

ANN ARBOR CHARTER TOWNSHIP BOARD OF TRUSTEES MEETING AGENDA

Monday, December 16, 2024, at 7:30 PM
Township Office, 3792 Pontiac Trail, Ann Arbor MI 48105

To participate via video conference call - [Click here to register](#) or [Visit aatwp.org](#)

I. CALL TO ORDER, ESTABLISH QUORUM

II. APPROVAL OF BOARD OF TRUSTEES MINUTES

- A. Regular Meeting Nov 18, 2024
- B. Special Meeting November 18, 2024
 - 1) Open session minutes
 - 2) Closed session minutes

III. CITIZEN PARTICIPATION 7:30 - 7:45 - Citizen Participation on Agenda items only. Call the Township Office for reserved time- 663-3418 - before noon on the day of the meeting. Public Comment regarding non-agenda items is at the end of the meeting.

IV. APPROVE THE AGENDA AND CONSENT AGENDA

- A. Claims Listing: 11-14-24 to 12-10-24 for \$284,153.70.
- B. Appoint Sharon Popp to serve on the Climate Resilience Committee.
- C. Approve contract for Jesse O'Jack to represent the Township in 14th District Ct cases.
- D. Appoint Peter Kotila to serve on the Utilities Committee.
- E. Approve the Resolution of the Ann Arbor Charter Township Board of Trustees to enter into an interlocal agreement founding the Washtenaw Area Mutual Aid Council, which will create a governmental entity pursuant to the Urban Cooperation Act of 1967, MCL 124.501
- F. Approve Farmland and Open Space consultant Barry Lonik rate increase of \$120 per hour for acquisition work and \$60 per hour for easement monitoring for 2025, and \$125 per hour for acquisition work in 2026.
- G. Approve renewal of Pitney Bowles lease for an annual cost of \$825.24.

V. ANNEXATIONS, ORDINANCES, ZONING, RESOLUTIONS

- A. Closed Session to Consider the purchase of real property pursuant to Section 8(1)(d) of the Michigan Open Meetings Act (MCL 15.268(1)(d)).
- B. Insurance Coverage Proposal – Kevin Decker, Decker Agency
 - 1) Approve Public Entity Insurance Package for \$107,568
- C. Conflict of Interest

- 1) Ordinance to Amend Chapter 2, Administration Article VI, Boards and Commissions, Division 1 Planning Commission, First Reading.
 - 2) Resolution to Adopt Policy for Conflict of Interest
- D. Ordinance to Amend Code Section 1-7, Penalties, First Reading
- E. Resolution Approving Reallocation of American Rescue Plan Act (ARPA) Funds
- F. Article VII. Soil erosion and Sedimentation Control, Division 1. Authority, Purpose, Interpretation, Sections 26-434, Sec. 26-451, Division 3. Sec. 26-461, Second Reading.
- G. Approve Bodman 2025 Rates.
- H. Resolution Electing Exemption from the Requirements of the Publicly Funded Health Insurance Contribution Act
- I. Washtenaw Regional Resource Management Authority (WRRMA)
- 1) Resolution to appoint 2025 WRRMA delegate and alternate delegate
 - 2) Review and provide any objections to 2025 WRRMA budget
 - 3) Approve 2025 WRRMA membership dues of \$5,000
- J. Approve the 2025 Ann Arbor Township Meeting Dates

VI. REPORTS, DISCUSSIONS

A. Supervisor's Report

B. Clerk's Report

C. Treasurer's Report

D. Planning Commission Report – December 2, 2024

1) Planning Commission Annual Report

E. Committee Report

1) Farmland Open Space and Preservation Board Report – November 25, 2024

2) Utility Committee – December 13, 2024

3) Climate Resilience Committee – December 9, 2024

(a) Energy Audit

(b) Community Engagement November 21, 2024

4) Zoning Board of Appeals

5) Public Safety Committee

6) Roads Committee

F. Utilities Department Report

G. Public Safety Report

1) Washtenaw County Sheriff's Department

2) Fire Department – Chief Mark Nicholai

H. Building Department Report

VII. INFORMATION ONLY ITEMS

VIII. NON-AGENDA ITEMS

IX. PUBLIC COMMENT

X. ADJOURNMENT

ANN ARBOR CHARTER TOWNSHIP
BOARD OF TRUSTEES MEETING
MINUTES OF MEETING – MONDAY, NOVEMBER 18, 2024
TOWNSHIP OFFICES - 3792 PONTIAC TRAIL, ANN ARBOR MI

I. CALL TO ORDER, ESTABLISH QUORUM

Supervisor O'Connell called the Ann Arbor Charter Township Board of Trustees meeting to order at 7:30 pm on November 18, 2024.

Present: Supervisor Diane O'Connell
Treasurer Carlene Colvin-Garcia
Clerk Rena Basch
Trustee John Allison
Trustee Della DiPietro
Trustee Michael Moran
Trustee Kristine Olsson

Absent: None

Also Present: Fire Chief Nicholai
Utilities Director Judkins
Attorney Gabis, Bodman PLC

II. APPROVAL OF BOARD OF TRUSTEES MINUTES

A. Regular Meeting October 21, 2024

MOTION by Allison, support by DiPietro, to amend and approve the minutes of the October 21, 2024 regular meeting as follows:

- P. 3, strike 1st bullet point.
- P. 6, 2nd paragraph before MOTION, correct to read: "agricultural community" instead of "Agricultural Committee."
- P. 7, 2nd bullet point, end of 4th line, correct to read: ". . . including near The Haven/Village Green."
- P. 7, 3rd bullet point, end of 1st line, correct to read: "County *Administrator* Dill."
- P. 7, last bullet point under Board discussion and ordinance violation, correct to read: "Trustee DiPietro pointed out that ongoing truck idling at the mine was also a significant noise issue."
- P. 8, 2nd bullet point, correct to read: "Election Commission met on October 7."
- P. 8, under C. Treasurer's Report, last bullet point, correct to read: "Blueberry Road paving is nearing completion."

Motion passed unanimously by voice vote.

B. Special Meeting November 13, 2024 – Open Session Minutes

MOTION by Allison, support by Moran, to approve the November 13, 2024 Open Session Special Meeting minutes as submitted.

Motion passed unanimously by voice vote.

C. Special Meeting November 13, 2024 – Closed Session Minutes

MOTION by Colvin-Garcia, support by Moran, to approve the November 13, 2024 Special Meeting Closed Session minutes as submitted.

Motion passed unanimously by voice vote.

III. CITIZEN PARTICIPATION - None

IV. INTRODUCTION OF NEW FULL-TIME FIRE FIGHTER – LANDON UMFLEET

Fire Chief Nicholai introduced Landon Umfleet as the Department's newest career fire fighter. Fire Fighter Umfleet had been chosen after a thorough selection process and began his new role on October 28. A member of the Department since 2019, Umfleet has completed a range of certifications and training programs, including Firefighter II, Hazardous Materials Operations, driver's training, EMT-Basic, Pre-Hospital Trauma Life Support, Traffic Incident Management, vehicle extrication, advanced vehicle stabilization, ice rescue, and numerous incident command classes. He has also honed his skills in both truck and engine company operations.

The Board congratulated Fire Fighter Umfleet on his new position.

V. APPROVE THE AGENDA AND CONSENT AGENDA

MOTION by Allison, support by DiPietro, to amend and approve the Agenda and Consent Agenda as follows:

- **Correct A. Claim Listing to read: 10-18-24 to 11-13-24 for \$795,082.73;**
- **Move VII.F Utilities Department Report to VI.C., with the remaining items in VI. renumbered accordingly.**
- **Move V.D., Approve 2025 Personnel Report to VI.F.**

Motion passed unanimously by voice vote.

Consent Agenda:

- A. Claims Listing: 10-18-24 to 11-13-24 for \$795,082.73; 10-17-24 to 10-17-24 for \$88,539.16
- B. Approve Annual Membership invoice for WATS in the amount of \$1,000.
- C. Approve adding overdue utility charges of \$851.52 for the property at 4050 E. Huron River Service Drive to the 2024 tax roll.
- D. Approve the Annual MAPERS Membership of \$200.

VI. ANNEXATIONS, ORDINANCES, ZONING, RESOLUTIONS

A. Adopt Capital Improvement Plan

MOTION by Allison, support by O’Connell, to amend and adopt the Capital Improvement Plan as follows:

- **Under Fire Department,**
 - o 1st line, delete “Replace with (Gas)”^o; and 3rd and 4th lines, delete “Replace with Hybrid”
 - o 3rd line, change 2024 amount from 1,400,000 to 1,100,000

Motion passed unanimously by voice vote.

B. Approve Revised L4029

A clean corrected copy of Form L4029 was presented to the Board, except that the spelling of Clerk Basch’s name also needed to be corrected.

MOTION by Olsson, support by Colvin-Garcia, that the Ann Arbor Charter Township Board of Trustees approve the revised L4029 form as submitted this evening, with corrected spelling of Rena Basch’s name.

Motion passed unanimously by voice vote.

C. Utilities Department Report

Utilities Director Judkins briefly reviewed the written Utilities Department Report, which was in the packets.

Discussion focused on:

- Barton Hills water demands: Ann Arbor Township is looking at renegotiating their water contract with the City of Ann Arbor. The Village of Barton Hills found that there is no language in their agreement with the City regarding their water supply, so they’ve requested to be included under Ann Arbor Township’s contract. The Township is waiting for Barton Hills to provide the specific quantity of water that they require.
- Update on Maple Ridge/Barton Ridge development construction and explanation of their wastewater treatment facility.

D. Article VII. Soil Erosion and Sedimentation Control, Division 1. Authority, Purpose, Interpretation, Sections 26-434, Sec. 26-451, Division 3. Sec. 26-461. First Reading.

Utilities Director Judkins explained that this amendment seeks to address issues with soil erosion and sedimentation control applications, particularly for small-scale residential projects. Homeowners often struggle to complete the extensive requirements for these state permits, leading to delays, increased costs, and inefficiencies for both residents and the Township. To streamline the process, the proposed amendment introduces a simpler grading permit for small projects, which eliminates the need for all 13 state-mandated items in the soil erosion permit. For larger projects—those over one acre or within 500 feet of a watercourse—the full soil erosion permit with all required documentation will still apply. This change reduces the administrative burden, will improve compliance, and will prevent potential penalties from the state while maintaining environmental safeguards.

MOTION by Colvin-Garcia, support by Allison, that the Ann Arbor Charter Township Board of Trustees approve AMENDMENT TO CODE: CHAPTER 26, ENVIRONMENT, ARTICLE VII SOIL EROSION AND SEDIMENTATION CONTROL, First Reading, dated November 18, 2024.

Motion passed unanimously by voice vote.

- E. Approve the MDOT contract for the Gateway Treatment on Joy Road Bridge**
Supervisor O’Connell explained that the submitted resolution formalizes the agreement with Michigan Department of Transportation (MDOT) for the installation of the “Welcome to Ann Arbor Charter Township” gateway sign on Joy Road, ensuring compliance with MDOT requirements and authorizing the project to move forward.

MOTION by DiPietro, support by Colvin-Garcia, that the Ann Arbor Charter Township Board of Trustees approve the resolution “CONTRACT No. 24-5366 , Control Section BO 81075; BFP 81075, Job Number 215788CON;215788PE/S by and between the MICHIGAN DEPARTMENT OF TRANSPORTATION and the Ann Arbor Charter Township, dated 18 day of November, 2024”, subject to Township attorney review and approval.

Motion passed unanimously by voice vote.

Supervisor O’Connell will see if the motion maker identification and signature wording on the acceptance page can be changed from “Commissioner” to “Trustee.”

- F. Approve 2025 Personnel Report**
After discussion, and acknowledging that last year’s rates had been sent to Board members, the following motion was made:

MOTION by Allison, support by DiPietro, to approve the 2025 Personnel Report.

Motion passed unanimously by voice vote.

- G. Approve Bodman 2025 Rates**
Referencing the November 12, 2024 memorandum from Sarah Williams and Sarah Gabis, Township Attorney Gabis went over the proposed rate adjustment to Bodman’s hourly rate for legal services for calendar year 2025.

Several Trustees expressed concerns about approving the change without having time to review the memo that had been provided earlier that day. After discussion, the Board decided to table the approval of the proposed rates until the December meeting to allow time for further review and clarification, with the following motion:

MOTION by Moran, support by Allison, to table action on Bodman 2025 Rates to the December meeting.

Motion passed unanimously by voice vote.

VII. REPORTS, DISCUSSIONS

A. Supervisor's Report – O'Connell

- Middle Huron Update
- November 13, 2024 Communications Consultant Report in the packets.
- Dixboro Pathway design is approved, just in time to access the American Rescue Plan Act (ARPA) funds designated for the project. The Township has been meeting with SEMCOG who has been very helpful. Additionally, the Township is awaiting the outcome of the Natural Features Trust Fund grant, expected in December. Should this funding not materialize, alternative funding options, such as TAP or Connecting Communities grants, will be pursued. Currently, the project has \$40,000 allocated for design, \$40,000 for the culvert, and \$250,000 for construction, leaving a funding gap of approximately \$200,000. The approval of the design opens up new opportunities, and obtaining the EGLE permit remains a critical next step for advancing the project.
- Community Engagement meeting scheduled for November 21 at 7:00pm regarding the Climate Report.
- Meeting with the City of Ann Arbor 2nd week of December regarding the water agreement.
- Three tie-barred preemptive sand and gravel bills are in the state legislature: Bills 6108, 6109, 6011. The Township opposes these bills; perhaps a resolution should be crafted to express this opposition.
- House bill 5557 supports housing by requiring planning commissions to include local housing needs in their work.

Noting that this was Trustees Olsson and Moran's last meeting, Supervisor O'Connell thanked both for their service.

Supervisor O'Connell noted that Trustee Olsson is a first-rate environmental activist, always in the forefront looking for new and creative ways of dealing with problems and trying to solve issues. Supervisor O'Connell and Trustee Olson have worked together on Township business since 1996.

Supervisor O'Connell related Trustee Moran's history with the Township starting with his appointment to the Planning Commission on July 7, 1993, his appointment as Supervisor effective September 18, 2002, and his assistance when Supervisor O'Connell became Supervisor.

Trustees DiPietro and Allison, who had served with Trustee Moran for decades, also made comments as to his positive impact on the Township and on the Board. Trustee Moran was the Township's longest serving Supervisor and shaped the Township's future in countless ways. His contributions to the Board and the Township are immeasurable.

Discussion of updates and action items from Supervisor's Report:

- Trustee Allison raised the importance of including mining-related information in Township communications, specifically noting gaps in updating aquifer recovery and sound data. Emphasizing that residents have a right to easily access this information, he suggested that Communications Consultant Burke be tasked with providing regular updates to mining-related data on the Township website, ideally on a biweekly basis.

- Trustee Allison questioned the utility of a proposed survey (noted on Consultant Burke's report) for township representatives and employees. Supervisor O'Connell said that she and Consultant Burke had discussed this item and agreed with Trustee Allison. Consultant Burke will be focusing some of her efforts on assisting committees such as the Climate Committee, especially with grant applications.
- Trustee Allison highlighted issues with queuing near the mine, particularly vehicles arriving shortly before the designated 7:00am start time. (Written communication from the mine indicates a queuing time of 6:50am). Mine operators need to understand that arrivals before 7:00am are unacceptable, and their communication with truckers and others should clearly state the 7:00am start time.
- Concerns were also raised about gravel placement near the mine entrance, with potential erosion issues noted. Utilities Director Judkins will inspect the area and address any problems.
- Trustee Allison emphasized the need to review and streamline the Township's conflict of interest policies, which are inconsistent across ordinances, planning commission rules, and board policies. He suggested simplifying these policies, potentially using the Board's existing policy across all boards and committees.
- Attorney Gabis confirmed she is drafting revised conflict of interest policies.
- Trustee Allison asked about the update to the fines and fees ordinance. Attorney Gabis will follow up.

B. Clerk's Report – Basch

- Ordinance supplement: Work on Supplement #6 is ongoing. The supplement draft is still being reviewed by the Township attorney, and the goal is to finish by December for incorporation into the online code.
- Election Statistics: The Township had 77% voter turnout, outperforming the County average of 66%. Excluding inactive voters, the turnout reached 89%. 59% of voters cast absentee ballots. Among in-person voters, turnout was equally split between early voting and election day, which meant that only 20% of voters voted on election day.
- Clerk Basch highlighted the challenge of managing responsibilities, including publishing deadlines, posting, website updates, and monthly e-Newsletters. She noted that Consultant Burke's proposal to assist Township employees could provide valuable support for these tasks, particularly for the monthly e-Newsletter.
- Clerk Basch thanked staff and especially the Clerk and Utilities Department for their support during the election.

C. Treasurer's Report – Colvin-Garcia

- Tax updates: Tax rolls are done and will be sent to the printer tomorrow. Tax bills will now include a fifth payment option for paying taxes online. A soft rollout for summer tax online payments had been surprisingly successful.
- Millage update: The Township's total millage rate has increased due to the passage of the Washtenaw County millages.
- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Report: Colvin-Garcia today received the ASHRAE Level II energy audit report; this will be presented to the Board at the next meeting.
- Newsletter: Working with Consultant Burke was a success.

- Survey: 200 responses were received in response to the survey, mostly in paper form (approximately 170 out of 200 responses were paper).

D. Planning Commission Report November 7, 2024 – Allison

Trustee Allison overviewed the November 7, 2024 regular Planning Commission meeting, where the Commission continued reviewing proposed adjustments to the Tree and Woodland Resource Preservation Ordinance amendment. The Commission tabled a request for a tree and woodland removal permit for a property on Dixboro Road to the December 2 meeting, to give the applicant time to submit revised plans. Additionally, the Commission approved a minor change to a PUD to allow the installation of a storage shed at the Optus Health and Rehabilitation Center on Huron River Drive.

Workshop October 28, 2024

The Planning Commission continued to work on the Township Master Plan.

E. Committee Reports

1. Farmland Open Space and Preservation Board Report – September 23, 2024

Did not meet in September. Next meeting scheduled for November 25.

2. Utility Committee – September 26, 2024; October 16, 2024

Meeting with the City of Ann Arbor regarding water agreement in December.

3. Climate Resilience Committee, October 4, 2024; October 14, 2024

As already noted, Community Engagement meeting is scheduled for November 21, 7:00pm. Washtenaw County Climate Resilience Director Beth Gibbons will be present. A representative from the City of Ann Arbor Office of Sustainability and Innovation will also be there.

Trustee Allison congratulated the Committee on a very well done Climate Report.

4. Zoning Board of Appeals – Did not meet.

5. Public Safety Committee

Has been meeting.

1) **Washtenaw County Sheriff's Department** - Report is in the packets

6. Roads Committee

Did not meet. New SAD (Special Assessment District) is being worked on for part of Country Club Road.

F. Utilities Department Report - Provided above (VI.C.)

G. Public Safety Report

1) Washtenaw County Sheriff's Department

Lt. Kratzenberg suggested installing "no parking" (or perhaps "no standing") signs on Earhart Road.

2) Fire Department – Chief Mark Nicholai

Chief Nicholai briefly reviewed the written October 2024 Fire Department report, included in the Board packets.

Request to purchase SMEAL Rescue Pumper

Chief Nicholai presented a purchase request for the acquisition of a new fire engine, a topic previously discussed during Capital Improvement Plan (CIP) reviews and meetings with various committees, including the Climate Resilience and Public Safety Committees. The request addresses two fire engines nearing the end of their 15-year service life, which is a realistic lifespan for such apparatus. Due to the long lead time for delivery—approximately 850 days from contract signing—planning for replacement is essential.

The CIP identified one purchase for 2024 and another for 2025.

After extensive debate, the Climate Resilience Committee endorsed the inclusion of idle reduction technology in the new engine specifications, aligning with environmental goals. The specifications were carefully developed to meet operational needs while ensuring compatibility with existing equipment, thereby minimizing the learning curve for staff, especially paid-on-call members.

Following a detailed review with the Public Safety Committee, the recommendation is to purchase the single engine from R&R Fire Truck Repair at a total prepayment cost of \$1,025,660, which prepayment would save approximately \$222,000. Chief Nicholai requested the Board's authorization to proceed with the purchase.

Noting that the purchase deadline of November 20 was a hard deadline, and after discussion regarding the contract language, including whether the 5% contingency fee is included in the purchase price, discussion of (8) indemnification statement, and discussion of other contract statements that were not completely clear, the following motion was offered:

MOTION by Moran, support by Olsson, that the Ann Arbor Charter Township Board of Trustees authorize the purchase from R& R Fire Truck Repair, Inc., of a 2025 [or newer] Smeal 1000-Gallon Side-Mount Eco Idle-Tech Rescue Pumper, through the Sourcewell Contract, for an amount not to exceed \$1,025,660.00, plus a 5% contingency, pending Township Attorney review and approval of the contract.

Motion passed by voice vote 6-1 (Colvin-Garcia opposed).

Chief Nicholai acknowledged Captain Kempf who had spent the better part of last year working on the specifications for this purchase.

Treasurer Colvin-Garcia said her "no" vote was not in opposition to the purchase generally, but she was opposed to not having a clear picture of whether the 5% contingency fee was included in the total cost quoted. She thanked Trustee DiPietro

(former Treasurer) for managing the Township's investments so effectively, ensuring that funds are available for these purchases.

Trustee Allison discussed the idea of a green roof for Fire Station Two, which had been considered following the previous meeting's approval of the roof replacement. After consulting with the Public Safety Committee and the Fire Chief, Trustee Allison concluded that the costs and structural requirements for retrofitting the green roof made it impractical. Fire Captain Kempf added that preliminary evaluations by contractors revealed the need for extensive redesign for a green roof, further confirming the decision to forego the retrofit.

Board members emphasized the importance of continuing to explore climate resilience initiatives. They commended the Fire Department for its openness to engaging with the Climate Resilience Committee and pursuing environmentally conscious options, such as solar panels, where feasible. The forthcoming Level II ASHRAE report discussion is expected to include discussion of solar, which may provide new information regarding pursuing this option.

H. Building Department Report - Report is in the packets.

VIII. INFORMATION ONLY ITEMS - None.

IX. NON-AGENDA ITEMS - None

IX. PUBLIC COMMENT - None.

X. ADJOURNMENT

**MOTION by Moran, support by Olsson, to adjourn the meeting.
Motion passed unanimously by voice vote.**

The meeting was adjourned at 9:27pm.

**ANN ARBOR CHARTER TOWNSHIP
BOARD OF TRUSTEES SPECIAL MEETING – MONDAY, NOVEMBER 18, 2024
TOWNSHIP OFFICE 3792 PONTIAC TRAIL, ANN ARBOR, MI**

MEETING MINUTES

I. CALL TO ORDER, ESTABLISH QUORUM

Supervisor O’Connell called the Special Meeting to order at 6:18 pm.

Present: Supervisor Diane O’Connell, Clerk Rena Basch, Treasurer Carlene Colvin-Garcia, Trustees John Allison, Della DiPietro, Kris Olsson and Michael Moran.

Also present: Township Attorney Sarah Gabis. Present via video conference call: Township Attorney Tom Meagher, Bodman Attorneys Erica Sarver and Kelly Lockman, and Township Controller Colleen Coogan.

II. CLOSED SESSION

A. Consider the purchase of real property pursuant to Section 8(1)(d) of the Michigan Open Meetings Act (MCL 15.268(1)(d)).

Colvin-Garcia moved to go into closed session per MCL 15.268(1)(d) of the Michigan Open Meetings Act to consider the purchase or lease of real property and consult with Township attorneys. Allison seconded.

Roll call vote:

Allison – yes

Basch – yes

Colvin-Garcia – yes

DiPietro – yes

Olsson - yes

Moran - yes

O’Connell – yes

Motion passed 7-0. The Board of Trustees moved into closed session at 6:19 pm.

Board returned to the meeting room at 7:25 pm.

III. OPEN SESSION

Allison moved to adjourn the closed session and return to open session. Colvin-Garcia seconded. **Motion passed 7-0.** The Board of Trustees moved into open session at 7:28 pm

Allison moved to authorize the Supervisor to sign the purchase agreement and the ancillary documents necessary to execute the transaction after attorney review; _____seconded.

Roll call vote:

Allison –
Basch – absent
Colvin-Garcia –
DiPietro –
Olsson -
Moran -
O'Connell –

Motion passed 6-0.

DiPietro moved to authorize the Supervisor to spend up to an additional \$15,000 to provide more due diligence on the land purchase. _____seconded.

Roll call vote:

Allison –
Basch – absent
Colvin-Garcia –
DiPietro –
Olsson -
Moran -
O'Connell –

Motion passed 6-0.

IV. PUBLIC COMMENT - None

V. ADJOURN

Allison moved to adjourn the Special Meeting; Colvin-Garcia seconded. Motion passed. Meeting adjourned at _____ pm.

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 101 GENERAL FUND					
Dept 000 OTHER REVENUE ACCOUNT					
101-000-202.002	BCN ACCRUED LIABILITIES	BLUE CARE NETWORK	HEALTH INSURANCE	7,250.52	2089700940
101-000-202.002	BCN ACCRUED LIABILITIES	BLUE CARE NETWORK	HEALTH INSURANCE	7,250.52	2089700948
101-000-202.003	BCBS ACCRUED LIAB	BLUE CROSS & BLUE SHIEI	HEALTH INSURANCE	9,858.33	2089700941
101-000-202.003	HEALTH INSURANCE	BLUE CROSS & BLUE SHIEI	HEALTH INSURANCE	14,012.51	2089700949
101-000-232.000	EMPLOYEE REIMBURSEMENT	VERIZON WIRELESS	CELLPHONES	40.01	2089700936
101-000-232.000	EMPLOYEE REIMBURSEMENT	VERIZON WIRELESS	CELLPHONES & PHONE UPGRADE FOR UTI	40.01	2089700957
Total For Dept 000 OTHER REVENUE ACCOUNT				38,451.90	
Dept 171 SUPERVISOR					
101-171-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	OCTOBER LIFE INSURANCE	178.46	2089700944
101-171-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	NOVEMBER LIFE INSURANCE	178.46	2089700951
101-171-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAG	WORKER'S COMP INSTALLMENT 2	79.83	38076
101-171-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAG	WORKER'S COMP INSTALLMENT 3	79.83	38076
101-171-955.200	CONVENTION & CONFERENCES	MICHIGAN TOWNSHIPS ASSC	LIVE WEBINAR	25.00	2089700957
Total For Dept 171 SUPERVISOR				541.58	
Dept 215 CLERK					
101-215-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	OCTOBER LIFE INSURANCE	174.60	2089700944
101-215-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	NOVEMBER LIFE INSURANCE	174.60	2089700951
101-215-715.002	DENTAL INSURANCE	Delta Dental of Plan of	DENTAL INSURANCE -OCTOBER	147.42	2089700943
101-215-715.002	DENTAL INSURANCE	Delta Dental of Plan of	DENTAL INSURANCE -NOVEMBER	147.42	2089700950
101-215-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAG	WORKER'S COMP INSTALLMENT 2	133.05	38076
101-215-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAG	WORKER'S COMP INSTALLMENT 3	133.05	38076
101-215-725.000	MEMBERSHIPS - DUES	ASSOCIATION OF MUNICIPA	MEMBERSHIP	90.00	2089700936
Total For Dept 215 CLERK				1,000.14	
Dept 228 TECHNOLOGY					
101-228-818.000	SERVICE CONTRACTS	DASHLANE	PASSWORD MANAGER APP	144.00	2089700936
101-228-818.000	SERVICE CONTRACTS	MICROSOFT CORPORATION	MICROSOFT 365 APPS	143.20	2089700936
101-228-818.000	SERVICE CONTRACTS	MICROSOFT CORPORATION	MICROSOFT 365 APPS	8.25	2089700936
101-228-818.000	SERVICE CONTRACTS	TAZ NETWORKS INC	IT SERVICE AND APPS	1,100.76	2089700936
101-228-818.000	SERVICE CONTRACTS	TAZ NETWORKS INC	IT SERVICE AND APPS	229.00	2089700936
101-228-818.000	SERVICE CONTRACTS	WEBROOT	ANTI VIRUS	74.19	2089700936
101-228-818.000	AATWP WEBSITE SUPPORT	JCM MEDIA GROUP LLC	AATWP WEBSITE SUPPORT	300.00	2089700945
101-228-818.000	AATWP WEBSITE SUPPORT	JCM MEDIA GROUP LLC	AATWP WEBSITE SUPPORT	300.00	2089700952
101-228-818.000	SERVICE CONTRACTS	ADOBE	ADOBE SOFTWARE	239.88	2089700957
101-228-818.000	SERVICE CONTRACTS	MICROSOFT CORPORATION	MICROSOFT 365 APPS	139.29	2089700957
101-228-818.000	SERVICE CONTRACTS	MICROSOFT CORPORATION	MICROSOFT 365	8.25	2089700957
101-228-818.000	SERVICE CONTRACTS	TAZ NETWORKS INC	IT SERVICE AND APPS	229.00	2089700957
101-228-818.000	SERVICE CONTRACTS	TAZ NETWORKS INC	IT SERVICE AND APPS	1,138.50	2089700957
101-228-933.000	REPAIR & MAINTENANCE	GODADDY.COM	AATWP DOMAIN	23.17	2089700957
101-228-980.000	PURCHASES	AMAZON.COM LLC	VOICE RECORDER FOR PUBLIC MEETINGS	102.50	2089700936
Total For Dept 228 TECHNOLOGY				4,179.99	
Dept 253 TREASURER					
101-253-404.000	PROPERTY TAX ADJUSTMENTS	WASHTENAW COUNTY TREASU	DALE NEWMAN 2023 TAX ADJUSTMENT	131.76	38088
101-253-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	OCTOBER LIFE INSURANCE	257.71	2089700944
101-253-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	NOVEMBER LIFE INSURANCE	257.71	2089700951
101-253-715.002	DENTAL INSURANCE	Delta Dental of Plan of	DENTAL INSURANCE -OCTOBER	43.71	2089700943

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 101 GENERAL FUND					
Dept 253 TREASURER					
101-253-715.002	DENTAL INSURANCE	Delta Dental of Plan of	DENTAL INSURANCE -NOVEMBER	43.71	2089700950
101-253-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAG	WORKER'S COMP INSTALLMENT 2	133.05	38076
101-253-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAG	WORKER'S COMP INSTALLMENT 3	133.05	38076
101-253-725.000	MEMBERSHIPS - DUES	MICHIGAN MUNICIPAL TREA	MEMBERSHIP RENEWAL 2025	198.00	38077
101-253-725.000	MEMBERSHIPS - DUES	MGFOA	MGFOA MEMBERSHIP 2025	135.00	2089700957
Total For Dept 253 TREASURER				1,333.70	
Dept 257 ASSESSOR					
101-257-957.100	GENERAL OPERATING EXPENSES	APEX SOFTWARE	APEX SOFTWARE FOR 2025	375.00	38069
101-257-957.100	GENERAL OPERATING EXPENSES	KENT COMMUNICATIONS INC	MAILING OF THE 2025 PERSONAL PROPEI	30.02	38075
Total For Dept 257 ASSESSOR				405.02	
Dept 261 OPERATIONS					
101-261-728.000	PRINTING/BINDING	OBM	PRINTING FEES	277.72	2089700936
101-261-728.000	PRINTING/BINDING	LEAF	COPIER LEASE	302.50	2089700947
101-261-728.000	PRINTING/BINDING	LEAF	COPIER LEASE	302.50	2089700954
101-261-728.000	PRINTING/BINDING	OBM	PRINTING FEES	165.09	2089700957
101-261-730.000	POSTAGE & MAILING	PITNEY BOWES	POSTAGE	1,000.00	38078
101-261-730.000	POSTAGE & MAILING	PITNEY BOWES BANK INC	POSTAGE	299.27	38079
101-261-818.000	SERVICE CONTRACTS	WEST SHORE FIRE, INC.	ANNUAL INSPECTION OF SIRENS	2,550.00	38089
101-261-818.000	SERVICE CONTRACTS	SHREDCORP	SHREDDING	160.00	38128
101-261-818.000	SERVICE CONTRACTS	TETRA TECH	WATER SAMPLING	193.00	38130
101-261-851.000	TELECOMMUNICATIONS	COMCAST CABLE	TV AND INTERNET	65.00	2089700936
101-261-851.000	TELECOMMUNICATIONS	VERIZON WIRELESS	CELLPHONES	82.16	2089700936
101-261-851.000	TELECOMMUNICATIONS	COMCAST CABLE	TV AND INTERNET	65.00	2089700957
101-261-851.000	TELECOMMUNICATIONS	VERIZON WIRELESS	CELLPHONES & PHONE UPGRADE FOR UTI	138.40	2089700957
Total For Dept 261 OPERATIONS				5,600.64	
Dept 262 ELECTION					
101-262-909.000	ADVERTISING/PUBLISHING	DETROIT LEGAL NEWS PUBLI	ELECTION NOTICE	80.00	38071
101-262-957.100	GENERAL OPERATING EXPENSES	SOLID ROCK CHURCH	RENTAL FEE FOR ELECTION POLLS	200.00	38084
101-262-957.100	GENERAL OPERATING EXPENSES	CARPENTER BROS. HARDWAR	ELECTION STORAGE SUPPLIES	20.11	2089700936
101-262-957.100	GENERAL OPERATING EXPENSES	GOAL ZERO	YETI 300	332.90	2089700936
101-262-957.100	GENERAL OPERATING EXPENSES	ELECTION SOURCE	PRECINCT TRANSFER BAG	45.88	2089700957
Total For Dept 262 ELECTION				678.89	
Dept 265 BUILDINGS AND GROUNDS					
101-265-818.000	SERVICE CONTRACTS	JNS FACILITY MAINTENANC	JANITORIAL SERVICES	695.00	2089700946
101-265-818.000	JANITORIAL SERVICES	JNS FACILITY MAINTENANC	JANITORIAL SERVICES	695.00	2089700953
101-265-920.000	Gas Charges : 3792 Pontiac Tr	DTE Energy Company	Gas Charges : 3792 Pontiac Trl	63.31	2089700933
101-265-920.000	Electric Charges : 3792 Pont	DTE Energy Company	Electric Charges : 3792 Pontiac Tr	367.59	2089700933
101-265-933.000	REPAIR & MAINTENANCE	CARPENTER BROS. HARDWAR	LED LIGHTS	39.98	38092
101-265-933.000	REPAIR & MAINTENANCE	JETSTREAM MECHANICAL LI	HEATER REPAIR	1,471.00	38120
Total For Dept 265 BUILDINGS AND GROUNDS				3,331.88	
Dept 266 LEGAL & PROFESSIONAL					
101-266-804.000	ACCOUNTING SERVICES	THE WOODHILL GROUP LLC	ACCOUNTING SERVICES	1,610.90	38131
101-266-811.014	LITIGATION- SUN COMMUNITIES	FOSTER, SWIFT, COLLINS	LEGAL FEES	920.00	38072
101-266-811.017	LITIGATION- PAULETTE METOYER	FOSTER, SWIFT, COLLINS	LEGAL FEES	2,870.00	38072

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 101 GENERAL FUND					
Dept 266 LEGAL & PROFESSIONAL					
Total For Dept 266 LEGAL & PROFESSIONAL				5,400.90	
Dept 272 FARMLAND SUPPORT					
101-272-920.001	4400 Pontiac Trl/Tilian Farm	DTE Energy Company	4400 Pontiac Trl/Tilian Farm	152.58	2089700933
Total For Dept 272 FARMLAND SUPPORT				152.58	
Dept 701 PLANNING COMMISSION					
101-701-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	OCTOBER LIFE INSURANCE	127.41	2089700944
101-701-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	NOVEMBER LIFE INSURANCE	127.41	2089700951
101-701-715.002	DENTAL INSURANCE	Delta Dental of Plan of	DENTAL INSURANCE -OCTOBER	82.17	2089700943
101-701-715.002	DENTAL	Delta Dental of Plan of	DENTAL INSURANCE -NOVEMBER	82.17	2089700950
101-701-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAG	WORKER'S COMP INSTALLMENT 2	79.82	38076
101-701-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAG	WORKER'S COMP INSTALLMENT 3	79.82	38076
101-701-909.000	ADVERTISING/PUBLISHING	DETROIT LEGAL NEWS PUB	NEWSPAPER NOTICE	45.00	38071
101-701-955.200	CONVENTION/CONFERENCES/CLASS	THE UNIVERSITY OF MICH	CITIZEN PLANNER COURSE	250.00	2089700936
101-701-955.200	CONVENTION/CONFERENCES/CLASS	MICHIGAN STATE UNIVERS	CITIZEN PLANNER ONLINE CLASS FOR JI	250.00	2089700957
Total For Dept 701 PLANNING COMMISSION				1,123.80	
Dept 702 ZONING					
101-702-957.100	CODE ENFORCEMT EXPENSES	CARLISLE-WORTMAN ASSOCI	CODE ENFORCEMENT - AUGUST	683.00	38070
101-702-957.100	CODE ENFORCEMT EXPENSES	CARLISLE-WORTMAN ASSOCI	CODE ENFORCEMENT EXPENSES-OCT	1,209.00	38070
Total For Dept 702 ZONING				1,892.00	
Total For Fund 101 GENERAL FUND				64,093.02	
Fund 105 DEVELOPMENT RIGHTS MONITORING					
Dept 266 LEGAL & PROFESSIONAL					
105-266-806.000	CONSULTANTS - OTHER	TREEMORE ECOLOGY & LAN	DEVELOPMENT RIGHTS MONITORING	400.20	38085
Total For Dept 266 LEGAL & PROFESSIONAL				400.20	
Total For Fund 105 DEVELOPMENT RIGHTS MONITORING				400.20	
Fund 205 PUBLIC SAFETY FUND					
Dept 253 TREASURER					
205-253-404.000	PROPERTY TAX ADJUSTMENTS	WASHTENAW COUNTY TREASU	DALE NEWMAN 2023 TAX ADJUSTMENT	579.86	38088
Total For Dept 253 TREASURER				579.86	
Dept 301 POLICE/SHERIFF					
205-301-815.000	WASHTENAW COUNTY SHERIFF	WASHTENAW COUNTY TREAS	POLICE SERVICES-NOVEMBER	59,096.68	38087
205-301-815.000	WASHTENAW COUNTY SHERIFF	WASHTENAW COUNTY TREAS	POLICE SERVICES -OCT	59,096.68	38087
Total For Dept 301 POLICE/SHERIFF				118,193.36	
Total For Fund 205 PUBLIC SAFETY FUND				118,773.22	
Fund 206 FIRE FUND					
Dept 228 TECHNOLOGY					
206-228-818.000	SERVICE CONTRACTS	MICROSOFT CORPORATION	MICROSOFT 365 APPS	271.05	2089700936
206-228-818.000	SERVICE CONTRACTS	TAZ NETWORKS INC	IT SERVICE AND APPS	956.50	2089700936
206-228-818.000	SERVICE CONTRACTS	MICROSOFT CORPORATION	MICROSOFT 365 APPS	263.68	2089700957
206-228-818.000	SERVICE CONTRACTS	TAZ NETWORKS INC	IT SERVICE AND APPS	956.50	2089700957

