



January 8, 2026

Darwin McClary
Village Manager
Village of Lake Orion
21 E. Church St.
Lake Orion, MI 48362

**RE: 2026 Pavement Improvements
Local Streets west of M-24, east of Lake Orion
Village of Lake Orion
Proposal for Professional Services**

Dear Mr. McClary:

Nowak & Fraus Engineers (NFE) appreciates the opportunity to submit our proposal for Professional Civil Engineering services for the Village of Lake Orion. You have requested our services to survey, design, bid, inspect and administer the construction contract as well as implement the TEDF grant for pavement and minor drainage improvements for the local streets west of M-24 and east of the lake. Please find detailed below a breakdown of our anticipated scope of services and associated fees.

Understanding of the Project:

In accordance with the Village's draft Pavement Asset Management Plan (PAMP) of 2023, capital improvements to local streets have been planned with the goal of bringing the Village's local road network into closer alignment with the statewide average condition for local road networks. Statewide, 55% of local streets are rated as Fair to Good (PASER condition 5 to 10) whereas, as of 2023, only 11% of Lake Orion's local streets met the Fair to Good designation. The PASER ratings of all streets within the proposed 2026 Pavement Improvement district fall within the Poor condition designation (PASER conditions 1 through 4). Treatment methods are intended to raise the rating designations of the treated segments to Fair or Good condition.

The total area of proposed improvement consists of two sub-districts; the street segments approved under the TEDF Grant received by the Village in October 2025 for use before September 30, 2026 and the remaining streets west of M-24 not included in the TEDF Grant. These sub-districts are described separately below as "TEDF Grant Streets" and "Additional Streets".

TEDF Grant Streets:

- Clare Street
- Axford Street from Flint Street to Lake Street
- Andrews Street from Flint Street to Lake Street
- North Shore Drive from Church Street to Lake Street
- W. Flint Street from S. North Shore Drive to S. Park Boulevard
- Lake Street from west end to abandoned Darling Drive / Peninsula Condos entrance
- Grove Street

Planned treatments for these street segments were preliminarily designed and costs estimated for the TEDF

Grant application to comply with the *MDOT Local Agency Guidelines for Geometrics on Local Agency Projects* 2017 Edition Approved Preventative Maintenance Treatments, as required by the TEDF Grant program. Those treatments are based on the PASER ratings of the street segments available at the time the TEDF Grant application was submitted, and consist of:

- Mill and one course non-structural HMA overlay and storm sewer/underdrain installation where necessary on
 - Clare Street from Lake Street south,
 - Axford and Andrews Streets between Lake and Flint Streets,
 - North Shore Drive between Lake Street and W. Church Street,
 - W. Flint Street between S. Park Boulevard and North Shore Drive, and
 - Lake Street from west end to Peninsula Condos entrance:
 - including riprap at south end of Clare Street to slow runoff into Lake Orion,
 - ADA-compliant ramp sections with detectable warnings,
 - adjustment of existing utility structures if necessary to meet grade, and
 - pavement markings where required.
- Crushing and shaping of existing asphalt roadway on Grove Street between Lake Street and dead end, including installation of perforated underdrain, outletting to Lake Orion in Lake Street ROW to resolve intermittent drainage ponding, adjustment of existing utility structure to meet grade.

Additional Streets:

- North Shore Drive from west cul-de-sac to Church Street
- W. Church Street from North Shore Drive to N. Park Boulevard
- Axford Street from N. Channel Street to Flint Street
- W. Shadbolt Street from N. Andrews Street to S. Park Boulevard
- Andrews Street from W. Church Street to Flint Street
- Andrews Street from Lake Street to south dead end, public section only
- Hill Street
- Beebe Street

Low and High preliminary construction cost estimates were provided to the Village in December for these street segments, based on comparing them conceptually to the preliminary designs of the TEDF Grant street segments (low estimate) and applying the potential costs per lane-mile from the draft PAMP based on current PASER rating (high estimate). The anticipated treatment methods include:

- HMA overlay 1.5" – 2"
- Mill and HMA overlay 1.5" – 2"
- Edge milling with overlay
- Full-depth reclamation 3" - 4"

The actual method of improvement for each segment will be determined during design based upon the existing pavement and base condition with recommendations provided by the geotechnical and pavement investigation, and any drainage deficiencies discovered.

