

Grand Traverse County Board of Public Works
3848 Veterans Drive, Traverse City, MI 49684
Garfield Township Hall

Thursday, January 9, 2025, at 9:00 a.m.

Meeting Agenda

2024 Officers:

- Chair: Jeff Shaw, Elmwood Township
Vice-Chair: Doug White, Acme Township
Secretary: Rob Lajko, Rural Townships

CALL TO ORDER

PLEDGE OF ALLEGIANCE

ROLL CALL

The Director opens the floor for Nominations for Board Chair.

ELECTION OF BOARD CHAIR

At this point the meeting is turned over to the new Chair.

ELECTION OF BOARD VICE CHAIR

ELECTION OF BOARD SECRETARY

PUBLIC COMMENT The board welcomes all public input and appreciates the adherence to the time limits established. Refer to Rules under Public Comment/Input on last page of Agenda.

APPROVAL OF AGENDA

REPORTS

- 1. Jacobs's Monthly Operating Report 1
2. Engineer of Record
3. Shop Manager/Director Report 23
4. Board Members

CONSENT CALENDAR

The purpose of the Consent Calendar is to expedite business by grouping non-controversial items together to be dealt with by one Board motion without discussion. Any member of the Board, staff or the public may ask that any item on the Consent Calendar be removed and placed elsewhere on the agenda for full discussion. Such requests will be automatically respected. If any item is not removed from the consent calendar, the following items are approved by a single Board action adopting the consent calendar with a MAJORITY ROLL CALL VOTE.

APPROVAL OF MEETING MINUTES: December 12, 2024..... 29

ITEMS (Claims and claims reports are available for review at any time upon request.)

- 1. Olson - Bzdok (\$935.00)..... 33
2. City of Traverse City - October sewer charger (\$224,794.00)..... 34
3. City of Traverse City - October Garfield water (\$101,115.60)..... 35
4. City of Traverse City - October Peninsula water (\$9,059.75)..... 36
5. City of Traverse City - October Elmwood water (\$1,946.79)..... 37
6. City of Traverse City - November sewer charger (\$162,684.41)..... 38
7. City of Traverse City - November Garfield water (\$42,261.86)..... 39
8. City of Traverse City - November Peninsula water (\$2,516.08)..... 40
9. City of Traverse City - November Elmwood water (\$813.46)..... 41

ACTION REQUESTED-A Motion to approve the Consent Calendar with a Roll Call Vote

UNFINISHED BUSINESS

1. Authority
BPW April 11, 2024, MOTION to request BPW Counsel to provide an outline on the viability of a water and sewer authority, to include the pros and cons of said structure.
2. Policy regarding the use of the Septage Treatment Facility
BPW October 10, 2024, MOTION for Scott Howard, Esq. to start the process to create a policy regarding the use of the Septage Treatment Facility by townships other than Acme, East Bay, Elmwood, Garfield, Peninsula, and Whitewater, with his findings to be reviewed by the Finance Committee.
3. Status update on application for State of Michigan PFAS Investigation Funding Grant.
4. Waterworth Invoice No. INV-1349 (\$31,700.00)- legal review
5. Director position
Performance review
6. Project ALPHA presentation..... 42

NEW BUSINESS

1. Appointments to Committees
 - a. Finance (3 Officers +2)
 - b. Personnel (Chair +2)
 - c. Appeals (3 Members; Chair is alternate)
2. Annual review of BPW bylaws..... 78
3. Grit Removal Cost Estimate..... 88

PUBLIC COMMENT

NOTICES: As listed

1. The next regular BPW Finance Committee Meeting will be held on February 5, 2025, at 1:00 p.m. in the Large Conference Room in the Public Services Building at 2650 LaFranier Rd.
2. The next regular meeting of the Board of Public Works will be held on February 13, 2025, at 9:00 a.m. in the Meeting room at GARFIELD TOWNSHIP HALL, 3848 Veterans Drive.

ADJOURNMENT

Link to website for agenda & packet

http://www.co.grand-traverse.mi.us/departments/public_works/Agenda_Packets.htm

You can find videos of the meetings at: <http://upnorthmedia.org/watchgovtv.asp?SDBFid=2365>

RULES AND PUBLIC COMMENT / INPUT

1. All cell phones shall be switched to silent mode or turned off.
2. Any person may make a video, audio or other record of this meeting. Standing equipment, cords, or portable microphones must be located so as not to block audience view.
3. Any person shall be permitted to address a meeting of the Board of Public Works which is required to be open to the public under the provision of the Michigan Open Meetings Act, as amended. (MCLA 15.261, et.seq.) Public Comment shall be carried out in accordance with the following Board Rules and Procedures:
 - A. Any person wishing to address the Board shall state his or her name and address.
 - B. No person shall be allowed to speak more than once on the same matter, excluding time needed to answer Board Member's questions. The Chairperson shall control the amount of time each person shall be allowed to speak, which shall not exceed (3) minutes.
 - i. Chairperson may, at his or her discretion, extend the amount of time any person is allowed to speak.
 - ii. Whenever a group wishes to address the Board, the Chairperson may require that the group designate a spokesperson; the Chairperson shall control the amount of time the spokesperson shall be allowed to speak, which shall not exceed five (5) minutes).

AUXILIARY AIDS AND SERVICES

Grand Traverse County will provide reasonable auxiliary aids and services; such as, signers for the hearing impaired or audio tapes of printed materials being considered at the meeting, to individuals with disabilities at the meeting upon (48) forty-eight hours-notice to Grand Traverse County. Individuals with disabilities requiring auxiliary aids or services should contact the Grand Traverse County Department of Public Works at (231) 995-6039.

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December 16, 2024

Attn: Elizabeth Vogel

City Manager

City of Traverse City

Project name: Traverse City

Project no: 439201TR

Subject: Monthly Operations Report

Reporting Month: November 2024

Dear Ms. Vogel,

This report details our activities at the Traverse City Regional WWTP, City Lift Stations and the Grand Traverse County Septage Treatment Facility for the reporting month. If there is anything you would like included in this report, please let me know.

Sincerely,

Mark J Huggard

Mark Huggard

Project Manager

231.922.4922

Mark.huggard@jacobs.com

Copies to: Art Kreuger, City Director of Municipal Utilities
Benjamin Marentette, City Clerk
Traverse City Commissioners
Grand Traverse Board of Public Works
Kevin Dahl, Regional Director, Jacobs
Nick Lenzi, Area Manager, Jacobs
Jacobs Traverse City Staff



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Executive Summary

Compliance / IPP

- The treatment facility remained well within compliance with its NPDES discharge permit.
- Two SIU inspections were completed.

Operations and Maintenance

- Continued membrane recovery cleanings.
- Completed the quarterly water treatment plant predictive maintenance.

Community Involvement / Sustainability / Jacobs Value Adds / Staff

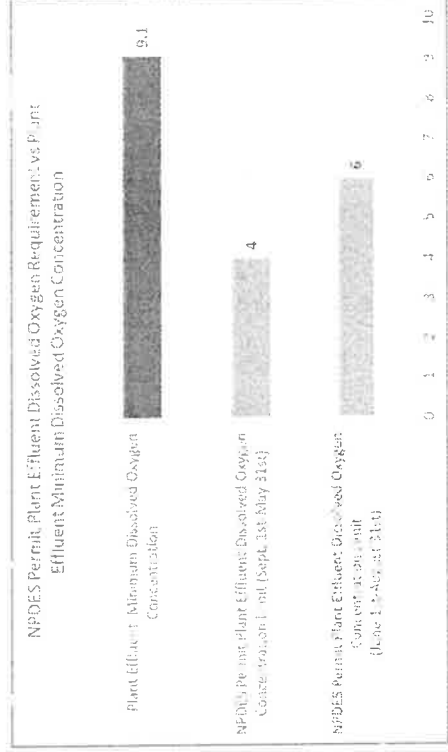
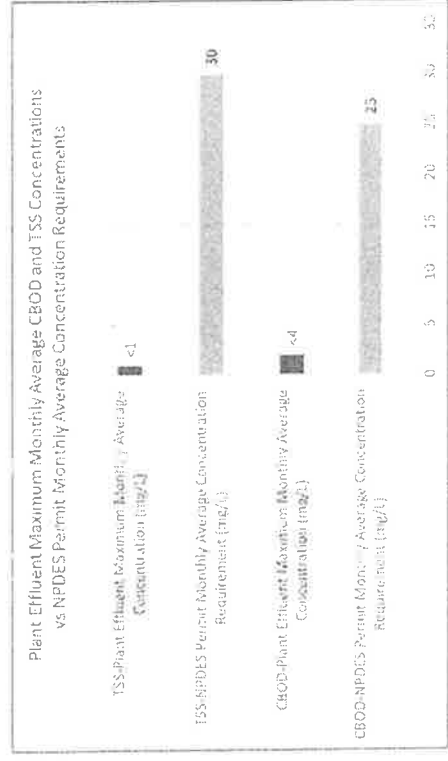
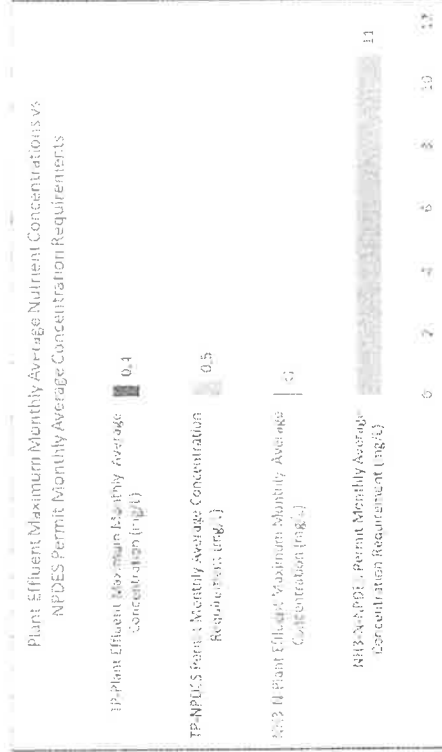
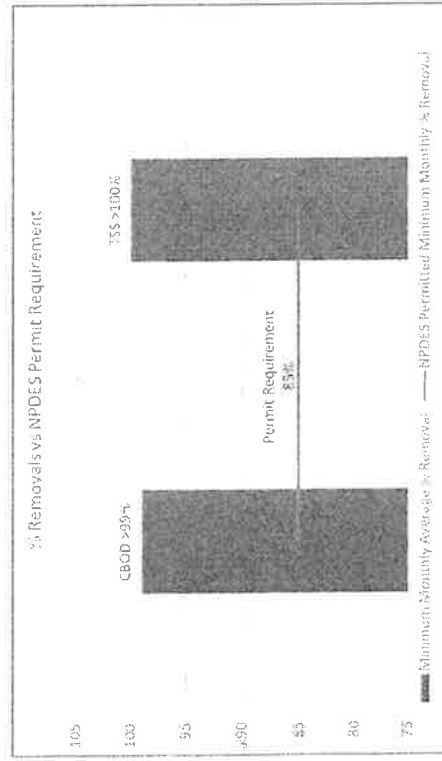
- Rooftop solar and BESS project bids were received.
- Installation of the level II EV charging station at the TCRWWTP was completed.

CIP Project Progress

- Programmable Logic Controllers and SCADA system update: We completed the migration of the solids half of the plant to the new SCADA system. By rewiring all of the control circuits over to the new PLC platform. We are preparing to move the rest of the plant over in the coming weeks.

Compliance

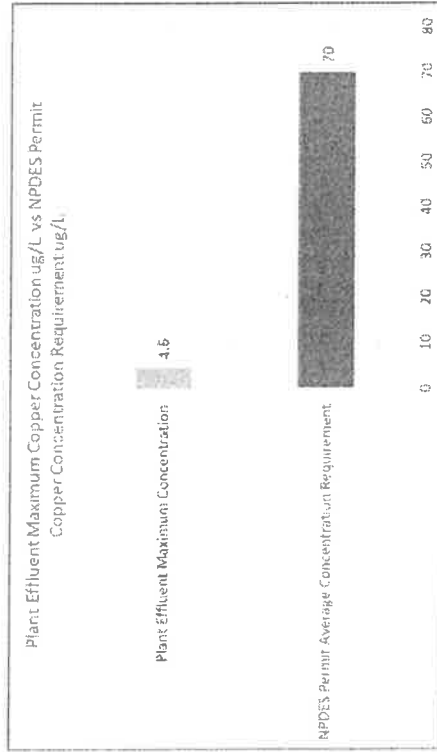
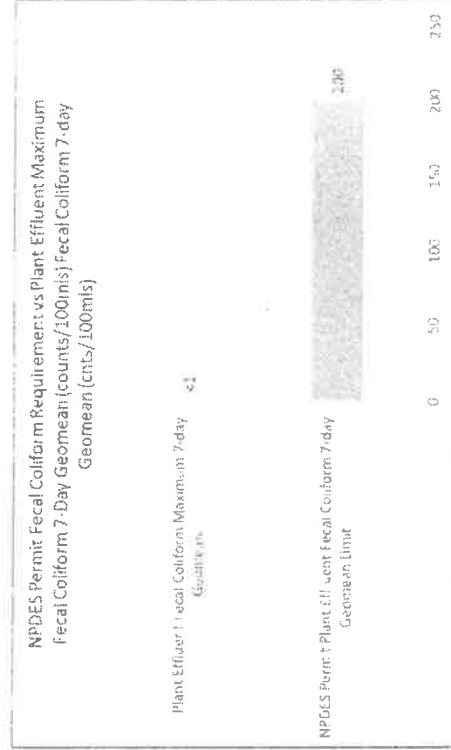
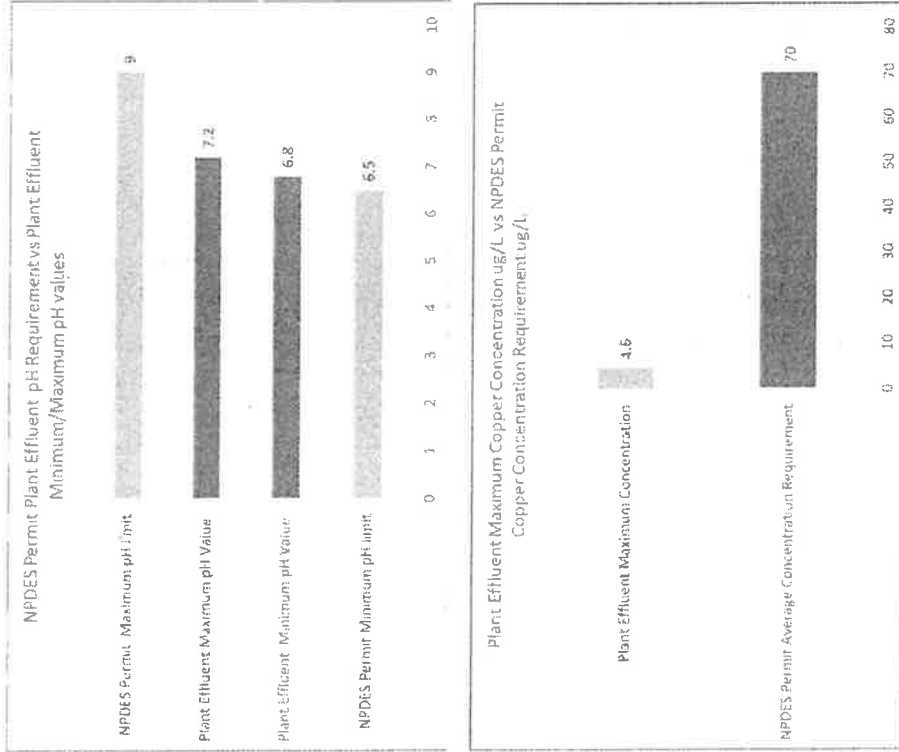
The following graphs illustrate the plants' compliance performance in relation to our NPDES permit limits. The treatment facility was well within compliance with its NPDES discharge permit.





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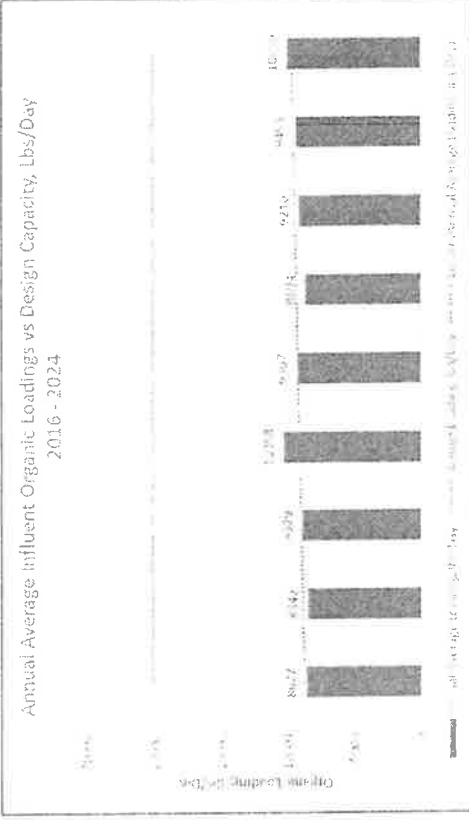
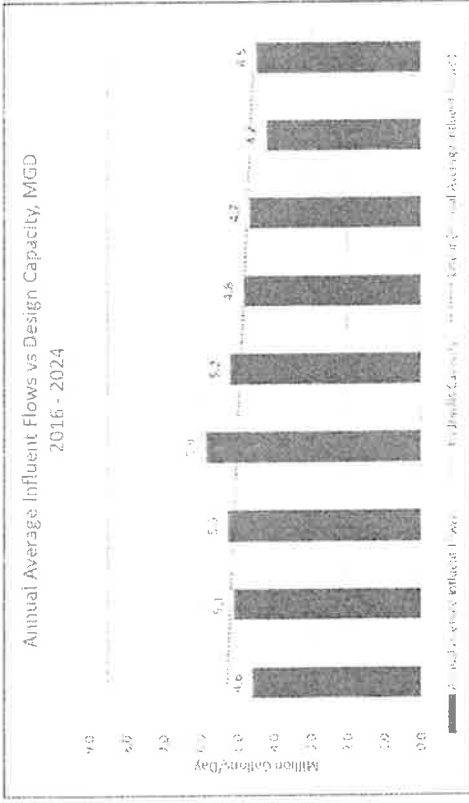


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Treatment Plant Capacity

The following charts depict the comparison between the plant's organic loading and flow capacity against its intended design capacity for the past nine years. Presently, the plant operates at approximately 53% of its designed hydraulic capacity and 50% of its design organic capacity. It is noteworthy to mention that July marks the commencement of the 24/25 contract year.





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Industrial Pretreatment Program (IPP)

What is an Industrial Pretreatment Program?

An industrial pretreatment program (IPP) regulates the disposal of industrial wastewater into the sanitary sewer collection system to protect the treatment plant and the environment. The Pretreatment Program requires industrial dischargers to use treatment techniques and best management practices to reduce or eliminate the discharge of harmful pollutants into sanitary sewers. A well-managed program helps maintain watershed quality, encourages pollution prevention, allows for the beneficial land application of biosolids, prevents poisonous gases from forming in sanitary sewer systems, ensures the treatment plant meets its discharge standards, and provides emergency preventative measures. Jacobs administers the IPP program on behalf of the City of Traverse City who serves as the Control Authority.

Discharging Significant Industrial Users (SIUs)

SIU #1 (Metal Finisher)

All inspections completed; Next SMR expected 12/15/24.

SIU #2 (Food Manufacturer)

An inspection of the facility was performed on 11/4/24 and found the facility and the lab practices to be in good order. There were no deficiencies noted. We suspect that operational conditions at this facility may contribute to the permeability issues we experience some years in our membrane bioreactor (MBR), therefore we informed the facility that we may perform additional sampling to help troubleshoot this problem if we experience loss of permeability this year.

SIU #3 (Medical Center)

An inspection of the facility was performed on 11/7/24 and discussed elements of the permit renewal application. There were no deficiencies noted. The facility's discharge permit was reviewed by the Jacobs compliance team and was sent for City review on 12/3. It is our goal to provide this to MMC by 12/13 to allow time for comments before issuance.

Non-Discharging Categorical Industrial Users (CIUs)

All annual inspections have been completed.



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Other Industrial Users (IU's)

Elmwood Township Fish Cleaning Station

After documents were provided by the Marina's engineers and PFAS results were reviewed, a meeting was held on 11/26 to discuss next steps. It was agreed that a letter of intent to issue a permit would be issued to the Marina to facilitate their construction planning.

US Coast Guard

A draft compliance order that would require USCG to perform a cleaning of the Parson's Road Lift Station was sent to be reviewed by the City and City Attorney in August. We recommend that this document be issued before the end of the year to ensure the lift station cleaning is performed before Summer 2025. This will likely be the last action required before EGLE can remove the semi-annual PFAS Interim Status Report requirement for the facility.

Tandem Ciders

Tandem Ciders submitted a completed special waste permit application on 11/18/24. The cidermaking waste is amenable to treatment at the GTSF, and a permit recommendation was sent to the City for review. The permit was issued on 11/18/24.

Miscellaneous Updates

Peninsula Lift Station

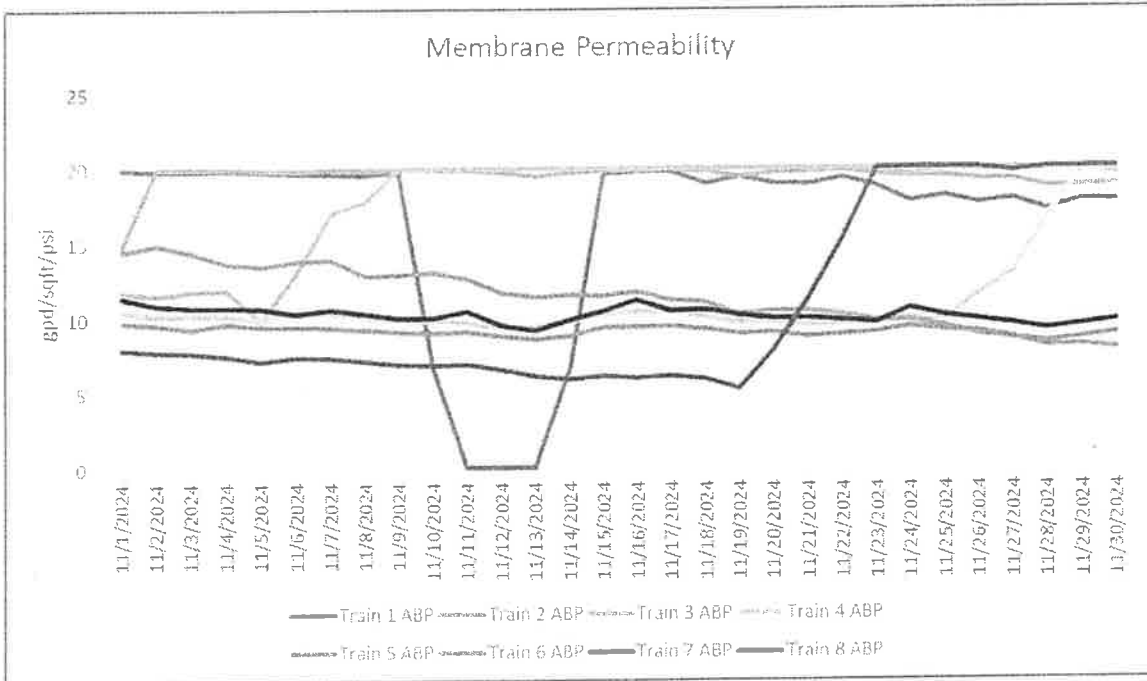
During routine monitoring for township BOD loadings (part of the master sewer agreement), it was found over the course of November that the lift station has an excess of high strength, high solids waste material that is interfering with the sampling equipment and is uncharacteristically high. The County DPW has come out on two occasions to assist with troubleshooting. Lift station operational changes are the most likely cause, but it is possible that there is an additional waste stream contributing to these conditions. Additional troubleshooting assistance from the County is necessary to make a determination.



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Operations

The provided diagram shows the average daily permeability rates for each membrane filtration system, with higher rates indicating better performance. There is an increase in permeability for trains 1, 2, 3, 4, and 8 after cleaning. The drop in permeability for Train 1 was caused by the permeate pump VFD failing, which led to intermittent permeation. After reinstating proper control of the permeate pump, Train 1 returned to full permeability. Trains 5, 6, and 7 are yet to be cleaned and currently have the lowest permeability. It is expected that the December permeability graph will show similar recoverability for the remaining trains. Flow tests conducted in November provided additional data supporting good permeation from all trains.



Staff addressed a cellular communication error involving four lift stations. On-call staff monitored the stations until communications were restored.

We received three odor complaints during November, all primarily related to historical odors from the facility rather than any recent increases. This prompted us to release a public message updating the community on the status of the odor control system and the steps the city plans to take to resolve these issues, starting with a comprehensive odor control study.



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Maintenance

Completed quarterly predictive maintenance for critical assets at the city's water treatment plant. Submitted a detailed report for review.

Finished hydrogen sulfide (H₂S) monitoring for the new aeration basin turbo blower. The manufacturer will use this data for necessary blower modifications. Jacobs will provide and install the blower at no cost to the city, expected by the end of 2025.

The west sludge storage tank progressive cavity pump was disassembled and cleared of all obstructions. The cause of the blockage was found to be air and other materials.

Plant PLC and SCADA upgrade project update: We completed the migration of the solids half of the plant to the new SCADA system. By rewiring all of the control circuits over to the new PLC platform. We are preparing to move the rest of the plant over in the coming weeks.

Other Notable Maintenance Activities

- We replaced the HMI screens associated with the gravity belt concentrator polymer mixing units.
- Repaired the stripped hinges on the double doors of the digester boiler room.
- Repaired a leaking fitting on digester #4 gas compressor.
- Repaired a failed Front St. Station pump motor contactor.

Looking ahead

In December, our main focus will be on completing preventive maintenance tasks. Throughout the month, we will also address various small corrective maintenance tasks that were delayed due to larger projects.



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Sustainability

Goals	Planned activities	Status	Anticipated outcome
Reduce plant electrical consumption	1. Install rooftop solar panels and BESS.	Project bids received and City is preparing to select a Contractor.	Reduce annual plant electrical consumption by 10% or 510 Mwh/year.
	2. Install new efficient aeration blower (Jacob's value add project)	The aeration blower has been purchased, the latest estimate received is July 2025 per manufacturer.	Reduce annual electrical consumption by 100,000 kW/hrs/year
Decrease annual ferric chloride usage	Complete comprehensive process sampling for Pro 2D plant model calibration Identify bio-P prohibiting factors. Implement process changes.	Bio- P sampling completed October 2023. Currently calibrating Pro 2 D model.	Identify ways to improve biological phosphorus removal.
Electric assist bike	Purchased for staff to transit to local lift stations, IPP inspections, meetings	Total miles to date = 259	Annual estimated carbon offset 116 to 233 kg of CO2.
Stewardship Activities			
Added a Ford F150 Lighting to our vehicle fleet, Recycle batteries, Donate to local nonprofits with environmental alignment, Nitrile glove recycling, scrap metal recycling, TART trail trash removal, general recycling.			

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Jacobs Value Adds

<i>Value Add Description</i>	<i>Jacobs Investment / Discount</i>	<i>Status</i>
Aeration Blower Upgrade	\$250,000	The blower has been purchased, the latest estimated receival date is July 2025 per manufacturer. Estimated total cost exceeds \$400,000.00. All costs are covered by Jacobs.
Biogas Reuse Study	\$150,000	Complete. Jacobs identified the Combined Heat and Power (CHP), otherwise known as cogeneration, as the most viable option. The city and TCLP are reviewing the options presented.
Upgrade to LED Lighting	\$100,000 in provided labor	Have converted 439 of 488 fluorescent fixtures to LED.
Engineering services discount	Up to \$250,000 of services @ 8.5% discount	NA
Solar Study	\$20,000	Complete: Jacobs through OOS agreement prepared a MPSC low carbon energy infrastructure enhancement grant application for WWTP rooftop solar panels and battery storage. City submitted grant application and was awarded a grant in the amount of \$1,685,479.
Annual Innovation Workshops	\$200,000 (\$20,000 / year)	1 st annual workshop October 5 th , 2022. 2 nd annual workshop March 4 th , 2024. (2023 delayed due to city manager search) 3 rd annual workshop November 13 th , 2024, Next workshop anticipated in October 2025.
Predictive maintenance (PDM) @ City's water treatment plant	\$50,000 / year	Continue to perform on a quarterly basis. A detailed report is submitted to water plant staff following each round.
Cybersecurity	\$10,000	Complete: We have already implemented cybersecurity upgrades to protect City assets at the WWTP. Winter 2023 we conducted a cyber security assessment of the City's water treatment facility, providing a detailed report of findings and recommendations.
Electric Vehicle Charging Station	\$10,000	Complete: Installation of Type II Ev charging station at the TCWWTP. Completed in November 2024. Total cost was approximately \$28,000.00. All costs are covered by Jacobs.