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 206 FIRE FUND					
Dept 228 TECHNOLOGY					
206-228-980.000	Computer Adapters	AMAZON.COM LLC	Computer Adapters	56.96	2089700936
206-228-980.000	Cable Splitter	ZORO	Cable Splitter	67.54	2089700936
Total For Dept 228 TECHNOLOGY				2,572.23	
Dept 261 OPERATIONS					
206-261-727.000	Clipboards / Envelopes	QUILL CORPORATION	Clipboards / Envelopes	56.95	38127
206-261-727.000	Dry Erase Markers	QUILL CORPORATION	Dry Erase Markers	22.79	38127
206-261-727.000	Laminator Supplies	JACKSON-HIRSH INC	Laminator Supplies	125.85	2089700936
206-261-727.000	White Board Markers	OFFICEMAX/OFFICE DEPOT	White Board Markers	22.47	2089700936
206-261-728.000	PRINTING/BINDING	OBM	PRINTING FEES	160.92	2089700936
206-261-728.000	PRINTING/BINDING	LEAF	COPIER LEASE	302.50	2089700947
206-261-728.000	PRINTING/BINDING	LEAF	COPIER LEASE	302.50	2089700954
206-261-728.000	PRINTING/BINDING	OBM	PRINTING FEES	195.29	2089700957
206-261-730.000	Postage for Drivers Training	THE UPS STORE	Postage for Drivers Training Class	15.55	2089700936
206-261-742.000	FIRE FIGHTING SUPPLIES	CARPENTER BROS. HARDWARE	Tape / Paint / Brushes	34.44	38092
206-261-742.000	FIRE FIGHTING SUPPLIES	CARPENTER BROS. HARDWARE	Remote Control Batteries	14.99	38092
206-261-742.000	FIRE FIGHTING SUPPLIES	CARPENTER BROS. HARDWARE	Tin Snips	22.99	38092
206-261-742.000	FIRE FIGHTING SUPPLIES	TRACTOR SUPPLY CREDIT	Floor Dry	426.93	2089700935
206-261-742.000	Partitions	AMAZON.COM LLC	Partitions	49.99	2089700936
206-261-742.000	Paracord	AMAZON.COM LLC	Paracord	78.99	2089700936
206-261-742.000	3 Medical Glove Holders	HEIMAN INC	3 Medical Glove Holders	315.55	2089700936
206-261-742.000	1 Medical Glove Holders	HEIMAN INC	1 Medical Glove Holders	119.83	2089700936
206-261-742.000	Nail Gun	HOME DEPOT USA INC	Nail Gun	418.98	2089700936
206-261-742.000	FIRE FIGHTING SUPPLIES	GALL'S, INC.	Incident Command Supplies	112.34	2089700957
206-261-742.000	Storage Totes / HDMI Cable /	HOME DEPOT USA INC	Storage Totes / HDMI Cable / Sandp	63.64	2089700957
206-261-742.000	FIRE FIGHTING SUPPLIES	Wheeldesk	Incident Command Supplies	49.95	2089700957
206-261-742.001	EMS Supplies	BOUND TREE MEDICAL, LLC	EMS Supplies	387.27	38091
206-261-742.001	EMS SUPPLIES	BOUND TREE MEDICAL, LLC	EMS Supplies	17.68	38091
206-261-742.001	EMS SUPPLIES	BOUND TREE MEDICAL, LLC	EMS Supplies	429.87	38091
206-261-742.001	Medical Spacer	AMAZON.COM LLC	Medical Spacer	16.99	2089700936
206-261-742.002	Pictures	CVS	Pictures	20.65	2089700936
206-261-742.002	Frames	MICHAELS	Frames	21.19	2089700936
206-261-742.002	Picture Frames	MICHAELS	Picture Frames	51.90	2089700936
206-261-742.002	Halloween Supplies - Public R	VISTAPRINT USA	Halloween Supplies - Public Relatio	50.86	2089700957
206-261-742.002	Wood Disc	Woodpeckers	Wood Disc	13.39	2089700957
206-261-818.000	SERVICE CONTRACTS	COMCAST CABLE	TV AND INTERNET	117.13	2089700936
206-261-818.000	SERVICE CONTRACTS	COMCAST CABLE	TV AND INTERNET	185.92	2089700936
206-261-818.000	SERVICE CONTRACTS	COMCAST CABLE	TV AND INTERNET	185.92	2089700957
206-261-821.000	Dispatch Services	EMERGENT HEALTH PARTNER	Dispatch Services	2,388.30	38117
206-261-851.000	TELECOMMUNICATIONS	AT&T	FAX NUMBER	55.11	2089700936
206-261-851.000	TELECOMMUNICATIONS	COMCAST CABLE	TV AND INTERNET	111.95	2089700936
206-261-851.000	TELECOMMUNICATIONS	COMCAST CABLE	TV AND INTERNET	65.00	2089700936
206-261-851.000	TELECOMMUNICATIONS	VERIZON WIRELESS	CELLPHONES	482.26	2089700936
206-261-851.000	TELECOMMUNICATIONS	AT&T	FAX NUMBER	55.11	2089700957
206-261-851.000	TELECOMMUNICATIONS	COMCAST CABLE	TV AND INTERNET	65.00	2089700957
206-261-851.000	TELECOMMUNICATIONS	VERIZON WIRELESS	CELLPHONES & PHONE UPGRADE FOR UTI	482.32	2089700957
206-261-933.000	EQUIP REPAIR & MAINTENANCE	WEINGARTZ SUPPLY CO INC	Chain Saw Motor Repair	212.98	38136
206-261-933.000	Replacement Roof Materials f	HOME DEPOT USA INC	Replacement Roof Materials for Roo	527.52	2089700936

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 206 FIRE FUND					
Dept 261 OPERATIONS					
206-261-933.001	Annual Hose Testing	NATIONAL HOSE TESTING S	Annual Hose Testing	4,956.50	38124
206-261-955.000	MISCELLANEOUS	LAWSON PRODUCTS INC	Nuts / Bolts / Screws / Parts Supp.	251.00	38121
206-261-955.000	Monitor Stand	AMAZON.COM LLC	Monitor Stand	80.99	2089700936
206-261-955.000	Lunch - Drivers Training Cla	DOMINOS PIZZA	Lunch - Drivers Training Class	137.76	2089700936
206-261-955.000	Replacement Microwave Station	HOME DEPOT USA INC	Replacement Microwave Station 1	141.58	2089700936
206-261-955.000	Morning Refreshments - Drive	KROGER	Morning Refreshments - Drivers Tra	14.96	2089700936
206-261-955.000	Fire Academy Graduation Refre	MEIJER, INC	Fire Academy Graduation Refreshment	62.49	2089700936
206-261-955.000	Bar Code Equipment Software	ORCA SCAN	Bar Code Equipment Software Program	40.00	2089700936
206-261-955.000	Station Supplies	SAM'S CLUB/SYNCHRONY BA	Station Supplies	173.23	2089700936
206-261-955.000	MISCELLANEOUS	HOME DEPOT USA INC	Materials to Construct Storage Area	63.94	2089700957
206-261-955.000	MISCELLANEOUS	LITTLE CEASERS	Lunch for Department Work Detail	21.59	2089700957
206-261-955.000	Bar Code Equipment Software	ORCA SCAN	Bar Code Equipment Software Program	40.00	2089700957
206-261-955.000	Station Supplies / Folding T	SAM'S CLUB/SYNCHRONY BA	Station Supplies / Folding Tables	353.38	2089700957
Total For Dept 261 OPERATIONS				15,195.18	
Dept 265 BUILDINGS AND GROUNDS					
206-265-775.000	Lysol	HOME DEPOT USA INC	Lysol	12.58	2089700936
206-265-775.000	Lysol	HOME DEPOT USA INC	Lysol	12.58	2089700957
206-265-920.000	Gas Charges : 3792 Pontiac Tr	DTE Energy Company	Gas Charges : 3792 Pontiac Trl	63.31	2089700933
206-265-920.000	4319 Goss Rd	DTE Energy Company	4319 Goss Rd	949.52	2089700933
206-265-920.000	Electric Charges : 3792 Ponti	DTE Energy Company	Electric Charges : 3792 Pontiac Trl	367.59	2089700933
206-265-920.000	Fire Station 4301 GOSS RD BLD	DTE Energy Company	Fire Station 4301 GOSS RD BLDG B C	24.72	2089700933
206-265-933.000	REPAIR & MAINTENANCE	CARPENTER BROS. HARDWAR	LED LIGHTS	15.99	38092
206-265-933.000	REPAIR & MAINTENANCE	HALEY MECHANICAL	Station 1 - Tube Heater Repair - P	479.51	38119
206-265-933.000	Station 1 Furnace Repair	HALEY MECHANICAL	Station 1 Furnace Repair	175.00	38119
206-265-933.000	REPAIR & MAINTENANCE	JETSTREAM MECHANICAL LI	Station 1 Furnace Repair	149.00	38120
206-265-933.000	Furnace Filters	HOME DEPOT USA INC	Furnace Filters	41.94	2089700936
206-265-933.000	Glue / Cabinet Lights	HOME DEPOT USA INC	Glue / Cabinet Lights	56.55	2089700957
Total For Dept 265 BUILDINGS AND GROUNDS				2,348.29	
Dept 270 PERSONNEL					
206-270-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	OCTOBER LIFE INSURANCE	1,001.28	2089700944
206-270-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	NOVEMBER LIFE INSURANCE	1,001.28	2089700951
206-270-715.002	DENTAL INSURANCE	Delta Dental of Plan of	DENTAL INSURANCE -OCTOBER	732.48	2089700943
206-270-715.002	DENTAL INS. ADJUSTMENT FOR P	Delta Dental of Plan of	DENTAL INSURANCE -NOVEMBER	(164.34)	2089700950
206-270-715.002	DENTAL INSURANCE	Delta Dental of Plan of	DENTAL INSURANCE -NOVEMBER	650.31	2089700950
206-270-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAG	WORKER'S COMP INSTALLMENT 2	12,240.41	38076
206-270-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAG	WORKER'S COMP INSTALLMENT 3	12,240.41	38076
206-270-723.000	EMPLOYMENT PHYSICALS	ALPHA PSYCHOLOGICAL SER	Career FF - Psychological Evaluatio	795.00	38090
206-270-723.000	EMPLOYMENT PHYSICALS	OAKLAND COMMUNITY COLLE	Career FF - Candidate Physical Agil	100.00	38125
206-270-723.000	EMPLOYMENT PHYSICALS	OCCUPATIONAL HEALTH CEN	Bricker - Vaccinations	187.00	38126
206-270-723.000	EMPLOYMENT PHYSICALS	OCCUPATIONAL HEALTH CEN	Woolams, Kelly Employment Phsicals	838.00	38126
206-270-723.000	Atkins, Carter Employment Phs	OCCUPATIONAL HEALTH CEN	Atkins, Carter Employment Phsicals	931.00	38126
206-270-746.001	PERSONAL PROTECTIVE EQUIP	MACQUEEN EMERGENCY	4 Structure Fire Boots	2,470.91	38122
206-270-746.001	Gear Repair x 8	TURNOUT RENTAL LLC	Gear Repair x 8	1,874.00	38132
206-270-746.001	PERSONAL PROTECTIVE EQUIP	TURNOUT RENTAL LLC	Structure Fire Coat Lettering	210.50	38132
206-270-746.001	PERSONAL PROTECTIVE EQUIP	TURNOUT RENTAL LLC	Pant Rental - Atkins 11/24 - 5/25	440.00	38132
206-270-961.000	TRNG & IMPROVEMENT FULL-TIME	CHELSEA AREA FIRE AUTHC	School Bus Extrication Training Pro	2,100.00	38093
206-270-961.000	TRNG & IMPROVEMENT FULL-TIME	MARC A VOLGER AND ASSOC	8 CPR Certifications - Provider Ca	96.00	38123

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 206 FIRE FUND					
Dept 270 PERSONNEL					
206-270-961.001	TRNG. & IMPROVEMENT PART-TIME	WASHTENAW AREA MUTUAL	A10 Students - Live Fire Training -	1,000.00	38135
206-270-961.001	EMT Testing Software - User:	PLATINUM EDUCATIIONAL	EMT Testing Software - Users Fee	680.00	2089700936
206-270-961.001	Drivers Training Textbooks x1	VFIS	Drivers Training Textbooks x10	136.00	2089700936
Total For Dept 270 PERSONNEL				39,560.24	
Dept 596 TRANSPORTATION					
206-596-748.000	Fuel	CORRIGAN OIL COMPANY NC	Fuel	1,130.27	38094
206-596-748.000	GASOLINE & DIESEL	CORRIGAN OIL COMPANY NC	Fuel	793.52	38094
206-596-748.000	GASOLINE & DIESEL	CORRIGAN OIL COMPANY NC	Fuel	846.48	38094
206-596-748.000	GASOLINE & DIESEL	BP PRODUCTS NORTH AMERI	SEPTEMBER BP GAS	318.56	2089700942
206-596-933.000	Fleet Air Filters	CUMMINS INC D/B/A CUMMI	Fleet Air Filters	711.04	38095
206-596-933.000	R-2 Door Closure Spring	EMERGENCY VEHICLE PLUS	R-2 Door Closure Spring	56.98	38096
206-596-933.000	REPAIR & MAINTENANCE	FIRE WRENCH OF MICHIGAN	E-1, L-2, R-1, E-2, T-1, R-2 - Annu	952.50	38118
206-596-933.000	REPAIR & MAINTENANCE	FIRE WRENCH OF MICHIGAN	E-2 Fuel Tank Strap Replacement	717.00	38118
206-596-933.000	REPAIR & MAINTENANCE	FIRE WRENCH OF MICHIGAN	E-2 Clogged Catalayst Repair / Tro	412.50	38118
206-596-933.000	REPAIR & MAINTENANCE	MACQUEEN EMERGENCY	E-1 Valve Repair Kit	135.95	38122
206-596-933.000	4 Replacment Apparatus Heate	Hebron RV Parts	4 Replacment Apparatus Heaters R1,	1,212.36	2089700957
206-596-933.000	3 UNLIMITED FAST PASS RENEWA	ZIPPY AUTO WASH LLC	3 UNLIMITED FAST PASS RENEWALS	29.99	2089700957
206-596-933.000	REPAIR & MAINTENANCE	ZIPPY AUTO WASH LLC	3 UNLIMITED FAST PASS RENEWALS	29.99	2089700957
Total For Dept 596 TRANSPORTATION				7,347.14	
Total For Fund 206 FIRE FUND				67,023.08	
Fund 219 STREET LIGHTING FUND					
Dept 265 BUILDINGS AND GROUNDS					
219-265-920.000	FC streetlights	DTE Energy Company	FC streetlights	429.41	2089700934
Total For Dept 265 BUILDINGS AND GROUNDS				429.41	
Total For Fund 219 STREET LIGHTING FUND				429.41	
Fund 225 FARMLAND PRESERVATION					
Dept 253 TREASURER					
225-253-404.000	PROPERTY TAX ADJUSTMENTS	WASHTENAW COUNTY TREASU	DALE NEWMAN 2023 TAX ADJUSTMENT	115.33	38088
Total For Dept 253 TREASURER				115.33	
Dept 266 LEGAL & PROFESSIONAL					
225-266-806.000	CONSULTANTS - OTHER	TREEMORE ECOLOGY & LANI	FARMLAND CONSULTING	404.48	38085
225-266-806.000	CONSULTANTS - OTHER	TREEMORE ECOLOGY & LANI	FARMLAND CONSULTING	495.00	38085
Total For Dept 266 LEGAL & PROFESSIONAL				899.48	
Total For Fund 225 FARMLAND PRESERVATION				1,014.81	
Fund 249 BUILDING DEPARTMENT FUND					
Dept 228 TECHNOLOGY					
249-228-818.000	SERVICE CONTRACTS	MICROSOFT CORPORATION	MICROSOFT 365 APPS	56.26	2089700936
249-228-818.000	SERVICE CONTRACTS	MICROSOFT CORPORATION	MICROSOFT 365 APPS	54.73	2089700957
249-228-980.000	PURCHASES	LENOVO INC	NEW PC FOR BUILDING OFFICIAL	1,845.55	2089700957
Total For Dept 228 TECHNOLOGY				1,956.54	

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 249 BUILDING DEPARTMENT FUND					
Dept 261 OPERATIONS					
249-261-812.000	INSPECTOR COSTS	GARY WOELKE	INSPECTIONS	1,400.00	38073
249-261-812.000	INSPECTOR COSTS	JAMES RATLIFF	INSPECTIONS	1,200.00	38074
249-261-812.000	INSPECTOR COSTS	RI-MAY LLC	INSPECTIONS	440.00	38081
249-261-812.000	INSPECTOR COSTS	RICK PLISKO	INSPECTIONS	560.00	38082
249-261-851.000	TELECOMMUNICATIONS	VERIZON WIRELESS	CELLPHONES	123.24	2089700936
249-261-851.000	TELECOMMUNICATIONS	VERIZON WIRELESS	CELLPHONES & PHONE UPGRADE FOR UTI	82.22	2089700957
Total For Dept 261 OPERATIONS				3,805.46	
Dept 266 LEGAL & PROFESSIONAL					
249-266-806.000	CONSULTANTS - OTHER	CARLISLE-WORTMAN ASSOCI	1555 WOODRIDGE TOYOTA CAFETERIA	540.00	38070
249-266-806.000	CONSULTANTS - OTHER	CARLISLE-WORTMAN ASSOCI	4800 E HURON RIVER DR (WCC TECHNICAL	5,814.00	38070
249-266-806.000	CONSULTANTS - OTHER	CARLISLE-WORTMAN ASSOCI	4600 ALL SEASON CIRCLE	405.00	38070
249-266-806.000	CONSULTANTS - OTHER	CARLISLE-WORTMAN ASSOCI	4600 ALL SEASON PHASE 4	32.50	38070
249-266-806.000	CONSULTANTS - OTHER	CARLISLE-WORTMAN ASSOCI	PLANNING FEES	675.00	38070
Total For Dept 266 LEGAL & PROFESSIONAL				7,466.50	
Dept 270 PERSONNEL					
249-270-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	OCTOBER LIFE INSURANCE	300.67	2089700944
249-270-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	NOVEMBER LIFE INSURANCE	300.67	2089700951
249-270-715.002	DENTAL INSURANCE	Delta Dental of Plan of	DENTAL INSURANCE -OCTOBER	229.59	2089700943
249-270-715.002	DENTAL INSURANCE	Delta Dental of Plan of	DENTAL INSURANCE -NOVEMBER	229.59	2089700950
249-270-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAG	WORKER'S COMP INSTALLMENT 2	133.05	38076
249-270-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAG	WORKER'S COMP INSTALLMENT 3	133.05	38076
249-270-725.000	MEMBERSHIPS - DUES	D.R.A.C.O.	MEMBERSHIP RENEWAL FOR DRACO	95.00	2089700936
249-270-955.200	CONVENTION & CONFERENCES	THE UNIVERSITY OF MICHIC	CITIZEN PLANNER COURSE	250.00	2089700936
Total For Dept 270 PERSONNEL				1,671.62	
Dept 596 TRANSPORTATION					
249-596-748.000	GASOLINE & DIESEL	BP PRODUCTS NORTH AMERI	SEPTEMBER BP GAS	34.28	2089700942
Total For Dept 596 TRANSPORTATION				34.28	
Total For Fund 249 BUILDING DEPARTMENT FUND				14,934.40	
Fund 592 UTILITIES FUND					
Dept 228 TECHNOLOGY					
592-228-818.000	SERVICE CONTRACTS	MICROSOFT CORPORATION	MICROSOFT 365 APPS	40.91	2089700936
592-228-818.000	SERVICE CONTRACTS	MICROSOFT CORPORATION	MICROSOFT 365 APPS	39.80	2089700957
592-228-933.000	REPAIR & MAINTENANCE	BATTERIES PLUS	LAPTOP BATTERY (RETURNED ON 10-3-	79.99	2089700936
592-228-933.000	REPAIR & MAINTENANCE	BATTERIES PLUS	LAPTOP BATTERY (RETURNED ON 10-3-	(79.99)	2089700957
592-228-980.000	PURCHASES	VERIZON WIRELESS	CELLPHONES & PHONE UPGRADE FOR UTI	149.99	2089700957
Total For Dept 228 TECHNOLOGY				230.70	
Dept 261 OPERATIONS					
592-261-818.000	SERVICE CONTRACTS	UIS SCADA INC	REPAIRS AT WCC VALVE BUILDING	1,409.73	38086
592-261-818.000	SERVICE CONTRACTS	UIS SCADA INC	CALIBRATE ARBORLAND INLET AND OUTLI	1,360.00	38133
592-261-818.000	SERVICE CONTRACTS	PARKWAY SERVICES, INC	PORTABLE TOILET	130.00	2089700936
592-261-818.000	SERVICE CONTRACTS	PARKWAY SERVICES, INC	PORTABLE TOILET	130.00	2089700957
592-261-818.000	SERVICE CONTRACTS	WM CORPORATE SERVICES I	4239 WHITEHALL TRASH PICKUP	269.31	2089700957
592-261-851.000	TELECOMMUNICATIONS	VERIZON WIRELESS	CELLPHONES ACCESSORIES	152.92	2089700936

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 592 UTILITIES FUND					
Dept 261 OPERATIONS					
592-261-851.000	TELECOMMUNICATIONS	VERIZON WIRELESS	CELLPHONES	173.25	2089700936
592-261-851.000	TELECOMMUNICATIONS	VERIZON WIRELESS	CELLPHONES & PHONE UPGRADE FOR UTI	173.34	2089700957
592-261-933.000	REPAIR & MAINTENANCE	SHARE CORPORATION	PRY BARS	186.24	38083
592-261-933.000	REPAIR & MAINTENANCE	CARPENTER BROS. HARDWAF	HARDWARE	4.98	38092
592-261-933.000	REPAIR & MAINTENANCE	CARPENTER BROS. HARDWAF	HARDWARE	28.22	38092
592-261-933.000	REPAIR & MAINTENANCE	CARPENTER BROS. HARDWAF	HARDWARE	57.96	38092
592-261-933.000	REPAIR & MAINTENANCE	SOUTHEASTERN EQUIPMENT	EQUIPMENT REPAIR	1,074.82	38129
592-261-933.000	REPAIR & MAINTENANCE	TRACTOR SUPPLY CREDIT F	HARDWARE	93.95	2089700935
592-261-933.000	REPAIR & MAINTENANCE	TRACTOR SUPPLY CREDIT F	HARDWARE	119.98	2089700935
592-261-933.000	REPAIR & MAINTENANCE	TRACTOR SUPPLY CREDIT F	HARDWARE	241.91	2089700935
592-261-933.000	REPAIR & MAINTENANCE	TRACTOR SUPPLY CREDIT F	HARDWARE	72.00	2089700935
592-261-933.000	REPAIR & MAINTENANCE	BLACKHAWK INDUSTRIAL	WATERLESS CLEANING WIPES	110.01	2089700936
592-261-933.000	REPAIR & MAINTENANCE	BLACKHAWK INDUSTRIAL	GLOVES	159.83	2089700936
592-261-933.000	REPAIR & MAINTENANCE	BUCK & KNOBBY EQUIPMENT	SKIDSTEER COUPLE HYDRLIC	194.17	2089700936
592-261-933.000	REPAIR & MAINTENANCE	CAMPING	AD/DC CONVERTER	18.76	2089700936
592-261-933.000	REPAIR & MAINTENANCE	HEAVY EQUIPMENT RESTORA	ENGINE PARTS	157.44	2089700936
592-261-933.000	REPAIR & MAINTENANCE	MENARD INC	HARDWARE	127.56	2089700936
592-261-933.000	REPAIR & MAINTENANCE	MENARD INC	HARDWARE	56.38	2089700936
592-261-933.000	REPAIR & MAINTENANCE	TRACTOR SUPPLY CREDIT F	HARDWARE	234.96	2089700955
592-261-933.000	REPAIR & MAINTENANCE	TRACTOR SUPPLY CREDIT F	HARDWARE	87.98	2089700955
592-261-933.000	REPAIR & MAINTENANCE	TRACTOR SUPPLY CREDIT F	HARDWARE	97.26	2089700955
592-261-933.000	REPAIR & MAINTENANCE	HOME DEPOT USA INC	MATERIALS TO CONSTRUCT STORAGE ARE	1,373.14	2089700957
592-261-933.000	REPAIR & MAINTENANCE	MENARD INC	HARDWARE	51.53	2089700957
592-261-955.000	MISCELLANEOUS	PCI MUNICIPAL SERVICES	PARKING FOR MEETING AT CITY OF ANN	4.80	2089700957
Total For Dept 261 OPERATIONS				8,352.43	
Dept 265 BUILDINGS AND GROUNDS					
592-265-920.000	4620 E Huron Dr	DTE Energy Company	4620 E Huron Dr	93.28	2089700933
592-265-920.000	3701 Plymouth Rd	DTE Energy Company	3701 Plymouth Rd	20.28	2089700933
592-265-920.000	4231 Whitehall Dr	DTE Energy Company	4231 Whitehall Dr	1,155.87	2089700933
592-265-920.000	1300 Earhart Rd	DTE Energy Company	1300 Earhart Rd	28.42	2089700933
592-265-920.000	1947 N Dixboro Rd	DTE Energy Company	1947 N Dixboro Rd	469.22	2089700933
592-265-920.000	1343 Stark Strasse	DTE Energy Company	1343 Stark Strasse	171.68	2089700933
592-265-920.000	3695 Washtenaw	DTE Energy Company	3695 Washtenaw	127.91	2089700933
Total For Dept 265 BUILDINGS AND GROUNDS				2,066.66	
Dept 270 PERSONNEL					
592-270-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	OCTOBER LIFE INSURANCE	305.21	2089700944
592-270-715.001	LIFE INSURANCE	HARTFORD LIFE & ACCIDEN	NOVEMBER LIFE INSURANCE	305.21	2089700951
592-270-715.002	DENTAL INSURANCE	Delta Dental of Plan of	DENTAL INSURANCE -OCTOBER	191.13	2089700943
592-270-715.002	DENTAL INSURANCE	Delta Dental of Plan of	DENTAL INSURANCE -NOVEMBER	191.13	2089700950
592-270-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAC	WORKER'S COMP INSTALLMENT 2	1,649.79	38076
592-270-715.009	WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL LEAC	WORKER'S COMP INSTALLMENT 3	1,649.79	38076
592-270-955.200	CONVENTION & CONFERENCES	AMWAY HOTEL CORPORATION	HOTEL	568.20	2089700936
592-270-955.200	CONVENTION & CONFERENCES	SOARING EAGLE CASINO &	HOTEL FOR MISS DIG 811	347.98	2089700936
592-270-955.200	CONVENTION & CONFERENCES	MICHIGAN WATER ENVIRONM	MI-AWWA MAINRENANCE SEMINAR	185.00	2089700957
Total For Dept 270 PERSONNEL				5,393.44	
Dept 596 TRANSPORTATION					

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 592 UTILITIES FUND					
Dept 596 TRANSPORTATION					
592-596-748.000	GASOLINE & DIESEL	BP PRODUCTS NORTH AMERI	SEPTEMBER BP GAS	692.34	2089700942
592-596-748.000	GASOLINE & DIESEL	GABBY'S SHELL	GAS	25.00	2089700957
592-596-933.000	REPAIR & MAINTENANCE	ZIPPY AUTO WASH LLC	CAR WASH MEMBERSHIP	29.99	2089700936
592-596-933.000	Car Wash	ZIPPY AUTO WASH LLC	Car Wash	29.99	2089700936
592-596-933.000	REPAIR & MAINTENANCE	ZIPPY AUTO WASH LLC	CAR WASH MEMBERSHIP	29.99	2089700936
592-596-933.000	REPAIR & MAINTENANCE	BILL BROWN FORD INC	TRUCK MAINTENANCE	96.15	2089700957
592-596-933.000	REPAIR & MAINTENANCE	BILL BROWN FORD INC	TRUCK MAINTENANCE	108.88	2089700957
592-596-933.000	3 UNLIMITED FAST PASS RENEWAI	ZIPPY AUTO WASH LLC	3 UNLIMITED FAST PASS RENEWALS	29.99	2089700957
Total For Dept 596 TRANSPORTATION				1,042.33	
Total For Fund 592 UTILITIES FUND				17,085.56	
Fund 702 ESCROW FUND					
Dept 000 OTHER REVENUE ACCOUNT					
702-000-272.037	ROW-04-23 3010 WARREN RD	VERITACORP	REFUND OF ROW-04-23	400.00	38134
Total For Dept 000 OTHER REVENUE ACCOUNT				400.00	
Total For Fund 702 ESCROW FUND				400.00	

12/11/2024 03:51 PM
User: IWHITT
DB: Ann Arbor Towhsh

INVOICE GL DISTRIBUTION REPORT FOR ANN ARBOR CHARTER TOWNSHIP
EXP CHECK RUN DATES 11/14/2024 - 12/10/2024
JOURNALIZED PAID
BANK CODE: POOL2

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
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Fund Totals:

Fund 101 GENERAL FUND	64,093.02
Fund 105 DEVELOPMENT	400.20
Fund 205 PUBLIC SAFET	118,773.22
Fund 206 FIRE FUND	67,023.08
Fund 219 STREET LIGHT	429.41
Fund 225 FARMLAND PRE	1,014.81
Fund 249 BUILDING DEP	14,934.40
Fund 592 UTILITIES FU	17,085.56
Fund 702 ESCROW FUND	400.00
Total For All Funds:	<u>284,153.70</u>

Effective date of agreement removing Barr, Anhut & Associates from the previous agreement so that the agreement is between Ann Arbor Charter Township and Jesse O'Jack solely is December 14, 2024.

Ann Arbor Charter Township (Township) hereby retains Jesse O'Jack to represent it before the 14th District Court on misdemeanor, traffic, ordinance enforcement and such other matters as is mutually agreed upon in writing at the rate of \$120 per hour for attorney time. Such work shall be billed monthly with an accounting of time spent and expenses incurred and will be timely paid by the Township.

Attorney will provide at attorney's own expense any equipment, software, materials and other supplies necessary to deliver services under the agreement.

Attorney shall communicate regarding these matters with the Township Supervisor, Building Official, Ordinance Enforcement Officer and such other Township employees as directed by the Township Supervisor.

Township may terminate this agreement upon at least 15 days written notice; likewise, attorney may terminate the agreement with at least 15 days written notice to the Township Supervisor. In the event of termination, attorney shall submit a final bill for work performed under this agreement prior to the effective day of termination, which shall be timely paid by the Township.

Upon termination of this agreement, attorney will return to client any property, documents, records or confidential information which is the property of client. Confidential information refers to any data or information relating to Township, whether business or personal, which would reasonably be considered to be private or proprietary to Township and that is not generally known and where release of that confidential information could reasonably be expected to cause harm to the Township.

Attorney agrees that he will not disclose, divulge, reveal, report, or use for any purpose any confidential information he has obtained except as authorized by Township or required by law. This obligation will apply during the term of this agreement and will survive indefinitely upon termination.

Except for the extent paid in settlement from any applicable insurance policies and to the extent permitted by applicable law, each party agrees to indemnify and hold harmless the other party and its officers, agents, employees, successors and assigns against any and all claims, losses, damages, liabilities, penalties, punitive damages, expenses, reasonable legal fees and costs of any kind or amount which result from or arise out of any act or omission of the indemnitor, officers, agents, employees, successors or assigns that occur in connection with this agreement. This indemnification will survive the termination of this agreement.

Attorney will not voluntarily or by operation of law or otherwise assign or transfer its obligations under this agreement without prior written consent of Township.

Any amendment or modification or additional obligation assumed by either party in connection with this agreement will only be binding if evidenced in writing signed by each party.

There is no representation, warranty, collateral agreement or condition affecting this agreement except as is expressly provided in this agreement.

The parties acknowledge that this agreement is non-exclusive and that either party will be free during and after the termination of this agreement to engage or contract with third parties for the provision of services similar to those here agreed upon.

Any dispute regarding the terms of this agreement, the work performed, or the accounting or fees shall be decided under the laws of the State of Michigan in Washtenaw County Michigan.

All notices, requests, demands, or other communications required or permitted by the terms of this agreement shall be given in writing and delivered to:

Jesse O'Jack

Signature



Date

11/24/2024

Jesse O'Jack

Email: jojlaw@msn.com

Address: Jesse O'Jack, PO Box 363, Saline, MI 48176

Telephone: 734 355 927

Ann Arbor Charter Township:

Signature

Date

Diane O'Connell

Supervisor@aatwp.org

Email

3792 Pontiac Trail, Ann Arbor, MI 48105

Telephone

734.476.0741



**Barr,
Anhut &
Associates, P.C.**
ATTORNEYS AT LAW

105 Pearl Street
Ypsilanti, MI 48197
(734) 481-1234
Fax (734) 483-3871
www.barrlawfirm.com
e-mail: jbarr@barrlawfirm.com

John M. Barr

Jesse O'Jack ~ Of Counsel
Tobias J. Lipski ~ Of Counsel
Randolph T. Barker ~ Of Counsel
Jennifer A. Merritt ~ Legal Assistant

November 13, 2024

Ann Arbor Township
Supervisor Diane O'Connell
3792 Pontiac Trail
Ann Arbor, MI 48105
Via email: supervisor@aatwp.org

Dear Diane:

RE: Law Practice closing

I hope this message finds you well. I am writing to share some important news regarding my retirement and Barr, Anhut & Associates, P.C.

After 65 wonderful years of serving, you and our community, I have decided to retire and close the law practice due to health concerns. It has been an honor to work alongside such dedicated clients and colleagues since I joined the firm in 1959. It has been a remarkable journey.

I have been especially proud to work alongside my son, Karl Barr, during his 21 years at the firm. His recent election as a judge is a testament to his dedication and integrity. I have also had the honor of working with my esteemed colleague, Jesse O'Jack during his 35 years at the firm. Jesse's legal expertise, professionalism, and commitment to client service are unparalleled, and I am confident that he can continue to take on the future of your legal matters.

Barr, Anhut & Associates, PC law firm will officially close its doors on December 31, 2024. This transition marks the end of an era, but I am excited for the future.

Please reach out to attorney Jesse O'Jack at your earliest convenience to either contract with him directly for legal services or discuss what your transition process will look like to another firm.

Thank you for your trust and support over the years. It has been a pleasure working with you, and I wish you all the best in your future endeavors.

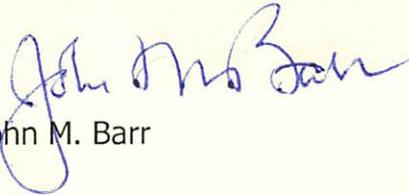


**Barr,
Anhut &
Associates, P.C.**
ATTORNEYS AT LAW

November 13, 2024
Page 2

Sincerely yours,

BARR, ANHUT & ASSOCIATES, P.C.

A handwritten signature in blue ink that reads "John M. Barr". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

John M. Barr

Encl.
cc.

**RESOLUTION OF THE ANN ARBOR CHARTER TOWNSHIP BOARD OF TRUSTEES
TO RATIFY ITS PREVIOUS ACTION TO ENTER INTO AN INTERLOCAL
AGREEMENT FOUNDING THE WASHTENAW AREA MUTUAL AID COUNCIL,
WHICH WILL CREATE A GOVERNMENTAL ENTITY PURSUANT TO THE URBAN
COOPERATION ACT OF 1967, MCL 124.501**

December 16, 2024

Resolution adopted at a regular meeting of the Board of Trustees of Ann Arbor Charter Township, Washtenaw County, Michigan held December 16, 2024 at 3792 Pontiac Trail, Ann Arbor, MI.

PRESENT: John Allison, Rena Basch, Carlene Colvin-Garcia, Della DiPietro, Eric Kaljian, Peter Kotila and Diane O’Connell.

ABSENT:

Motion by _____; supported by _____.

WHEREAS to protect the safety, health and welfare of the Township residents, it is important to have the ability for specialty emergency response capabilities along with the ability to request mutual aid from surrounding communities; and

WHEREAS this Interlocal Agreement is for the governmental units which are parties hereto to join together to establish the Washtenaw Area Mutual Aid Council (WAMAC) for the purposes set forth herein pursuant to and under the authority of the Urban Cooperation Act of 1967, Act 7 of the Public Acts of 1967, as amended; the Intergovernmental Contracts Between Municipal Corporations Act, Act 35 of the Public Acts of 1951, as amended, and the Joint Public Buildings Act, Act 150 of the Public Acts of 1923, as amended.

WHEREAS the Township Board previously discussed this Interlocal Agreement at their March 18, 2024 Board meeting, and had the Township Attorney review it, and approved the Interlocal Agreement and authorized its execution by the Township Supervisor by motion, as is evidenced in the approved minutes of said meeting.

NOW THEREFORE BE IT RESOLVED, that Ann Arbor Charter Township ratifies the Township Board’s action by motion approving the Interlocal Agreement for the Washtenaw Area Mutual Aid Council for the purposes set forth herein pursuant to and under the authority of the Urban Cooperation Act of 1967, Act 7 of the Public Acts of 1967, as amended; the Intergovernmental Contracts Between Municipal Corporations

Act, Act 35 of the Public Acts of 1951, as amended, and the Joint Public Buildings Act, Act 150 of the Public Acts of 1923, as amended.

Roll Call Vote:

Allison -
Basch -
Colvin-Garcia -
DiPietro -
Kaljian -
Kotila -
O'Connell -

RESOLUTION DECLARED ADOPTED

I certify that the foregoing is a true and complete copy of a resolution adopted by the Ann Arbor Charter Township Board of Trustees, County of Washtenaw, State of Michigan, at a regular meeting held on December 16, 2024, that said meeting was conducted and public notice of said meeting was given pursuant to and in full compliance with the Open Meetings Act, being Act 267, Public Acts of Michigan, 1976, and that the minutes of said meeting were kept and will be or have been made available as required by said Act.

