the dam; however, the City does not actually own any portion of the dam. The Meadowbrook Lake Subdivision Association (Association) and multiple individual property owners own the land encompassing the dam. The City's attorney, Secret Wardle, has confirmed that the City is not the owner of the dam, has no control of it, and lacks continuing access to it. For that reason, we request that the MDEQ no longer direct inspection reports to the City.

The City has contacted the Association and individual land owners requesting permanent easements to upgrade and maintain the dam; however no parties have granted or intend to grant any easements. Since the Association has been acting as the intermediary for the entire subdivision, future inspection reports should be directed to the Association as the owner/operator of the dam.

The dam is owned by the following property owners:

- Meadowbrook Lake Subdivision Association - P.O. Box 242, Novi, MI 48376 (parcel 50-22-26-476-018)
- Bennett and Sylvia Wright - 22647 Penton Rise Ct., Novi, MI 48375 (parcel 50-22-26-476-017)
- Costa Charnas - 22674 Ennishore Dr., Novi, MI 48375 (parcel 50-22-26-429-018)
- Christine Wilke Trust - 22692 Ennishore Dr., Novi, MI 48375 (parcel 50-22-26-429-017)

You are welcome to contact our office at 248-347-0454 with any questions regarding this matter.

Sincerely,

DEPARTMENT OF PUBLIC SERVICES

Rob Hayes, P.E.
Director of Public Services/City Engineer

cc: Brian Coburn, PE; Senior Civil Engineer, City of Novi
Ben Croy, PE; Civil Engineer, City of Novi
Tom Schultz; Secrest Wardle
Lynn Kocan; Civics Director, Meadowbrook Lake Subdivision Association
Bennett and Sylvia Wright
Costa Charnas
Christine Wilke Trust

DRAFT



Meadowbrook Lake

Subdivision Association

Post Office Box 242

Novi, Michigan 48376

Mr. Rob Hayes, City Engineer
City of Novi
26300 Delwal Drive
Novi, Michigan 48375

January 19, 2010

Subject: Meadowbrook Lake Dam Reconstruction Project

Dear Mr. Hayes:

Thank you for forwarding us a preliminary draft of your letter to the Michigan DEQ. The Meadowbrook Lake Subdivision Association (Association) Board of Directors met and reviewed your proposed letter. The wording in your letter "that no parties have granted or intend to grant easements" and "the City ... has no control of ... and lacks continuing access" to the dam is incorrect. The City does, in fact, have easements, control and continuing access to the dam.

In September 2007 the City Council discussed easements and "whether the City has the legal right to access and work in the areas at and downstream of the dam." A 9/10/2007 memo from the Engineering Department and a 9/27/07 letter from you to Clay Pearson discuss and show permanent easements on Association property, which were secured for the 1984 dam reconstruction. The first easement is 100-foot wide centered on the river's centerline and extending south of the dam on the Association's north parcel. The other easement is 35-foot wide measured from the centerline of the river, through the Association's south parcel. The 9/27/07 letter states, "The recorded easement language authorizes construction, operations and maintenance/repair work in these areas." The fact that these easements are permanent, the City built the spillway, the City modified the dam, the City dredged the lake in 1984, and the City dredged the lake again in 2005 show the City of Novi has assumed continuing responsibility for improving and maintaining this regional detention pond.

We strongly urge you to consider these facts before you contact the DEQ. Consistent with City Council's motion on 11/23/2009, we would hope "that the City and the homeowners would continue to work together towards a resolution that would be satisfactory to both sides."

We look forward to meeting with you and finding a mutually beneficial solution to the issues and concerns of the Meadowbrook Lake Dam Reconstruction Project.