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Community Involvement / Staff

Nothing to report this month.

Financial Summary

Traverse City	CY34 Annual Budget	Current Month Expensed	YTD Expenses	Annual Budget Remaining
All Chemicals	\$400,000.00	\$24,777.86	\$128,596.14	\$271,403.86
Biosolids Disposal	\$315,000.00	\$0.00	\$79,661.63	\$235,338.37
Electricity	\$460,000.00	\$39,926.92	\$160,830.16	\$299,169.84
Repairs	\$125,000.00	\$26,559.32	\$134,481.88	\$(9,481.88)
Totals	\$1,300,000.00	\$91,264.10	\$503,569.81	\$796,430.19



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Capital Improvement Projects

CIP Projects 2023 - 2024	Current Status	Estimated Cost (*Final Cost)
GBC Rebuild (CIP 1236-22) - City Commission approved 8-15-22.	Complete	\$142,827*
West Fine Screen Rebuild (CIP 1237-22) - City Commission approved 8-15-22.	Complete	\$165,507*
Scour Air Blower Overhaul - 5 Blowers Total (CIP 1073)	Complete	\$47,250*
Digester 5 Condition Assessment (CIP 1175-22) - Includes cleaning of digester.	Complete	\$251,438.37*
Boiler Controls Upgrade (CIP 1077-22) - Replaces obsolete and unsupported existing controls, replaces aging boiler burners. Anticipated completion date of Spring 2024.	Complete	\$366,260.12*
Engineering Evaluation of Lift Stations (CIP 967-22) - Includes Woodmere, Riverine, Coast Guard and Clinch Park.	City to Issue RFP	\$60,000
Plant PLC Upgrades (CIP 970-22) - Replaces existing PLCs excluding membrane PLC's (scheduled for 2024-2025). Includes repairing GBC Room MCC panel wiring and components and construction of a long-term solution to corrosion.	In process, Estimated date of completion January 2025.	\$398,408
SCADA upgrade (CIP 795-22) - Upgrades existing SCADA system and relocates SCADA server/hardware rack to controlled environment location.	In process, Estimated date of completion January 2025.	\$293,469
UV System Upgrade Engineering (CIP 1033-22) - UV system upgrade engineering study including part 41 submission to EGLE by December 31st, 2024, per July 3rd, 2019, ACO and is in accordance with the AMP prioritization - CA rated the UV process the 4th highest risk prior to UV limited capacity being identified.	Incorporated with CWSRF Headworks and Primary Treatment Upgrade Project.	Included in CWSRF Project.
Chemical Room Upgrades: This project was identified as a need to address increased maintenance due to failing fittings, system leaks and lack of system reliability. We will also be replacing the HVAC unit for this process with an electric heater system.	Complete	\$109,964.67*



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TCRWWTP BOD Loading Summary

Township flows weren't available at the time this report was submitted. December's report will be updated to include November's data.



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Grand Traverse County Septage Treatment Facility (GTCSTF)

Executive Summary

Compliance

- Effluent concentrations were outside of target limits for one week of the month.

Operations and Maintenance Highlights

- SBR tank level transducer electrical conduits are being scheduled for replacement.
- There was a spill on November 18th caused by a faulty control system. The spill was isolated to within the fenceline and measures were taken to prevent further occurrences.
- We are troubleshooting some hauler receipt issues.

Upcoming Initiatives

- Replacement of unloading bay isolation valves once received.
- Submittal of the grit removal process project cost estimates.



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Grand Traverse County Septage Treatment Facility Process Status Overview						
Process Area	In Service	Rated Capacity	Used Capacity, per 2019 Capacity Study	Equipment Status	Comments	
Administration Building	2005	NA	NA	NA	HVAC system was replaced in 2022. Supervisory Control and Data Acquisition (SCADA) server replacement completed December 2023.	
Unloading Bays	2005	NA	NA	In service	Both the east and west bay flow meter replacements were replaced in 2023. New unloading bay printer was installed in September 2023.	
Sequence Batch Reactor	2005	20,500 gpd (peak month)	32,000 gpd (peak month)	In service	The rotating drum thickener control panel was reconstructed in 2023. Lift station #2 was reconstructed in 2023.	
Auto thermophilic Aerobic Digester	2005	10,000 lb./day	4,700 lbs./day	In service	The ATAD pumps including the foam and jet pump were replaced in 2023 along with the isolation valves for each pump. These replacements also included the cleaning of the ATAD tank. Day tank level transducer was replaced in 2024.	
Storage Nitrification/Denitrification Tank	2005	150 days of Storage Recommended	150 days of Storage	In service	SNDR level transducer was replaced in 2024.	



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Compliance

The GTCSTF holds a vital position within the publicly owned treatment works (POTW) as a designated pretreatment facility. Its duties include receiving and managing special waste, holding tank waste, grease, and septage waste, with the primary aim of preventing any negative impact on the POTW from these waste streams. Although it does not operate under a discharge permit, we diligently monitor the effluent quality by comparing it against local limits established by the Industrial Pretreatment Program (IPP). In November, a sample indicated higher than normal concentrations discharged due to modifications in plant operations to address PCP 4 control panel communication issues. The concentrations returned to standard levels the following week.

Table 1 Monthly effluent results compared to local limits.

Parameter	GTCSTF Effluent Monthly Maximum Concentration, mg/L	Local Limit Concentrations, mg/L
Total Suspended Solids, TSS	7,434	285
Biochemical Oxygen Demand, BOD	2,783	285
Total Kjeldahl Nitrogen, TKN	441	60
Total Phosphorus	46	13

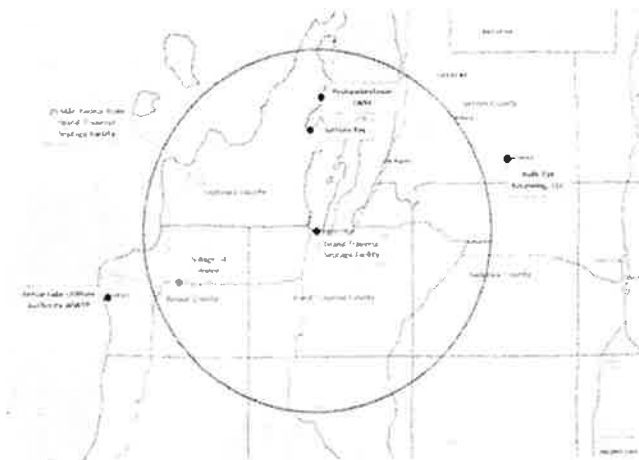
Grit Removal Process Engineering

Jacob's engineering team completed the 90% design documents and are now finalizing the project cost estimates. We anticipate providing the cost estimates in December.

Operations and Maintenance Highlights

As required by the facility's state approved operations plan; holding tank, grease, septage, and preapproved special waste generated within a 25 miles radius of the facility, was able to be accepted 24 hours a day, seven days a week throughout the month.

GTSF Facility Service Radius



Maintenance staff and Windemuller are diagnosing issues with SBR level transducers. They are scheduling a contractor to install new conduit to fix the problem.

Foreberg Scientific was onsite to troubleshoot a discrepancy in the Storage Tank level transducer, which was discovered after the tank was emptied during the most recent sludge haul.

On November 18th, on-call staff responded to an alarm indicating low levels in the influent EQ tank and high levels at lift station 2 (LS2). They found LS2 had overflowed onto the adjacent ground covering approximately 600 sqft. The area was cleaned by GFL, lime was applied, and proper notifications were made. The spill was contained within the fence line. Due to unreliable PCP 4 communications and programming, staff adjusted schedules to allow for all operations to occur while the facility is manned until to occur until these issues are resolved.

Some haulers have reported issues with receipt errors, specifically improper offloading volumes or hauler ID numbers. Jacob's is currently reaching out to Windemuller to determine if this is a programming issue they can resolve or if it is related to the Pro Fuel receipt software.

Maintenance staff replaced failed belts on the Influent EQ Blower.



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2024 Proposed or Active Facility Repairs >\$1,000

Repair Initiatives Details	Estimated Cost	Current Status / Comments
Unloading bay replacement valves	\$3,812.52	On order
ATAD roof repairs	\$146,822.56	County determining budget availability
Replacement of corroded water supply lines in the unloading bays.	TBD	Developing scope of work
Rebuild of the influent and post eq control panel.	TBD	County determining budget availability
The addition of unloading bay hauled waste historical trending.	TBD	In process
Grease pump critical spare parts.	\$15,716.00	Purchase approved by BPW on 8-29-24



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Capital Improvements

Contract Year	Project	Estimated Cost	Comments
2023	Grit Removal Project- Part 1 - Design	\$300,000	Preparing bid documents
2023 Estimated Total			\$436,346
2024	Grit Removal Project Construction	TBD	Project to be bid in 2024 for cost determination
2024 Estimated Total			TBD
2025	Replace day tank liner (includes cleaning and inspection of tank interior)	\$389,000	County determining funding availability
2025 Estimated Total			\$389,000
2026	Update Facility Programming and PLCs-License to be owned by DPW (Condition Assessment Rating of 2)	\$750,000	No comments
2026	Clean, Inspect, Repair ATAD Reaction Tank - Address items identified in 2018 Inspection.	\$150,000	No comments
2026 Estimated Total			\$900,000
2027	Foul Air System Evaluation	\$15,000	No comments
2027	Clean and Inspect SNDR (Per NTH, every 5 yrs. last done 2018)	\$100,000	No comments
2027	Storage pump and valve replacement - Includes tank cleaning and tank condition assessment	\$155,000	No comments
2027	Clean and Inspect SBRs (Every 3 years)- cost based on 80,000 gallons removed	\$175,000	No comments
2027 Estimated Total			\$380,000
2028	SBR Improvements per 2019 Capacity Evaluation - Diffuser Replacement, DO and blower speed control, Addition of two Decanters, Programming, SBR wall improvements	\$1,007,000	2019 Dollars
2028	Biofilter media replacement last replaced in 2014 (recommended every 7 years)	\$175,000	No comments
2028 Estimated Total			\$1,182,000
2029	RDT Overhaul and Polymer System Upgrade	\$175,000	No comments
2029	Biosolids handling evaluation - Engineering study to identify means of reducing haul volumes and cost. Engineering capacity evaluation, review of options, recommendations, and estimated cost.	\$50,000	No Comments
2029 Estimated Total			\$125,000



Challenging today.
Reinventing tomorrow.

Financial Summary

Grand Traverse CY19	Annual Budget	Current Month Expensed	YTD Expenses	Budget Remaining
Repairs	\$70,000	\$1,088.14	\$99,876.77	(\$29,876.77)
Influent Tank Cleaning	\$40,000	\$0.00	\$0.00	\$40,000.00
Post EQ Tank Cleaning	\$24,000	\$0.00	\$0.00	\$24,000.00
Biosolids Disposal	\$77,000	\$0.00	\$26,045.07	\$50,954.93
Grit Removal	\$19,500	\$1,819.46	\$16,289.02	\$3,210.98
PFAS Testing	\$3,000	\$900.00	\$3,028.00	(\$28.00)
Totals	\$233,500	\$3,807.60	\$145,238.86	\$88,261.14

December Activities

DPW Shop/ Director Report

Submitted by Kent Nothstine

December 2024

Director Activities:

- Garfield - Water Contract / Master meter
- East Bay - Public vs Private Water main conversations
- DPW Director position

General Shop Activities:

- DPW Staff completed monthly operating reports for the water systems.
- Customer meter readings were performed on December 27th.
- Master meter readings were performed with the City on December 27th.
- Employee retirement – Greg Fasel retired after 31 years, 7 months, 20 days on January 6th, 2025
- 10 Sensaphone auto dialer and radio to cellular conversions at multiple stations completed

Acme Township:

- Nothing to note

Elmwood Township:

- Nothing to note

Garfield Township:

- SPS 6 Cleaned by GFL due to Blair TWP force main cleaning, Blair TWP will be covering costs
- The Crown booster abandonment – Not Complete

Peninsula Township:

- Nothing to note

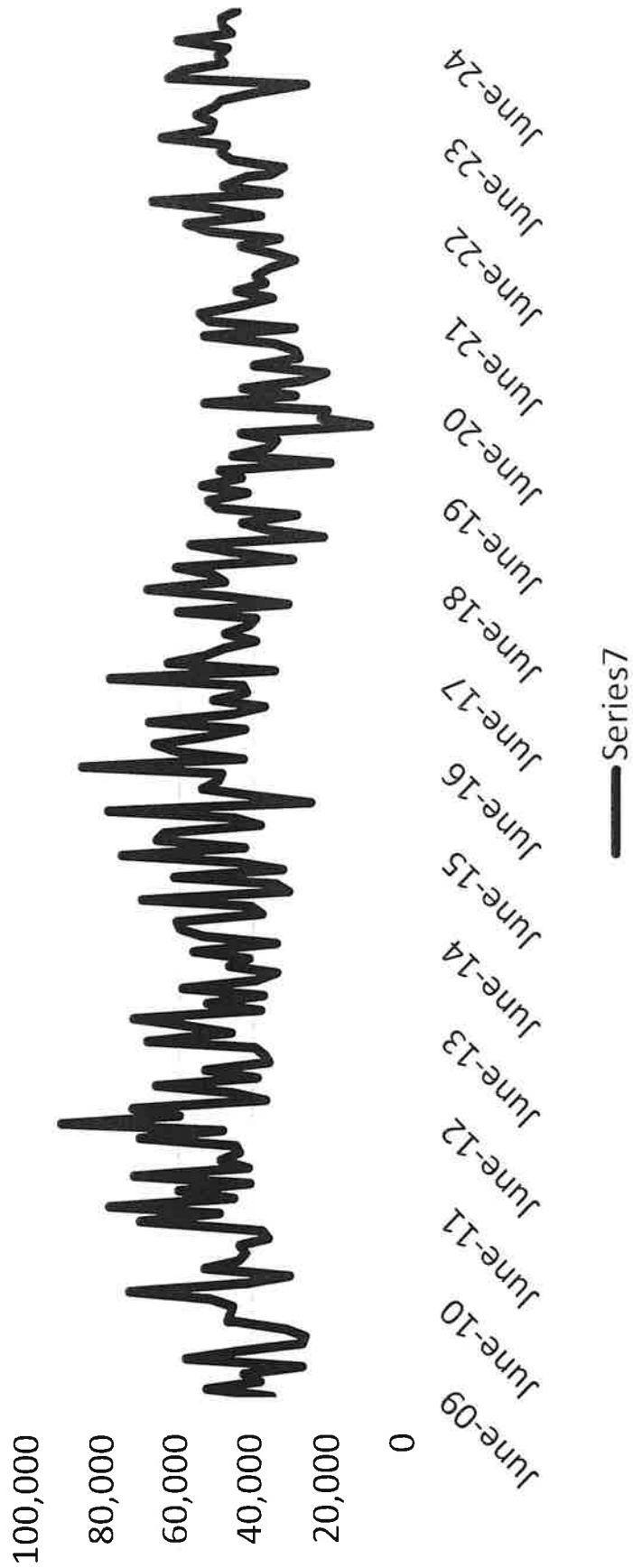
East Bay Township:

- Holiday well house PLC replaced
- Holiday Well 1 – maintenance required – will not operate
- SPS 10 – Verndale repaired pump

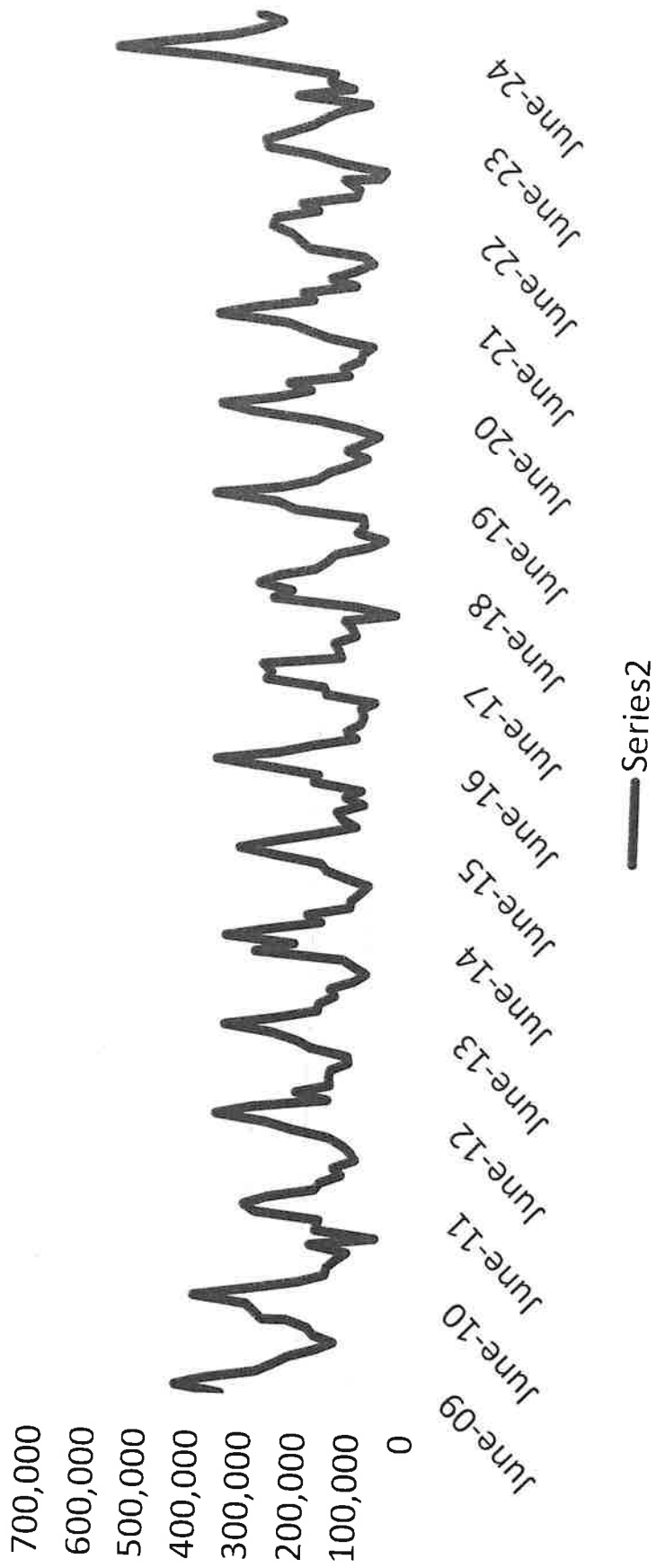
DATE	SEPTAGE		Failed Systems		New as of 2/2015		HOLDING TANK		SPECIAL WASTE		GREASE		FAILED GREASE		TOTAL GALLONS	TOTAL \$
	As of 2-1-2013 0.12 per gallon	As of 2-1-2013 0.18 per gallon	Special Rate .08 gallon	Special Rate .05 gallon	As of 2-1-2013 0.05 per gallon	As of 2-1-2013 0.04 per gallon	Enter on the right side of page Totals here	As of 7-2-2012 0.12 per gal. .19 per gallon	New-Aug.17 .09 per gallon							
Dec. 2024																
12/1/2024	0	0	0	0.00	9,370	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	9,370.00	\$468.50
12/2/2024	14,470	0	0	0.00	24,920	3,846	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43,235.79	\$4,158.26
12/3/2024	15,970	0	0	0.00	12,990	0	0.00	0	1,638.90	0.00	0.00	0.00	0.00	0.00	30,598.90	\$3,835.49
12/4/2024	6,110	0	0	0.00	9,000	0	0.00	0	514.74	0.00	0.00	0.00	0.00	0.00	15,624.74	\$1,647.60
12/5/2024	4,010	0	0	0.00	3,730	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	7,740.00	\$908.30
12/6/2024	2,860	0	0	0.00	16,580	0	0.00	0	2,248.31	0.00	0.00	0.00	0.00	0.00	21,688.31	\$1,770.98
12/7/2024	0	0	0	0.00	5,130	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	5,130.00	\$256.50
12/8/2024	0	0	0	0.00	4,980	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	4,980.00	\$249.00
12/9/2024	15,450	0	0	0.00	22,950	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	38,400.00	\$3,928.50
12/10/2024	22,940	0	0	0.00	22,080	0	0.00	0	3,603.21	0.00	0.00	0.00	0.00	0.00	48,623.21	\$5,917.81
12/11/2024	10,840	0	0	0.00	2,640	0	0.00	0	4,194.87	0.00	0.00	0.00	0.00	0.00	17,674.87	\$2,880.23
12/12/2024	2,170	800	0	0.00	8,450	0	0.00	0	3,289.63	0.00	0.00	0.00	0.00	0.00	14,709.63	\$1,502.13
12/13/2024	4,190	1,040	0	0.00	5,020	0	0.00	0	786.91	0.00	0.00	0.00	0.00	0.00	11,036.91	\$1,237.91
12/14/2024	0	0	0	0.00	5,080	0	0.00	0	4,218.54	0.00	0.00	0.00	0.00	0.00	9,298.54	\$1,055.52
12/15/2024	0	0	0	0.00	4,930	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	4,930.00	\$246.50
12/16/2024	13,860	0	0	0.00	17,150	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	31,010.00	\$3,352.30
12/17/2024	26,800	0	0	0.00	18,510	0	0.00	0	4,875.29	0.00	0.00	0.00	0.00	0.00	50,185.29	\$6,675.81
12/18/2024	5,380	0	0	0.00	11,520	0	0.00	0	8,052.49	0.00	0.00	0.00	0.00	0.00	24,952.49	\$3,074.37
12/19/2024	13,300	0	0	0.00	8,240	0	0.00	0	10,294.89	0.00	0.00	0.00	0.00	0.00	31,834.89	\$4,762.03
12/20/2024	4,710	0	0	0.00	14,380	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	19,090.00	\$1,566.80
12/21/2024	0	0	0	0.00	3,830	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	3,830.00	\$191.50
12/22/2024	0	0	0	0.00	5,060	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	5,060.00	\$253.00
12/23/2024	8,220	0	0	0.00	14,160	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	22,380.00	\$2,187.60
12/24/2024	1,350	0	0	0.00	12,010	0	0.00	0	1,212.90	0.00	0.00	0.00	0.00	0.00	14,572.90	\$1,073.95
12/25/2024	0	0	0	0.00	5,030	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	5,030.00	\$251.50
12/26/2024	2,830	0	0	0.00	8,720	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	11,550.00	\$945.40
12/27/2024	12,400	0	0	0.00	33,350	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	45,750.00	\$3,899.50
12/28/2024	1,050	0	0	0.00	7,800	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	8,850.00	\$579.00
12/29/2024	0	0	0	0.00	7,570	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	7,570.00	\$378.50
12/30/2024	9,910	0	0	0.00	14,250	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	24,160.00	\$2,496.30
12/31/2024	13,830	1,100	0	0.00	19,530	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	34,460.00	\$3,553.90
	0	0	0	0.00	0	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	\$0.00
Dec. 2024 Totals	212,650.00	2,940.00	0.00	0.00	358,960.00	3,846	0.00	0.00	44,930.68	0.00	0.00	0.00	0.00	0.00	623,326.47	\$65,304.69
TOTALS	94,416,293.88	418,606.00	136,390.00	0.00	51,800,686.92	66,139,864	0.00	0.00	9,639,301.18	57,699.69	0.00	0.00	0.00	0.00	222,571,618.95	\$21,599,028.23

SEPTAGE TREATMENT FACILITY COMPARISON OF GALLONS RECEIVED (& THE DOLLARS THOSE GALLONS WILL GENERATE) SUMMARY									
2022			2023			2024			
DATE	TOTAL GALLONS	TOTAL \$	DATE	TOTAL GALLONS	TOTAL \$	DATE	TOTAL GALLONS	TOTAL \$	
January 2022	335,390	\$39,365.04	January 2023	476,278	\$60,501.20	January 2024	530,603	\$59,112.22	
February 2022	306,914	\$37,904.48	February 2023	289,593	\$36,132.44	February 2024	384,390	\$46,081.53	
March 2022	407,406	\$53,220.02	March 2023	328,517	\$44,680.05	March 2024	672,161	\$92,484.00	
April 2022	790,163	\$109,699.58	April 2023	804,664	\$119,208.66	April 2024	926,762	\$139,270.85	
May 2022	1,048,830	\$153,714.42	May 2023	964,398	\$140,764.74	May 2024	1,055,067	\$148,356.67	
June 2022	955,494	\$134,979.00	June 2023	1,033,495	\$142,798.28	June 2024	1,195,321	\$159,485.09	
July 2022	979,681	\$135,134.51	July 2023	965,080	\$130,311.33	July 2024	1,383,643	\$168,258.33	
August 2022	985,068	\$136,668.02	August 2023	976,867	\$137,759.43	August 2024	1,234,889	\$154,605.78	
September 2022	896,842	\$130,829.64	September 2023	927,395	\$134,392.61	September 2024	1,107,580	\$146,510.95	
October 2022	963,812	\$138,956.71	October 2023	1,046,864	\$159,068.09	October 2024	1,232,823	\$176,145.93	
November 2022	647,252	\$94,908.23	November 2023	725,526	\$105,274.19	November 2024	923,488	\$124,993.58	
December 2022	516,809	\$71,841.91	December 2023	461,521	\$63,965.68	December 2024	623,326	\$65,304.69	
Totals	8,833,659.18	\$1,237,221.56	Totals	9,000,197.84	\$1,274,856.70	Totals	11,270,054	\$1,480,609.62	
2021 compared to 2022			2022 compared to 2023			Dec 2023 compared to Dec 2024			
YTD	-960,338	-\$159,056.66	YTD	166,539	\$37,635.14	YTD	161,806	\$1,339.01	
	-9.81%	-11.39%		1.89%	3.04%		35.06%	2.09%	
2023 compared to 2024			2024 compared to 2025			YTD			

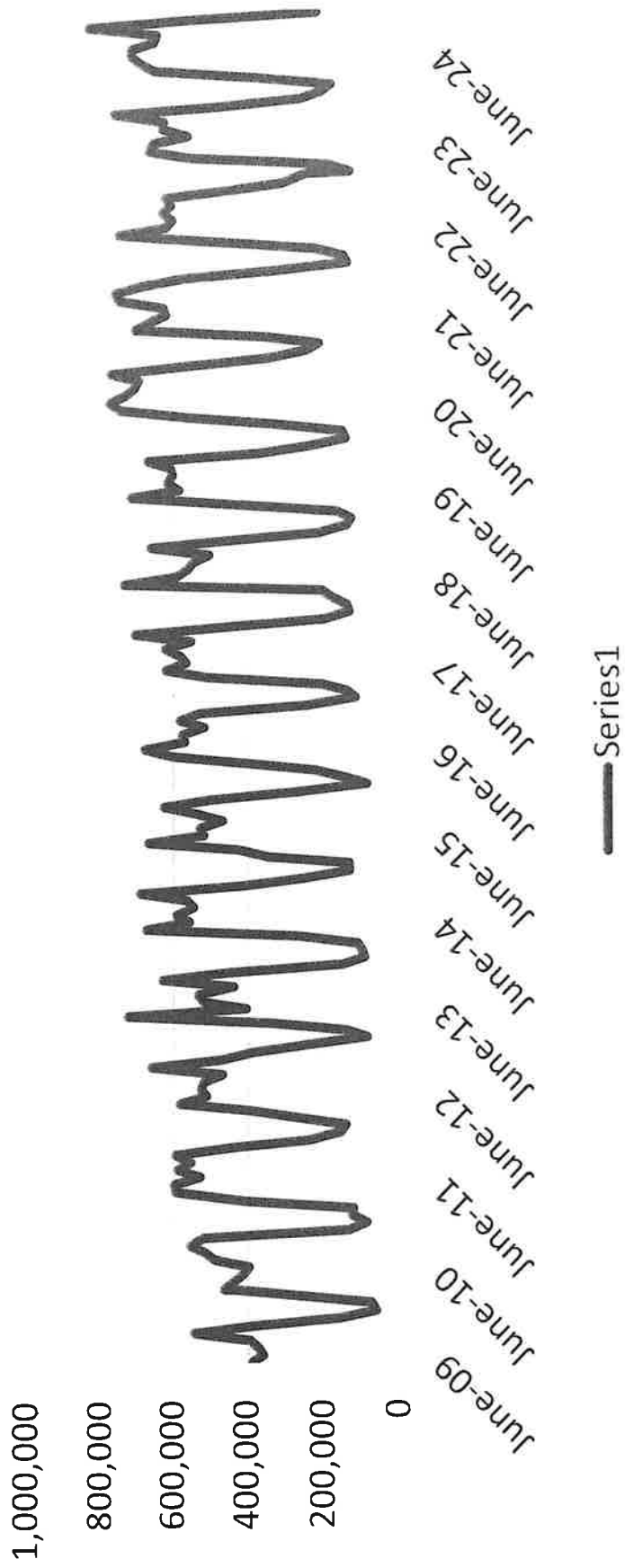
Grease



Holding Tank



Septic



Grand Traverse County Board of Public Works

Thursday, December 12, 2024

Regular Meeting Minutes

2024 Officers: Chair: Jeff Shaw; Vice-Chair: Doug White, Secretary: Rob Lajko

CALL TO ORDER

The Chair called the regular meeting of the Grand Traverse County Board of Public Works to order at 9:00 a.m. in the meeting room at Garfield Township Hall, 3848 Veterans Drive, Traverse City, MI.