Rena Basch, Clerk

Dated: _____



Diane O'Connell, Supervisor
Rena Basch, Clerk
Carlene Colvin-Garcia, Treasurer

John Allison, Trustee
Eric Kaldjian, Trustee
Della DiPietro, Trustee
Peter Kotila, Trustee

TO: Ann Arbor Township Board of Trustees (BOT)

FROM: Farmland and Open Space Preservation Board (FOSPB)

RE: Recommendation on consultant rates for 2025-26

DATE: 12 December 2024

At its November 25 meeting the FOSPB recommended that the BOT support our consultant Barry Lonik's rate increases for 2025 and 2026. Barry has been staffing our land preservation program since its inception in 2003 and has done an outstanding job. With Barry's leadership, in the last 20 years our program has permanently conserved 1,284 acres with more projects in the works. Barry has attracted over \$8.6 million of matching funds while keeping the cost for his services at just 6% of total expenditures.

Barry's rates for 2025 are \$120/hour for acquisition work (up \$10), \$80/hour for conservation easement baseline documentation (up \$10) and \$60/hour for easement monitoring (unchanged in 20 years). In 2026 his rate for acquisition work will increase an additional \$5 to \$125/hour (the other rates will remain the same).



2025 Premium History
Ann Arbor Charter Township

2024 Premium \$ 95,037
 Policy Changes:

Premium w/ changes \$ **95,037**

2025 Renewal Premium	\$ 107,568	
	<u>95,037</u>	
Premium Change	\$ 12,531	13.2%

Awarded Grants and Dividends		
MTTP Dividend (2019-2023)	\$ 9,499	
MTTP Grants (Security Camera 22 &23)	3,386	
Accident Fund Dividends	<u>-</u>	
	\$ 12,885	



DECKER
AGENCY

DKRagency.com

Ann Arbor Township

Proposal of Coverages

January 1, 2025

Kevin Decker
Risk Manager

****NOTE****

As with all proposals and summaries, this is not to be construed as a complete disclosure of the following coverages being offered or provided. As with all insurance, please refer to the actual contracts, documents, and policies for the complete wording of terms, conditions, definitions, and exclusions. This supersedes all other "explanations" of the coverages whether oral or written.

Coverage/Service Companies: Michigan Township Participating Plan, HCC Public Risk, Provident, Accident Fund, Amerisure, Liberty Mutual, Colonial Life, Mid-America Appraisal Company, Metropolitan Appraisal Company



FEATURED PRODUCTS

Abuse Prevention Services

Plans starting at \$250

- ❖ Provides online and live training to all staff and volunteers; includes training tracking.
- ❖ Offers sample policies, procedures, ongoing updates and education.
- ❖ Up to date newsletters and articles regarding current trends and exposures.
- ❖ Criminal Background check system and online control panel for tracking.

Cyber Liability Insurance

Limits begin at \$100,000 with premiums starting at \$1,000

- ❖ Liability claims involving the unauthorized release of information for which the organization has a legal obligation to keep private or confidential.
- ❖ Security breach response including the cost of IT forensics and credit monitoring.
- ❖ Extortion expenses and ransom payments to third party to avert potential damage, system interruption, data corruption or dissemination of confidential information.

Workers Compensation & Accident Insurance *Protect your Employees & First Responders*

- ❖ We offer injury and illness coverage for boards, fire departments and law enforcement. These policies provide additional benefits to employees and can provide coverage on or off duty.
- ❖ Plans for every budget and department size.
- ❖ Workers' compensation insurance is a specific type of insurance that helps employers provide wages and medical benefits to teammates who have been injured on the job.
- ❖ Municipal group discounts and dividend plans are available.

ADDITIONAL SOLUTIONS

- | | |
|---|---|
| <input type="checkbox"/> Health Insurance | <input type="checkbox"/> Fiduciary Liability |
| <input type="checkbox"/> Employee Benefits | <input type="checkbox"/> Pollution Coverage |
| <input type="checkbox"/> Dental & Vision Care Programs | <input type="checkbox"/> Storage Tank Coverage |
| <input type="checkbox"/> Life Insurance | <input type="checkbox"/> Excess Limits |
| <input type="checkbox"/> Higher Liability Limits | <input type="checkbox"/> Higher Zoning Limits |
| <input type="checkbox"/> Misconduct Prevention Training | <input type="checkbox"/> Drone Coverage |



**Features
of the
Decker Agency Public Entity Program**

- Dedicated Service Team, One Phone Number To Call.
- No Pooling - 100% Of Covered Risk Is Placed With Insurance Companies.
- Non-Assessable.
- Independent Liability Limits.
- "True" Occurrence Form Liability - **No Claims Made Liability Forms.**
- Higher Limits for Most Coverage Sections Are Available Upon Request.
- HR Muni - Human Resources risk management services provided free to members.
- Group Experience Dividend Plan - No other non-pool program offers this feature.
- Risk Reduction Program - Visit: www.theparplan.com for additional information.
 - Online Resources – Sample policies, forms, and educational seminars.
 - Grant Program (RRGP) – Two cycles a year, max award of \$5,000 per member, per cycle.
 - Scholarships (TCAP) – Training, Certification, & Accreditation education reimbursement.
 - Water Sensor Program – Kits are available to protect against leaks and freezing.

Over \$10,000,000 in Grants & Dividends

INDEX OF COVERAGE SECTIONS

- I) MUNICIPAL GENERAL LIABILITY COVERAGE
- II) PUBLIC OFFICIALS LIABILITY COVERAGE (Wrongful Acts)
- III) LAW ENFORCEMENT PROFESSIONAL LIABILITY COVERAGE
- IV) AUTO LIABILITY & PHYSICAL DAMAGE COVERAGE
- V) PROPERTY COVERAGE
- VI) OUTDOOR & PORTABLE EQUIPMENT COVERAGE (Inland Marine)
- VII) ELECTRONIC & DATA PROCESSING EQUIPMENT COVERAGE
- VIII) VALUABLE PAPERS & RECORDS COVERAGE
- IX) BROAD FORM CRIME COVERAGE
- X) PUBLIC OFFICIAL & EMPLOYEE BOND COVERAGE
- XI) PUBLIC OFFICIAL AND EMPLOYEE ACCIDENT POLICY
- XII) FIREFIGHTERS ACCIDENT POLICY
- XIII) CYBER & PRIVACY LIABILITY POLICY

PROPERTY, VEHICLE & INLAND MARINE SCHEDULES

DECKER AGENCY

info@dkragency.com

Local 269.327.2700

Toll Free 800.678.4100

Fax 269.327.8578

SUPPORT COMPANIES

CLAIMS ADMINISTRATION

1441 W Long Lake Road
Suite 150
Troy, MI 48098
Toll Free 800.225.6561
Fax 248.371.3091

TECHNICAL ADMINISTRATION

1441 W Long Lake Road
Suite 150
Troy, MI 48098
Toll Free 800.225.6561
Fax 248.371.3091

RISK CONTROL ADMINISTRATION

1441 W Long Lake Road
Suite 150
Troy, MI 48098
Toll Free 800.225.6561
Fax 248.371.3091

I) MUNICIPAL GENERAL LIABILITY COVERAGE

Per-Occurrence Liability Limit (Occurrence Form Liability)	\$5,000,000
Policy Period Maximum Limit	UNLIMITED
Section I Deductible	\$ - 0 -

- A) Bodily Injury Included.
- B) Personal Injury Included.
- C) Property Damage Included.
- D) Sewer Backup Coverage Included.
\$100,000 per Occurrence / \$100,000 Policy Period Maximum

Additionally Named:

The "Persons Covered" provision of the Comprehensive Municipal Liability coverage also includes the following while acting "on behalf of " or "in the interest of " the Named Entity.

- 1) **Any** member of the governing body of the named Entity;
- 2) **Any** member of a board/commission of the named Entity;
- 3) **Any** elected or appointed official of the named Entity;
- 4) **Any** employee of the named Entity; and
- 5) **Any** volunteer for the named Entity.

Additionally Included:

- 1) Advertising Injury Liability - Includes Slogan Infringement.
- 2) Host Liquor Law Liability - Includes Incidental Giving and Serving.
- 3) Broad Form Property Damage Liability.
- 4) Incidental Medical Malpractice Liability (All employees).
- 5) Extended Bodily Injury & Property Damage Liability (Broad Form) - The definition of occurrence includes any intentional act by or at the direction of the additionally named which results in bodily injury or property damage if such injury arises from the use of reasonable force for the purpose of protecting persons or property.
- 6) Contractual Liability - Coverage for the Entity When It Becomes Legally Obligated for Liability Assumed Through Contractual Agreement.
- 7) Newly Acquired or Formed Organizations or Operations - 180 Days Automatic Coverage for Bodily Injury, Personal Injury, Property Damage and Advertising Injury Liability.
- 8) Completed Operations Liability.
- 9) Products Liability (Services).
- 10) Premises and Operations Liability.
- 11) Elected or Appointed Officials Residence or Place of Employment Liability. (All Applicable Coverages).
- 12) Special Events Liability - Includes Sponsored Athletic, Fund Raising, Social or Recreational Events (Fireworks and/or Liquor Liability excluded, available separately).
- 13) Explosion. Collapse. Underground - Exclusions Deleted (Coverage Included).
- 14) No Specific Exclusions or limitations for: Vicarious Liability, Fellow Employee or Exemplary Damages.
- 15) Premises Medical Payments - \$10,000 each person/\$50,000 Policy Maximum Limit.
- 16) Medical Services Professional Liability.
- 17) Cemetery Professional Liability - Includes Vandalism (Where Applicable).
- 18) Non-Owned Water Craft Liability.
- 19) Definition of "Bodily Injury" and "Personal Injury" are AMENDED to include mental anguish, mental injury, shock, and disability.
- 20) Definition of "Occurrence" is AMENDED to include accident, event or happening.

II) PUBLIC OFFICIALS LIABILITY COVERAGE (Wrongful Acts)

Per-Occurrence Liability Limit (Occurrence Form Liability)	\$5,000,000
Policy Period Maximum Limit	UNLIMITED
Section II Deductible	\$ - 0 -

- A) Employment Practices Liability Included.
- B) Private Property Use Restriction Included.
\$100,000 per Occurrence / Unlimited Policy Period Maximum
\$10,000 Deductible.
- C) Non-Monetary Defense Coverage Included.
\$100,000 Policy Period Maximum.

Additionally Named:

The "Persons Covered" provision of the Wrongful Acts Liability coverage also includes the following while acting "on behalf of " or "in the interest of " the Named Entity.

- 1) **Any** member of the governing body of the named Entity;
- 2) **Any** member of a board/commission of the named Entity;
- 3) **Any** elected or appointed official of the named Entity;
- 4) **Any** employee of the named Entity; and
- 5) **Any** volunteer for the named Entity.

Additionally Included:

- 1) Coverage addresses Not Only Public Officials and Employees, but the Entity as well.
- 2) Pay on Behalf Wording.
- 3) "All Employee's Endorsement" (those who were, now are or shall be).

III) LAW ENFORCEMENT PROFESSIONAL LIABILITY COVERAGE

Per-Occurrence Liability Limit (Occurrence Form Liability)	\$5,000,000
Policy Period Maximum Limit	UNLIMITED
Section III Deductible	\$ 2,500

Additionally Named:

- 1) All (full and part-time) paid employees of the Law Enforcement Department.
- 2) Unpaid Volunteers or Reserves.
- 3) The governmental subdivision, its elected and appointed officials, employees and volunteers.

Additionally Included:

- 1) "Auto Wrap" Endorsement Included.
- 2) Assault and Battery.
- 3) False Arrest.
- 4) False Imprisonment.
- 5) Care, Custody and Control of Prisoner's Property.
- 6) Civil Rights Violations (Including Federal Civil Rights).
- 7) Wrongful Detention.
- 8) Libel, Slander, Defamation of Character.
- 9) Discrimination.
- 10) Malicious Prosecution.
- 11) Mental Anguish, Mental Injury.
- 12) Wrongful Entry and Eviction.
- 13) Riot, Insurrection, Civil Disturbance, Curfew.
- 14) Legal Expenses, including Legal Defense for Groundless, False, or Fraudulent Negligence Suits.

IV) AUTO LIABILITY & PHYSICAL DAMAGE COVERAGE

Per-Occurrence Liability – Bodily Injury and Property Damage	\$5,000,000
Personal Injury Protection Coverage	UNLIMITED
Property Protection Coverage	INCLUDED
Non-Owned & Hired Auto Liability	INCLUDED
Uninsured Motorists	\$ 100,000
Underinsured Motorist	\$ 100,000
Mini-Tort Liability	\$ 3,000
Physical Damage Total Limit	\$2,621,015
Comprehensive Deductible	\$ 2,500
Collision Deductible	\$ 2,500
Comprehensive Deductible on vehicles > \$350,000	\$ 5,000
Collision Deductible on vehicles > \$350,000	\$ 5,000

Additionally Included:

- 1) Comprehensive Coverage - All owned Vehicles/Includes Waived Deductible for Strikes with Animals Such as a Deer, Horse, Bird or Livestock.
- 2) Broadened Collision Coverage - All Vehicles.
- 3) Public Officials/ Employees Vehicles (Physical Damage Reimbursement) \$1,000 per Loss Maximum while being used for Entity business.
- 4) See Vehicle Schedule Page for Individual Limits.

Emergency Services Only:

- 1) Freezing Extension - Fire Vehicles.
- 2) Recertification Extension - Fire Vehicles.
- 3) Equipment Borrowed, Leased or Rented from Others - \$25,000 any one item, Fire and Rescue Department Only.
- 4) Rental Reimbursement - Fire and Rescue Vehicles Only - \$500 per day/\$10,000 Policy period Maximum Limit.
- 5) Active Members Personal Effects - Fire, Rescue and Police Personnel/\$1,000 Per Person/\$2,500 per Claim.
- 6) Volunteer Firemen's Vehicles (Physical Damage Reimbursement) \$1,000 per Loss Maximum while being used for Entity business.

Please Note: Coverage includes endorsement CAH0050-2011 (25%).

At the Time of a "total loss" of a Fire or Rescue Vehicle, the insured has the option of purchasing an "additional" 25% of the insured limit.

V) BUILDING & CONTENTS COVERAGE

Total Building & Contents Limit	\$12,549,577
Section V Deductible	\$ 5,000

Equipment & Mechanical Breakdown Limit (Boiler)	INCLUDED
Equipment & Mechanical Breakdown Deductible (Boiler)	\$ 1,000

- A) "All Risk"/Agreed Value Replacement Cost.
- B) See Property Schedule Page for Individual Limits.

Additionally Included:

- 1) Accounts Receivable any one occurrence- \$250,000.
- 2) Business Income any one occurrence- \$500,000.
- 3) Extra Expense any one occurrence- \$500,000.
- 4) Debris Removal any one occurrence- 25% of direct physical loss or damage to covered property.
- 5) Newly Acquired or Constructed Prop-Building for 180 days at each building \$1,000,000.
- 6) Personal Effects- Property of any one employee or volunteer \$1,000. (\$50 Deductible)
- 7) Property Transit any one occurrence- \$50,000.
- 8) Property off Premises any one occurrence- \$100,000.

VI) OUTDOOR & PORTABLE EQUIPMENT COVERAGE (Inland Marine)

Collective Total Limit	\$1,583,316
Section VI Deductible	\$ 2,500

- A) Provides "All Risk" Coverage on a "Stated Amount" basis for property & equipment owned by the Entity while on or off the premises.
- B) See Inland Marine Schedule Page for Individual Limits.

VII) ELECTRONIC & DATA PROCESSING EQUIPMENT COVERAGE

Broad Form Hardware & Software Limit	\$ 100,000
Section VII Deductible	\$ 1,000

- A) Provides "All Risk" Coverage on a "Stated Amount" basis for electronic & data processing owned by the Entity including power surge and extra expenses.
- B) Included Minimum Policy Limit.

VIII) VALUABLE PAPERS & RECORDS COVERAGE

Per Loss Maximum Limit	\$ 250,000
Section VIII Deductible	\$ 5,000

- A) Broad Form Coverage for the Reconstruction of Valuable Papers & Records.
- B) Example: Assessment cards, tax rolls, meeting records, voter registrations, etc.
- C) Locations Include: All owned Entity premises and all officials' homes and/or any other off premise storage location. (\$100,000 Limit)

IX) BROAD FORM CRIME COVERAGE

Year Round Maximum Limit	\$ 100,000
Section IX Deductible	\$ - 0 -

- A) Money & Securities Coverage – “Broad Form”.
- B) Forgery & Alteration Coverage – “Broad Form”.
- C) Computer Fraud.
- D) Inside Coverage:
 - 1) actual destruction, or wrongful abstraction
 - 2) other property if loss results from safe burglary or robbery within premises.
- E) Outside Coverage:
 - 1) while the property is being conveyed by a messenger
 - 2) while it is being conveyed by an armored car company
 - 3) while it is within the living quarters if the home of any messenger or collector
- F) Included: All Owned Entity premises and all officials' homes and/or any other off premise collection location.

X) PUBLIC OFFICIAL AND EMPLOYEE BOND COVERAGE

<u>Position</u>	
Blanket Employee	\$ 100,000*
Treasurer	25,000
Deputy Treasurer	15,000
Clerk	10,000
Deputy Clerk	10,000
Supervisor	5,000

*Limit is excess over individual Position Bonds.

XI) PUBLIC OFFICIAL AND EMPLOYEE ACCIDENT POLICY- Provident

	<u>Off Duty</u>	<u>On Duty Only</u>
<u>Death Benefits:</u>		
Accidental Death-Injury Only	\$ 200,000	\$ 250,000
Safety Belt	50,000	50,000
Air Bag	20,000	25,000
<u>Impairment Benefits:</u>		
Loss of or Loss of Use (Up to 100% of the principal sum based on Policy Schedule)	200,000	250,000
Quadriplegia	200,000	250,000
Paraplegia	150,000	187,500
Hemiplegia	100,000	125,000
Uniplegia	50,000	62,500
<u>Additional Benefits:</u>		
Coma		
1% per month, first 11 months	2,000	2,500
100% in the 12 month	200,000	250,000
Accidental Severe Burn and Disfigurement (Up to 100% based on percentage of Burn Area)	100,000	100,000
Hepatitis C (Resulting from Occupational or Assigned Duties)		50,000
<u>Supplemental Benefits:</u>		
Felonious and Violent Crime		\$ 10,000
Home Alteration and Vehicle Modification		\$ 10,000
Rehabilitation		\$ 10,000
Prosthesis		\$ 1,000
Bereavement and Trauma Counseling		\$ 1,000
Burial and Cremation		\$ 5,000
<u>Travel Assistance Benefits:</u>		
Access to 24/7 Security Assistance Center		
Emergency Travel Arrangements		
Referral to Medical Providers		
Pre-Trip Informational Assistance		
Translation Services		
Medical Evacuation – Due to a covered injury or emergency sickness, services provided through AXA Assistance Service		
Repatriation - Due to a covered injury or emergency sickness, services provided through AXA Assistance Service		

XII) FIREFIGHTERS ACCIDENT POLICY- Provident

24-Hour Group Benefits:

Accidental Death & Dismemberment Benefit- Injury Only	\$	*****
Safety Belt Benefit		*****

On Duty Only**

Death Benefits:

Accidental Death Benefit - Injury	\$	125,000
Accidental Death Benefit - Illness		50,000
HIV Positive Benefit	Up to	125,000
Bereavement Benefit - Injury or Illness	Up to	10,000
Dependent Child Benefit - Injury or Illness		10,000
Safety Belt Benefit		31,250
Air Bag Benefit		31,250
Final Expense Benefit		10,000
Spousal Benefit		15,000

Impairment Benefits:

Dismemberment or Vision Impairment Benefit	Up to \$	125,000
Cosmetic Disfigurement from Burns Benefit	Up to	125,000
Permanent Physical Impairment Benefit	Up to	125,000
Felonious Assault Benefit	Up to	62,500
Impairment Modification Benefit	Up to	50,000
Paralysis Benefit		125,000*

Income Protection Benefits:

Maximum Weekly Total Disability Benefit	Up to	300
Minimum Weekly Total Disability Benefit		50
Earned Income Replacement Benefit		250*
Partial Disability Benefit	Up to	300*
Cost of Living Adjustment	Up to	900
First Week Disability Benefit	Up to	1,000
Transition Benefit	Up to	300
Retraining Benefit	Up to	20,000*

Medical Expenses Benefits:

Medical Expense Benefit – Injury or Illness		10,000*
Plastic Surgery Benefit		25,000*

Family Assistance Benefits:

Daily Hospital Confinement and Outpatient Treatment Benefit		60
Daily Critical Care Benefit		120
Family Expense Benefit		5,000
Occupational Rehabilitation Benefit		5,000*
Mental Stress Management Benefit per person, per incident		5,000
Traumatic Incident Benefit per Covered Activity		1,000
Health Insurance Premium Benefit		12,000
Surviving Spouse and Dependent Child Education Benefit		10,000

*Benefits are Excess of Workers Compensation

** Auxiliary Persons, Junior Firefighters and/or Community Volunteers Included

XIII) CYBER AND PRIVACY LIABILITY POLICY - MTPP

Policy Period Maximum Limit	\$1,000,000
Additional Defense Cost Limit	\$1,000,000
Section XIII Retention Limit (Including Claim Expense)	\$ 2,500

Third Party Liability

Multimedia Liability Coverage	\$1,000,000
Security and Privacy Liability Coverage	\$1,000,000
Privacy Regulatory Defense and Penalties Coverage	\$1,000,000
PCI DSS Liability Coverage	\$1,000,000
TCPA Defense Coverage	\$ 50,000

First Party Coverage

Breach Event Costs Coverage	\$1,000,000
Post Breach Remediation Costs Coverage	\$ 25,000
BrandGuard Coverage	\$1,000,000
System Failure Coverage	\$1,000,000
Dependent Systems Failure Coverage	\$1,000,000
Cyber Extortion	\$ 100,000

Cyber Crime

Financial Fraud Sublimit	\$ 250,000
Telecommunications and Utilities Fraud Sublimit	\$ 250,000
Phishing Fraud Sublimit	\$ 250,000

Additionally Included

Reward Expenses	\$ 50,000
Court Attendance Costs	\$ 25,000
Bodily Injury	\$ 250,000
Bricking Loss with betterment	\$ 250,000

Ann Arbor Charter Township As Of 01/01/2025

Property Schedule

<u>Loc #</u>	<u>Bldg #</u>	<u>Address</u>	<u>Description</u>		<u>Building Limit</u>	<u>Contents Limit</u>
1	1	3792 Pontiac Trail	Administrative Offices	\$	3,326,873	\$ 151,850
2	1	4319 Goss Rd #2	Fire Station	\$	3,352,388	\$ 32,500
3	1	4231 Whitehall Dr	Water Tower	\$	1,122,191	\$ -
3	2	4231 Whitehall Dr	Pumping Station	\$	2,244,379	\$ -
3	3	4231 Whitehall Dr	Storage Building	\$	139,440	\$ -
3	4	4231 Whitehall Dr	Storage Building	\$	49,560	\$ -
4	1	1947 Dixboro	Lift Station	\$	575,124	\$ -
7	1	1343 Starks Strasse St	Lift Station	\$	448,876	\$ -
8	1	4400 Pontiac Dr	Barn	\$	259,140	\$ -
9	1	36595 Washtenaw Dr	Meter Station	\$	308,603	\$ -
10	1	4620 E Huron River Dr	Pumping Station	\$	308,603	\$ -
11	1	1300 Earhart Rd	Meter Vlt Sewer#2	\$	115,025	\$ -
12	1	3701 Plymouth Rd	Meter Vlt Sewer#3	\$	115,025	\$ -

Vehicle Schedule

<u>Year</u>	<u>Type</u>	<u>Description</u>	<u>VIN#</u>	<u>Vehicle Limit</u>
1940	10	Gen Fire Truck - Liab Only	1977	Liability Only
1998	13	Timberwolf Trailer	1499	ACV
2005	18	FD Crimson Fire Tanker-Spartan	2550	\$ 370,000
2007	18	FD Crimson Aerial 207	6749	\$ 574,689
2009	17	EMS Ford F-550 Rescue	6873	\$ 125,000
2011	18	FD Crimson Legend Pumper	4047	\$ 399,000
2011	18	FD Crimson Legend Pumper	4048	\$ 399,000
2012	13	Kaufman Trailer	2588	ACV
2015	2	BD Ford Pickup	4150	ACV
2015	13	Aluminum Trailer	2TA2	ACV
2016	7	UTL Ford F-550 Dump	2490	ACV
2016	18	FD Toyota Pickup	3422	\$ 70,000
2018	2	Ford F-150 4x4	1945	ACV
2019	2	BD Ford Ranger	0607	ACV
2019	18	FD Ford F-250	0274	\$ 33,435
2020	2	Ford F-350 W/Plow	8173	ACV
2021	13	Utility Trailer	9750	ACV
2021	18	FD Chevy Silverado 4WD	5143	\$ 270,591
2021	18	FD Chevy Silverado 4WD	2235	\$ 316,300
2022	18	FD Ford F-150	5416	\$ 63,000

Ann Arbor Charter Township As Of 01/01/2025

Inland Marine Schedule

<u>Description</u>		<u>Item Limit</u>
Miscellaneous Equipment	\$	133,331
Fire Department Equipment	\$	941,860
 <u>Scheduled Equipment (items over \$25,000)</u>		
Warning Sirens 2001-130 One-Way	\$	110,000
Mako Compressor System	\$	45,000
Speed Trailer	\$	10,625
2 Sets Jaws of Life	\$	66,000
35 KW Generac Portable Generator	\$	28,000
Skid Steer Tractor W/Attachment	\$	119,000
Polaris Ranger XP1000 W/Skid Unit	\$	29,000
Ford Tractor	\$	75,000
Kubota RTV 1100	\$	25,500

Additional Insureds

Entity

Leaf Capital Funding LLC
Washtenaw County Road Commission

Interest

Lease of two Sharp MX-3071 Copiers valued at \$5000 each.
Right of Way permitted activities.

**ANN ARBOR CHARTER TOWNSHIP
BOARD OF TRUSTEES
ORDINANCE TO AMEND CHAPTER 2, ADMINISTRATION
ARTICLE VI, BOARDS AND COMMISSIONS
DIVISION 1, PLANNING COMMISSION**

December 16, 2024

The Ann Arbor Charter Township Board of Trustees ordains and adopts the following amendments to Chapter 2, Administration, Article VI, Boards and Commissions, Division 1, Planning Commission, Section 2-225 – Removal from office; conflict of interest [new language underlined, deleted language ~~stricken~~]:

CHAPTER 2, ARTICLE VI, Division 1, Section 2-225 is amended to read as follows:

Sec. 2-225. Removal from office; conflict of interest.

- (a) The Township Board may remove a member from the Planning Commission for misfeasance, malfeasance, or nonfeasance in office upon written charges and after a public hearing as provided in the Act.
- (b) Before casting a vote on a matter on which a member may reasonably be considered to have a conflict of interest as defined in paragraphs (c), (d), (e), and (f) ~~and (g)~~ below, the member shall disclose the conflict of interest to the Planning Commission. The member shall be disqualified from voting on a matter involving a conflict of interest to the extent so provided in this division. Failure of a member to disclose a potential conflict of interest known to the member as required by this division constitutes malfeasance in office.
- (c) For purposes of this division a member shall declare a potential conflict of interest in the following circumstances:
 - (1) The member, a relative or other family member of a member or a business associate of the member is involved in any project, property or request ("project") for which the Planning Commission is asked to make a decision;
 - (2) The member, a relative or other family member of a member or a business associate of the member has a business or financial interest in the project or has a business or financial interest in the owner or applicant for the project;
 - (3) There is a reasonable appearance of a conflict of interest, as determined by the member declaring the potential conflict of interest.
- ~~(d) When a member, a relative or other family member of a member, or a business associate of a member, owns or has a financial interest in neighboring properties, the member shall disclose such fact to the Planning Commission. For purposes of this subsection, a neighboring property shall include any property falling within the notification radius~~

~~for a project, as required by the zoning ordinance or other applicable law or ordinance. Such interest in a neighboring property shall not be considered a conflict of interest unless otherwise determined by the Planning Commission in view of the particular circumstances.~~

~~(e)~~(d) The member declaring a potential conflict of interest should state the nature of the conflict and whether the member believes he or she could impartially consider the request before the Planning Commission. The other Planning Commission members shall then decide by a majority vote if the member declaring a potential conflict of interest shall abstain from voting on the matter.

~~(f)~~(e) If the other Planning Commission members decide that the member declaring a potential conflict of interest must abstain from voting, the member may not participate in the discussion as a member on the matter and may not vote on such matter.

~~(g)~~(f) A member, though disqualified from voting or discussion of a matter as a member as a result of a conflict of interest may, nevertheless, personally appear before the Planning Commission as an applicant or owner on such matter.

This Ordinance shall take effect upon publication as provided by law.

Motion By:

Second By:

YEAS:

NAYS:

Abstain:

Absent:

ORDINANCE DECLARED ADOPTED

CERTIFICATION

It is hereby certified that the foregoing Ordinance was adopted by the Township Board of Ann Arbor Charter Township, Washtenaw County, Michigan at a meeting of the Board duly called and held on _____, 2024.

ANN ARBOR CHARTER TOWNSHIP

By: _____
Diane O'Connell, Supervisor

By: _____
Rena Basch, Clerk

First Reading:

Public Hearing:

Approved by Board:

Effective: _____, 2024

BOARD OF TRUSTEES

ANN ARBOR CHARTER TOWNSHIP

WASHTENAW COUNTY, MICHIGAN

RESOLUTION TO ADOPT POLICY FOR CONFLICT OF INTEREST

DECEMBER 16, 2024

Resolution adopted at a regular meeting of the Board of Trustees of the Charter Township of Ann Arbor, Washtenaw County, Michigan, held at the Township Hall, 3792 Pontiac Trail, Ann Arbor, Michigan on December 16, 2024, at 7:30 p.m., and available electronically via Zoom video conference which was open and made available to the public via a registration link and dial in number located on the Township website.

PRESENT: John Allison, Rena Basch, Della DiPietro, Eric Kaldjian, Diane O'Connell, Peter Kotila, Carlene Colvin-Garcia.

ABSENT: N/A

Resolution by _____; supported by _____.

RECITALS

A. On July 19, 2021, the Board of Trustee adopted a conflict of interest policy (“Policy”) designed to help elected and appointed officials, managers, department heads, officers, agents, and employees of Ann Arbor Charter Township identify situations that present potential conflicts of interest and to provide Ann Arbor Charter Township with a procedure that, if observed, will allow a transaction to be treated as valid and binding even though an official, manager, officer, agent, or employee has or may have a conflict of interest with respect to the transaction.

B. The Township Board as determined that it is in the best interests of the health, safety and welfare of the Township to amend the Policy to read as set forth in this Resolution.

RESOLUTION

After consideration of the foregoing recitals, and the health, safety and welfare of the Township, NOW THEREFORE, IT IS HEREBY RESOLVED BY the Ann Arbor Charter Township Board of Trustees that the Policy shall be amended to read as follows:

1. Conflict of Interest Defined. For purposes of this Policy, the following circumstances shall be deemed to create Conflicts of Interest:

A. Outside Interests.

(i) A Contract or Transaction between Ann Arbor Charter Township and a Responsible Person or Family Member.

- (ii) A Contract or Transaction between Ann Arbor Charter Township and an entity in which a Responsible Person or Family Member has a real or apparent(a) Material Financial Interest, (b) or other interest or tangible personal benefit, (c) or of which such person is a director, officer, agent, partner, associate, trustee, personal representative, receiver, guardian, custodian, conservator, other legal representative, employee, or soon-to-be employee.
- B. Outside Activities.
- (i) A Responsible Person or Family Member competing with Ann Arbor Charter Township in the rendering of services or in any other Contract or Transaction with a third party.
 - (ii) A Responsible Person's or Family Member's having a real or apparent Material Financial Interest, or other interest or tangible personal benefit in; or serving as a director, officer, employee, soon-to-be-employee, agent, partner, associate, trustee, personal representative, receiver, guardian, custodian, conservator, or other legal representative of, or consultant to; an entity or individual that competes with Ann Arbor Charter Township in the provision of services or in any other Contract or Transaction with a third party.
- C. Gifts, Gratuities and Entertainment. A Responsible Person accepting gifts, entertainment, or other favors from any individual or entity that:
- (i) does or is seeking business with, or is a competitor of Ann Arbor Charter Township; or
 - (ii) has received, is receiving or is seeking to receive a loan or grant, or to secure other financial commitments from Ann Arbor Charter Township.
 - (iii) is a charitable organization; under circumstances where it might be inferred that such action was intended to influence or possibly would influence the Responsible Person in the performance of his or her duties.
 - (iv) This paragraph does not preclude the acceptance of items less than \$50 or entertainment less than \$50 that are not related to any particular transaction or activity of Ann Arbor Charter Township.

2. **Definitions.** All capitalized terms are defined as set forth in this Section.

- A. A Conflict of Interest is any circumstance described in Part 1 of this Policy.
- B. A Responsible Person is any person serving as an elected or appointed official, manager or department head, officer, employee, agent, or member of the board of trustees, planning commission, zoning board of appeals, or other board, commission, or committee of Ann Arbor Charter Township. If any board,

commission, or committee of the Township is subject to a conflict of interest policy applicable only to that board, commission or committee, any conflict between such conflict of interest policy and this Policy shall be resolved in favor of the policy term that imposes greater requirements on a Responsible Person.

- C. A Family Member is a spouse, domestic partner, parent, child, or spouse of a child, brother, sister, or spouse of a brother or sister, or any other person belonging to the immediate family, of a Responsible Person.
- D. A Material Financial Interest in an entity is a financial interest of any kind that, in view of all the circumstances, is substantial enough that it would, or reasonably could, affect a Responsible Person's or Family Member's judgment with respect to transactions to which the entity is a party. This includes all forms of compensation. The board may from time to time establish or update the dollar amount that it would consider to be a "material financial interest."
- E. A Contract or Transaction is any agreement or relationship involving the sale or purchase of goods, services, or rights of any kind, the providing or receipt of a loan or grant, the establishment of any other type of pecuniary relationship or review of a charitable organization by Ann Arbor Charter Township. The making of a gift to Ann Arbor Charter Township is not a Contract or Transaction.

3. Procedures.

- A. Before board or committee action on a Contract or Transaction involving a Conflict of Interest, a trustee or committee member having a Conflict of Interest and who attends the meeting shall disclose all facts material to the Conflict of Interest. Such disclosure shall be reflected in the minutes of the meeting.
- B. A trustee or committee member who plans not to attend a meeting at which he or she has reason to believe that the board or committee will act on a matter in which the person has a Conflict of Interest shall disclose to the township supervisor and chair of the meeting all facts material to the Conflict of Interest. The chair shall report the disclosure at the meeting and the disclosure shall be reflected in the minutes of the meeting.
- C. A person who has a Conflict of Interest shall not participate in the board's or committee's discussion of the matter except to disclose material facts and to respond to questions. Such person shall not attempt to exert his or her personal influence with respect to the matter, either at or outside the meeting.
- D. Responsible Persons who are not members of the board of trustees or other committee or board of Ann Arbor Charter Township or who have a Conflict of Interest with respect to a Contract or Transaction that is not the subject of board or committee action, shall disclose to the Chair or the Chair's designee any Conflict of Interest that such Responsible Person has with respect to a Contract or Transaction. Such disclosure shall be made as soon as the Conflict of Interest is known to the Responsible Person. The Responsible Person shall refrain from any

action that may affect Ann Arbor Charter Township's participation in such Contract or Transaction.

In the event it is not entirely clear that a Conflict of Interest exists, the individual with the potential conflict shall disclose the circumstances to the Chair or the Chair's designee, who shall determine whether there exists a Conflict of Interest that is subject to this Policy.

4. **Confidentiality.** Each Responsible Person shall exercise care not to disclose confidential information acquired in connection with such status or information the disclosure of which might adversely impact the interests of Ann Arbor Charter Township. Furthermore, a Responsible Person shall not disclose or use information relating to the business of Ann Arbor Charter Township for the personal profit or advantage of the Responsible Person or a Family Member.
5. **Review of Policy.**
 - A. Each new Responsible Person shall be required to review a copy of this Policy and to acknowledge in writing that he or she has done so.
 - B. Each new Responsible Person shall annually complete a disclosure form, in the form identified in Paragraph 9, identifying any relationships, positions, or circumstances in which the Responsible Person is involved that he or she believes could contribute to a Conflict of Interest arising. Such relationships, positions, or circumstances might include service as a director of or consultant to a not-for-profit organization, or ownership of a business that might provide goods or services to Ann Arbor Charter Township. Any such information regarding business interests of a Responsible Person or a Family Member shall be treated as confidential and shall generally be made available only to the elected officials, committee chairs, and any committee appointed to address Conflicts of Interests (such as the personnel committee), except to the extent additional disclosure is necessary in connection with the implementation of this Policy.
 - C. This Policy shall be reviewed annually by the Board of Trustees. Any changes to the Policy shall be communicated immediately to all Responsible Persons.
6. **Violations of Policy.** Ann Arbor Charter Township shall take appropriate disciplinary action with any Responsible Person who violates this Policy, in accordance with applicable state and federal laws, including potential sanctions or termination.
7. **Disclosure of Potential Conflicts.** When receiving grants from a federal agency, Ann Arbor Charter Township will disclose to the federal agency in writing any potential conflict

of interest related to the grant in accordance with that federal agency's applicable policy or other applicable federal law.

- 8. **Conflict with Federal or State Law.** In the event there is an inconsistency between the requirements and the procedures prescribed herein and those in federal or state law, the law shall control.
- 9. **Conflict of Interest Information Form.**

Conflict of Interest Information Form

Name: _____ Date: _____

Please describe below any relationships, positions, or circumstances in which you are involved that you believe could contribute to a Conflict of Interest (as defined in Ann Arbor Township's Policy on Conflicts of Interest) arising.

RESOLUTION DECLARED ADOPTED

I certify that the foregoing is a true and complete copy of a resolution adopted by the Ann Arbor Charter Township Board, County of Washtenaw, State of Michigan, at a regular meeting held on December 16, 2024 that said meeting was conducted and public notice of said meeting was given pursuant to and in full compliance with the Open Meetings Act, being Act 267, Public Acts of Michigan, 1976, and that the minutes of said meeting were kept and will be or have been made available as required by said Act.

Diane O'Connell, Township Supervisor

Rena Basch, Township Clerk

**BOARD OF TRUSTEES
CHARTER TOWNSHIP OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN
RESOLUTION APPROVING REALLOCATION OF ARPA FUNDS**

DECEMBER 16, 2024

Resolution adopted at a special meeting of the Board of Trustees of the Charter Township of Ann Arbor, Washtenaw County, Michigan, held at the Township Hall, 3792 Pontiac Trail, Ann Arbor, Michigan on December 16th, 2024, and available electronically via video conference which was open and made available to the public via a link and dial in number located on the Township website.

