

# GOGEBIC MEDICAL CARE FACILITY

402 North Street  
Wakefield, Michigan 49968  
(906) 224-9811~FAX (906) 224-9841



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## DEPARTMENT OF HEALTH AND HUMAN SERVICES

Marcia Jurakovich, DHHS Board Chairperson  
Julann Ritter, DHHS Board Vice Chairperson  
Bob Murphy, DHHS Board Member

## ADMINISTRATOR

Melissa Jurakovich

April 30, 2025

To Whom It May Concern,

I am writing as the leader of one of Michigan's 34 county medical care facilities, which serve as cornerstones of our state's healthcare system. Our mission is to provide exceptional care, dignity, and support to the residents who rely on these facilities, including some of the most vulnerable populations. Today, I am compelled to express my unwavering support for Canal View and to underscore its value to both its county and the residents of Michigan.

Canal View is more than a healthcare provider—it is a trusted community partner, an economic contributor, and a vital resource for individuals who need compassionate, comprehensive care. It fulfills an irreplaceable role in serving its county's residents, including seniors, individuals with disabilities, and those in need of long-term care. Its presence ensures access to high-quality healthcare, often for individuals who might otherwise struggle to find it elsewhere.

In addition to the direct care it provides, Canal View supports the local economy through employment opportunities and partnerships with local vendors, businesses, and organizations. The facility's impact extends beyond its immediate community—it contributes to the fabric of Michigan's healthcare network, strengthening our state's ability to address the diverse needs of its residents.

Selling or repurposing Canal View would have far-reaching consequences, potentially depriving countless individuals of essential care and eroding the community's well-being. It is imperative to recognize the profound loss that would result from its absence—not only for the residents it serves but for the broader network of county medical care facilities in Michigan.

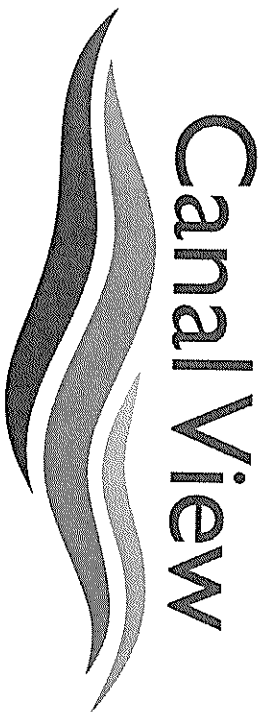
I urge the decision-makers involved to consider the enduring value of Canal View to its county and to the state as a whole. Preserving this facility is not merely a matter of sustaining a healthcare institution; it is about safeguarding the dignity, health, and future of Michigan's residents. Together, we can ensure that Canal View continues its vital work and remains a beacon of hope and care for generations to come.

Thank you for your attention to this critical matter. Please do not hesitate to contact me if you require additional information or support.

Sincerely,

A handwritten signature in cursive script that reads "Melissa Jurakovich".

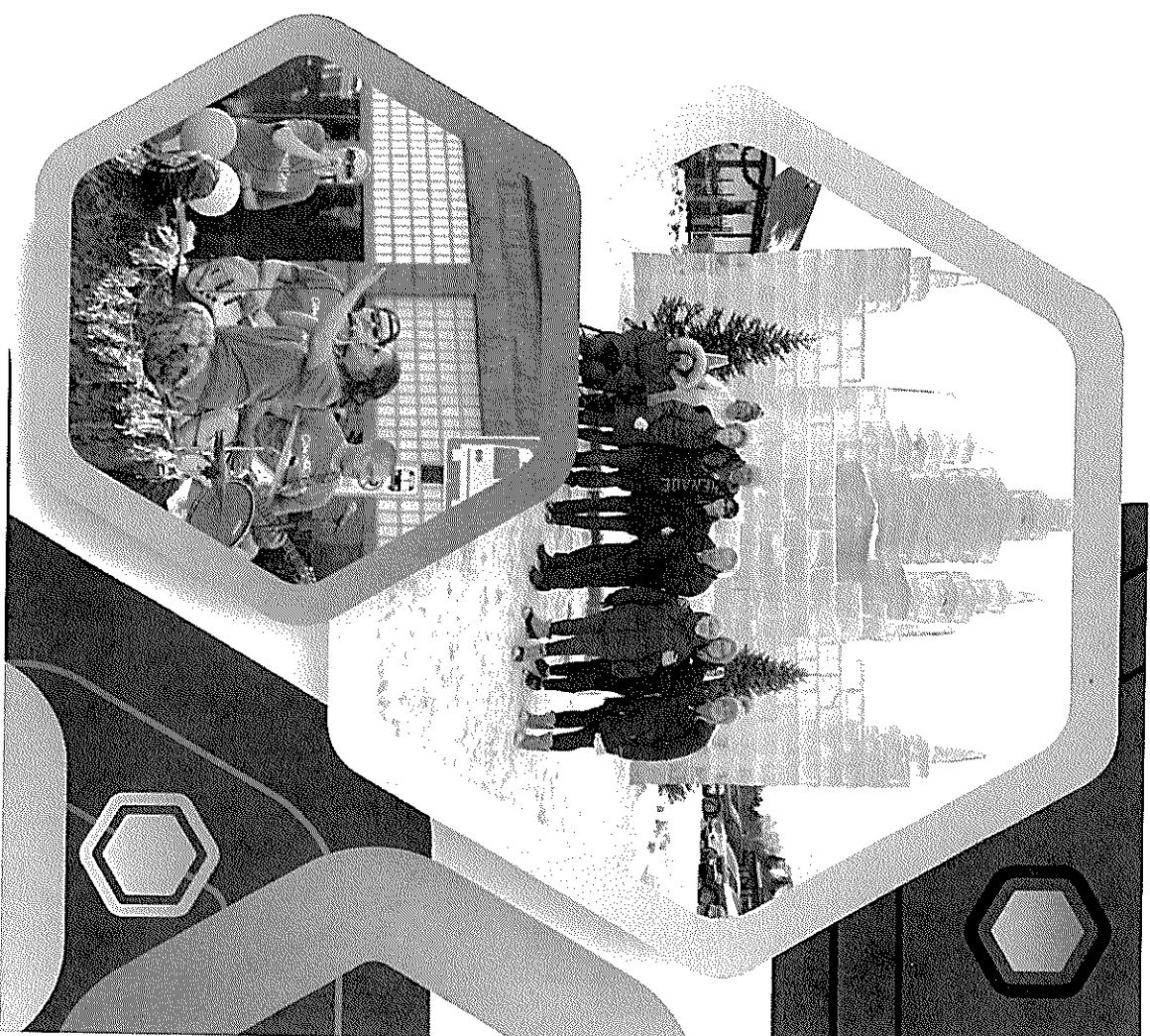
Melissa Jurakovich, LNHA  
Administrator



Houghton County

*Commitment to Community*

MAY 2025



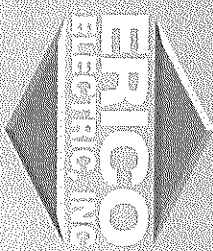


## Completed Building Projects since 2022

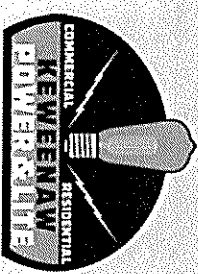
- New roof installed.
- Replaced all windows in the building.
- Replaced 4 water heaters.
- Replaced AC condenser units on roof top units.
- Replaced all duct smoke sensors.
- Repaired 10 major water leaks throughout the building.
- Rebuilt the Kohler generator engine.
- Rebuilt the vacuum stations for the boiler system.
- Replaced AC unit in Laundry Department.
- Replaced exhaust unit for walk-in cooler/freezer.
- Converted all the parking lot lights to LED.
- Revamped Woodland Haven Memory Care unit from two separate homes to one home with new service doors and new double locked door unit.
- Rebuilt Admin AC condenser unit.
- Installed new flooring in staff breakrooms.
- Installed new shades for 1st and 2nd floors.
- New roof on Woodland Haven stair towers.
- Concrete curb built outside of Central Supply.
- Replaced resident room furniture, wardrobes, nightstands, dressers.
- Classroom/Media space for education completed.
- 80% of interior of building repainted.
- Added dedicated entrance to Billing Office and Canal View Classroom and Media room.

*Working with Community*

**UPEA**  
ENGINEERS & ARCHITECTS



**HAIRE CARE**



## Upcoming/Ongoing Projects

- New water main into the building.
- Replacing all three elevators.
- Replacing the boiler burner assemblies. (*This will save Canal View an estimated \$52,000 in gas per year.*)
- Drain project for Main Kitchen for steam kettles.
- 3rd & Woodland Haven new window shade installation.

*Working with  
Community*

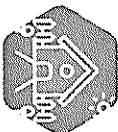


UP AUTOMOTIVE



## Completed Kitchen Projects Since 2022

- Replaced Towers kitchen dishwashers.
- Replaced Towers kitchen ice machines.
- Replaced Main kitchen ovens.
- Replaced Main kitchen cooktops.
- Replaced Main kitchen food processors.



## Completed Grounds Improvements

- Upgraded snow removal equipment.
- Repair large area of the East parking lot pavement.
- 3 new trees at front of the building.



## Completed Transportation Improvements

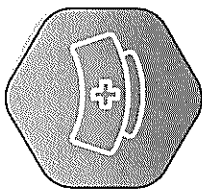
- Upgraded resident appointment transportation by replacing four vehicles and bus.
- Upgraded snow removal equipment.