ROLL CALL

PRESENT: Beth Friend, Chuck Korn, Rob Lajko, Jeff Shaw, Andy Smits, Liz Vogel, and Doug White

ABSENT: Doug Bonnell, Bob Fudge, Darryl Nelson, and Isaiah Wunsch

STAFF: Kent Nothstine, Dianne Thompson, and Tricia Daugherty

Also Present: Andrew Waldron, Jacobs; Chris Barsheff, Garfield Township Manager; Maura Sanders, Peninsula Township Supervisor; and LIAA Videographer

PUBLIC COMMENT

None.

APPROVAL OF AGENDA

MOTION by ANDY SMITS to approve the agenda and addendum as modified; second by Liz Vogel.

The Motion PASSED unanimously.

REPORTS

1. Jacobs Monthly Operating Report
Jacobs submitted a written report. Andrew Waldron was present to discuss the report with the Board.

2. Engineer of Record
Jennifer Graham was not present.

3. Shop Manager/Interim Director
Kent Nothstine submitted a written report and was present to discuss it with the Board.

4. Board
- a. Elmwood Township: Jeff Shaw was present and thanked the City of Traverse City and Jacobs for their work on hooking the fish cleaning station to the sewer system.
 - b. Garfield Township: Chuck Korn was present and had nothing of note to report. He expects that Joe McManus will be appointed to the Board of Public Works at the next Commissioner meeting.
 - c. East Bay Township: Beth Friend was present and reported that the Township was awarded trail head grant funding on December 11, 2024, and the joint meeting with Acme Township went well.
 - d. Peninsula Township: Isaiah Wunsch was not present.
 - e. Acme Township: Doug White was present and reported everything is fairly quiet.
 - f. Rural Township(s): Rob Lajko was present and reported that Paradise Township is nice and quiet and full of snow.

- g. City of Traverse City: Liz Vogel was present and reported that she is impressed with the crews keeping the roads clear (three crews, 24/7).
- h. County Commissioner: Darryl Nelson was not present.
- i. At Large Member: Bob Fudge was not present.
- j. At Large Member: Doug Bonnell was not present.
- k. Drain Commissioner: Andy Smits was present and reported that he is finishing the year strong.

CONSENT CALENDAR

The purpose of the Consent Calendar is to expedite business by grouping non-controversial items together to be dealt with by one Board motion without discussion. Any member of the Board, staff or the public may ask that any item on the Consent Calendar be removed and placed elsewhere on the agenda for full discussion. Such requests will be automatically respected. *If any item is not removed from the consent calendar, the following items are approved by a single Board action adopting the consent calendar with a MAJORITY ROLL CALL VOTE.*

APPROVAL OF MEETING MINUTES: November 14, 2024 and December 3, 2024

ITEMS (*Claims and claims reports are available for review at any time upon request.*)

1. Budget Reports as of November 26, 2024
2. Jacobs Monthly – November 2024 (\$23,768.59)
3. Olson – Bzdok (\$931.00)
4. City of Traverse City (\$47,173.65)
5. City of Traverse City (\$45,685.43)
6. City of Traverse City (\$9,340.96)

MOTION by BETH FRIEND to approve the consent calendar, as amended; second by Rob Lajko.

ROLL CALL VOTE:

(7) YES: Beth Friend, Rob Lajko, Doug White, Andy Smits, Chuck Korn, Jeff Shaw, and Liz Vogel
(0) NO: N/A
(4) ABSENT: Doug Bonnell, Bob Fudge, Darryl Nelson, and Isaiah Wunsch

The Motion PASSED unanimously (7-0).

UNFINISHED BUSINESS

1. Authority

Nothing new to report. No action taken.

2. Policy regarding the use of the Septage Treatment Facility

Nothing new to report. No action taken.

3. Status of application for State of Michigan PFAS Investigation Funding Grant

The application was successfully submitted. We are in the prequalification stage. No action taken.

4. Waterworth invoice (\$31,700.00)

The Chair will seek legal review. No action taken.

5. Director position – job description – performance review – discussion

MOTION by LIZ VOGEL to approve the job description in the packet; second by Rob Lajko.

The Motion PASSED unanimously.

MOTION by LIZ VOGEL to hire Noah Karberg as Director. The Chair has authority to negotiate salary within Step 4 or Step 5 with a possible increase in pay to Step 5 or 6 with a successful six-month performance review. Second by Andy Smits.

The Motion PASSED with a 6-1 vote.

NEW BUSINESS

1. Discussion about the County ALPHA project – Nate Alger

County Administrator, Nate Alger, was present to discuss the potential involvement of DPW in the County ALPHA project. Cunningham-Limp, project manager, will present to the Board of Public Works at the January 9, 2025 meeting. No action taken.

2. Draft 2025 Budgets

MOTION by BETH FRIEND to accept the budget as presented; second by Doug White.

The Motion PASSED unanimously.

3. Septage Treatment Facility

- (1) Septage Treatment Facility flows and graphs

Discussion. No action taken.

- (2) Jacobs Contract Amendment No. 6 for 2025

MOTION by BETH FRIEND to approve Jacobs Contract Amendment No. 6 for 2025; second by Andy Smits.

The Motion PASSED unanimously.

(3) STF Budget concerns/GTSF CIP, Repair and Maintenance Recommendations

Discussion. No action taken.

Septage Plant PCP Panel 4

MOTION by LIZ VOGEL to approve Septage Plant PCP Panel 4 replacement not to exceed \$105,555.05; second by Beth Friend.

The Motion PASSED unanimously.

4. MMRMA Insurance 2025 Renewal

MOTION by BETH FRIEND to approve MMRMA Insurance 2025 Renewal; second by Doug White.

The Motion PASSED unanimously.

PUBLIC COMMENT

None.

NOTICES

1. The next regular BPW Finance Committee Meeting will be held on February 5, 2025, at 1:00 p.m. in the Large Conference Room in the Public Services Building at 2650 LaFranier Rd.
2. The next regular meeting of the Board of Public Works will be held on January 9, 2025, at 9:00 a.m. in the Meeting room at GARFIELD TOWNSHIP HALL, 3848 Veterans Drive.

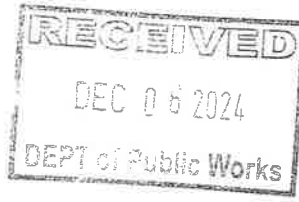
ADJOURNMENT

The Chair adjourned the meeting at 10:24 a.m.

Date: _____

BPW Chair

Secretary (Approved as to form and content)



Olson & Howard, P.C.

420 East Front Street
Traverse City, MI 49686
(231) 946-0044
www.envlaw.com
EIN 38-2843057

Grand Traverse County Board OF Public Works
2650 Lafranier Road
Traverse City, MI 49686

December 6,
2024

Dear Grand Traverse County Board OF Public Works,

Enclosed are all the new invoices for all matters in progress. The total amount due is \$935.00, including any interest charges.

Total Fees for professional services rendered	\$935.00
Total Expenses	\$0.00
Total Interest	\$0.00
Total Paid	-\$0.00
Total Balance Due	\$935.00

If you have any questions, please contact our office.

Sincerely,
Kimberly Flynn



CITY OF TRAVERSE CITY
Treasurer's Office



400 BOARDMAN AVENUE
TRAVERSE CITY, MI 49684

TELEPHONE (231) 922-4431
FAX (231) 922-4485

INVOICE

GRAND TRAVERSE COUNTY
DEPARTMENT OF PUBLIC WORKS
2650 LAFRANIER RD
TRAVERSE CITY, MI 49686-8972

Invoice Number:	0000106659
Invoice Date:	10/31/2024
Amount Due:	224,794.00
Due Date:	01/16/2025

Return this portion with payment

ITEM DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL DUE
ACME TOWNSHIP	1.00	29,668.33	29,668.33
EAST BAY TOWNSHIP	1.00	47,605.09	47,605.09
ELMWOOD TOWNSHIP	1.00	2,872.54	2,872.54
GARFIELD TOWNSHIP	1.00	128,919.65	128,919.65
SEPTAGE TREATMENT FAC.	1.00	3,887.36	3,887.36
BLAIR TOWNSHIP	1.00	4,635.23	4,635.23
PENINSULA TOWNSHIP	1.00	4,998.55	4,998.55
PORT OF OLD MISSION	1.00	2,207.25	2,207.25

Notes:

SEWER CHARGES
OCTOBER 2024

Payments:	0.00
Adjustments:	0.00
Amount Due:	224,794.00

Make checks payable to City of Traverse City
Please reference the invoice number on all correspondence

MAIL PAYMENTS TO: City Treasurer P.O. Box 592, Traverse City, MI 49685-0592

Invoice Number: 0000106659





CITY OF TRAVERSE CITY
Treasurer's Office



400 BOARDMAN AVENUE
TRAVERSE CITY, MI 49684

TELEPHONE (231) 922-4431
FAX (231) 922-4485

INVOICE

GRAND TRAVERSE COUNTY
DEPARTMENT OF PUBLIC WORKS
2650 LAFRANIER RD
TRAVERSE CITY, MI 49686-8972

Invoice Number:	0000106660
Invoice Date:	10/31/2024
Amount Due:	101,115.60
Due Date:	01/16/2025

Return this portion with payment

ITEM DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL DUE
GARFIELD TOWNSHIP - WATER	1.00	101,115.60	101,115.60

Notes:

GARFIELD TOWNSHIP WATER BILLING
OCTOBER 2024

Payments:	0.00
Adjustments:	0.00
Amount Due:	101,115.60 ✓

Make checks payable to City of Traverse City
Please reference the invoice number on all correspondence

MAIL PAYMENTS TO: City Treasurer P.O. Box 592, Traverse City, MI 49685-0592

Invoice Number: 0000106660





CITY OF TRAVERSE CITY
Treasurer's Office



400 BOARDMAN AVENUE
TRAVERSE CITY, MI 49684

TELEPHONE (231) 922-4431
FAX (231) 922-4485

INVOICE

**PENINSULA TOWNSHIP
WATER BILLING
2650 LAFRANIER RD
TRAVERSE CITY, MI 49686-8972**

Invoice Number:	0000106661
Invoice Date:	10/31/2024
Amount Due:	9,059.75
Due Date:	01/16/2025

Return this portion with payment

ITEM DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL DUE
WATER SERVICES	1.00	9,059.75	9,059.75

Notes:

PENINSULA TOWNSHIP WATER BILLING
OCTOBER 2024

Payments:	0.00
Adjustments:	0.00
Amount Due:	9,059.75 ✓

Make checks payable to City of Traverse City
Please reference the invoice number on all correspondence

MAIL PAYMENTS TO: City Treasurer P.O. Box 592, Traverse City, MI 49685-0592

Invoice Number: 0000106661





CITY OF TRAVERSE CITY
Treasurer's Office



400 BOARDMAN AVENUE
TRAVERSE CITY, MI 49684

TELEPHONE (231) 922-4431
FAX (231) 922-4485

INVOICE

ELMWOOD TOWNSHIP
WATER BILLING
2650 LAFRANIER RD
TRAVERSE CITY, MI 49686-8972

Invoice Number:	0000106662
Invoice Date:	10/31/2024
Amount Due:	1,946.79
Due Date:	01/16/2025

Return this portion with payment

ITEM DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL DUE
WATER SERVICES	1.00	1,946.79	1,946.79

Notes:

ELMWOOD TOWNSHIP WATER BILLING
OCTOBER 2024

Payments:	0.00
Adjustments:	0.00
Amount Due:	1,946.79 ✓

Make checks payable to City of Traverse City
Please reference the invoice number on all correspondence

MAIL PAYMENTS TO: City Treasurer P.O. Box 592, Traverse City, MI 49685-0592

Invoice Number: 0000106662





CITY OF TRAVERSE CITY
Treasurer's Office



400 BOARDMAN AVENUE
TRAVERSE CITY, MI 49684

TELEPHONE (231) 922-4431
FAX (231) 922-4485

INVOICE

**GRAND TRAVERSE COUNTY
DEPARTMENT OF PUBLIC WORKS
2650 LAFRANIER RD
TRAVERSE CITY, MI 49686-8972**

Invoice Number:	0000106681
Invoice Date:	11/30/2024
Amount Due:	162,684.41
Due Date:	01/18/2025

Return this portion with payment

ITEM DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL DUE
ACME TOWNSHIP	1.00	18,932.30	18,932.30
EAST BAY TOWNSHIP	1.00	32,355.35	32,355.35
ELMWOOD TOWNSHIP	1.00	7,750.57	7,750.57
GARFIELD TOWNSHIP	1.00	92,225.20	92,225.20
SEPTAGE TREATMENT FAC.	1.00	2,600.97	2,600.97
BLAIR TOWNSHIP	1.00	3,300.73	3,300.73
PENINSULA TOWNSHIP	1.00	3,546.18	3,546.18
PORT OF OLD MISSION	1.00	1,973.11	1,973.11

Notes:

SEWER CHARGES
NOVEMBER 2024

Payments:	0.00
Adjustments:	0.00
Amount Due:	162,684.41

Make checks payable to City of Traverse City
Please reference the invoice number on all correspondence

MAIL PAYMENTS TO: City Treasurer P.O. Box 592, Traverse City, MI 49685-0592

Invoice Number: 0000106681





CITY OF TRAVERSE CITY
Treasurer's Office



400 BOARDMAN AVENUE
TRAVERSE CITY, MI 49684

TELEPHONE (231) 922-4431
FAX (231) 922-4485

INVOICE

GRAND TRAVERSE COUNTY
DEPARTMENT OF PUBLIC WORKS
2650 LAFRANIER RD
TRAVERSE CITY, MI 49686-8972

Invoice Number:	0000106682
Invoice Date:	11/30/2024
Amount Due:	42,261.86
Due Date:	01/18/2025

Return this portion with payment

ITEM DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL DUE
GARFIELD TOWNSHIP - WATER	1.00	42,261.86	42,261.86

Notes:

GARFIELD TOWNSHIP WATER BILLING
NOVEMBER 2024

Payments:	0.00
Adjustments:	0.00
Amount Due:	42,261.86

Make checks payable to City of Traverse City
Please reference the invoice number on all correspondence

MAIL PAYMENTS TO: City Treasurer P.O. Box 592, Traverse City, MI 49685-0592

Invoice Number: 0000106682





CITY OF TRAVERSE CITY
Treasurer's Office



400 BOARDMAN AVENUE
TRAVERSE CITY, MI 49684

TELEPHONE (231) 922-4431
FAX (231) 922-4485

INVOICE

PENINSULA TOWNSHIP
WATER BILLING
2650 LAFRANIER RD
TRAVERSE CITY, MI 49686-8972

Invoice Number:	0000106683
Invoice Date:	11/30/2024
Amount Due:	2,516.08
Due Date:	01/18/2025

Return this portion with payment

ITEM DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL DUE
WATER SERVICES	1.00	2,516.08	2,516.08

Notes:

PENINSULA TOWNSHIP WATER BILLING
NOVEMBER 2024

Payments:	0.00
Adjustments:	0.00
Amount Due:	2,516.08

Make checks payable to City of Traverse City
Please reference the invoice number on all correspondence

MAIL PAYMENTS TO: City Treasurer P.O. Box 592, Traverse City, MI 49685-0592

Invoice Number: 0000106683





CITY OF TRAVERSE CITY
Treasurer's Office



400 BOARDMAN AVENUE
TRAVERSE CITY, MI 49684

TELEPHONE (231) 922-4431
FAX (231) 922-4485

INVOICE

ELMWOOD TOWNSHIP
WATER BILLING
2650 LAFRANIER RD
TRAVERSE CITY, MI 49686-8972

Invoice Number:	0000106684
Invoice Date:	11/30/2024
Amount Due:	813.46
Due Date:	01/18/2025

Return this portion with payment

ITEM DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL DUE
WATER SERVICES	1.00	813.46	813.46

Notes:

ELMWOOD TOWNSHIP WATER BILLING
NOVEMBER 2024

Payments:	0.00
Adjustments:	0.00
Amount Due:	813.46

Make checks payable to City of Traverse City
Please reference the invoice number on all correspondence

MAIL PAYMENTS TO: City Treasurer P.O. Box 592, Traverse City, MI 49685-0592

Invoice Number: 0000106684



Memorandum

Grand Traverse County
County Administration
400 Boardman Avenue
Traverse City, Michigan 49684
(231) 922-4780

TO: Grand Traverse County Board of Public Works

cc: Kent Nothstine, Interim Department of Public Works Director
Nate Alger, County Administrator
Jerry Tomczak, Director of Construction Northwest Michigan,
Cunningham Limp

FROM: Chris Forsyth, Deputy County Administrator ^{CIF}

DATE: January 3, 2025

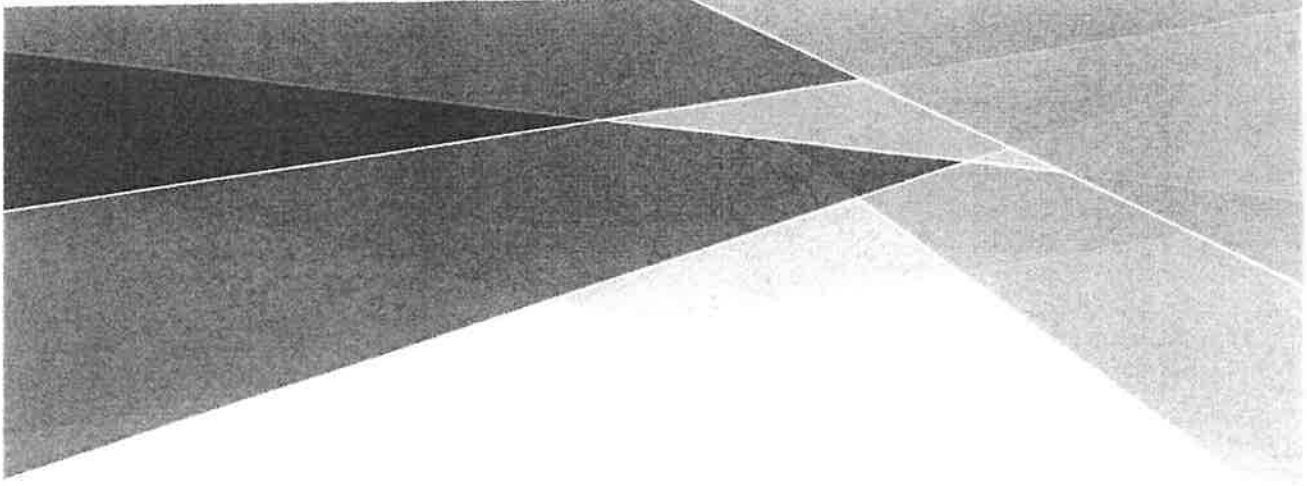
SUBJECT: Project Alpha; DPW Workshop; Centralized Storage Facility

I am providing the Board of Public Works this memo as follow up to Nate Alger's presentation to the Board at its December 2024 regular meeting. To address some of the questions at the end of his presentation, I have included with this memo the following:

- A presentation providing Board members with details concerning the Facilities Master Plan (FMP), Project Alpha, and data related to the existing DPW workshop. Also, the presentation provides Board members suggested next steps.
- A facilities assessment of the DPW workshop. Representatives with the architectural firm Tower Pinkster performed the assessment of this facility on March 23, 2023, as part of the FMP. The assessment includes categorizing and rating various aspects or items of the workshop as being good, fair, poor, and replace. As used in the assessment, "replace" means items no longer meets current use, is outdated, does not meet code, and should be replaced in the next three years. The assessment also includes cost estimates to address the deficiencies at the workshop. The cost estimate is \$406,096.

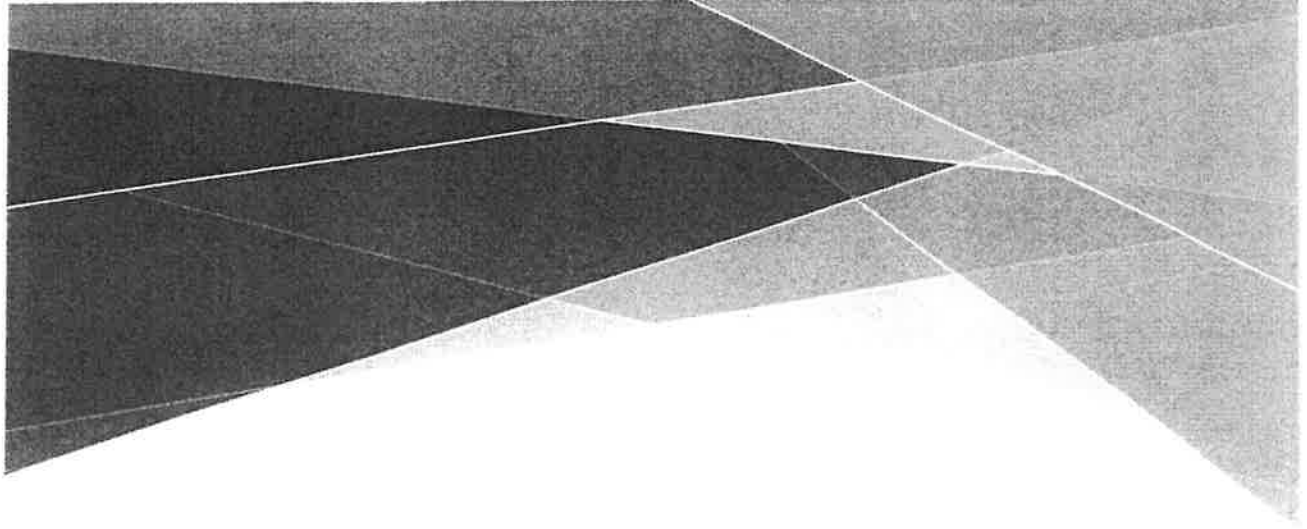
I plan on attending the January regular meeting and discuss the above items in depth. Please let me know if you have any questions concerning the above.

Project Alpha Update



Agenda

1. Intro / Background
2. Facilities Master Plan
3. Project Alpha
4. The DPW Workshop
5. Suggested Next Steps



Grand Traverse County 2024-2027 Strategic Plan

Mission Statement

Grand Traverse County commits to being a leader in providing responsive, effective, quality service to our community

Vision Statement

Grand Traverse County, through innovation and collaboration with our community, cultivates a vibrant place for all to live, work, and play

Goals

Plan	Recruit & Retain	Build Trust and Transparency	Focus on the Needs of the Community
Plan for Sustainable Growth and Innovation	Recruit and Retain Qualified Staff	Build Trust and Transparency	Focus on the Needs of the Community

Completion of the FMP in 2024 is an identified task under Goal One

INTRO – A brief history of capital planning at the County

1997 FMP



2008 CIP



2015 CIP



Common Priorities

- Adjacencies - Co-location of similar operations
- Development of Dual Campuses
- Improve/Consolidate storage and operations of Facilities Management
- Invest in Building Operations and Maintenance

2019 Facilities Audit



2020 Civic Center



GRAND TRAVERSE



CITY OF
TRAVERSE CITY

JANUARY 30, 2024
PPT # 2.126

Pinkster

GRAND TRAVERSE COUNTY //

CITY OF TRAVERSE CITY

FACILITIES MASTER PLAN

The Three Parts of the FMP

1. Facilities Assessments
2. Master Plan
3. Cost Estimates



GRAND TRAVERSE

Process Summary

- Focused on charter + RFP priorities
- Support strategic initiatives
- 42 departmental interviews
- Online community survey
- Interactive planning concepts developed with Admin and staff
- Budget development with OAK

Priorities

- Adjacencies: Co-location of similar operations
- Development of Dual Campuses
- Improve/consolidate storage and operations of Facilities Management
- Leverage under-utilized assets for potential redevelopment

Program Summary

BOARDMAN CAMPUS - SHARED

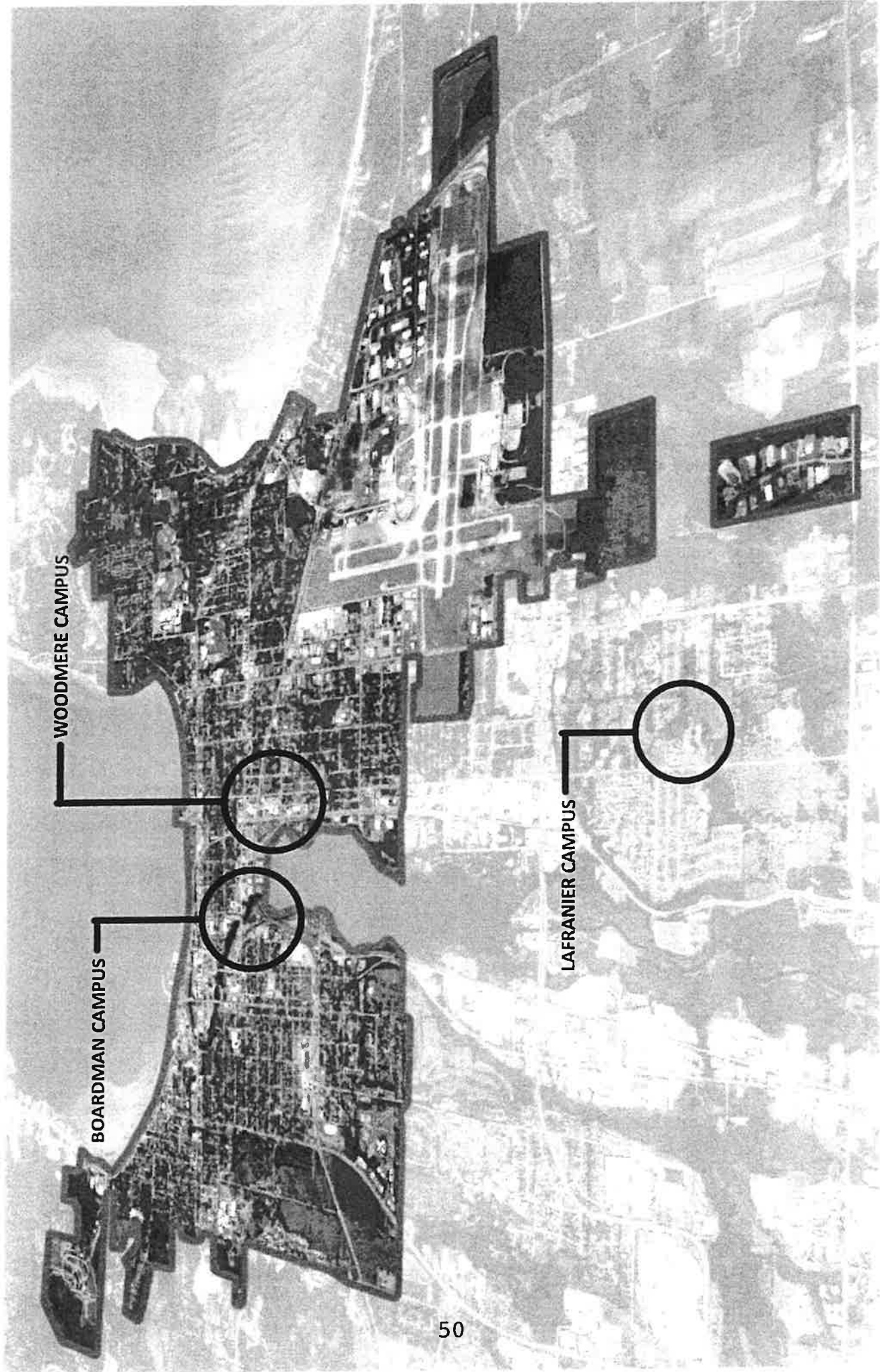
1. RENOVATIONS IN GOVERNMENTAL CENTER - FULL RENOVATION
 1. 1ST FLOOR - 13,000sf EXPANSION AND RENOVATION
 2. 2ND FLOOR - FULL RENO
 3. 3RD FLOOR - FULL RENO
 4. LOWER LEVEL - 13,000sf RENOVATIONS
2. ADDITIONS TO HALL OF JUSTICE
 1. NEW "IN-CUSTODY" SALLYPORT - 9,000sf (3 STORIES)
 2. NEW PUBLIC ENTRY - 1,000sf
3. ADDITIONS TO HISTORIC COURTS
 1. NEW PUBLIC ENTRY - 3,500sf (3 STORIES)
2. INTERIOR RENOVATIONS TO SUPPORT NEW CIRCULATION - 10,000sf
4. ALLOW PARKING SOUTH OF GOV CEN TO BE DEVELOPED
5. NEW PARKING AT FORMER JAIL LOCATION