As you will recall, the preliminary construction cost ranges provided to the Council when they considered whether to add these street segments was based on the understanding that drainage improvements at the North Shore low point toward the west end would be a separate project, entailing the installation of a piped storm outlet from the street to the lake. With the recent denial of requested easements that would allow that



Scope Clarifications and Exclusions:

Additional Services: Any other services requested by the Village will be quoted separately or billed on an hourly basis according to our Village of Lake Orion discounted hourly rate schedule.

Opinions of Probable Cost: Opinions of probable cost provided represent NFE's best judgment as design professionals familiar with the construction industry; however, NFE has no control over the cost of labor, materials, equipment or services provided by others. Therefore, NFE cannot guarantee that proposals, bids or actual construction costs will not vary from the opinions of probable cost prepared by our firm.

Acceptance and Authorization to Proceed:

Provided this proposal meets with your approval, please sign, date and return a copy of this Work Authorization to our office. Receipt of your signed Work Authorization will serve as our authorization to proceed.

The above Proposal is valid if accepted within 30 days of its receipt.

Thank you for choosing Nowak & Fraus Engineers to provide Engineering and Surveying services to the Village of Lake Orion.

Sincerely,

Nowak & Fraus Engineers

Accepted and Approved By:

A handwritten signature in blue ink that reads 'Wendy E. Spence'.

Wendy E. Spence, PE
Sr. Project Manager

(Signature)
Darwin McClary, Village Manager

Dated: 01/08/2026

(Date)

Enclosure: Village of Lake Orion Discounted Rate Schedule
TEC Proposal 060-25-369

Cc: Wesley Sanchez, DPW Director

Village of Lake Orion
2021 DISCOUNTED FEE SCHEDULE



Personnel	Hourly Rate
Corporate Principal	\$ 150.00
Senior Associate	\$ 135.00
Associate	\$ 125.00
ALTA Survey Manager	\$ 130.00
Land Surveyor/Field Coordinator	\$ 120.00
Plat Manager	\$ 120.00
CAD Manager	\$ 120.00
Senior Project Manager	\$ 125.00
Project Manager	\$ 115.00
Registered Landscape Architect	\$ 96.00
Project Engineer	\$ 110.00
Engineer III	\$ 105.00
Engineer II	\$ 95.00
Engineer I	\$ 85.00
Engineering Technician III	\$ 95.00
Engineering Technician II	\$ 85.00
Engineering Technician I	\$ 80.00
Senior Testing/Inspection Engineer	\$ 82.00
Testing/Inspection Engineer	\$ 75.00
Engineering Assistant	\$ 65.00
Survey Crew – 3 Person	\$ 175.00
Survey Crew – 2 Person	\$ 145.00
Survey Crew – 1 Person	\$ 110.00
Land Survey Technician	\$ 95.00

Survey Crew size will be determined on a per project basis.

Reimbursable Expenses:

Round trip vehicle mileage from the NFE offices will be charged \$0.56 per mile, when identified in the Work Authorization as a reimbursable expense.

The following expenses, when incurred in direct connection with the project, will be charged at the rates indicated (includes handling):

Courier services and project related purchases	Cost + 15%
Prints	\$2.00 Each
Oversize Prints	\$3.00 Each
Mylars & Vellums	\$20.00 Each
Express Deliveries	\$25.00 Each
Electronic Data Transfer - CD	\$100.00 Each
Electronic Data Transfer - Email	Hourly
Subconsultants	Fee + 10%
Traffic Counter	\$50.00/Day



Testing Engineers & Consultants, Inc.

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Engineering Client Success

TEC Proposal: 060-25-369

Date Issued: December 30, 2025

Ms. Wendy E. Spence, P.E.
Nowak & Fraus Engineers
48680 Van Dyke, Suite 200
Shelby Township, Michigan 48317

Re: Geotechnical Investigation
Village of Lake Orion
2026 Pavement Program
C.I.P. Treatment Area "A"
Lake Orion, Michigan

Dear Ms. Spence:

In response to your request, Testing Engineers & Consultants, Inc. (TEC) is pleased to submit our proposal for a Geotechnical Investigation of the above referenced project. We have enclosed a scope of work and fee schedule for the requested services.

TEC looks forward to working with you on this project. We will contact you soon to discuss how we may be of assistance.

