



CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

October 26, 2022

Mr. Paul M. Davis, P.E.
City Engineer, Deputy Director, Department of Public Services
City of Rochester Hills
1000 Rochester Hills Drive
Rochester Hills, MI 48309

**RE: Bloomer Park Pathway Extension - City File E22-TBD
City of Rochester Hills, Michigan
Proposal #9-D940**

Dear Mr. Davis:

In response to your request, we have reviewed the project requirements relative to development of plans and specifications for the extension of a pathway connecting existing improved trails in Bloomer Park to the existing pathway on the north side of E. Avon Road. The City has provided NFE with a site sketch that depicts two options for consideration.

Option A includes improvement of approximately 1400 lineal feet of existing pathway traversing from E. Avon Road approximately 450 feet northerly and 500 feet easterly along the bank of the Clinton River at which point the pathway will then extend northerly 450 feet where it connects to an improved trail system within Bloomer Park. Option A follows an established pathway route that is heavily used. There appears to be a small amount of wetlands close to E. Avon Road that will require attention in the design process through the implementation of approximately 100 feet of boardwalk or possibly a wetland fill permit. Otherwise, the pathway system seems to be within upland area that should be confirmed by the City's Environmental Consultant.

Option B includes improvement of approximately 1350 lineal feet of pathway traversing from E. Avon Road approximately 450 feet northerly along the bank of the Clinton River at which point the pathway will follow an existing overhead power line corridor northerly approximately 550 feet where it intersects an existing foot path that connects Cider Mill Village to the Bloomer Park pathway system. The proposed pathway would then traverse easterly along said footpath approximately 350 feet where it will then connect to an improved trail system within Bloomer Park. Option B follows an established pathway route that is heavily used for the first 450 feet. There appears to be a small amount of wetlands close to E. Avon Road that will require attention in the design process through the implementation of approximately 100 feet of boardwalk or possibly a wetland fill permit. Additionally, there is a wetland crossing immediately west of the connection to Bloomer Park that will also require a wetland permit and boardwalk to cross. Otherwise, the pathway system seems to be within upland area that should be confirmed by the City's Environmental Consultant. We do note that this option has significant challenges associated with elevation relief, and the aesthetics of the power lines are not desirable.

We note that both options are within the influence of the Oakland/Macomb Interceptor system that will need to be assessed as a part of the overall design development process. Specifically, there is a gated entrance off of Avon Road which is likely for the maintenance of this system. It would be expected that maintenance vehicles will have to access infrastructure and that the proposed pathway system should be designed to accommodate that condition.

NOWAK & FRAUS ENGINEERS

46777 WOODWARD AVENUE
PONTIAC, MI 48342-5032

WWW.NOWAKFRAUS.COM

VOICE: 248.332.7931
FAX: 248.332.8257

Considering an overall length of 1,400 lineal feet with a unit price of approximately \$1.3M per mile to construct pathway systems, the overall construction budget for this project will be approximately \$350,000 which does not include PE or CE.

Based on our review of the project requirements, we have identified the following scope of work required to develop these projects and advance them to the construction phase:

SCOPE OF WORK

PHASE I SERVICES – PRE-ENGINEERING - Both Option A and Option B

- Perform all field investigation and survey services required to support the full design development of the project. Field investigation and survey services will include the following:
 - Perform required field survey of the project development area and prepare existing condition drawings consistent with Rochester Hills requirements.
 - Existing underground utilities shall be located and identified, including rim elevations and pipe inverts.
 - Existing spot grades shall be obtained at 50-foot intervals for road edges and centerline, centerline of driveways and driveway edges, road intersection PC's, and other locations needed for design. The pathway route will be cross sectioned every 50 feet along the route of the proposed pathway.
 - All existing trees and improvements within the limits of the project shall be located. We note that the City's Environmental Consultant will be responsible for performing the required tree tagging, tree identification and wetland delineation. NFE will coordinate these activities.
 - Perform field engineering analysis to identify construction constraints, conditions and make engineering assessment of current conditions to support design initiatives.

PHASE II SERVICES – PRELIMINARY ENGINEERING – Both Option A and Option B

- Prepare preliminary construction plans in accordance with City requirements. Construction plans to include the following:
 - Existing Condition Plans
 - Preliminary Paving Plans including utility adjustments
 - Preliminary Typical Detail sheet with existing and proposed cross-sections.
 - Standard Detail Sheet(s)

- Plan sheets will be drawn to a scale of 1"=30' horizontal and 1"=3' vertical.
- Identify work items consistent with MDOT Standard Specifications for Construction and prepare preliminary Engineer's Opinion of Construction Cost.
- Coordinate project development with the City and other permitting agencies as required for project permits.
- Identify potential utility conflicts and coordinate with utility companies to resolve utility conflicts.
- Attend project design review meeting to present preliminary design and obtain critical feedback from City staff and departments.
- Attend public hearings, City Commission meeting, etc. as requested