WOODMERE CAMPUS- CITY

1. NEW POLICE DEPARTMENT - 15,000sf - ONE STORY
2. NEW CITY PUBLIC SERVICES BUILDING + GARAGE - 45,000sf (51,400sf PREVIOUSLY) - 2 STORY OFFICE - HIGH BAY GARAGE
3. REORGANIZE SITE TO ALLOW FOR MAXIMUM YARD SPACE AND EFFICIENT INTERNAL CIRCULATION

LAFRANIER CAMPUS - COUNTY

1. RELOCATE COUNTY FACILITIES NOT REQUIRED TO BE IN THE COUNTY SEAT
2. NEW COUNTY PUBLIC SERVICES BUILDING - 75,000sf (3 STORIES) PREVIOUSLY 177,000sf - ADDED:
 1. EXISTING PUBLIC SERVICES - 20,000sf
 2. MSU EXTENSION - 2,000sf
 3. COA - 3,600sf
 4. SENIOR CENTER NETWORK ADMIN - 1,000SF
 5. PARKS STAFF - 800sf
 6. CONFERENCE + TRAINING CENTER - 9,000sf
 7. COUNTY ADMINISTRATION - 4,000sf
 8. COUNTY IT - 4,000sf
3. NEW COUNTY FACILITIES + STORAGE - 54,000sf - (2 STORY OFFICE + HIGH BAY)
 1. FACILITIES - 10,000sf
 2. GOV CEN STORAGE - 2,000sf
 3. COA STORAGE - 4,400sf
 4. COURT STORAGE - 3,000sf
 5. SHERIFF STORAGE - 8,500sf
 6. ANIMAL CONTROL AREA - 500sf W/ EXTERIOR KENNEL
4. NEW CENTRAL DISPATCH AND EOC - 9,000SF
5. NEW JAIL - 75,000SF
6. SPACE RESERVED FOR JUVENILE FACILITY



WOODMERE CAMPUS

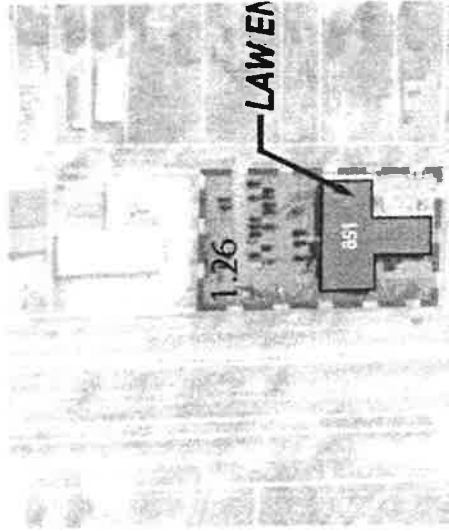
BOARDMAN CAMPUS

LAFRANIER CAMPUS

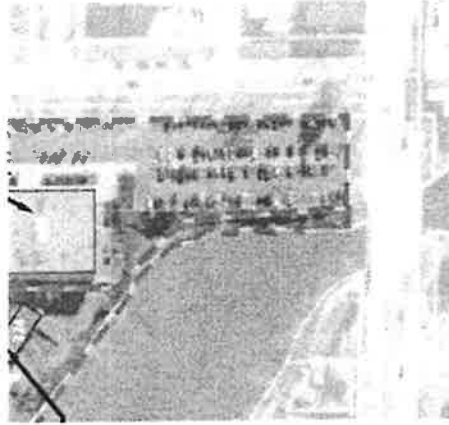
Potential Properties To Review



51 SHERIFF'S OFFICE STORAGE



LAW ENFORCEMENT CENTER PROPERTY

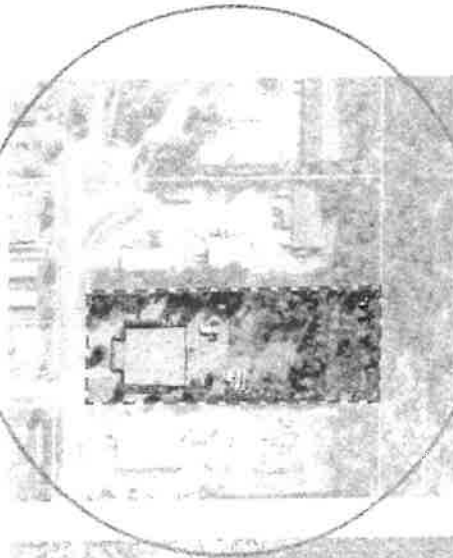


GOV CEN SOUTH PARKING LOT

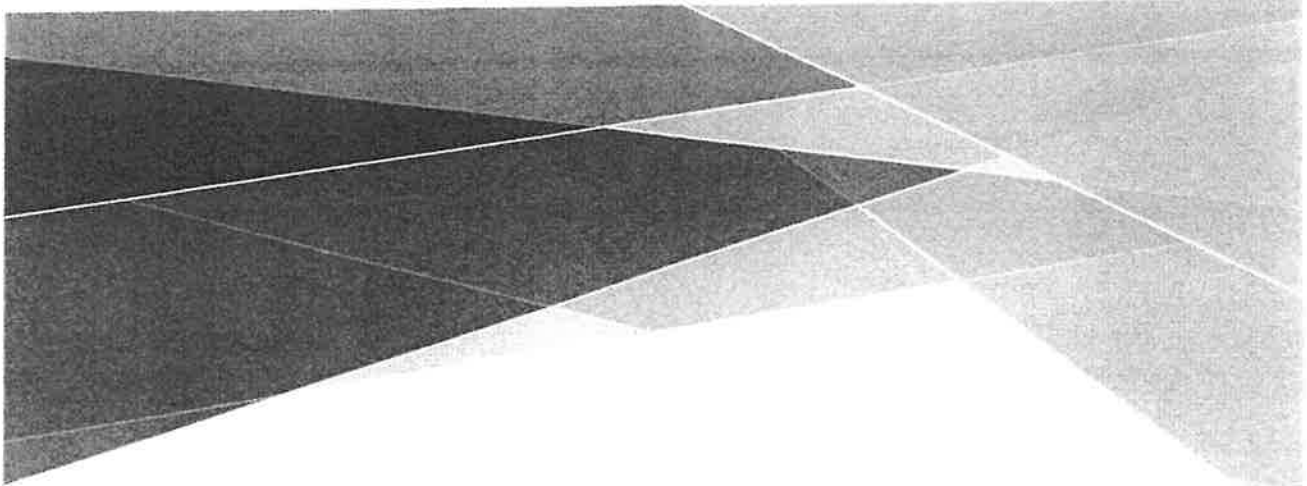


COA STORAGE

GRAND TRAVERSE



DPW GARAGE - MOVE TO LAFRANIER



Existing LaFranier Campus

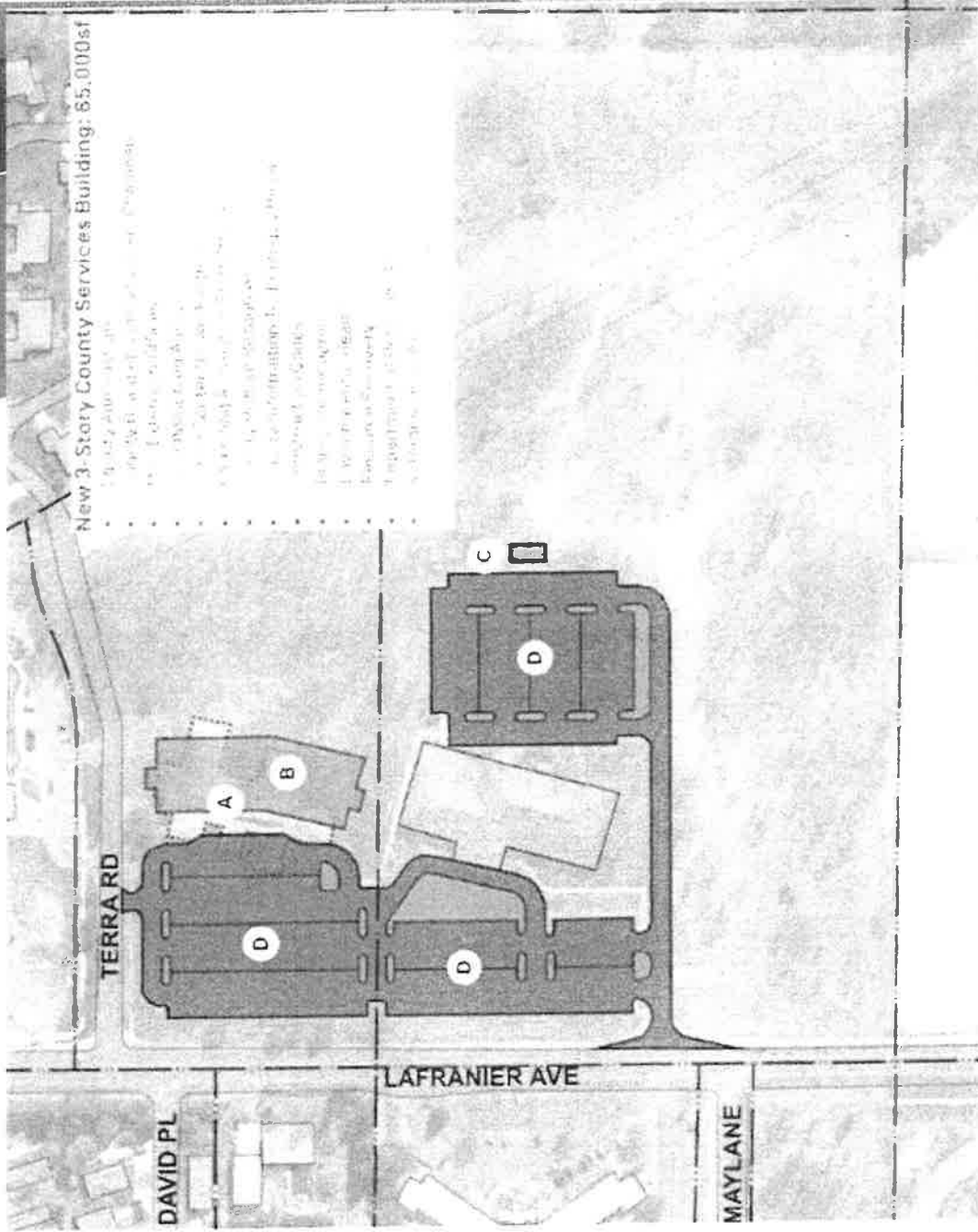


Existing LaFranier Labours currently houses two facilities. The main building houses the Health Services Building. The new building is a multi-story building that houses the staff and the new building is on the east side.

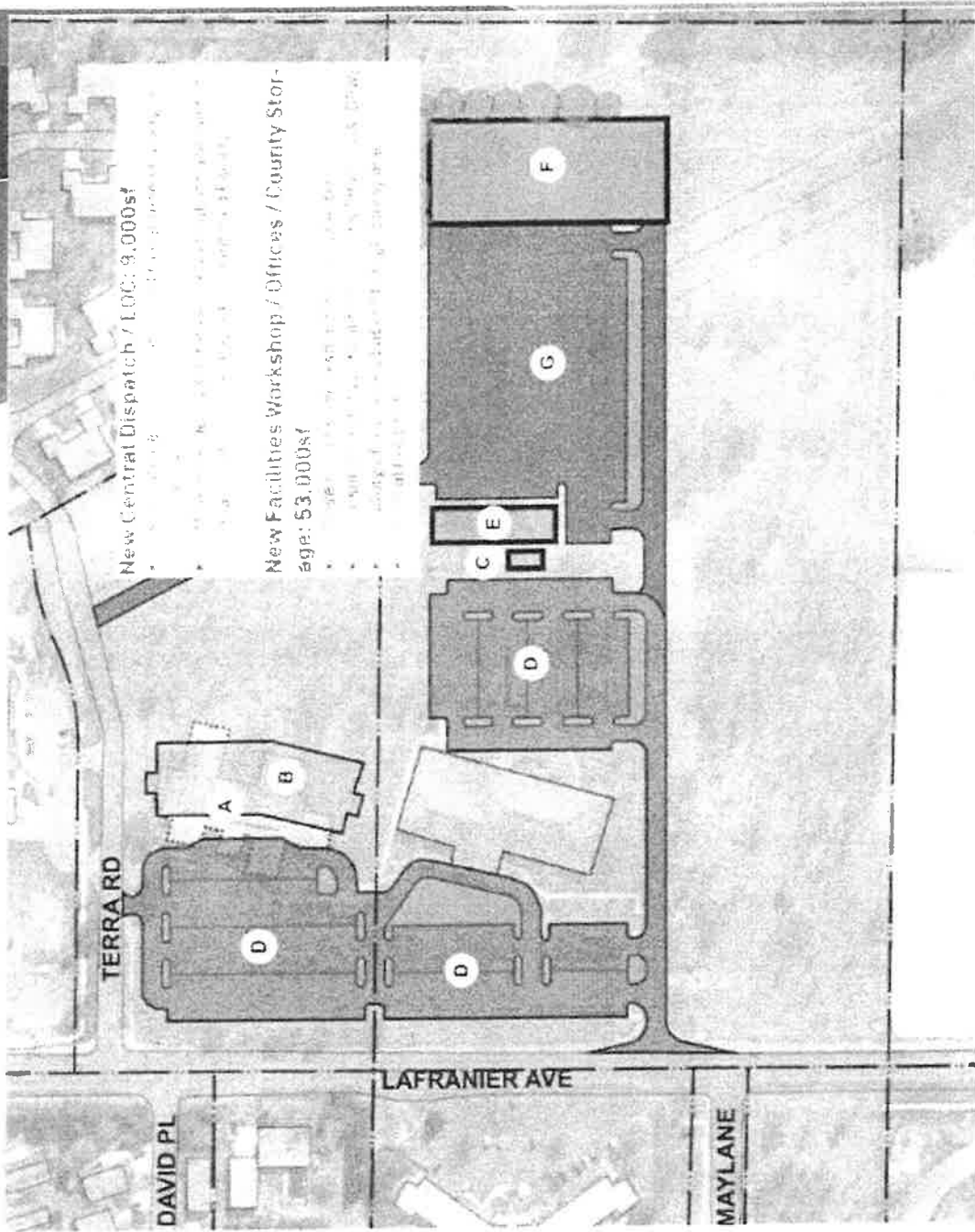
Existing LaFranier Labours currently houses two facilities. The main building houses the Health Services Building. The new building is a multi-story building that houses the staff and the new building is on the east side.

The topography of the site is a large lot of 27,000 sq. ft.

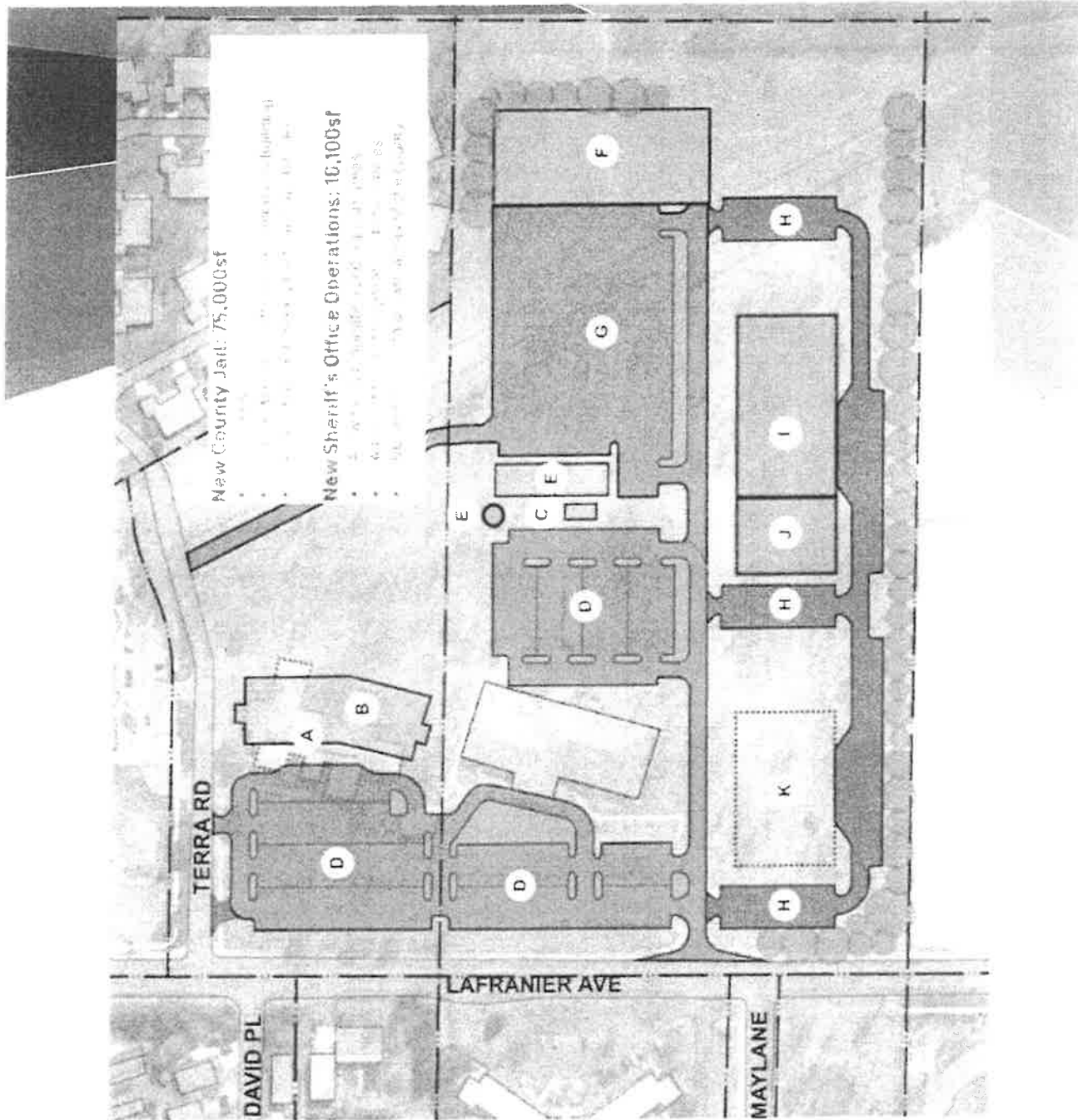
Lafranier Campus Phase 1

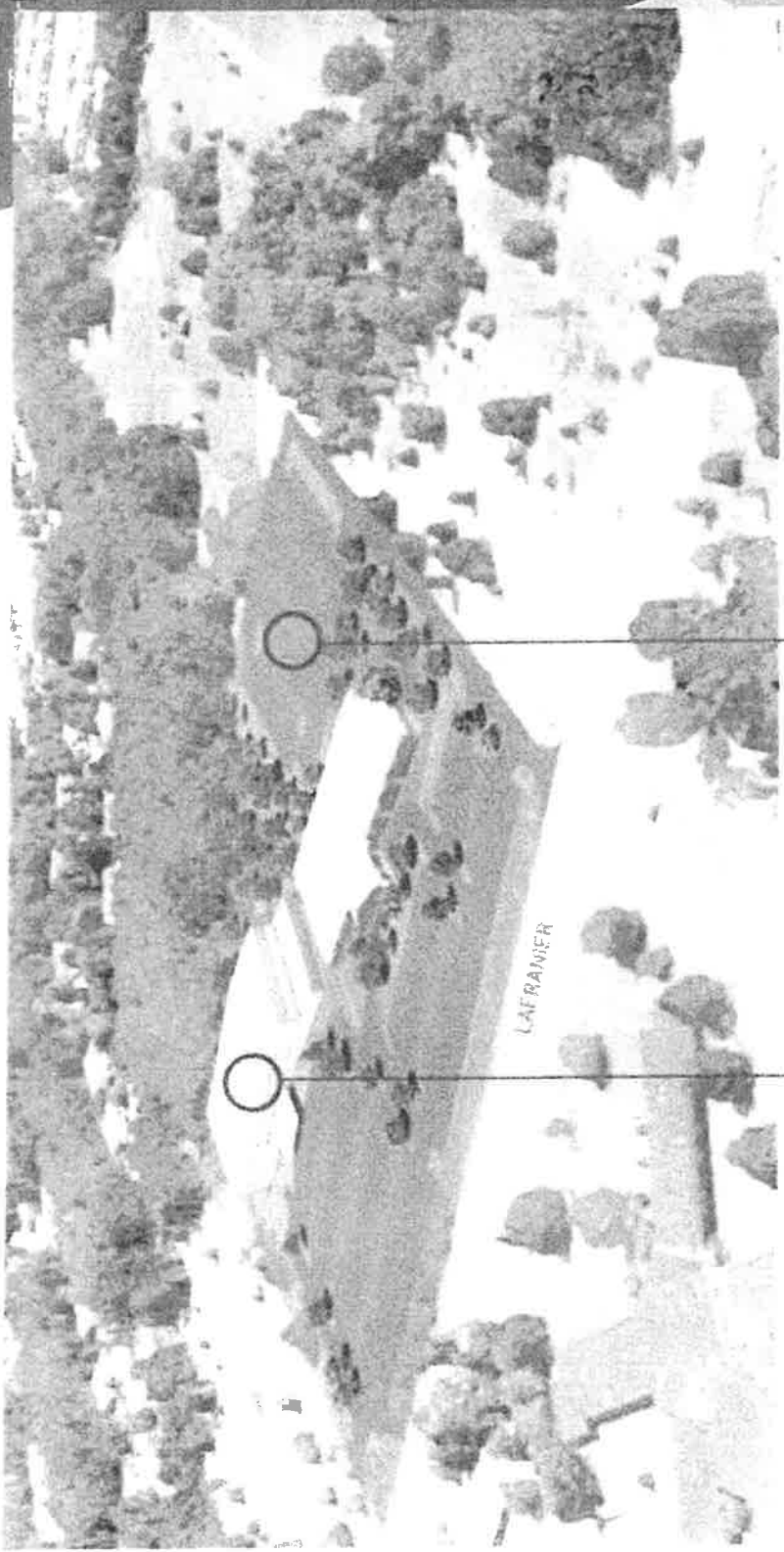


Lafranier Campus Phase 2



Lafranier Campus Phase 3

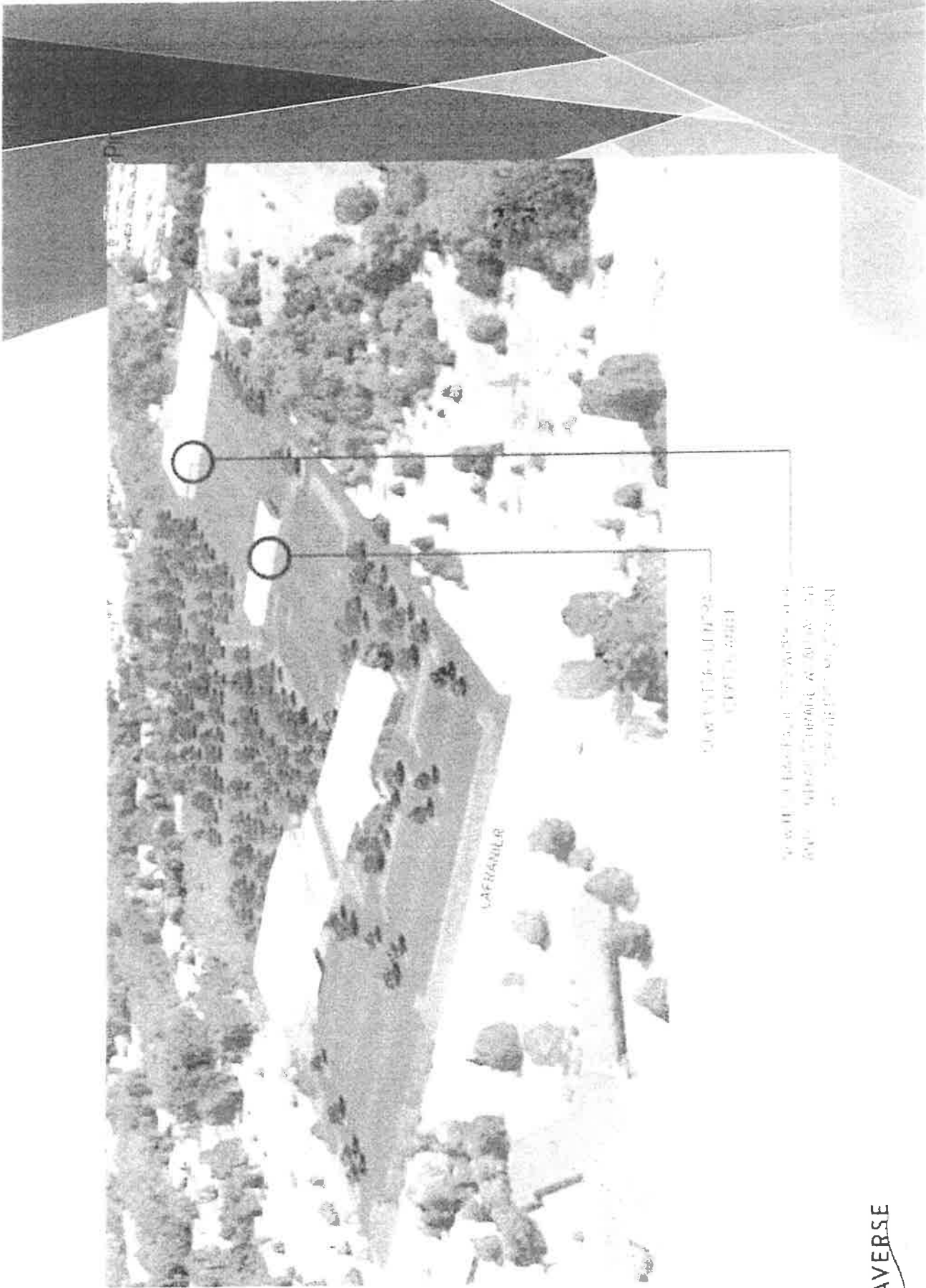


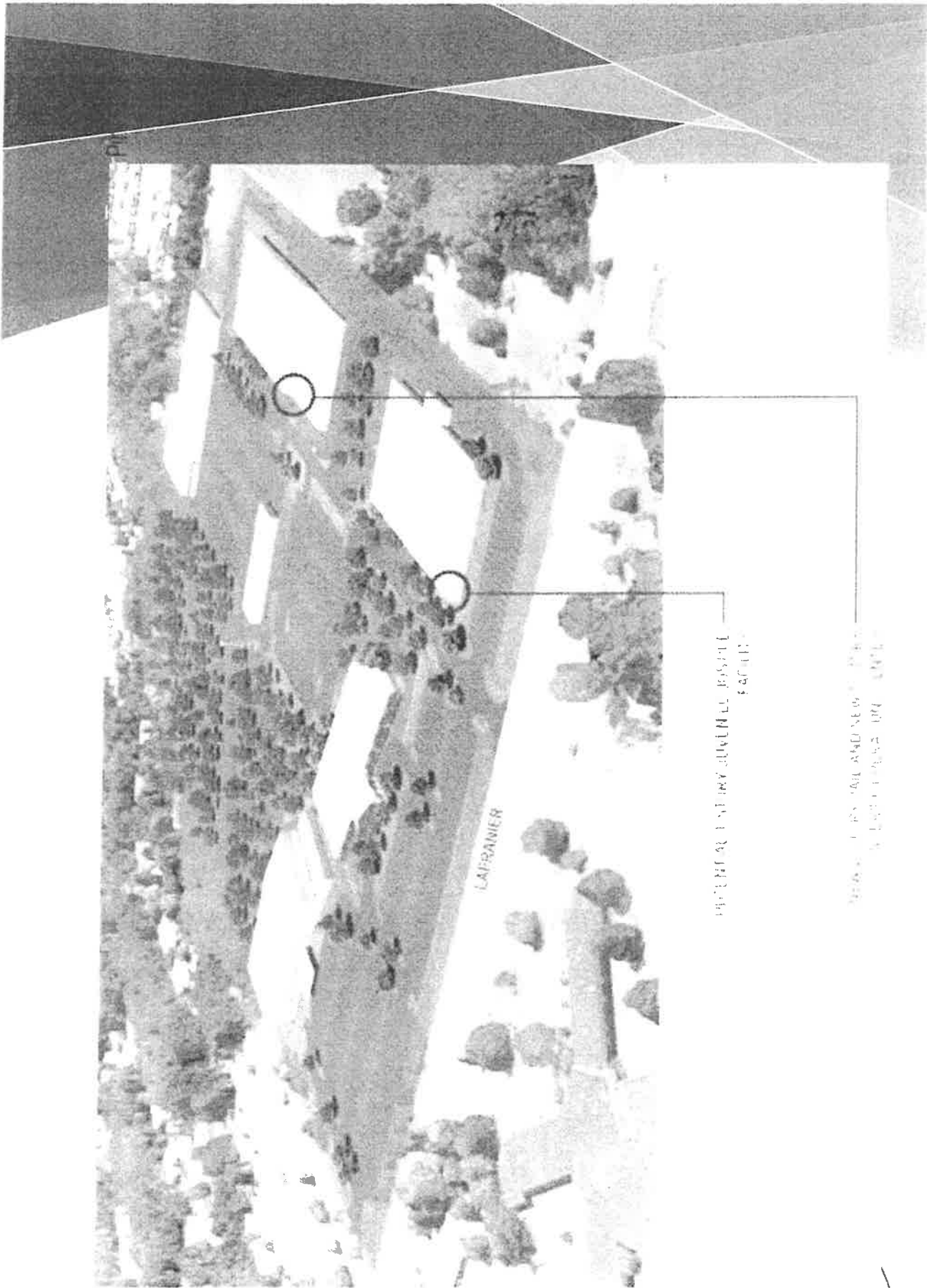


LA RAMIER TO
LA RAMIER

LA RAMIER TO
LA RAMIER

GRAND TRAVERSE





Budget Summary

- Construction cost range
- Project costs include:
 - Contingency
 - General conditions
 - Architecture and engineering fees
 - Construction mgmt. Fees
 - Furniture fixtures + equipment
 - Reimbursable allowance
 - Utility fees and connections
 - Owner costs

