



TRAVERSE AREA
DISTRICT
LIBRARY

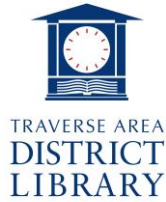
PUBLIC NOTICE

**The
May 18, 2023
TADL Board of Trustees Regular Meeting**
originally scheduled at the
Interlochen Public Library

**has been RE-LOCATED to the
McGuire Community Room
Traverse Area District Library
610 Woodmere Ave
Traverse City, Michigan**

Posted: 5-12-2023

The Traverse Area District Library will provide necessary reasonable auxiliary aids and services to individuals with disabilities at the meeting upon at least 3 days' notice to the Library. Individuals with disabilities requiring auxiliary aids or services should contact the Library Administrative Office by emailing publiccomment@tadl.org or calling 231-932-8500.



AGENDA

Board of Trustees Regular Meeting
Thursday, May 18, 2023 at 3:00pm
McGuire Community Room
610 Woodmere Ave., Traverse City, MI 49686

1. **Call to Order**
2. **Pledge of Allegiance**
3. **Re-appointment of Trustee Vickery Oath of Office | Policy**
4. **Approval of Agenda**
5. **Public Comment***

6. **Presentation: TADL Millage ~ Shirley Bruursema, Millage Queen**

7. **Consent Agenda**
 - a. Approval of Minutes – Regular Meeting of April 20, 2023
 - b. Department Reports
 - c. Finance and Facilities Committee Report – May 2, 2023
 - d. Policy and Personnel Committee Report – no May meeting
 - e. Financial Report – Narrative | Expenses | Revenues
 - f. Member Library Communications – FLPL | IPL | PCL
 - g. Friends of TADL Report – Donna Hornberger, President
 - h. Correspondence
8. **Items Removed from the Consent Calendar**

9. **Director Report**

10. **New Business**
 - a. Smart Building Software Approval
 - b. October Board Meeting – Date Change Discussion

11. **Public Comment***
12. **Trustee Comment**
13. **Closed Session (if needed)**
14. **Adjournment**

* If you wish to speak during the Public Comment section of the meeting, please (1) wait until you are recognized; (2) approach the podium and use the microphone; (3) state your name and the county and township or city in which you reside; and (4) limit your comments to 3 minutes. Please sign in at the podium.

1.3 Oath of Office for Trustees Policy

The Traverse Area District Library Board of Trustees requires each new or re-appointed trustee to be sworn in by repeating or affirming the Oath of Office at the beginning of each new term on the Library Board.

Oath of Office

"I do solemnly affirm that I will support the constitution of the United States, and the constitution of the State of Michigan, and that I will faithfully discharge the duties of Member of the Board of Trustees of Traverse Area District Library, according to the best of my ability."

Process

The Oath of Office will be administered at the beginning of the first regular board meeting at which the Trustee begins a new term. The Board Secretary, Board President, or Administrative Assistant shall administer the Oath of Office. After being sworn in, the Trustee will sign the Oath of Office which will then become part of the TADL Board permanent records.

New on January 20, 2011 / Revised October 21, 2021

Motion by: Pakieser

Adopted: Yes No

Support by: Wescott

Marydee Pakieser
M. Pakieser, Board Secretary

10/21/21
Date

Bruursema recognized for library achievements

Updated: Nov. 15, 2016, 7:10 p.m.]
Published: Nov. 15, 2016, 6:10 p.m.



Shirley Bruursema was recently recognized for her work promoting libraries across Michigan.

By [Advance Newspapers](#)

Shirley Bruursema, a member of the Kent District Library Board of Trustees for more than 20 years, was recently recognized by a coalition of libraries and organizations for her efforts in championing libraries across Michigan.

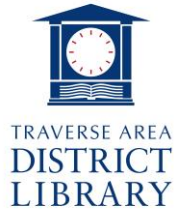
"You have worked to open new libraries while also keeping and expanding existing libraries," said Gov. Rick Snyder in a letter to Bruursema. "Your service and dedication to the libraries, communities and people of Michigan is greatly appreciated."

Bruursema was praised for her enthusiasm for public libraries, her dedication in educating and coaching library staff, and the goodwill she has spread through the library community. She

accepted her award during the Michigan Library Association 2016 Annual Conference in Lansing.

Bruursema has been a Lakeland Library Cooperative Board Member for more than 30 years. She has been dubbed the "Millage Queen" for coaching libraries through millage campaigns and helping pass 80 successful library millage elections since 2000. She planned and presented numerous workshops for the education and training of library trustees and supported the Michigan Library Association with countless hours of legislative advocacy efforts.

Bruursema is also known in the area for her devotion to local history through her work with the Gaines Township Historical Society.



Board of Trustees Regular Meeting MINUTES

Thursday, April 20, 2023 at 3:00pm
McGuire Community Room
610 Woodmere Ave., Traverse City, MI 49686

1. **Call to Order**

With a quorum of trustees in attendance, the meeting was called to order by Vice President Pakieser at 3:05pm. Present were: Pakieser (Vice President); Sullivan (Treasurer, left at 5:00); Vickery and Deyo (Trustees). Odgers (President, arrived at 3:07); Wescott (Secretary, arrived at 3:09); and Jones (Trustee, arrived at 3:36). Also present were: Howard (Director); Morey, Baldwin, and Carpenter (Staff).

2. **Pledge of Allegiance**

All members in attendance recited the Pledge of Allegiance to the Flag of the United States of America.

3. **Approval of the Agenda**

It was MOVED by Sullivan, SUPPORTED by Deyo, to approve the agenda as presented. Motion CARRIED.

Vice President Pakieser turned the meeting over to President Odgers upon her arrival.

4. **Public Comment**

President Odgers opened the floor for public comment. There was none.

5. **Consent Agenda**

- a. *Approval of Minutes - Regular Meeting of February 16, 2023*
- Study Session Retreat of March 7, 2023
- b. *Department Reports*
- c. *Finance and Facilities Committee Report – No March Meeting / April 4, 2023*
- d. *Policy and Personnel Committee Report – No March Meeting / April 4, 2023*
 1. Revision: 3.1 Borrowing and Library Account Policy
- e. *Financial Report – Narrative | Expenses | Revenues*
- f. *Member Library Communications – FLPL | IPL | PCL*
- g. *Friends of TADL Report – Donna Hornberger, President*
- h. *Correspondence*

President Odgers made a request to remove item c from the consent agenda in order to hear more information about the roof update reported in the Finance and Facilities minutes.

It was MOVED by Vickery, SUPPORTED by Pakieser, to accept and affirm receipt of the consent calendar information, with the removal of item c, April 4, 2023 Finance and Facilities Committee Report, to expand on the roof update. Motion CARRIED.

6. **Items Removed from the Consent Calendar**

Deyo provided a detailed synopsis of the roof update. Trustees asked questions ranging from the start of the icing issues to studies and status of the various treatments of the issue to date. There

was concern as to the length of time it is taking for a definitive answer as to how to move forward on the roof and the cost of the project. Howard emphasized that the important thing to date is that what has been done so far has eliminated the need for a cold roof and that the building is not sustaining anymore damage. That money has been well spent. Due to mild winters there has not been enough evidence yet to comfortably determine the next phase. In addition, prices for materials were extremely high during COVID and have since come down, which worked in TADL's favor. Keen Technical Solutions is auditing the process so far and will provide the board with several options and a recommendation on the repair, hopefully in the Fall.

It was MOVED by Vickery, SUPPORTED by Wescott to accept and affirm the receipt of the April 4, 2023 Finance and Facilities minutes as discussed. Motion CARRIED.