Sincerely,

Colleen Hanley, President
Meadowbrook Lake Subdivision Association

Lynn Kocan, Director, Civics
Meadowbrook Lake Subdivision Association

cc Brian Coburn, PE; Senior Civil Engineer, City of Novi
Ben Croy, PE; Civil Engineer, City of Novi
Clay Pearson; City Manager



January 28, 2010

30903 Northwestern Highway
P.O. Box 3040
Farmington Hills, MI 48333-3040
Tel: 248-851-9500
Fax: 248-851-2158
www.secretswardle.com

THOMAS R. SCHULTZ
Direct: 248-539-2847
tschultz@secretswardle.com

Rob Hayes, Director of Public Services
City of Novi
Public Services – DPW Garage
26300 Delwal Drive
Novi, MI 48375

Re: *Meadowbrook Lake Dam Reconstruction Project*
Our File No. 55142 NOV

Dear Mr. Hayes:

Our office received a copy of the January 19, 2010 letter to you from the Meadowbrook Lake Subdivision Association regarding the Dam Reconstruction Project. The letter takes issue with the statement made in the City's draft letter to the Michigan Department of Environmental Quality (MDEQ) that "the City . . . has no control of . . . and lacks continuing access" to the dam. The association's letter states that the City does "in fact, have easements, controlling continuing access to the dam." The association's letter points out a couple of documents and/or other relevant information apparently in support of that conclusion. You asked us to comment on those.

100-Foot Wide "Drainage Easement"

This is a notation on the 1960 plat. The plat shows "100-foot drainage easement" over Lot 128, which is one of the parks in the development. The plat does not show a dam. In fact, that location appears to be the then existing drainage point for the lake. The "dedication" language on the plat states as follows:

. . . that streets as shown on said plat are hereby dedicated to the use of the public *and that the private easements indicated on said plat are hereby reserved for the public utilities or for the specific uses as thereon indicated* subject to the regulation and control of the use thereof by local governmental authorities and that no permanent structures are to be erected within the limits of said easement, and that Lot 128, as shown hereon, is not to be used for residential purposes.

We note that this 100-foot wide "private easement" is only across Lot 128. It ends at the unplatted property that the Meadowbrook Lake Subdivision Association has subsequently acquired. We're not even sure whether it is physically accessible even by foot without some *other* right of access. Moreover, it is not entirely clear that it gives the *City* the right to do anything. As we have previously stated, Section 8(f) of the Meadowbrook Lake Subdivision restrictions make clear that the lake and the park (Lot 128) are private facilities, and that Novi has "no responsibility whatever concerning the control of water level, improvement, or maintenance thereof, and that such responsibility is solely that of the property owners of Meadowbrook Lake Subdivision and/or the Association, and is so acknowledged."

And to complicate matters further, it appears from the recent survey prepared by URS (copy attached) that even if the 100-foot wide easement does give the City some right to enter upon that area to work on the dam structure (as opposed to simply indicating a *drainage* easement), that is not where the spillway—i.e., the gate structure—is even located. In other words, the 100-foot easement, if it makes it to the lake's edge, would appear to give access to the berm area, not the spillway.

35-Foot Wide Easement Through the "South Parcel"

This easement (Liber 8674, Page 502) was granted to the City by the association in 1984 as part of a dam improvement/lake dredging project. It is a permanent easement, but it is limited to the purpose of "constructing, operating, maintaining and/or repairing a *drainage ditch* across and through" the described property. The described property is not in the plat; it is the unplatted parcel south of Lot 128. Note also that this easement also includes a "temporary construction easement" that allowed the City additional temporary rights over the property beyond the 35-foot permanent easement.

Temporary Easement Over Lot 128

This easement (Liber 8674, Page 507) is also from the 1984 project, and is the only other easement that we are aware of that has been granted by the association. It is a *temporary* construction easement over all of Lot 128 for the purpose of "replacing and reconstructing the Meadowbrook Lake Dam, a channel for the Walled Lake branch of the Middle Rouge River, and for the dredging of Meadowbrook Lake." By its terms, the easement terminates after the construction work is done.

As we have discussed, a review of various City records, including meeting minutes of the City Council, reflects that on each occasion when the City performed work on the lake or in the area of the dam, it ended up securing some

Rob Hayes, Director of Public Services

January 28, 2010

Page 3

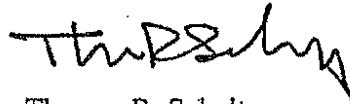
sort of formal approval for that from the association. Even substantial dam work was done with temporary construction easements. We would need more information from the association to understand how, on the basis of these documents, the City would safely enter upon the area where the dam is and conduct substantial permanent improvements there without securing further approvals of the association as had been done in the past.