# V/A

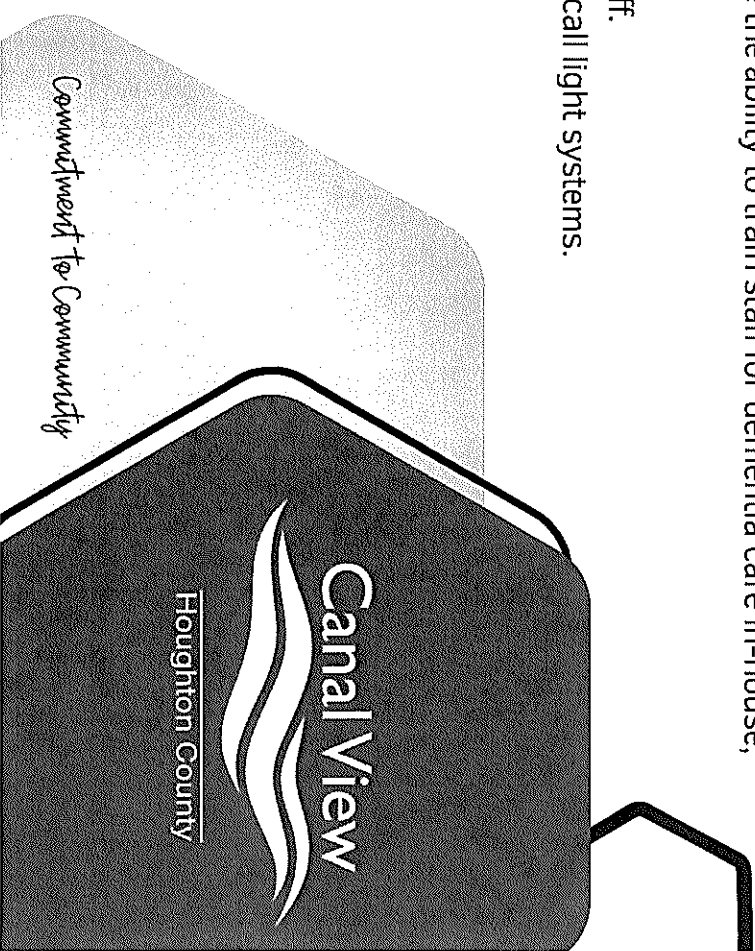
U.S. Department  
of Veterans Affairs

Canal View is the only VA contracted facility in the Upper Peninsula



## Completed Resident Care Improvements Since 2022

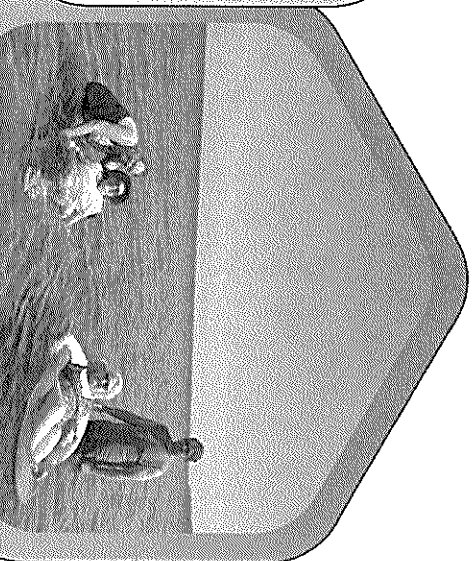
- Provide in-house PT/OT/ST rehabilitation services 5 days a week.
- Provide FMP (RNA) program as an added service to help keep residents mobile and independent.
- Dementia certification for staff, Canal View will have the ability to train staff for dementia care in-house, *beginning in May 2025.*
- Restorative Nurse program up-grade.
- Admission nurse/wound care certified nurse on staff.
- Improved staff communication with phones for the call light systems.
- Upgrade in wound care module electronics.
- Portable phones for resident use.
- New code alerts.
- Kiosks for more efficient charting.
- New vitals trees.
- New feeding pumps.
- New transfer lifts.
- Improved Nurse carts.
- New beds.
- New mattresses.
- New pillows and bedding.
- Replaced all med fridge alarms



Canal View is a more than just a Long Term Care facility.  
It is a community, and this community is very engaged and active.

## Resident Outing Highlights

- |                                       |                       |  |
|---------------------------------------|-----------------------|--|
| Eagle River Ice Castle                | MTU Statue Tour       | Fishing                                    |
| Copper Harbor/Brockway Mountain Drive | Rosza Center          | Christmas Light Tour                       |
| Fall Color Tour                       | Seaman Mineral Museum | Petting Zoo                                |
| Lunch/Dinner Outings                  | Calumet Theater       | Parades                                    |
| Shopping                              | Boat Rides            | Pumpkin Farms                              |
| Casino Visits                         | Swimming              | Hockey/Baseball/Basketball games           |
| Outdoor Community Concerts            | Picnics               | Pet Visits @ Copper Country Humane Society |
| Feeding the Deer                      |                       | Houghton County Fair                       |



Commitment  
to  
Community



# In Facility Resident Life Enrichment Highlights

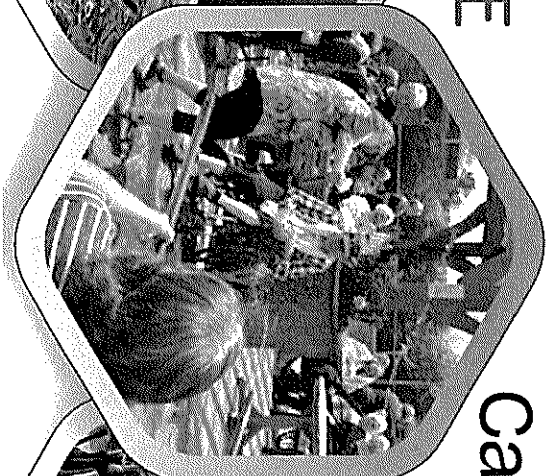
Mobil - A motion activated gaming system. The only facility in MI to have Mobil.  
 Volunteer work for Little Brothers Friends of the Elderly.  
 Volunteer work for Cooper Country Humane Society.  
 Wheelchair Swing - CV is the only facility in the area with one.  
 Music & Memory Program - CV is the only facility in the area using program.  
 Canal View has it's own band made up of staff members.  
 Local bands come and play throughout the year.  
 Spa Days - facials, nails, makeup and hair  
 Holiday/Birthday Parties

Veteran's Group	Church Services	Baking
Exercise Groups	Puzzle building	Crafts
Educational Groups	Movie Nights	Bingo
Resident Council	Jewelry Making	Bowling
Tech Groups	Dice Games	Trivia
Reminiscing Groups	Science Projects	Painting
Indoor Fishing	Duck Rides	Gardening
		<i>...and much more</i>

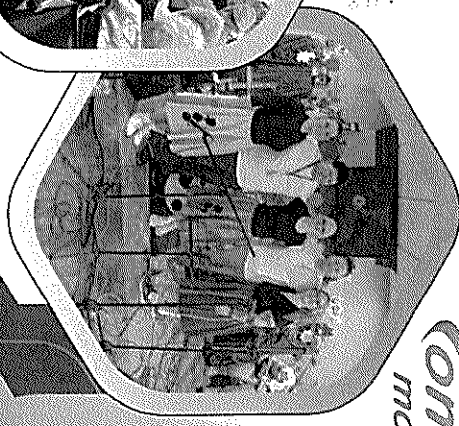


LITTLE BROTHERS  
FRIENDS OF  
THE ELDERLY

LBFE



CanalCrue  
We rock & we roll.



omi  
mobii

# Holiday Craft Market

CANAL VIEW - HIGHLIGHT COUNTY

DECEMBER 12TH  
11:00 AM - 3:00 PM

Community Blood Drive

February 13

YOU'RE OUR TYPE

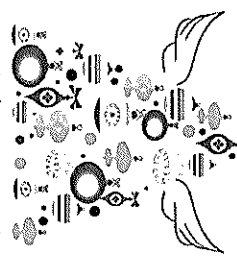
BE SWEET DONOR

BL.00D

SAVE A LIFE

CU

Canal View  
2024 Angel Tree



We are excited to announce that our 2024 Angel Tree has arrived in our vestibule. Please consider stopping by this holiday season to choose an angel matching a Canal View resident.

Canal View  
SUMMER PICNIC  
JULY 3  
11:30AM - 1

1st floor residents & fan  
It takes a lot to care for a loved one. Find support and comfort in caring and compassionate environment.  
This monthly group is a safe place for those caring for loved ones of those suffering from memory loss or dementia. Our purpose is to share stories, losses, frustrations and information with each other to support each other in a respectful environment.

MEMORY LOSS/DEMENTIA  
CAREGIVER SUPPORT GROUP  
Tuesday, April 15 @ 6:00 pm

Canal View  
STRAWBERRY FEST  
2024

3rd Floor

Residents & Staff  
2pm patio & 3rd Floor

WEDNESDAY, JULY 17

Your help would be greatly appreciated to assist with pulling this off for our residents!

Commitment To Community

BRIDGE FEST

Canal View



Join Canal View in  
THE COPPER COUNTRY  
STRAWBERRY PARADE  
JULY 13TH

If you have a 2024 Bridgefest shirt please wear it for this parade as the shirt again will honor our residents who are a Canal View hero!  
Line up begins @ 10:00 am on July 13 at the Thruway. Parade begins @ 11:00 am. The welcome sign across from First. Bridgefest shirts available for those who RSVP to walk in the parade. 3:00 not have a shirt already - 2 women's (size 1) and 3 men's (size 1) first come first served. Shirt will be held until Friday, July 12th.

CANAL VIEW CANAL VIEW

DONATION DRIVE

SEPTEMBER 1ST-30TH

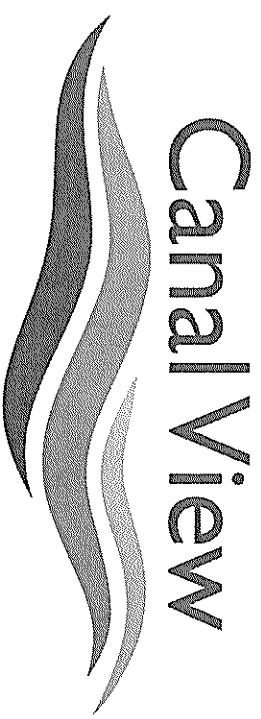
WISH LIST

- Flat sheets
- Flat blankets
- Paper towel
- Toilet paper
- Bleach
- Dish & hand soap
- Cat toys
- Cat treats
- Sponges, scrub brushes
- Portable radios and tea
- Portable dog toys like
- Hyalones
- Toyne Pine Pellets (to eat litter)
- Pill bottles for dogs
- Grease no battery lbs
- Cat litter (unscented clumping or non clump)

BRING YOUR DONATED WISHLIST ITEMS TO THE RECEPTION AREA OR TO THE STAFF DINING ROOM.







*We are part of your community,  
providing compassionate, personalized  
care with a commitment to excellence.*

# Tuscola County Medical Care Community

**Your Care Partner in Skilled Nursing and Rehabilitation Therapy**

1285 CLEAVER ROAD ♦ CARO, MICHIGAN 48723  
PHONE (989) 673-4117 ♦ FAX (989) 673-6665

## Executive Management

Robert C. Rabideau, RN, NHA – Chief Executive Officer  
Maggie Root, CHC – Chief Financial Officer  
Mandy Palmer, RN – Chief Nursing Officer  
Arshad Aqil, M.D. – Certified Medical Director



Tuscola County Department of Health & Human  
Services and Tuscola County Medical Care Facility  
Board of Directors  
Mark Wolfe - Chairperson  
Sue Morris – Vice Chair

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Thank you for your attention to this critical matter. Please do not hesitate to contact me if you require additional information or support.