7. Director Report

Howard provided the following comments:

- Congratulations to Teen Services staff members, Linda Smith and Colleen Hatch, recipients of a Friend of Education Award from Delta Kappa Gamma Society for their work with the Teen Leadership group.
- One protestor was present during a program for LBGTQ+ families. The protestor was respectful and followed TADL policy.
- There has been a huge decrease in incidents over last year. March 2022 was the worst month ever with 44 incidents. This year there were 12, with only 8 requiring assistance of the police or suspension. Howard thanked the board for their support in hiring security guards. Deyo suggested writing an editorial sharing the statistics and expressing appreciation for the community efforts to find solutions to support the homeless population which resulted in reducing behavioral problems. Vickery added making an emphasis that it was the cooperation across community organizations that helped reduce the problems. President Odgers asked Howard to submit an editorial.
- Howard has been invited to the Friends of the Library annual meeting to talk about her favorite book and how it influenced her life.
- Howard thanked Baldwin, TADL's new Finance and Human Resources Manager, for a fantastic job on her first TADL audit. Results from the auditors will be brought the Finance and Facilities Committee in June.

Howard answered a few questions from the trustees, in particular regarding Howard's and the board's readiness for book challenges. Howard provided several articles in her written report and affirmed that she felt prepared and that it could be helpful for the board to do some additional training and practice drills if they desired. President Odgers suggested doing something sooner rather than wait until the 2024 retreat. It was MOVED by Wescott, SUPPORTED by Pakieser, to hold a future Study Session in order to provide a training opportunity and discussion. Motion CARRIED.

8. Old Business

a. *Community Foundation*

It was agreed to wait for an investment advisory report from Rehmann Group regarding TADL's investment strategies before committing funds to Grand Traverse Community Foundation or any other investment source.

b. *Board Retreat Survey and Next Steps*

Trustees shared their thoughts on their retreat experience and suggestions were made for future retreats. It was agreed that the focus should be on just one or two big picture items in order to have deeper discussion within the timeframe of the retreat and to build this as an on-going approach into the structure of the board.

c. *Library Annual Review 2022 and TADL Community Survey*

The board was provided a summary review of 2022 library activity. Howard noted that although there were less users in the building they were using the materials and services more intensely. Overall visits were down but circulation was up.

Per the Strategic Plan, TADL offered a public survey to find out what things people know the library does, how they find out about what the library has to offer, and what they come to the library for. Most of the 164 responses came through the newsletter survey link. Half of the respondents were under age 60 and half were over age 60. Overall TADL is viewed as a refuge, or a landing place for people and they mostly receive information through the newsletter or website. Vickery noted that comparative data would be helpful and suggested another similar survey in the summer with a different population of respondents. A second survey was already planned for 2024.

d. *Strategic Plan Update*

Howard provided a list of identified strategic plan accomplishments in 2022. Although a few planned items were unfinished, those have been carried over for completion in 2023. Howard is proud of all that has been accomplished and believes that the strategic plan is important to indicating how busy the library is and keeping workflow focused on a common goal. The focus of 2023 is innovative engagement which can be leveraged for the upcoming millage and demonstrate how deeply ingrained the library is in the community.

e. *Director Review*

Pakieser noted that the Policy and Personnel Committee went over the results of the director evaluation survey and discussed Howard's contract with Zeits (Counsel). It was helpful to use the new review process because it gave the board a better appreciation for what the Director does from the staff vantage point rather than relying on just their own personal experience. Vickery explained the effort made to change the review structure and process and the benefits of using it going forward. He confirmed that Howard has done a spectacular job this year and is integral to the many library achievements to celebrate. Pakieser noted that the new process has delayed Howard's raise for 2023 and will be addressed in the proposed new contract.

Howard thanked the board for the review survey feedback and thoughtful comments. She feels good about the goals provided by the board, in particular the strategic plan and millage request and emphasized that It's an honor to be in charge, but she couldn't do it without everyone working together.

f. *Director Contract*

Zeits (Counsel) reviewed the amendments of Howard's contract with the Board consistent with those recommended by the Policy and Personnel Committee at its April meeting. Zeits worked with Janice Adams, TADL's labor relations counsel, on Howard's contract amendments. The amendments include: any salary increase the Board may approve for the Director following the Director's annual review would be effective as of January 1 of each year; a non-discretionary bonus for 2023; inclusion of an Enhanced Severance Event Severance provision; and term amended from year to year to three (3) years and year to year thereafter.

The board had a lengthy discussion to fully understand all of the amendments, including situations that would trigger the Enhanced Severance Event Severance provision. It was MOVED by Pakieser, SUPPORTED by Wescott, to approve the amendments to the director employment

contract, subject to approval as to form by Zeits (Counsel), as discussed and presented. A roll call vote was taken with the following results:

Wescott – aye	Jones – aye	Vickery – aye	
Deyo – nay	Pakieser – aye	Odgers – aye	Sullivan – absent

Motion CARRIED with 5 aye, 1 nay.

It was MOVED by Pakieser, SUPPORTED by Wescott, to approve a 5% increase in Howard’s salary for 2023. A roll call vote was taken with the following results:

Wescott – aye	Jones – aye	Vickery – aye	
Deyo – aye	Pakieser – aye	Odgers – aye	Sullivan – absent

Motion CARRIED with 6 aye.

9. **New Business**

a. *Evergreen Management Company*

Morey, Assistant Director for Technology, explained that due to staffing challenges in IT, the best solution to solve the issue would be to pay for ILS hosting. Three major benefits include: increased sustainability of current technology and staff demand for ongoing service projects and commitments like the local history collection and library cards for schools; reduce issues with service outages to the district if there were a prolonged power outage at the main library; and it minimizes the risk of knowledge and service gaps through natural attrition of staff whose primary responsibility is ILS management.

ILS management is a very niche market. Morey has compared the two companies who could provide TADL with satisfactory ILS hosting, and determined Equinox is the top choice for reasons of cost and past service relationship. The hosting cost of \$24,750 is just under Howard’s expenditure authority, however Morey was asking the board to waive the RFP requirement due to the limited pool of vendors who can provide this service, and to agree to secure Equinox services based on the reasons discussed. It was MOVED by Deyo, SUPPORTED by Wescott to waive the bidding/RFP requirement for an ILS hosting proposal as discussed and proceed with Equinox. Motion CARRIED.

b. *TADL Millage*

Howard provided a memo to the board with notes and considerations regarding the upcoming millage and recommended putting the millage on the ballot in February 2024 to maximize the window for successful passage. The request could be brought to the Finance and Facilities Committee and then to the board for discussion at the May meeting. Vickery, among other trustees, were in favor of a millage study session in May.

10. **Public Comment**

President Odgers opened the floor for public comment. There was none.

11. **Trustee Comment**

Deyo encouraged everyone to go to the Unite Against Book Bans website to learn more about book banning during National Library Week.

Odgers inquired about a possible youth board member as discussed at the retreat and about the vacant board seat. Howard informed the board that she is investigating a youth member with Smith, Teen Services Department Head and that Vickery had just been re-appointed to the board. He will take his oath of office at the next meeting.

Howard again thanked the board for the review process and the salary increase.

12. **Closed Session (if needed)**

A closed session was not needed.

13. **Adjournment**

With a motion to adjourn by Wescott, supported by Vickery, President Odgers adjourned the meeting at 5:47pm.