- Q1 2024 \$/sf – 3-5% escalation currently

- Facility assessment costs keep operations “as-is”

DPW Workshop \$406,096

COUNTY PROJECTS		LOW RANGE	HIGH RANGE
1.0	BOARDMAN CAMPUS		
1.1	RENOVATION AT GOVERNMENT CENTER	\$ 1,742,275	\$ 26,321,625
1.2	ADDITION AT GOVERNMENT CENTER	\$ 1,333,534	\$ 1,546,560
1.3	DEMCO WORK RELEASE	\$ 53,888	\$ 107,775
1.4	DEMCO PROJECTING AT CORNLY	\$ 71,950	\$ 161,663
1.5	NEW LANDSCAPING AT GOVERNMENT CENTER	\$ 751,500	\$ 533,000
1.6	HQ RENOVATION	\$ 778,965	\$ 1,052,250
1.7	NEW SALLYPORT ADDITION	\$ 4,417,875	\$ 5,669,125
1.8	NEW ENTRY HISTORIC COURTHOUSE	\$ 2,023,200	\$ 3,168,000
1.9	NEW SALLYPORT HISTORIC COURTHOUSE	\$ 749,474	\$ 953,400
1.10	DEMCO AT MID PARKING/SITE MODIFICATIONS	\$ 4,225,538	\$ 5,341,375
		\$ 31,993,084	\$ 44,846,681
2.0	LAFORNIER CAMPUS		
2.1	NEW PUBLIC SERVICES BUILDING	\$ 34,064,063	\$ 39,574,313
2.2	PARKING/SITE MODIFICATIONS	\$ 1,817,111	\$ 2,214,889
2.3	NEW CENTRAL DISPATCH, ELEC & Tower	\$ 4,890,545	\$ 6,845,425
2.4	CAMPUS GENERATORS	\$ 3,257,500	\$ 4,560,500
2.5	NEW CENTRAL STORAGE	\$ 11,740,103	\$ 16,009,333
2.6	ARMA - CANTON KERRILL	\$ 490,315	\$ 1,141,463
2.7	NEW JAIL	\$ 51,370,875	\$ 59,932,688
2.8	CLCSO	\$ 8,412,663	\$ 10,232,258
2.9	NEW JUVENILE FACILITY	\$ 23,627,510	\$ 27,564,937
		\$ 139,978,143	\$ 168,866,945
	COUNTY PROJECTS	\$ 171,969,227	\$ 213,713,626

CITY PROJECTS		LOW RANGE	HIGH RANGE
3.0	WOODMERE CAMPUS		
3.1	NEW CITY PD BUILDING	\$ 3,483,500	\$ 9,526,530
3.2	NEW CITY OPS BUILDING	\$ 14,547,750	\$ 20,445,750
3.3	FUEL STATION	\$ 977,250	\$ 1,529,750
3.4	PARKING/SITE MODIFICATIONS	\$ 631,000	\$ 945,000
		\$ 24,198,500	\$ 32,546,000
4.0	FIRE STATIONS		
4.1	FIRE STATION 1	\$ 986,250	\$ 1,033,039
4.2	FIRE STATION 2	\$ 5,314,136	\$ 7,408,750
		\$ 16,176,988	\$ 19,031,750
	CITY PROJECTS	\$ 40,370,488	\$ 51,577,750
	5.0 FACILITY ASSESSMENT PROJECTS	\$ 847,636,191	

Project Alpha

Motion: Direct staff to obtain information for a plan to move forward with construction of a 911 Center, Emergency Operations Center and a Facilities building at the Lafranier campus by the April 17, 2024 meeting.

RESULT:	Carried
MOVER:	Brad Jewett
SECONDER:	Brian McAllister
AYES:	Brian McAllister, Ashlea Walter, Brad Jewett, Rob Hentschel, Darryl Nelson, TJ Andrews, Scott Siefert, and Penny Morris
NAYS:	Lauren Flynn

Carried 8-1 on a recorded vote

00
0

UNFINISHED BUSINESS:

- a. Administration Plan for the Construction of a Combined Central Dispatch/Emergency Operations Center and Facilities Building

Deputy County Administrator Chris Forsyth presented on the construction of a combined dispatch operation and facilities facility. Jason Torrey, Central Dispatch Director, further extrapolated and answered commissioners questions regarding funding.

Moved by Brad Jewett
Seconded by Rob Hentschel

Motion: Direct Staff to go out for proposals (RFP) for an owners rep and project manager for items 2.0, 2.2, 2.3, 2.4, and 2.5 of the Master Plan Phase 2 for parking site modifications, new central dispatch/voe tower, campus generators and a new central storage facility.
Carried

Why?

Priorities

- Adjacencies - Co-location of similar operations
- Development of Dual Campuses
- Improve/consolidate storage and operations of Facilities Management
- Leverage under-utilized assets for potential redevelopment

Project Team

Grand Traverse County

- Nate Alger, County Administrator
- Chris Forsyth, Deputy County Administrator
- Jason Torrey, 911 Director
- Gregg Bird, Emergency Manager
- John Chase, Director of Parks and Facilities
- Jenny McKeellar, Special Projects Coordinator

61 Owners Representative

Cunningham Limp

Architect

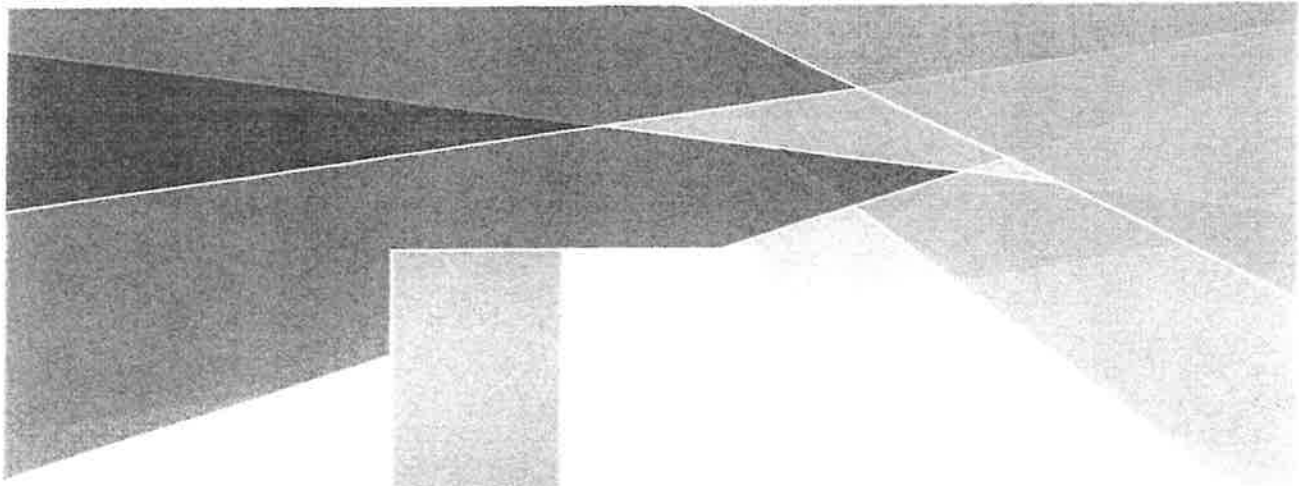
Partners in Architecture

Civil Engineer

Monument Engineering Group Associates

Environmental Consultant

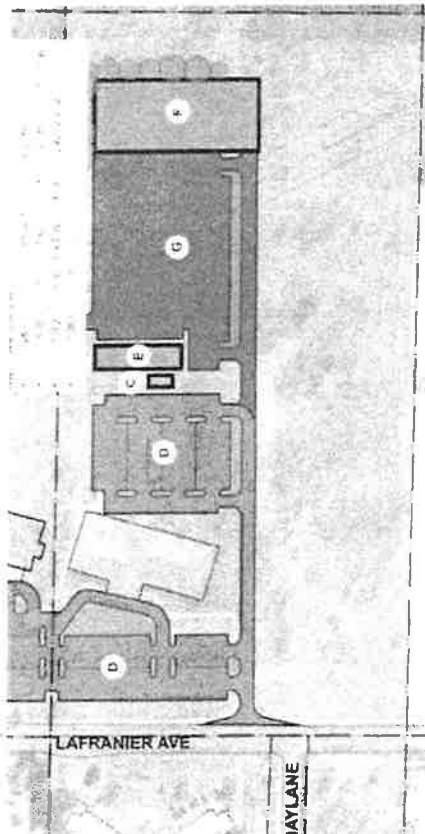
Otwell Mawby



Phase 1: Pre-Design

Phase 2: Design

Phase 3: Construction



Milestone Schedule

Days **Stage**

Feasibility Based on Previous Designs and Historic C-L Data

August 28, 2024 0-45

Onboarding Architecture and Engineering Team

15-60



45 - 100

Schematic Design and Budget Development

90 - 150

Refine and Solidify Budget Expectations with the Board

120 - 210

Design Development and Budget Control

180 - 270

Construction Drawings & Public Bidding

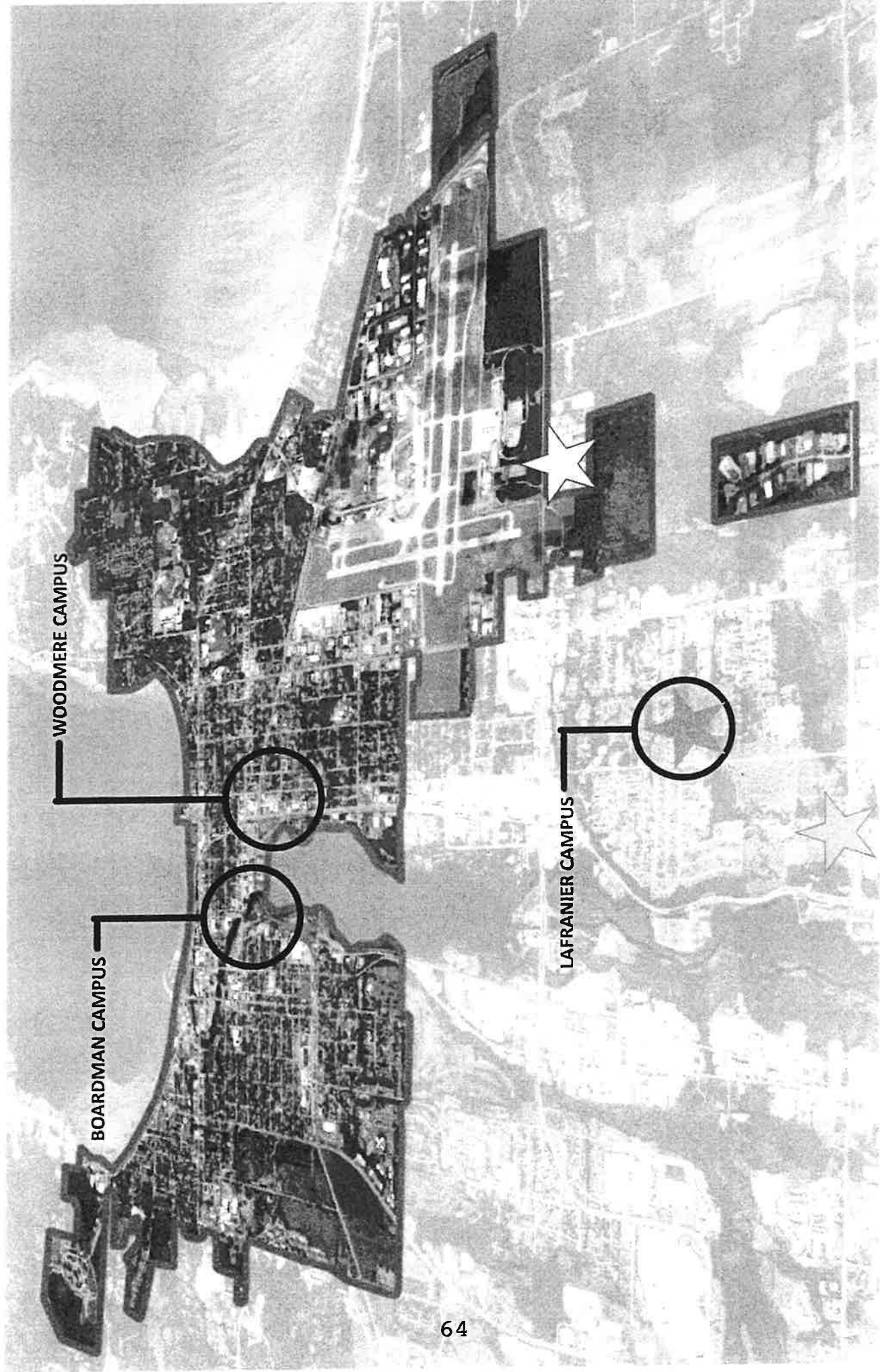
270+

Construction

12 - 14 months

Estimated Project Cost \$13 Million

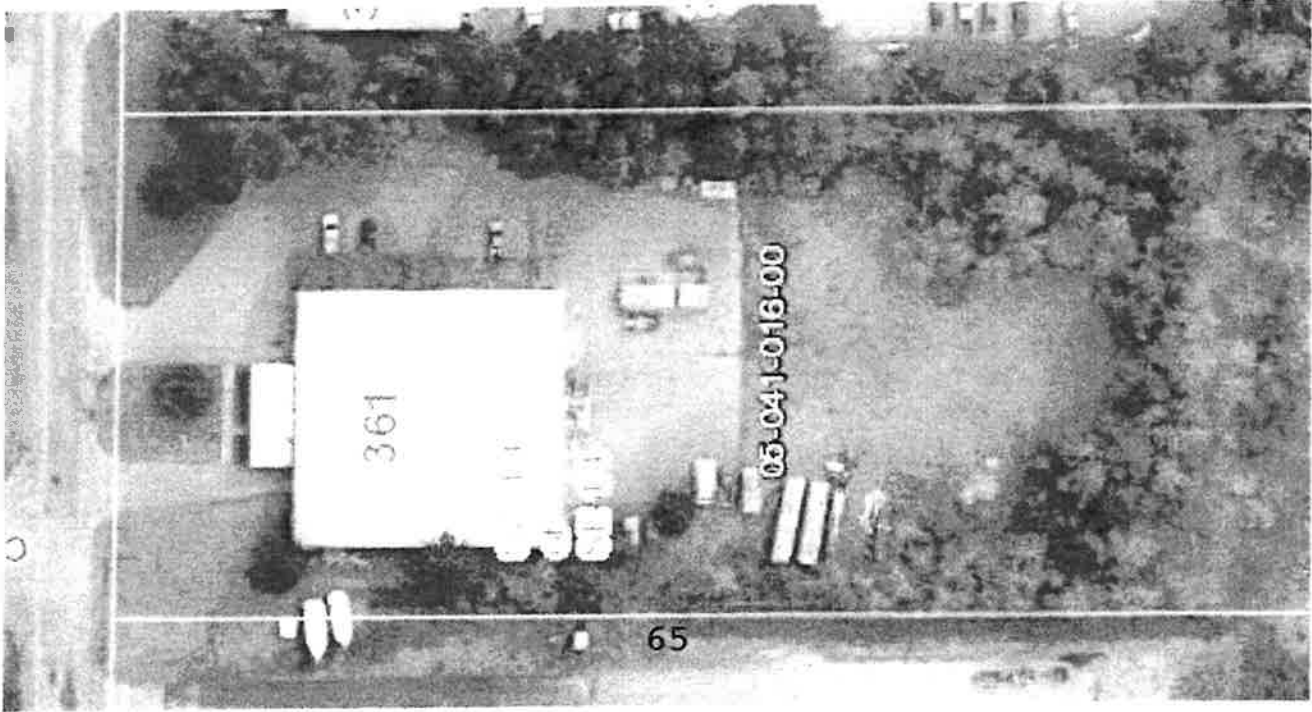
- \$7 million for ECC/EOC
- \$6 million CSF



WOODMERE CAMPUS

BOARDMAN CAMPUS

LAFRANIER CAMPUS



DPW Workshop

- ▶ 361 Welch Court, Garfield Township
- ▶ Owned by the Department of Public Works
- ▶ Acquired December 11, 1984
- ▶ 3.45-acre site
- ▶ 16,500 sq ft building
- ▶ Land value of \$803,725
- ▶ Improved value of \$564,371

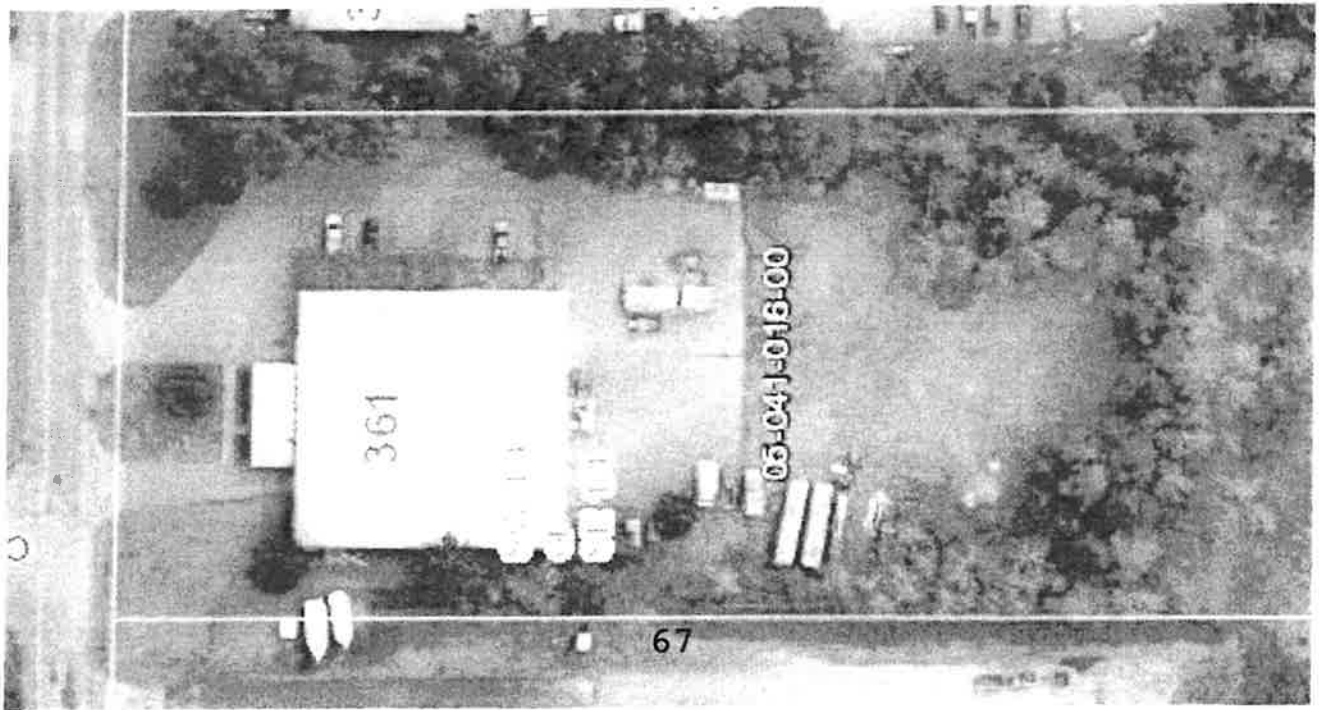
Operations & Maintenance Costs

2024 Budget Data from myGTC (County ERP System)

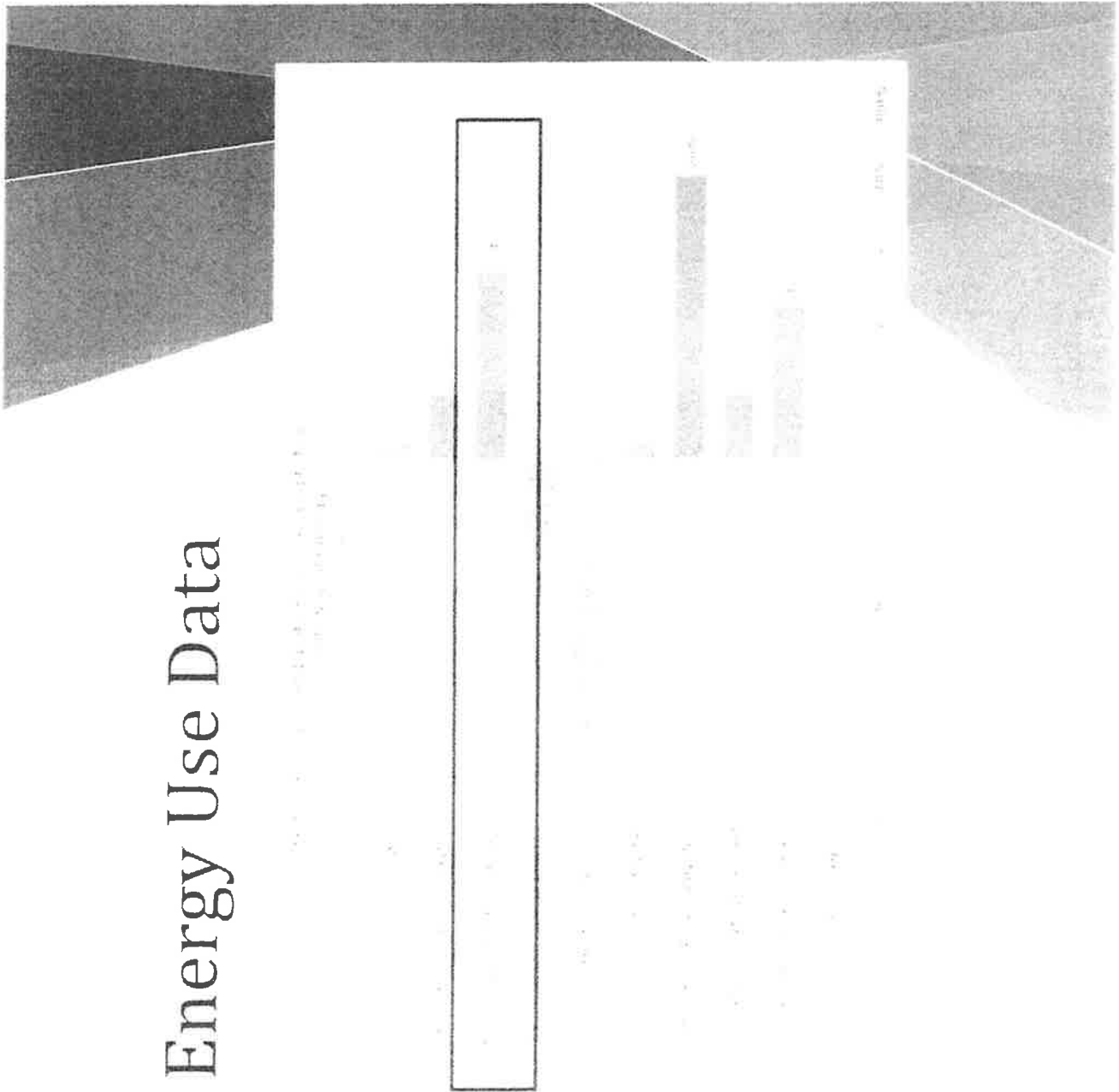
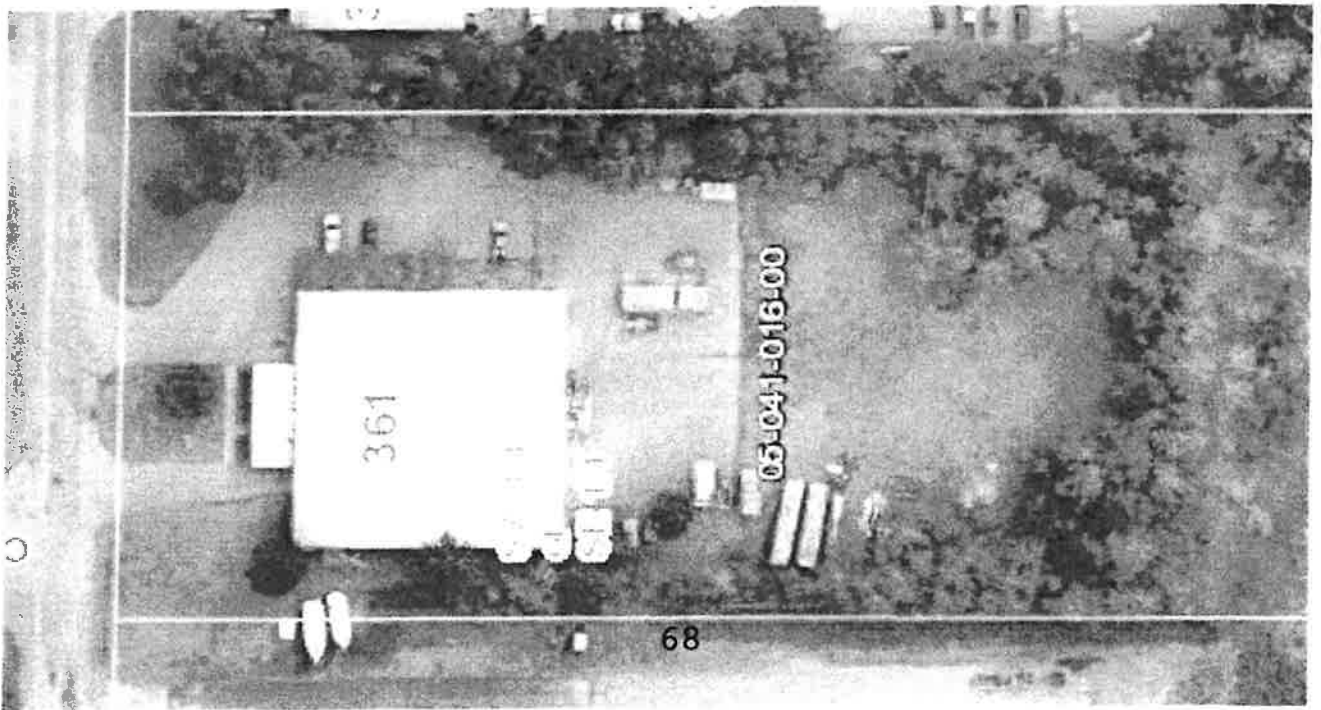
Cost Center	Initial Budget	Budget Amendments	Adjusted Budget	Expenditures This Month	Expenditures This Year	Current Commitments	Current Obligations	Total Encumbrances	Outlier Balance	% Expenditures Realized
1000000	15,125,000	0	15,125,000	1,152,000	11,400,000	0	0	0	470,442	53.37%
1000001	1,450,000	0	1,450,000	1,450,000	0	0	0	0	11,402	100%
1000002	1,000,000	0	1,000,000	1,000,000	0	0	0	0	11,442	100%
1000003	6,000,000	0	6,000,000	0	0	0	0	0	0	0%
1000004	2,000,000	0	2,000,000	1,100,000	0	0	0	0	11,300	55.00%
1000005	1,000,000	0	1,000,000	1,000,000	0	0	0	0	11,002,04	100%
1000006	2,000,000	0	2,000,000	0	0	0	0	0	0	0%
1000007	1,500,000	0	1,500,000	0	0	0	0	0	488,877	13.65%
Total	76,727,000	0	76,727,000	1,284,260	72,093,360	0	0	0	4,794,442	93.95%