Sincerely,

Robert Cody Rabideau  
Chief Executive Officer  
Tuscola County Medical Care Community  
989-673-4117  
[rrabideau@tcmcf.org](mailto:rrabideau@tcmcf.org)

Founded in 1852  
by Sidney Davy Miller



STEVEN D. MANN  
TEL (313) 496-7509  
FAX (313) 496-8451  
E-MAIL [mann@millercanfield.com](mailto:mann@millercanfield.com)

Miller, Canfield, Paddock and Stone, P.L.C.  
150 West Jefferson, Suite 2500  
Detroit, Michigan 48226  
TEL (313) 963-6420  
FAX (313) 496-7500  
[www.millercanfield.com](http://www.millercanfield.com)

MICHIGAN  
ILLINOIS  
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MEXICO  
POLAND  
QATAR  
UKRAINE

May 5, 2025

*Via email only*

Ms. Teresa Hill  
HR & Operations Manager  
Houghton County  
401 East Houghton Avenue  
Houghton, MI 49931

Re: Bond Counsel Services –Jail and Facilities Bond Proposal

Dear Ms. Hill:

We appreciate the opportunity to again serve the County of Houghton (the "County") as bond counsel in connection with the proposed issuance of Unlimited Tax General Obligation Bonds (the "Bonds") to finance new jail facilities and improvements to existing county buildings. We value highly our relationship with the County and you may be assured of our prompt and complete attention to this financing. It is our practice when beginning work on a new matter to send an engagement letter like this which sets forth the scope of our services as bond counsel, our conflict of interest policy, and the nature of our compensation.

***Bond Counsel's Role***

The role of bond counsel was created a century ago in response to requests from prospective purchasers of municipal bonds for an independent opinion about the legality and validity of bonds issued by local governments. Over the years, bond counsel's role has expanded to include advising issuers on the means available to finance public improvements and passing upon the tax status of interest paid to bondholders, to cite two examples. These days bond counsel prepares most of the documentation related to a bond financing and leads the bond issuer through the process of issuing bonds.

In performing our services as bond counsel, our client is the County and we will represent its interests. However our representation of the County does not alter our responsibility to render an objective opinion as bond counsel. Upon delivery of the opinion our responsibilities as bond counsel will be concluded with respect to the Bonds.

***Scope of Bond Counsel Services – What We Will Do***

As bond counsel, we would provide the following services customarily performed by bond counsel respecting the authorization, sale, issuance and delivery of bonds:

1. Consult with County officials, its consultants, and others to explain the legal nature of a proposed borrowing, the County's power to borrow and the limitations on that power, and consult with County officials in the design of the bonding program and timing schedules.
2. Prepare all of the necessary resolutions, ballot language, and other documents necessary to authorize, issue and deliver the bonds. We also would assist you or your financial advisor in preparing applications to the Michigan Department of Treasury, if necessary, for approval to issue the bonds.
3. Examine the federal tax issues related to the bonds (done by an attorney specializing in the requirements of the Internal Revenue Code as they apply to municipal tax-exempt bonds) to assure that all requirements of the Internal Revenue Code are complied with and that any adverse tax consequences are minimized.
4. Review and pass on the legal accuracy of certain information regarding the bonds and the exclusion of interest on the bonds from gross income for taxation purposes and other legal matters relating to the bonds contained in the official statement, offering circular, or request for proposals respecting the bonds.
5. Prepare the official Notice of Sale (if any) respecting the bonds and the bond form for printing definitive bonds for delivery to the purchaser. We will also participate in the sale and delivery of the bonds to the purchaser in order to handle legal matters that may arise at those times.
6. Render the approving opinion as to validity and enforceability of the bonds and their authorizing documents and as to the excludability of the interest on the bonds from federal and state income taxation.

We are not being retained and our acceptance of this engagement is not an undertaking to provide the County or any other person or entity with any advice or guidance relating to the Corporate Transparency Act (CTA) or their obligations thereunder, to prepare, review, submit, or update any document under the CTA, or to prepare or file any entity formation or registration documents on behalf of the County or any other person or entity.

Our professional responsibilities as attorneys in this matter will be limited to interpretations of law and other legal issues and the drafting of legal documents. We are not registered municipal advisors under the federal Dodd-Frank Act and therefore we will not assume the responsibilities of a municipal finance advisor or the professional responsibilities of any other advisor with respect



to non-legal matters. We understand that the County has engaged Robert W. Baird to serve as its registered municipal advisor.

***Additional Services***

We believe that the above services encompass the normal scope of bond counsel activities. Our services as bond counsel do not include activities outside of the scope of activities described above. Review of construction contracts, land acquisition, or representation of the County in litigation or administrative proceedings that might arise in connection with the Bonds or the project are beyond the scope of our role as bond counsel. In the event that serious matters or matters outside the norm arise in these areas, we would provide you at that time with a fee quote for such additional services.

Our engagement does not include any obligation to monitor compliance with the federal tax requirements found in the Internal Revenue Code of 1986 (the "Code") and applicable to the Bonds, including the rebate requirements of Code Section 148(f), if applicable, as described in an exhibit attached to the Nonarbitrage and Tax Compliance Certificate that the County will execute in connection with the issuance of the Bonds, or in connection with any audit or examination of the Bonds by the Internal Revenue Service. However, we would be available to assist with rebate calculations or any audit or examination as a separate engagement.

***Conflict of Interest Policy***

Our firm is one of the largest in Michigan. In addition to having the largest public finance practice in the State, our attorneys represent a great many clients and our practice is in many different legal areas. At one time or another our firm has represented nearly every large and many smaller commercial and investment banks and other bond purchasers that do business in Michigan.

We are not representing and do not intend to represent any other party in this financing. We do not believe that our representation in unrelated matters of the various other parties both in and out of the municipal area will affect our ability to serve the County as bond counsel.

Because we are a large firm with many clients we are asked occasionally to represent a client in a matter adverse to the County. We, of course, would decline to represent any client in a matter involving the County that would conflict with our services to the County as bond counsel for the above issue. Moreover, before we would represent a client adverse to the County in any area not involving the bond issue, we would advise the County before undertaking such representation.

Ms. Teresa Hill

-4-

May 5, 2025

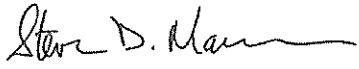
***Bond Counsel Fee***

Bond counsel fees and expenses will be paid from bond proceeds. Once the timing, structure and amount of the project is finally determined, we will be able to provide a firm quote for our fees as bond counsel as described above. Our customary practice is to submit our invoice for payment at the time of delivery of the Bonds to be paid from the proceeds of the bonds. If the bond proposal is not approved by voters, we will not invoice the County for our services related to this matter.

We welcome this opportunity to be of service to the County and look forward to working with you. If you have any questions regarding this letter, please give me a call.

Very truly yours,

Miller, Canfield, Paddock and Stone, P.L.C.

By:   
Steven D. Mann

**RESOLUTION SUBMITTING  
JAIL AND COUNTY BUILDING IMPROVEMENT BOND PROPOSAL**

**COUNTY OF HOUGHTON**

State of Michigan

Minutes of a regular meeting of the County Board of Commissioners of the County of Houghton, State of Michigan (the "County"), held on May 13, 2025, at 3:00 p.m., Eastern Daylight Time.

PRESENT: Commissioners \_\_\_\_\_

\_\_\_\_\_

ABSENT: Commissioners \_\_\_\_\_

The following preamble and resolution were offered by Commissioner \_\_\_\_\_ and supported by Commissioner \_\_\_\_\_.

WHEREAS, the County Board of Commissioners (the "County Board") of the County of Houghton, Michigan (the "County"), has determined that it is necessary for the health, safety and welfare of the County and its residents and property owners that the County acquire, construct, furnish and equip new county jail facilities, and remodel, re-construct, renovate, furnish and equip existing county buildings, including interests in land, site improvements, and parking improvements, together with rights-of-way, appurtenances and attachments thereto, and demolition of existing buildings (the "Projects"); and

WHEREAS, the County Board has determined that the County should borrow money in an amount not to exceed \_\_\_\_\_ Million Dollars (\$\_\_\_\_\_,000,000), and issue general obligation unlimited tax bonds of the County in such amount, in one or more series (the "Bonds"), for the purpose of paying all or part of the cost of the Project; and

WHEREAS, the County Board has determined that a proposal to issue the Bonds for the Project shall be submitted to the qualified electors of the County at an election to be held in the County on Tuesday, August 5, 2025 (the "Election Date"); and

WHEREAS, in order for the bond proposal to be submitted to the qualified electors, it is necessary for the County Board to certify the ballot wording of the proposal to the County Clerk as required by Act 116, Public Acts of Michigan, 1954, as amended (the "Michigan Election Law").

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The bond proposal attached hereto as Exhibit A (the "Bond Proposal") shall be submitted to a vote of the qualified electors of the County on the Election Date.

2. The ballot wording of the Bond Proposal is hereby certified to the County Clerk for submission to the County's electors on the Election Date. The County Clerk is hereby authorized and directed to file this Resolution and/or complete any such forms, certificates or documents as may be required by the County Clerk to evidence the foregoing certification and/or submission by no later than Tuesday, May 13, 2025.

3. The County Clerk is hereby directed to (a) post and publish notice of the last day of registration and notice of the election as required by the Michigan Election Law; and (b) have prepared and printed, as provided by the Michigan Election Law, ballots for submitting the Bond Proposal at the election, which ballots shall contain the proposal appearing herein, or the proposition shall be stated as a proposal on the voting machines, which ballots may include other matters presented to the electorate on the same date.

4. The estimated millage rate in the first year and simple average annual millage rate set forth in the Bond Proposal, which have been prepared for the County by Robert W. Baird & Co. Incorporated, financial advisors to the County, are reasonable estimates of such millage rates based on current assumptions.

5. The County may incur expenditures for the Project prior to receipt of proceeds of the Bonds and may advance moneys for that purpose from funds available to the County, to be reimbursed from proceeds of the Bonds when available. The County makes the following declarations for the purpose of complying with the reimbursement rules of Treas. Reg. § 1.150-2 pursuant to the Internal Revenue Code of 1986, as amended:

- (a) If the ballot proposal is approved by the electors, the County reasonably expects to reimburse itself with proceeds of the Bonds for certain costs of the Project which were paid or will be paid from available funds of the County subsequent to sixty (60) days prior to today.
- (b) The maximum principal amount of debt expected to be issued for the Project, including issuance costs, is \$ \_\_,000,000.
- (c) A reimbursement allocation of the capital expenditures described above with the proceeds of the Bonds will occur not later than 18 months after the later of (i) the date on which the expenditure is paid, or (ii) the date the Project is placed in service or abandoned, but in no event more than three (3) years after the original expenditure is paid. A reimbursement allocation is an allocation in writing that evidences the County's use of the proceeds of the Bonds to reimburse the County for a capital expenditure made pursuant to this resolution.