Respectfully submitted,

TESTING ENGINEERS & CONSULTANTS, INC.

A handwritten signature in blue ink that reads "Gary E. Putt".

Gary E. Putt, P.E.
Senior Project Engineer

A handwritten signature in blue ink that reads "Carey J. Suhan".

Carey J. Suhan, P.E.
Vice President, Geotechnical
& Environmental Services

GEP/CJS/ln

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All services undertaken are subject to the following policy. Reports are submitted for exclusive use of the clients to whom they are addressed. Their significance is subject to the adequacy and representative character of the samples and the comprehensiveness of the tests, examinations and surveys made. No quotation from reports or use of TEC's name is permitted except as expressly authorized by TEC in writing.

CONSULTING ENGINEERS & FULL-SERVICE PROFESSIONAL TESTING AND INSPECTION
OFFICES IN ANN ARBOR, DETROIT, AND TROY
FOUNDED IN 1966



Testing Engineers & Consultants, Inc.

Ms. Wendy E. Spence, P.E.
Nowak & Fraus Engineers
December 30, 2025

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PROPOSAL FOR A GEOTECHNICAL INVESTIGATION

A. INTRODUCTION

This investigation will provide geotechnical design parameters for the proposed street rehabilitation.

Based on information provided, we understand that the project will consist of the pavement rehabilitation of the following street locations:

- North Shore Drive from west cul-de-sac to Lake Street
- W. Church Street from North Shore Drive to N. Park Boulevard
- Axford Street from N. Chanel Street to Lake Street
- W. Shadbolt Street from N. Andrews Street to S. Park Boulevard
- W. Flint Street from S. North Shore Drive to S. Park Boulevard
- Lake Street from Grove Street to Darling Drive
- Andrews Street from W. Church Street to south dead end

The treatment methods being considered include overlay (1.5" – 2"), mill and overlay (1.5" – 2"), edge milling with overlay, and crush and shape with full depth overlay (4") for the worst sections.

The investigation will include verification of existing pavement composition, thickness, layering, condition and underlying base material (if any). We have assumed that a right of way permit will not be required.

Our recommendations will be based upon the preceding project characteristics (some of which have been assumed by us). We should be advised of any differences because they might affect the recommendations to be included in our report.

B. SCOPE OF WORK

1. Mobilize and demobilize a truck-mounted drill rig.

Testing Engineers & Consultants, Inc.

Ms. Wendy E. Spence, P.E.
Nowak & Fraus Engineers
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2. TEC will stake boring locations in the field from a drawing provided by the client and will contact Miss Dig for utility clearance with respect to the boring locations.
3. As directed by the client, perform explorations consisting of nine borings with sampling. It is estimated that the borings will be to 5-foot depth. The existing pavement will be cored to obtain more accurate pavement thicknesses.
4. Perform a laboratory investigation to determine the strength, compressibility, corrosive, and physical characteristics of the soils encountered.
5. Analyze the results of the field and laboratory investigation.
6. Document our analysis in a report of the recommended geotechnical design parameters including:
 - A. Stabilization requirements for subgrade materials, if needed;
 - B. Alternate pavement types and thicknesses;
 - C. Evaluation of ground water conditions and its effect on construction and the design of the pavement rehabilitation;
 - D. Parameters affecting site grading and drainage;
 - E. Geotechnical factors affecting construction of the project;
 - F. Gradation analysis for evaluation of soils as backfill, suitable aggregate base and subbase and preliminary permeability considerations for dewatering;

The geotechnical design parameters will be implemented into design by other professionals.

C. FEE SCHEDULE

The following estimate is based upon information available at this time. Our services will end with the submission of the report as outlined in the scope of work. In the unlikely event that unusual or unforeseen subsurface conditions are encountered or if there is a necessary change in the scope of work, you will be notified before additional

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services are performed. Additional services will not be performed without first obtaining your approval of the additional costs in excess of 10% of the estimated cost. Additional services and meetings will be at the rates in our current fee schedule. Any variations in work from this estimate will be adjusted accordingly using the unit rates below:

1.	Mobilization	\$ 600.00
2.	Boring Layout and Utility Clearance 4 hours at \$110.00/hour	\$ 440.00
3.	Minor Traffic Control 1 day at \$150.00/day	\$ 150.00
4.	Drilling and Sampling 0' – 25' Depth: 45' at \$18.00/foot	\$ 810.00
5.	Pavement Coring 9 cores at \$90.00 each	\$ 810.00
6.	Laboratory Analysis	
A.	Moisture, Density, Unconfined 18 samples at \$12.00 each	\$ 216.00
B.	Sieve Analysis 6 samples at \$125.00 each	\$ 750.00
C.	Atterberg Limits Determination 2 samples at \$150.00 each	\$ 300.00
7.	Geotechnical Analysis and Engineering Report	<u>\$ 1,900.00</u>
	Estimated Total	\$ 5,976.00

D. TIME FRAME

The following represents our tentative schedule. If the time frame outlined below does not satisfy your scheduling requirements, we will be happy to make other arrangements to meet your specific time schedule. We plan to begin these studies

Spoke with Gary Putt January 8 re: adding testing for infiltration at North Shore low point. Agreed one additional 5' bore, core test, analysis. Agreed multiplying Estimate Total by 10/9 is a reasonable new Estimated Total.

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about one to two weeks after receipt of written notice-to-proceed. It is estimated that the borings and pavement coring will require approximately one day to complete; the laboratory tests plus engineering analysis and report will require an additional three weeks. If requested, a verbal report of our recommendations will be given to you, then followed with a written report.

E. TERMS AND CONDITIONS

1. The client will provide direction to the site, permission to enter the site, and access throughout the site for single-drive axle, truck-mounted equipment.
2. Downtime not caused by TEC will be charged at \$225.00 per hour. For difficult access sites, a surcharge of \$500.00 per day will be charged for an All-Terrain Vehicle drill rig.
3. Rates for Saturday, Sunday, holidays, or shift work will be quoted upon request.
4. Laboratory work that needs immediate attention will be billed at 1.5 times the standard test rate. This applies to work required to be performed on Saturdays or after 5:00 p.m. on weekdays. Work required to be performed on a Sunday or Holiday will be billed at 2.0 times the standard test rate.
5. The invoice will be based upon the actual work performed and at the quoted rates. Unless otherwise stated, invoices are due 30 days from the invoice date. An administrative fee of 1.5% per month will be added to all delinquent accounts. It is agreed that the client is liable for all costs and expenses of collection, including reasonable attorney's fees, whether or not legal proceedings are instituted. Disputes of invoiced amounts must be submitted in writing within 30 days of invoice date.
6. Unless otherwise stated, local transportation costs will be invoiced at \$0.90 per mile, portal-to-portal from TEC facilities. Lodging, subsistence and transportation for out-of-town services are invoiced at cost plus 20%.
7. The TEC fee for depositions, court appearance, expert witness, legal assistance, litigation, preparation, or other legal work is \$250.00 per hour plus expenses.
8. Unless otherwise stated, two (2) copies of the report will be distributed per client instruction. There may be additional charges for extra copies of reports.

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9. TEC will not be responsible for work performed on materials furnished by others not controlled by TEC.
10. Except for circumstances caused by the willful misconduct of TEC, all claims for damages asserted against TEC by a client or third party, including claims against TEC directors, officers, shareholders, employees and agents, are limited to the lesser amount of \$25,000 or the total dollar value of this contract.
11. All reports, plans, specifications, computer files, field data, notes and other documents prepared by TEC as instruments of service shall remain the property of TEC. TEC shall retain all common law, statutory and other reserved rights, including the copyright thereto. The client shall not reuse or make any modifications to reports, plans, specifications, computer files or other documents without the prior written authorization of TEC.
12. In an effort to resolve any conflicts that arise during this project or following the completion of this project, the client and TEC agree that all disputes between them arising out of or relating to this project shall be submitted to nonbinding mediation unless the parties mutually agree otherwise.
13. This proposal is valid if authorized within 90 days of date issued.

Testing Engineers & Consultants, Inc.

Ms. Wendy E. Spence, P.E.
Nowak & Fraus Engineers
December 30, 2025

TEC Proposal: 060-25-369

F. AUTHORIZATION

If this proposal meets with your approval, please sign in the spaces provided below and return an executed copy for our files. We will consider this a legal contract and written authorization to proceed.

Accepted By:

Firm

Federal ID No.

Authorized Signature

Typed or Printed Name

Title

Date