PRESENT:

ABSENT:

Motion by

RECITALS

- A. The Township received 442,738.78 in State and Local Fiscal Recovery Funds (“SLFRF”) in relation to the American Rescue Plan Act (“ARPA”), which was passed to help communities recover from negative impacts of the Covid-19 pandemic.
- B. On May 24, 2023, the Township Board passed a resolution allocating the Township’s ARPA funds to the various projects including the New Human Services Partnership grant, Warren Road Culvert Repair project, local road improvements, Dhu Varren Road Special Assessment District, and Dixboro Trail Gap Engineering costs.
- C. The U.S. Department of Treasury issued updated guidance that all awarded SLFRF dollars must be obligated by December 31, 2024, and spent by December 31, 2026. Any funds not obligated by December 31st, 2024, or not spent by December 31st, 2026, must be returned to the Department of Treasurer.
- D. ARPA projects may result in lower-than-expected costs.

RESOLUTION

NOW, THEREFORE, RESOLVED, that all unused and unallocated ARPA funds are hereby dedicated for use of general operation expensed such as employee wages, benefits, and consultant fees for January 1, 2024, to December 31, 2024.

FURTHER RESOLVED, that the Township’s Supervisor may do all things necessary to effectuate the above resolution, including the execution and delivery of any agreements or other documents to evidence and effectuate the allocation, including, but not limited to any previously allocated funds.

RESOLUTION DECLARED ADOPTED.

AYES:

NAYES:

ABSTAIN:

Diane O'Connell
Ann Arbor Charter Township Supervisor

I certify that the foregoing is a true and complete copy of a resolution adopted by the Ann Arbor Charter Township Board of Trustees, County of Washtenaw, State of Michigan, at a special meeting held on May 24, 2023, that said meeting was conducted and public notice of said meeting was given pursuant to and in full compliance with the Open Meetings Act, being Act 267, Public Acts of Michigan, 1976, and that the minutes of said meeting were kept and will be or have been made available as required by said Act.

Rena Basch
Ann Arbor Charter Township Clerk

Dated: _____, 2023

**ANN ARBOR CHARTER TOWNSHIP
BOARD OF TRUSTEES
AMENDMENT TO CODE: CHAPTER 26, ENVIRONMENT
ARTICLE VII SOIL EROSION AND SEDIMENTATION CONTROL**

November 18, 2024

The Ann Arbor Charter Township Board of Trustees ordains and adopts the following amendments to Chapter 26, Environment, Article VII Soil Erosion and Sedimentation Control, [new language underlined, deleted language ~~stricken~~]:

SECTION 1. Amendment of CHAPTER 26, ARTICLE VII, Division 1, Section 26-434.

Chapter 26, Article VII, Division 1, Section 26-434 is amended to read as follows:

Sec. 26-434. Incorporation by reference.

For the purposes of this article, the following statute and related regulations and/or rules are incorporated by reference by the Township as part of this article: Part 91 of Act 451 of 1994, MCL 324.9101 et seq., and the rules promulgated pursuant to Part 91 by the Michigan Department of ~~Environmental Quality~~ Environment, Great Lakes, and Energy, to the extent that this article is not more restrictive.

SECTION 2. Amendment of CHAPTER 26, ARTICLE VII, Division 2, Section 26-451.

Chapter 26, Article VII, Division 2, Section 26-451 is amended to read as follows:

Sec. 26-451. Definition of terms.

The following terms, phrases, words and derivatives shall have the meanings defined below:

Best management practices. Those structural, vegetative or managerial practices used to treat, prevent or reduce water pollution such as temporary seeding on exposed soils, detention and retention basins for sediment control, and scheduling and implementation of all best management practices to ensure their effectiveness, and include the minimum control measures contained in the most recent version of the State of Michigan's "Guidebook of Best Management Practices for Michigan Watersheds."

Earth change. A human-made change in the natural cover or topography of land, including cut and fill activities, which may result in or contribute to soil erosion or sedimentation of the waters of the State of Michigan or onto properties adjacent to the change. This includes, but is not limited to, grading and preparation for wells, septic fields (including perimeter drains), driveways, foundations, backfill, final grade changes, and stockpiling of material. "Earth change" shall not apply to the practice of plowing and tilling soil for the purpose of crop production and ordinary household gardens.

Erosion. When land is diminished or worn away due to wind, water, or glacial ice. Often the eroded debris (silt or sediment) becomes a pollutant via stormwater runoff. Erosion occurs naturally but can be intensified by land-clearing activities such as farming, development, road building, and timber harvesting.

Major project. Any earth change that will disturb five acres or more of property.

Minor project. Any earth change (other than on a single-family residential project) that will disturb less than five acres of property.

Municipal enforcing agency. The municipal enforcing agency shall be the Utilities Department of Ann Arbor Charter Township. One or more individuals affiliated with the Township Utilities Department shall have current certificates of training issued under Section 9123 of Part 91 to administer this article.

~~*MDEQ EGLE.*~~ The Michigan Department of ~~Environmental Quality or any successor agency~~ Environment, Great Lakes, and Energy.

NREPA. Natural Resources and Environmental Protection Act, Act 451 of 1994, MCL 324.101 et seq., as amended.

Part 91 and the rules. Part 91, Soil Erosion and Sedimentation Control of NREPA (MCL 324.9101) and the rules promulgated under Part 91 by the Michigan Department of ~~Environmental Quality~~ Environment, Great Lakes, and Energy.

Person. The word "person" means any individual, partnership, corporation, association, club, joint venture, estate, trust, governmental unit, and any other group or combination acting as a unit, and the individuals constituting such group or unit.

Sediment. Mineral or organic particulate matter that has been removed from its site of origin by the processes of soil erosion, is in suspension in water, or is being transported.

Single-family residential project. An earth change on a parcel containing an existing single-family residence owned and occupied for single-family residential purposes that disturbs less than one acre of property.

Soil erosion. The wearing away of land by the action of wind, water, gravity or a combination thereof.

Township. Ann Arbor Charter Township.

Township Board. Ann Arbor Charter Township Board.

SECTION 3. Amendment of CHAPTER 26, ARTICLE VII, Division 3, Section 26-461.

Chapter 26, Article VII, Division 3, Section 26-461 is amended to read as follows:

Sec. 26-461. Applicability; permit; permit waivers.

- (a) A person shall not maintain or undertake an earth change governed by this article except as authorized by a permit issued by the municipal enforcing agency.
- (b) An owner of property in the Township who contracts for, allows, or engages in a public or private earth change shall obtain a permit from the municipal enforcing agency before commencing an earth change, except: (i) earth changes by an authorized public agency approved under Section 9110 of Part 91, and (ii) earth changes exempted under section 26-464 below. An earth change activity that does not require a permit under section 26-464 is not exempt from enforcement procedures under this article, Part 91 or the rules if the exempted activity causes or results in a violation of this article, Part 91 or the rules.

- (c) An owner may request from the municipal enforcing agency a permit waiver for an earth change that will disturb less than 225 square feet and that will not contribute to sedimentation of lakes or streams, or adjacent properties.
- (d) At the time that the permit application is submitted to the municipal enforcing agency:
 - (1) For projects consisting of an earth change activity which disturbs one or more acres of land or which is within 500 feet of a lake or stream, the applicant shall ~~also~~ submit a soil erosion and sedimentation control plan as set forth in the SESC plan checklist attached to the SESC permit application which is consistent with Part 91 and the rules (including, but not limited to, Rules 323.1703 and 323.1708—323.1710), along with any other document required by the municipal enforcing agency. The soil erosion and sedimentation control measures shall also be implemented and maintained in accordance with best management practices and the approved SESC plan.
 - (2) For projects consisting of an earth change activity which disturbs less than one acre of land, is greater than 500 feet from a lake or stream, and does not otherwise require a SESC permit according to Part 91 and the rules, the applicant shall submit a Grading Plan as set forth in the Grading Plan checklist attached to the Grading Plan permit application. Soil erosion and sedimentation control measures shall be required as part of the Grading Plan, however the Grading Plan does not need to comply with the Part 91 requirements.
- (e) The owner of property that is subject to a permit under this article is responsible for compliance with the terms of the permit that apply to the owner's property.
- (f) The Township Building Official shall not issue a building permit for any proposed construction, alteration or improvement within the Township unless the applicant provides evidence that any necessary permit for an earth change under this article has been approved and all fees and deposits paid.

SECTION 4. Amendment of CHAPTER 26, ARTICLE VII, Division 3, Section 26-462.

Chapter 26, Article VII, Division 3, Section 26-462 is amended to read as follows:

Sec. 26-462. Transfer.

- (a) Except as provided in subsection 26-462(b) below, if property subject to a permit under this article is transferred, both of the following are transferred with the property:
 - (1) The permit, including the permit obligations and conditions.
 - (2) Responsibility for any violations of the permit that exist on the date the property is transferred.
- (b) If property is subject to a permit under this article and a parcel of the property, but not the entire property, is transferred, both of the following are transferred with the parcel:
 - (1) The permit obligations and conditions with respect to that parcel, but not the permit itself.
 - (2) Responsibility for any violations of the permit with respect to that parcel that exist on the date the parcel is transferred.

- (c) If property subject to a permit under this article is proposed to be transferred, the transferor shall notify the transferee of the permit in writing on a form developed by the ~~MDEQ~~ EGLE. The notice shall inform the transferee of the requirements of section 26-461, subsection (d) above and, as applicable, subsections (a) and (b) of this section 26-462. The notice shall include a copy of the permit. The transferor and transferee shall sign the notice, and the transferor shall submit the signed notice to the municipal enforcing agency before the property is transferred.
- (d) The municipal enforcing agency may charge a fee for the transfer of a permit under subsections (a) or (b) of this section 26-462. The fee shall be established by resolution of the Township Board and shall not exceed the administrative costs of transferring the permit. Fees collected under this section 26-462 shall only be used for the enforcement and administration of this article by the municipal enforcing agency.

SECTION 5. SEVERABILITY.

The provisions of this Ordinance are hereby declared to be severable and if any part is declared invalid for any reason by a court of competent jurisdiction it shall not affect the remainder of this Ordinance which shall continue in full force and effect.

SECTION 6. REPEAL.

All other ordinances or parts of ordinances in conflict with this ordinance are hereby repealed, but only to the extent to give this Ordinance full force and effect.

SECTION 7. SAVINGS CLAUSE

All proceedings pending and all rights and liabilities existing, acquired or incurred, at the time this ordinance takes effect, are hereby saved, and such proceedings may be consummated under and according to the ordinance in force at the time such proceedings are or were commenced. It is the legislative intent that this ordinance shall not be construed to alter, affect or abate any pending prosecution or enforcement action, or prevent prosecution or enforcement hereafter instituted under such repealed sections, for violations committed prior to the effective date of this ordinance; and all prosecutions or enforcement actions pending at the effective date of this ordinance, and all prosecutions or enforcement actions instituted after the effective date of this ordinance for violations that occurred prior to the effective date of this ordinance may be continued or instituted under and in accordance with the provisions of the ordinance in force at the time of the occurrence of such violation.

SECTION 6. EFFECTIVE DATE.

This Ordinance shall take effect upon publication as provided by law.

FIRST READING DRAFT

Motion By: Second By:

YEAS:

NAYS:

Abstain:

Absent:

ORDINANCE DECLARED ADOPTED

CERTIFICATION

It is hereby certified that the foregoing Ordinance was adopted by the Township Board of Ann Arbor Charter Township, Washtenaw County, Michigan at a meeting of the Board duly called and held on _____, 2024.

ANN ARBOR CHARTER TOWNSHIP

By: _____
Diane O'Connell, Supervisor

By: _____
Rena Basch, Clerk

First Reading: 11/18/2024

Second Reading:

Approved by Board:

Effective: _____, 2024 (7 days after publication)

**RESOLUTION OF THE ANN ARBOR CHARTER TOWNSHIP BOARD OF TRUSTEES
ELECTING EXEMPTION FROM THE REQUIREMENTS OF THE PUBLICLY FUNDED
HEALTH INSURANCE CONTRIBUTION ACT**

December 16, 2024

Resolution adopted at a regular meeting of the Board of Trustees of Ann Arbor Charter Township, Washtenaw County, Michigan held December 16, 2024 at 3792 Pontiac Trail, Ann Arbor, MI.

PRESENT: John Allison, Rena Basch, Carlene Colvin-Garcia, Della DiPietro, Eric Kaljian, Peter Kotila and Diane O’Connell.

ABSENT:

Motion by _____; supported by _____.

RECITALS:

- A. Pursuant to the Michigan Publicly Funded Health Insurance Contribution Act, being Public Act 152 of 2011 (“Act”), certain limits are imposed on the amount of health care coverage provided by public employers to their employees.
- B. The Act allows the Township Board to exempt the Township from the requirements of the Act for the next succeeding year by a resolution approved by a 2/3 vote of the Township Board.
- C. The Act addresses only one method for saving health care costs and does not take into consideration other methods such as savings that can result from not providing health care insurance coverage to retirees and 40% payment in lieu of health care coverage, as is done in the Township.
- D. The Township and Fire Fighters Local Union 2003, IAFF negotiated a contract effective for 2025 through 2027, which reduces costs by encouraging participation in the lower cost health insurance plan, and by sharing some premium cost increases between the employees and the Township.
- E. The Township wishes to continue to treat its union and non-union employees similarly for purposed of health care coverage.

Now, therefore, the Ann Arbor Charter Township Board of Trustees adopts the following resolution by at least a 2/3 vote:

RESOLUTION

Resolved, the Township Board elects to exempt the Township from the requirements of the Act for the year 2025.

Roll Call Vote:

- Allison -
- Basch -
- Colvin-Garcia -
- DiPietro –
- Kaljjan -
- Kotila -
- O’Connell -

RESOLUTION DECLARED ADOPTED

I certify that the foregoing is a true and complete copy of a resolution adopted by the Ann Arbor Charter Township Board of Trustees, County of Washtenaw, State of Michigan, at a regular meeting held on December 16, 2024, that said meeting was conducted and public notice of said meeting was given pursuant to and in full compliance with the Open Meetings Act, being Act 267, Public Acts of Michigan, 1976, and that the minutes of said meeting were kept and will be or have been made available as required by said Act.

Rena Basch, Clerk

Dated: _____

**ANN ARBOR CHARTER TOWNSHIP
WASHTENAW COUNTY, MICHIGAN
RESOLUTION TO APPOINT A DELEGATE AND ALTERNATE TO THE
WASHTENAW REGIONAL RESOURCE MANAGEMENT AUTHORITY (WRRMA)**

DECEMBER 16, 2024

At a regular meeting of the Board of Trustees of Ann Arbor Charter Township, Washtenaw County, Michigan, held at 3792 Pontiac Trail, Ann Arbor, MI 48105 on December 16, 2024.

Present:

Absent:

The following preamble and resolution were moved by Carlene Colvin-Garcia and supported by _____.

WHEREAS, Ann Arbor Charter Township is a member of the Washtenaw Regional Resource Management Authority; and

WHEREAS, the Board of Trustees has the authority to appoint a delegate as detailed in the WRRMA Articles of Incorporation; and

WHEREAS, the Board of Trustees has determined that the citizens of the community will be served well by the appointments of Carlene Colvin-Garcia to the role of WRRMA Delegate and _____ to the role of WRRMA Alternate.

NOW THEREFORE BE IT RESOLVED that Carlene Colvin-Garcia is hereby appointed as WRRMA Delegate, and _____ is hereby appointed as WRRMA Alternate; and

BE IT FURTHER RESOLVED, that the appointees Carlene Colvin-Garcia and _____ shall serve in the role during the next fiscal year or until his/her successor is appointed by this Board.



2024 Summary of Activities:

WRRMA continued to move forward with the goal of increasing the quantity of high-quality recycling for WRRMA communities. Board members have agreed upon a regular education and outreach method and cycle. The focus of 2024 continues to be developing a collective service contract which is anticipated to be released in early 2025. Finally, WRRMA staff provided updates on the Countywide Materials Management Planning process and proposed state legislation.

WRRMA provides a recycling search engine for residents to help them understand what is recyclable in their community. The “Waste Wizard” is incorporated into the front page of the WRRMA website. Several member municipalities incorporate the website into their waste and recycling page as a resource for residents. As of October 21, 2024, the Waste Wizard had 8,528 searches from 4,660 residents.

The Board discussed options for how they’d like to pursue education and outreach and agreed upon a regular three-year cycle. In the first year, WRRMA will collect data. A contamination audit is scheduled for mid-November of 2024. The results of the audit will be used to create messaging in 2025. In the final year of the cycle, WRRMA will deliver educational messaging about the recycling process with an aim to provide clarity and reduce confusion about how the recycling process works.

The largest initiative of 2023-2024 has been pursuing a collective service contract for trash, recycling, and yard waste with the same or better service level at a lower price than what could be obtained by an individual municipality. With an increased number of households serviced, the authority can leverage increased negotiating power and take advantage of increased efficiencies. WRRMA would manage the contract and resolve service issues. WRRMA released a request for proposals in December 2023, received competitive pricing for services, and partially negotiated a contract at which point it had to discontinue as two municipalities pursued a 1-year contract extension with their existing provider. Now, four interested members’ contracts will expire in September 2025. WRRMA is collecting member input and anticipates releasing an RFP in January 2025. Interested members are asked to sign a contract between WRRMA and the municipality for WRRMA to manage their materials conditional upon certain terms such as realizing cost savings.

The manner that waste and recycling are managed will change. The State of Michigan has amended Act 451 to require counties to have a Materials Management Plan. County staff contracted by WRRMA provide regular updates on the initial stages of the planning process as it develops. County staff also provide updates on legislative bills that can impact member municipalities such as waste tip fee surcharges, extended producer responsibility bills for packaging which would fund recycling, and bills that would enable the County to regulate single use plastics commonly referred to as the “bag ban ban.”



**DRAFT Washtenaw County Regional Resource Management Authority (WRRMA)
Fiscal Year 2025 Budget**

Washtenaw County Regional Resource Management Authority's fiscal year begins January 1 and ends December 31. The proposed budget is prepared, discussed, and per the Articles of Incorporation, sent to Authority member's legislative bodies for objections each October. The WRRMA Board will review and address objections received by December 1, and then set their budget at the December meeting. The members of the WRRMA are: The Charter Township of Ann Arbor, Pittsfield Charter Township, Scio Township, the Charter Township of Ypsilanti, the City of Ann Arbor, the City of Dexter, the City of Saline, and the City of Ypsilanti.

Revenue: Authority Members have agreed to provide membership dues to advance the goals and initiatives falling within the purposes of WRRMA. The membership dues are collected in arrears and invoiced in December. Eight municipal members contribute membership dues of \$5,000 each.

Expenditures: WRRMA has not applied for grants for FY2025 and no matching funds are anticipated. WRRMA's budget may change in 2025. If a multi-community joint contract for trash, recycling, and yard waste or other organics is finalized, WRRMA would hire staff to provide services. Funding for additional costs incurred, such as insurance, and work performed to administer and execute a collective service contract will be paid for by members who are part of the contract. Until the scope of work is discussed and refined by the WRRMA Board, the 2025 budget will be based upon prior budgets. Expenditures in 2024 are budgeted for \$40,000.

Washtenaw County Staff time for administrative support includes staff time, overhead, and fringe. Staff time includes only work done on behalf of WRRMA. Time is tracked and reimbursed in accordance with the contract including coordination responsibilities, budget creation and tracking, contract creation, billing, grant application and coordination, meeting support, campaign creation, social media outreach and monitoring, website development, and any other education and outreach requirements requested by the Board. Contracted legal support provides legal advice and opinions, WRRMA meeting attendance, occasional municipal board attendance, material creation review, negotiations, contract assistance, and any litigation. Operating supplies provides support materials required for campaign costs.

(Revenue and expense details on the next page)

WRRMA BUDGET FY2025

Description	Amount
REVENUE	Budgeted
Member Contribution	\$40,000
State Revenue	\$ -
Local Revenue	\$ -
Total Revenue 2024	\$ 40,000
EXPENDITURES	Budgeted
Salaried	\$18,000
Printing	\$200
Postage	-
Operating Supplies	\$550
Auditing	\$700
Consultants and Contracts	-
Advertising and Outreach	\$4,550
Project Costs	-
Legal	\$ 16,000
Total Expenditures 2024	\$ 40,000

**ANN ARBOR TOWNSHIP MEETING DATES
2025 CALENDAR YEAR**

DRAFT

PLANNING COMMISSION	SUBMITTAL DEADLINE
1st Monday of most months @ 7:30 p.m.	By 2:00 pm
Monday, January 6, 2025	Tuesday, December 17, 2024
Monday, February 3, 2025	Tuesday, January 14, 2025
Monday, March 3, 2025	Tuesday, February 11, 2025
Monday, April 7, 2025	Tuesday, March 18, 2025
Monday, May 5, 2025	Tuesday, April 15, 2025
Monday, June 2, 2025	Tuesday, May 13, 2025
Monday, July 7, 2025	Tuesday, June 17, 2025
Monday, August 4, 2025	Tuesday, July 15, 2025
Monday, September 8, 2025	Wednesday, August 13, 2025
Monday, October 6, 2025	Wednesday, September 17, 2025
Monday, November 3, 2025	Wednesday, October 15, 2025
Monday, December 1, 2025	Tuesday, November 11, 2025
Monday, January 5, 2026	Tuesday, December 16, 2025
Note: Planning Commission workshops held as needed.	
BOARD OF TRUSTEES	SUBMITTAL DEADLINE
3rd Monday of most months @ 7:30 p.m.	By 2:00 pm
Wednesday, January 22, 2025	Monday, January 13, 2025
Monday, February 17, 2025	Monday, February 10, 2025
Monday, March 17, 2025	Monday, March 10, 2025
Monday, April 21, 2025	Monday, April 14, 2025
Monday, May 19, 2025	Monday, May 12, 2025
Monday, June 16, 2025	Monday, June 9, 2025
Monday, July 21, 2025	Monday, July 14, 2025
Monday, August 18, 2025	Monday, August 11, 2025
Monday, September 15, 2025	Monday, September 8, 2025
Monday, October 20, 2025	Monday, October 13, 2025
Monday, November 17, 2025	Monday, November 10, 2025
Monday, December 15, 2025	Monday, December 8, 2025
ZONING BOARD OF APPEALS	SUBMITTAL DEADLINE
One Tuesday each month @ 4:00 p.m.	By 2:00 pm
Tuesday, January 21, 2025	Tuesday, December 10, 2024
Tuesday, February 18, 2025	Tuesday, January 7, 2025
Tuesday, March 18, 2025	Tuesday, February 4, 2025
Tuesday, April 22, 2025	Tuesday, March 11, 2025
Tuesday, May 20, 2025	Tuesday, April 8, 2025
Tuesday, June 17, 2025	Tuesday, May 6, 2025
Tuesday, July 22, 2025	Tuesday, June 10, 2025
Tuesday, August 19, 2025	Tuesday, July 8, 2025
Tuesday, September 16, 2025	Tuesday, August 5, 2025
Tuesday, October 21, 2025	Tuesday, September 9, 2025
Tuesday, November 18, 2025	Tuesday, October 7, 2025
Tuesday, December 16, 2025	Tuesday, November 4, 2025
Shaded means moved for holiday or election conflict	

**ANN ARBOR TOWNSHIP MEETING DATES
2025 CALENDAR YEAR**

DRAFT

BOARD OF REVIEW	
TBD	9 am - 10 am (Organizational meeting)
TBD	9 am - 4:30 pm
TBD	1:30 pm - 4:30 pm and 6 pm - 9 pm
COMPENSATION COMMISSION	
TBD - meets odd years, typically in October	
FARMLAND & OPEN SPACE PRESERVATION BOARD	
4th Monday of every other month @ 7:30 p.m.	
Monday, January 27, 2025	
Monday, March 24, 2025	
Tuesday, May 27, 2025	
Monday, July 28, 2025	
Monday, September 22, 2025	
Monday, November 24, 2025	
ELECTION COMMISSION	
TBD	
Shaded means moved for holiday or election conflict	

**ANN ARBOR TOWNSHIP MEETING DATES
2025 CALENDAR YEAR**

DRAFT

PLANNING COMMISSION	SUBMITTAL DEADLINE
1st Monday of most months @ 7:30 p.m.	By 2:00 pm
Monday, January 6, 2025	Tuesday, December 17, 2024
Monday, February 3, 2025	Tuesday, January 14, 2025
Monday, March 3, 2025	Tuesday, February 11, 2025
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Monday, May 5, 2025	Tuesday, April 15, 2025
Monday, June 2, 2025	Tuesday, May 13, 2025
Monday, July 7, 2025	Tuesday, June 17, 2025
Monday, August 4, 2025	Tuesday, July 15, 2025
Monday, September 8, 2025	Wednesday, August 13, 2025
Monday, October 6, 2025	Wednesday, September 17, 2025
Monday, November 3, 2025	Wednesday, October 15, 2025
Monday, December 1, 2025	Tuesday, November 11, 2025
Monday, January 5, 2026	Tuesday, December 16, 2025
Note: Planning Commission workshops held as needed.	
BOARD OF TRUSTEES	SUBMITTAL DEADLINE
3rd Monday of most months @ 7:30 p.m.	By 2:00 pm
Wednesday, January 22, 2025	Monday, January 13, 2025
Monday, February 17, 2025	Monday, February 10, 2025
Monday, March 17, 2025	Monday, March 10, 2025
Monday, April 21, 2025	Monday, April 14, 2025
Monday, May 19, 2025	Monday, May 12, 2025
Monday, June 16, 2025	Monday, June 9, 2025
Monday, July 21, 2025	Monday, July 14, 2025
Monday, August 18, 2025	Monday, August 11, 2025
Monday, September 15, 2025	Monday, September 8, 2025
Monday, October 20, 2025	Monday, October 13, 2025
Monday, November 17, 2025	Monday, November 10, 2025
Monday, December 15, 2025	Monday, December 8, 2025
ZONING BOARD OF APPEALS	SUBMITTAL DEADLINE
One Tuesday each month @ 4:00 p.m.	By 2:00 pm
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Tuesday, March 18, 2025	Tuesday, February 4, 2025
Tuesday, April 22, 2025	Tuesday, March 11, 2025
Tuesday, May 20, 2025	Tuesday, April 8, 2025
Tuesday, June 17, 2025	Tuesday, May 6, 2025
Tuesday, July 22, 2025	Tuesday, June 10, 2025
Tuesday, August 19, 2025	Tuesday, July 8, 2025
Tuesday, September 16, 2025	Tuesday, August 5, 2025
Tuesday, October 21, 2025	Tuesday, September 9, 2025
Tuesday, November 18, 2025	Tuesday, October 7, 2025
Tuesday, December 16, 2025	Tuesday, November 4, 2025
Shaded means moved for holiday or election conflict	

**ANN ARBOR TOWNSHIP MEETING DATES
2025 CALENDAR YEAR**

DRAFT

BOARD OF REVIEW	
TBD	9 am - 10 am (Organizational meeting)
TBD	9 am - 4:30 pm
TBD	1:30 pm - 4:30 pm and 6 pm - 9 pm
COMPENSATION COMMISSION	
TBD - meets odd years, typically in October	
FARMLAND & OPEN SPACE PRESERVATION BOARD	
4th Monday of every other month @ 7:30 p.m.	
Monday, January 27, 2025	
Monday, March 24, 2025	
Tuesday, May 27, 2025	
Monday, July 28, 2025	
Monday, September 22, 2025	
Monday, November 24, 2025	
ELECTION COMMISSION	
TBD	
Shaded means moved for holiday or election conflict	

December 10, 2024

To: Ann Arbor Township Board of Trustees
From: Ann Arbor Township Planning Commission
Subject: Ann Arbor Township Planning Commission Annual Report for 2024

In addition to its regular business of reviewing and taking action on proposed developments, the Planning Commission accomplished the following during 2024:

- Recommended to the Board of Trustees approval of:
 - o Amendments to Zoning Ordinance Section 74-592 “mineral mining.”
 - o Amendment to Fence Ordinance Sections 74-2, 74-600, 74-426.
 - o Rezoning of Property from A-1 to R-3 (1575 Earhart Road).
 - Continued work on update to the Master Plan to be completed in 2025, including holding a Public Input Session in March.

The Planning Commission’s Work Program for 2025 includes the following:

- Address clarifications of various regulations as recommended by staff.
- Complete the 2024 Master Plan Update

No budget is included in this submittal, as the Planning Commission does not develop its budget.

Respectfully submitted,

Lee Gorman
Secretary
Ann Arbor Township Planning Commission

Approved by the Planning Commission at the December 2, 2024, Meeting

ASHRAE LEVEL II ENERGY AUDIT REPORT

Ann Arbor Twp Hall/Fire Station #1, 3792 Pontiac Trail, Ann Arbor, MI 48103

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Benchmarking - Page 2

A discussion of utility bill information and analysis.

Energy Matrix - Page 3

A table displaying characteristics of the building shell components and energy using equipment with comments and recommendations for improvements or replacement.

ECM Summary Table and Narratives - Pages 4, 5, 6, 7, 8

A table displaying the energy and dollar savings for a set of Energy Conservation Measures (ECMs) recommended for the facility. ECM cost and payback are provided; also incentives available from DTE Energy.

Lighting Analysis - Page 9

Gas Consumption Analysis - Pages 10

Electric Consumption Analysis - Pages 11

Solar PV System Analysis - Page 12

GHG Emission Reduction Component Table - Page 13

Appendix - Separate document

Introduction

This report documents the energy consumption baseline for the Ann Arbor Township Hall & Fire Station 1 (AA Twp Bldg), located on Pontiac Trail just south of the intersections with Gleaner Hall Rd and Warren Rd., and identifies areas of opportunity for energy savings. The recommendations provided in this report take into consideration the architectural integrity of the building, the proper functioning of the mechanical equipment, and the health and safety of its occupants.

The AA Twp Bldg is a two story masonry structure. The original one story construction, built on a concrete slab floor, dates from 1951. There have been 3 additions to the building. In 1965 the entry and public restrooms were added. In 1989 an office wing with full ground level/basement below. The last additions were constructed in 1995 and included the firehouse living quarters with ground level garage and mechanicals below. The building currently houses the township meeting hall, administrative offices, and fire station #1. The gross floor area of the building totals 8,718 square feet.

A site visit to the property was conducted on October 1, 2024 by Bob Tinker, Energy Architect for the Ann Arbor 2030 District Energy Audit Project, to inspect, photograph, and document its physical characteristics. Carlene Colvin-Garia, Twp Treasurer, and Diane O'Connell, Twp Supervisor, were in attendance at the initial site visit, conducted a walk-through of the building, and provided requested information on the operations and history of the facility.

There was a letter size floor plan for the first floor available for use during the site visit. There were no construction documents available for review. There was a previous energy audit conducted in 2010. This report may reference that document.

ASHRAE LEVEL II ENERGY AUDIT REPORT

Ann Arbor Twp Hall/Fire Station #1, 3792 Pontiac Trail, Ann Arbor, MI 48103



Utility Bill Information

Utility bill information for almost 5 years for both fossil gas and electricity was obtained and input to a Portfolio Manager account. The analysis of energy data covers from September 2020 to August 2024.

Portfolio Manager (PM) is online software used to track and analyze building energy consumption. Analyzing utility data is important for the creation of an energy efficiency project and for assessing the results of energy conservation efforts. The Ann Arbor/Washtenaw 2030 District has provided assistance for data input to PM for the Energy Audit Project.

DTE Energy (DTE) provides both fossil gas and electricity for the facility. There is one commercial electric meter and 1 residential gas heating meter.

Benchmarking

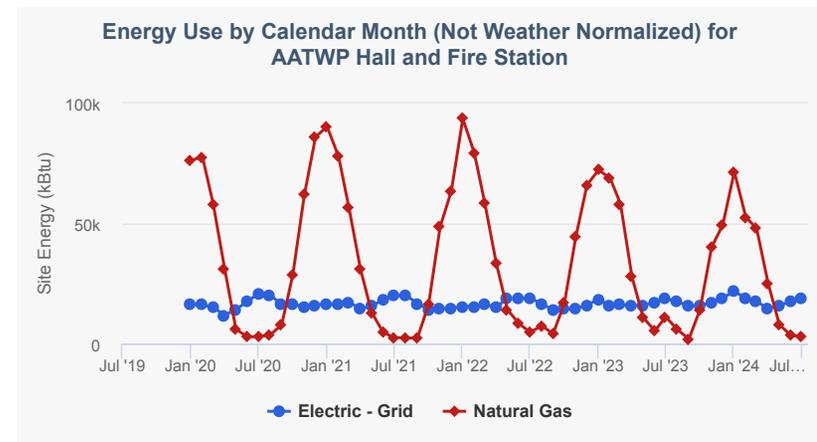
The table to the right was extracted from the PM site. It provides an overall Energy Utilization Index (EUI) for gas and electricity combined for the Longshore Building. The EUI is the annual value of all energy consumed converted to kBtu (thousands of British thermal units) divided by the square foot area of the facility - 8,817 SF in this case. The EUI is used to compare energy use between buildings, especially of one building to another of the same type. PM uses this values as part of the Energy Star Score. The Score value spans 1 to 100 with 100 ranking as the most efficient for that building type.

No Energy Star Score is provided for the Township facility because fire stations are not eligible. The Site EUI is the next best value for comparison with similar buildings.

Metric	Dec 2020 (Energy Baseline)	Oct 2022 (Energy Current)	Change
ENERGY STAR Score (1-100)	Not Available	Not Available	N/A
Source EUI (kBtu/ft ²)	138.2	125.4	-12.80 (-9.30%)
Site EUI (kBtu/ft ²)	87.0	71.9	-15.10 (-17.40%)
Energy Cost (\$)	Not Available	13,437.54	N/A
Total GHG Emissions Intensity (kgCO ₂ e/ft ²)	7.3	6.9	-0.40 (-5.50%)

The EUIs for each fuel type are shown below. The overall EUI for the building is in the normal range for office buildings in Michigan. The Fossil Gas EUI is less than normal while the Electrical EUI is higher than normal.

Gas EUI - 36.6 Electric EUI - 24.0



ASHRAE LEVEL II ENERGY AUDIT REPORT

Ann Arbor Twp Hall/Fire Station #1, 3792 Pontiac Trail, Ann Arbor, MI 48103



Architectural/Mechanical/Electrical Energy Matrix

Component	Existing Conditions			Comments & Recommendations	
Bldg Shell	Description	Insulation	Age/Date	Comment	Recommendation
Roof	Wood & Steel / Truss & Joist	Varies R15 to R30	1989-2019		Com 1 - Add Insulation to R-30 or R-49
Walls	Conc Block & Wood Frame	Varies R4 to R15	1989-2019		ECM 1 - Insulate Bare Block Walls
Basement Walls	Concrete Block	Varies R4 to R10	1989-2019		Com 2 - Insulate Bare Block Walls
Floor	Concrete Slab/Over Garage	Unknown	1950-1995		Com 3 - Check Garage Ceiling
Windows	Aluminum Fixed/Vinyl Sliders	U-value 0.5 / 0.33	1995/1989	All Double Pane Glass	Com 4 - Install High Performance Glass
Doors	HC Steel / Alum & Glass	U-value 3 / 1	1995/1989	Single Pane Glass	Com 5 - Check Seals / Insulated Doors
Water/DHW	Description	Value	Age/Date	Comment	Recommendation
Water Heating	Gas 40 Gal / Elec 6 Gal	UEF 0.58 Atmos/0.90	1995/1989	Bryant / Lochinvar	ECM 2 - Pipe Insulation / Heat Pump
Toilets	Flush Tank	1.6 gal/flush	1995	Already code	Consider Replacing with 1.28 gal/flush
Faucets	Lavatories / Shower	1 / 2 gal/min	1995	Aerators Installed	Continue using low flow aerators
HVAC	Description	Characteristics	Age/Date	Comment	Recommendation
Heating/Cooling	Gas Furnace/Elec A/C (3)	AFUE 95 / SEER 13	2008-2022		Com 6 - Replace w/ Heat Pumps
Heating	Gas Radiant Tube Heater	AFUE 80	1995	Works well for this use	See Comment 6
Ventilation	Energy Recovery Ventilators	For each Furnace	2020		Com 7 - Retro-com ERV Controls
Ventilation	Exhaust Fans	In Restrooms	1995	Separate Switches	Com 8 - Exhaust Fans on Light Circuit
Electrical Appliance	Description	Characteristics	Age/Date	Comment	Recommendation
Refrigerators	Side x Side	Whirlpool	2019	Keep Clean	Purchase Energy Star
Appliances	Range, MW, Toast/Oven, CM		Various	Turn off when not using	Purchase Energy Star
Electronic	Computer, monitor, copier		Various	Turn off when not using	Purchase Energy Star
Lighting	Location	Technology	Age/Date	Comment	Recommendation
Screw-in Lamp Fixt	Throughout Building	Incandescent and CFL	1995		Relamp with LED
Troffer Fixtures	Throughout Building	T8 Fluorescent	1995		Replace with LED Volumetric Fixtures
Strip Fixtures	Throughout Building	T8 Fluorescent	1995		Replace with LED Strip Fixtures
Lighting Controls	Throughout Building	Switches	1995		ECM 4 - Install Occupancy Sensors

Items highlighted in orange are provided with a narrative and are included in the ECM Summary Table. Items highlighted in blue are in the Lighting Analysis with lighting project total in the ECM Summary Table. Items highlighted in green are provided with a special narrative in the ECM Summary Pages.

Occupancy: Monday through Friday from 8:00 AM to 4:30 PM, 5 to 15 persons. T-stat set points: Heating 60°- 70°, Cooling 72°-78°.

ASHRAE LEVEL II ENERGY AUDIT REPORT

Ann Arbor Twp Hall/Fire Station #1, 3792 Pontiac Trail, Ann Arbor, MI 48103



ECM SUMMARY TABLE AND NARRATIVE

ECM	Description	Cost Est. (\$)	Savings Est. (\$/Yr)	Savings kWh/Yr	Savings CCF/Yr	Rebate Est. (\$)	Payback (Yr)	Life (Yr)	SIR	GHG (Ton)
1	Insulate Bare Masonry Walls	\$7,164	\$561	0	678	\$320	12.2	40	3.3	4.3
1	Add DWH Pipe Insulation	\$50	\$15	100	0	\$5	3.0	20	6.7	0.1
2	LED Lighting Retrofit Project	\$10,056	\$1,230	8,041	0	\$673	7.6	15	2.0	4.5
3	Lighting Controls	\$2,160	\$191	1,282	0	\$90	10.8	15	1.4	0.7
TOTALS		\$19,430	\$1,997	9,423	678	\$1,088	9.2			9.6

Notes

The set of ECMs above will reduce the electricity consumption by 20%. Fossil gas consumption is not reduced.

Utility savings estimates assume \$0.828

per CCF of fossil gas and \$0.149 per kWh of electricity.