As you know, one of the documents that our office and the engineering department prepared and circulated to the association in connection with *this* proposed project was a permanent easement for the dam (the entire length of the dam, but also including the spillway structure) and that part of the channel on Lot 128. Given the closeness with it negotiated the terms of that permanent easement while it was being considered, it is a surprise to now hear that the association might believe the City could enter upon the property and do the work requested without further consultation with the association.

Our recommendation at this point, then, is that we meet with the association to discuss in further detail the legal basis for the assertions in this letter.

If you have any questions regarding the above, please call me.

Very truly yours,



Thomas R. Schultz

TRS/jes

Enclosure

cc: Clay Pearson, City Manager
Pamela Antil, Assistant City Manager
Maryanne Cornelius, City Clerk

1368489

EASEMENT

KNOW ALL MEN BY THESE PRESENTS, that THE MEADOWBROOK LAKE SUBDIVISION ASSOC., INC., A MICHIGAN CORPORATION, WHOSE ADDRESS IS P.O. BOX 242, NOVI, MI 48050 hereinafter called the Grantor, for and in consideration of the sum of (\$1.00) ONE DOLLAR AND NO/100

*1/8
1/26*

received from the City of Novi, a Michigan Municipal Corporation, hereinafter called the City, whose address is 45225 West Ten Mile Road, Novi, Michigan, 48050, does hereby grant easements to the City for constructing, operating, maintaining and/or repairing a drainage ditch across and through the following described land situated in Section 26, T.1N., R.8E., City of Novi, Oakland County, Michigan, to-wit:

*0
#*

A permanent easement consisting of a strip of land 35.00 feet wide and being the easterly 35.00 feet of the hereinafter described property and also the south 50.00 feet of the hereinafter described property.

SEE EXHIBIT 'A' ATTACHED HERETO AND MADE A PART HEREOF.

Said easement being over and across the following described parcel:

Part of the southeast 1/4 of Section 26, T.1N., R.8E., City of Novi, Oakland County, Michigan, described as beginning at a point on the south line of Section 26, located N88°46'19"E 205.03 feet from the southwest corner of Meadowbrook Lake Subdivision as recorded in Liber 106 of Plats, Pages 6 and 7, Oakland County Records; thence N00°20'W along the easterly line of 60 foot wide Ennishore Drive 739.07 feet to a point of curve; thence on a curve to the right along said easterly line (radius = 570.00 feet, long chord bears N04°12'16"E 90.19 feet) a distance of 90.29 feet to the southwesterly corner of Lot 128, Meadowbrook Lake Subdivision; thence S59°04'31"E along southeasterly line of said Lot 128 and the boundary line of said subdivision, 380 feet more or less to the centerline of the Walled Lake Branch of the Middle Rouge River; thence southeasterly along said centerline to the south line of said Section 26; thence westerly along said south line to the point of beginning, except the southerly 60.00 feet thereof.

RECORDED
MAY 22 1984

And further, the Grantor does hereby grant a temporary construction easement to the City over all of the above described property excepting the above described permanent easement.

Said temporary construction easement shall terminate upon the completion date of construction of the "Middle Rouge River Improvements".

*11.00
Ret.
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As further consideration for the granting of this Easement, the City of Novi and their agents shall comply with the following terms and conditions:

1. All park benches and barbeque grills located at the south end of the lake which require removal during construction shall be reinstalled upon completion of construction. In the event the benches or barbeque grills are damaged, the City shall furnish new ones of like quality and install the same.
2. The "tennis court" shall not be disturbed. If during construction the court is damaged, the same shall be repaired with a minimum thickness of 2-1/2 inches of asphalt.
3. Any part of the existing walkway which is disturbed or damaged during construction shall be replaced with like material, strength, width, and thickness.
4. The existing bridge may be reused, extended, or replaced.
5. All existing park electric lights, timers, and controls which are disturbed or damaged during construction shall be replaced with like quality and material.
6. A minimum of one floodlight shall be installed near the bridge and directed at the lake dam falls. This light is to be connected to the existing control system.
7. The dam at the south end of the lake shall provide a "falls," and not a spillway or step falls.
8. Existing capped artesian wells and piping located in the park shall not be disturbed. Any damage to these systems during construction shall be repaired by the contractor. The piping which extends into the existing river channel may be trimmed to the new bank slopes.
9. A total of thirty-five new trees shall be planted in the subdivision park at locations determined by the Grantor. Trees to be removed are shown on Exhibit "B" which is attached hereto and made a part hereof. Trees to be placed in the park shall be of good quality and shall consist of an equal number of oak, maple, blue spruce, and white pine placed at locations specified by the Board of Directors. Deciduous trees shall be 2-inch caliper as measured at a point two feet above the ground. Evergreen trees shall be a minimum of 6 feet high.
10. All park areas disturbed during construction shall be restored with 3 inches of topsoil, a good quality grass hydroseed.
11. The dredging of Meadowbrook Lake will be provided to a depth of 12 feet below the existing natural water level subject to a review of the condition of the bottom after field inspection by the engineers for any danger of lake bottom damage which might occur as a result of the 12-foot depth.
12. The westerly bank slopes of the river channel between the dam and the Nine Mile Road bridge are to be stabilized with an engineering fabric, topsoil, and hydroseed at locations shown on Exhibit "B". Bank slopes shall be graded to a slope of 3 feet horizontal to 1 foot vertical.
13. The lake may be drained for a period not to exceed one year in order to perform the dredging operation.
14. The City of Novi shall indemnify and save harmless, the Grantor from and against any and all detriments, damages, losses, claims, demand suits, costs, or other expenses which the Grantor may suffer, sustain, or be subject to caused either wholly or in part, directly or indirectly, by reason of the use of the above premises pursuant to the rights granted herein.

This instrument shall be binding upon and inure to the benefit of the parties hereto, their heirs, representatives, successors, and assigns.

IN WITNESS WHEREOF, the undersigned have hereunto affixed their signatures this 5th day of January, A.D., 19 84.

In Presence Of:

MEADOWBROOK LAKE SUBDIVISION
ASSOCIATION, INC.

By: Gerald MacEachern (L.S.)
Gerald MacEachern
Its: President (L.S.)

And By: Anne M. Reynolds (L.S.)
Anne M. Reynolds
Its: Secretary (L.S.)

Greg Wick
Greg Wick

Bernard C. Seiber, Jr.
Bernard C. Seiber, Jr.

STATE OF MICHIGAN
COUNTY OF OAKLAND ss

On this 5th day of January, A.D., 19 84, before me, a Notary Public in and for said County, appeared Gerald MacEachern and Anne M. Reynolds, respectively the President and Secretary of Meadowbrook Lake Subdivision Association, Inc.

to me known to be the person (s) described in and who executed the foregoing instrument and respectively acknowledged the execution thereof to be their free act and deed for and on behalf of the Meadowbrook Lake Subdivision Association, Inc.