PHASE III SERVICES – FINAL ENGINEERING FOR SELECTION OPTION

- Prepare final construction plans in accordance with City requirements. Construction plans to include the following:
 - Existing Condition Plans
 - Final Paving & Grading Plans including utility adjustments
 - Final Typical Detail Sheet with existing and proposed Cross-Sections.
 - Standard Detail Sheet
 - Final Traffic Maintenance Plan / Construction Staging Plan
 - Final Permanent Striping and Signing Plans
- Identify work items consistent with MDOT Standard Specifications for Construction and prepare final Engineer's Opinion of Construction Cost.
- Coordinate project development with the City and permitting agencies, as required for project permits. Apply for and obtain all required permits from permitting authorities.
- Prepare construction bid documents including modified Rochester Hills boiler plate, standard specifications for construction
- Submit 90% complete final design package to City for final review and comments.
- Make all necessary changes to final design documents and assist City with project bidding process
 - Review submitted bids for completeness and accuracy and prepare a bid tabulation sheet
 - Review references and prepare a letter recommending award to the desired contractor
- Attend project meetings as required to develop final design consistent with City requirements. Based on the work outlined above, we submit the following engineering fee for your approval:

Based on the work outlined above, we submit the following engineering fee for your approval:

PROJECT – BLOOMER PARK PARKING LOT REHABILITATION PROJECT

<u>WORK</u>	<u>ESTIMATED FEE</u>
Phase I – Pre-Engineering Services	\$17,340.00
Phase II – Preliminary Engineering Services	\$15,024.00
Phase III – Final Engineering Services	\$16,728.00
Reimbursable Expenses	\$1,000.00
TOTAL NOT-TO-EXCEED AMOUNT PROJECT 1:	<u>\$50,092.00</u>

We submit the following cost breakdown as evidence of our expected costs associated with the design of the project:

PHASE I – PRE-ENGINEERING

<u>Classification</u>	<u>Description of Work</u>	<u>Estimate Hours</u>	<u>Hourly Rate</u>	<u>Amount</u>
2 Person Survey Crew	Topographic Survey	60	\$139.00	\$ 8,340.00
Engineering Tech III	Topographic Survey	80	84.00	6,720.00
Engineer II	Field Review/Investigation	20	78.00	1,560.00
Principal	Coordination	6	120.00	720.00
Tree Survey Allowance				By Others
Wetland Survey Allowance				<u>By Others</u>
Subtotal Phase I				\$17,340.00

PHASE II – PRELIMINARY ENGINEERING

<u>Classification</u>	<u>Description of Work</u>	<u>Estimate Hours</u>	<u>Hourly Rate</u>	<u>Amount</u>
Engineering Tech. III	Prepare Const. Drawings in CAD	60	\$ 84.00	\$5,040.00
Project Engineer	Design of Improvements	40	96.00	3,840.00
Engineer II	Quantities & Cost Estimate, etc.	48	78.00	3,744.00
Principal	Review & Coordinate	20	120.00	<u>2,400.00</u>
Subtotal Phase II:				\$15,024.00

PHASE III – FINAL ENGINEERING

<u>Classification</u>	<u>Description of Work</u>	<u>Estimate Hours</u>	<u>Hourly Rate</u>	<u>Amount</u>
Engineering Tech. III	Prepare Const. Drawings in CAD	60	\$ 84.00	\$5,040.00
Project Engineer	Design of Improvements	48	96.00	4,608.00
Engineer II	Quantities & Cost Estimate, etc.	60	78.00	4,680.00
Principal	Review & Coordinate	20	120.00	<u>2,400.00</u>
Subtotal Phase III:				\$16,728.00

REIMBURSABLES

Blueprinting, delivery charges, etc.	\$ 1,000.00
Subtotal Reimbursables:	\$ 1,000.00

TOTAL NOT-TO-EXCEED AMOUNT PROJECT 1: \$50,092.00

The work will be undertaken in accordance with our professional services agreement dated August 5, 2020, and we will proceed with the design work upon your authorization and complete the required construction documents within the following design development schedule:

Pre-Engineering Phase	Completed by December 16, 2022
Preliminary Engineering Phase	Completed by January 27, 2023
Final Engineering Phase	Completed by March 10, 2023
Permits	Completed by June 30, 2023
Bid Package Complete	Completed by April 3, 2023
Bids Received	June, 2023

Timeline above assumes an EGLE permitting process for wetland crossings. We understand that this work may be added to the Bloomer Park Paving Project. If that is the case, NFE will work with the selected contractor to obtain the necessary pricing for a change order to that contract. Please be advised that invoices will be based on actual hours and work required as approved by your office and the not-to-exceed amount will not be exceeded unless authorized by our office. We look forward to working with you on this important project for the city.

Mr. Paul M Davis, P.E.
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If you have any questions or require further information, please feel free to contact me.

Sincerely,
Nowak & Fraus Engineers



Jeffrey J. Huhta, P.E., P.S.
Managing Partner

Date: October 26, 2022

Recommended By:
CITY OF ROCHESTER HILLS

Paul Davis, P.E., Deputy DPS Director

Date: _____

Approved By:
CITY OF ROCHESTER HILLS

Bryan K. Barnett, Mayor

Date: _____