Payback Years include utility rebates, but not energy fuel inflation or cost of borrowed implementation funding. The savings-to-investment ratio (SIR) indicates how many times a retrofit will pay for itself by the end of its life. The Greenhouse Gas (GHG) emission savings are in annual tons of CO₂.

Contact DTE during the planning stage for any energy related project to obtain necessary incentive approvals.

Renewable Energy Resource - The Ann Arbor Twp Hall building has large areas of unshaded, flat roof surface that is ideal for the installation of ballasted solar PV panels. The south and eastern portions of the site are suitable for a ground mounted solar PB system, but this would be a more expensive option. The report evaluates for a roof mounted

Comment 1 - The roofs of the 1995 additions are wood trussed attic spaces. The floors of the attics are insulated with 9” of fiberglass with an R-value of 30 which met code at that time. The current code for attics for new construction is R-49. This can be achieved by adding a 6” layer of blown cellulose insulation. Although this procedure would help reduce equipment sizing for future electrification efforts, the payback will be long.

The remaining majority of the roof area is flat and low sloped. The roofing membrane was replaced 5 years. At that time 4” of extruded polystyrene foam insulation was installed on top of the roof deck before installation of the EDPM membrane. This provides an R-value of 20. The current code for flat roofs is R-30. When the roofing is next replaced, the insulation level should be brought up to the code at that time, likely to be as high as R-40.

ASHRAE LEVEL II ENERGY AUDIT REPORT

Ann Arbor Twp Hall/Fire Station #1, 3792 Pontiac Trail, Ann Arbor, MI 48103

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ECM SUMMARY TABLE AND NARRATIVE

ECM 1 - The Ann Arbor Township Hall has a variety of wall section types and insulation levels. The 1989 addition has block walls that are insulated from the inside with 1 inch of rigid foam and a layer of gypsum board for fire safety. During any future renovation, add at least another 1 1/2 inches of rigid foam (R-7.5) on either the interior or the exterior.

The masonry walls of the 1995 additions are insulated in a variety of ways. The front entry has an exterior insulated (R-10) finish system, while the walls of the living quarters are wood framed on the interior with R-13 fiberglass insulation.

That leaves the concrete block walls of the original building construction. The one exterior wall of the meeting room has been insulated like the 1989 addition, and the same comments apply.

The original block walls of the apparatus room and the two story office entry walls of the 1995 addition have never been insulated. Both these area have independent heating systems with lower efficiencies than the other ducted systems in the the facility.

The easiest method for insulating these walls is working from the inside. First screw Z-furring, made from recycled plastic, directly to the interior walls at 24 on center. Then glue rigid (graphite EPS) or batt (cellulose) insulation onto the wall tightly between the furring. Then 1/2" gypsum board should be screwed to the furring to cover the insulation and to trim around window openings.

ECM 1 (cont) - The wall insulation should extend the full height of the wall from floor to ceiling. Some walls may have electrical outlet boxes ore other items attached to the wall that would need to be removed and relocated. At \$4.50/SF of finished wall construction and a modest incentive from DTE, ECM 1 can produce large energy savings with a payback under 10.3 years.

Comment 2 - Portions of the exterior concrete block walls of the lower floor of the 1989 addition have not been insulated. These are mostly in the large storage room with mechanical equipment on the Southeast corner of the building. The procedure set forth in ECM 1 can be used. Since these walls are partially below grade, the energy savings would be less and the payback longer. It will be easier to maintain the interior design temperature and humidity level to preserve the paper storage. Also, the ductwork running through the room to all areas of the 2 story 1989 addition will loose less heat to space while ducted air passes through.

Comment 3 - The garage below the fire house living quarters is an uninsulated unconditioned space. The floor of the living quarters should be insulated to R-30. There is also a duct chase that should be properly insulated. The garage ceiling ass a hare gypsum board surface which could not be accessed during the audit site visit. Management may want to investigate this situation. If additional insulation is needed, a layer of rigid foam and gypsum board could be added to the existing ceiling. Energy savings and payback would be determined by how much insulation exists in the floor cavity and around ductwork.

ASHRAE LEVEL II ENERGY AUDIT REPORT

Ann Arbor Twp Hall/Fire Station #1, 3792 Pontiac Trail, Ann Arbor, MI 48103

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ECM SUMMARY TABLE AND NARRATIVE

Comment 4 - The windows installed in the 1989 addition are vinyl clad wood sliders with Low-E double pane glass. The Low-e coating, which provides significant energy advantages, would have been considered novel at that time. The glass provides a U-value of 0.33. The 1995 addition has aluminum framed windows, mostly fixed, but with a few sliding or awning windows in the fire house quarters. These also have double pane glass, but without the Low-E coating. This glass provided a less efficient UOvalue of 0.5.

The current windows appear to be in good condition. There were no observed window seal failures that would cause condensation within the cavity between panes and loss of its insulation value. The wood and metal frames may last for decades yet.

Unless the operable windows have lost the ability to seal against air leaks, there is no need to replace any windows. However, should any pane of glass lose its seal, that should be replaced with high performance glazing. Such glazing has two panes of glass, a Low-E coating on one surface, and the space between panes will be filled with argon gas rather than air. High performance glazing will have a U-value around 0.25. This is the level to which updated codes are aiming, although glass with efficiencies 2 to 3 times better are currently available at a higher price point.

Comment 5 - The most important function of an exterior door is to allow access but prevent unwanted air leaks when closed. The weatherstripping on all exterior doors should be checked annually and repaired or replaced as needed.

Comment 5 (cont) If the hollow core metal exit doors should need to be replaced, an insulated fiberglass door is recommended. These provide much better thermal insulation than metal doors and are just as strong and secure.

The two glass entry doors have a single pane of glass. Should these doors need to be replaced, high performance glazing should, like that recommended for windows, should be specified.

The apparatus room overhead door is already insulated.

ECM 2 - There are two water heaters serving the building.

There is a 6 gallon, tank type, electric water heater serving the office restroom and kitchenette in the 1989 building addition. It has an efficiency of 92% and is considered at the end of its life. When that occurs, this unit could be replaced with an electric tankless model that could save about 30% of the electricity cost for hot water. The copper pipes serving the water heater are not insulated as required by code. This is an easily installed ECM with modest cost and significant savings. Install a minimum of 3 feet of R-4 insulation on the cold water pipe entering the water heater and all accessible hot water piping running through the utility room. The analysis assumes a total of 10 ft of pipe wrap installed.

There is a 40 gallon, tank type, gas-fired unit installed in a mechanical room off the garage of 1995 addition. It serves the public restrooms and the fire house living quarters. The previous audit in 2010 recommended adding pipe insulation and that was done professionally. This unit is considered to be beyond its expected life time. When replacing, a heat pump water heater (HPWH) should be considered. A new electric water heater can be placed on an interruptible meter to enable a 30% reduction in the cost of each kWh used for DHW.

ASHRAE LEVEL II ENERGY AUDIT REPORT

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ECM SUMMARY TABLE AND NARRATIVE

Comment 6 - Most of the building is heated and cooled by three gas-fired condensing furnaces with electric DX cooling units. The furnace install dates range from 2010 to 2022. The A/C condenser install dates range from 1992 to 2022. See HVAC Table in the Appendix for more details.

The A/C unit serving the Meeting Room is over 30 years old, not efficient and rust covered. The age of the furnace is unknown because the nameplate is not accessible. Management should plan for the replacement of this HVAC system. This offers an opportunity to begin a decarbonization process for the facility. The Meeting Room only has one exterior wall and the roof. Both are insulated. So this HVAC zone could be serviced by a heat pump. The cooling efficiency of a new heat pumps could be twice as that of the existing air-conditioning equipment. Rather than replacing the furnace with a new air handler, a ductless heat pump system has advantages. One interior ceiling cassette connected to the exterior heat pump, in the roof replacing the A/C condenser, would be sufficient to provide precise temperature and humidity control for the Meeting Room.

The next oldest HVAC system is the one serving the two level office wing. This system has three ducted zones. A new air handle could simply replace the furnace, keeping all of the zone dampers and controls in place if desired. The heat pump would sit ousted on the ground replacing the A/C condenser. Other options are possible. Management should develop a strategy for this HVAC zone so that it is prepared when the existing equipment fails.

The third HVAC system serving the fire department entry, office, and living quarter was installed in 2022 and has another 10 to 15 years of life remaining if regularly maintained. DTE offers incentive for bi-annual furnace tune-ups which will recuse maintenance costs.

The township office entry on the north side of the building is currently uninsulated. See ECM 1. When the walls are insulated, the need for heating this space will be greatly reduced, so the gas-fired through wall unit heater can be replaced with a small split system heat pump. The hazard of having a hot gas appliance along a pubic pathway can be eliminated. The heat will also provide cooling for the space.

The apparatus room has two gas-fire radiant tube heaters. When the walls of this room are insulated the radiant tube can be used less. Heat pumps are not suitable for fast reheating of large volume of outside air that enter the space when the apparatus room door is opened. Decarbonization for this space will need additional thought.

Decarbonization and electrification of HVAC equipment is not intended to save energy dollars but rather to lower the GHG emissions. However, heat pumps serving well insulated buildings can be implemented without increasing costs.

ASHRAE LEVEL II ENERGY AUDIT REPORT

Ann Arbor Twp Hall/Fire Station #1, 3792 Pontiac Trail, Ann Arbor, MI 48103

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ECM SUMMARY TABLE AND NARRATIVE

Comment 7 - In 2020, during the beginning of the COVID pandemic, Energy Recovery Ventilators (ERVs) were installed to provide larger volumes of fresh outside air while reducing the energy cost for heating and cooling all this fresh air. One ERV was connected to the ductwork for each of the three HVAC zones.

During the energy audit site visit, it was discovered that the ERV serving the two level office wing was operating when the furnace fan was not on. The way the ERV connects to the ductwork requires that the furnace fan be operating in order to distribute any fresh air. Without the furnace fan operating the ERV is constantly bringing in fresh air into and back out of the return air duct. This needlessly wastes electricity to run the ERV fans. This same process may be occurring at the other two HVAC zones.

This report recommends that the ERVs be retro-commissioned. This means inspecting how the ERVs are installed and controlled. Ideally, the fan on the furnace would be constantly running when the building is occupied in order to provide the desired amount of fresh air. The furnace fan may have variable speed settings. A high setting for active heating and cooling and a lower setting to just move fresh air. The ERVs would not function at night when the building is unoccupied.

Or the whole system can be controlled by CO2 or occupancy sensors that activate the furnace and ERV fans intermittently as needed. The commissioning process should determine which strategy was used for each HVAC zone, if the system controls are present to enable the strategy, and, if not, what remediation efforts are required. Management should start with the company that installed the ERVs. Review by mechanical engineer may be necessary.

Comment 8 - The exhaust fans serving the restrooms in the facility are currently on separate switches. Instead, the exhaust fans should be placed on the lighting circuit serving each restroom. These circuits can then be placed on switch mounted occupancy sensors. Savings for this recommendation are included in the calculations for ECM 4, lighting controls.

ECM 3 - See Page 9 for LED lighting project.

ECM 4 - There are a number of lighting circuits that can be placed switch mounted occupancy sensors for both convenience and to ensure that lighting is turned off when occupants leave a space. This can have significant energy and dollar savings.

ASHRAE LEVEL II LIGHTING AUDIT REPORT

Ann Arbor Twp Hall/Fire Station #1, 3792 Pontiac Trail, Ann Arbor, MI 48103

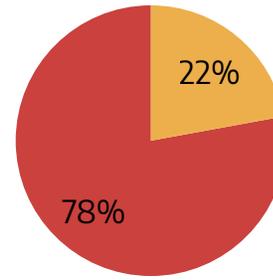


Lighting Analysis

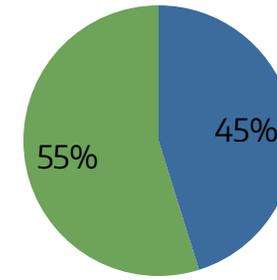
Five Lighting ECMs were identified for the Ann Arbor Township Hall/Fire Station #1. This set of LECMs constitutes 78% of all lighting fixtures and would reduce lighting electrical consumption by 55%

- LECM #1** - Replace two gimbal halogen cans lighting map in fire station office with equivalent LED fixtures.
- LECM #2** - Replace surface mounted 1X4 2 lamp T8 fluorescent fixtures with 1X4 LED strip fixtures. 22 Fixtures
- LECM #3** - Replace 2X4 3 lamp T8 fluorescent wrap fixtures throughout the building with LED wrap fixtures. 30 Fixtures
- LECM #4** - Replace 2X4 recessed troffer 4 lamp T8 fluorescent fixtures throughout the building with 2X4 LED flat panels. 30 Fixtures
- LECM #5** - Replace four exterior HID canopy fixtures in soffits at front and office entries with LED canopy fixtures.

Lighting Fixture Retrofit



Retrofit KWh Savings



● Unchanged ● Retrofit ● New ● Saved

The Table below displays the energy savings and economic analysis for each LECM. The Total Abel values are displayed in the ECM Summary Table as ECM #3. The lighting inventory and product specifications are provided in an Appendix. Overall, this project would save about \$1,285 in annual electricity costs. Return on Investment (ROI) is 7.5 years. Incentives are available from DTE for new fixtures and some lamps.

LECM	LAMP	KWh SAVED	\$ SAVED	\$ COST	REBATE	ROI
1	LED CAN 8W	262	\$40	\$140	\$10	3.2
2	LED STRIP 25W	760	\$116	\$2,596	\$108	21.4
3	LED WRAP 34W	2,618	\$401	\$3,540	\$165	8.4
4	LED PANEL 45W	4,041	\$618	\$3,540	\$291	5.3
5	LED CANOPY 35W	718	\$110	\$480	\$40	4.0
TOTAL		8,400	\$1,285	\$10,296	\$615	7.5

NOTE: This report assumed one for one replacement of existing lighting fixtures with LED equivalents. Other design options are possible. Most fixtures specified will have multiple light color and light output levels that can be individually selected for occupant lighting preferences. All fixtures are also dimmable. Occupancy sensor light switching with dimmable capability are recommended for all rooms except the open office, storage, and circulation areas.

ASHRAE LEVEL II ENERGY AUDIT REPORT

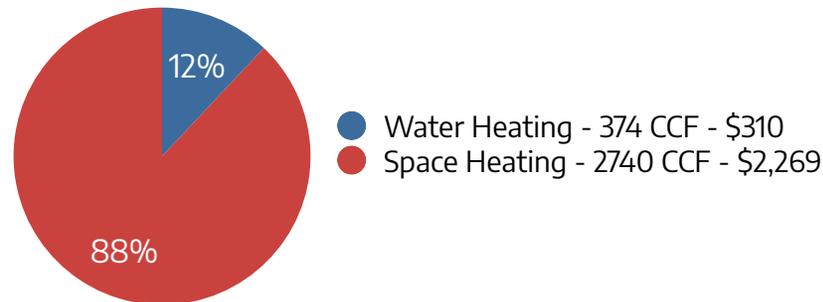
Ann Arbor Twp Hall/Fire Hse 1, 3792 Pontiac Trail, Ann Arbor, MI 48103



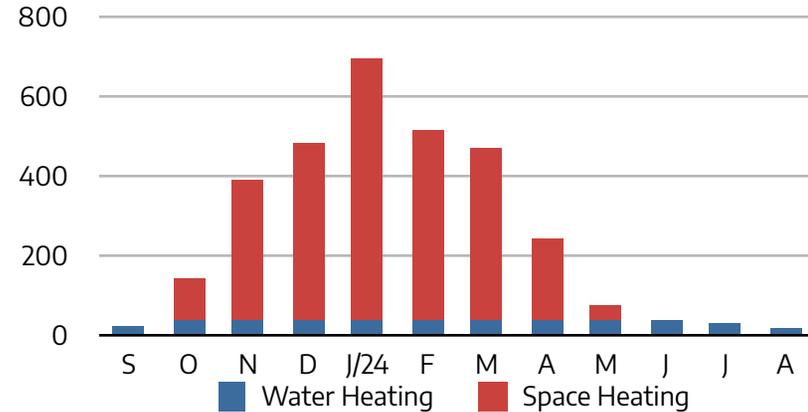
Gas Consumption Analysis

The chart to the right displays the monthly gas consumption in CCF (102,500 Btu) for 416 Longshore by End Use for the 12 months of the analysis period. Gas used for domestic hot water (DWH) is shown in blue comprising 4% of the total gas consumption. The remaining use of gas is for space heating, shown in red. The space heating consumption profile follows the exterior temperature conditions remarkably close as shown in the Heating Degree Days (HDD) chart below that. The total HDD for Ann Arbor for the 12 months analyzed was 6,225, about 7% more than the 30 year average.

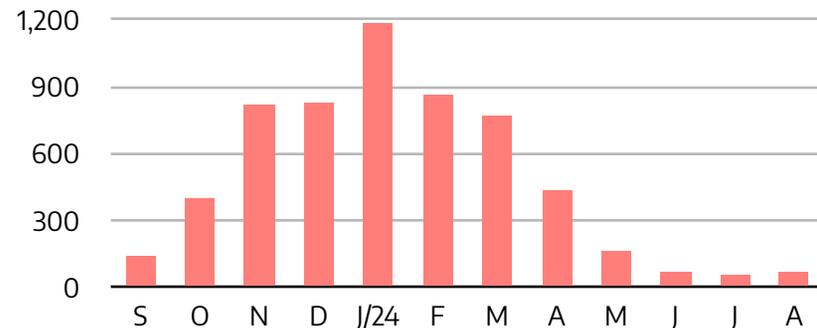
Total CCF and \$ value for each gas component is provided below. The cost for gas used for the analysis is \$0.828/CCF, the average over the 12 month analysis period.



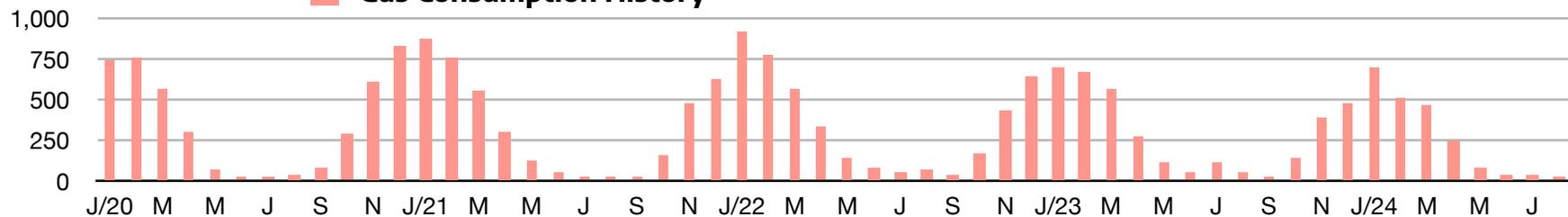
Gas Consumption - CCF - 2023/24



HDD 65°F - Ann Arbor - 2023/24



Gas Consumption History



ASHRAE LEVEL II ENERGY AUDIT REPORT

Ann Arbor Twp Hall/Fire Hse 1, 3792 Pontiac Trail, Ann Arbor, MI 48103



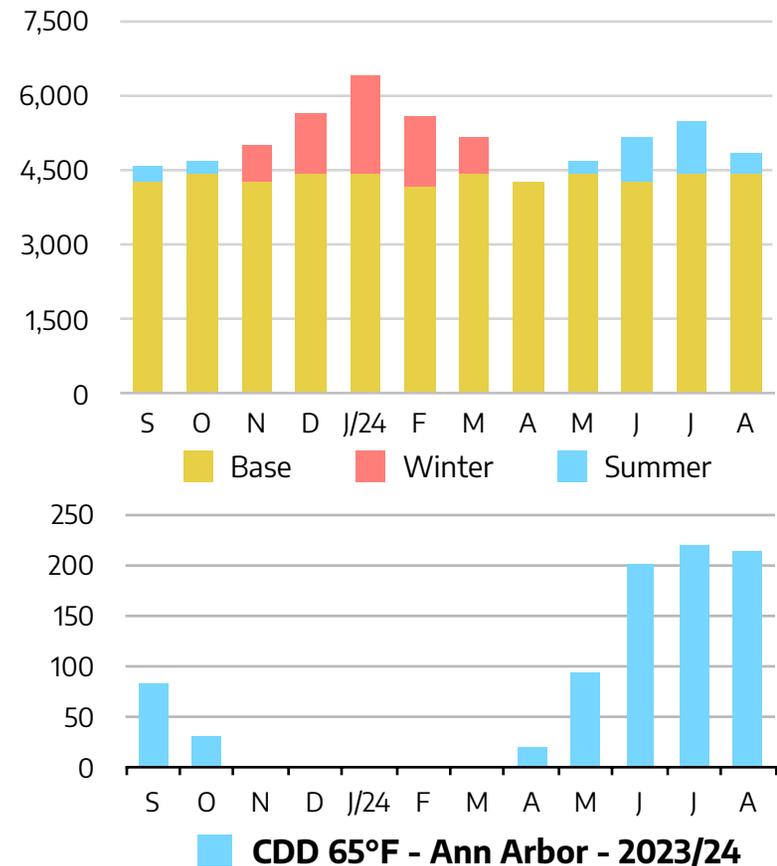
Electricity Consumption Analysis

The chart on the right displays the monthly electricity consumption in kWh (kiloWattHours) for the Township Hall by End Use. Base consumption (shown in yellow) includes daily use typically experienced for lighting, appliances, refrigeration, electronics, and HVAC fans. The winter consumption includes increased lighting during days off less daylight, increased office occupancy, and electric space heaters. The Summer consumption documents the use of space cooling equipment. The total electrical consumption and cost for each end use is provided in the table below. The average cost for electricity during this time period was \$0.149.

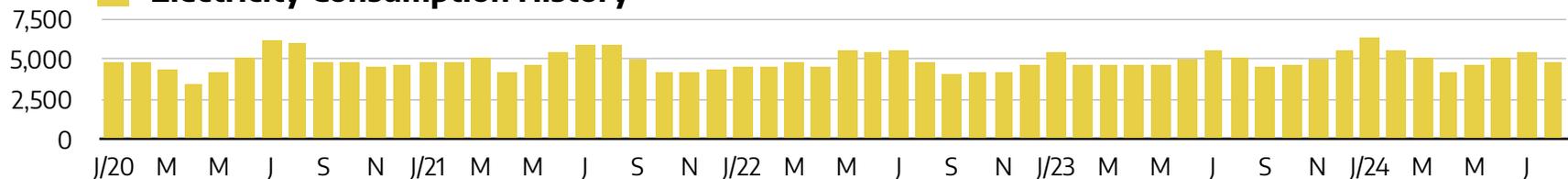
End Use	kWh	Cost
Base	52,209	\$7,777
Winter	6,065	\$903
Summer	3,167	\$472
Total	61,441	\$9,152

The chart to the right shows the Cooling Degree Days (CDD) for the Ann Arbor area that correspond with the metered electrical consumption billing dates for the building. The need for air-conditioning follows the pattern of temperature change in the CDD graph, but seem muted.

Electricity Consumption - kWh - 2023/24



Electricity Consumption History



ASHRAE LEVEL II ENERGY AUDIT REPORT

Ann Arbor Twp Hall/Fire Station #1, 3792 Pontiac Trail, Ann Arbor, MI 48103

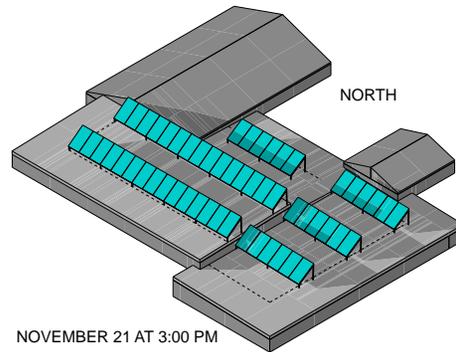


PV System Design

Ann Arbor Township desired an evaluation for the installation of a solar PV system at the Township Hall site. The renewable energy resource analysis (See Page 4) explains that a roof mounted system is the best option. The building and roof are shown below with a suggested arrangement for 48 solar panels.

The solar module selected is SIL-500HM made by Silfab Solar, which is a long established North American PV manufacture. This module has a 500 Watt rating and a 21% Nominal Efficiency.

The PV modules are paired with SMA America inverters. The inverter converts the DC power generating by the solar cells into AC power which can be used by the building. SMA also has a long history in the solar business. The STP 20000TL-US-10 is rated at 20 KW operating at 480V AC.

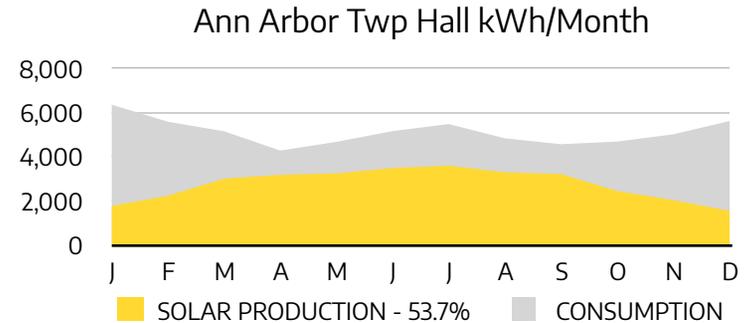


The PV modules are arrayed in strings. There are 12 modules per string. The modules are mounted on ballasted racks at angle of 35.2° from horizontal. This is the optimal angle for best annual generation for a fixed collector panel. The PV system has a total rating of 24.0 KW DC. This size is limited by keeping panels 10 feet from roof edges to avoid the requirement for 36” tall guard rails which increases system costs. Panels also avoid rooftop equipment.

PV System Performance

System Advisor Model (SAM) is used as the basis of all solar and financial calculations in this report. SAM is software created by NREL and made available free to the public. SAM uses the technical data for the selected solar panel/inverter combination. SAM was run to provide an analysis of performance, cost, and benefit. The full SAM report is available in the Appendix. Selected information from that report is presented here.

The chart below displays the monthly electrical consumption for the Township Hall for the 12 months analyzed. Superimposed over that area is the calculated monthly electricity generation calculated by SAM using the averaged weather and solar data for Ann Arbor.



Financial Performance	
Year 1 AC Energy	33,010 kWh
Total Capital Cost	\$70,998
US Investment Tax Credit	30%
LCOE (FCR Method)	9.7 ¢/kWh
Net Present Value	\$17,800
Simple Payback Period	12.3 years

ASHRAE LEVEL II ENERGY AUDIT REPORT

Ann Arbor Twp Hall/Fire Station #1, 3792 Pontiac Trail, Ann Arbor, MI 48103



GHG Emissions Reduction Audit Components

Scope 1 Direct Consumption Fossil Fuels (e.g. Gasoline Powered Vehicle Fleet)							
	NONE						
Scope 2 Indirect Consumption Purchased Energy							
Energy Efficiency	Building Envelope	DHW General	HVAC General	Bldg System Automation	Heating Load Data	Demand Management	Thermal Storage
	INCLUDED	INCLUDED	INCLUDED	NA	NA	NA	NA
Electrification, Onsite Renewables, & Refrigerants	DHW Electrification	HVAC Electrification	Other Appliances	On Site Renewables	Electrical Infrastructure	Refrigerants	
	INCLUDED	INCLUDED	NA	INCLUDED	INCLUDED	NA	
Added Scope of Items	Utility Rate Analysis	Electrical Load Study	Battery Storage	Demand Flexibility	Bldg Systems Commissioning	Energy Mgmt Info Systems	EV Charging Assessment
	NA	NA	NA	NA	INCLUDED	NA	INCLUDED
Scope 3 Indirect Consumption Goods and Services							
	NONE						

Resource Links

[State of Michigan Energy Management Funding](#)

[DTE Energy Business Renewable Energy Programs](#)

[Ann Arbor / Washtenaw 2030 District Commercial Solar Technical Assistance](#)

APPENDIX

ANN ARBOR TWP HALL/FIREHSE

INCLUDES

RECYCLED CELLULOSE BATT/BLANKET INSULATION
WALL FURRING MATERIAL
GRAPHITE EPS INSULATION
ALL CLIMATE LOW-E GLAZING
PIPE INSULATION
ELECTRIC TANKLESS WATER HEATER
HEAT PUMP WATER HEATER
HVAC EQUIPMENT SCHEDULE
HVAC HEAT PUMP OPTIONS
LIGHTING INVENTORY
INVENTORY FLOOR PLANS
LIGHTING SPECIFICATIONS

Superior Performance, Meets Code Standards, and it's Green!

ECOCELL® Product Performance:

- :: Use in crawl spaces, unfinished basements, sidewalls and attics
- :: Meets building code requirements - Code compliant basement insulation system
- :: Class A fire rating
- :: Made from recycled and renewable fibers
- :: Qualifies for the Federal Energy Tax Credit
- :: Reduces airborne sound transmissions
- :: Contains an EPA registered fungicide to resist the growth of mold
- :: Easy to handle
- :: Zero waste in manufacturing
- :: Can be painted or covered with drywall

Available Products:

- ECOCELL® blankets - use in basements, crawl spaces, and cement block walls
- :: Nominal Thickness/R-value: 1.5"/R-6; 2.5"/R-10
- :: Blanket sizes: 48" x 96"
- ECOCELL® batts - use in sidewalls, attics
- :: Nominal Thickness/R-value: 3.5"/R-13
- :: Batt sizes: 16" x 94"



R-26300
Unfaced Batts and Blankets
Issue No. EM 1503
FORM A

CLASSIFIED
UL

Surface Burning Characteristics

- Flame Spread 15
- Smoke Developed 95 - 170

Surface Burning Characteristics (ASTM E-84, UL 723):

- Flame Spread 15 (Class A)
- Smoke Developed < 450 (Class A)

Environmental Characteristics:

- Corrosiveness: Acceptable
- Fungal Growth: Acceptable

Physical Characteristics:

- Thermal Resistance:
 - Batts: 3.6 R per inch
 - Blankets: 3.7 R per inch
- Moisture Absorption: Acceptable
- Odor Emission: Acceptable



A simple, **GREEN** way to add insulation to your home!



ECOCELL® in your basement pays for itself in energy savings in 3 years**!

Ideal for the do-it-yourself individual!

Industry first cellulose based thermal insulation batts and blankets that are easy to install and non-irritating



cellulose material solutions, llc

2472 port sheldon jenison, mi 49428
info@cmsgreen.com +888 968 9877

cmsgreen.com

Printed on recycled paper-06/10. Reorder #44035

Product Performance:

Cellulose Material Solutions, LLC (CMS) began producing its green ECOCELL® batts and blankets after years of extensive testing and development to provide the consumer with an industry first, superior performing insulation product made from cellulose fibers.

ECOCELL® products thermally outperform many fiberglass products by reducing air infiltration. The dense fibers of ECOCELL® batts and blankets not only reduce air infiltration, but control and deaden sound. Airborne sound transmission is reduced from room to room and outdoor noise is blocked for a noticeable quietness. A quieter, more air tight home is achieved with ECOCELL® batts and blankets.

GREEN Characteristics:

ECOCELL® batts and blankets are environmentally responsible and sustainable products. ECOCELL® batts and blankets are made from a combination of recycled and renewable fibers, the majority of which is post-consumer recycled newspaper. By converting recycled paper into the cellulose fibers used in ECOCELL® products, the paper is kept out of landfills where it has the potential to pollute the environment. ECOCELL® batts and blankets are completely recyclable, and no scrap is produced during manufacturing or installation of the material. CMS also creates a “greener” manufacturing process by reducing energy use and air pollution. The most important green attribute of ECOCELL® to the homeowner is the savings** on energy bills.

Product Safety:

Homeowners are concerned with safety, especially when it comes to one of their biggest investments, their homes. ECOCELL® batts and blankets have a Class A fire rating. ECOCELL® products do not contain any harmful airborne particles and do not itch or irritate skin like fiberglass insulation. Easy to handle and soft to the touch, ECOCELL® batts and blankets can be left exposed, painted or covered with drywall. To protect against mold growth, ECOCELL® batts and blankets contain an EPA registered fungicide.



Great insulation option for those hard to reach areas!

* Savings based on the Department of Energy - www.energy.gov
 ** Savings vary. Find out why in the seller's fact sheet on R-values.
 Higher R-values mean greater insulating power.

ECOCELL® basement/blanket system Step by Step Installation

Equipment needed:

- Square • Marker • Tape Measure • Circular saw with masonry blade • 8 foot 2" x 4" • Hilti or Touch 'n Seal All Seasons Foam

1. Prepare the area

Make sure all surfaces are free from dust and water. Lay the 2" x 4" flat on the floor along the wall beneath each blanket as a spacer.



2. Measure

Start at a square corner of the room. Measure length and width of blanket needed for wall application. Then measure and mark blanket.



3. Cut

Cut along marked lines with a circular saw equipped with a masonry saw blade.

4. Apply Adhesive



Apply Hilti or Touch 'n Seal All Seasons Foam on the back of the ECOCELL® blanket across the top and in vertical lines as pictured. Adhesive will adhere in 30 - 60 seconds and cure in 30 minutes.

5. Apply to wall



Align the seam of the blanket with the wall's edge or previously installed blanket. Work from the spacer* to the ceiling to apply the blanket to the wall, pressing firmly.

*When applying in crawl spaces, begin at least 3 1/2" from floor



Unfinished room insulated with ECOCELL® blankets

ECOCELL® 3.5" batt Step by Step Installation

Equipment needed:

- Circular saw with masonry blade or Table saw • Marker • Tape measure

Sidewall Application: 1. Prepare the area

Calculate how many 16" batts are needed to insulate the entire area. Make sure the wall cavities are free from dust and water.

2. Measure

ECOCELL® 3.5" batts are a standard 94" long. If sidewalls are not this length, measure to determine what length batts will need to be cut to and mark batts at this length. The entire area from stud to stud should be filled with a batt.

3. Cut

Cut along marked lines with a circular saw equipped with a masonry saw blade or table saw. Use a circular saw to cut around outlets, pipes and other objects in the wall.

4. Apply to wall

Working from the floor plate towards the top of the wall, insert the batt into the wall cavity for a tight, friction fit. Continue this process until all wall cavities have been insulated.

Attic Application: 1. Prepare the area

Calculate how many batts you will need to insulate the entire attic to the recommended R-value (R-49). ECOCELL® 3.5" cellulose batts can be applied directly on top of the insulation in your attic.

2. Check the ventilation of your attic and add baffles and blockers if needed

Attics must be properly ventilated to remove moisture and heat. Normally, a combination of soffit vents under eaves and roof ventilation (consisting of a ridge vent or roof vents) provides very good ventilation. Older houses may require gable vents. Attics should have one square foot of under eave vent opening and one square foot of roof or ridge vent opening for each 150 square feet of attic area. If you need to add vents, do so before insulating.

To aid ventilation, attic baffles or air chutes should be installed at least every other rafter or truss cavity. These allow air to move from soffit vents, over the insulation to the roof or ridge vents. To prevent insulation from blocking soffit vents, insulation blockers should be placed on top of the exterior wall top plates.

3. Prepare the attic

The following items should be addressed before insulating:

1. Recessed lights, furnace flues, heating vents, chimneys and other heat sources in the attic MUST BE PROTECTED. Install metal or other rigid barriers around heat sources with clearances of at least 3 inches. Heat trapped by any type of insulation can be a fire hazard. Recessed lights marked "IC" may be covered with insulation.
2. If insulating over batts with paper facing, the facing should be slashed in several places between every joist to avoid moisture entrapment.

4. Install ECOCELL® batts

Insulation should be placed within the framing of the attic, if not already covered. If adding more than one layer of batts, run each layer perpendicular to the underneath layer, if framing allows. Ensure air sealing around pipes and other items penetrating the insulated plane using caulks and foam sealants. Finally, insulate the access hole cover or door.





SUBMITTAL FORM

Extruded Resin – EcoStud® Track and Stud System, Z Furring, and Flanged Furring Channel

Product Benefits

EcoStud® furring products (Flanged Furring Channel & Z Furring) are used to fur out interior masonry structures, poured concrete, block, tilt up concrete structures and other applications. The EcoStud® Track and Stud System is used to fur out the interior of structures and can also be used as interior partition walls.

- Provides a thermal break, effectively doubling the effective R-value (U-value) of a wall when compared to steel studs.
- Eliminates condensation stripes on interior wall surfaces in cold environments when properly installed.
- Will not rot, rust, corrode or support mold growth and is termite resistant.
- Is produced using 100% recycled material and provides five LEED® point opportunities.
- Supports insulation while providing a uniform plane for gypsum or other panel attachment.
- Available in .090” thickness to provide structural integrity and allow the use of course thread drywall screws.

Physical Properties

Tensile strength > 6,000 PSI ASTM D 638-08 - Izod Impact 6 – 12 ASTM D 256 - Flame Spread Log 1 ASTM E162 - Limited Oxygen Index LOI 48 ASTM D2843 – Maximum Smoke Density Dm 280 ASTM E662 - Screw pull-out value >100 Lbs EcoStud LLC Internal Standard - Thermal Conductivity .19 W/mK - Acoustical Velocity 1920 m.min - Density 1.38 gm/cm³ - Impedance 3.27 MRayls - Attenuation 11.2 dB/cm, 5 MHz

Storage

Avoid bending or other damage and store in a dry cool place out of direct sunlight.

Installation Recommendations

EcoStud LLC recommends installation in accordance with ASTM Standards and prevalent industry standards. Reference materials include Gypsum Association GA-216 and EcoStud LLC website (www.ecostud.com).