This instrument was drafted by and return to: Cliff Seiber & Larry Currin

JCK & ASSOCIATES, INC.
9215 Dixie Highway
P.O. Box 329
Clarkston MI 48016

Bernard C. Seiber, Jr.
Bernard C. Seiber, Jr.
Notary Public Oakland

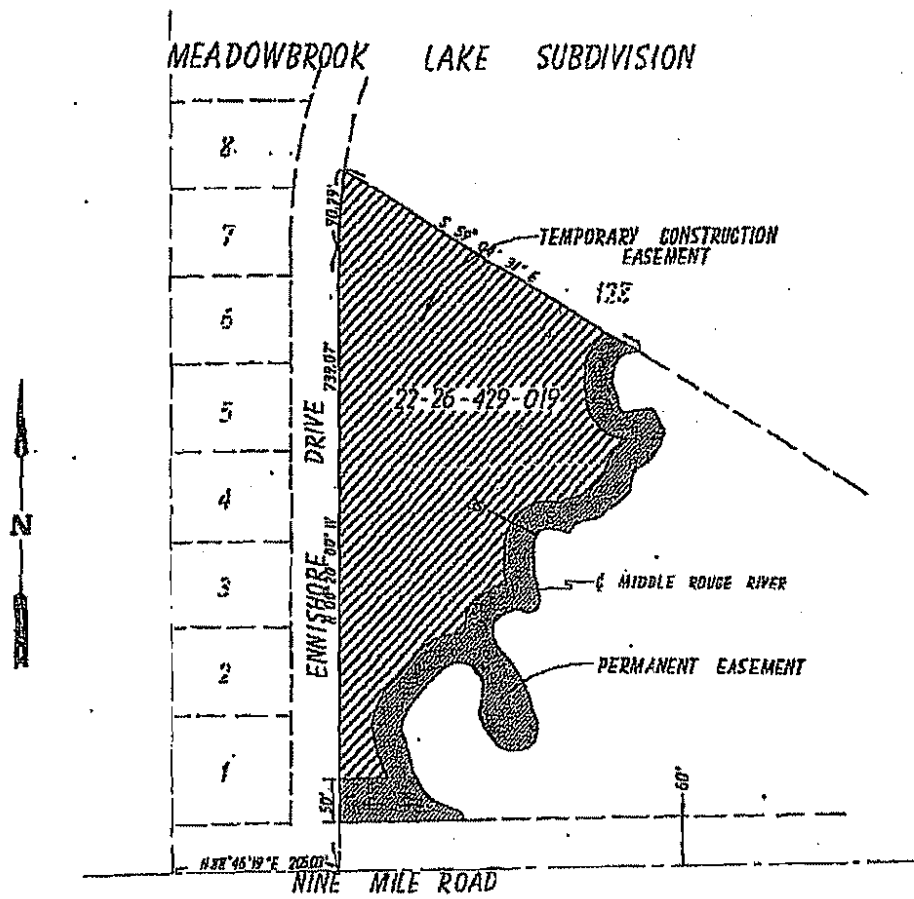
County, Michigan.
my Commission Expires:

June 30, 1987

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EXHIBIT "A"

LIBER 8674 PAGE 505



LEGEND

-  PERMANENT EASEMENT
-  TEMPORARY EASEMENT


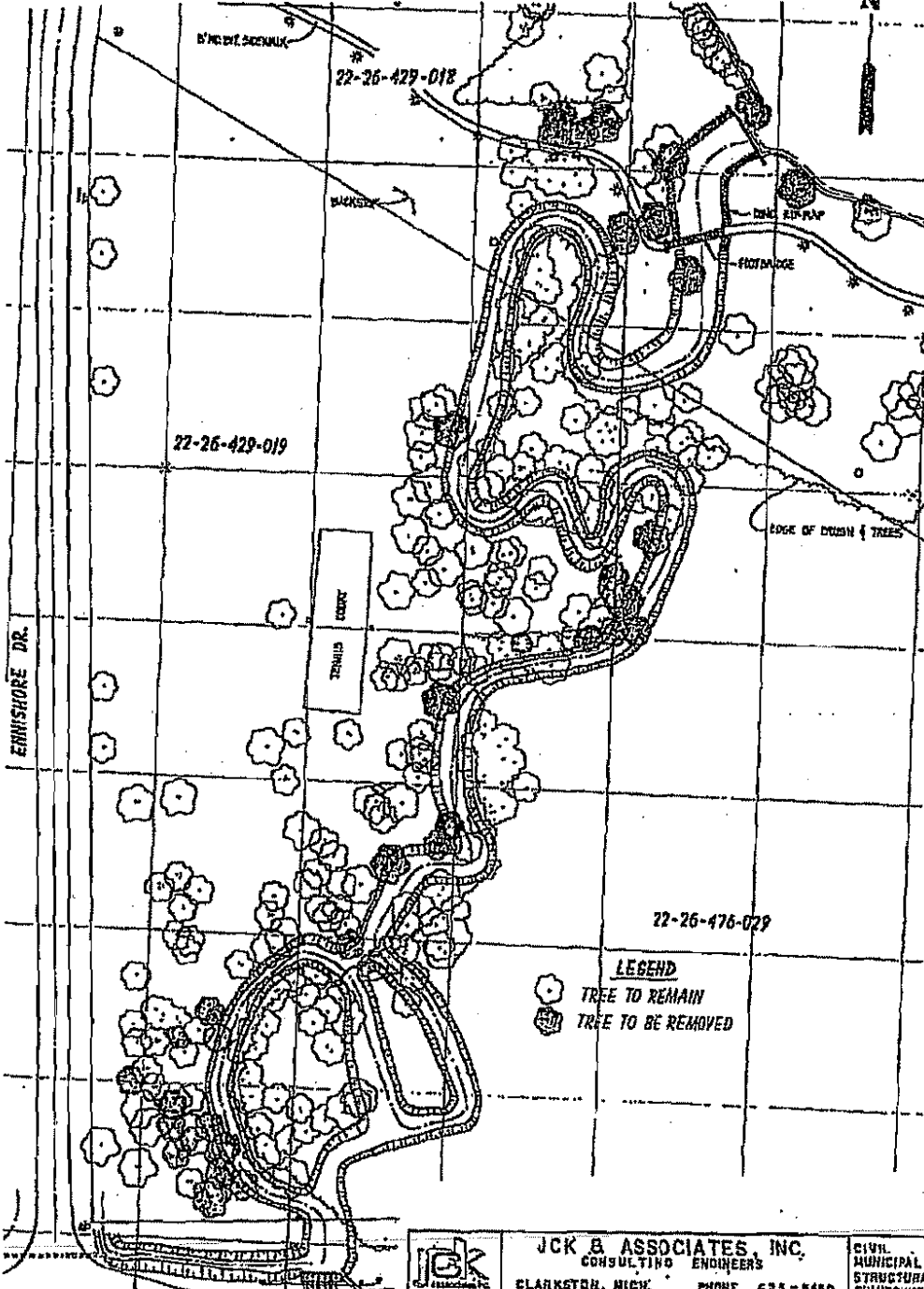
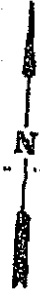
	J&K & ASSOCIATES, INC. CONSULTING ENGINEERS CLARKSTON, NICH. PHONE 625-3450	CIVIL MUNICIPAL STRUCTURAL ENVIRONMENTAL
	MIDDLE ROUGE RIVER IMPROVEMENTS	
EASEMENT ACROSS 22-26-429-019		
DRAWN <u>TLR</u>	DATE	SCALE
		JOB NO.
		SHT. NO.