Facilities Assessment Data

- ▶ Poor/Replace
- ▶ Heating Source and Condition
- ▶ Ventilation
- ▶ Building Management System/Controls
- ▶ Water Heaters
- ▶ Plumbing Fixtures
- ▶ Lighting Controls
- ▶ Fire Alarm System



Energy Use Data



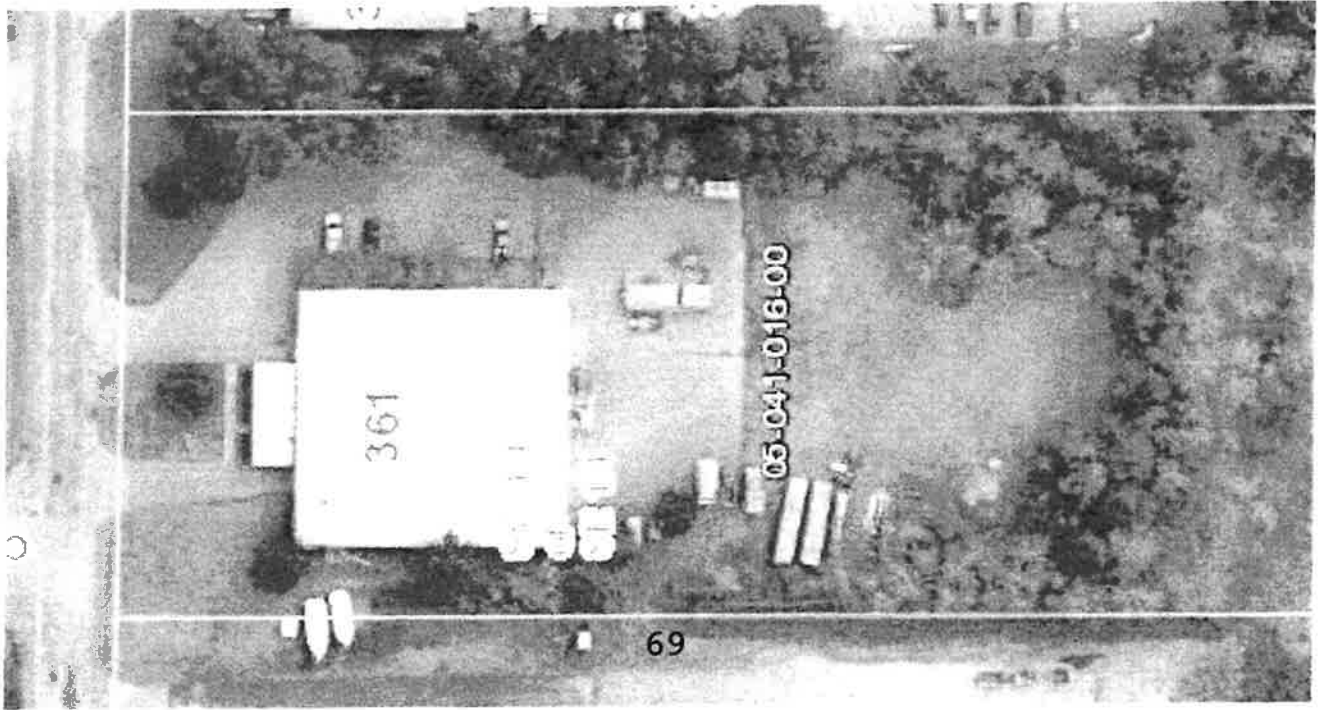
Energy Use Data

Current Major Energy Contributors:

- Minimal exterior wall insulation
- Furnace and unit heaters beyond useful life
- No BMS
- Water heater nearing end of life
- Lighting controls do not appear to be working correctly

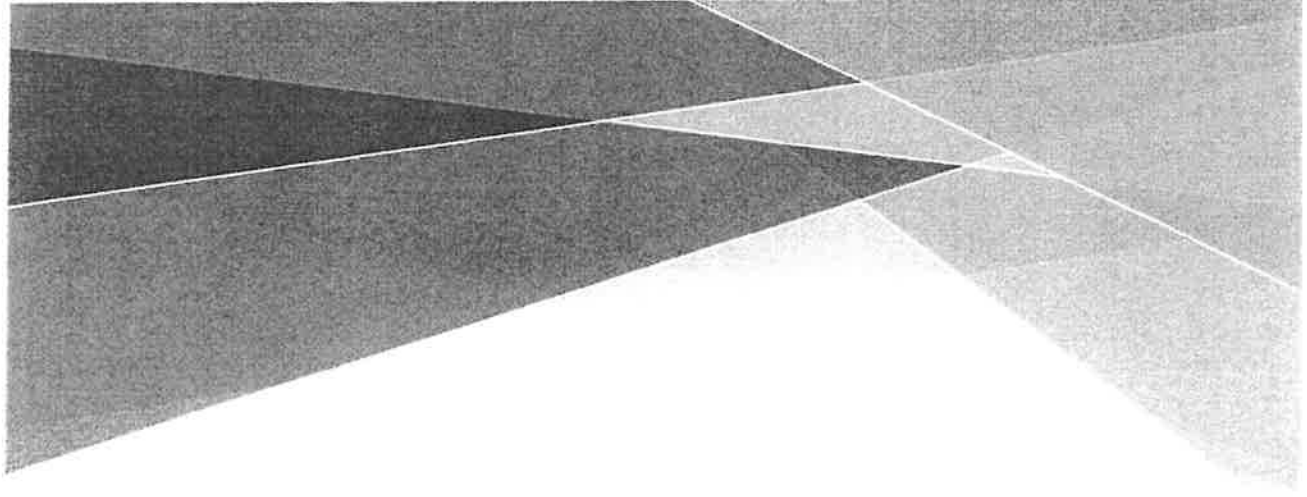
Recommendations:

- Upgrade furnaces, unit heaters and water heater to be more efficient
- Repair lighting controls

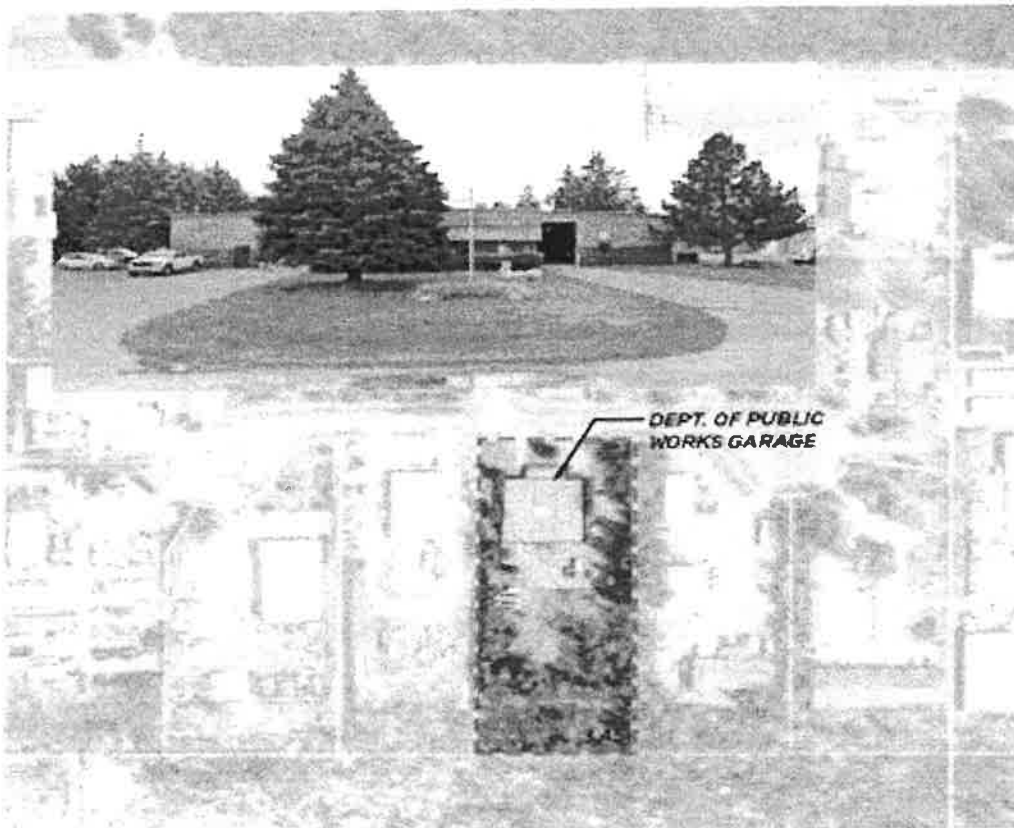


Suggested Next Steps

- DPW review data and perform a cost benefit analysis
 - Continue to operate out of existing facility
- vs
- Rent space from County at the new centralized storage facility
 - Explore alternatives and other options
- County staff provide updates and progress on Project Alpha
 - Site Plan
 - Floor Plan
 - Cost Estimate



09 PUBLIC WORKS GARAGE



FACILITIES ASSESSMENT DATA

Pinkster

CLIENT: Grand Traverse County

BUILDING: Public Works Garage

DATE: March 23, 2023

Good = Item meets current and future needs, no recommendation for improvement for the next 10 years
 Fair = Item meets current use, showing signs of age and should be replaced in the next 10 years
 Poor = Item is nearing the end of it's useful life, current need, should be replaced in the next 5 years
 Replace = Item no longer meets current use, is outdated, does not meet code, and should be replaced in the next 3 years

SITE

PARKING LOTS

	GOOD	FAIR	POOR	REPLACE	COMMENTS
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Barrier Free Parking	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No Barrier Free parking provided
Curbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

PEDESTRIAN SERVICES

	GOOD	FAIR	POOR	REPLACE	COMMENTS
Sidewalks and Curbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Barrier Free Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA

OUTDOOR ELEMENTS

	GOOD	FAIR	POOR	REPLACE	COMMENTS
Signage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Landscaping	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Irrigation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Benches, Flagpole, Etc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dumpster Enclosure	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fencing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hard Surface Play	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Drainage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Surface / ADA Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Playground	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Athletic Fields	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA

SITE UTILITIES

	GOOD	FAIR	POOR	REPLACE	COMMENTS
Storm Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Assessed
Well / City Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Assessed
Septic / Sewer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Assessed
Incoming Electrical Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Assessed
Emergency Power Generator(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not Assessed

ARCHITECTURAL

ACCESSIBILITY

	GOOD	FAIR	POOR	REPLACE	COMMENTS
Building Entrances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Door in front adjacent to OH Gar Dr. is missing a stoop
Elevator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Toilet Rooms	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 ADA Accessible, 1 not

Drinking Fountains	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 ADA Accessible, 1 not
Stairwells	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Steel stair & handrail to Storage Mezzanine
BUILDING ENVELOPE	GOOD	FAIR	POOR	REPLACE	COMMENTS
Roofing Membrane and Flashings	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	appears PVC membrane was added on top of metal roof
Roof Gutters and Downspouts	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	appears to have had a gutter system that was roofed over?
Exterior Walls	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Office - Scored CMU + drywall, Shop - 1/2 ht. scored CMU w/ corrugated metal siding, Rear wall all corrugated metal siding, not a lot of insulation
Aluminum Windows / Glazing	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Aluminum horizontal sliders, insulated
Trim, Fascia, and Soffits	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Steel
Porches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Exterior Doors	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	HM doors & frames starting to rust
SAFETY + SECURITY	GOOD	FAIR	POOR	REPLACE	COMMENTS
Egress Windows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Stairwells	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Steel stairs to Storage Mezzanine
INTERIORS / FINISHES					
FLOORING	GOOD	FAIR	POOR	REPLACE	COMMENTS
Corridors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Classrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Toilet Rooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	VCT flooring- in need of replacement
Gymnasium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Cafeteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Kitchen: VCT flooring- in need of replacement
Offices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	VCT flooring- in need of replacement
Media Center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
COMMENTS					
WALLS	GOOD	FAIR	POOR	REPLACE	
Corridors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Classrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Toilet Rooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Painted gyp- replace wet walls with wall tile. Some touch up painting needed.
Gymnasium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Cafeteria	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Kitchen: Painted gyp, in need of touchup painting
Offices	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Painted gyp in fair condition
Media Center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
CEILINGS	GOOD	FAIR	POOR	REPLACE	COMMENTS
Corridors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Classrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Toilet Rooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2' x 2' ACP- in need of replacement
Gymnasium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Cafeteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Kitchen: 2' x 4' ACP- in need of replacement
Offices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2' x 4' ACP- in need of replacement
Media Center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA

	GOOD	FAIR	POOR	REPLACE	COMMENTS
DOORS + HARDWARE	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hollow metal doors and frames are in fair condition. Some hardware is not lever style
WINDOWS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Aluminum horizontal sliders
CABINETS / STORAGE / COUNTERS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Metal lockers are in fair condition. Casework in office area is dated and worn, in need of replacement
MECHANICAL					
HVAC	GOOD	FAIR	POOR	REPLACE	COMMENTS
Heating Source and Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Furnace serving office spaces is beyond its useful life and shall be replaced along with associated condenser. Gas fired infrared heaters are in fair condition, unit heaters deserve replacement
Ventilation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Generator exhaust fan connections are past useful life and warrant replacement to ensure safety of occupants
Building Management System / Controls	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Stand alone controls with no district BMS tie in
PLUMBING					
PLUMBING	GOOD	FAIR	POOR	REPLACE	COMMENTS
Storm System	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No issues reported
Sanitary System	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No issues reported; lines should be flushed and inspected to ensure no oil backups
Domestic Water Piping	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water Heaters	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Water heater is likely scaled up at age and warrants replacement
Plumbing Fixtures	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fixtures should be replaced within restrooms
Drinking Fountains	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Drinking fountains are reaching end of life
Fire Protection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ELECTRICAL					
ELECTRICAL	GOOD	FAIR	POOR	REPLACE	COMMENTS
Electrical Service	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- Service entrance panel is in good condition - No SPD observed on equipment
Exterior Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	- Exterior lighting above exit doors sometimes not present - Wall packs provide coverage of parking lot - Was not assessed during nighttime
Parking Lot Lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Distribution + Branch Panels	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- Branch panels are in good condition
Emergency Lighting	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- Building has a decent amount of non-illuminated exit signage, add new signage - Bugeyes for egress lighting and general lighting backed up by generator - Was not assessed under emergency conditions

Receptacles + Circuiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	- Receptacles and coverplates are aged and several instances of coverplates being cracked - Seal-offs are present for refueling yard
Lighting Controls	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	- Occupancy sensors in offices, conferences, and select locations - An instance of lighting zone not turning on with switch
Emergency Power	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	- Natural gas generator is in like-new condition - Lights and SCADA on generator
Fire Alarm System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	- Little to no fire alarm notification or pull stations
TECHNOLOGY					
	GOOD	FAIR	POOR	REPLACE	COMMENTS
Main Distribution Frame + Independent Distribution Frame	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Fiber Optic Cabling (between buildings/distribution frames)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Network Cabling (within building)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Router, AP and switch serves the office needs, need improved space and bandwidth for online employee training
Classroom/Office AV Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Large Space AV Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Security Camera System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Access Control System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Paging/Bell System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Clock System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA
Digital Signage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA

CLIENT: Grand Traverse County

BUILDING: Public Works Garage

DATE: March 23, 2023

SITE				
PARKING LOTS		COMMENTS	Pricing	Pricing Comments
Barrier Free Parking	No Barrier Free parking provided		\$ 5,274	Restripe to provide additional barrier free space
ARCHITECTURAL BUILDING ENVELOPE				
ARCHITECTURAL BUILDING ENVELOPE		COMMENTS	Pricing	Pricing Comments
Roof Gutters and Downspouts	appears to have had a gutter system that was roofed over?		\$ 16,041	
Exterior Walls	Office - Scored CMU + drywall, Shop - 1/2 ht. scored CMU w/ corrugated metal siding, Rear wall all corrugated metal siding, not a lot of insulation		\$ 38,038	Add insulation and liner panel at rear elevation
Aluminum Windows / Glazing	Aluminum horizontal sliders, insulated		\$ 9,041	Replace with insulated al/gl windows
Exterior Doors	HM doors & frames starting to rust		\$ 20,341	Remove and replace 3 exterior doors/frames/hardware
INTERIORS / FINISHES				
INTERIORS / FINISHES		COMMENTS	Pricing	Pricing Comments
FLOORING				
Toilet Rooms	VCT flooring- in need of replacement		\$ 3,390	
Cafeteria	Kitchen: VCT flooring- in need of replacement		\$ 5,650	
Offices	VCT flooring- in need of replacement		\$ 9,041	
WALLS				
Toilet Rooms	Painted gyp- replace wet walls with wall tile. Some touch up painting needed.		\$ 10,547	
Cafeteria	Kitchen: Painted gyp. in need of touchup painting		\$ 2,260	
CEILING				
CEILING		COMMENTS	Pricing	Pricing Comments
Toilet Rooms	2' x 2' ACP- in need of replacement		\$ 3,767	
Cafeteria	Kitchen: 2' x 4' ACP- in need of replacement		\$ 4,520	
Offices	2' x 4' ACP- in need of replacement		\$ 7,232	
WINDOWS		Aluminum horizontal sliders	Replacement priced above	
CABINETS / STORAGE / COUNTERS		Metal lockers are in fair condition. Casework in office area is dated and worn, in need of replacement	\$ 27,122	Includes replacement of casework and countertops in office
MECHANICAL				
MECHANICAL		COMMENTS	Pricing	Pricing Comments
HVAC				
Heating Source and Condition	Furnace serving office spaces is beyond its useful life and shall be replaced along with associated condenser. Gas fired infrared heaters are in fair condition, unit heaters deserve replacement		\$ 47,086	Includes removal and replacement of furnace system, unit heaters
Ventilation	Generator exhaust fan connections are past useful life and warrant replacement to ensure safety of occupants		\$ 16,951	
Building Management System / Controls	Stand alone controls with no district BMS tie in		\$ 34,279	
PLUMBING				
PLUMBING		COMMENTS	Pricing	Pricing Comments
Water Heaters	Water heater is likely scaled up at age and warrants replacement		\$ 12,807	
Plumbing Fixtures	Fixtures should be replaced within restrooms		\$ 27,122	
Drinking Fountains	Drinking fountains are reaching end of life		\$ 12,807	

ELECTRICAL			
	COMMENTS	Pricing	Pricing Comments
Exterior Lighting	- Exterior lighting above exit doors sometimes not present - Wall packs provide coverage of parking lot - Was not assessed during nighttime	\$ 9,041	
Receptacles + Circuiling	- Receptacles and cover plates are aged and several instances of cover plates being cracked - Seal-offs are present for refueling yard	\$ 15,181	
Lighting Controls	- Occupancy sensors in offices, conferences, and select locations - An instance of lighting zone not turning on with switch	\$ 24,485	
Fire Alarm System	- Little to no fire alarm notification or pull stations	\$ 24,485	
TECHNOLOGY			
	COMMENTS		
Network Cabling (within building)	Router, AP and switch serves the office needs, need improved space and bandwidth for online employee training	\$ 19,588	
Total		\$ 406,096	

BYLAWS

Of the

GRAND TRAVERSE COUNTY BOARD OF PUBLIC WORKS

Approved December 11, 2014
Revised December 15, 2016
Revised December 13, 2018

ARTICLE I

ORGANIZATION

The Grand Traverse County Department of Public Works was established by resolution of the Grand Traverse County Board of Commissioners on July 9, 1969 pursuant to the Michigan County Department and Board of Public Works Act 185 of the Public Acts of Michigan of 1957, as amended ("Act 185"). The Department of Public Works operates under the general control of the Board of Commissioners and under the immediate control of the Board of Public Works. The Department and Board of Public Works ("BPW" or "Board") shall be limited in their authority to the powers and duties prescribed in Act 185. The Board of Public Works shall consist of eleven (11) members appointed by the Board of Commissioners and as further described in Article II of these bylaws. In order to effectively conduct its business, the Board of Public Works has adopted these bylaws.

ARTICLE II

MEMBERSHIP

The Board is composed of eleven (11) voting members; members appointed to represent a specific municipality are preferred to be the highest elected official of the municipality. Members are appointed by the Board of Commissioners as follows:

1. The County Drain Commissioner (ex officio);
2. One (1) member to represent the County; Commissioner preferred
3. One (1) member to represent the City of Traverse City; Commissioner preferred



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4. One (1) member to represent Acme Township; Supervisor preferred
5. One (1) member to represent East Bay Township; Supervisor preferred
6. One (1) member to represent Elmwood Township; Supervisor preferred
7. One (1) member to represent Garfield Charter Township; Supervisor preferred
8. One (1) member to represent Peninsula Township; Supervisor preferred
9. One (1) member to represent Rural Townships; and
10. Two (2) other members representing the General Public.

In reviewing candidates and making appointments, the County Board shall consider: the recommendations of Township Boards; the goal to maximize the number of citizens involved in county government; capability to meet time commitments; representation from various geographic regions, gender and ethnic representation of the community; frequency of potential conflicts of interest; representation of various groups such as homeowners, business, industry, education, environmental organizations; technical qualifications and/or interest in serving;

- A. The County Drain Commissioner is an ex officio member, which means membership on the board is contingent upon being elected as the County Drain Commissioner. The (3) three year term does not apply to an ex officio member.
- B. Elected officials appointed to the board are limited in membership to their status as an elected official. In the event that an elected official loses that status, a vacancy on the board opens and another member shall be appointed to fulfill the (3) three year term.
- C. All other members of the Board shall be appointed to (3) three year terms, which terms shall be staggered so that terms of some Board members shall expire in each year of a (3) three consecutive year period. Except as provided in the first sentence of this paragraph, if a replacement Board member has not been appointed for a Board member whose term has expired, such Board member shall continue to serve until the replacement Board member is appointed.

The Board member representing the Board of Commissioners is expected to maintain a liaison with the Board of Commissioners and shall bring before the Board any matters which may require consideration and discussion.



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D. The County Board may dismiss any member of the BPW under the following circumstances:

1. Absence of any member for more than three (3) consecutive meetings, including regular or special meetings, without advance notification to the Board at least five (5) business days prior to the meeting.
2. Absence of any member at more than four (4) regular or special meetings within any six (6) month period.
3. Determination that conflicts of interest occur on a frequent basis, compromising the capability of the BPW to properly represent various interests in the community or act in a timely manner.

E. **Resignation:** BPW members may resign at any time. Statements outlining the reason for resignation should be provided.

Compensation: The BPW members shall not be considered full-time officers of the County. The duties of the Drain Commissioner or County Board member who serve on the Board are declared to be additional and separate duties not compensated for by the established salary or per diem of the Drain Commissioner and County Board member of the Board.

Board members are eligible to receive per diem and mileage expense reimbursement for Board related meetings and travel at the rate and under the guidelines established by the Board of Commissioners. Any Board member may waive his or her per diem and/or mileage expense reimbursement by signing and placing on file a waiver with the Board Secretary or by not submitting a per diem request. The Board Chair shall be responsible for approval of all vouchers for per diem and mileage reimbursement expenses. All expense requests must be submitted within 60 days of the expenditure or they may be rejected by the Chair.

CONFLICT OF INTEREST

Determination of Conflict: In order to best serve the interests of the community, BPW members should disclose any conflict of interest which may be perceived as influencing their decision. The decision on a potential conflict of interest is a personal matter. A conflict may exist where the BPW has a financial interest in the project, such as a direct relationship in a development, a professional or personal association with the applicant, or the project could be perceived as having a direct impact on the members' livelihood.



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1. A member with a potential conflict of interest should disclose the conflict to the satisfaction of the full membership, which becomes part of the official record prior to any deliberation on the matter.
2. At the request of the member with the potential conflict the remaining BPW members may elect to discuss the potential conflict and vote to determine whether the conflict is significant to warrant abstention.
3. A member abstaining due to a conflict shall not participate in the discussion of that item and should leave the dais.
4. The remaining members of the BPW may require participation of a member if the member is needed for the quorum necessary for official action or to conduct duties as required by law. In such cases, the member with the potential conflict shall not participate in any deliberation or discussion on the motion.

Unresolved concerns: Unresolved concerns regarding a conflict of interest shall be directed to the County Board.

Officers: Officers of the Board shall be elected at the annual organizational meeting of the Board to be held in the month of January of each year or at such time as may be needed during the calendar year to fill vacancies. The following officers are to be elected:

CHAIR: The Chair shall preside at all meetings and workshops of the BPW. It shall be the responsibility of the Chair:

1. To open the meeting on time and to call the Board members and assembly to order.
2. To announce the business before the Board in the order outlined in the agenda.
3. To recognize members entitled to the floor and direct questions to county staff or consultants.
4. To ensure the participation of the full membership in deliberations.
5. To call for a vote on all questions which are regularly moved in the course of the proceedings and to announce the results of the vote, in accordance with the procedures outlined herein.



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6. To protect the meeting from annoyance by refusing to recognize frivolous or negligent motions.
7. To expedite business under statutory guidelines and rules of procedure compatible with the rights of the members and general public.
8. To enforce the observance of order among the members and the public. The Chair shall decide all questions of order unless preferring to submit the questions for a decision of the BPW.
9. To inform the Board, when appropriate, on a point of order pertinent to pending business.
10. To authenticate by his or her signature, as required, all acts, orders and proceedings of the BPW declaring its will and direction.
11. The Chair shall have the privilege of discussing and voting on all matters.
12. The Chair shall authorize attendance of other BPW members or director in an official capacity as a representative to any meeting, convention or gathering deemed important to the conduct of BPW business.

VICE CHAIR: shall act for the Chair in his or her absence.

SECRETARY: shall act in the capacity of Chair in the absence of the Chair and Vice-Chair. The Secretary shall be responsible for assuring the minutes of all meetings are accurate and signing as such.

DPW staff shall be responsible for recording minutes of all meetings and workshops of the BPW.

ARTICLE III

BOARD MEETINGS

Regular Meetings - Meetings of the Board may be held on a regularly scheduled basis as determined by the Board, but shall be held at least four (4) times per year. A regular meeting schedule shall be established by the Board at their first meeting of each calendar year. Meetings may be canceled or rescheduled by the Chair with due notice or by the Board itself at a prior meeting.



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Special Meetings - Special meetings may be called by the Chair or by any two (2) members of the Board by serving written notice to each or left at the member's place of residence at least twenty-four (24) hours before the meeting. A member may waive notice of a special meeting either before or after the holding of a meeting and if in attendance at such special meeting is deemed to have waived notice. A notice for a special meeting shall contain the date, time, location, reason for the meeting and any and all pertinent information for the Board to review prior to the meeting. The Director may request the Chair to call a special meeting.

Work Session - In order to familiarize itself with an issue or issues being considered before it, the Board Chair may from time to time schedule work sessions. No formal action may be taken on any issue at a work session. All work sessions shall be subject to the Michigan Open Meetings Act.

Closed Sessions - Closed meetings may be held only for those reasons permitted in the Michigan Open Meetings Act in accordance with the procedures provided in such Act. The Board shall designate one of its members or the Director to keep a record of the proceedings during the closed session in accordance with the Michigan Open Meetings Act.

Meeting Cancellation - Should there be, during a year for which a regular meeting schedule has been established by the Board, insufficient business to justify the Board meeting, the Chair at his/her discretion, may cancel any regular meeting, provided that notice of such cancellation shall be given at least eighteen (18) hours in advance of the meeting to all Board members in the manner described under Special Meetings above and posted at the office of the Department of Public Works.