Respectfully submitted,

Approved by board vote on May 18, 2023

V. Carpenter, Recording Secretary

P. Deyo, Board Secretary

DRAFT



Departmental Reports
for the month of April
(May 18, 2023 Board Meeting)

Adult Services

- The 25th annual Poets' Night Out event happened on Sunday, April 23rd. Almost 100 people enjoyed the live poetry reading event and the selected poets were thrilled to be able to share their writing with the crowd. And for all those who won prizes, the night was even better! Many thanks for continued support go to our PNO Prize donors - Horizon Books, Tina Tank, Jody Clark, Paul Stebelton/Landmark Books, and the Sonneman Family - as well as to all those who volunteer and help us with the event. We're already looking forward to next year!
- Tax Season 2023 is over! TADL provided boxes and boxes of forms and instruction booklets for both state and federal taxes and when they ran out, printed out over 400 more forms for patrons.
- A book group based in Manistee was having their 40th anniversary and chose to have that meeting here at the Woodmere Library on April 19th. They asked for a tour of the library, so Melissa showed them around our lovely facility. They were so impressed with everything that TADL has to offer.
- Partnership Highlights (*Purposeful Partnerships*):
 - A Nurse from Munson Medical Center presented 2 programs on [Advanced Care Planning](#) this month to a total of 11 people in person, and 3 online, plus 35 views of the video so far.
 - Melissa presented in a SCORE workshop about the business databases available through TADL on April 20th.
 - Melissa represented the library at an event with local author and artist Lois Beardslee at The Dennon Museum on April 13th.
 - Melissa & Librarian Katheyrrn Carrier presented on [Genealogy and Local History Resources at TADL](#) at the monthly Grand Traverse Area Genealogical Society meeting on April 27th. There were about a dozen people in attendance, 5 on Zoom, and 13 views of the video so far.
 - 20 people joined us for Coffee with a Cop on Saturday, April 8th. Many thanks to Cuppa Joe for providing the coffee and to Jennifer Campbell, MSW with TCPD, and the two TCPD officers for providing the company and conversation.
 - We partnered with Linda Solem from Up North Prevention to host an information session about Human Trafficking presented by members of the Michigan State Police on April 25th.
 - Grand Traverse Audubon Club hosted a bird walk at the Commons for 15 TADL patrons willing to get up at 7:30am on Sunday, April 23rd.
- In April, the following programs were held (in addition to those listed above):

- 60 people learned about Gardening Basics on April 2nd.
- We were grateful to be joined by two authors for programs this month - [Shelley Shepard Gray](#), NYT bestselling [author of more than 100 books](#), on April 20th and [Jacob Wheeler](#), who talked about his book [Angel of the Garbage Dump](#), on April 26th.
- Tai Chi met twice with 7 total attendees.
- Books & Brewskis met at Silver Spruce Brewery this month on April 24. A probably-record-breaking 23 people attended to discuss [Magic Lessons](#) by Alice Hoffman. (*Innovative Engagement*)
- Queer Tales met in person this month and had 3 attendees discuss [Other Names for Love](#) by Taymour Soomro. (*Inclusive Space*)
- TADL Stitchers met four times in-person with a total attendance of 17.
- April Adult Services Statistics:
 - Questions Answered In-Person - 1550
 - Questions answered via Phone - 565
 - Questions Answered via Email/Chat - 102
 - Notary Signatures - 20
 - Proctored Exams - 2
 - Craft Kits Distributed - 51 (Needle Felting Animals)
 - Volunteer Hours - 10.5

Local History Collection

- Robin created a spring/gardening themed display of LHC items for the case on the 2nd floor.
- Robin and Melissa created a [Preservation Week post](#) that will remain on the Local History website permanently. It contains lots of good information to help people know how to handle their precious items at home.
- Robin and Melissa continue to help plan for the upcoming TADL-Woodmere 25th anniversary display. There is quite a bit of materials in the LHC about the millage, and construction of the Woodmere Library. We look forward to sharing it with the community soon!
- Mary Morgan, the local history librarian at Peninsula Community Library visited the library and got a brief tour of the LHC space.
- We worked with the Friendly Garden Club to help them try to identify women in a photo from the 40s.
- Reference staff answered at least 16 local history questions over the course of the month. (This was the first month we began tracking these queries separately, so I'm sure we missed a few. We'll be more accurate as time goes on.)



Respectfully Submitted,
 Melissa McKenna
 Head of Adult Services

Youth Services

Youth Services moved back into some semblance of normality after March which included TCAPS 1st grade visits and Spring Break Week. April was a month full of regular storytimes and afterschool programs, but included our annual, signature MakerFest program at the end of month at the Grand Traverse Civic Center.

- Early Literacy programs: 19
 - Down 9.5% from 21 in 2022
- Early Literacy program attendance: 259
 - Down 15.1% in 2022
- Program attendance: 1,068
 - Down 0% from 1,069 in 2022
- Program counts: 19
- Reference questions: 827
 - down 43% from 2022 (due in part to the abundance of 1st graders' questions during their visits)
- Reference - phone questions: 85
- Reference - digital questions: 4





TADL's MakerFest was another huge success for the library and our community this year. Twenty-five different educational organizations, businesses, departments, and branches participated in this year's festivities at the Civic Center grounds, including spaces in the Amphitheatre, Pavilion, and children's play area (nearest the pavilion). There was a wide variety of activities for families both young and old.

- Continuing organizational partnerships: 4-H/MSU Extension, Challenge Island NW MI, Cherryland Ghostbusters, The Dennon Museum, Grand Traverse Conservation District, The Great Lakes Children's Museum, Inland Seas Education Association, MiSTEM Network, Newton's Road, TADL - Teen Services, TADL - Youth Services (3 stations), and the Traverse City Preschool Cooperative.
- New organizational partnerships: Art and Connection (Elk Rapids), Cherryland Amateur Radio, Discovery Center & Pier, TADL - East Bay, Young Eagles (Traverse City Airport)
- Food donated by Oryana Community Co-op (for exhibitors): Plenty of delicious sandwiches, chips, cookies and seltzer
- Food Truck: The Good Bowl's Good on Wheels
- Total TADL Staff: 7
- Total TADL Volunteers: 22
- Total attendees: approximately 500

This event does not happen each year without the help of friends and organizations in the [STEAM/Maker Alliance](#), including our friends at Newton's Road. We were saddened by the recent news that Newton's Road is moving to an all-volunteer employment, as TADL staff have developed strong relationships with employees there. We wish them the best as they hopefully continue their work in STEM education.

Andy Schuck
Head of Youth Services

Circulation

April was an amazing month for circulation! We welcomed 1,731 new patrons to the library; a lot of that was due to the wonderful work that our Technology team did with new cards for students at TCAPS. These cards have been really magical for the students, and we have noticed that parents will often come in with the students to get cards for the rest of the family!

In merchandise news, we have sold all of the upcycled library totes. Patrons really loved the care that went into the creation of these bags. Thanks very much to Heather Brady for making these possible. We are also very excited about some of the new items we have received for sale - more on those in the next board report!

Kate Parvel continues to provide excellent service as a notary, with 12 requests filled this month.

I'm excited by the continued increase in our MeLCat requests, and I hope to see this trend continue throughout the year.

I have had such a wonderful time in the Introduction to Tai Chi program here at Woodmere that I jumped at the opportunity to have this program at our East Bay branch. Matt, Chantel, Jody, and all the East Bay patrons who attended were amazing!