6. Miller, Canfield, Paddock and Stone, P.L.C. is hereby approved as bond counsel for the Bonds.

7. Robert W. Baird & Co., Incorporated is hereby approved as registered municipal advisor for the Bonds.

8. All resolutions and parts of resolutions, insofar as they conflict with the provisions of this resolution, are hereby repealed.

AYES: Commissioners \_\_\_\_\_  
\_\_\_\_\_

NAYS: Commissioners \_\_\_\_\_

**RESOLUTION DECLARED ADOPTED.**

\_\_\_\_\_  
Jennifer Kelly  
County Clerk

I HEREBY CERTIFY that the attached is a true and complete copy of a resolution adopted by the County Board of Commissioners of the County of Houghton, State of Michigan, at a regular meeting held on May 13, 2025 and that the meeting was conducted and public notice of the meeting was given pursuant to Act No. 267, Public Acts of Michigan, 1976, and that the minutes of the meeting were kept and will be or have been made available as required by the Act.

\_\_\_\_\_  
Jennifer Kelly  
County Clerk



**EXHIBIT A**

COUNTY JAIL AND COUNTY BUILDING IMPROVEMENT BOND PROPOSAL

Shall the County of Houghton, Michigan, borrow the principal sum of not to exceed [REDACTED] Million Dollars (\$[REDACTED],000,000) and issue its general obligation unlimited tax bonds, in one or more series, payable in not to exceed thirty (30) years from the date of issuance of each series, for the purpose of paying all or part of the costs to acquire, construct, furnish and equip new county jail facilities, and remodel, re-construct, renovate, furnish and equip existing county buildings, including interests in land, site improvements, and parking improvements, together with rights-of-way, appurtenances and attachments thereto, and demolition of existing buildings?

YES ☐

NO ☐

If approved, the estimated millage to be levied in the first year of the levy in 2026 is [REDACTED] mills (\$[REDACTED] per \$1,000 of taxable value) and the estimated simple average annual millage rate required to retire the bonds is [REDACTED] mills (\$[REDACTED] per \$1,000 of taxable value).

43780300.1/110007.00003

<b>Term</b>	<b>20 Year</b>	<b>25 Year</b>	<b>30 Year</b>
Par Amount	\$30,00,000	\$30,000,000	\$30,000,000
Estimated Project Fund Deposit	\$30,731,443	\$30,300,215	\$29,989,312
Estimated Total Debt Service	\$48,201,750	\$53,304,250	\$58,667,000
Estimated True Interest Cost	4.39%	4.62%	4.75%
Average Mill Rate Impact	\$1.85	\$1.64	\$1.50
Estimated Tax Impact to Median Home Value	\$260	\$230	\$211



TABLE OF CONTENTS

County of Houghton, Michigan  
General Obligation Unlimited Tax Bonds, Series 2025  
Scenario 2 :: \$30 Million Par Amount | 25 Years | Level Debt  
Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
Assumes Tax-Exempt, Non-Bank Qualified Bonds  
Assumes Negotiated Public Offering  
Optional Redemption :: December 1, 2034 @ 100  
\*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

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## SOURCES AND USES OF FUNDS

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 2 :: \$30 Million Par Amount | 25 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
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 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Dated Date 12/01/2025  
 Delivery Date 12/01/2025

## Sources:

Bond Proceeds:	
Par Amount	30,000,000.00
Premium	1,360,128.10
	31,360,128.10

## Uses:

Project Fund Deposits:	
Deposit to the Project Fund	30,300,215.35
Cost of Issuance:	
Other Cost of Issuance	900,000.00
Other Delivery Date Expenses:	
Bond Insurance Estimate (30 bps assumed)	159,912.75
	31,360,128.10

# BOND DEBT SERVICE

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 2 :: \$30 Million Par Amount | 25 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Dated Date 12/01/2025  
 Delivery Date 12/01/2025

Period Ending	Principal	Coupon	Interest	Debt Service	Annual Debt Service	Bond Balance	Total Bond Value
12/01/2025						30,000,000	30,000,000
06/01/2026			750,000	750,000		30,000,000	30,000,000
09/30/2026					750,000	30,000,000	30,000,000
12/01/2026	615,000	5.000%	750,000	1,365,000		29,385,000	29,385,000
06/01/2027			734,625	734,625		29,385,000	29,385,000
09/30/2027					2,099,625	29,385,000	29,385,000
12/01/2027	650,000	5.000%	734,625	1,384,625		28,735,000	28,735,000
06/01/2028			718,375	718,375		28,735,000	28,735,000
09/30/2028					2,103,000	28,735,000	28,735,000
12/01/2028	680,000	5.000%	718,375	1,398,375		28,055,000	28,055,000
06/01/2029			701,375	701,375		28,055,000	28,055,000
09/30/2029					2,099,750	28,055,000	28,055,000
12/01/2029	715,000	5.000%	701,375	1,416,375		27,340,000	27,340,000
06/01/2030			683,500	683,500		27,340,000	27,340,000
09/30/2030					2,099,875	27,340,000	27,340,000
12/01/2030	755,000	5.000%	683,500	1,438,500		26,585,000	26,585,000
06/01/2031			664,625	664,625		26,585,000	26,585,000
09/30/2031					2,103,125	26,585,000	26,585,000
12/01/2031	795,000	5.000%	664,625	1,459,625		25,790,000	25,790,000
06/01/2032			644,750	644,750		25,790,000	25,790,000
09/30/2032					2,104,375	25,790,000	25,790,000
12/01/2032	835,000	5.000%	644,750	1,479,750		24,955,000	24,955,000
06/01/2033			623,875	623,875		24,955,000	24,955,000
09/30/2033					2,103,625	24,955,000	24,955,000
12/01/2033	875,000	5.000%	623,875	1,498,875		24,080,000	24,080,000
06/01/2034			602,000	602,000		24,080,000	24,080,000
09/30/2034					2,100,875	24,080,000	24,080,000
12/01/2034	920,000	5.000%	602,000	1,522,000		23,160,000	23,160,000
06/01/2035			579,000	579,000		23,160,000	23,160,000
09/30/2035					2,101,000	23,160,000	23,160,000
12/01/2035	970,000	5.000%	579,000	1,549,000		22,190,000	22,190,000
06/01/2036			554,750	554,750		22,190,000	22,190,000
09/30/2036					2,103,750	22,190,000	22,190,000
12/01/2036	1,020,000	5.000%	554,750	1,574,750		21,170,000	21,170,000
06/01/2037			529,250	529,250		21,170,000	21,170,000
09/30/2037					2,104,000	21,170,000	21,170,000
12/01/2037	1,070,000	5.000%	529,250	1,599,250		20,100,000	20,100,000
06/01/2038			502,500	502,500		20,100,000	20,100,000
09/30/2038					2,101,750	20,100,000	20,100,000
12/01/2038	1,125,000	5.000%	502,500	1,627,500		18,975,000	18,975,000
06/01/2039			474,375	474,375		18,975,000	18,975,000
09/30/2039					2,101,875	18,975,000	18,975,000
12/01/2039	1,185,000	5.000%	474,375	1,659,375		17,790,000	17,790,000
06/01/2040			444,750	444,750		17,790,000	17,790,000
09/30/2040					2,104,125	17,790,000	17,790,000
12/01/2040	1,245,000	5.000%	444,750	1,689,750		16,545,000	16,545,000
06/01/2041			413,625	413,625		16,545,000	16,545,000
09/30/2041					2,103,375	16,545,000	16,545,000
12/01/2041	1,310,000	5.000%	413,625	1,723,625		15,235,000	15,235,000
06/01/2042			380,875	380,875		15,235,000	15,235,000
09/30/2042					2,104,500	15,235,000	15,235,000
12/01/2042	1,375,000	5.000%	380,875	1,755,875		13,860,000	13,860,000
06/01/2043			346,500	346,500		13,860,000	13,860,000
09/30/2043					2,102,375	13,860,000	13,860,000
12/01/2043	1,445,000	5.000%	346,500	1,791,500		12,415,000	12,415,000
06/01/2044			310,375	310,375		12,415,000	12,415,000
09/30/2044					2,101,875	12,415,000	12,415,000
12/01/2044	1,520,000	5.000%	310,375	1,830,375		10,895,000	10,895,000
06/01/2045			272,375	272,375		10,895,000	10,895,000
09/30/2045					2,102,750	10,895,000	10,895,000
12/01/2045	1,595,000	5.000%	272,375	1,867,375		9,300,000	9,300,000
06/01/2046			232,500	232,500		9,300,000	9,300,000
09/30/2046					2,099,875	9,300,000	9,300,000
12/01/2046	1,680,000	5.000%	232,500	1,912,500		7,620,000	7,620,000
06/01/2047			190,500	190,500		7,620,000	7,620,000
09/30/2047					2,103,000	7,620,000	7,620,000
12/01/2047	1,765,000	5.000%	190,500	1,955,500		5,855,000	5,855,000
06/01/2048			146,375	146,375		5,855,000	5,855,000



## BOND DEBT SERVICE

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 2 :: \$30 Million Par Amount | 25 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Period Ending	Principal	Coupon	Interest	Debt Service	Annual Debt Service	Bond Balance	Total Bond Value
09/30/2048					2,101,875	5,855,000	5,855,000
12/01/2048	1,855,000	5.000%	146,375	2,001,375		4,000,000	4,000,000
06/01/2049			100,000	100,000		4,000,000	4,000,000
09/30/2049					2,101,375	4,000,000	4,000,000
12/01/2049	1,950,000	5.000%	100,000	2,050,000		2,050,000	2,050,000
06/01/2050			51,250	51,250		2,050,000	2,050,000
09/30/2050					2,101,250	2,050,000	2,050,000
12/01/2050	2,050,000	5.000%	51,250	2,101,250			
09/30/2051					2,101,250		
	30,000,000		23,304,250	53,304,250	53,304,250		

## BOND DEBT SERVICE

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 2 :: \$30 Million Par Amount | 25 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Dated Date 12/01/2025  
 Delivery Date 12/01/2025