Agenda for Regular Meetings - The agenda for regularly scheduled meetings of the Board shall be prepared by the Director and, at a minimum, consist of the following order of business:

1. Call to Order	8. Consent Calendar
2. Pledge of Allegiance	9. Special Orders
3. Roll Call	10. Old Business
4. First Public Comment	11. New Business
5. Approval of Agenda	12. Second Public Comment
6. Approval of Minutes	13. Notices
7. Reports	14. Adjournment

- The Director of the Department of Public Works is responsible for developing meeting agenda.



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- Agenda materials are to be submitted to the Director's office by 5:00 P.M. on the eighth (8th) calendar day prior to the scheduled Board meeting.
- The meeting agenda and related materials will be made available by the Director to the Board members at least three (3) business days prior to a scheduled meeting. A copy of these materials will also be retained by the Director as part of the historical file of County business.

Minutes:

Recording Format: All Board meetings are to be recorded on audio tape for later transcription. **(Note: Audio recordings will be disposed of in accordance with Board of Public Works Policy).**

- Draft resolutions will be included in the agenda materials brought before the Board for consideration.
- Discussion and comment during Board meetings will be summarized in the minutes as required to ensure clear meaning and intent for record purposes.

Review, authentication and retention:

- The minutes of the BPW will be prepared as soon as possible following a Board meeting and will be distributed to Board members for review and approval at a subsequent Board meeting.

Open Meetings Act – All business conducted by the Board shall be held at public meetings of the Board held in compliance with the Michigan Open Meetings Act, Act 267, of the Public Acts of Michigan of 1976, as amended. Notice of all meetings shall be posted at the following locations:

1. Public Services Building
2650 LaFranier Road
2. Governmental Center
400 Boardman Avenue
3. Garfield Township Hall
3848 Veterans Drive

Parliamentary Law - All proceedings of the Board shall be conducted in accordance with general parliamentary procedures outlined in the most recent edition of *Roberts's Rules of Order*.

Quorum – A quorum shall consist of at least six (6) members of the Board. A quorum shall be required for the Board to conduct any business. An informational meeting may be held without a quorum.

Voting – All actions taken by the Board shall be by a motion or resolution adopted by the affirmative vote of a majority of the full Board as required by Section 4(1) of Act 185 of 1957 (County Department and Board of Public Works). Six (6) affirmative votes are required to pass a motion.

Public Comment – Frequency: A person shall be permitted to address the BPW during each regular and special meeting of the Board.



The Board Chair shall be permitted to modify the time limits established based on attendance at a meeting, provided such modification is made prior to the start of the public comment period(s).

Time Limits: Public comment shall be reserved for designated periods.

1. Each person shall be limited to one three minute comment.
2. A group representative shall be limited to one five minute comment.
3. These time limits will be printed on the Board agenda along with the following notation: “The Board welcomes all public input and appreciates adherence to the time limits established.”
4. Such time limits shall not be applied to a person asked to appear before the Board to address a topic of business, make a presentation, provide a report or to answer questions from the Board.
5. Each person appearing before the Board will state his/her name and address before making a public comment.
6. All public comments shall be addressed to the Board Chair.
7. If required, a person making a public comment will be asked to complete a name and address card to facilitate a written response.
8. In response to public comment, the Chair will determine if action is required by the Board or by DPW staff.
9. Official responses to the person making the public comment will be made by the Chair or by other Board members or staff members when recognized by the Chair.

Addressing an agenda topic: A person wishing to address a specific topic on the meeting agenda shall indicate thusly to the Chair during the public comment period.

The Chair may allow such request (provided that the person has a direct interest in the topic) or the Chair may determine that such comment should remain within the framework of the public comment period.

Written public comment:

1. A person shall be permitted to present or send written material and comments to the Board.
2. Materials not received in time to be distributed for one meeting will be disseminated at the next regular meeting.
3. The Chair will determine the order in which written submissions will appear on the agenda and also whether written submissions will be read aloud for record purposes.

ARTICLE IV



COMMITTEES

Committee membership extends from the date of appointment until the annual organizational meeting held by the Board of Public Works; typically held the first meeting in January. Subcommittee membership is of limited duration based on direction of the Board of Public Works.

Finance Committee – The Finance Committee will consist of the (3) Officers of the Board [Chair, Vice Chair and Secretary] and two additional members appointed by the Board Chair; with special preference given to members representing Acme, East Bay, Elmwood, Garfield and Peninsula Townships. The Finance Committee shall oversee the Board's finance, budget, and operational matters and will consult with staff on the annual budget preparation and present the budget to the Board for its approval.

Personnel Committee – The Personnel Committee will consist of the Board Chair and (2) additional members appointed by the Board Chair. The Personnel Committee shall oversee policies and procedures and provide recommendations to the Board regarding annual employee appraisals.

Appeal Panel – The Appeal Panel will consist of (3) members appointed by the Chair from representatives of Acme, East Bay, Elmwood, Garfield or Peninsula Townships; the Board Chair shall act as an alternate in the event of a conflict of interest.

The Appeal Panel shall hold a public meeting to discuss an appeal within 30 days of receipt of a written request for an appeal. This meeting shall comply with the Open Meetings Act. The Appeal Panel shall provide a written response within 10 days of hearing an appeal.

Subcommittees – The Board of Public Works shall be permitted to establish subcommittees as may be necessary to conduct the business of the Board. A subcommittee appointed by the Board shall be given a specific task and time frame to submit a written report to the Board. The subcommittee shall be terminated upon completion of its assigned task.

ARTICLE V

PERSONNEL

Public Works Director – The Board may hire a Director whose salary shall be fixed by the Board within the budget appropriation. The specific duties and responsibilities of the Director's job shall be included in a job description established and adopted by the Board.



Professional and Lay Personnel – The Board may hire or authorize the Director to hire such professional and lay personnel as it shall deem advisable, subject to budget appropriations but no budget appropriation shall be necessary where services are employed in connection with acquiring any project and are to be included in the project cost. The Board may also authorize the Board Chair to designate (2) members from its membership to act as a Negotiating Team for negotiating terms of any contract related to the operation of the Department.

ARTICLE VI

BUDGET

Budgets – The Director shall be responsible for the preparation of the annual operating budgets for all Department of Public Works Enterprise Funds. The budgets shall be submitted to the Board for review no later than the August meeting in the year prior to the effective date of the budget. The Board shall approve, disapprove or amend the budget at the next regular meeting after August.

Payment of Claims – The Director shall be responsible for the prompt and efficient payment of all invoices and assure that all invoices are properly charged to their respective budgets. The Director shall make a full and accurate report to the Board at each regular meeting of all invoices paid since the preceding Board meeting.

ARTICLE VII

BYLAW AMENDMENTS

Amendments – The Board's Bylaws may be amended at any regular meeting by an affirmative vote of a majority of the full membership of the Board. Written notification of the proposed amendment must be mailed to each member at least five (5) days prior to the meeting.

Severability – If any provision of these bylaws shall be deemed to be invalid or unenforceable by a court of appropriate jurisdiction, then such unenforceable or invalid provision shall be deemed to be deleted from these bylaws. All remaining provisions of these Bylaws shall be deemed to be in full force and effect.



December 20th, 2022

Mr. John Divozzo
Director of Public Works
Grand Traverse County
2650 Lafranier Road
Traverse City, MI 49686

Subject: Grand Traverse County Board of Public Works-Out-of-Scope Letter Agreement for Phase 1 (Design) and Phase 2 (Construction Management) of the addition of a Grit Removal System at the Grand Traverse Septage Treatment Facility.

Dear Mr. Divozzo :

This letter confirms the out-of-scope services for Phase 1 (Design) and Phase 2 (Construction Management). The out-of-scope service shall be performed pursuant to the Agreement for Operations, Maintenance, and Management Services for Grand Traverse County Septage Treatment Facility ("Agreement") by and between the Grand Traverse County Board of Public Works (the "County") and Operations Management International, Inc. ("Contractor").

Project Description: The Grand Traverse County Septage Treatment Facility (GTCSTF) Capacity Evaluation report (dated April 10, 2019) conducted a capacity evaluation for the entire treatment system. The report included recommended facility improvements, capital costs and an implementation schedule.

One of the projects included in the report under the category of "Projects to Address Aging Equipment, Enhance Performance and Reduce Energy" was "Add Grit Removal." Grit material in the septage and holding tank waste settles and accumulates in the Influent EQ Tank and other downstream processes, including the SBRs and ATAD. The grit accumulation reduces the capacity of the system, prematurely wears equipment, and increases operational costs for tank clean-outs.

On September 14th, 2022, the Grand Traverse County Board of Public Works approved to enter into an out-of-scope agreement with Jacobs for Design and Construction Management of a grit removal system at the GTCSTF.

What is being provided: Unless expressly stated otherwise, Contractor will provide the services set forth in Attachment A Section 2.1 Scope. This agreement does not include construction cost for this project.

Scope of Services: **Phase 1 Design** – Consisting of Task 1 Technology Review and Task 2 Engineering Design – Refer to Attachment A Section 2.2.1 and 2.2.2 for more details.

This phase will consist of revisions to the technology review conducted in 2019, followed by engineering design of the new grit removal system. The technology review will ensure that the correct technology is selected for this project application and will include both monetary and non-monetary evaluation criteria.

The engineering design work will be carried out using a phased design delivery approach to assure a logical and progressive completion of the design work. Design review workshops will be conducted with the Owner's personnel, key individuals from the JACOBS project team and others as needed; the design review workshops will be conducted at critical design milestones as identified in the following section.

Phase 2 Construction Management – Consist of Task 3 BID Phase Services and Task 4 Services During Construction - Refer to Attachment A Section 2.2.3 and 2.2.4 for more details.

This phase will consist of bid support and services during construction. Bid support will provide Grand Traverse County with all the necessary support to adequately advertise the project and review bids. Services during construction will include shop drawing review, responses to Requests for Information (RFIs), managing change, punch listing, and start-up/commissioning.

Deliverables: Detailed in Attachment A.

Price of services: The services pursuant to this OOS Agreement shall be billed as T&M upon completion of each of the task listed in table 1 and per the additional services labor rate tables per Amendment 3 of our 2018 O&M services agreement. A copy of the labor rate table is provided as attachment B of this OOS agreement.

The additional services labor rate tables will be utilized in the event a change order is requested for services not described in the scope.

Table 1: Fee Summary

Fee Summary		
	Task Labor	Phase Fee
Phase 1		\$93,000
Task 1: Preliminary	\$15,000	
Task 2: Design	\$78,000	
Phase 2		\$73,000
Task 3: Bid Phase	\$9,000	
Task 4: SDC	\$64,000	
	Total Labor	\$166,000
	Expenses	\$30,000
	Project Price	\$196,000

Estimate of costs: The estimated total cost of the scope pursuant to this OOS Agreement is One Hundred and Ninety-Six Thousand Dollars and Zero Cents (\$196,000.00)

Payment terms: The parties to the Agreement hereby understand and agree that payment for each completed task will be due and payable within thirty (30) calendar days following receipt of Contractor's invoice.

All other terms and conditions of the Agreement dated April 1, 2018, between Contractor and the Grand Traverse County Board of Public Works remain in full force and effect.

If these terms are agreeable to you, please sign both copies of this letter. We will return one fully executed original for your files.

Operations Management International, Inc appreciates the opportunity to provide these additional services to the Grand Traverse County Board of Public Works.

Sincerely,



Mark Huggard
 Project Manager
Jacobs

Both parties indicate their approval of the above-described services by their signature below.

Authorized by:
Operations Maintenance International, Inc.

DocuSigned by:
Kevin Dahl
7E0CF681C97F457...
Kevin Dahl
Manager of Projects

Date: 04-Jan-2023

Authorized by:
Grand Traverse County Board of Public Works

DocuSigned by:
Jeff Shaw
F393060EDF01479...
Name: Jeff Shaw

Date: 10-Jan-2023

DocuSigned by:
Rob Lajko
789D85817F164CA...
Name: Rob Lajko

Date: 11-Jan-2023

Attachment A: Grit Removal Proposal – Scope of Services

Attachment B: Additional Services Engineering and Site Labor Rates

Engineering Rates	Billing Rates				
	2018	2019	2020	2021	2022
Principal PM	220.00	224.95	230.01	235.19	240.48
Sr. Tech	183.00	187.12	191.33	195.63	200.03
PM/Engineer Specialist	157.00	160.53	164.14	167.84	171.62
Associate PM/Project Engineer	117.00	119.63	122.32	125.08	127.89
Associate Engineer	113.00	115.54	118.14	120.80	123.52
Staff Engineer 2	98.00	100.21	102.46	104.76	107.12
Staff Engineer 1 –	94.00	96.12	98.28	100.49	102.75
Engineering Tech 5	n/a	n/a	n/a	n/a	n/a
Engineering Tech 4	n/a	n/a	n/a	n/a	n/a
Engineering Tech 3	80.00	81.80	83.64	85.52	87.44
Engineering Tech 2	n/a	n/a	n/a	n/a	n/a
Senior Office Admin	79.00	80.78	82.59	84.45	86.35
Office/Clerical Admin	53.00	54.19	55.41	56.66	57.93

Site Labor Rates	2018	2019	2020	2021	2022
Project Manager	65.00	66.46	67.96	75.09	76.78
Supervisor/Foreman	58.00	59.31	60.64	68.64	70.18
Mechanic	41.00	41.92	42.87	49.44	50.55
Operator	41.00	41.92	42.87	49.44	50.55
Lab Tech	39.00	39.88	40.77	48.00	49.08
Utility Worker	28.00	28.63	29.27	33.60	34.36



Grand Traverse County Septage Treatment Facility

Grit Removal Addition Scope of Work

Grit Removal System Scope of Work
Grand Traverse County Board of Public Works

August 12, 2022





**Grand Traverse County Septage Treatment Facility
Grit Removal Addition Scope of Work**

Client name: Grand Traverse County Board of Public Works
Subject: Grit Removal Addition Proposal
Revision: Final
Revision date: August 12, 2022
Project/Proposal no: 438951CH
Project manager: Mark Huggard
Prepared by: Tharps, Lee
Approved by: Mark Huggard

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United States

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Grand Traverse County Septage Treatment Facility
Grit Removal Addition Scope of Work

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Grand Traverse County Septage Treatment Facility
Grit Removal Addition Scope of Work

Project understanding

The Grand Traverse County Septage Treatment Facility (GTCSTF) Capacity Evaluation report (dated April 10, 2019) conducted a capacity evaluation for the entire treatment system, including the Sequencing Batch Reactor (SBR), Autothermal Aerobic Digester (ATAD) and Simultaneous Nitrification/Denitrification (SNDR) solids storage system. The report included recommended facility improvements, capital costs and an implementation schedule.

One of the projects included in the report under the category of "Projects to Address Aging Equipment, Enhance Performance and Reduce Energy" was "Add Grit Removal." Grit material in the septage and holding tank waste settles and accumulates in the Influent EQ Tank and other downstream processes, including the SBRs and ATAD. The grit accumulation reduces the capacity of the system, prematurely wears equipment and increases operational costs for tank clean-outs. Currently, the cost to clean out the grit from the Influent EQ is approximately \$45,000 annually, the cost to clean the SBRs is nearly \$100,000, which is recommended every three years, and the cost to clean the ATAD is approximately \$77,000, which is recommended every five years.

Grand Traverse County Septage Treatment Facility
Grit Removal Addition Scope of Work

Solution/Methodology

2.1 Scope

Phase 1 Design – Consist of Task 1 and Task 2

This phase will consist of revisions to the technology review conducted in 2019, followed by engineering design of the new grit removal system. The technology review will ensure that the correct technology is selected for this project application and will include both monetary and non-monetary evaluation criteria.

The engineering design work will be carried out using a phased design delivery approach to assure a logical and progressive completion of the design work. Design review workshops will be conducted with the Owner's personnel, key individuals from the JACOBS project team and others as needed; the design review workshops will be conducted at critical design milestones as identified in the following section.

Phase 2 Construction Management – Consist of Task 3 and Task 4

This phase will consist of bid support and services during construction. Bid support will provide Grand Traverse County with all the necessary support to adequately advertise the project and review bids. Services during construction will include shop drawing review, responses to Requests for Information (RFIs), managing change, punch listing, and start-up/commissioning.

2.2 Tasks

The scope of work has been divided into four logical tasks. Tasks 1 and 2 fall into Phase 1 and would be completed together. Tasks 3 and 4 fall into Phase 2 and can be completed at any point after the completion of Phase 1.

2.2.1 Task 1 – Technology Review

The objective of this task is to review the previous grit system evaluation performed by Jacobs in 2019, evaluate all applicable grit removal technologies and recommend a grit removal technology on which to base the engineering design.

Jacobs will perform additional research, engage internal subject matter experts, and solicit preliminary information from vendors. This information will be summarized in presentation form and presented at a client technology review workshop. The workshop will include all key stakeholders, including client staff and Jacobs O&M staff. Jacobs will develop selection criteria in advance and then facilitate a selection exercise to drive to a decision.

2.2.1.1 Deliverables

- Workshop Slides
- Workshop Meeting Notes (draft and final)

2.2.2 Task 2 – Engineering Design

The engineering design task will be completed in four phases – each phase of design will include a specific list of work products and deliverables, which are identified in the Task descriptions below. Design review workshops will be conducted with the Owner's personnel, key individuals from the JACOBS project team and others as needed; the design review workshops will be conducted at critical design milestones as identified in the following section.

Grand Traverse County Septage Treatment Facility Grit Removal Addition Scope of Work

2.2.2.1 Preliminary Design Phase

The purpose of this task is to use the data and guidelines developed in the Preliminary Design Report to develop and evaluate alternative design concepts and agree upon a single design concept. The end products from this task will include sketches and preliminary drawings which will provide sufficient information for Owner and agency review and design team coordination and review. JACOBS will conduct one virtual interactive workshop with the Owner's personnel prior to the conclusion of this task. Specific work activities and deliverables from this task are as identified below.

2.2.2.1.1 Civil and Site Development

Preliminary Design work will include the following activities.

- Confirm adequacy of topographical and boundary mapping. Evaluate legal, ownership, permitting and zoning constraints. Identify environmentally sensitive areas such as wetlands, flood plains, known hazardous waste areas, etc.
- Develop two alternative plant site layouts. This will include activities such as: (1) determine structure size, location, and orientation; (2) layout roadways/truck access corridors and define maneuvering requirements (design vehicle); (3) size and locate parking lots for employees and visitors to the facility; (4) determine emergency vehicle access requirements. (4) evaluate flood plain impacts and constraints; (5) locate storm water management facilities. (6) locate utility and piping corridors (horizontal and vertical).
- Coordinate with surveyors; define surveyors' scope of work; coordinate with geotechnical engineer on boring locations; record boring locations on site drawings.
- Develop preliminary erosion control plan for project. Determine if erosion control ponds are required; locate ponds on site plan drawings as required. Prepare preliminary storm water calculations suitable for submission to local site permitting authorities. Develop preliminary storm water control concepts (swales, curb, and gutter). Meet with local storm water and erosion and sediment control agency to determine permitting requirements for site plans, and impact of requirements on preparation of contract documents. Document findings.
- Set preliminary finished floor levels for new structures. Establish preliminary finished grades, overall major surfaces, road profiles, etc. Iterate preliminary surfaces and structures to optimize earthwork if necessary.
- Review concepts and draft work products with and seek approval from quality control reviewer.

2.2.2.1.2 Architectural

Preliminary Design work for architectural will include the following activities:

- Establish preliminary building/space sizes. Identify the adjacencies and functional requirements of each space. Establish architectural theme for exterior of building. Select interior and exterior construction materials for each building. Select roof type, slope, and roof support system for each building.
- Assign code classification to each building. Meet with local code official to review code classifications.
- Compile list of chemicals and amounts to be used. Coordinate with other disciplines (mechanical and electrical) to resolve code compliance issues specific to these

Grand Traverse County Septage Treatment Facility Grit Removal Addition Scope of Work

- disciplines (e.g., National Electrical Code and National Fire Protection Association 820 issues).
- Prepare preliminary building layouts (hand sketches including plans, sections, and elevations).
- Review concepts and draft work products with and seek approval from quality control reviewer.

2.2.2.1.3 Structural

Preliminary Design for structural will include the following activities.

- Coordinate with architectural discipline on the selection of building concepts. Consult with lead process engineer on building/structure layouts.
- Develop building foundation and structure concepts based on schematic building layouts.
- Review concepts and draft work products with and seek approval from quality control reviewer.

2.2.2.1.4 Geotechnical

Preliminary Design for geotechnical will include the following:

- Determine site specific geotechnical conditions for each facility and structure. Develop specific foundation requirements.
- Verify constructability (shoring and bracing requirements, dewatering issues).
- Using existing geotechnical data and results of investigations, prepare foundation and corrosion control recommendations.
- Review concepts and draft work products with and seek approval from quality control reviewer.

2.2.2.1.5 Process

Preliminary Design for process will include the following:

- Determine size/capacity of all unit treatment processes and ancillary systems.
- Review capacity of all existing processes and equipment to remain in service where appropriate. Assign capacity to existing processes.
- A review of the existing plant operating facilities that are impacted by the proposed construction.
- Prepare process flow diagrams (PFDs).
- Prepare preliminary solids balance.
- Develop process narratives.
- Review concepts and draft work products with and seek approval from quality control reviewer.

Grand Traverse County Septage Treatment Facility Grit Removal Addition Scope of Work

2.2.2.1.6 Mechanical

Preliminary Design for mechanical will include the following:

- Select and size all major process equipment including pumps. Prepare sizing calculations and obtain review. Establish level of redundancy required for all process equipment.
- Prepare equipment list with sizing for major equipment. Coordinate with the owner on preferences of equipment manufacturer and processes.
- Prepare preliminary hand sketches for equipment arrangements.
- Prepare preliminary hydraulic profile.
- Review capacity and condition of all existing equipment to remain in service where appropriate. Assign capacity to existing equipment.
- Review concepts and draft work products with and seek approval from quality control reviewer.

2.2.2.1.7 HVAC/Plumbing

Preliminary Design for HVAC and plumbing will include the following.

- Select type of ventilation system to be used in process buildings (inlet air tempered with both inlet and outlet fans, simple exhaust fan system).
- Select type of heating system to be used (hot water boiler, hot air furnace, space heaters). Identify fuel (gas, oil, or other fuel) for heating buildings and identify local fuel storage requirements.
- Select type of air conditioning system to be used in personnel spaces (variable air volume system, zoned constant air volume system).
- Coordinate with the architectural discipline to establish design R-values for all exterior walls.
- Coordinate with local fire marshal and Architect to determine requirements for sprinklers and fire protection.
- Determine overall potable water requirements for the project. Confirm adequate quantity and pressure can be obtained from the local potable water supply utility.
- Review concepts and draft work products with and seek approval from quality control reviewer.

2.2.2.1.8 Instrumentation and Control Systems (I&CS)

Preliminary Design work for the instrumentation and control will include the following activities.

- Coordinate with the process engineer(s) to prepare a process flow drawing (PFD) for each treatment process. Information to be included on each PFD includes at a minimum: Process configuration, flow streams, valve, and gate locations (manual and powered), chemical additions points/types, process equipment location/type including packaged control panels and adjustable-speed drives, flow meters and other process control devices.

Grand Traverse County Septage Treatment Facility Grit Removal Addition Scope of Work

- Coordinate equipment/instrument tag numbering, naming, and abbreviation conventions.
- Work with Process Engineer to prepare written operational description of each major process.
- Develop overall control philosophy including local control approach, control system, level of automation, supervisory control.
- Review concepts and draft work products with and seek approval from quality control reviewer.

2.2.2.1.9 Electrical

Preliminary Design work for electrical will include the following.

- Prepare preliminary overall one-line diagram for proposed facilities.
- Prepare preliminary load calculations.
- Size electrical rooms.
- Determine number of electrical feeds to be provided to facility. Coordinate with local power utility to determine locations of power feeds, voltage, billing details (peak usage rates), requirements for reduced voltage starters, substation requirements
- Determine redundancy requirements for power supplies and power distribution.
- Establish preferred voltages for power distribution and utilization equipment.
- Coordinate with other disciplines (architectural, mechanical) to resolve code compliance issues specific to these disciplines. Develop preliminary schedule of hazardous and corrosive locations.
- Evaluate sizing for site-wide backup generator.
- Review concepts and draft work products with and seek approval from quality control reviewer.

2.2.2.1.10 Preliminary Design Workshop

JACOBS will conduct a one-day workshop with the Owner's personnel to review the work and preliminary design. The workshop will be held at the Grand Traverse Septage Treatment Facility or location of owners choice. Final minutes from the workshop, and the work products as defined above will be assembled in the Preliminary Design report and submitted to the Owner.

2.2.2.2 Intermediate Design Phase

The purpose of this task is to utilize the decisions of the project that were made in the previous phase and to complete and finalize the preliminary calculations of the previous phase, develop the project design to achieve a true "design freeze" at the end of this phase. Structures, equipment, major plant piping, process, site plan are all finalized during this phase to allow final detailing of the same in the next phase of design. Drawings and other materials that may be required exhibits for environmental permit applications will be available at the conclusion of this phase. The majority of the quality control review and approval will occur prior to the finalization of the work products from Intermediate Design phase. Specific activities, and work products from this phase are described in the following subtasks:

Grand Traverse County Septage Treatment Facility
Grit Removal Addition Scope of Work

2.2.2.2.1 Design Management

- Update workplan.
- Conduct initial constructability review.
- Conduct initial operability review.
- Update construction cost estimate.

2.2.2.2.2 Civil and Site Development

- Freeze civil design concept. Structures, road, and major site element horizontal locations are finalized. Structure floor/control levels, and finished grades are finalized.
- Define demolition requirements and limits. Define contractor staging, storage, access, and off-site access corridors.
- Prepare preliminary site grading drawings.
- Download survey data to create site-drawing files for final design.
- Set final building and structure elevations.
- Develop preliminary yard piping (18-inches and larger) and plant drain layouts. Identify corridors for smaller piping and other utilities. Pipes 4-inches and smaller in diameter will be field routed.
- Show storm water control concepts (swales, curb, and gutter) on the Intermediate Design drawings.
- Finalize traffic flow, parking, and lay out road access to all buildings and structures. Coordinate handicap requirements with architectural discipline and local site plan regulations.
- Prepare first draft of technical specifications.
- Review Intermediate Design and draft work products with and seek approval from quality control reviewer.

2.2.2.2.3 Architectural

- Develop building floor plans and elevations.
- Coordinate with I&C and electrical disciplines to size and locate electrical and control rooms.
- Coordinate with the mechanical discipline to select the type of HVAC equipment, locate HVAC equipment rooms, determine space requirements and routing for ductwork if required, and establish design R-values for all exterior walls.
- Coordinate with structural engineer to define the structural design concepts for the facilities.
- Establish applicable codes for all buildings/structures with local code officials and fire marshal. Complete building and fire code analysis. Meet with local code official to review floor plans.

Grand Traverse County Septage Treatment Facility Grit Removal Addition Scope of Work

- Prepare first draft of technical specifications.
- Review Intermediate Design and draft work products with and seek approval from quality control reviewer.

2.2.2.2.4 Structural

- Coordinate with geotechnical engineer to establish foundation design criteria for proposed facilities. Review geotechnical report and discuss foundation design approach with geotechnical engineer and senior structural reviewer
- Document structural design concept for each building (room by room) and structure. Finalize materials of construction (cast-in-place versus precast concrete, roof structures, etc).
- Preliminary framing plan for buildings and other structures.
- Prepare 3-D electronic models or preliminary floor plan for all major structures.
- Prepare first draft of technical specifications.
- Review Intermediate Design and draft work products with and seek approval from quality control reviewer.

2.2.2.2.5 Process

- Final major equipment sizing calculations.
- Coordinate with I&CS on completion of P&IDs.
- Coordinate with I&CS on development of process control narratives.
- Review Intermediate Design and draft work products with and seek approval from quality control reviewer.

2.2.2.2.6 Mechanical

- Calculate the hydraulic profile for all-major gravity process pipelines and hydraulic structures. Establish maximum and minimum water surface elevations for all process tanks.
- Prepare 3-D electronic models or building and structure layouts (plans and major section(s)).
- Assemble catalog cuts for all major process equipment. Complete equipment data sheets or equipment list on all major equipment items.
- Coordinate with I&CS in the finalization of P&IDs
- Final ancillary equipment sizing and line sizing calculations.
- Final equipment selection (type, size, weight, arrangement).
- Select piping materials.
- Prepare first draft of technical specifications.
- Review Intermediate Design and draft work products with and seek approval from quality control reviewer.