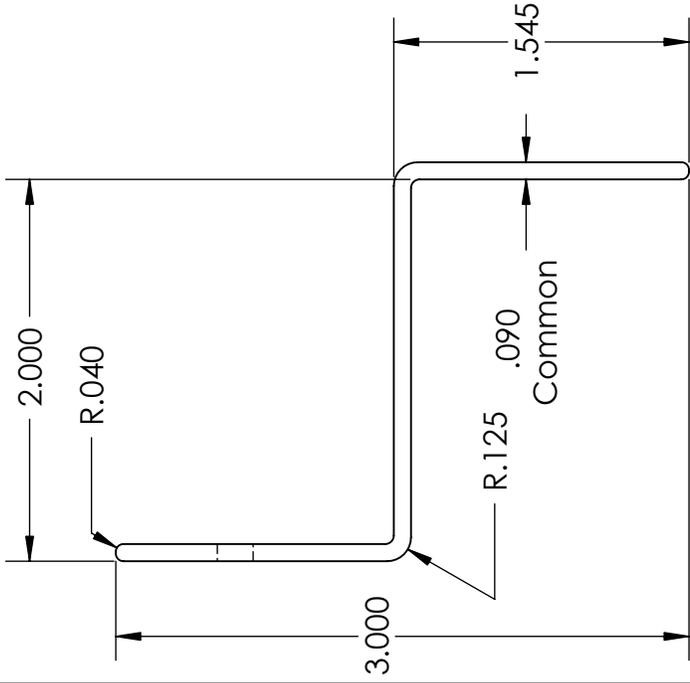
Submittal Approvals:

Job Name: _____

Contractor: _____ **Date:** _____

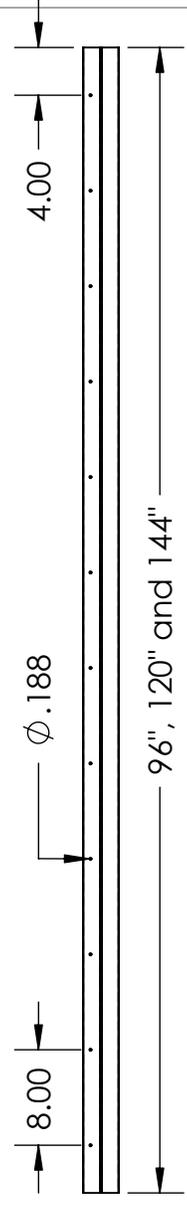
The information and recommendations contained herein are, to the best of EcoStud LLC’s knowledge and belief, accurate and reliable as of the date issued. EcoStud LLC has no control over the conditions of handling and use, makes no warranty regarding the results obtained from the use of this data. The information and recommendations are offered for the users consideration and examination, and it is the user’s responsibility to determine that they are suitable and complete for its particular use. EcoStud LLC reserves the right to make alterations and amendments to the detailed specifications at its discretion. EcoStud LLC disclaims responsibility for all actions, proceedings, liabilities, claims, damages, cost, losses, and expenses in relation to, or arising out of, incorrect utilization of this information.

www.ecostud.com
25280 Renaissance Rd Calumet, MI 49913
Phone: (906) 337-3355 Fax: (906) 337-3357

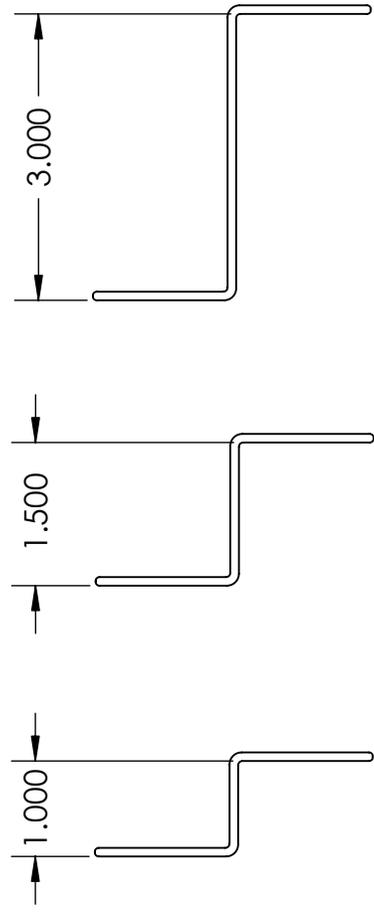


Part No. 2536

Scale
1:1



Scale
1:16



Part No. 2534

Part No. 2535

Part No. 2537

Scale: 1:2

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SUPERIOR POLYMER PRODUCTS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SUPERIOR POLYMER PRODUCTS IS PROHIBITED.

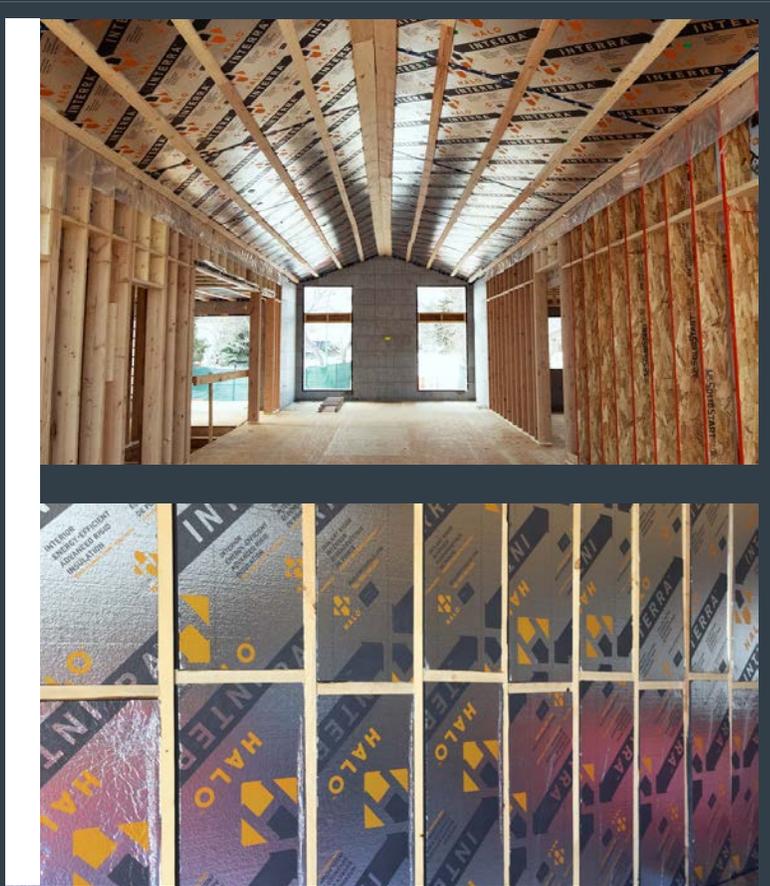
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ANGULAR: MACH ± BEND ±			
TWO PLACE DECIMAL ±			
THREE PLACE DECIMAL ±			
MATERIAL			
100% Recycled Rigid PVC			
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EcoStud LLC		Z Furring	
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SCALE:		WEIGHT:	
REV.		SHEET 1 OF 1	



DESIGNED FOR
INTERIOR APPLICATIONS

- Halo® GPS (graphite polystyrene) delivers a longterm 5 per nominal inch*
- Continuous GPS insulation creates a thermal break
- Built-in vapor barrier**
- Reflective laminate reflects heat back into the home or building***
- Interra® FR is now regionally available and is specially formulated to not require a thermal or ignition barrier (in the USA only) when installed on any interior wall surface.****

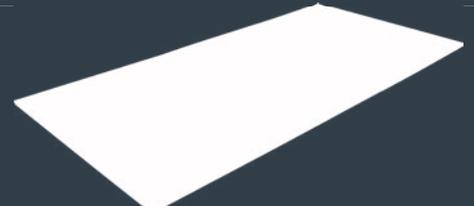
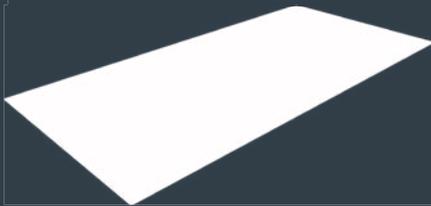
* Thermal performance claim based on a thickness of 1-1/16". ** When seams, fasteners and edges are taped and/or sealed (see the Halo® Installation Guide). ***When an appropriate air space is provided. ****Provided Type XI Halo® Interra® FR is installed at a maximum thickness of 2.28". Based on testing to NFPA 286 in accordance with IBC 2015, Section 2603.9 and IRC 2015, Section 316.6. (Not available in all regions)



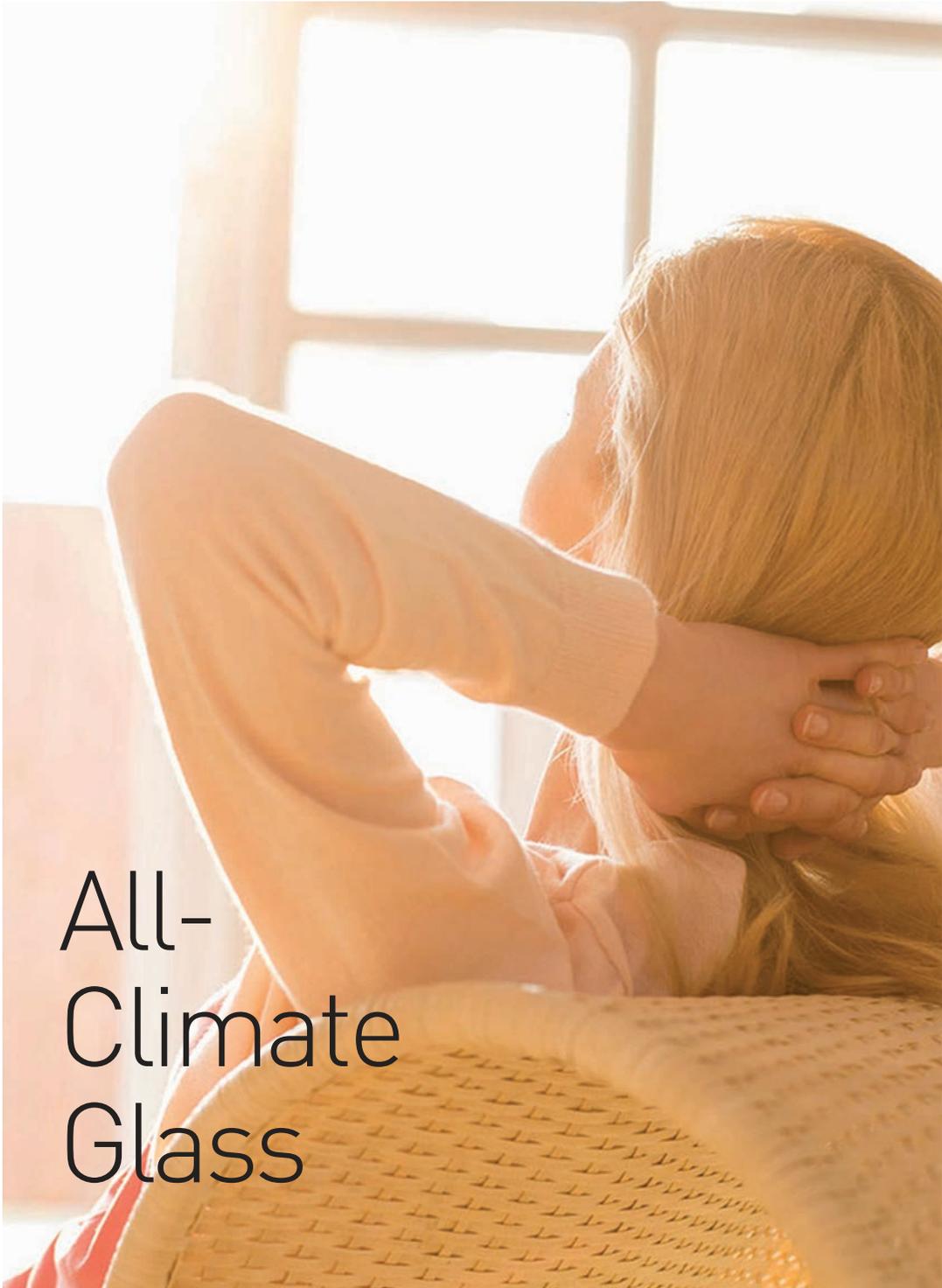
ZERO THERMAL DRIFT. ZERO COMPROMISE.

- Graphite Polystyrene (GPS) provides R-5 per nominal inch*.
- GPS provides a permanent long-term R-value and won't deteriorate over time like XPS and ISO.
- GPS delivers greater R-values at lower outside temperatures.
- Minimizes the energy loss from thermal bridging.
- Light yet durable — perfect for today's demanding jobsites.
- Superior indoor air quality due to Halo®'s clean steam-fused GPS core.
- GPS is 100% recyclable and ozone layer-friendly — no CFCs or HCFCs.

*Thermal performance claim based on a thickness of 1-1/16".



BUILDWITHHALO.COM



All-Climate Glass



CARDINAL CG  ENGINEERING THE FUTURE OF COATED GLASS
A CARDINAL GLASS INDUSTRIES COMPANY



Who says you can't do anything about the weather? Cardinal's LoE² coated glass delivers year-round comfort in all types of weather. In summer, it rejects the sun's heat and damaging UV rays. In winter, it reflects heat back into the room.



Cardinal LoE² glass includes two variations, LoE²-272 and LoE²-270. LoE²-272 offers a little more light transmittance, while LoE²-270 gives a little more solar control.

Regardless of where your home is located, choosing windows that provide you with the highest level of comfort and energy savings year-round is extremely important. And choosing the right glass for your windows is the most important factor in that decision. Go beyond ordinary low-E glass. Let LoE² glass help you handle the weather – any weather.

When the temperature is heading to the top of the thermometer, ordinary window glass simply welcomes in the heat. Cardinal LoE², however, has been specially formulated to reject the sun's heat and damaging rays and keep your home cool and comfortable. The patented LoE² coating provides high-performance solar control and visual clarity. The end result of all this engineering is that Cardinal LoE² provides the ultimate in comfort because it reduces window heat gain by 50% or more when compared to ordinary glass.



Hot sun?
Cool windows.

Frigid outside, cozy inside.

During cold weather, the insulating effect of your windows has a direct impact on how your rooms feel. Typically, 75% of the exposed surface of a window is glass, and the temperature of the room-side of the glass directly affects the air temperature in the room. The better insulated the window glass, the warmer your room will be.

In fact, the Efficient Windows Collaborative (www.efficientwindows.org) suggests that when glass surface temperatures fall below 52°F, there is a risk of thermal discomfort. To maintain the best comfort during the winter, select a glass product that produces surface temperatures that will stay above this point during the coldest outdoor conditions.



INSIDE GLASS AND OUTSIDE TEMPERATURES

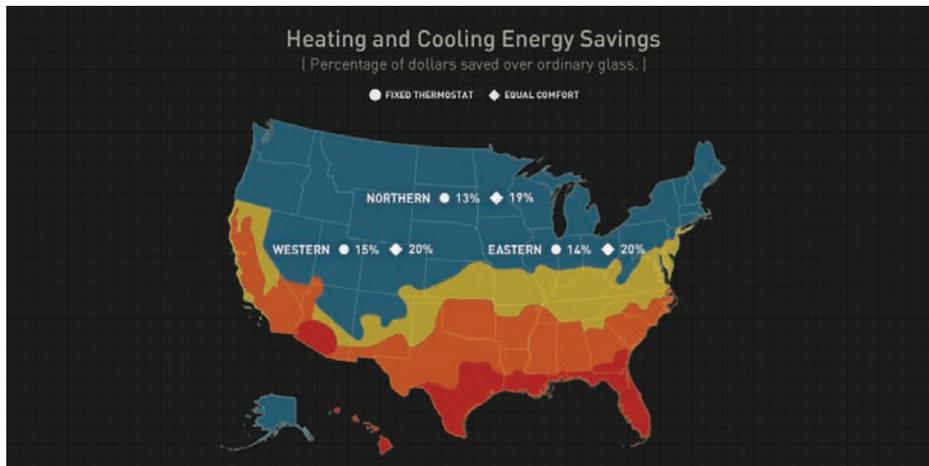
The table below compares the room-side center of glass temperatures of different glass types against two different winter conditions.

IG TYPE AND COATING	OUTSIDE TEMPERATURES	
	VERY COLD OUTSIDE -20°F (-30°C)	COLD OUTSIDE 20°F (-10°C)
	INSIDE TEMPERATURES	
Single-pane, Clear	0°F (-19°C)	31°F (-3°C)
Double-pane, Clear	37°F (2°C)	51°F (9°C)
Ordinary low-e (air fill)	46°F (7°C)	57°F (13°C)
LoE²-272/270 (air fill)	49°F (9°C)	58°F (14°C)
LoE²-272/270 (argon fill)	52°F (10°C)	60°F (15°C)

The superior insulating capability of Cardinal LoE² glass is a key factor in the construction of comfortable windows for cold climates. The dramatic comfort improvement from windows with warm glass surfaces also means the relative humidity of the indoor air can be controlled and maintained properly. Proper humidity levels (not too much, not too little) will improve comfort and promote a healthier living environment.

Glass so smart, it controls your comfort.

Although windows provide beautiful views and wonderful natural light, they can also account for up to 50% of the heating and cooling energy consumed in a home. In the summer Cardinal LoE² keeps your home cool and comfortable by rejecting the sun's heat and damaging rays. In the winter it helps your home stay warm and cozy by blocking heat loss to the cold weather outside. In short, it can save energy year-round.



*Thermostat settings are the largest variable in establishing the heating and cooling energy savings potential with window replacements. If you tolerate the discomfort from your current windows and don't change thermostat settings with the weather, consider the savings suggested from the "Fixed Thermostat" column. If on the other hand you frequently adjust the thermostat, add space heaters to compensate for cold rooms, or close drapes/blinds to block the sun, consider the additional savings suggested in the "Equal Comfort" column.

GLASS COMPARISONS

IG TYPE AND COATING	VSB (%)			FD E TRAN MISSION		SOAR	U-FACTOR	
	TRANSMITTANCE	EXTERIOR REFLECTANCE	INTERIOR REFLECTANCE	U	SO	BATGN COEFFICIENT	R FL P /SI	R GN L P /SI
Single-pane, Clear	90%	8%	8%	0.71	0.84	0.86	1.04 / 5.91	—
Double-pane, Clear	82%	15%	15%	0.58	0.75	0.78	0.48 / 2.73	—
Ordinary low-e	76%	17%	17%	0.50	0.68	0.72	0.34 / 1.93	0.30 / 1.70
LoE²22	72%	11%	12%	0.16	0.55	0.41	0.8 / 1.70	0.25 / 1.42
LoE²20	70%	12%	13%	0.14	0.53	0.3	0.8 / 1.70	0.25 / 1.42

The difference is clear.

Cardinal LoE² glass is ideal for all weather conditions in most climates. In summer, its patented coating blocks 86% of the sun’s harmful ultraviolet rays and 63% of the sun’s heat. It even outperforms the tinted glass often used in warm climates. You can see out and the light shines in, with no heavy bronze or smoke colored tints to darken the personality of your home. In winter, it reflects heat back into rooms.



LoE² glass can also be purchased in hurricane-resistant laminated glass and in a variety of shapes and sizes.

To learn more about LoE² and other Cardinal glass products, ask your window manufacturer, contractor or architect.

CARDINAL CG

ENGINEERING THE FUTURE OF COATED GLASS

775 Prairie Center Drive,
Eden Prairie, MN 55344
cardinalcorp.com





ENERGY SAVINGS

Tubolit

The Tubolit® family of products includes premium quality closed-cell polyethylene (PE) foam insulations used in residential, light commercial and light industrial projects to prevent heat loss and protect pipes from freezing. It's flexible nature makes it easy to cut and install.

- // Tubolit: Tubular pipe insulation in semi-slit format
- // Tubolit SS: Pipe insulation with easy, self-seal closure
- // Tubolit W SS: White pipe insulation with self-seal closure
- // Tubolit Sheet and Roll: Flexible sheeting for large pipes, tanks and vessels



www.armacell.us



 **armacell**
Tubolit®

Tubolit

Tubolit® is 100% non-particulating polyethylene foam pipe insulation. Its closed-cell structure won't wick moisture and helps prevent the absorption of condensation that could cause mold to develop over time. The SS options have an easy-to-install self-seal closure system. Choose sheets or rolls when you need to insulate large pipes or vessels.

Tubolit and Tubolit SS



Tubolit W SS



Tubolit Sheet and Roll



APPLICATIONS

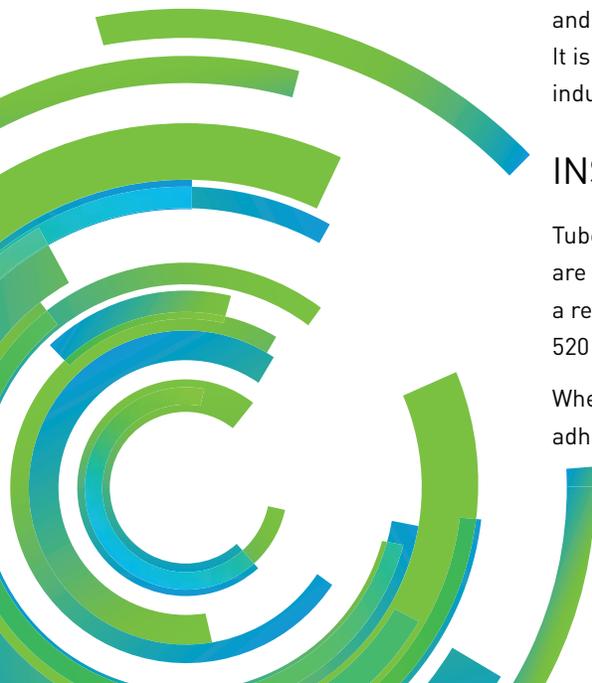
Tubolit is used to retard heat loss on hot water pipes and to prevent freezing of all water pipes. It is available in a wide range of wall and sheet thicknesses.

Tubolit has a low thermal conductivity and very low water vapor transmission rate. This low density product demonstrates excellent thermal, physical and chemical resistant properties and has a broad service temperature range between -297°F and 200°F (-183°C and 93°C). It is ideal for residential applications, but can be installed in light commercial and light industrial projects as well. It is acceptable for use with heat tracing/heat tape.

INSTALLATION

Tubolit pipe insulation is semi-slit, and can be completely slit by hand. Tubolit SS and W SS are pre-slit with a factory applied pressure sensitive adhesive to both seam surfaces and has a release liner for easy installation. All butt joints should be properly sealed with ArmaFlex 520 or ArmaFlex 520 B V contact adhesive.

When Tubolit sheet is applied to equipment, use 100% coverage of ArmaFlex 520 contact adhesive. Both surfaces to be joined should be coated and then joined after adhesive is dry to the touch. Compression joints with adhesive applied should be used on all butt edges.



Technical Data: Tubolit, Tubolit SS and Tubolit W SS

Tubolit and Tubolit SS – Dark Gray/Black Tubes

Approvals, Certifications, Compliances

- GREENGUARD Gold Certified
- Manufactured without EPO, FOS, BPO, PBES, or Formaldehyde.
- Plenum Rated
- UL 94 B, File E55798 (For TB only)
- ASTM C 1427, Type I (tubes)

- All Armacell facilities in North America are ISO 9001 certified
- Conforms to ASHRAE 90.1 Energy Standards
- Conforms to building codes: International Mechanical Code, IMC, International Energy Conservation Code, IECC International Residential Code, IRC, Title 24 California Building Energy Efficiency Standards.

Sizes: Tubolit and Tubolit SS

	Tubolit	Tubolit SS
Wall Thickness (Nominal)	3/8", 1/2", 3/4" and 1" (10, 13, 19, 25 mm)	3/8", 1/2", 3/4" and 1" (10, 13, 19, 25 mm)
Inside Diameter, Tubular	3/8" to 2-5/8" ID (10 mm to 67 mm)	3/8" to 4" IPS ID (10 mm to 114 mm ID)
Length of Sections, Tubular	6' (1.83 m)	6' (1.83 m)

* 3/8" wall up to 3-1/8" ID

Tubolit W SS – White Tubes

Approvals, Certifications, Compliances

- Manufactured without EPO, FOS, BPO, PBES, or Formaldehyde.
- Plenum Rated
- ASTM C 1427, Type I (tubes)
- All Armacell facilities in North America are ISO 9001 certified

- Conforms to ASHRAE 90.1 Energy Standards
- Conforms to building codes: International Mechanical Code, IMC, International Energy Conservation Code, IECC International Residential Code, IRC, Title 24 California Building Energy Efficiency Standards.

Sizes: Tubolit W SS

Wall Thickness (Nominal)	1/2" and 1" (13 and 25 mm)
Inside Diameter, Tubular	3/8" to 4" IPS ID (10 mm to 114 mm ID)
Length of Sections, Tubular	6' (1.83 m)

Typical Properties

Physical Properties	Values	Test Method
Thermal Conductivity: $Btu \cdot in/h \cdot ft^2 \cdot ^\circ F$ (W/mK)		
100F (38C Mean Temperature)	0.280 (0.040)	ASTM D 77 or C 18
75F (24C Mean Temperature)	0.270 (0.039)	
50F (10C Mean Temperature)	0.265 (0.038)	
Maximum Service Temperature, °F (°C)	200 (93)	ASTM D 427
Minimum Service Temperature, °F (°C) ①	-297 (-183)	ASTM D 427
Water Vapor Permeability, Perm-In	0.02	ASTM E 96, Procedure A
Water Absorption, % by Volume:	0.2	ASTM D 763
Chemical/Solvent Resistance	Good	
Mildew Resistance/Air Erosion	Pass	UL 181
Flame Spread and Smoke Developed Index through 1" (25 mm) thickness*	25/50 rated	ASTM E 84

Outdoor Use Painting with WB finish or other protective jacketing is required to prevent damage to the insulation in exterior applications and to comply with the insulation protection sections of the International Energy Conservation Code (IECC) and ASHRAE 90.1.

① Please consult Armacell Technical Services for application temperatures below 0°F.

* Cellular plastics and thermoplastics, such as polyethylene/polyolefin insulation, that may drip, melt, delaminate or draw away from the fire, present unique problems and require careful interpretation of the test results.

Tubolit, Tubolit SS and Tubolit W SS R-Values

Pipe O.D. or Nominal		R Value			
Insulation I.D.		3/8" (10 mm) Wall	1/2" (13 mm) Wall	3/4" (19 mm) Wall	1" (25 mm) Wall
3/8"	10 mm	2.7	3.7	6.0	8.6
1/2"	13 mm	2.4	3.4	5.6	7.9
5/8"	16 mm	2.4	3.3	5.3	7.4
3/4"	19 mm	2.3	3.2	5.1	7.1
7/8"	22 mm	2.2	3.0	4.8	6.8
1-1/8"	29 mm	2.1	2.9	4.5	6.3
1-3/8"	35 mm	1.7	2.5	3.9	5.8
1-5/8"	41 mm	2.0	2.7	4.3	5.9
2"	50 mm	1.8	2.5	3.9	5.4
2-1/8"	54 mm	2.0	2.7	4.1	5.6
2-3/8"	62 mm	1.8	2.4	3.8	5.2
2-5/8"	67 mm	2.0	2.6	4.0	5.4
2-7/8"	72 mm	1.8	2.4	3.7	5.0
3-1/8"	79 mm	2.0	2.6	3.9	5.3
3-5/8"	92 mm	-	2.6	3.9	5.2
4-1/8"	105 mm	-	2.7	3.9	5.2
4-1/2"	115 mm	-	2.3	3.5	4.7

Note: "R" values were calculated using a K factor of 0.27 (75° F, 24° C mean temp.) and nominal all thickness in each case. Lower operating temperatures will result in improved R values. Contact Technical Services for specific recommendations.

Technical Data: Tubolit Sheet and Roll – Dark Gray/Black and White

Approvals, Certifications, Compliances

- ASTM C 1427 Type II (sheets)
- Plenum Rated
- All Armacell facilities in North America are ISO 9001 certified
- Conforms to ASHRAE 90.1 Energy Standards
- Conforms to building codes: International Mechanical Code, IMC, International Energy Conservation Code, IECC International Residential Code, IRC, Title 24 California Building Energy Efficiency Standards.

Typical Properties

Physical Properties	Values	Test Method
Thermal Conductivity: $Btu \cdot in/h \cdot ft^2 \cdot ^\circ F$ (W/mK)		
100F (38°C) Mean Temperature	0.280 (0.040)	ASTM C 77 or C 18
75F (24°C) Mean Temperature	0.270 (0.039)	
50F (10°C) Mean Temperature	0.265 (0.038)	
Maximum Service Temperature °F (°C)	200 (93)	ASTM C 427
Minimum Service Temperature °F (°C) ①	-297 (-183)	ASTM C 427
Water Vapor Permeability, Perm-In	0.02	ASTM E 96, Procedure A
Water Absorption, % by Volume:	0.2	ASTM C 763
Chemical / Solvent Resistance	Good	
Mildew Resistance/Air Erosion	Pass	UL 181
Flame Spread and Smoke Developed Index through 1" (25 mm) thickness*	25/50 rated	ASTM E 84

① Please consult Armacell Technical Services for application temperatures below 0°F.

* Cellular plastics and thermoplastics, such as polyethylene/polyolefin insulation, that may drip, melt, delaminate or draw away from the fire, present unique problems and require careful interpretation of the test results.

Sizes

Sheet Width and Length	3' x 4' (0.92 m x 1.22 m)
Thickness (nominal)	1/4", 3/8", 1/2", 3/4", 1", 1-1/2", 2", 2-1/2" (6.4 mm, 10 mm, 13 mm, 19 mm, 25 mm, 38 mm, 51 mm, 64 mm)
Roll Width and Length	4' x 50' (1.22m x 15.3m)
Thickness (nominal)	3/8", 1/2", 3/4", 1", 1-1/2", 2", 2-1/2" (10 mm, 13 mm, 19 mm, 25 mm, 25 mm, 38 mm, 51 mm, 64 mm)

Outdoor Use

Painting with White finish or other protective jacketing is required to prevent damage to the insulation in exterior applications and to comply with the insulation protection sections of the International Energy Conservation Code (IECC) and ASHRAE 90.1.

R-Values

Per Square Foot

3/8" (10 mm)	1/2" (13 mm)	3/4" (19 mm)	1" (25 mm)	1-1/2" (38 mm)	2" (50 mm)	2-1/2" (63 mm)
1.4	1.9	2.8	3.7	5.6	7.4	9.3

Note: "R" values were calculated using a K factor of 0.27 (75° F, 24° C mean temp.) and nominal wall thickness in each case. Lower operating temperatures will result in improved R values. Contact Technical Services for specific recommendations.

Sound Absorption Co-efficients at Frequency

ASTM E-95 Type A Mounting / Sabins / Sq. Ft.

Thickness	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
1/4" (6 mm)	0.00	0.03	0.05	0.10	0.25	0.45	0.10
1/2" (12 mm)	0.03	0.04	0.08	0.15	0.4	0.25	0.2
1" (25 mm)	0.1	0.15	0.45	0.3	0.4	0.33	0.35

All data and technical information are based on results achieved under typical application conditions. It is the customer's responsibility to verify if the product is suitable for the intended application. The responsibility for professional and correct installation and compliance with relevant building regulations lies with the customer. By ordering/receiving product you accept the **Armacell General Terms and Conditions of Sale** applicable in the region. Please request a copy if you have not received these.

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00128 | Tubolit, SS, WSS, Sheet | Tubolit | TDS | 032022 | NA | EN-A | 052

ABOUT ARMACELL

As the inventors of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal, acoustic and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With over 3,000 employees and 23 production plants in 15 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for high-tech and lightweight applications and next generation aerogel blanket technology.

For more information, please visit:

www.armacell.us

info.us@armacell.com





Sharing the Warmth™

- ECO 18
- ECO 24
- ECO 27
- ECO 36



Tested and certified by the Water Quality Association against NSF/ANSI 372 for lead free compliance.



ecosmart
TANKLESS WATER HEATERS

ecosmartus.com

Tankless Electric Water Heater

EcoSmart ECO 18 through ECO 36 tankless electric water heaters are designed for larger apartments, condominiums, or townhomes. In warmer climates, these units can provide that same consistent, endless hot water to an entire single-family home. Each of these larger tankless electric water heaters has a digital display showing output temperature and can be adjusted in 1-degree increments. Equipped with EcoSmart self-modulating technology, ECO tankless electric water heaters use energy only when hot water is being delivered. For the consumer this means no more wasting water or energy.

These heaters are stylish, and their advanced design is pleasing to the eye. The digital temperature control in 1-degree increments allows control of hot water which can help reduce water heating costs by 50%. The copper and stainless components are designed for efficiency, durability and easy replacement and the compact size saves valuable storage space

EXAMPLE APPLICATIONS

Description	GPM	Range
Low Flow Faucet	0.5	0.5–0.9
Bathroom Faucet	1	0.5–1.3
Kitchen Faucet	1.5	1.0–2.2
Shower	2	1.5–2.5



endless hot water



save space



save energy

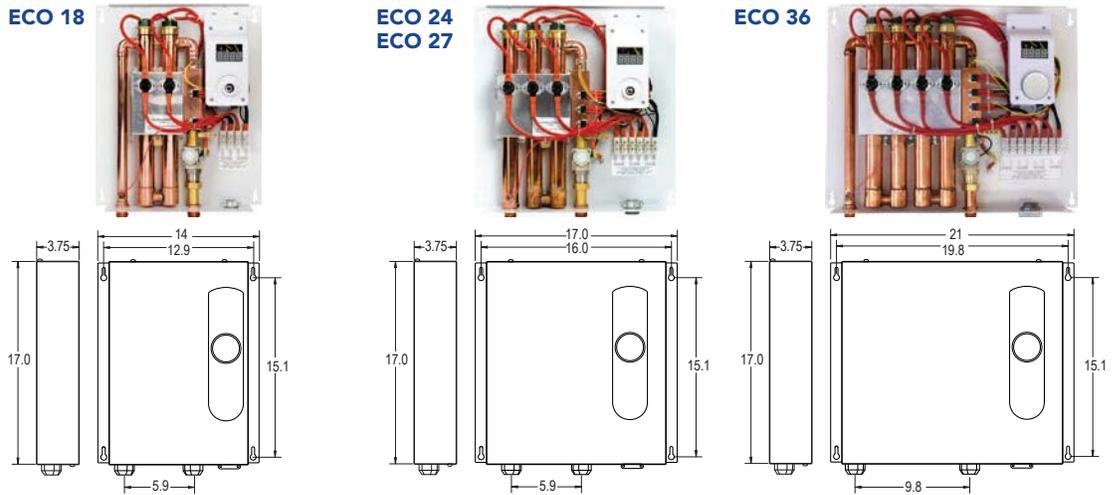


save time



save money

ECO 18
ECO 24
ECO 27
ECO 36



Product dimensions shown in inches.

SPECIFICATIONS

Model #	ECO 18	ECO 24	ECO 27	ECO 36
kW	18	24	27	36
Voltage	240	240	240	240
Phase	Single	Single	Single	Single
Element	(2) 9kW @ 240V	(3) 8kW @ 240V	(3) 9kW @ 240V	(4) 9kW @ 240V
Required Breaker	(2) 40A DP	(3) 40A DP	(3) 40A DP	(4) 40A DP
Max Power	75A	100A	112.5A	150A
Required Wire	(2) 8 AWG	(3) 8 AWG	(3) 8 AWG	(4) 8 AWG
Water Connections	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT
Dimensions	17" x 14" x 3.75"	17" x 17" x 3.75"	17" x 17" x 3.75"	17" x 21" x 3.75"
Weight	11.25 lb	13.75 lb	13.75 lb	17.4 lb
Digital Temp. Adj.	yes	yes	yes	yes
Heat Exchanger	Copper	Copper	Copper	Copper
Energy Efficiency	99.8%	99.8%	99.8%	99.8%
Certification	ETL Listed to UL-499 and CAN/CSA-C22.2 No. 64			
Warranty	Limited Lifetime			
Operating Pressure	Minimum: 25 PSI Maximum: 150 PSI (Note: Flow Activated at 0.3 GPM)			

TEMPERATURE RISE

The ECO 18, 24, 27, and 36 are EcoSmart tankless electric water heaters capable of heating multiple fixtures simultaneously. These models are equipped with patented, self-modulating technology so that it will only consume the energy necessary for the current demand. Below is a chart showing the flow rate capacity of each model, measured in gallons per minute for various inlet water temperatures and calculated for a set output temperature of 105° F.

FLOW RATE CAPACITY CHART (GPM)

MODEL	37°F	42°F	47°F	52°F	57°F	62°F	67°F	72°F	77°F
ECO 18	1.8	2.0	2.1	2.3	2.6	2.9	3.2	3.7	4.4
ECO 24	2.4	2.6	2.8	3.1	3.4	3.8	4.3	5.0	5.9
ECO 27	2.7	2.9	3.2	3.5	3.8	4.3	4.9	5.6	6.6
ECO 36	3.6	3.9	4.2	4.6	5.1	5.7	6.5	7.5	8.8

Flow rate shown in GPM based on outlet temperature of 105°F. Inlet temperature varies by region and seasonal changes.

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ecosmartus.com

Sharing the Warmth



ecosmart
TANKLESS WATER HEATERS

EcoSmart, 400 Captain Neville Dr, Waterbury, CT 06705 USA
877-474-6473 | support@ecosmartus.com

Encore[®]

Encore Hybrid Electric is the most efficient water heater available

EFFICIENCY

- Up to 4.07 UEF reduces operating cost
- ENERGY STAR[®] rated
- Title 24 Compliant (JA13 Ready)

PERFORMANCE

- Delivers hot water faster than most standard electric water heaters – 54-87 gallons first-hour delivery, depending on model
- Ambient operating range: 37-145° F is widest in class, offering more days of HP operation annually; designed to meet Northern Climate Spec (Tier 4)

EASY INSTALLATION

- Easy access side connections
- Quick access to electrical junction box
- Easily replaces a standard electric water heater

INTEGRATION

- Electronic control for easy temperature adjustment and mode management
- Audible alarm for service alerts
- Integrated EcoNet[®] WiFi-connected* technology (2.4 GHz only) and free mobile app gives users control over water systems, allowing for customizable temperature, vacation settings, energy savings and system monitoring at home or away.
- Demand Response Ready with built-in EcoPort/ CTA-2045 port
- LeakGuard™ and LeakSense™ Ready – Easily add leak detection and prevention with leak sensor and shutoff valve upgrade kit

OPERATION MODES

- Energy Saver
- Heat Pump Only
- High Demand
- Electric Heat Only
- Vacation/Away: 2-28 days (or placed on hold indefinitely)

PLUS...