April Circulation Numbers

New patron accounts created: 1731 (vs 195 last year)

Curbside pickups for April 2023: 17

Notary Public Service requests filled: 12

Circulation Statistics for MeLCat, April 2023:

- TADL items sent to borrowing institutions: 1310 (vs 1278 last year)
- TADL items received from lending institutions: 1929 (vs 1666 last year)

Respectfully Submitted,
Josh Denby

Marketing and Communications

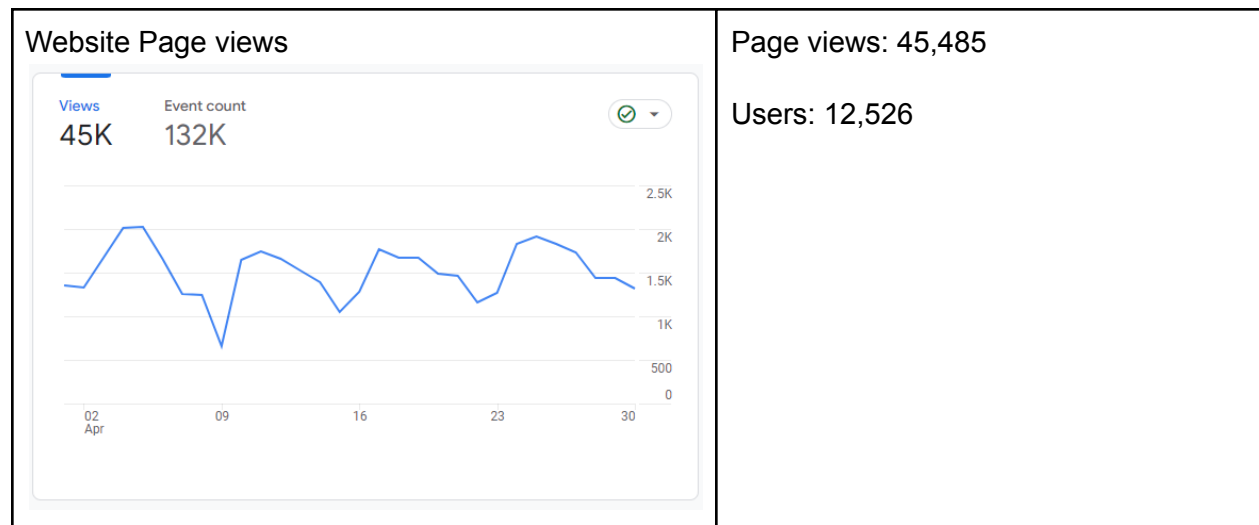
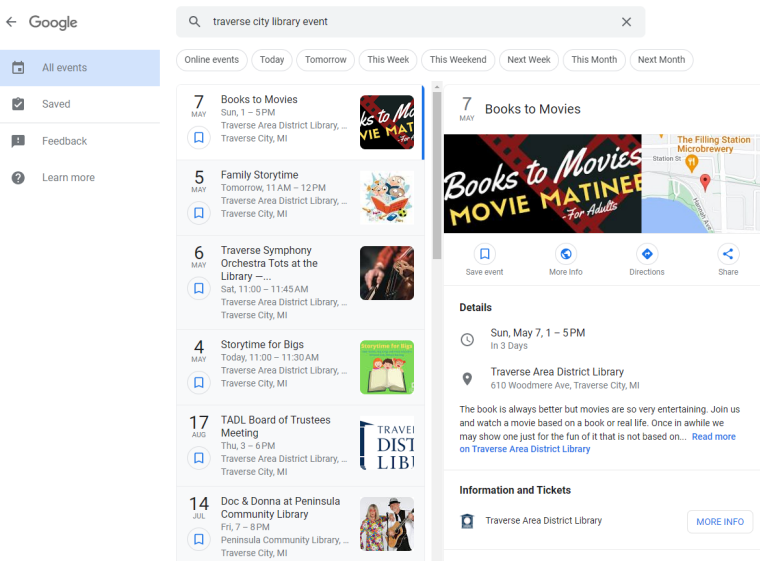
Summer might seem a long way off but we're putting the finishing touches on our groovy plans for the 2023 Summer Library Challenge! I'm looking forward to seeing the response to this year's theme, and all the collaborative aspects - not to mention it touches on all our Strategic Plan elements (**Inclusive Space, Innovative Engagement, Targeted Outreach, Purposeful Partnerships**). The swirls in the summer logo are colored to match the books on the side of the



bookmobile.

This portion of the year is the busiest part of the marketing calendar, with Poets' Night Out, MakerFest, and summer prep all packed in. As of the last day of April we have all the major summer materials in hand and ready for the school visits that will happen in May. In addition, the library card mailing to TCAPS students who have joined the district since our last mailing in June, 2021 arrived in homes. (**Targeted Outreach, Purposeful Partnerships**)

A few interesting items to mention: the calendar on the new website is very popular, the month calendar and upcoming events are both top 10 pages. Additionally, the new website worked more smoothly with Google - now more of our events show up on Google than ever before. (**Targeted Outreach**) I've also continued making short videos to help explain library services - on tadl.org/videos and our YouTube channel. (**Inclusive Space, Innovative Engagement**)



Heather Brady
Marketing & Communications Manager

Human Resources

The following is a summary of employment changes for the month of April '23.

New Employees for April:

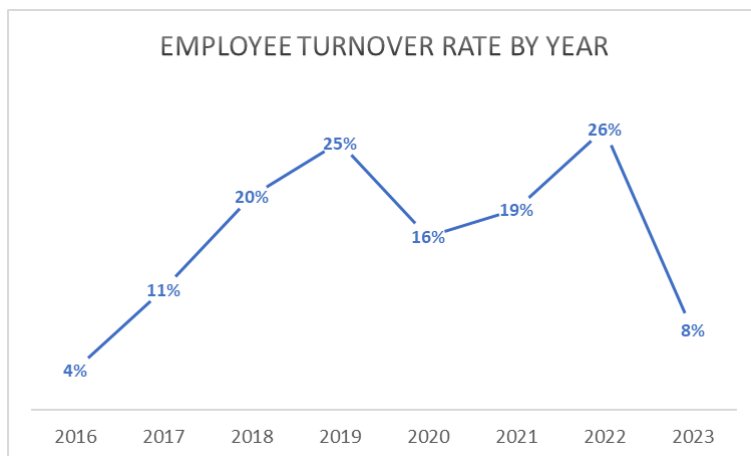


Welcome to
the Team!

Employee Departures for April:

Marilyn Metiva, Page, Youth Services (Retirement)

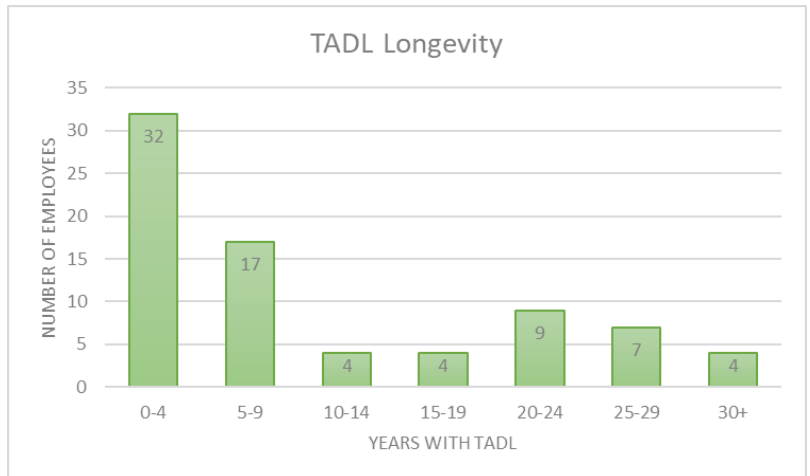
In an effort to report on more HR data, I present to you the following graphs using available data from our HRIS software.



At TADL, we always have our fair share of employees who leave our employment, whether to enjoy retirement, continue their education, or for other reasons. In 2021, companies in the U.S. had a staggering average turnover rate of 47.2% - as well known through media reports calling it the “Great Resignation.” TADL experienced an uptick in employee separations in 2021 and 2022 as well, with turnover rates at 19% and 26% respectively. Between 10 and 20% of our employee

separations were retirements during these two years. As of 4/30/23, we have had 6 separations in 2023 of which 3 have been retirements.