Period Ending	Principal	Coupon	Interest	Debt Service	Bond Balance	Total Bond Value
09/30/2026			750,000	750,000	30,000,000	30,000,000
09/30/2027	615,000	5.000%	1,484,625	2,099,625	29,385,000	29,385,000
09/30/2028	650,000	5.000%	1,453,000	2,103,000	28,735,000	28,735,000
09/30/2029	680,000	5.000%	1,419,750	2,099,750	28,055,000	28,055,000
09/30/2030	715,000	5.000%	1,384,875	2,099,875	27,340,000	27,340,000
09/30/2031	755,000	5.000%	1,348,125	2,103,125	26,585,000	26,585,000
09/30/2032	795,000	5.000%	1,309,375	2,104,375	25,790,000	25,790,000
09/30/2033	835,000	5.000%	1,268,625	2,103,625	24,955,000	24,955,000
09/30/2034	875,000	5.000%	1,225,875	2,100,875	24,080,000	24,080,000
09/30/2035	920,000	5.000%	1,181,000	2,101,000	23,160,000	23,160,000
09/30/2036	970,000	5.000%	1,133,750	2,103,750	22,190,000	22,190,000
09/30/2037	1,020,000	5.000%	1,084,000	2,104,000	21,170,000	21,170,000
09/30/2038	1,070,000	5.000%	1,031,750	2,101,750	20,100,000	20,100,000
09/30/2039	1,125,000	5.000%	976,875	2,101,875	18,975,000	18,975,000
09/30/2040	1,185,000	5.000%	919,125	2,104,125	17,790,000	17,790,000
09/30/2041	1,245,000	5.000%	858,375	2,103,375	16,545,000	16,545,000
09/30/2042	1,310,000	5.000%	794,500	2,104,500	15,235,000	15,235,000
09/30/2043	1,375,000	5.000%	727,375	2,102,375	13,860,000	13,860,000
09/30/2044	1,445,000	5.000%	656,875	2,101,875	12,415,000	12,415,000
09/30/2045	1,520,000	5.000%	582,750	2,102,750	10,895,000	10,895,000
09/30/2046	1,595,000	5.000%	504,875	2,099,875	9,300,000	9,300,000
09/30/2047	1,680,000	5.000%	423,000	2,103,000	7,620,000	7,620,000
09/30/2048	1,765,000	5.000%	336,875	2,101,875	5,855,000	5,855,000
09/30/2049	1,855,000	5.000%	246,375	2,101,375	4,000,000	4,000,000
09/30/2050	1,950,000	5.000%	151,250	2,101,250	2,050,000	2,050,000
09/30/2051	2,050,000	5.000%	51,250	2,101,250		
	30,000,000		23,304,250	53,304,250		

## BOND PRICING

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 2 :: \$30 Million Par Amount | 25 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Bond Component	Maturity Date	Amount	Rate	Yield	Price	Yield to Maturity	Call Date	Call Price
Serial Bonds (NBQ):								
	12/01/2026	615,000	5.000%	3.200%	101.757			
	12/01/2027	650,000	5.000%	3.220%	103.421			
	12/01/2028	680,000	5.000%	3.250%	104.963			
	12/01/2029	715,000	5.000%	3.280%	106.398			
	12/01/2030	755,000	5.000%	3.330%	107.633			
	12/01/2031	795,000	5.000%	3.380%	108.731			
	12/01/2032	835,000	5.000%	3.470%	109.436			
	12/01/2033	875,000	5.000%	3.530%	110.167			
	12/01/2034	920,000	5.000%	3.650%	110.277			
	12/01/2035	970,000	5.000%	3.730%	109.633	C 3.831%	12/01/2034	100.000
	12/01/2036	1,020,000	5.000%	3.870%	108.519	C 4.033%	12/01/2034	100.000
	12/01/2037	1,070,000	5.000%	3.990%	107.574	C 4.190%	12/01/2034	100.000
	12/01/2038	1,125,000	5.000%	4.050%	107.105	C 4.282%	12/01/2034	100.000
	12/01/2039	1,185,000	5.000%	4.150%	106.329	C 4.390%	12/01/2034	100.000
	12/01/2040	1,245,000	5.000%	4.260%	105.484	C 4.494%	12/01/2034	100.000
	12/01/2041	1,310,000	5.000%	4.370%	104.646	C 4.587%	12/01/2034	100.000
	12/01/2042	1,375,000	5.000%	4.480%	103.816	C 4.672%	12/01/2034	100.000
	12/01/2043	1,445,000	5.000%	4.560%	103.218	C 4.732%	12/01/2034	100.000
	12/01/2044	1,520,000	5.000%	4.620%	102.772	C 4.776%	12/01/2034	100.000
	12/01/2045	1,595,000	5.000%	4.680%	102.328	C 4.817%	12/01/2034	100.000
		20,700,000						
Term Bond (2050):								
	12/01/2046	1,680,000	5.000%	4.800%	101.447	C 4.899%	12/01/2034	100.000
	12/01/2047	1,765,000	5.000%	4.800%	101.447	C 4.899%	12/01/2034	100.000
	12/01/2048	1,855,000	5.000%	4.800%	101.447	C 4.899%	12/01/2034	100.000
	12/01/2049	1,950,000	5.000%	4.800%	101.447	C 4.899%	12/01/2034	100.000
	12/01/2050	2,050,000	5.000%	4.800%	101.447	C 4.899%	12/01/2034	100.000
		9,300,000						
		30,000,000						

Dated Date	12/01/2025	
Delivery Date	12/01/2025	
First Coupon	06/01/2026	
Par Amount	30,000,000.00	
Premium	1,360,128.10	
Production	31,360,128.10	104.533760%
Underwriter's Discount		
Purchase Price	31,360,128.10	104.533760%
Accrued Interest		
Net Proceeds	31,360,128.10	

## BOND SUMMARY STATISTICS

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 2 :: \$30 Million Par Amount | 25 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Dated Date	12/01/2025
Delivery Date	12/01/2025
Last Maturity	12/01/2050
Arbitrage Yield	4.546603%
True Interest Cost (TIC)	4.616542%
Net Interest Cost (NIC)	4.708180%
NIC w/Interest only	5.000000%
NIC w/Interest & OID	4.708180%
NIC w/Interest, OID & Und. Discount	4.708180%
All-In TIC	4.901954%
Average Coupon	5.000000%
Average Life (years)	15.536
Weighted Average Maturity (years)	15.388
Duration of Issue (years)	10.568
Par Amount	30,000,000.00
Bond Proceeds	31,360,128.10
Total Interest	23,304,250.00
Net Interest	21,944,121.90
Total Debt Service	53,304,250.00
Maximum Annual Debt Service	2,104,500.00
Average Annual Debt Service	2,132,170.00

Bond Component	Par Value	Price	Average Coupon	Average Life	PV of 1 bp change
Serial Bonds (NBQ)	20,700,000.00	105.921	5.000%	12.138	13,993.55
Term Bond (2050)	9,300,000.00	101.447	5.000%	23.099	6,789.00
	30,000,000.00			15.536	20,782.55

	TIC	All-In TIC	Arbitrage Yield
Par Value	30,000,000.00	30,000,000.00	30,000,000.00
+ Accrued Interest			
+ Premium (Discount)	1,360,128.10	1,360,128.10	1,360,128.10
- Underwriter's Discount			
- Cost of Issuance Expense		-900,000.00	
- Other Amounts	-159,912.75	-159,912.75	-159,912.75
Target Value	31,200,215.35	30,300,215.35	31,200,215.35
Target Date	12/01/2025	12/01/2025	12/01/2025
Yield	4.616542%	4.901954%	4.546603%



## FORM 8038 STATISTICS

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 2 :: \$30 Million Par Amount | 25 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Dated Date 12/01/2025  
 Delivery Date 12/01/2025

Bond Component	Date	Principal	Coupon	Price	Issue Price	Redemption at Maturity
Serial Bonds (NBQ):						
	12/01/2026	615,000.00	5.000%	101.757	625,805.55	615,000.00
	12/01/2027	650,000.00	5.000%	103.421	672,236.50	650,000.00
	12/01/2028	680,000.00	5.000%	104.963	713,748.40	680,000.00
	12/01/2029	715,000.00	5.000%	106.398	760,745.70	715,000.00
	12/01/2030	755,000.00	5.000%	107.633	812,629.15	755,000.00
	12/01/2031	795,000.00	5.000%	108.731	864,411.45	795,000.00
	12/01/2032	835,000.00	5.000%	109.436	913,790.60	835,000.00
	12/01/2033	875,000.00	5.000%	110.167	963,961.25	875,000.00
	12/01/2034	920,000.00	5.000%	110.277	1,014,548.40	920,000.00
	12/01/2035	970,000.00	5.000%	109.633	1,063,440.10	970,000.00
	12/01/2036	1,020,000.00	5.000%	108.519	1,106,893.80	1,020,000.00
	12/01/2037	1,070,000.00	5.000%	107.574	1,151,041.80	1,070,000.00
	12/01/2038	1,125,000.00	5.000%	107.105	1,204,931.25	1,125,000.00
	12/01/2039	1,185,000.00	5.000%	106.329	1,259,998.65	1,185,000.00
	12/01/2040	1,245,000.00	5.000%	105.484	1,313,275.80	1,245,000.00
	12/01/2041	1,310,000.00	5.000%	104.646	1,370,862.60	1,310,000.00
	12/01/2042	1,375,000.00	5.000%	103.816	1,427,470.00	1,375,000.00
	12/01/2043	1,445,000.00	5.000%	103.218	1,491,500.10	1,445,000.00
	12/01/2044	1,520,000.00	5.000%	102.772	1,562,134.40	1,520,000.00
	12/01/2045	1,595,000.00	5.000%	102.328	1,632,131.60	1,595,000.00
Term Bond (2050):						
	12/01/2046	1,680,000.00	5.000%	101.447	1,704,309.60	1,680,000.00
	12/01/2047	1,765,000.00	5.000%	101.447	1,790,539.55	1,765,000.00
	12/01/2048	1,855,000.00	5.000%	101.447	1,881,841.85	1,855,000.00
	12/01/2049	1,950,000.00	5.000%	101.447	1,978,216.50	1,950,000.00
	12/01/2050	2,050,000.00	5.000%	101.447	2,079,663.50	2,050,000.00
		30,000,000.00			31,360,128.10	30,000,000.00

	Maturity Date	Interest Rate	Issue Price	Stated Redemption at Maturity	Weighted Average Maturity	Yield
Final Maturity	12/01/2050	5.000%	2,079,663.50	2,050,000.00		
Entire Issue			31,360,128.10	30,000,000.00	15.3881	4.5466%

Proceeds used for accrued interest	0.00
Proceeds used for bond issuance costs (including underwriters' discount)	900,000.00
Proceeds used for credit enhancement	159,912.75
Proceeds allocated to reasonably required reserve or replacement fund	0.00