EXHIBIT "B"



LEGEND
 ○ TREE TO REMAIN
 ● TREE TO BE REMOVED

	J&K ASSOCIATES, INC. CONSULTING ENGINEERS			CIVIL MUNICIPAL STRUCTURAL ENVIRONMENTAL	
	CLARKSTON, MICH. PHONE 625-5450				
MIDDLE ROUGE RIVER IMPROVEMENTS					
CITY OF NOVI					
DRAWN DESIGNED CHECKED	S.A.S. S.S.S. S.S.S.	DATE 12-19-83	SCALE NO SCALE	JOB NO. N-0167	SHT. NO. 2 OF 2

NINE MILE ROAD

EASEMENT

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hereinafter called the Grantor, for and in consideration of the sum of (\$1.00) ONE DOLLAR AND NO/100

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received from the City of Novi, a Michigan Municipal Corporation, hereinafter called the City, whose address is 45225 West Ten Mile Road, Novi, Michigan, 48050, does hereby grant a temporary easement to the City for replacing and constructing the Meadowbrook Lake Dam, a channel for the Walled Lake Branch of the Middle Rouge River and for the dredging of Meadowbrook Lake, through the following described land situated in Section 25, T.1N., R.8E., City of Novi, Oakland County, Michigan, to-wit:

A temporary construction easement over all of Lot 12B of Meadowbrook Lake Subdivision, being part of the SE 1/4 of Section 25, T.1N., R.8E., City of Novi, Oakland County, Michigan as recorded in Liber 106 of Plats, Pages 6 & 7, Oakland County Records.

106006

SEE EXHIBIT 'A' ATTACHED HERETO AND MADE A PART HEREOF.

Said temporary construction easement shall terminate upon the completion date of construction of the "Middle Rouge River Improvements".

98 MAR 22 1985

As further consideration for the granting of this Easement, the City of Novi and their agents shall comply with the following terms and conditions:

1. All park benches and barbeque grills located at the south end of the lake which require removal during construction shall be reinstalled upon completion of construction. In the event the benches and barbeque grills are damaged, the City shall furnish new ones of like quality and install the same.
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old

Ret. over

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13. The lake may be drained for a period not to exceed one year in order to perform the dredging operation.
14. The City of Novi shall indemnify and save harmless, the Grantor from and against any and all detriments, damages, losses, claims, demand suits, costs, or other expenses which the Grantor may suffer, sustain, or be subject to caused either wholly or in part, directly or indirectly, by reason of the use of the above premises pursuant to the rights granted herein.