Segueing from retirements, this graph represents our workforce and the length of time employees have been employed by TADL. Employees with a tenure of 20 or more years represent 25% of our workforce. These employees are instrumental in TADL's success. Every day, they bring important institutional knowledge to assist patrons and other staff.



Happy Spring!
Danielle Baldwin
Finance and Human Resources Manager

Facilities

- New electric drop for 3D printer outside Tech Center installed
- All exterior window cleaning completed
- "Banned Books" posters hung in staff hallway
- Continued research for exterior drinking fountain
- Obtained additional quotes for Building Control upgrade
- Repaired exterior Bicycle Repair Station pump
- Installed shelving for Ref Health Kits
- Installed new Youth Services bathroom "indicator" handle
- Obtained quotes for upgraded East Bay electrical wiring
- Researched tree condition for ongoing Lawn Project
- Leak in Sight & Sound floorboard heating repaired
- Book Bike tuned up, researched e-bike upgrade
- Reviewed East Bay lease
- Replaced worn U.S. and TADL Flags on flagpole
- Building review with Insurance Adjuster

Respectfully Submitted,
Bret R Boulter, Facilities Manager

TADL Talking Book Library

The National Library Service will now have Braille eReaders for patrons. I have attended two training sessions and will have one more in May.

The Visually Impaired Person Support group held a training session on the phone app Seein AI. We had 5 people attend.

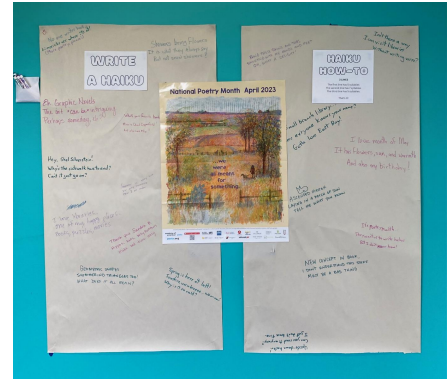
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This month, the Tuesday @ Two book group read “Mrs. Lincoln’s Dressmaker” by Jennifer Chiaverini.

Anita Chouinard
Talking Book Library Manager

East Bay Branch Library

- April is National Poetry Month, and Chantel challenged patrons to write a haiku in our entryway. We ended with quite a few creative poems on our wall.
- Many thanks to Josh Denby from the Circulation department for hosting a session of Tai Chi with our patrons here at East Bay. Josh was very well received, and all the attendees enjoyed themselves and said we should do this again.
- In an effort to provide programming for some of our younger school-aged patrons, we hosted a Tween Time event, with many different activities for pre-teens. We plan to host more of these.
- To celebrate Earth Day, we had patrons decorate terra cotta pots and plant seeds (from our seed library!) in them. This was a very successful program, and we had some very happy patrons!
- Matt and Chantel had a great time encouraging young gardeners and botanists at the TADL Makerfest.
- Matt had the opportunity to encourage local 4th and 5th grade readers as a judge in the National Writers Series’ Battle of the Books.



Respectfully submitted,
Matt Archibald
East Bay Branch Manager

Kingsley Branch Library

I typically use this space to talk about past events, but I would rather call the Board’s attention to the upcoming excitement at Kingsley Branch Library! We hope to see all of you at the Kingsley Adams Fly Fest, our largest annual program hosted by the Kingsley Friends of the Library! The Fest is also a fundraiser for the Friends, and all proceeds are for the benefit of KBL. Without their steadfast support, we could not do nearly as much programming as we do!



We will see you on Saturday, June 3rd, from 12:00pm to 6:00pm, rain or shine. If you've not been to the Adams Fly Fest before, we have vendors and educational visitors discussing all things fly fishing and preserving our natural resources, live and silent auctions, live music, a beer tent, and local food and food trucks. Your favorite librarians will also take you on guided history tours at 1:30pm and 3:00pm to Mayfield Pond Park, where the Fly was created, tested, and perfected.

Additionally, our staff has developed a wonderful working relationship with the Kingsley Farmer's Market staff. This year, we're collaborating with them to bring children's programming every week at the Wednesday market from 3:00-5:00pm (Purposeful Partnerships, Targeted Outreach)! Our activities and stories will feature the theme of the Market that week (for example, seeds, soil, birds, dairy, and other food and ecology topics). It's going

to be a wonderful time and a great partnership, so we hope to see you every Wednesday starting June 7th.

Respectfully submitted,
 Amy Barritt
 Kingsley Branch Manager



TADL Board of Trustees Finance & Facilities Committee

May 2, 2023

2:00 pm ~ Thirlby Room

610 Woodmere Ave. / Traverse City, MI / 49686

Attendance: P. Deyo, and J. Jones, Trustees. Chair C. Sullivan was absent. B. Boulter, D. Baldwin, and M. Howard, staff.

Agenda Approval: It was motioned by Deyo and seconded by Jones to approve the agenda but in reverse order to accommodate a guest. All were in favor. The agenda was approved.

Minutes Approval: It was motioned by Deyo and approved by Jones that the minutes from the April 4, 2023 Finance and Facilities and Services Committee be approved. All were in favor. The minutes were approved.

Public Comment: No public comment.

Finance:

- **TADL Millage**

Howard has arranged for Shirley Bruursema, the Millage Queen, to present at the May meeting. This meeting is scheduled to be at Interlochen Public Library. Howard will confirm their technical capacity. If they can't accommodate, the meeting will be held at the Main Library. Howard will also let the Member Library Directors know and ask them to invite their Trustees.

Facilities:

- **October Board Meeting**

Howard was elected to the Michigan Library Association Board and must attend the MLA meeting in October which is the same day as the TADL Board meeting. Trustees were confident the TADL Board meeting could proceed without Howard but asked Howard to put it on the May Agenda for Board Discussion.

- **East Bay Lease**

Howard presented the East Bay lease for review as required by the lease. Howard had no substantial changes. Trustees had no changes. Howard will check with Zeits.

- **Roof Update**

Boulter explained that Mike Powers from Keen Technical has been serving as a consultant to review building energy and environmental improvements, and the roof/insulation project. Boulter explained the memo. Boulter and Powers explained that the Intertek report indicated that TADL does not need a cold roof but does need to finish insulation and ducting work. Powers will work with Spence and other vendors to get this done.

Powers also explained that the roof needs to have annual inspections to review the top and beneath for any issues that need to be addressed. Powers believes a few years of inspections will help to better create a long-term plan for the roof that could include adding Standing Seam shingles and solar capacity at a future date. Currently, our roof is not suitable for solar.

Powers discussed adding heated gutter covers to reduce the icicles from forming. Boulter will also budget to have a company steam off any icicles.

- **Smart Building Software/Building Management System.**

Boulter explained Trane has been mentioning the need to update our building control system which is a 25-year-old system/computer. Trane is a proprietary system and only controls our HVAC system. Powers has suggested moving to a Smart Building Software. His suggestion is Tridium Niagara. This has the ability to control HVAC, lights and security. He also suggests adding Demand Ventilation and Co2 detectors. Howard and Boulter are requesting to forgo the RFP process as this is a specialized system for the library's infrastructure and instead request 3 bid. Trustees agreed. Boulter and Howard will bring 3 bids and an analysis and recommendation to the May Board meeting.

There was a brief discussion about the building's chillers. Howard and Boulter are looking at hiring an Engineer to draw up spec for an RFP process for replacing one of the chillers. Howard and Boulter will bring this to a future committee meeting.

Next Meeting Date / Time: June 7, 2023

Next Meeting Topic Suggestions: Roof, Bathrooms

Public Comment: No public comment.

Adjournment: It was motioned by Deyo and seconded by Jones to adjourn. The meeting adjourned at 3:02 pm.