## PROOF OF ARBITRAGE YIELD

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 2 :: \$30 Million Par Amount | 25 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Date	Debt Service	PV Factor	Present Value to 12/01/2025 @ 4.5466033361%
06/01/2026	750,000.00	0.977772286	733,329.21
12/01/2026	1,365,000.00	0.956038644	1,304,992.75
06/01/2027	734,625.00	0.934788091	686,718.70
12/01/2027	1,384,625.00	0.914009889	1,265,560.94
06/01/2028	718,375.00	0.893693538	642,007.10
12/01/2028	1,398,375.00	0.873828774	1,221,940.31
06/01/2029	701,375.00	0.854405559	599,258.70
12/01/2029	1,416,375.00	0.835414076	1,183,259.61
06/01/2030	683,500.00	0.816844731	558,313.37
12/01/2030	1,438,500.00	0.798688141	1,148,912.89
06/01/2031	664,625.00	0.780935129	519,029.01
12/01/2031	1,459,625.00	0.763576727	1,114,535.68
06/01/2032	644,750.00	0.746604162	481,373.03
12/01/2032	1,479,750.00	0.730008858	1,080,230.61
06/01/2033	623,875.00	0.713782431	445,311.01
12/01/2033	1,498,875.00	0.697916679	1,046,089.86
06/01/2034	602,000.00	0.682403587	410,806.96
12/01/2034	15,382,000.00	0.667235315	10,263,413.62
06/01/2035	232,500.00	0.652404200	151,683.98
12/01/2035	232,500.00	0.637902746	148,312.39
06/01/2036	232,500.00	0.623723626	145,015.74
12/01/2036	232,500.00	0.609859676	141,792.37
06/01/2037	232,500.00	0.596303890	138,640.65
12/01/2037	232,500.00	0.583049418	135,558.99
06/01/2038	232,500.00	0.570089562	132,545.82
12/01/2038	232,500.00	0.557417775	129,599.63
06/01/2039	232,500.00	0.545027652	126,718.93
12/01/2039	232,500.00	0.532912933	123,902.26
06/01/2040	232,500.00	0.521067497	121,148.19
12/01/2040	232,500.00	0.509485358	118,455.35
06/01/2041	232,500.00	0.498160663	115,822.35
12/01/2041	232,500.00	0.487087691	113,247.89
06/01/2042	232,500.00	0.476260845	110,730.65
12/01/2042	232,500.00	0.465674655	108,269.36
06/01/2043	232,500.00	0.455323773	105,862.78
12/01/2043	232,500.00	0.445202966	103,509.69
06/01/2044	232,500.00	0.435307122	101,208.91
12/01/2044	232,500.00	0.425631240	98,959.26
06/01/2045	232,500.00	0.416170431	96,759.63
12/01/2045	232,500.00	0.406919913	94,608.88
06/01/2046	232,500.00	0.397875014	92,505.94
12/01/2046	1,912,500.00	0.389031162	744,022.10
06/01/2047	190,500.00	0.380383889	72,463.13
12/01/2047	1,955,500.00	0.371928825	727,306.82
06/01/2048	146,375.00	0.363661697	53,230.98
12/01/2048	2,001,375.00	0.355578329	711,645.58
06/01/2049	100,000.00	0.347674636	34,767.46
12/01/2049	2,050,000.00	0.339946624	696,890.58
06/01/2050	51,250.00	0.332390387	17,035.01
12/01/2050	2,101,250.00	0.325002109	682,910.68
48,802,500.00			31,200,215.35

Proceeds Summary

Delivery date	12/01/2025
Par Value	30,000,000.00
Premium (Discount)	1,360,128.10
Arbitrage expenses	-159,912.75
Target for yield calculation	31,200,215.35

## PROOF OF ARBITRAGE YIELD

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 2 :: \$30 Million Par Amount | 25 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Assumed Call/Computation Dates for Premium Bonds

Bond Component	Maturity Date	Rate	Yield	Call Date	Call Price	Yield To Call/Maturity
SER	12/01/2035	5.000%	3.730%	12/01/2034	100.000	3.7864214%
SER	12/01/2036	5.000%	3.870%	12/01/2034	100.000	3.9289171%
SER	12/01/2037	5.000%	3.990%	12/01/2034	100.000	4.0514872%
SER	12/01/2038	5.000%	4.050%	12/01/2034	100.000	4.1137813%
SER	12/01/2039	5.000%	4.150%	12/01/2034	100.000	4.2163193%
SER	12/01/2040	5.000%	4.260%	12/01/2034	100.000	4.3288464%
SER	12/01/2041	5.000%	4.370%	12/01/2034	100.000	4.4415524%
SER	12/01/2042	5.000%	4.480%	12/01/2034	100.000	4.5542966%
SER	12/01/2043	5.000%	4.560%	12/01/2034	100.000	4.6367801%
SER	12/01/2044	5.000%	4.620%	12/01/2034	100.000	4.6992007%
SER	12/01/2045	5.000%	4.680%	12/01/2034	100.000	4.7616870%

Rejected Call/Computation Dates for Premium Bonds

Bond Component	Maturity Date	Rate	Yield	Call Date	Call Price	Yield To Call/Maturity	Increase to Yield
SER	12/01/2035	5.000%	3.730%			3.8831202%	0.0966988%
SER	12/01/2036	5.000%	3.870%			4.0837665%	0.1548494%
SER	12/01/2037	5.000%	3.990%			4.2396443%	0.1881571%
SER	12/01/2038	5.000%	4.050%			4.3297435%	0.2159622%
SER	12/01/2039	5.000%	4.150%			4.4375138%	0.2211946%
SER	12/01/2040	5.000%	4.260%			4.5405365%	0.2116900%
SER	12/01/2041	5.000%	4.370%			4.6337641%	0.1922117%
SER	12/01/2042	5.000%	4.480%			4.7189174%	0.1646208%
SER	12/01/2043	5.000%	4.560%			4.7790054%	0.1422253%
SER	12/01/2044	5.000%	4.620%			4.8229214%	0.1237207%
SER	12/01/2045	5.000%	4.680%			4.8638991%	0.1022121%

## WEIGHTED AVERAGE MATURITY

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 2 :: \$30 Million Par Amount | 25 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Methodology

IRS Form 8038 Instructions - Line 21(d). 'For column (d), the weighted average maturity is the sum of the products of the issue price of each maturity and the number of years to maturity (determined separately for each maturity and by taking into account mandatory redemptions), divided by the issue price of the entire issue (from line 21, column (b)).'

WAM Statistics

Total Issue Price X Years to Maturity (numerator)	482,573,736.30
Issue Price (denominator)	31,360,128.10
Weighted Average Maturity (years)	15.388130

Proof of Issue Price X Years to Maturity

Date	Bond Principal	Issue Price	Years after Delivery Date	Issue Price X Years to Maturity
12/01/2026	615,000.00	625,805.55	1.00000000	625,805.55
12/01/2027	650,000.00	672,236.50	2.00000000	1,344,473.00
12/01/2028	680,000.00	713,748.40	3.00000000	2,141,245.20
12/01/2029	715,000.00	760,745.70	4.00000000	3,042,982.80
12/01/2030	755,000.00	812,629.15	5.00000000	4,063,145.75
12/01/2031	795,000.00	864,411.45	6.00000000	5,186,468.70
12/01/2032	835,000.00	913,790.60	7.00000000	6,396,534.20
12/01/2033	875,000.00	963,961.25	8.00000000	7,711,690.00
12/01/2034	920,000.00	1,014,548.40	9.00000000	9,130,935.60
12/01/2035	970,000.00	1,063,440.10	10.00000000	10,634,401.00
12/01/2036	1,020,000.00	1,106,893.80	11.00000000	12,175,831.80
12/01/2037	1,070,000.00	1,151,041.80	12.00000000	13,812,501.60
12/01/2038	1,125,000.00	1,204,931.25	13.00000000	15,664,106.25
12/01/2039	1,185,000.00	1,259,998.65	14.00000000	17,639,981.10
12/01/2040	1,245,000.00	1,313,275.80	15.00000000	19,699,137.00
12/01/2041	1,310,000.00	1,370,862.60	16.00000000	21,933,801.60
12/01/2042	1,375,000.00	1,427,470.00	17.00000000	24,266,990.00
12/01/2043	1,445,000.00	1,491,500.10	18.00000000	26,847,001.80
12/01/2044	1,520,000.00	1,562,134.40	19.00000000	29,680,553.60
12/01/2045	1,595,000.00	1,632,131.60	20.00000000	32,642,632.00
12/01/2046	1,680,000.00	1,704,309.60	21.00000000	35,790,501.60
12/01/2047	1,765,000.00	1,790,539.55	22.00000000	39,391,870.10
12/01/2048	1,855,000.00	1,881,841.85	23.00000000	43,282,362.55
12/01/2049	1,950,000.00	1,978,216.50	24.00000000	47,477,196.00
12/01/2050	2,050,000.00	2,079,663.50	25.00000000	51,991,587.50
	30,000,000.00	31,360,128.10		482,573,736.30

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County of Houghton, Michigan  
General Obligation Unlimited Tax Bonds, Series 2025  
Scenario 3 :: \$30 Million Par Amount | 20 Years | Level Debt  
Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
Assumes Tax-Exempt, Non-Bank Qualified Bonds  
Assumes Negotiated Public Offering  
Optional Redemption :: December 1, 2034 @ 100  
\*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

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SOURCES AND USES OF FUNDS

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 3 :: \$30 Million Par Amount | 20 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
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 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Dated Date 12/01/2025  
 Delivery Date 12/01/2025

Sources:

Bond Proceeds:	
Par Amount	30,000,000.00
Premium	1,776,048.10
	31,776,048.10

Uses:

Project Fund Deposits:	
Deposit to the Project Fund	30,731,442.85
Cost of Issuance:	
Other Cost of Issuance	900,000.00
Other Delivery Date Expenses:	
Bond Insurance Estimate (30 bps assumed)	144,605.25
	31,776,048.10



## BOND DEBT SERVICE

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 3 :: \$30 Million Par Amount | 20 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
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 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Dated Date 12/01/2025  
 Delivery Date 12/01/2025