This instrument shall be binding upon and inure to the benefit of the parties hereto, their heirs, representatives, successors, and assigns.

IN WITNESS WHEREOF, the undersigned have hereunto affixed their signatures this 5th day of January, A.D., 19 84.

In Presence Of:

Brey Rick
Brey Rick

Bernard C. Seiber, Jr.
Bernard C. Seiber, Jr.

MEADOWBROOK LAKE SUBDIVISION
ASSOCIATION, INC.
By: Gerald MacEachern (L.S.)
Gerald MacEachern

Its: President (L.S.)

And By: Anne M. Reynolds (L.S.)
Anne M. Reynolds

Its: Secretary (L.S.)

STATE OF MICHIGAN
COUNTY OF OAKLAND ss

On this 5th day of January, A.D., 19 84, before me, a Notary Public in and for said County, appeared Gerald MacEachern and Anne M. Reynolds, respectively the President and Secretary of Meadowbrook Lake Subdivision Association, Inc.

to me known to be the person (s) described in and who executed the foregoing instrument and respectively acknowledged the execution thereof to be their free act and deed for and on behalf of the Meadowbrook Lake Subdivision Association, Inc.

This instrument was drafted by and return to: Cliff Seiber & Larry Currin

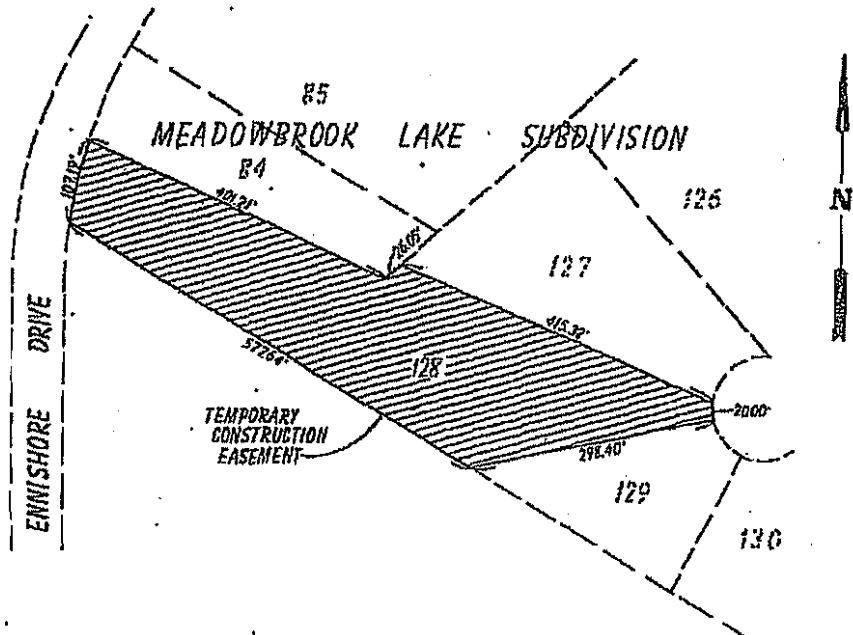
JCK & ASSOCIATES, INC.
9215 Dixie Highway
P.O. Box 329
Clarkston MI 48016

Bernard C. Seiber, Jr.
Bernard C. Seiber, Jr.
Notary Public Oakland

County, Michigan.
my Commission Expires:
June 30, 1987

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EXHIBIT "A" LIGER 6674 PAGE 510