MEMORANDUM

TO: MICHELE P. HOWARD, LIBRARY DIRECTOR

FROM: BRET R BOULTER, FACILITIES MANAGER

SUBJECT: ROOF CONDITION

DATE: 4 / 27 / 2023

Since the initial construction of the library, the roof has suffered from ice buildup including overabundant gutter icicles, ice dams, and eventual interior leaking. TADL contracted for various investigations and remedial work to be performed.

After reviewing the last investigative report from Intertek dated 8/4/22, consulting with multiple roofing contractors, and monitoring the roof over the past year, I'd like to codify my findings and current understanding of the situation.

The report from Intertek detailed their previous recommendation that warm air leakage into the attic space be stopped and ventilation increased, and then went on to evaluate the effectiveness of the remediation that was performed. Visual inspection of the work, combined with thermal imaging and temperature data logging, indicates that the remediation, while not totally complete as recommended, reduced heat transfer to the roof in an amount that could be improved by completing the work, but which nevertheless should prevent unusual amounts of ice buildup at the gutters and attendant problems. Additionally, the previously recommended "cold roof" is no longer deemed a necessary consideration.

Consultation with roofing contractors reinforced the fact that in climates such as Michigan's, and particularly with roofs with an aesthetic design such as TADL's, there is always the likelihood of some amount of ice buildup. Additionally, they saw no egregious construction or insulation concerns, though they did note some minor deficiencies, detailed later.

Observation of ice buildup in the year previous to my taking over as Facilities Manager indicated a reduction, though not a complete elimination, which it was my initial understanding was the goal. In my year of observation, I also saw some evidence of ice buildup, though the winter was not typical and perhaps not a maximal test. However, I did not observe any significant ice damming and no interior leaking. Along with my current understanding that some ice buildup is likely even with a properly functioning roof, and consideration of the report from Intertek and opinions of roof contractors, I now believe that any future ice buildup can be controlled through the not-uncommon and relatively inexpensive contracting of ice steaming services.

That being said, I think there is no reason not to complete the remaining work as identified by Intertek, utilizing the services of Spence Brothers and Cooke Sheet Metal, as identified by Mike Powers, to obtain the maximum functionality of the roof.

Regarding the roof condition apart from that, I found that the promotional literature for the Dura-Lok metal roofing applied at the time of construction indicated a 50-year lifespan (which is median for metal roof systems), but also that the installation was imperfect (as noted by roofing contractors, particularly the absence of rubber grommets for the fasteners holding the metal layer on, which are intended to prevent water ingress). Unfortunately the manufacturer of Dura-Loc is long out of business and the statute of limitations expired in any event, so we are left to consider our options going forward.

Since there were interior leakage problems that have not reappeared since the remediation work, it can be assumed that we do not face any imminent re-roofing needs. Additionally, pursuant to discussions with roofing contractors, it is their opinion that whatever other design and construction deficiencies there may have been, the layered construction method used is very effective. While there may have been some wood damage during leakage events, the particulars of this layered construction method obviate the need for investigation and repair of damaged wood, if any. That will be addressed as a normal course of re-roofing at whatever time that is necessary. At this point we merely need to keep diligent watch for any evidence of leakage, and address the situation when it arises, be it in one year or twenty-five.

There are potential courses of action to possibly mitigate future roof deterioration, including but not limited to protective spray treatment of the metal shingles, but these are not currently deemed urgent and I believe a methodical and considered approach involving observation and data collection over time is warranted, at no dollar cost other than instituting annual roof inspections, and the expected diligence of the Facilities Manager.

intertek

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ROOF THERMAL EVALUATION REPORT

TRAVERSE AREA DISTRICT LIBRARY

TRAVERSE CITY, MICHIGAN

PROJECT NUMBER

N4663.01-416-17-R0

ISSUE DATE

08/04/22

PAGES

21



ROOF THERMAL EVALUATION REPORT

Project No.: N4663.01-416-17-R0

Date: 08/04/22

REPORT ISSUED TO

Traverse Area District Library

610 Woodmere Avenue

Traverse City, MI 49686

PROJECT

Traverse Area District Library – Woodmere Main Library

610 Woodmere Avenue

Traverse City, MI 49686

SCOPE

Architectural Testing, Inc., an Intertek company (“Intertek”), has been retained to perform a thermal study of roof system at the above-referenced building. The primary purpose of the study is to provide a follow up to the initial Roof Ice Damming Investigation performed in 2017 (*reference Intertek Report H5689.01-601-17-R1, dated 01/15/18*).

Since the initial investigation, it is our understanding that portions of the recommended remediation presented in our previous report have been completed. Traverse Area District Library (TADL) has a desire to re-roof the building soon and requested the study to determine if the past remediation efforts were adequate in preventing icing along the eaves or if additional remediation/work would be necessary. Additionally, TADL would like to understand if the replacement roof system should include a vented system (as proposed by a contractor).

The scope for the study consists of a limited roof condition survey from grade or accessible roof areas, accompanied with infrared (IR) thermal imaging of the roof and soffits to detect temperature differentials. As part of the study, data loggers were placed at various locations (exterior and interior) to record temperatures. Interior observations were limited to the areas the data loggers were placed which also included IR imaging.

This report presents our findings and opinions/recommendations. Our findings are based on our on-site observations and assessment during which we interviewed on-site personnel, performed an infrared scan of various interior and exterior areas, and installed data loggers to record interior and exterior temperatures. The information contained in this report is based upon a limited investigation; concealed conditions may exist that are not identified. If additional information becomes available, we reserve the right to revise this report and the opinions stated herein, as necessary.

ROOF THERMAL EVALUATION REPORT

Project No.: N4663.01-416-17-R0

Date: 08/04/22

BACKGROUND INFORMATION AND HISTORY

The Woodmere Main Library was constructed between 1997 and 1999, with occupancy in 1999. After construction, significant ice damming occurred around the perimeter of the building and at valleys in the roof system. In some instances, water backed up into the roof and damaged soffits, which became a potential safety hazard.

Intertek was retained in 2017 to perform an investigation of the ice damming. Our findings and recommendations are documented in Intertek report dated January 15, 2018. In general, we identified the primary reasons for the ice damming was due to warm interior air migrating into the vented attic space, as well as blocked venting paths. Based on that, our primary recommendation was to stop the air leakage into the attic space and increase ventilation.

INFORMATION FROM OTHERS

During preparation for and during the site work, we met with John Jass, Facilities Manager (at the time of the site work), who provided the following pertinent information:

- Remediation of plenum air/vapor barrier has been completed for the 2nd floor HVAC system in an attempt to reduce air leakage from the interior, except for the areas above the Nelson Room and Computer Center (*reference Second Floor Reflective Ceiling Plan in Appendix B*).
- Ice dams and/or significant ice hanging from eaves has not been noted since the remediation work.
- Temperatures have been monitored in limited areas of the attic, and differentials have been identified between the attic and exterior in some area (approximately 10°F).

OBSERVATIONS

The following summarizes observations from our on-site survey performed on April 1, 2022 by Mr. Ronald Perkins of Intertek.

Exterior Observation:

At the time of the survey, the weather conditions were cloudy with temperatures between 27° and 37° F, and roofs were covered with a layer snow ranging from a dusting to approximately 1 to 2-inches (*reference Photos #1 through #4, #7 and #9 in Appendix A*).

IR thermal images show the temperature differences of the roof surface from the eaves to the field of the roof only vary a couple degrees (*reference Photos #5, #6, #9, and #10 In Appendix A*). Two small icicles were observed along the eave; one at a gutter seam north of the main entrance on the east and one below a valley on the west (*reference Photos #11 and #12 in Appendix A*). Two (2) displaced soffit panels were noted at the northwest corner of the facility (*reference Photo #13 in Appendix A*).