Period Ending	Principal	Coupon	Interest	Debt Service	Annual Debt Service	Bond Balance	Total Bond Value
12/01/2025						30,000,000	30,000,000
06/01/2026			750,000	750,000		30,000,000	30,000,000
09/30/2026					750,000	30,000,000	30,000,000
12/01/2026	895,000	5.000%	750,000	1,645,000		29,105,000	29,105,000
06/01/2027			727,625	727,625		29,105,000	29,105,000
09/30/2027					2,372,625	29,105,000	29,105,000
12/01/2027	940,000	5.000%	727,625	1,667,625		28,165,000	28,165,000
06/01/2028			704,125	704,125		28,165,000	28,165,000
09/30/2028					2,371,750	28,165,000	28,165,000
12/01/2028	990,000	5.000%	704,125	1,694,125		27,175,000	27,175,000
06/01/2029			679,375	679,375		27,175,000	27,175,000
09/30/2029					2,373,500	27,175,000	27,175,000
12/01/2029	1,040,000	5.000%	679,375	1,719,375		26,135,000	26,135,000
06/01/2030			653,375	653,375		26,135,000	26,135,000
09/30/2030					2,372,750	26,135,000	26,135,000
12/01/2030	1,095,000	5.000%	653,375	1,748,375		25,040,000	25,040,000
06/01/2031			626,000	626,000		25,040,000	25,040,000
09/30/2031					2,374,375	25,040,000	25,040,000
12/01/2031	1,150,000	5.000%	626,000	1,776,000		23,890,000	23,890,000
06/01/2032			597,250	597,250		23,890,000	23,890,000
09/30/2032					2,373,250	23,890,000	23,890,000
12/01/2032	1,210,000	5.000%	597,250	1,807,250		22,680,000	22,680,000
06/01/2033			567,000	567,000		22,680,000	22,680,000
09/30/2033					2,374,250	22,680,000	22,680,000
12/01/2033	1,270,000	5.000%	567,000	1,837,000		21,410,000	21,410,000
06/01/2034			535,250	535,250		21,410,000	21,410,000
09/30/2034					2,372,250	21,410,000	21,410,000
12/01/2034	1,335,000	5.000%	535,250	1,870,250		20,075,000	20,075,000
06/01/2035			501,875	501,875		20,075,000	20,075,000
09/30/2035					2,372,125	20,075,000	20,075,000
12/01/2035	1,405,000	5.000%	501,875	1,906,875		18,670,000	18,670,000
06/01/2036			466,750	466,750		18,670,000	18,670,000
09/30/2036					2,373,625	18,670,000	18,670,000
12/01/2036	1,475,000	5.000%	466,750	1,941,750		17,195,000	17,195,000
06/01/2037			429,875	429,875		17,195,000	17,195,000
09/30/2037					2,371,625	17,195,000	17,195,000
12/01/2037	1,550,000	5.000%	429,875	1,979,875		15,645,000	15,645,000
06/01/2038			391,125	391,125		15,645,000	15,645,000
09/30/2038					2,371,000	15,645,000	15,645,000
12/01/2038	1,630,000	5.000%	391,125	2,021,125		14,015,000	14,015,000
06/01/2039			350,375	350,375		14,015,000	14,015,000
09/30/2039					2,371,500	14,015,000	14,015,000
12/01/2039	1,715,000	5.000%	350,375	2,065,375		12,300,000	12,300,000
06/01/2040			307,500	307,500		12,300,000	12,300,000
09/30/2040					2,372,875	12,300,000	12,300,000
12/01/2040	1,805,000	5.000%	307,500	2,112,500		10,495,000	10,495,000
06/01/2041			262,375	262,375		10,495,000	10,495,000
09/30/2041					2,374,875	10,495,000	10,495,000
12/01/2041	1,895,000	5.000%	262,375	2,157,375		8,600,000	8,600,000
06/01/2042			215,000	215,000		8,600,000	8,600,000
09/30/2042					2,372,375	8,600,000	8,600,000
12/01/2042	1,990,000	5.000%	215,000	2,205,000		6,610,000	6,610,000
06/01/2043			165,250	165,250		6,610,000	6,610,000
09/30/2043					2,370,250	6,610,000	6,610,000
12/01/2043	2,095,000	5.000%	165,250	2,260,250		4,515,000	4,515,000
06/01/2044			112,875	112,875		4,515,000	4,515,000
09/30/2044					2,373,125	4,515,000	4,515,000
12/01/2044	2,200,000	5.000%	112,875	2,312,875		2,315,000	2,315,000
06/01/2045			57,875	57,875		2,315,000	2,315,000
09/30/2045					2,370,750	2,315,000	2,315,000
12/01/2045	2,315,000	5.000%	57,875	2,372,875			
09/30/2046					2,372,875		
	30,000,000		18,201,750	48,201,750	48,201,750		



## BOND DEBT SERVICE

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 3 :: \$30 Million Par Amount | 20 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Dated Date 12/01/2025  
 Delivery Date 12/01/2025

Period Ending	Principal	Coupon	Interest	Debt Service	Bond Balance	Total Bond Value
09/30/2026			750,000	750,000	30,000,000	30,000,000
09/30/2027	895,000	5.000%	1,477,625	2,372,625	29,105,000	29,105,000
09/30/2028	940,000	5.000%	1,431,750	2,371,750	28,165,000	28,165,000
09/30/2029	990,000	5.000%	1,383,500	2,373,500	27,175,000	27,175,000
09/30/2030	1,040,000	5.000%	1,332,750	2,372,750	26,135,000	26,135,000
09/30/2031	1,095,000	5.000%	1,279,375	2,374,375	25,040,000	25,040,000
09/30/2032	1,150,000	5.000%	1,223,250	2,373,250	23,890,000	23,890,000
09/30/2033	1,210,000	5.000%	1,164,250	2,374,250	22,680,000	22,680,000
09/30/2034	1,270,000	5.000%	1,102,250	2,372,250	21,410,000	21,410,000
09/30/2035	1,335,000	5.000%	1,037,125	2,372,125	20,075,000	20,075,000
09/30/2036	1,405,000	5.000%	968,625	2,373,625	18,670,000	18,670,000
09/30/2037	1,475,000	5.000%	896,625	2,371,625	17,195,000	17,195,000
09/30/2038	1,550,000	5.000%	821,000	2,371,000	15,645,000	15,645,000
09/30/2039	1,630,000	5.000%	741,500	2,371,500	14,015,000	14,015,000
09/30/2040	1,715,000	5.000%	657,875	2,372,875	12,300,000	12,300,000
09/30/2041	1,805,000	5.000%	569,875	2,374,875	10,495,000	10,495,000
09/30/2042	1,895,000	5.000%	477,375	2,372,375	8,600,000	8,600,000
09/30/2043	1,990,000	5.000%	380,250	2,370,250	6,610,000	6,610,000
09/30/2044	2,095,000	5.000%	278,125	2,373,125	4,515,000	4,515,000
09/30/2045	2,200,000	5.000%	170,750	2,370,750	2,315,000	2,315,000
09/30/2046	2,315,000	5.000%	57,875	2,372,875		
	30,000,000		18,201,750	48,201,750		

## BOND PRICING

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 3 :: \$30 Million Par Amount | 20 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Bond Component	Maturity Date	Amount	Rate	Yield	Price	Yield to Maturity	Call Date	Call Price
Serial Bonds (NBQ):								
	12/01/2026	895,000	5.000%	3.200%	101.757			
	12/01/2027	940,000	5.000%	3.220%	103.421			
	12/01/2028	990,000	5.000%	3.250%	104.963			
	12/01/2029	1,040,000	5.000%	3.280%	106.398			
	12/01/2030	1,095,000	5.000%	3.330%	107.633			
	12/01/2031	1,150,000	5.000%	3.380%	108.731			
	12/01/2032	1,210,000	5.000%	3.470%	109.436			
	12/01/2033	1,270,000	5.000%	3.530%	110.167			
	12/01/2034	1,335,000	5.000%	3.650%	110.277			
	12/01/2035	1,405,000	5.000%	3.730%	109.633	C 3.831%	12/01/2034	100.000
	12/01/2036	1,475,000	5.000%	3.870%	108.519	C 4.033%	12/01/2034	100.000
	12/01/2037	1,550,000	5.000%	3.990%	107.574	C 4.190%	12/01/2034	100.000
	12/01/2038	1,630,000	5.000%	4.050%	107.105	C 4.282%	12/01/2034	100.000
	12/01/2039	1,715,000	5.000%	4.150%	106.329	C 4.390%	12/01/2034	100.000
	12/01/2040	1,805,000	5.000%	4.260%	105.484	C 4.494%	12/01/2034	100.000
	12/01/2041	1,895,000	5.000%	4.370%	104.646	C 4.587%	12/01/2034	100.000
	12/01/2042	1,990,000	5.000%	4.480%	103.816	C 4.672%	12/01/2034	100.000
	12/01/2043	2,095,000	5.000%	4.560%	103.218	C 4.732%	12/01/2034	100.000
	12/01/2044	2,200,000	5.000%	4.620%	102.772	C 4.776%	12/01/2034	100.000
	12/01/2045	2,315,000	5.000%	4.680%	102.328	C 4.817%	12/01/2034	100.000
		30,000,000						

Dated Date	12/01/2025	
Delivery Date	12/01/2025	
First Coupon	06/01/2026	
Par Amount	30,000,000.00	
Premium	1,776,048.10	
Production	31,776,048.10	105.920160%
Underwriter's Discount		
Purchase Price	31,776,048.10	105.920160%
Accrued Interest		
Net Proceeds	31,776,048.10	

# BOND SUMMARY STATISTICS

County of Houghton, Michigan  
General Obligation Unlimited Tax Bonds, Series 2025  
Scenario 3 :: \$30 Million Par Amount | 20 Years | Level Debt  
Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
Assumes Tax-Exempt, Non-Bank Qualified Bonds  
Assumes Negotiated Public Offering  
Optional Redemption :: December 1, 2034 @ 100  
\*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Dated Date	12/01/2025
Delivery Date	12/01/2025
Last Maturity	12/01/2045
Arbitrage Yield	4.164828%
True Interest Cost (TIC)	4.389897%
Net Interest Cost (NIC)	4.512122%
NIC w/Interest only	5.000000%
NIC w/Interest & OID	4.512122%
NIC w/Interest, OID & Und. Discount	4.512122%
All-In TIC	4.720592%
Average Coupon	5.000000%
Average Life (years)	12.135
Weighted Average Maturity (years)	12.066
Duration of Issue (years)	8.980
Par Amount	30,000,000.00
Bond Proceeds	31,776,048.10
Total Interest	18,201,750.00
Net Interest	16,425,701.90
Total Debt Service	48,201,750.00
Maximum Annual Debt Service	2,374,875.00
Average Annual Debt Service	2,410,087.50

Bond Component	Par Value	Price	Average Coupon	Average Life	PV of 1 bp change
Serial Bonds (NBQ)	30,000,000.00	105.920	5.000%	12.135	20,275.70
	30,000,000.00			12.135	20,275.70