Grand Traverse County Septage Treatment Facility Grit Removal Addition Scope of Work

2.2.2.2.7 HVAC/Plumbing

- Prepare sizing calculations for HVAC equipment based on energy code requirements and selected building construction materials. Prepare HVAC equipment data sheets and cut sheets.
- Create ventilation concept drawing (louver locations, fan locations, type of equipment, air flows).
- Identify routing or right-of-way for major duct runs. Locate major air handling equipment. Confirm size of mechanical equipment rooms.
- Prepare HVAC system block diagrams. Define HVAC system control philosophy.
- Coordinate with civil engineer for potable water and fire water supply and distribution, as well as plant drain system.
- Prepare first draft of technical specifications including performance specifications for HVAC and plumbing design by the contractor.
- Review Intermediate Design and draft work products with and seek approval from quality control reviewer.

2.2.2.2.8 Instrumentation and Control

- Finalize hand annotated internal reference P&IDs for internal coordination use.
- Prepare preliminary I/O count. Size and locate I/O locations for distributed control systems (DCS). Coordinate I/O rack room sizing with electrical and architectural disciplines.
- Summarize I&C system design philosophy for each major process in a process control narrative. Include a description of the field elements to be used for each application and preliminary set points for major I&C elements. Update/finalize control system block diagram. Finalize typical control diagrams/loop diagrams for each type of control scheme to be used.
- Coordinate with HVAC engineer regarding control system requirements.
- Define control interfaces for all package systems with local controls, including adjustable frequency drives.
- Prepare first draft of technical specifications.
- Review Intermediate Design and draft work products with and seek approval from quality control reviewer.

2.2.2.2.9 Electrical

- Determine number of motor control centers (MCCs) to be provided and location of MCCs, and equipment to be powered out of each MCC. Prepare preliminary one-line diagrams for proposed facilities. Coordinate with lead process engineers to size equipment motors.
- Prepare detailed electrical load calculations.
- Size electrical rooms and prepare a preliminary layout of the major electrical equipment located in each electrical room. Determine equipment requiring uninterruptable power supplies (UPS) and locations of UPS equipment. Coordinate with I&C discipline to

Grand Traverse County Septage Treatment Facility Grit Removal Addition Scope of Work

- determine space requirements and locations for control equipment. Locate major I/O termination panels, TJB's, and control panels.
- Define/document requirements and concepts for special systems: Telephone (including incoming service location, scope of supply, etc.), Data highway (control system), Data highway (LAN, office automation) and Fire alarm system.
 - Submit load calculations and one-lines to electric utility for review. Identify rights-of-way and routing methods for electrical conduit and tray. Lay out duct bank system (major runs/manholes). Locate incoming power service and primary power transformers. Coordinate with civil yard piping. Locate manholes and hand holes.
 - Provide a new self-contained generator and integral fuel storage system for backup power for the new facilities, systems, and components. Optionally, this generator could power additional loads.
 - Prepare preliminary site lighting layout.
 - Define hazardous locations (NFPA 820) and document. Define corrosive locations and document.
 - Prepare first draft of technical specifications including performance specifications for interior lighting design by the contractor.
 - Review Intermediate Design and draft work products with and seek approval from quality control reviewer.

2.2.2.2.10 Intermediate Design Workshop

JACOBS will conduct one design workshop to review the work products with the Owner's personnel and other key project staff. The workshop will be held at the Grand Traverse Septage Treatment Facility or location of owner's choice. The review drawings provided to the Owner will be extractions from 3-D models with limited annotation. The level of annotation will be similar to the sample previously provided to the Owner. Note: this workshop is critical to reach closure on all of the design issues with the owner's personnel. The workshop should include all key individuals from the Owner organization – plant operations, and maintenance. Owner's PM at a minimum. Workshop should preferably be held in our office rather than Owner's, so we can get the design leads to participate. Final workshop minutes, documenting the key decisions, and the work products produced through subtasks above will be submitted to the Owner. Note: this package of meeting notes and products should be around 40%-45% design completion and will generally be enough for environmental regulatory agency reviews.

2.2.2.3 Contract Document Preparation (Final Design and Final Contract Documents)

The purpose of this task is to develop the final contract drawings, specifications, and schedules for competitive bidding. Key activities during this phase will include:

2.2.2.3.1 Design Management

- Update workplan.
- Conduct final constructability review.
- Conduct final operability review.
- Purge project files of irrelevant and extraneous material. File all relevant information.

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2.2.2.3.2 Contract Document Completion

- Finalize specification front-end documents, including General Conditions, General Requirements, bidding documents, bonds, and Instruction to Bidders. Owner input is required at this point to determine construction contract requirements and insurance requirements.
- Coordinate with Owner on advertising and bidding process.
- Prepare final construction drawings.
- Prepare final technical specifications.
- Prepare final calculations.
- Complete final checking and coordination review.

2.2.2.3.3 Final Review Workshop

JACOBS will conduct one workshop to conduct a final review of the work products with the Owner's personnel and other key project staff. The Owner will prepare one set of collated comments and submit them to JACOBS. The workshop will be held at the Grand Traverse Septage Treatment Facility or location of owner's choice. Note: this workshop is critical to reach closure on all remaining design issues with the Owner's personnel. The workshop should include all key individuals from the Owner's organization – plant operations, and maintenance. Owner's PM at a minimum. Final workshop minutes, documenting the key decisions and responses to the Owner's comments will be submitted to the Owner. Note: this package contract documents should be 100% complete in the design team's eyes and sufficient for bidding without additional work.

2.2.2.3.4 Incorporation of Final Review Comments

JACOBS will modify the contract documents to reflect all agreed upon final review comments from the Owner, applicable regulatory agencies, and Jacobs' quality control review team. The final documents will then be submitted to the Owner.

2.2.3 Task 3 – Bid Phase Services

JACOBS will provide services to assist the Owner in selection of a single Contractor for the construction of the project. These services will consist of the following.

2.2.3.1 Preparation and Delivery of Bid Documents

JACOBS will assist the Owner in assembling the Bid Documents and delivering the bid documents to prospective bidders. JACOBS will maintain a list of prospective bidders receiving the Bid Documents.

2.2.3.2 Bid Period Information Requests

JACOBS will develop and implement procedures for receiving and answering bidders' questions and requests for additional information. The procedures shall include a log of all significant bidders' questions and requests and the response thereto. JACOBS will provide technical interpretation of the contract bid documents and will prepare proposed responses to all bidder's questions and requests, which may be in the form of addenda.

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2.2.3.3 Pre-Bid Conference

JACOBS will assist the Owner in arranging and conducting one pre-bid conference. JACOBS will assist the Owner in developing the agenda and content of the pre-bid conference. JACOBS will take minutes or make other provision for documenting the results of the pre-bid conference. JACOBS will also record all questions and requests for additional information and shall coordinate with the Owner for issuing responses and additional information.

2.2.3.4 Addenda

JACOBS shall assist the Owner in issuing all Addenda to the Bid Documents and shall distribute Addenda to the bidders. All Addenda shall be approved by the Owner. The Owner shall pay for the expenses of all Addenda.

2.2.3.5 Bid Opening

JACOBS shall assist the Owner in opening of bids. JACOBS shall review all bids and evaluate them for responsiveness and bid amount. JACOBS will also verify through reasonable investigation the financial and performance history documentation submitted by the low bidder and second low bidder. JACOBS shall prepare a report of its review and evaluation and include recommendations for award of the contract for construction, or other action as may be appropriate. The Owner shall make the final decision on the award of the contract for construction and the acceptance or rejection of all bids. JACOBS will provide technical (but not legal) advice in bid pretest situations.

2.2.3.6 Recommendation of Contract Award

JACOBS shall assist the Owner in preparing the notice of award; assembly, delivery and execution of the contract for construction; and preparation of the notice to proceed. The Owner shall sign the notice of award and the notice to proceed. JACOBS shall also provide reasonable assistance with negotiations with the selected bidder prior to execution of the contract for construction.

2.2.4 Task 4 – Services During Construction

JACOBS will provide services to assist in coordinating the site activities, administering the contract for construction, monitoring the contractor's performance, responding to design and technical submittals, and closing out the contract for construction.

2.2.4.1 Project Management

Workplan: JACOBS will develop a general workplan that defines Jacobs' delivery approach, staffing, responsibilities, and project deliverables.

Reporting: JACOBS will keep the Owner advised of the progress of the construction. This includes submitting monthly progress reports to the Owner and holding periodic meetings and consultations with the Owner.

Document Management System and Procedures

JACOBS will establish a system and set of procedures for managing, tracking and storing all relevant documents between the Contractor, JACOBS and Owner produced during the Bid/Award, Construction and Closeout phases of the project. JACOBS will utilize an appropriate computer-based document management system selected by JACOBS. Should the Owner require a specific system, the Owner will advise JACOBS in advance and will compensate JACOBS for any additional costs incurred. JACOBS will, in

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coordination with the Owner, maintain hard copy records, suitably organized, of all relevant documentation.

JACOBS will implement procedures for the logging and tracking of all relevant correspondence and documents. JACOBS will assist the Owner in monitoring all outstanding decisions, approvals or responses required from the Owner.

2.2.4.2 Site Coordination

Pre-Construction Conference: JACOBS shall coordinate and attend one pre-construction conference with the Contractor to review the project communication, coordination and other procedures and discuss the Contractor's general workplan and requirements for the project. JACOBS will take minutes or otherwise record the results of this conference.

Communications: JACOBS will implement and maintain regular communications with the Contractor during the construction. JACOBS will receive and log all communications from the Contractor and will coordinate the communications between the Owner and Contractor. JACOBS will not communicate directly with the Contractor's subcontractors.

Project Site Meetings: JACOBS will conduct periodic meetings with the Contractor and will prepare the minutes of these meetings.

2.2.4.3 Construction Contract Administration

JACOBS will receive and review the Contractor's requests for payment. JACOBS will determine whether the amount requested reflects the progress of the Contractor's work and is in accordance with the contract for construction. JACOBS shall provide recommendations to the Owner as to the acceptability of the requests. JACOBS will advise the Owner as to the status of the total amounts requested, paid, and remaining to be paid under the terms of the contract for construction.

Recommendations by JACOBS to the Owner for payment will be based upon Jacobs' knowledge, information and belief from its observations of the work on site and selected sampling that the work has progressed to the point indicated. Such recommendations do not represent that continuous or detailed examinations have been made by JACOBS to ascertain that the Contractor has completed the work in exact accordance with the contract for construction; that JACOBS has made an examination to ascertain how or for what purpose the Contractor has used the moneys paid; that title to any of the work, materials or equipment has passed to the Owner free and clear of liens, claims, security interests, or encumbrances.

2.2.4.4 Changes

Minor Variations in the Work: JACOBS may authorize minor variations in the work which do not involve an adjustment in the Contractor's contract price nor time for construction and are not inconsistent with the intent of the contract documents.

Coordinate Issuance of Changes: JACOBS will assist the Owner with the issuance of changes to the contract for construction. Design and engineering services to prepare drawings, specifications and other information for the change shall be considered as Additional Services and shall entitle JACOBS to additional compensation for the design services.

JACOBS will receive and review the Contractor's response to the request for change and will obtain such further information as is necessary to evaluate the basis for the Contractor's proposal. JACOBS will assist the Owner with negotiations of the proposal and, upon approval by the Owner, prepare final change order documents for execution by the Owner and Contractor.

Review of Contractor's Requested Changes: JACOBS shall review all Contractor -requested changes to the contract for construction. JACOBS will make recommendations to the Owner regarding the acceptability of

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the Contractor's request and, upon approval of the Owner, assist the Owner in negotiations of the requested change. Upon agreement and approval, JACOBS will prepare final change order documents.

Design and engineering services of JACOBS to review Contractor initiated changes and to prepare drawings and specifications for issuance to the Contractor shall be considered as Additional Services, entitling JACOBS to additional compensation.

Change Order Reports: JACOBS will provide periodic reports to the Owner about the status of Change Orders. The report shall include issued Change Orders, pending change orders, and change order amounts.

2.2.4.5 Interpretations of Contract Documents

JACOBS will provide written responses to the Contractor's request for interpretation or clarification of the contract documents.

2.2.4.6 As Built Drawings and Record Documents

JACOBS will coordinate the Contractor's submittal of as-built drawings, specifications and other as-built or record documents and shall transmit these to the Owner. JACOBS will meet with the Contractor as necessary to discuss the preparation and submittal of as-built or record drawings.

2.2.4.7 Claims and Disputes

JACOBS will receive, log, and notify the Owner about all letters and notices from the Contractor concerning claims or disputes between the Contractor and Owner pertaining to the acceptability of the work or the interpretation of the requirements of the contract for construction. JACOBS will review all such letters and notices and will discuss them with the Contractor as necessary to understand each such claim or dispute. JACOBS will advise the Owner regarding the Contractor's compliance with the contract requirements for such claims and disputes. JACOBS will assist the Owner in discussions with the Contractor to resolve claims and disputes.

JACOBS will not issue decisions on Contractor claims or disputes. JACOBS will not, except as part of Additional Services, undertake comprehensive and detailed investigation or analysis of Contractor's claims and disputes, nor participate in judicial or alternative dispute resolution procedures for the claims or disputes.

2.2.4.8 Project Controls

Contractor's Schedule Submittal: JACOBS will review the Contractor's construction schedule and verify that it is consistent with the requirements of the contract for construction. JACOBS will advise the Contractor of any areas where the schedule is not in compliance with the contract for construction. JACOBS will provide comments to the Owner to assist the Owner in approving, accepting or taking other action on the contractor's schedule, in accordance with the contract for construction.

Jacobs' review and comments shall not be considered as a guarantee or confirmation that the Contractor will complete the work in accordance with the contract for construction.

Contractor's Schedule Updates: JACOBS will review the Contractor's periodic schedule updates or other schedule submissions. JACOBS will advise the Contractor if the updates or other submissions are not in accordance with the contract for construction. JACOBS will provide comments to the Owner regarding the updates or other submissions.

Effect of Change Orders: JACOBS will review information submitted by the Contractor regarding the effect of proposed or issued Change Orders upon the construction schedule, duration and completion date. JACOBS will advise the Owner as to the potential impact of proposed or issued Change Orders. JACOBS

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will assist the Owner in discussions with the Contractor concerning the potential impact of proposed or issued Change Orders.

Periodic Reports: JACOBS will provide periodic reports to the Owner as to the status of the construction schedule, date of completion, contract price, retainage, pending changes to the contract price or completion date and other issues material to the cost and time for completion of the construction.

2.2.4.9 Field Inspection

Independent Testing, Inspection and Survey Services: The Owner will employ, or cause the Contractor to employ, independent firms for the material testing, specialty inspection, survey, or other services related to verifying the quality of the Contractor's work. JACOBS will assist in coordinating Owner provided testing, inspection, and survey services. JACOBS will review the reports and other information prepared by the independent firms that are provided to the Owner. JACOBS will assist in coordinating their schedules and the transmittal of their reports, findings or other information to the Contractor and/or the Owner. JACOBS shall not be responsible for the accuracy or completeness of the work and reports of the independent testing, inspection, and survey firms.

Review of Work: JACOBS will conduct weekly on-site observations of the Contractor's work for the purposes of determining if the work generally conforms to the contract for construction and that the integrity of the design concept as reflected in the contract for construction has been implemented and preserved by the Contractor. JACOBS will supervise a team of field inspection staff, who will prepare written reports, diaries, or other records of their observations.

Jacobs' inspection staff will arrange for monthly photographs of the work in progress by the Contractor, which will be made available to the Owner.

Jacobs' observation of the work is not an exhaustive observation or inspection of all work performed by the Contractor. JACOBS does not guarantee the performance of the Contractor. Jacobs' observations shall not relieve the Contractor from responsibility for performing the work in accordance with the contract for construction, and JACOBS shall not assume liability in any respect for the construction of the project. JACOBS shall, with the assistance of the Owner, obtain written plans from the Contractor for quality control of its work, and will monitor the Contractor's compliance with its plan.

Deficient and Non-conforming Work: Should JACOBS discover or believe that any work by the Contractor is not in accordance with the contract for construction, or is otherwise defective, or not conforming to requirements of the contract or applicable rules and regulations, JACOBS will bring this to the attention of the Contractor and the Owner. JACOBS will thereupon monitor the Contractor's corrective actions and shall advise the Owner as to the acceptability of the corrective actions.

Design Team Visits: JACOBS will coordinate monthly visits to the site by the design team members to review progress and quality of the work. The visits shall observe the general quality of the work at the time of the visit and review any specific items of work that are brought to the attention of the design team members by the Contractor or the Owner.

Factory and Off-Site Tests and Inspections: JACOBS will coordinate tests and inspections of work, materials, and equipment for the project at off-site facilities and suppliers, as specified in the contract for construction.

Performance and Witness Testing: JACOBS will attend, and witness field and factory performance tests as specified in the contract for construction and JACOBS contract scope.

Regulatory and Third-Party Testing and Inspections: JACOBS will monitor the Contractor's coordination of inspection and testing by regulatory and third-party agencies that have jurisdiction over the project.

Subsurface and Physical Conditions: Whenever the Contractor notifies JACOBS or Owner of subsurface or physical conditions at the site which the contract for construction provides should be so notified, JACOBS

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will advise the Owner and inspect the conditions at the site. JACOBS will advise the Owner as to the appropriate action(s) and will assist the Owner in responding to the Contractor.

Engineering and technical services that are required to investigate the subsurface or physical conditions shall be considered an Additional Service.

Substantial and Final Completion: JACOBS will assist the Owner with inspections at substantial and final completion, in accordance with the contract for construction. JACOBS will prepare up to two (2) separate punch lists of items requiring completion or correction. JACOBS shall make recommendations to the Owner regarding acceptance of the work based upon the results of the final inspection.

Specialty Inspections: JACOBS and Owner will agree as part of Jacobs' scope of work any specialty inspections or testing services that the Owner requires from JACOBS for the work. JACOBS shall perform the agreed specialty inspections and testing in accordance with the contract for construction.

2.2.4.10 Shop Drawings, Samples and Submittals

Submittal Schedule: JACOBS will obtain from the Contractor a proposed shop drawing and submittal schedule, which shall identify all shop drawings, samples and submittals required by the contract for construction, along with the anticipated dates for submission.

Review of Shop Drawings, Samples and Submittals: JACOBS will coordinate with the design team for the reviews of the Contractor's shop drawings, samples, and other submittals. JACOBS will log and track all shop drawings, samples and submittals.

JACOBS and design team's review of all shop drawings, samples and submittals shall be for general conformance with the design concept and general compliance with the requirements of the contract for construction. Such review shall not relieve the Contractor from its responsibility for performance in accordance with the contract for construction, nor is such review a guarantee that the work covered by the shop drawings, samples and submittals is free of errors, inconsistencies or omissions.

Scope of Review: Jacobs' scope shall be based upon the scope of work in the contract for construction and shall include for a maximum of two submissions by the Contractor for each shop drawing, sample or submission. Should there be additional reviews required of JACOBS and design team, JACOBS shall be entitled to additional compensation.

2.2.4.11 Contractor Clarifications and Requests for Information (RFI/CCIR)

Requests for Information: JACOBS will review the Contractor's requests for information or clarification of the contract for construction. JACOBS will coordinate such review with the design team and with the Owner as appropriate. JACOBS will coordinate and issue responses to the requests.

JACOBS will log and track the Contractor's requests.

Proposed Substitutions: JACOBS will assist the Owner in reviewing and responding to the Contractor's requests for substitution of materials and equipment. JACOBS will review such requests and will advise the Owner as to the acceptability of such substitutions.

2.2.4.12 Substantial Completion

JACOBS will assist the Owner in issuing documents for substantial completion and acceptance of the work. JACOBS will advise the Owner on payment, and partial release of retention.

2.2.4.13 Final Completion

JACOBS will assist the Owner in issuing documents for final completion and acceptance of the work. JACOBS will advise the Owner on final payment, release of retention, and release of insurance and bonds.

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2.2.4.14 Occupancy and Start-Up Permits

JACOBS will assist the Owner with securing occupancy and start-up permits. Should the contract for construction require the Contractor to secure such permits, JACOBS will monitor the Contractor's efforts and will advise the Owner of the Contractor's progress. Should the Owner be required to secure such permits, JACOBS will assist the Owner by coordinating final inspections, submitting documents to the governmental agencies, and coordinating inspections by the agencies.

2.2.4.15 Vendor Operation and Maintenance Manuals, Training

JACOBS will coordinate with the Contractor for the submission of required manuals provided by equipment suppliers for operation and maintenance and for training of the Owner's staff by the Contractor.

2.2.4.16 Warranties, Guarantees, Lien Releases

JACOBS will coordinate with the Contractor for the submission of required warranties, guarantees, lien releases and other similar documents as required by the contract for construction. JACOBS will advise the Owner as to the acceptability and compliance of these documents with the contract for construction.

2.2.4.17 Close-out File and Records

JACOBS will provide to the Owner an organized set of project documents and records.

2.2.4.18 Operations and Maintenance Manual

JACOBS will develop an Operations and Maintenance (O&M) manual describing the operation of the Project facilities and systems. This manual will explain the various primary modes of operation that may be used, including both normal operation and initial emergency operation procedures. The manual will explain the purpose and basic concept of the various processes that are incorporated into the overall plant. Where appropriate, reference will be made to the manufacturer's detailed O&M submittals. It will include instructions for process operations and test or laboratory procedures that may be required to monitor the performance of the facilities. The manual will be suitable for use as an operational tool and to facilitate operator training. The manual will be produced in a computerized format using commercially available software. The O&M manual will be revised at the end of one-year of operations based on actual operating and maintenance experience and input from the Owner's staff.

2.2.4.19 Operation and Maintenance Training

JACOBS will provide supplemental instruction to the Owner's staff in the operation, maintenance and testing of the equipment provided under this Project. This instruction shall cover both the basic operational concept and actual operation of the systems and components under both normal and abnormal operations that are likely to occur. The instruction will also include training of the staff for equipment maintenance. JACOBS will also coordinate the services of qualified representatives from equipment manufacturers.

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2.2.4.20 Start-Up Support

JACOBS will furnish assistance to the Owner in project startup to the extent to be mutually agreed upon by both parties. This assistance includes:

Preparing a Plan of Operation to identify specific actions and related completion dates for startup and operation of the new facilities.

Assisting during the initial startup of the facilities by assisting the operating personnel assigned by the Owner.

2.2.4.21 As-Built Drawings

JACOBS will revise the original design drawings to reflect available record information provided by the Contractor and equipment suppliers. One reproducible set and three hard copies will be submitted to the Owner.

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Withdrawing your consent

If you decide to receive notices and disclosures from us electronically, you may at any time change your mind and tell us that thereafter you want to receive required notices and disclosures only in paper format. How you must inform us of your decision to receive future notices and disclosure in paper format and withdraw your consent to receive notices and disclosures electronically is described below.

Consequences of changing your mind

If you elect to receive required notices and disclosures only in paper format, it will slow the speed at which we can complete certain steps in transactions with you and delivering services to you because we will need first to send the required notices or disclosures to you in paper format, and then wait until we receive back from you your acknowledgment of your receipt of such paper notices or disclosures. Further, you will no longer be able to use the DocuSign system to receive required notices and consents electronically from us or to sign electronically documents from us.

All notices and disclosures will be sent to you electronically

Unless you tell us otherwise in accordance with the procedures described herein, we will provide electronically to you through the DocuSign system all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you. To reduce the chance of you inadvertently not receiving any notice or disclosure, we prefer to provide all of the required notices and disclosures to you by the same method and to the same address that you have given us. Thus, you can receive all the disclosures and notices electronically or in paper format through the paper mail delivery system. If you do not agree with this process, please let us know as described below. Please also see the paragraph immediately above that describes the consequences of your electing not to receive delivery of the notices and disclosures electronically from us.

How to contact Jacobs Engineering Group Inc.:

You may contact us to let us know of your changes as to how we may contact you electronically, to request paper copies of certain information from us, and to withdraw your prior consent to receive notices and disclosures electronically as follows:

To contact us by email send messages to: ITDocuSignAdministrators@jacobs.com

To advise Jacobs Engineering Group Inc. of your new email address

To let us know of a change in your email address where we should send notices and disclosures electronically to you, you must send an email message to us at ITDocuSignAdministrators@jacobs.com and in the body of such request you must state: your previous email address, your new email address. We do not require any other information from you to change your email address.

If you created a DocuSign account, you may update it with your new email address through your account preferences.

To request paper copies from Jacobs Engineering Group Inc.

To request delivery from us of paper copies of the notices and disclosures previously provided by us to you electronically, you must send us an email to ITDocuSignAdministrators@jacobs.com and in the body of such request you must state your email address, full name, mailing address, and telephone number. We will bill you for any fees at that time, if any.

To withdraw your consent with Jacobs Engineering Group Inc.

To inform us that you no longer wish to receive future notices and disclosures in electronic format you may:

- i. decline to sign a document from within your signing session, and on the subsequent page, select the check-box indicating you wish to withdraw your consent, or you may;
- ii. send us an email to ITDocuSignAdministrators@jacobs.com and in the body of such request you must state your email, full name, mailing address, and telephone number. We do not need any other information from you to withdraw consent.. The consequences of your withdrawing consent for online documents will be that transactions may take a longer time to process..

Required hardware and software

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SUMMARY REPORT

Project Name: 438951CH- Grit Removal System - GTCSTF - TempleEstimator:
 Project Number: 438951CH Rev/Date:
 Design Stage: 90% Estimate Class: 2

Facility	Work Pkg	Description	Takeoff Quantity	Grand Total Price	Grand Total with Markups	
001	01.0	GENERAL CONDITIONS				
		General Requirements	16.00 MO	130,785.60 /MO	2,092,570	
		001 GENERAL CONDITIONS	1.00 LS	2,092,569.57 /LS	2,092,570	
	002	03.0	Concrete Work	158.68 CY	1,965.59 /CY	311,890
		04.0	Masonry	1,922.90 SF	87.88 /SF	168,982
		05.0	Metals	1.00 LS	27,216.25 /LS	27,216
		06.0	Wood, Plastics and Composites	1,140.00 SF	2.55 /SF	2,912
		07.0	Thermal and Moisture Protection	1,138.00 SF	75.62 /SF	86,052
		08.0	Openings	5.00 EA	16,884.56 /EA	84,423
		09.0	Finishes	6,797.25 SF	22.45 /SF	152,576
		10.0	Specialties	1.00 EA	12,813.04 /EA	12,813
		22.0	Plumbing	1.00 LS	30,785.90 /LS	30,786
		23.0	HVAC	1.00 LS	101,407.51 /LS	101,408
		26.0	Electrical Work	1.00 LS	224,779.32 /LS	224,779
		31.0	Earthwork	549.32 CY	799.91 /CY	439,407
		40.0	Process Pipe	161.00 LF	467.53 /LF	75,273
		40.9	Instrumentation & Controls	1.00 LS	22,831.03 /LS	22,831
41.0		Material Processing and Handling Equipment	1.00 EA	18,601.94 /EA	18,602	
43.0		Process Gas and Liquid Handling Equipment	2.00 EA	251,629.01 /EA	503,258	
002		002 GRIT REMOVAL SYSTEM (GRS) FACILITY	1.00 PR	2,263,206.85 /PR	2,263,207	
		SITWORK				
	02.0	Existing Conditions	1.00 LS	95,996.98 /LS	95,997	
	26.0	Electrical Work	1.00 LS	331,400.67 /LS	331,401	
	27.0	Communications	1.00 LS	12,973.36 /LS	12,973	
	31.0	Earthwork	0.00	/CY	242,902	
	32.0	Exterior Improvements	1.00 LS	16,322.77 /LS	16,323	
	33.0	Utilities	396.00 LF	207.59 /LF	82,204	
		003 SITEWORK	1.00 LS	781,800.27 /LS	781,800	
	004		YARD PIPING			
33.0		Utilities	189.00 LF	629.62 /LF	118,998	
	004 YARD PIPING	189.00 LF	629.62 /LF	118,998		

SUMMARY REPORT

Project Name: 438951CH- Grit Removal System - GTCSTF - TempleEstimator:
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Estimate Totals

Description	Amount	Totals	Hours	Rate	Cost / Unit	% of Total
Labor	2,300,696		22,806.165 hrs			43.77%
Material	1,886,373					35.89%
Subcontract	639,300					12.16%
Equipment	390,193		11,830.986 hrs			7.42%
Other	40,013					0.76%
Total Prime Contractor Costs	5,256,575	5,256,575				100.00%
Total Construction Cost	5,256,575	5,256,575				100.00%
Total		5,256,575				