ROOF THERMAL EVALUATION REPORT

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Interior Observations:

Interior observations are limited to areas where data loggers were placed.

Data Logger #1 was placed within an electrical outlet box west of the east entrance on the North Elevation to collect exterior temperatures.

Data Logger #2 was placed in the attic space above the mezzanine adjacent to the clocktower and just below roof framing (*reference Photo # 14 in Appendix A and Building Section A3.4/2 in Appendix B*). Blown-in cellulose insulation above the 3rd floor mezzanine appears adequately placed to allow a 6-inch air flow space connecting the adjacent unconditioned spaces at most locations of the perimeter of the flat ceiling (*reference Photos #15 and #16*). There are sloped ceiling areas between the flat portion and adjacent areas where air flow could be reduced by blockage but could not be fully reviewed. IR images show the insulation to be uniform in the heat transfer through the material (*reference Photos #17 and #18*). IR imaging also shows that heat transfer is occurring at various locations where the mezzanine ceiling is sloped. There is a light-gauge steel framed mechanical chase that is not insulated towards the northeast mezzanine ceiling that is allowing heat transfer into the attic (*reference Photos #19 and #20 in Appendix A*).

Data Loggers #3 and #4 are placed in the 2nd floor attic space south of the 3rd floor mezzanine. Observations were limited to the locations that could be traveled on ductwork. Data Logger #3 was placed on a light-gauge steel stud of the south mezzanine wall just below the roof deck and Data Logger #4 was placed on a duct support rod just below the roof deck (*reference Photos #21 and #22 in Appendix A and 3rd Floor HVAC Plan M2.3 in Appendix B*). Displaced and missing insulation was noted on the mezzanine wall adjacent to the attic access panel (*reference Photos #23 and #24 in Appendix A*). The plastic vapor barrier was noted to be incomplete and open where the insulation is missing. The space between the top of the wall and roof frame appears to provide adequate air flow for the mezzanine attic. Metal tubes were installed between some rafters at the attic perimeter for soffit venting (*reference Photo #25 and #26*). The metal tubes are not visible between all rafters and there is heat buildup at hip and valley rafters (*reference Photos #27 and #28 in Appendix A*).

Data Loggers #5 and #6 were placed in the 2nd floor attic space east of the 3rd floor mezzanine. Data Logger #5 was placed on the unconditioned side of the mezzanine wall similar to logger #3 and Data Logger #6 was placed on a duct support strap similar to logger #4 (*reference Photos #29 and #30 in Appendix A and Building Section A3.4/2 and 3rd Floor HVAC Plan in Appendix B*). Observations were limited to locations that could be traveled on ductwork and boards placed on the ceiling joist of the 2nd floor plenum. Air spaces between the insulation and roof deck above the east mezzanine wall appears to allow for adequate air flow to the mezzanine attic (*Reference Photo # 29 in Appendix A*). Displaced and missing insulation was observed on the unconditioned mezzanine wall at various locations and 2nd floor ceiling joist (*reference Photos #31 through #35 in Appendix A*). Three (3) to four (4) metal tubes are between some rafters at the attic perimeter for soffit venting (*reference Photos #36 and #37 in Appendix A*).

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Data Logger #7 was placed just below the roof deck on a support wire for the 2nd floor plenum ceiling joist in the attic space north of the 3rd floor mezzanine (*reference Photo #38 in Appendix A and 3rd Floor HVAC Plan in Appendix B*). Unsupported and open insulation was noted on the unconditioned side of the mezzanine wall along with displaced and missing insulation on the 2nd floor plenum ceiling joist.

Data Loggers #8 and #9 were placed in the 2nd floor return air plenum. Data Logger #8 was placed in the south plenum while Data Logger #9 was placed in the north plenum (*reference Photos #39 and #40 in Appendix A and 2nd Floor Reflective Ceiling Plan A9.2 in Appendix B*). The air vapor barrier is open at multiple penetrations, laps and interface joints (*reference Photos #41 through 45 in Appendix A*).

DATA LOGGER FINDINGS

Nine (9) data loggers were placed on April 1, 2022 and collected environment data until retrieved on April 27, 2022. The data loggers were set to collect data every hour. As noted above, one (1) data logger was placed in a covered electrical outlet box at grade on the north side of the building to record exterior conditions. Six (6) data loggers were placed in unconditioned attic spaces, one (1) was placed above the 3rd floor mezzanine and five (5) were placed within the 2nd floor attic spaces to the south, east, and north of the 3rd floor mezzanine. Two (2) loggers were placed in the 2nd floor return air plenum to record conditioned temperatures, one (1) in the south and one (1) in the north plenum. The data loggers in attic spaces were placed near the underside of the metal roof deck to obtain approximate interior ambient temperatures that may affect snow melt on the roof system.

Overall, the average temperatures within the unconditioned attic spaces were ~10 to 13 degrees Fahrenheit warmer than the exterior temperature, except for Logger #5. The average temperature differential at data logger #5 was ~17 degrees Fahrenheit.

DISCUSSION AND RECOMMENDATIONS

Based on the IR imaging of the exterior roof and temperature information collected from the data loggers, it appears that the remediation work has provided significant improvements, making the unconditioned attic areas (and the roof surface) colder during winter months. As indicated by only minor and isolated icicles during our April 2022 visit, the reduced attic temperatures have significantly reduced ice melting on the roof.

Since insulation is not perfect, and various structural and other elements will always transfer heat to the attic (during winter months), some temperature differential should always be anticipated. That said, the typical 10°F to 13°F recorded can be further reduced. Based on our visual observation while placing the data loggers, additional remediation should be performed to further reduce air leakage and thermal transfer. Displaced and missing insulation is a large source of heat migration into the attic spaces and was noted at each area the data loggers were placed. The higher temperature differential recorded at data logger #5 was likely due to the larger areas of displaced and missing insulation on the mezzanine walls and 2nd floor plenum ceiling joist adjacent to where the logger was placed.

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Another source contributing to warmer attic temperature is openings in the 2nd floor plenum air/vapor barrier. It is unclear what plenum work was included the past remediation. As noted, there were multiple open terminations, membrane laps, and penetrations in the system. Conditions were only reviewed where the two data logger were placed, and may be widespread allowing the warm return air to migrate into the attic space.

The vent tubes added during the remediation from attic spaces to the soffit areas appear to be functioning and reducing the potential for snow melt and ice buildup at the eaves. That said, it did not appear that tubes were installed in all areas and should be considered to ensure proper air flow from the exterior.

Recommendations:

Based on the information gathered during this study, we recommend the following item to further reduce the potential for ice buildup at the roof eaves and valleys:

- Where not present, install additional venting tubes (or clear insulation) from the soffit areas to main attic spaces. The venting should be provided at all soffit areas/locations, along the entire length. We note that while the tubes appear to be functioning, attic venting baffles would help provide air flow consistency across the roof surface between roof framing and be lower profile. Also, the round vents are compressing the fiberglass insulation reducing its R-factor and causing it to be deformed and created openings between segments.
- Remediate displaced and missing insulation in the attic spaces. This would include installing new insulation where missing, repositioning sections of batt insulation to reduce or eliminate open gaps between batts and adding additional fasteners where necessary.
- Seal all openings in air/vapor barrier separating the conditioned areas from the unconditioned areas. This includes the 2nd floor plenum, attic walls and interfaces between the two. A combination of mechanical securing of the air/vapor barrier and tape would provide the best long-term solution. Spray polyurethane foam may be considered to seal irregular shaped penetrations through the membrane.
- Ensure all mechanical duct work and chases are insulated to reduce thermal transfer into the unconditioned attic space.