	TIC	All-In TIC	Arbitrage Yield
Par Value	30,000,000.00	30,000,000.00	30,000,000.00
+ Accrued Interest			
+ Premium (Discount)	1,776,048.10	1,776,048.10	1,776,048.10
- Underwriter's Discount			
- Cost of Issuance Expense		-900,000.00	
- Other Amounts	-144,605.25	-144,605.25	-144,605.25
Target Value	31,631,442.85	30,731,442.85	31,631,442.85
Target Date	12/01/2025	12/01/2025	12/01/2025
Yield	4.389897%	4.720592%	4.164828%



## FORM 8038 STATISTICS

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 3 :: \$30 Million Par Amount | 20 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Dated Date 12/01/2025  
 Delivery Date 12/01/2025

Bond Component	Date	Principal	Coupon	Price	Issue Price	Redemption at Maturity
Serial Bonds (NBQ):						
	12/01/2026	895,000.00	5.000%	101.757	910,725.15	895,000.00
	12/01/2027	940,000.00	5.000%	103.421	972,157.40	940,000.00
	12/01/2028	990,000.00	5.000%	104.963	1,039,133.70	990,000.00
	12/01/2029	1,040,000.00	5.000%	106.398	1,106,539.20	1,040,000.00
	12/01/2030	1,095,000.00	5.000%	107.633	1,178,581.35	1,095,000.00
	12/01/2031	1,150,000.00	5.000%	108.731	1,250,406.50	1,150,000.00
	12/01/2032	1,210,000.00	5.000%	109.436	1,324,175.60	1,210,000.00
	12/01/2033	1,270,000.00	5.000%	110.167	1,399,120.90	1,270,000.00
	12/01/2034	1,335,000.00	5.000%	110.277	1,472,197.95	1,335,000.00
	12/01/2035	1,405,000.00	5.000%	109.633	1,540,343.65	1,405,000.00
	12/01/2036	1,475,000.00	5.000%	108.519	1,600,655.25	1,475,000.00
	12/01/2037	1,550,000.00	5.000%	107.574	1,667,397.00	1,550,000.00
	12/01/2038	1,630,000.00	5.000%	107.105	1,745,811.50	1,630,000.00
	12/01/2039	1,715,000.00	5.000%	106.329	1,823,542.35	1,715,000.00
	12/01/2040	1,805,000.00	5.000%	105.484	1,903,986.20	1,805,000.00
	12/01/2041	1,895,000.00	5.000%	104.646	1,983,041.70	1,895,000.00
	12/01/2042	1,990,000.00	5.000%	103.816	2,065,938.40	1,990,000.00
	12/01/2043	2,095,000.00	5.000%	103.218	2,162,417.10	2,095,000.00
	12/01/2044	2,200,000.00	5.000%	102.772	2,260,984.00	2,200,000.00
	12/01/2045	2,315,000.00	5.000%	102.328	2,368,893.20	2,315,000.00
		30,000,000.00			31,776,048.10	30,000,000.00

	Maturity Date	Interest Rate	Issue Price	Stated Redemption at Maturity	Weighted Average Maturity	Yield
Final Maturity	12/01/2045	5.000%	2,368,893.20	2,315,000.00		
Entire Issue			31,776,048.10	30,000,000.00	12.0663	4.1648%

Proceeds used for accrued interest	0.00
Proceeds used for bond issuance costs (including underwriters' discount)	900,000.00
Proceeds used for credit enhancement	144,605.25
Proceeds allocated to reasonably required reserve or replacement fund	0.00

## PROOF OF ARBITRAGE YIELD

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 3 :: \$30 Million Par Amount | 20 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Date	Debt Service	PV Factor	Present Value to 12/01/2025 @ 4.1648284530%
06/01/2026	750,000.00	0.979600657	734,700.49
12/01/2026	1,645,000.00	0.959617446	1,578,570.70
06/01/2027	727,625.00	0.940041880	683,997.97
12/01/2027	1,667,625.00	0.920865643	1,535,658.57
06/01/2028	704,125.00	0.902080589	635,177.49
12/01/2028	1,694,125.00	0.883678737	1,497,062.24
06/01/2029	679,375.00	0.865652271	588,102.51
12/01/2029	1,719,375.00	0.847993533	1,458,018.88
06/01/2030	653,375.00	0.830695022	542,755.36
12/01/2030	1,748,375.00	0.813749389	1,422,739.09
06/01/2031	626,000.00	0.797149435	499,015.55
12/01/2031	1,776,000.00	0.780888110	1,386,857.28
06/01/2032	597,250.00	0.764958506	456,871.47
12/01/2032	1,807,250.00	0.749353854	1,354,269.75
06/01/2033	567,000.00	0.734067528	416,216.29
12/01/2033	1,837,000.00	0.719093032	1,320,973.90
06/01/2034	535,250.00	0.704424006	377,042.95
12/01/2034	21,945,250.00	0.690054219	15,143,412.35
	41,680,000.00		31,631,442.85

Proceeds Summary

Delivery date	12/01/2025
Par Value	30,000,000.00
Premium (Discount)	1,776,048.10
Arbitrage expenses	-144,605.25
Target for yield calculation	31,631,442.85

## PROOF OF ARBITRAGE YIELD

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 3 :: \$30 Million Par Amount | 20 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Assumed Call/Computation Dates for Premium Bonds

Bond Component	Maturity Date	Rate	Yield	Call Date	Call Price	Yield To Call/Maturity
SER	12/01/2035	5.000%	3.730%	12/01/2034	100.000	3.7864214%
SER	12/01/2036	5.000%	3.870%	12/01/2034	100.000	3.9289171%
SER	12/01/2037	5.000%	3.990%	12/01/2034	100.000	4.0514872%
SER	12/01/2038	5.000%	4.050%	12/01/2034	100.000	4.1137813%
SER	12/01/2039	5.000%	4.150%	12/01/2034	100.000	4.2163193%
SER	12/01/2040	5.000%	4.260%	12/01/2034	100.000	4.3288464%
SER	12/01/2041	5.000%	4.370%	12/01/2034	100.000	4.4415524%
SER	12/01/2042	5.000%	4.480%	12/01/2034	100.000	4.5542966%
SER	12/01/2043	5.000%	4.560%	12/01/2034	100.000	4.6367801%
SER	12/01/2044	5.000%	4.620%	12/01/2034	100.000	4.6992007%
SER	12/01/2045	5.000%	4.680%	12/01/2034	100.000	4.7616870%

Rejected Call/Computation Dates for Premium Bonds

Bond Component	Maturity Date	Rate	Yield	Call Date	Call Price	Yield To Call/Maturity	Increase to Yield
SER	12/01/2035	5.000%	3.730%			3.8831202%	0.0966988%
SER	12/01/2036	5.000%	3.870%			4.0837665%	0.1548494%
SER	12/01/2037	5.000%	3.990%			4.2396443%	0.1881571%
SER	12/01/2038	5.000%	4.050%			4.3297435%	0.2159622%
SER	12/01/2039	5.000%	4.150%			4.4375138%	0.2211946%
SER	12/01/2040	5.000%	4.260%			4.5405365%	0.2116900%
SER	12/01/2041	5.000%	4.370%			4.6337641%	0.1922117%
SER	12/01/2042	5.000%	4.480%			4.7189174%	0.1646208%
SER	12/01/2043	5.000%	4.560%			4.7790054%	0.1422253%
SER	12/01/2044	5.000%	4.620%			4.8229214%	0.1237207%
SER	12/01/2045	5.000%	4.680%			4.8638991%	0.1022121%



## WEIGHTED AVERAGE MATURITY

County of Houghton, Michigan  
 General Obligation Unlimited Tax Bonds, Series 2025  
 Scenario 3 :: \$30 Million Par Amount | 20 Years | Level Debt  
 Assumes Underlying Rating of 'A+' | Assumes Bond Insurance  
 Assumes Tax-Exempt, Non-Bank Qualified Bonds  
 Assumes Negotiated Public Offering  
 Optional Redemption :: December 1, 2034 @ 100  
 \*\*\*PRELIMINARY ILLUSTRATION AS OF MAY 2, 2025\*\*\*

Methodology

IRS Form 8038 Instructions - Line 21(d). 'For column (d), the weighted average maturity is the sum of the products of the issue price of each maturity and the number of years to maturity (determined separately for each maturity and by taking into account mandatory redemptions), divided by the issue price of the entire issue (from line 21, column (b)).'

WAM Statistics

Total Issue Price X Years to Maturity (numerator)	383,419,953.00
Issue Price (denominator)	31,776,048.10
Weighted Average Maturity (years)	12.066320

Proof of Issue Price X Years to Maturity

Date	Bond Principal	Issue Price	Years after Delivery Date	Issue Price X Years to Maturity
12/01/2026	895,000.00	910,725.15	1.00000000	910,725.15
12/01/2027	940,000.00	972,157.40	2.00000000	1,944,314.80
12/01/2028	990,000.00	1,039,133.70	3.00000000	3,117,401.10
12/01/2029	1,040,000.00	1,106,539.20	4.00000000	4,426,156.80
12/01/2030	1,095,000.00	1,178,581.35	5.00000000	5,892,906.75
12/01/2031	1,150,000.00	1,250,406.50	6.00000000	7,502,439.00
12/01/2032	1,210,000.00	1,324,175.60	7.00000000	9,269,229.20
12/01/2033	1,270,000.00	1,399,120.90	8.00000000	11,192,967.20
12/01/2034	1,335,000.00	1,472,197.95	9.00000000	13,249,781.55
12/01/2035	1,405,000.00	1,540,343.65	10.00000000	15,403,436.50
12/01/2036	1,475,000.00	1,600,655.25	11.00000000	17,607,207.75
12/01/2037	1,550,000.00	1,667,397.00	12.00000000	20,008,764.00
12/01/2038	1,630,000.00	1,745,811.50	13.00000000	22,695,549.50
12/01/2039	1,715,000.00	1,823,542.35	14.00000000	25,529,592.90
12/01/2040	1,805,000.00	1,903,986.20	15.00000000	28,559,793.00
12/01/2041	1,895,000.00	1,983,041.70	16.00000000	31,728,667.20
12/01/2042	1,990,000.00	2,065,938.40	17.00000000	35,120,952.80
12/01/2043	2,095,000.00	2,162,417.10	18.00000000	38,923,507.80
12/01/2044	2,200,000.00	2,260,984.00	19.00000000	42,958,696.00
12/01/2045	2,315,000.00	2,368,893.20	20.00000000	47,377,864.00
	30,000,000.00	31,776,048.10		383,419,953.00