- Premium grade anode rod with resistor extends the life of the tank
- Self-Cleaning design fights sediment buildup
- 3/4" NPT water inlet and outlet; 3/4" condensate drain connections
- Incoloy stainless steel resistor elements
- Dry-fire protection
- Easy access, top mounted washable air filter
- 2" Non-CFC foam insulation
- Enhanced flow brass drain valve
- Temperature and pressure relief valve installed
- Design certified to NSF/ANSI 372 (Lead Content)

WARRANTY

- 10-Year limited tank and parts warranty, 2-year limited labor warranty

See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



15 and
30 Amps

Encore Hybrid
50 and 80-Gallon
Capacities
208-240 Volt / 1 PH
Electric



LEED Points = 3

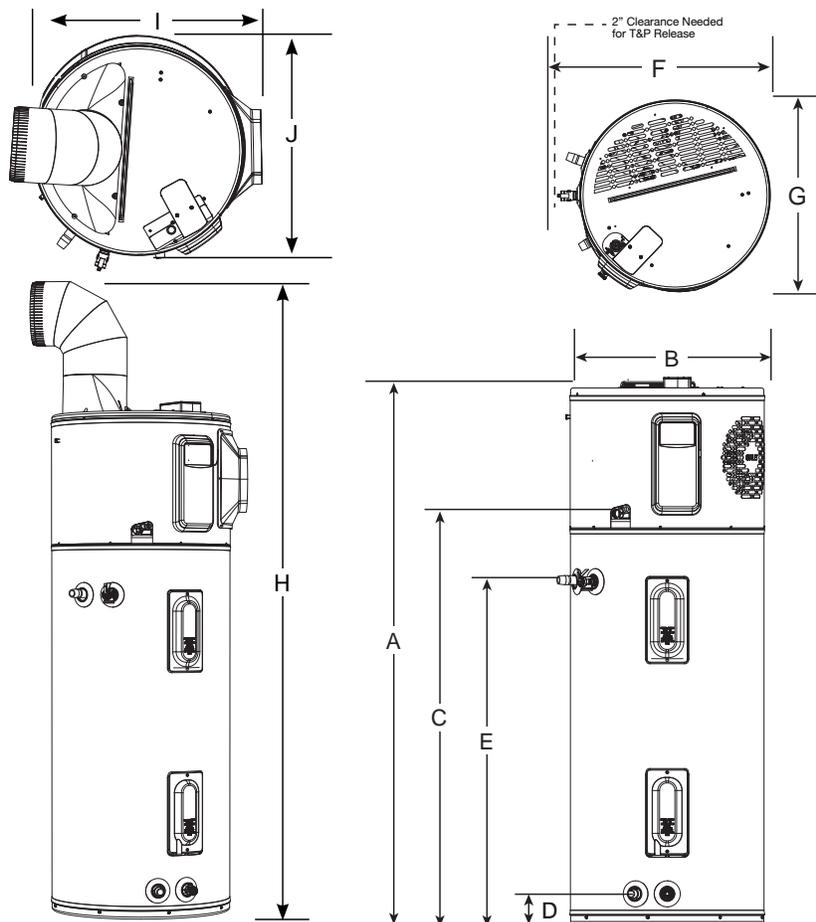
* WiFi broadband internet connection required

See specifications chart on back.

Hybrid Electric Specifications

DESCRIPTION				ENERGY INFO		FEATURES						SHIPPING WEIGHTS	
NOMINAL GALLON CAPACITY	RATED GALLON CAPACITY	MODEL NUMBER	ELECTRIC BREAKER SIZE	UNIFORM ENERGY FACTOR (UEF)	EST. YEARLY ENERGY COST	COMPRESSOR BTU/H	UEF FIRST HR. RATING G.P.H.	RECOVERY IN G.P.H 90° F RISE	ELEMENT WATTAGE	TOTAL UNIT WATTAGE	MAX AMPS	UNIT WT. (LBS)	APPROX. SHIP WT. (LBS.)
30 AMPS													
50	45	10E50-HP530	30	3.88	\$117	4,200	67	27	4,500	5,000	21	178	218
80	72	10E80-HP530	30	4.07	\$171	4,200	87	27	4,500	5,000	21	244	281
15 AMPS													
50	45	10E50-HP515	15	3.75	\$104	4,200	52	16	2,250	2,750	12	178	218
80	72	10E80-HP515	15	3.70	\$105	4,200	67	16	2,250	2,750	12	244	281

Estimated energy cost based on a national average electricity cost of \$0.12 /kWh. Uniform Energy Factor and rated gallon capacity based on Department of Energy (DOE) requirements. All units have integrated WiFi control board.

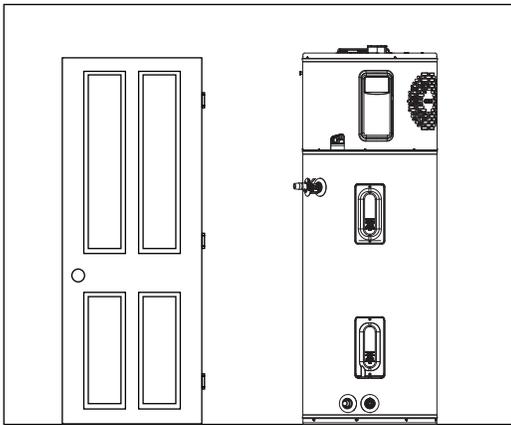


DESCRIPTION		DIMENSIONS (SHOWN IN INCHES)									
NOMINAL GALLON CAPACITY	MODEL NUMBER	A	B	C	D	E	F	G	H	I	J
50	10E50-HP5	61-3/4	22-1/4	47	3-5/8	39-5/8	25-3/8	22-1/2	78-5/8	24-3/8	25-9/16
80	10E80-HP5	74-3/16	24-1/4	59	3-7/8	42-3/8	27-1/2	24-5/8	91	26-1/2	27-3/8

Hybrid Water Heater Installation Guidelines to Provide Optimal Efficiency

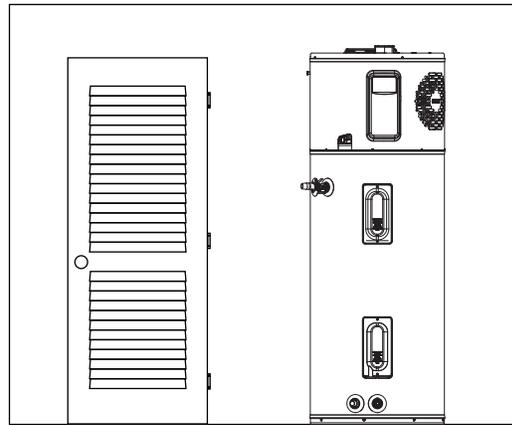
Heater: Not Ducted

Room size: Larger than 700 ft³ (e.g. 7' x 10' x 10').
 Requirements: No additional ventilation needed.



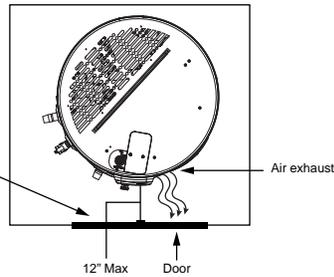
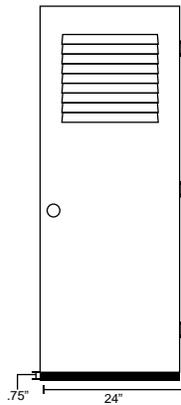
Heater: Not Ducted

Room size: Smaller than 700 ft³ (e.g. 7' x 10' x 10').
 Requirements: Full louvered door OR two louvers top and bottom. See below.



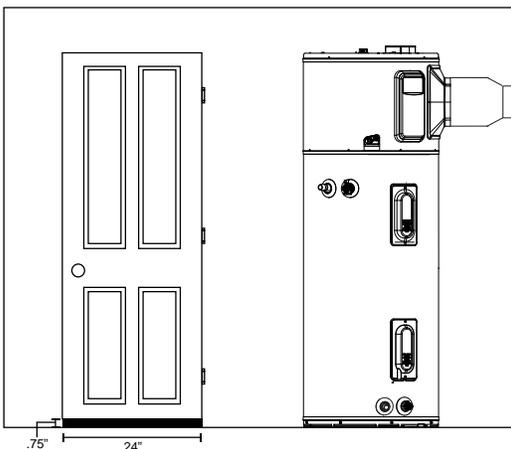
Heater: Not ducted

Room: Small Closet
 Requirements: * Air gap under door equal to 18 in² (0.75" clearance).
 * Louver must be located the same height on door as the air exhaust on heater.
 * Heater air exhaust must be positioned towards louver within one foot of door.



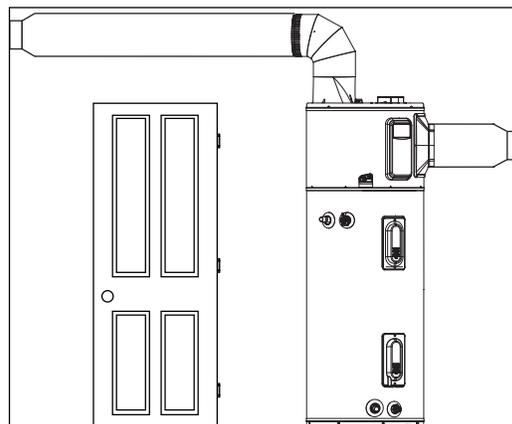
Heater: Ducted with inlet OR outlet duct

Room size: Any size room
 Requirements: Air gap under door equal to 18 in² (0.75" clearance)



Heater: Ducted with inlet AND outlet duct

Room size: Any size room
 Requirements: No additional ventilation needed.



ANN ARBOR HALL/FIRE STATION HVAC SCHEDULE

SERVING	ID	QTY	DATE	MFR	UNIT TYPE	UNIT CODE	MAX CFM	DESIGN		SUPPLY		COMP		COOLING			HEATING		CO2 SENSOR	POWER	FRESH AIR	NOTES
								OA CFM	?	FAN HP	FAN HP	FAN HP	FAN HP	SIZE	STAGE	SEER	AFUE					
2 LEVEL OFFICE WING	F1	1	2008	CARRIER	FURNACE	NO ACCESS	?	?	?	?	?	NA	NA	NA	NA	95	NO	120/1/60	ERV	3 ZONES		
MEETING ROOM	F2	1	?	BRYANT	FURNACE	NO ACCESS	?	?	?	?	?	NA	NA	NA	95	NO	120/1/60	ERV				
FIRE STATION QUARTERS	F3	1	2022	BRYANT	FURNACE	NO ACCESS									95	NO	120/1/61	ERV				
APPARATUS ROOM	RH	1	1995	RE-VERBER-RAY	RADIANT HEATER	OTH S 20-75 P-2	?	?	?	?	?	NA	NA	NA	80	NO	120/1/61	NO				
OFFICE ENTRY	UH	1	?	COZY	UNIT HEATER	NO ACCESS									80	NO	120/1/62	NO				
2 LEVEL OFFICE WING	CU1	1	2010	CARRIER	A/C CONDENSER	187BNA048-B							4 TON			NO	208-230/1/60	N/A				
MEETING ROOM	CU2	1	1992	BRYANT	A/C CONDENSER	593JC060-A							5 TON			NO	208-230/1/60	N/A				
FIRE STATION QUARTERS	CU3	1	2022	BRYANT	A/C CONDENSER	126BNA060-B	NA	NA	NA	NA	0.2	5 TON	1	13	N/A	NO	208-230/1/60	N/A	R-410A			
EACH FURNACE	ERV	3	2020	RENEW AIRE	ENERGY RECOVERY VENTILATOR	EV130																

PVA MULTI-POSITION AIR HANDLER HEAT PUMP



(PVA-A42AA7 MODEL SHOWN)

BS = Seacoast Protection

Model Name	Indoor Unit		PVA-A12AA7	PVA-A18AA7	PVA-A24AA7	PVA-A30AA7	PVA-A36AA7	PVA-A42AA7
	Outdoor Unit		PUZ-A12NKA7 (-BS)	PUZ-A18NKA7 (-BS)	PUZ-A24NHA7 (-BS)	PUZ-A30NHA7 (-BS)	PUZ-A36NKA7 (-BS)	PUZ-A42NKA7 (-BS)
Cooling *1	Rated Capacity	Btu/h	12,000	18,000	24,000	30,000	36,000	42,000
	Minimum Capacity	Btu/h	4,800	7,000	10,000	10,000	14,600	15,000
	Rated Total Input	W	890	1,570	1,960	3,000	3,250	4,150
	Moisture Removal	Pints/h	2.5	3.9	3.7	7.0	7.4	7.2
	Sensible Heat Factor		0.77	0.76	0.83	0.74	0.77	0.81
Heating at 47° F *2	Rated Capacity	Btu/h	14,000	19,000	26,000	32,000	38,000	46,000
	Minimum Capacity	Btu/h	5,700	7,700	12,000	12,000	17,700	18,100
	Rated Power Input	W	1,070	1,470	1,920	2,640	3,030	3,900
Heating at 17° F *3	Rated Capacity	Btu/h	9,900	12,000	15,000	18,000	24,000	28,400
	Rated Power Input	W	1,400	1,520	1,760	2,110	2,990	3,440
Efficiency	SEER		21.40	20.20	20.50	19.00	19.30	18.00
	EER *1		13.40	11.40	12.20	10.00	9.80	10.10
	HSPF (IV)		10.30	10.40	9.30	10.00	9.50	9.30
Electrical	Voltage, Phase, Frequency		1-phase, 60Hz, 208 / 230V *4					
	Guaranteed Voltage Range	V AC	187 - 253					
	Recommended Fuse/Breaker Size	A	15		25		30	
Indoor Unit	MCA	A	3.00	3.00	4.13	5.50	5.63	
	Airflow Rate	DRY (CFM)	280-340-400	515-625-735	613-744-875		788-956-1,125	1,040-1,262-1,485
		WET (CFM)	n/a	n/a	n/a	n/a	n/a	n/a
	External Static Pressure	In. WG	0.30-0.50-0.80					
	Sound Pressure Level	dB(A)	24-28-32	28-33-36	30-34-38			34-38-42
	Drain Pipe Size	In.	3/4					
	External Finish Color		Galvanized steel cabinet, Powder-coated Slate Gray					
	Dimension Unit	W: In.	17	21	25			
		D: In.	21-5/8					
		H: In.	50-1/4	54-1/4	59-1/2			
Weight Unit	Lbs.	113	141	172				
Outdoor Unit	MCA	A	11	19	25			
	MOCP	A	28	26	31			
	Airflow Rate	CFM	1,590	1,940	3,880			
	Refrigerant Control		Linear Expansion Valve					
	Defrost Method		Reverse Cycle					
	Sound Pressure Level at Cooling *1	dB(A)	44	47	52			
	Sound Pressure Level at Heating *2	dB(A)	46	48	53			
	External Finish Color		Munsell No. 3Y 7.8 / 1.1					
	Dimensions	W: In.	31-13/16 + 7/16	37-13/32	41-5/16			
		D: In.	11-3/16	13 + 1-3/16				
H: In.		24-13/16	37-1/8	52-11/16				
Weight	Lbs.	93	100	153	214			
Outdoor Unit Operating Temperature Range	Cooling Intake Air Temperature (Maximum / Minimum)	° F	115 DB / 0° DB					
	Heating Intake Air Temperature (Maximum / Minimum)		70 DB, 59 WB / 12 DB, 10 WB		70 DB, 59 WB / -4 DB, -4 WB			
Refrigerant	Type	R410A						
Refrigerant Pipe	Gas Side O.D.	In.	1/2	5/8				
	Liquid Side O.D.	In.	1/4	3/8				
Refrigerant Pipe Length	Maximum Height Difference	Ft.	100					
	Maximum Piping Length	Ft.	100	165				
Connection Method	Indoor/Outdoor	Flared/Flared						

NOTES: Test conditions are based on AHRI 210/240.

*1. Rating conditions (cooling)-Indoor: D.B. 80° F (27° C), W.B. 67° F (19° C); Outdoor: D.B. 95° F (35° C), W.B. 75° F (24° C).

*2. Rating conditions at 47° F (heating)-Indoor: D.B. 70° F (21° C), W.B. 60° F (16° C); Outdoor: D.B. 47° F (8° C), W.B. 43° F (6° C).

*3. Rating conditions at 17° F (heating)-Indoor: D.B. 70° F (21° C), W.B. 60° F (16° C); Outdoor: D.B. 17° F (-8.3° C), W.B. 15° F (-9° C).

*4. Indoor units receive power from outdoor units through field-supplied interconnected wiring.

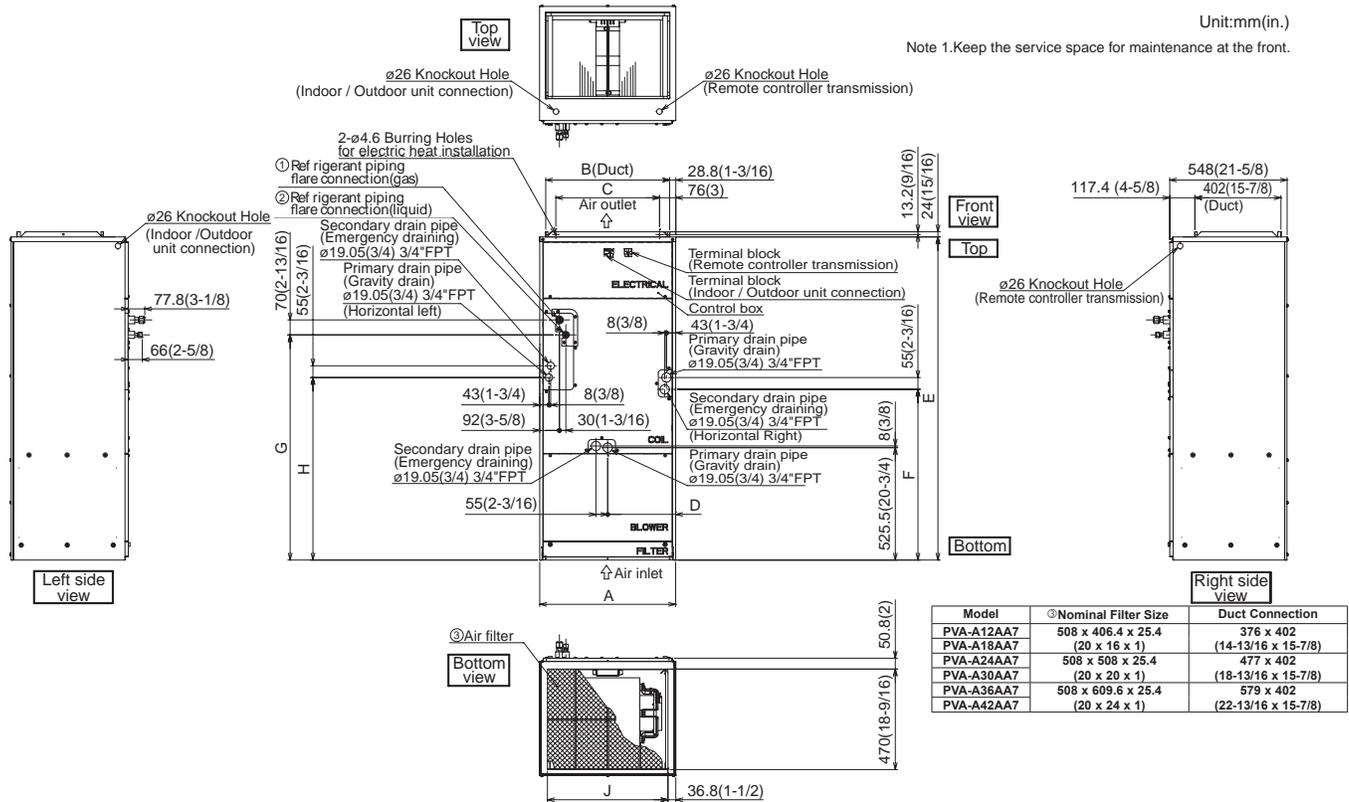
*Wind baffles required to operate below 23° F DB in cooling mode. PUZ with wind baffle: 0° F - 115° F.

Specifications are subject to change without notice.

LIMITED WARRANTY | Five year parts and seven years warranty compressor.

DIMENSIONS: PVA-A36AA7 & PUZ-HA36NHA5

PVA-A36AA7



Model	A	B	C	D	E	F	G	H	J	Unit: mm (in.)	
										⊙Gas Pipe	⊙Liquid Pipe
PVA-A12AA7	432 (17)	376 (14-13/16)	281 (11-1/8)	224 (8-7/8)	1275 (50-1/4)	680 (26-13/16)	823 (32-7/16)	735.5 (29)	360 (14-3/16)	Φ 12.7 (1/2)	Φ 6.35 (1/4)
PVA-A18AA7	534 (21)	477 (18-13/16)	382.6 (15-1/8)	266.5 (10-1/2)	1378 (54-1/4)	737 (29-1/16)	953.5 (37-9/16)	792 (31-3/16)	461 (18-3/16)	Φ 15.88 (5/8)	Φ 9.52 (3/8)
PVA-A24AA7	635 (25)	579 (22-13/16)	484.6 (19-1/8)	317.5 (12-1/2)	1511 (59-1/2)	798.5 (31-7/16)	1053 (41-1/2)	853.5 (33-5/8)	563 (22-3/16)	Φ 15.88 (5/8)	Φ 9.52 (3/8)

H2i® P-SERIES HEAT PUMP



Air Handler models

Model Name	Indoor Unit		PVA-A30AA7	PVA-A36AA7	PVA-A42AA7
	Outdoor Unit		PUZ-HA30NHA5	PUZ-HA36NHA5	PUZ-HA42NKA
Cooling *1	Rated Capacity	Btu/h	28,500	33,000	42,000
	Minimum Capacity	Btu/h	18,000	18,000	19,000
	Rated Total Input	W	2,280	2,640	4,270
	Moisture Removal	Pints/h	7.0	7.4	7.2
	Sensible Heat Factor		0.70	0.74	0.76
Heating at 47° F *2	Rated Capacity	Btu/h	32,000	38,000	48,000
	Minimum Capacity	Btu/h	18,000	18,000	18,000
	Rated Power Input	W	2,590	3,040	4,010
Heating at 17° F *3	Rated Capacity	Btu/h	22,600	29,000	42,400
	Rated Power Input	W	2,740	3,230	4,990
Heating at 5° F *4	Maximum Capacity	Btu/h	32,000	38,000	48,000
	Maximum Power Input	W	5,320	6,100	7,360
Efficiency	SEER		17.0	17.8	15.3
	EER *1		12.5	12.5	9.8
	HSPF (IV)		9.7	11.0	11.0
Electrical	Voltage, Phase, Frequency		1-phase, 60Hz, 208 / 230V *5		
	Guaranteed Voltage Range	V AC	187 - 253		
	Recommended Fuse/Breaker Size	A	30		40
Indoor Unit	MCA	A	4.13	5.50	5.63
	Airflow Rate	DRY (CFM)	613-744-875	788-956-1125	1040-1262-1485
		WET (CFM)	n/a	n/a	n/a
	External Static Pressure	In. WG	0.30-0.50-0.80		
	Sound Pressure Level	dB(A)	30-34-38		34-38-42
	Drain Pipe Size	In.	3/4 FPT		
	External Finish Color		Galvanized steel cabinet, Powder-coated Slate Gray		
	Dimension Unit	W: In.	21	25	
		D: In.	21-5/8		
		H: In.	54-1/4	59-1/2	
Weight Unit	Lbs.	141	172		
Outdoor Unit	MCA	A	28	37	
	MOCP	A	40	44	
	Airflow Rate	CFM	3,530		3,320
	Refrigerant Control		Linear Expansion Valve		
	Defrost Method		Reverse Cycle		
	Sound Pressure Level at Cooling *1	dB(A)	52	49	
	Sound Pressure Level at Heating *2	dB(A)	53	51	
	External Finish Color		Munsell No. 3Y 7.8 / 1.1		
	Dimensions	W: In.	37-3/8	41-3/8	
		D: In.	13 + 1-3/16		
H: In.		53-1/8	52-11/16		
Weight	Lbs.	265	287		
Outdoor Unit Operating Temperature Range	Cooling Intake Air Temperature (Maximum / Minimum)	° F	115 DB / 0° DB		
	Heating Intake Air Temperature (Maximum / Minimum)		70 DB, 59 WB / -13 DB, -13 WB		
Refrigerant	Type	R410A			
Refrigerant Pipe	Gas Side O.D.	In.	5/8		
	Liquid Side O.D.	In.	3/8		
Refrigerant Pipe Length	Maximum Height Difference	Ft.	100		
	Maximum Piping Length	Ft.	245		
Connection Method	Indoor/Outdoor		Flared/Flared		

NOTES: Test conditions are based on AHRI 210/240.

*1. Rating conditions (cooling)-Indoor: D.B. 80° F (27° C), W.B. 67° F (19° C); Outdoor: D.B. 95° F (35° C), W.B. 75° F (24° C).

*2. Rating conditions at 47° F (heating)-Indoor: D.B. 70° F (21° C), W.B. 60° F (16° C); Outdoor: D.B. 47° F (8° C), W.B. 43° F (6° C).

*3. Rating conditions at 17° F (heating)-Indoor: D.B. 70° F (21° C), W.B. 60° F (16° C); Outdoor: D.B. 17° F (-8.3° C), W.B. 15° F (-9° C).

*4. Conditions at 5° F (heating)-Indoor: D.B. 70° F (21° C), W.B. 60° F (16° C); Outdoor: D.B. -4° F (-8.3° C), W.B. -5° F (-9° C).

*5. Indoor units receive power from outdoor units through field-supplied interconnected wiring.

*Wind baffles required to operate below 23° F DB in cooling mode. PUZ with wind baffle: 0° F - 115° F.

Specifications are subject to change without notice.

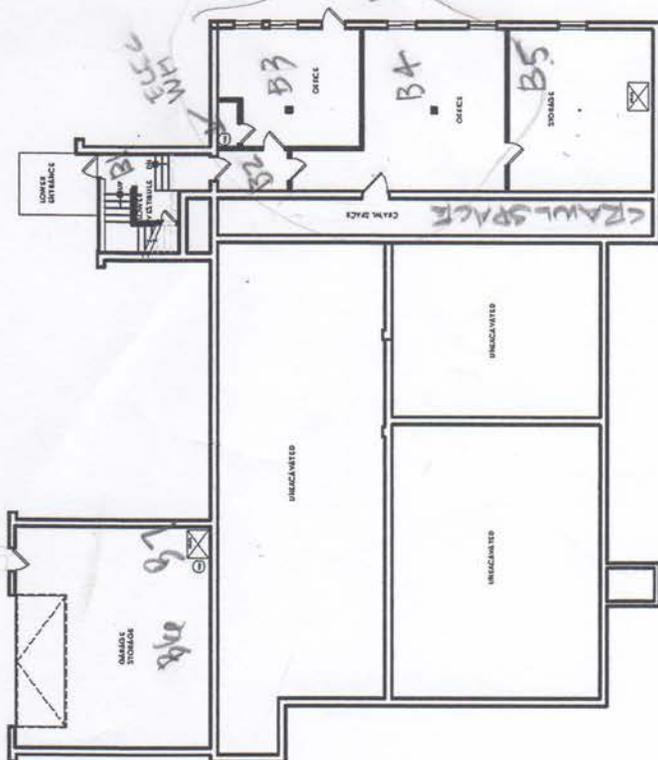
LIMITED WARRANTY | Five year parts and seven years warranty compressor.

LIGHTING INVENTORY

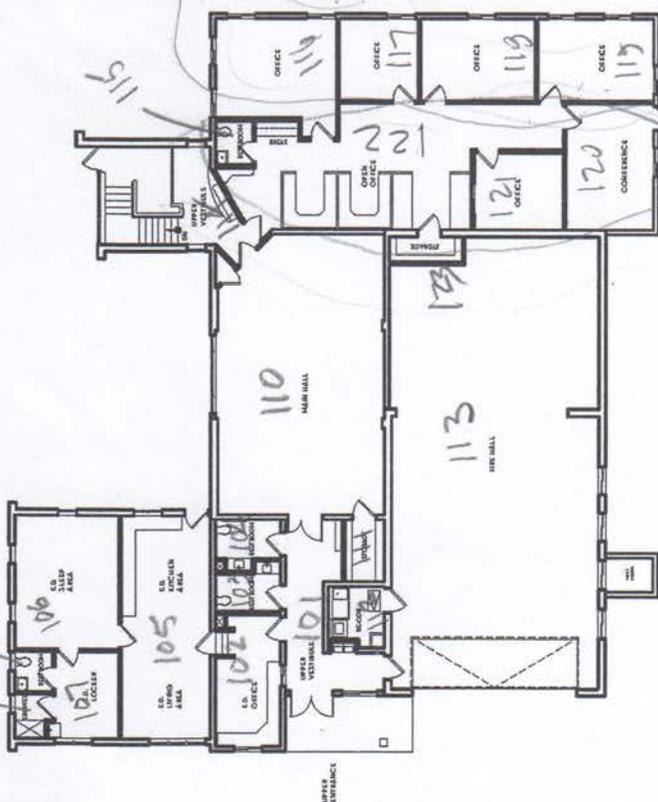
Ann Arbor Twp Hall/Fire Station #1, 3792 Pontiac Trail, Ann Arbor, MI 48103

ID #	RM NAME	HRS /DAY	FIXT ID	FIXT TYPE	LAMP TYPE	FIXT QTY	WATT /FIXT	WHr /DAY	NEW FIXT/LAMP	NEW N/FIXT	NEW WHr/D	WHr/D SAVE
B1	Stairwell	24		sconce	C13	1	13	312	Already LED	13	312	0
B1	Stairwell	9		SW14	L30	1	30	270	Already LED	30	270	0
B1	Stairwell	9		RC	L10	1	10	90	Already LED	10	90	0
B1	Stairwell	24		Exit	L3	1	3	72	Already LED	3	72	0
B2	Vestibule	9	F4	SW24	4F48CTA	1	112	1008	New LED FP	45	405	603
B3	Office	4	F5	RT24	4F48CTA	2	112	896	New LED FP	45	360	536
B4	Office	9	F4	SW24	4F48CTA	7	112	7056	New LED FP	45	2835	4221
B5	Storage and Mecha	2	F4	SW24	4F48CTA	4	112	896	New LED FP	45	360	536
B5	Storage and Mecha	2	F8	SS18	2F88CTA	2	59	236	New LED FP	25	100	136
B6	Parking garage	2		SI14	2F48CTA	5	59	590	New LED FP	25	250	340
B7	Furnace Room	2		SS14	2F48CTA	5	59	590	New LED FP	25	250	340
123	storage	9		SW14	2F48CTA	1	59	531	New LED FP	25	225	306
122	Open Office	9	F3	SW24	3F48CTA	9	72	5832	New LED FP	34	2754	3078
121	Office	9	F3	SW24	3F48CTA	2	72	1296	New LED FP	34	612	684
120	Office	9	F3	SW24	3F48CTA	4	72	2592	New LED FP	34	1224	1368
120	Office	24	X1	Exit	L3	1	3	72	Already LED	3	72	0
119	Office	9	F3	SW24	3F48CTA	4	72	2592	New LED FP	34	1224	1368
118	Office	9	F3	SW24	3F48CTA	4	72	2592	New LED FP	34	1224	1368
117	Office	9	F3	SW24	3F48CTA	2	72	1296	New LED FP	34	612	684
116	Office	9	F3	SW24	3F48CTA	4	72	2592	New LED FP	34	1224	1368
115	Restroom	9	F4	SW24	4F48CTA	1	112	1008	New LED FP	45	405	603
114	Top of stair	9		RC	L9	4	3	108	Already LED	3	108	0
113	FireGarage	9		SS14	2F48CTA	1	59	531	New LED FP	25	225	306
113	FireGarage	9		HB1	L80	2	80	1440	Already LED	80	1440	0
113	FireGarage	9		HB2	4F48CTA	5	112	5040	New LED FP	45	2025	3015
112	Laundry	4		SB14	2F48CTA	1	59	236	New LED FP	25	100	136
111	Storage	24	X1	Exit	L3	1	3	72	Already LED	3	72	0
110	TWP meeting room	9	F3	RT24P	4F48CTA	10	112	10080	New LED FP	45	4050	6030
110	TWP meeting room	2		RC	L9	1	9	18	Already LED	9	18	0
110	TWP meeting room	24	X1	Exit	L3	2	3	144	Already LED	3	144	0
109	Toilet	4		SOFFIT	2F48CTA	1	59	236	New LED FP	25	100	136
109	Toilet	4		EF	L12	1	12	48	Already LED	12	48	0
108	Shower Room	2		EF	L12	1	12	24	Already LED	12	24	0
108	Shower Room	2		Drum	2L9	1	18	36	Already LED	18	36	0
107	Locker Room	4	F3	SB24	3F48CTA	1	72	288	New LED FP	34	136	152
106	Bed Room	2		Drum	2L9	2	18	72	Already LED	18	72	0
105	Living/Dining	5		Fan	3L9	1	27	135	Already LED	27	135	0
105	Living/Dining	5		SB14	2F48CTA	1	59	295	New LED FP	25	125	170
104	Women	2		Vanity	2F48CTA	1	59	118	New LED FP	25	50	68
104	Women	2		RC	L9	1	9	18	Already LED	9	18	0
103	Men	2		Vanity	2F48CTA	1	59	118	New LED FP	25	50	68

ID #	RM NAME	HRS /DAY	FIXT ID	FIXT TYPE	LAMP TYPE	FIXT QTY	WATTS /FIXT	WHr /DAY	NEW FIXT/LAMP	NEW N/FIXT	NEW WHr/D	WHr/D SAVE
103	Men	2		RC	L9	1	9	18	Alady LED	9	18	0
102	Fire Office	24		FP24	L40	1	40	960	Alady LED	40	960	0
102	Fire Office	12		CA	Halo50	2	50	1200	New LED FP	8	192	1008
101	Lobby	9	F2	RT24P	2F48CTA	3	59	1593	New LED FP	25	675	918
101	Lobby	24	X1	Exit	L3	1	3	72	Alady LED	3	72	0
100	Lobby exterior	6		N	HID	4	150	3600	New LED Lamp	35	840	2760
					Fixtures	113		58607			26613	32306
								Existing			New	Saved
					Unchange	25		WHr/D			WHr/D	WHr/D
					Retrofit	88						



LOWER LEVEL FLOOR PLAN
SCALE 1/8" = 1'-0"



MAIN LEVEL FLOOR PLAN
SCALE 1/8" = 1'-0"

LED Luminaires

ProLED Select Gimbal Downlight Series

- Five Selectable Color Temperatures
- Adjustable Beam Direction
- 90+ CRI for Superior Color Rendering
- UL Listed for Wet Locations
- Dimmable to 5%

Specifications



Description

The ProLED Select Gimbal Downlight Series provides a high performing solution for all retrofit downlighting projects. This fixture makes directional lighting simple, offering the ability to adjust the beam direction up to 25° and rotate it 355° to meet your ideal lighting requirements. Combine this with five Selectable Color Temperatures and you have one of the most versatile downlights on the market.

Construction

- CCT Select Dipswitch
- Metal Housing
- Impact Resistant Polycarbonate Lens
- Smooth Trim, Matte White Finish
- Adjustable Beam Direction up to 25°, rotatable up to 355°
- 4" Housing - Friction Clip Installation
- 6" Housing - Torsion Spring Installation compatible with most 5/6" Cans
- E26 (Medium base) Adapter Included - Title 24 Compliant

Performance

- Selectable CCT - 2700K, 3000K, 3500K, 4000K, 5000K
- High Efficacy - >90 LPW
- High CRI - 90+
- L70 Lumen Maintenance > 50,000 Hours
- Dimmable to 5% on Compatible Dimmers
- 120VAC Input
- 5 Year limited Warranty

Certifications

- ETL Listed
- Energy Star Certified
- Wet Location Rated
- IC Rated
- Title 20 Compliant
- JA-8 2019

ProLED Select Gimbal Downlight Series

Ordering Information

Product SKU	Product Code	Product Description
83986	FSDLG4FR8/CCT/LED	Field Selectable Gimbal Downlight 4" 8W 2700K-5000K Dimmable JA-8 ProLED Select
83987	FSDLG6FR10/CCT/LED	Field Selectable Gimbal Downlight 6" 10W 2700K-5000K Dimmable JA-8 ProLED Select
83988	FSDLG6FR11/CCT/LED	Field Selectable Gimbal Downlight 6" 11W 2700K-5000K Dimmable JA-8 ProLED Select

Specifications Table

	FSDLG4FR8/CCT/LED	FSDLG6FR10/CCT/LED	FSDLG6FR11/CCT/LED
Nominal Wattage	8W	10W	11W
Delivered Lumens	711m - 831lm	901m - 1011m	1126m - 1219lm
CCT	Selectable - 2700, 3000, 3500, 4000, 5000		
Efficacy (lm/W)	92LPW - 103LPW	96PW - 101LPW	86LPW - 93LPW
CRI	90		
L70 Lifetime (hrs)	50000		
Voltage	120VAC		
Power Factor	0.9		
Dimming	5%		
Housing	Metal Housing		
Lens	Diffused Polycarbonate Lens		
Operating Temperature	-20°C - 40°C		
Listings	ETL, Energy Star, Title 20 Title 24 JA-8		
Environment	UL Wet Location, C Rated		
Warranty	5 years Standard		

Performance Table

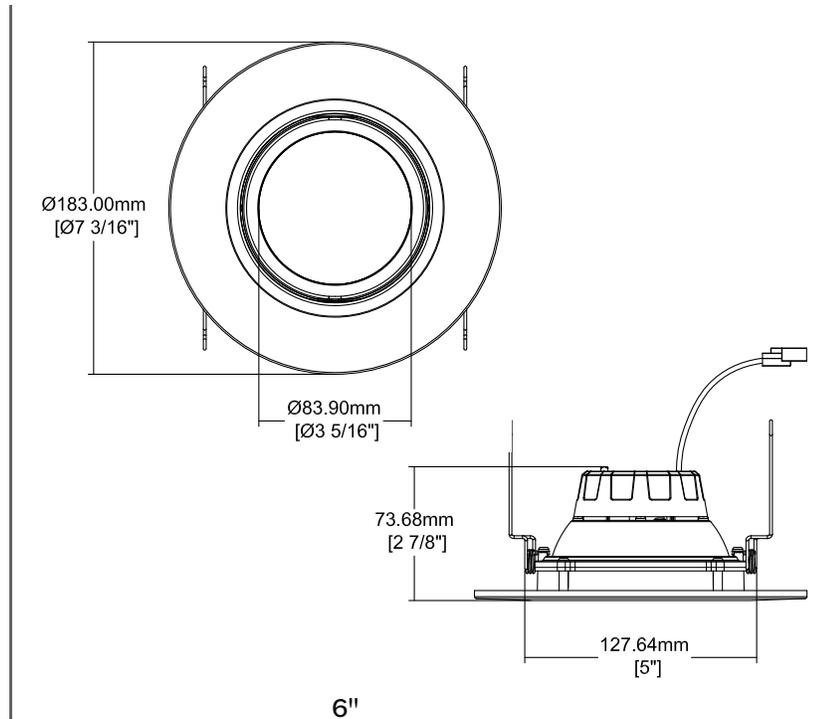
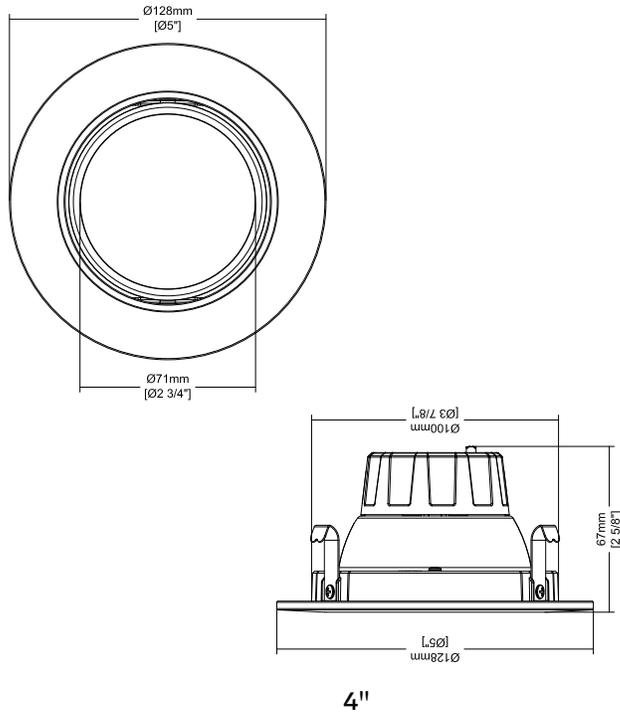
Product Code	Wattage	2700K	3000K	3500K	4000K	5000K
		Lumen Output (lm)				
FSDLG4FR8/CCT/LED	8	741	776	818	831	815
FSDLG6FR10/CCT/LED	10	969	1028	1079	1091	1067
FSDLG6FR11/CCT/LED	11	1126	1156	1210	1219	1184

ProLED Select Gimbal Downlight Series

Dimmer Compatibility

Dimmer Information Description		Compatibility			
Dimmer Brand	Dimmer Model	1-fixture	4-fixture	8-fixture	10-fixture
LUTRON	MACL-153M	Yes	Yes	Yes	Yes
LUTRON	SCL-153P	Yes	Yes	Yes	Yes
LEVITON	Cat.NO.6674	Yes	Yes	Yes	Yes
LUTRON	DVCL-153P	Yes	Yes	Yes	Yes
LEGRAND	RHCL453PTC	Yes	Yes	Yes	Yes
LEGRAND	DCL453PTCCCV6	Yes	Yes	Yes	Yes
LEGRAND	HCL453PTCCCV6	Yes	Yes	Yes	Yes
LUTRON	CTCL-153PDH-WH	Yes	Yes	Yes	Yes
LUTRON	TGCL-153PH-WH	Yes	Yes	Yes	Yes
LEVITON	R50-IPL06-10M	Yes	Yes	Yes	Yes
LUTRON	DVWCL-153PH-WH	Yes	Yes	Yes	Yes

Dimensions





PART #	
JOB NAME	
TYPE	



With up to 146 lumens per watt, and up to 25 years of virtually maintenance free operation, learn why smart decision makers use the The Linear Transformer (LBI) when upgrading to LED.