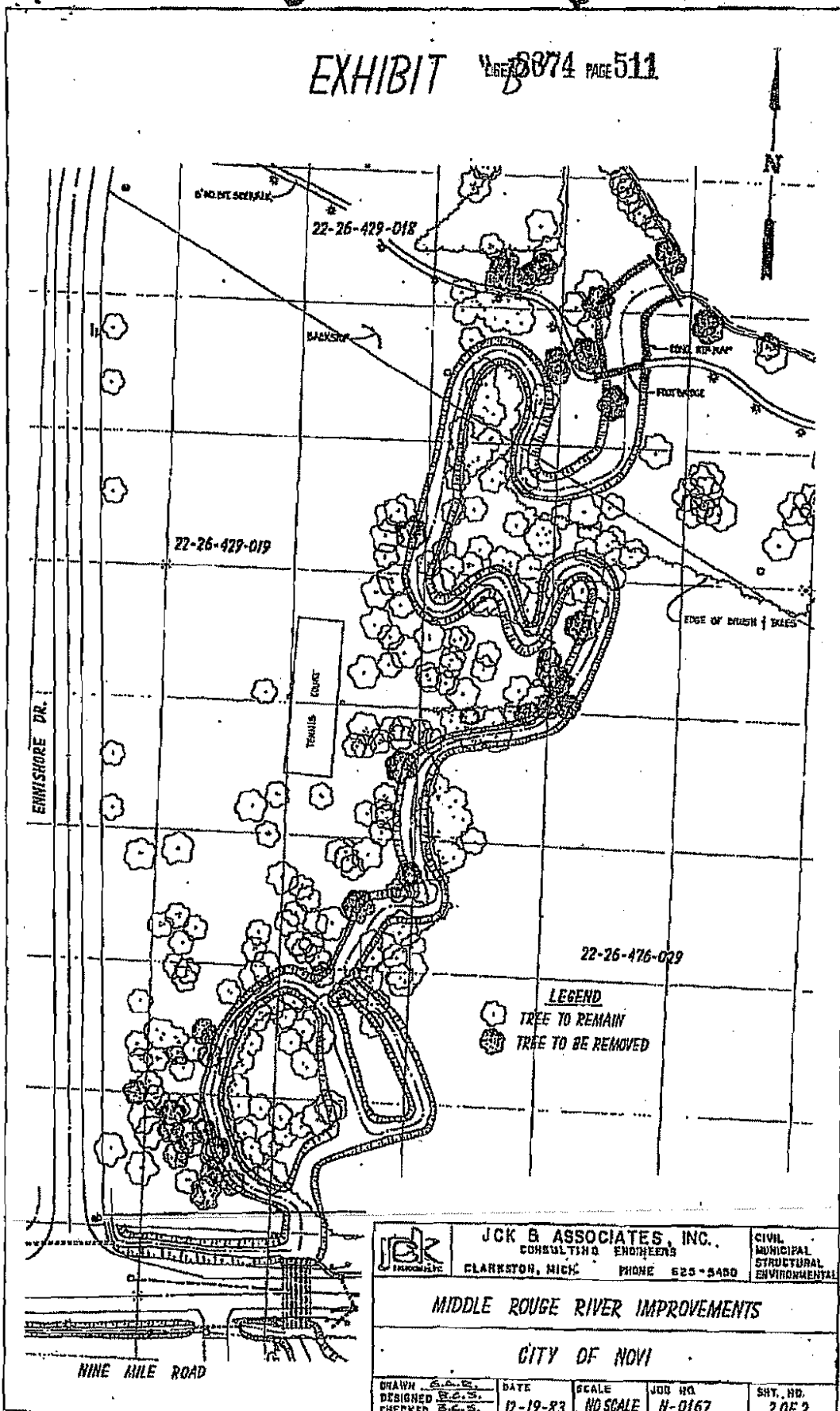



LEGEND

TEMPORARY EASEMENT

	J&K ASSOCIATES, INC. CONSULTING ENGINEERS CLARKSTON, MICH. PHONE 623-5450	CIVIL MUNICIPAL STRUCTURAL ENVIRONMENTAL
	MIDDLE ROUGE RIVER IMPROVEMENTS	
LOT 128 MEADOWBROOK LAKE SUB'N		

EXHIBIT ¹ 8874 PAGE 511



	J&K ASSOCIATES, INC. CONSULTING ENGINEERS CLARKSTON, MICH. PHONE 625-5480		CIVIL MUNICIPAL STRUCTURAL ENVIRONMENTAL
	MIDDLE ROUGE RIVER IMPROVEMENTS CITY OF NOVI		
DRAWN <u>S.S.S.</u> DESIGNED <u>S.S.S.</u> CHECKED <u>S.S.S.</u>	DATE 12-19-83	SCALE NO SCALE	JOB NO. H-0167
			SHY. NO. 2 OF 2