SUPERflex
**SWITCH BETWEEN
 3 WATTAGES &
 3 COLOR TEMPS**

- Link 33 4ft units together @ 120VAC or 40 4ft units @ 277VAC (see page 5 for more details)
- Perfect replacement for: linear and general purpose strips, troffers, vapor tight fixtures, low and high bay fixtures, cove lighting, stairwells and much more.
- SuperFlex technology allows for 9 skus in one product.
- Use a number of controls and sensors with FlexControl technology.
- Use our various accessories to mount the LBI in many different locations.

10 YEAR WARRANTY	120-277V* *240-347V FOR CANADA ONLY	146 LPW EFFICACY	<20% THD >0.9 PFR FACTOR	80+ CRI (UNLESS NOTED)	0-10V DIM TO OFF 12V AUX	OCC	120° BEAM ANGLE	EMG OPTIONAL EMG BATTERY BACKUP	-13°F TO 140°F OPERATING TEMP

DEFAULT CONFIGURATIONS

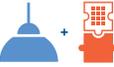
PART #	UPC	DESCRIPTION	LUMENS*	WATTAGE	COLOR
RP-LBI-G1-2F-6W-27K-WC2	844006024826	2FT PRO WARM CCT INTERNAL DRIVE LIGHT BAR	696-1524	FLEXWATT 6W/9W/12W	FLEXCOLOR 2700/3000K/3500K
RP-LBI-G1-2F-6W-40K-WC	844006023867	2FT PRO INTERNAL DRIVE LIGHT BAR	780-1560		FLEXCOLOR 3500/4000K/5000K
RP-LBI-G1-3F-10W-27K-WC2	844006024833	3FT PRO WARM CCT INTERNAL DRIVE LIGHT BAR	1270-1980	FLEXWATT 10W/12W/15W	FLEXCOLOR 2700/3000K/3500K
RP-LBI-G1-3F-10W-40K-WC	844006023959	3FT PRO INTERNAL DRIVE LIGHT BAR	1400-2100		FLEXCOLOR 3500/4000K/5000K
RP-LBI-G1-4F-15W-27K-WC2	844006024840	4FT PRO WARM CCT INTERNAL DRIVE LIGHT BAR	1260-3400	FLEXWATT 10W/15W/25W	FLEXCOLOR 2700/3000K/3500K
RP-LBI-G1-4F-15W-40K-WC	844006024079	4FT PRO INTERNAL DRIVE LIGHT BAR	1462-3653		FLEXCOLOR 3500/4000K/5000K

POPULAR ACCESSORIES

SOLD SEPERATELY

EMG BATTERY BACKUP	LINKING CABLES	SEAMLESS CONNECTOR	OC2 SENSOR KIT	SUSPENDED IN-LINE BRACKET KIT	INCOMING POWER KIT*





PART NUMBER BUILDER

MFR	PRODUCT	GENERATION	LENGTH	WATTAGE	COLOR	FUNCTION
RP	LBI	G1				
			2F	6W 9W 12W	27K = 2700K	WC2 = WATTAGE + COLOR SELECTABLE WARM COLOR TEMPERATURES
			3F	10W 12W 15W	30K = 3000K	WC = WATTAGE + COLOR SELECTABLE NORMAL COLOR TEMPERATURES
			4F	10W 15W 25W	35K = 3500K	
					40K = 4000K 50K = 5000K	

EXAMPLE PART NUMBER

RP-LBI-G1-2F-6W-40K-WC

CONTROL OPTIONS

RP-LBI-OC2-A/ RP-LBI-OC3-A	RP-LBI-BLE-A	RP-LBI-PIR-A	RP-LBI-BLE-PIR-A
LBI IN LINE MICROWAVE OCCUPANCY SENSOR IR11 REMOTE	LBI IN LINE SILVAIR BLUETOOTH NODE SILVAIR APP	LBI IN LINE PASSIVE INFERRED OCCUPANCY SENSOR IR11 REMOTE	LBI IN LINE SILVAIR BLUETOOTH NODE WITH PASSIVE INFERRED OCCUPANCY SENSOR SILVAIR APP

FLEXWATT LUMENS @ 3500K

SIZE	POSITION 1	POSITION 2	POSITION 3
2FT	6W (706LM)	9W (1063LM)	12W (1419LM)
3FT	10W (1335LM)	12W (1648LM)	15W (1961LM)
4FT	10W (1344LM)	15W (2255LM)	25W (3166LM)

FLEXCOLOR SWITCH POSITION

COLOR TEMPS	POSITION 1	POSITION 2	POSITION 3
WARM (WC2)	2700K	3000K	3500K
STANDARD (WC)	3500K	4000K	5000K



SELECTABLE LED WRAPAROUND



Product Features

These fixtures are designed to save energy and meet low light egress requirements. Also the fixture is optimal for stairways, bathrooms, and other lower traffic areas. They are designed with high efficacy LED engines to get the most energy savings compared to fluorescent fixtures.

Mounting

- V-Hook ready*
- Surface Mounting

Warranty

- 5-year warranty

Applications

- Offices
- Hallways
- Multipurpose Rooms
- Conference Rooms

Rated Life

- More than 100K hours per L70 TM-21 @ 70 °C

Ratings

- UL 1598 suitable for damp locations
- UL 8750 LED equipment in Lighting Products
- Temperature Rated at(-20°C to +50°C)(-4°F to 122°F)
- The 0-10V Dimming type is continuous
- The product can dim to 10%

Ordering Information

PLT-80057 -- 25/30/24W, Up to 4488 Lumens, 3500/4000/5000K, 4'

PLT-80058 -- 34/38/45W, Up to 5940 Lumens, 3500/4000/5000K, 4'

*Available via Special Order. Call 1-800-624-4888.

Dimensions:MM

Specifications

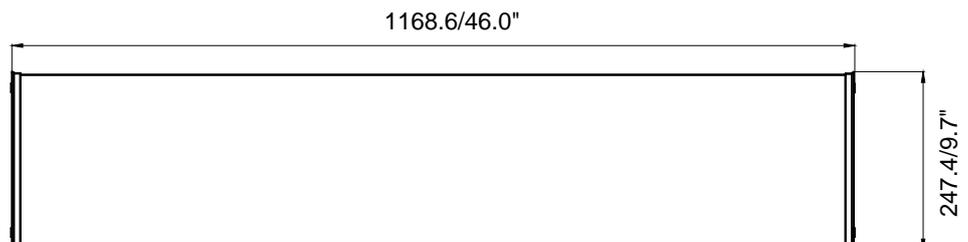
ETLWRAP04-4FT

Length:1168.6(46.0")

Width: 247.4(9.7")

Depth:86.7(3.4")

Weight:4.30 kg / 9.48 lbs



Photometric Test List

Catalog No.	Lumens Rated	Watts Rated	Efficacy Rated	Color Temperature
NPS-00260*	2860	22	130	835
	2882	22	131	840
	2904	22	132	850
NPS-00261*	3960	30	132	835
	4050	30	135	840
	4080	30	136	850
NPS-00262*	5200	40	130	835
	5240	40	131	840
	5280	40	132	850
NPS-00263*	5980	46	130	835
	6026	46	131	840
	6072	46	132	850

Catalog No.	Lumens Rated	Watts Rated	Efficacy Rated	Color Temperature
NPS-00264*	2860	22	130	835
	2882	22	131	840
	2904	22	132	850
NPS-00265*	3900	30	130	835
	3930	30	131	840
	3960	30	132	850
NPS-00266*	5200	40	130	835
	5240	40	131	840
	5280	40	132	850
NPS-00267*	5980	46	130	835
	6026	46	131	840
	6072	46	132	850

Catalog No.	Lumens Rated	Watts Rated	Efficacy Rated	Color Temperature
NPS-00268*	5980	46	130	835
	5240	40	131	
	3960	30	132	
	6118	46	133	840
	5360	40	134	
	4050	30	135	
	6256	46	136	850
	5480	40	137	
	4140	30	138	

Catalog No.	Lumens Rated	Watts Rated	Efficacy Rated	Color Temperature
NPS-00269*	5980	46	130	835
	5240	40	131	
	3960	30	132	
	6118	46	133	840
	5360	40	134	
	4050	30	135	
	6256	46	136	850
	5480	40	137	
	4140	30	138	

Catalog No.	Lumens Rated	Watts Rated	Efficacy Rated	CCT Range
PLT-80057	4420	34	130	3500K to 5000K
	4454	34	131	
	4488	34	132	
	3990	30	133	3500K to 5000K
	4020	30	134	
	4050	30	135	
	3400	25	136	3500K to 5000K
	3425	25	137	
3450	25	138		
NPS-00270*	5200	40	130	835-850
	5240	40	131	
	5280	40	132	
	4522	34	133	835-850
	4556	34	134	
	4590	34	135	
	3808	28	136	835-850
	3836	28	137	
3864	28	138		
PLT-80058	5850	45	130	835-850
	5895	45	131	
	5940	45	132	
	5054	38	133	835-850
	5092	38	134	
	5130	38	135	
	4624	34	136	835-850
	4658	34	137	
4692	34	138		

Catalog No.	Lumens Rated	Watts Rated	Efficacy Rated	CCT Range
NPS-00271*	4420	34	130	835-850
	4454	34	131	
	4488	34	132	
	3990	30	133	835-850
	4020	30	134	
	4050	30	135	
	3400	25	136	835-850
	3425	25	137	
3450	25	138		
NPS-00272*	5850	45	130	835-850
	5895	45	131	
	5940	45	132	
	5054	38	133	835-850
	5092	38	134	
	5130	38	135	
	4624	34	136	835-850
	4658	34	137	
4692	34	138		

*Available via Special Order. Call 1-800-624-4888.





Selectable LED Panel Fixtures



Top features

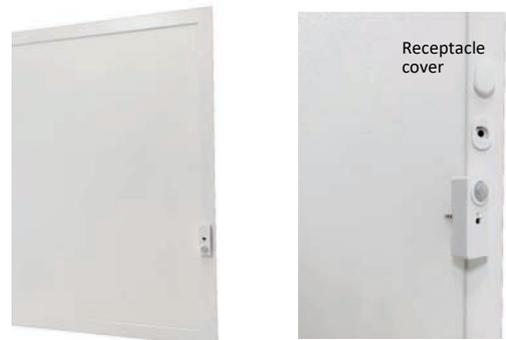
- 125 lm/W or 110 lm/W
- Power and/or CCT adjustable default
- Flicker free(≤ 10%)
- DC sensor and EM solution ready*

Multiple sensor solutions ready **

- Quick and easy in-field installation of sensors.**
- Integrated occupancy and daylight controls.**



There is a flexible cable with connector secured to the back of the bracket cover.



The sensor receptacle is pre-embedded in the profile frame.

**Optional accessories available via Special order. Please call 1-800-624-4488 for more information.*

***Fixtures with built-in sensors are available via Special Order. Please call 1-800-624-4488 for more information.*



Specifications and accessories

UL Listing:

Suitable for damp locations.
DLC 5.1 Standard
IC rated

LEDs:

Long-life, high-efficacy, micro-power LEDs
80 CRI, 120-277V

Lifespan:

Lumen Maintenance, L70 > 100,000 hours based on
IES LM-80 results and TM-21 calculations

Housing:

Steel sheet and extruded aluminum

Lens:

Frosted Polystyrene

Finish:

Long lasting white with high durability

Ambient Operating Temperature:

-20°C (-4°F) to 50°C (122°F)

Driver:

Driver includes dimming control wiring for 0-10V dimming systems. The dim-to-off voltage threshold of optional 12V AUX* integrated driver ranges from 0.1V to 0.5V.

IESNA LM-79 & IESNA LM-80 Testing:

LED luminaires have been tested based on IESNA LM-79 and LM-80 by a third-party laboratory

Mounting:

Recessed ceiling mounting ready(default)
Surface mounting with optional accessories*
Suspended installation with optional accessories*

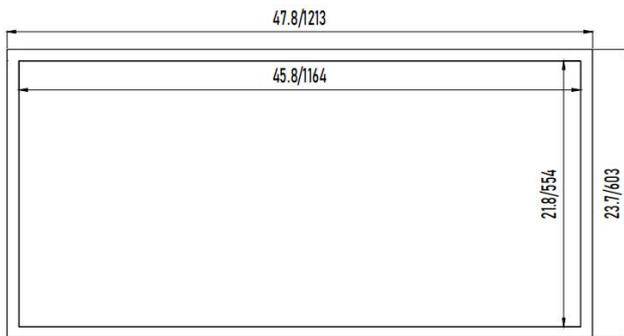
Optional accessories (purchased separately)*:

- Drywall mount kit
- Surface mount kit
- Cable suspending mounting kit

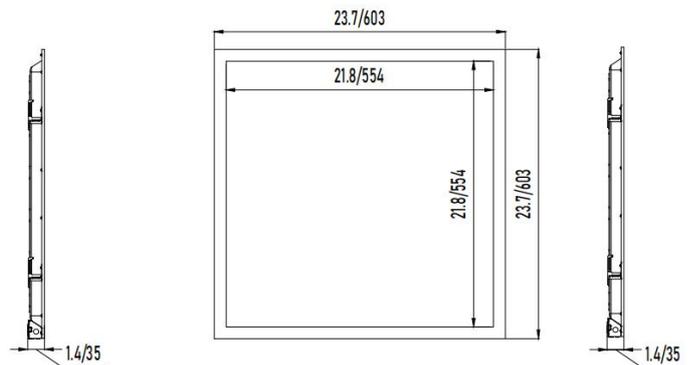
**Optional accessories available via Special order. Please call 1-800-624-4488 for more information.*

Dimensions

2x4

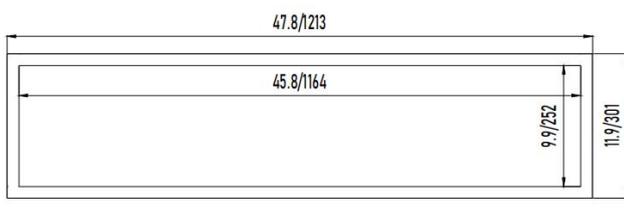


2x2



Size unit: inch/mm

1x4



Performance

Product Series	SKU No.	Size	Input Wattage**	Lumens Rated**	LPW**	CCT	DLC #	DLC Level
Field-adjustable Power and CCT	NPS-00235*	1x4	40/30/25	5000/3750/3125	125	Selectable, 3500&4000&5000K	N/A	N/A
	NPS-00236*	2x2	30/25/20	3750/3125/2500	125	Selectable, 3500&4000&5000K	N/A	N/A
	NPS-00237*	2x2	40/30/25	5000/3750/3125	125	Selectable, 3500&4000&5000K	N/A	N/A
	NPS-00238*	2x4	40/30/25	5000/3750/3125	125	Selectable, 3500&4000&5000K	N/A	N/A
	NPS-00239*	2x4	50/40/30	6250/5000/3750	125	Selectable, 3500&4000&5000K	N/A	N/A
	NPS-00240*	2x4	60/50/40	7500/6250/5000	125	Selectable, 3500&4000&5000K	N/A	N/A
Field-adjustable Power, fixed CCT	NPS-00241*	1x4	40/30/25	5000/3750/3125	125	Fixed, 3500/4000/5000K	N/A	N/A
	NPS-00242*	2x2	30/25/20	3750/3125/2500	125	Fixed, 3500/4000/5000K	N/A	N/A
	NPS-00243*	2x2	40/30/25	5000/3750/3125	125	Fixed, 3500/4000/5000K	N/A	N/A
	NPS-00244*	2x4	40/30/25	5000/3750/3125	125	Fixed, 3500/4000/5000K	N/A	N/A
	NPS-00245*	2x4	50/40/30	6250/5000/3750	125	Fixed, 3500/4000/5000K	N/A	N/A
	NPS-00246*	2x4	60/50/40	7500/6250/5000	125	Fixed, 3500/4000/5000K	N/A	N/A
Field-adjustable Power and CCT	PLT-80020	1x4	40/30/25	4480/3450/2950	110	Selectable, 3500&4000&5000K	PLTM5C1111	5.1 Standard
	PLT-80021	2x2	40/30/25	4480/3450/2950	110	Selectable, 3500&4000&5000K	PLTM5C2111	5.1 Standard
	PLT-80022	2x4	50/40/30	6200/5300/3990	110	Selectable, 3500&4000&5000K	PLTM5C3211	5.1 Standard
	NPS-00247*	24	60/50/40	6600/5500/4400	110	Selectable, 3500&4000&5000K	N/A	N/A
Field-adjustable Power, fixed CCT	NPS-00248*	14	40/30/25	4400/3300/2750	110	Fixed, 3500/4000/5000K	N/A	N/A
	PLT-80023	2x2	40/30/25	4400/3300/2750	110	Fixed, 4000K	PLTM5C2114	5.1 Standard
	PLT-80024	2x2	40/30/25	4400/3300/2750	110	Fixed, 5000K	PLTM5C2115	5.1 Standard
	PLT-80025	2x4	50/40/30	5500/4400/3300	110	Fixed, 3500K	PLTM5C3213	5.1 Standard
	PLT-80026	2x4	50/40/30	5500/4400/3300	110	Fixed, 4000K	PLTM5C3214	5.1 Standard
	PLT-80027	2x4	50/40/30	5500/4400/3300	110	Fixed, 5000K	PLTM5C3215	5.1 Standard
	NPS-00249*	24	60/50/40	6600/5500/4400	110	Fixed, 3500/4000/5000K	N/A	N/A

*Please call 1-800-624-4488 for more information and ordering.

**See Selectable Tables for full breakdown.

Selectable Tables

SKU	Wattage	CCT	Lumens	LPW
PLT-80020	40	3500K	4400	110
		4000K	4480	112
		5000K	4440	111
	30	3500K	3390	113
		4000K	3450	115
		5000K	3420	114
	25	3500K	2900	116
		4000K	2950	118
		5000K	2925	117
PLT-80021	40	3500K	4400	110
		4000K	4480	112
		5000K	4440	111
	30	3500K	3390	113
		4000K	3450	115
		5000K	3420	114
	25	3500K	2900	116
		4000K	2950	118
		5000K	2925	117
PLT-80022	50	3500K	5975	120
		4000K	6200	124
		5000K	6100	122
	40	3500K	5000	125
		4000K	5300	133
		5000K	5100	128
	30	3500K	3800	127
		4000K	3990	133
		5000K	3880	129

SKU	Wattage	CCT	Lumens	LPW
PLT-80023	40	4000K	4400	110
	30	4000K	3300	110
	25	4000K	2750	110
PLT-80024	40	5000K	4400	110
	30	5000K	3300	110
	25	5000K	2750	110
PLT-80025	50	3500K	5500	110
	40	3500K	4400	110
	30	3500K	3300	110
PLT-80026	50	4000K	5500	110
	40	4000K	4400	110
	30	4000K	3300	110
PLT-80027	50	5000K	5500	110
	40	5000K	4400	110
	30	5000K	3300	110



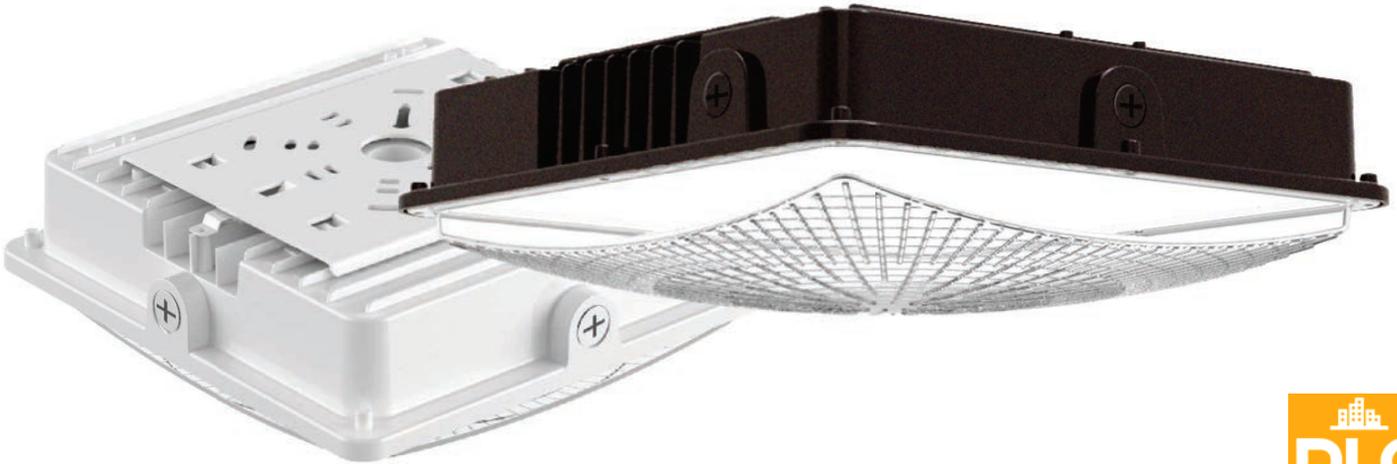
LED CANOPY FIXTURES

DESCRIPTION

35W-120W LED CANOPY LIGHT | 120–277VAC, 50-60HZ | 5000K | IP65

APPLICATION

Entryways, Exterior Canopies, Hallways & Stairways, Perimeter Lighting, Security



PRODUCT FEATURES

- Low-profile, stylish design with durable bronze powder coat finish
- Powered by 0–10V dimming LED drivers
- 2 way of installation: surface mount with J-box or pendant*
- Ambient operating temperature: $-40^{\circ}\text{C}/-40^{\circ}\text{F}$ to $50^{\circ}\text{C}/122^{\circ}\text{F}$
- UL listed for wet locations, IP65
- 4KV surge protection
- LED L70 Life Hours - $\geq 100,000$ hours
- Power Factor: >0.95
- THD: $<20\%$
- Meets FCC Part 15, Part B, Class A standards for conducted and radiated emissions
- DLC 5.1 Premium

**Additional accessories required. Call 1-800-624-4488 for more information.*



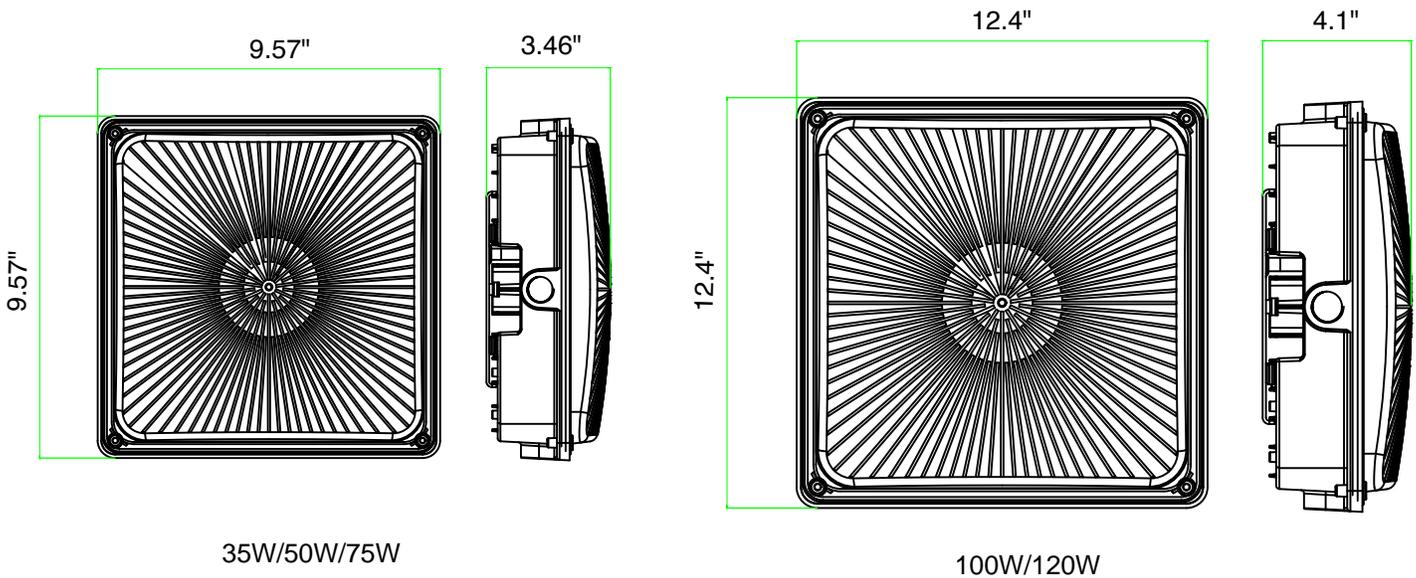
LED CANOPY FIXTURES

ELECTRICAL SPECIFICATIONS

Model #	Watt	Lumens	Dimming	CCT	LPW	CRI	Volt	Chips	SPD	Working Temp	IP Rating	Legacy Equivalent	DLC 5.1 Premium
PLT-13014	35W	4500 lm	0-10V	5000K	130 lm/w	>70	120-277VAC	Lumiled 2835	4KV	-40~50° C	IP65	150W MH	PLTBE15
PLT-13013	50W	6500 lm	0-10V	5000K	130 lm/w	>70	120-277VAC	Lumiled 2835	4KV	-40~50° C	IP65	175W MH	PLTBE25
PLT-13012	75W	9700 lm	0-10V	5000K	130 lm/w	>70	120-277VAC	Lumiled 2835	4KV	-40~50° C	IP65	250W MH	PLTBE35
PLT-13016	100W	13,000 lm	0-10V	5000K	130 lm/w	>70	120-277VAC	Lumiled 2835	4KV	-40~50° C	IP65	400W MH	PLTBE45
PLT-13015	120W	15,600 lm	0-10V	5000K	130 lm/w	>70	120-277VAC	Lumiled 2835	4KV	-40~50° C	IP65	400W MH	PLTBE55

**Optional finishes or integrated sensor available via Special Order. Call 1-800-624-4488.*

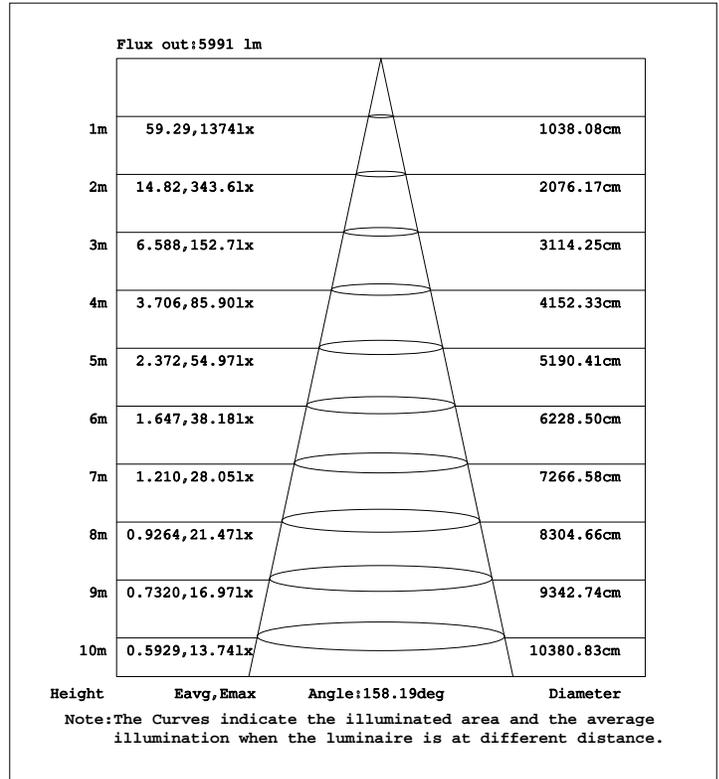
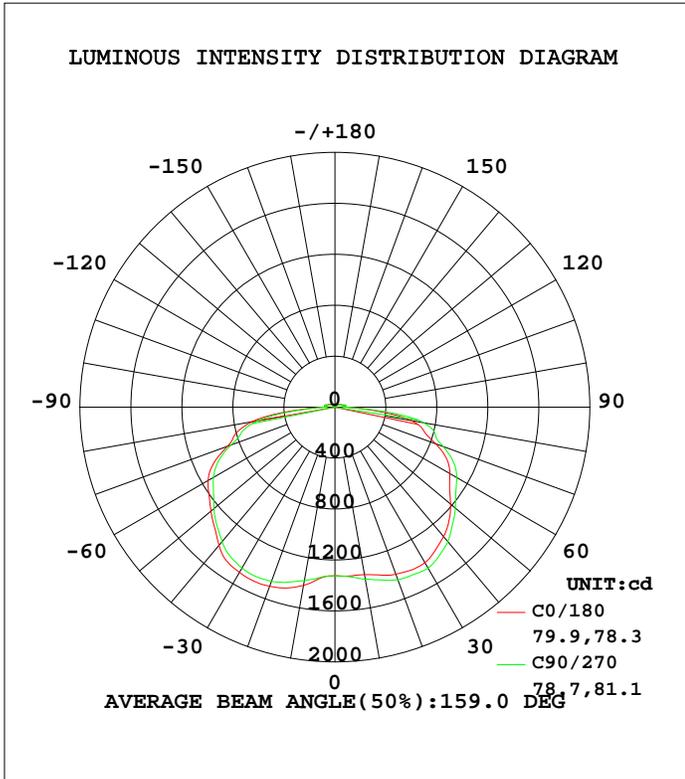
PRODUCT DIMENSIONS





LED CANOPY FIXTURES

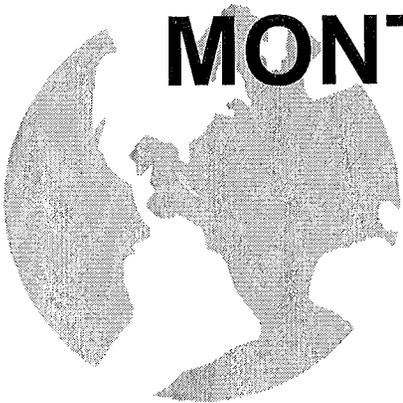
PHOTOMETRICS



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Ann Arbor Charter Township

**UTILITIES
DEPARTMENT
MONTHLY REPORT**



November, 2024

MAINTENANCE / PROJECTS

1. Water Samples to EGLE
2. Miss Dig Program
3. Sanitary Sewer Manhole Inspection
4. Working on Stop Box Cards
5. Weekly Generator Run Test
6. Locate and Fix Stop Boxes
7. Weekly Station Checks
8. GIS Updates
9. Clean up Leaves
10. Checked SCADA Alarms
11. Cleaned Stations
12. Cleaned Shop
13. Soil Erosion Inspections
14. Set up for Election
15. Finished Winterizing Fire Hydrants
16. Fixed Mower and Winterized for Season
17. Test Radiator Coolant Levels
18. Replaced Water Meters
19. Fixed Tailgate on F150 Truck
20. SCADA Station Calibrations
21. Changed out Radio Meter Remotes
22. Put Wheels on Dividers at Twp.
23. Detailed Twp. Trucks

MEETINGS – SEMINARS

1. **Toll Brothers Soil Erosion**
2. **Adam Class MWEA**
3. **Eric Water Resources**
- 4.
- 5.

PLAN REVIEWS

1. **Soil Erosion Plans**
2. **Barton Ridge**

TOPICS TO DISCUSS

1. **Soil Erosion Ordinance Second Reading**
- 2.

ANN ARBOR CHARTER TOWNSHIP
FIRE DEPARTMENT
NOVEMBER 2024 - TOWNSHIP BOARD REPORT





Fire Department Activity Report for November 2024

INCIDENTS:

- Structure Fire 1
- Vehicle Fire 2
- Smoke Scare 4
- Fire Alarm 7
- Haz-Mat/Gas Leak/CO 1
- Station Coverage 2
- EMS 51
- Motor Vehicle Accident 29
- Extrication -Technical Rescue 1
- Water/Ice Rescue 1
- Canceled before Arriving 6
- Good Intent 4

The department responded to a total of 109 incidents during the period.

During the month of November, the Ann Arbor Township Fire Department provided mutual aid twelve (12) times and received mutual aid assistance eight (6) times.

Mutual Aid Provided:

- Dispatched & Canceled En Route 2
- Cover Assignment, Station Move-Up 2
- EMS 2
- Motor Vehicle Accident 3
- Extrication -Technical Rescue 1
- Semi Fire 1
- Structure Fire 1

Mutual Aid Received:

- EMS 1
- Structure Fire Response 2
- Motor Vehicle Accident 2
- Water Rescue 1

PAID-ON-CALL (POC) STAFF ACTIVITY:

The department responded to 109 incidents during the month of November, and of those 109 incidents, paid-on-call staff responded to 68 incidents. This represents one or more paid-on-call firefighters responding to 62% of our dispatched incidents.

RECRUITMENT / RETENTION:

The department has received two new applications for paid-on-call firefighter / EMT positions. Staff have begun to process those applications.

TRAINING / EVENTS:

- ❖ On November 2, 9, 19, and 23, fire department trainees attended Phase II Orientation / Training. The training topics included:
 - ❖ Attack Hose Line Operations
 - ❖ Gear Donning
 - ❖ Self-Contained Breathing (SCBA) Operations
 - ❖ Rural Water Supply Systems
 - ❖ Vehicle Stabilization Methods
 - ❖ Rescue Company Familiarity
 - ❖ Engine Company Familiarity

On November 2, 4, 6, 9, 11, 13, 16, 18, 20, 25, 27, and 30, fire department trainees attended the Ann Arbor Township Fire Department's EMT-Basic Academy. The following topics were presented:

- ❖ Lifespan Development
- ❖ Lifting and Moving Patients
- ❖ Team Approach to Healthcare
- ❖ Patient Assessment
- ❖ Scene Size-up
- ❖ Human Trafficking
- ❖ Airway Maintenance / Techniques
- ❖ Oxygen Therapy
- ❖ Basic EMT Airway Devices
- ❖ Principles of Pharmacology / IV Maintenance

On November 14, 16, 20, 23, and 27, newly hired members of the department attended Phase I Orientation / Training. The training topics included:

- ❖ Blood Borne Pathogen
- ❖ Safety Data Sheets Familiarization
- ❖ Energy Systems Control Methods
- ❖ Traffic Control Vests
- ❖ Eye Protection Use
- ❖ Hearing Protection Use
- ❖ Personnel Protective Equipment (PPE)
- ❖ Fitness Orientation
- ❖ Fire Department Communications and Radio Operations.
- ❖ Self-Contained Breathing Apparatus (SCBA)
- ❖ Department Phone Systems
- ❖ Incident Accountability System
- ❖ Map Books

- ❖ Mobile Data Computer/Tablet Operations
- ❖ Traffic Management
- ❖ Utility Emergencies

Respectfully Submitted,

Mark A. Nicholai

Fire Chief

BUILDING REPORT

November 2024

Permit Record Type Totals	Records	Revenue	Records	Revenue
Building	12	7,085	188	213,391
Electrical	13	5,932	157	35,612
Mechanical	12	1,628	153	36,226
Plumbing	3	804	51	9,408
ZONING-LAND USE	1	150	11	600
Fence Permit	-	-	9	480
Sign Permit	-	-	3	320
Special Event	-	-	14	1,150
Total	41	15,599	566	297,186

Building	Ann Arbor Township	Barton Hills
Ann Arbor Township	10	2
Barton Hills	6,605	480
	153	15
	194,216	19,175

Electrical	Ann Arbor Township	Barton Hills
Ann Arbor Township	11	2
Barton Hills	5,727	205
	142	15
	32,488	3,124

Mechanical	Ann Arbor Township	Barton Hills
Ann Arbor Township	9	3
Barton Hills	1,371	257
	131	22
	32,790	3,436

Plumbing	Ann Arbor Township	Barton Hills
Ann Arbor Township	3	-
Barton Hills	564	240
	47	4
	8,338	1,070

ZONING-LAND USE	Ann Arbor Township	Barton Hills
Ann Arbor Township	1	-
Barton Hills	150	-
	9	2
	600	-

Fence Permit	Ann Arbor Township	Barton Hills
Ann Arbor Township	-	-
Barton Hills	-	-
	8	1
	420	60

Sign Permit	Ann Arbor Township	Barton Hills
Ann Arbor Township	-	-
Barton Hills	-	-
	3	-
	320	-

Special Event	Ann Arbor Township	Barton Hills
Ann Arbor Township	-	-
Barton Hills	-	-
	14	-
	1,150	-

Total	41	15,599	566	297,186
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