With regards to the proposed vented replacement roof system (providing a vent space over the existing roof deck), based on our observations, data collected, and reports from TADL that icicle/ice formation has been relatively eliminated since the initial remediation work, we do not believe providing a vent replacement roof system is needed. We note that limited icicles and ice formatting should be anticipated on all roof under certain conditions, but the remediation has addressed the wide-spread concern experienced by TADL. That said, the recommended additional remedial work noted above should be completed to further reduce the potential of ice/icicles forming on the roof.

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CLOSING

This concludes our current scope of services for the façade and roof evaluation portion of this project. We appreciate the opportunity to be of service. Do not hesitate to contact us with any questions.

For INTERTEK B&C:

COMPLETED BY:	Ronald Perkins, CDT
TITLE:	Project Manager Building Science Solutions
SIGNATURE:	

RP/EJS:wam

REVIEWED BY:	Eric Seaverson, P.E.
TITLE:	Director Building Science Solutions
SIGNATURE:	 Digitally Signed by: Eric Seaverson

Attachments: Appendix A – Photographs (8 pages)
Appendix B – Drawings (3 page)



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ROOF THERMAL EVALUATION REPORT

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REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	08/04/22	N/A	Original Report Issue



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ROOF THERMAL EVALUATION REPORT

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Appendix A
Observational Images

TADL – Roof Thermal Study Photographs



1. Overview of the south and east elevations of the facility.



2. Overview of the west elevation of the facility.



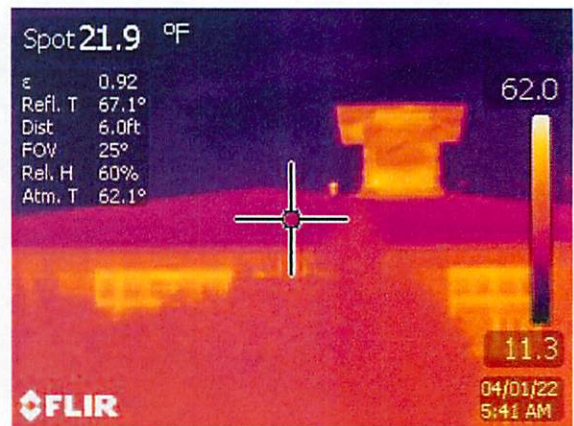
3. Partial view of the east roof. Reference Photo #5 for IR image.



4. Partial view of the north roof. Reference Photo #6 for IR image.



5. Partial IR image of the east roof. Note, temperature at the eave and field of the roof are similar.



6. Partial IR image of the north roof. Note, temperature at the eave and field of the roof are similar.

Photographs 1-6

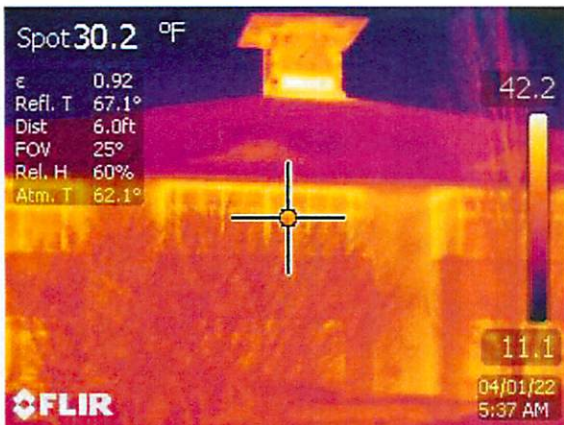
TADL – Roof Thermal Study Photographs



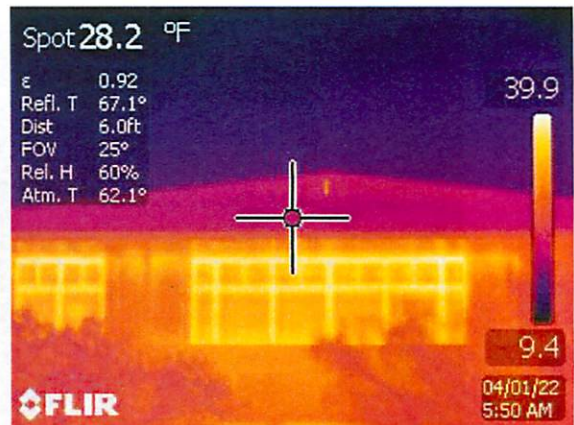
7. Partial view of the west roof. Reference Photo #9 for IR image.



8. Partial view of the south roof. Reference Photo #10 for IR image.



9. Partial IR image of the west roof. Note, temperature at the eave and field of the roof are similar.



10. Partial IR image of the south roof. Note, temperature at the eave and field of the roof are similar.



11. Ice icicle at gutter seam along east roof eave.



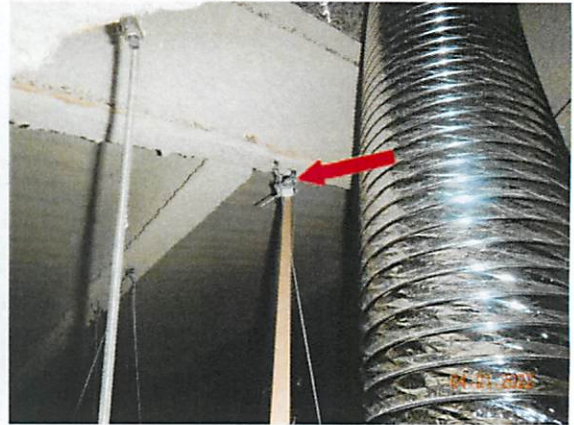
12. Ice at valley along west roof eave.

Photographs 7-12

TADL – Roof Thermal Study Photographs



13. Displaced soffit panels at northwest corner.



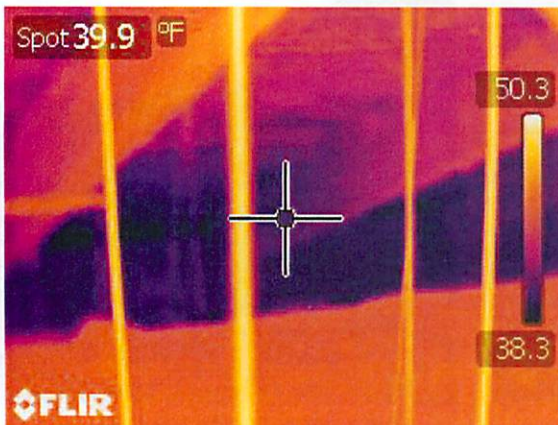
14. View of Data Logger #2 in 3rd floor mezzanine attic, adjacent to the clocktower.



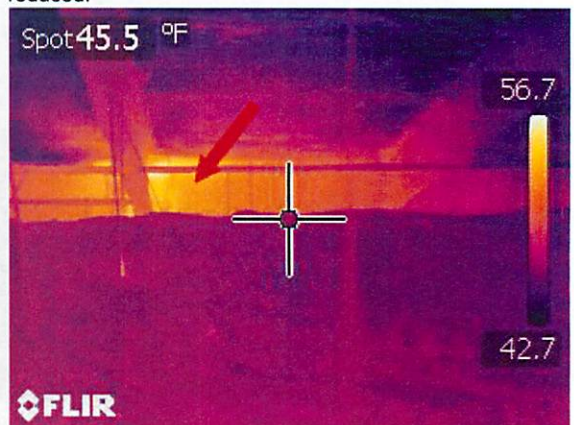
15. Typical view of the cellulose insulation in attic above the 3rd floor mezzanine. Air flow space between insulation and roof appears adequate.



16. Typical view of the cellulose insulation in attic above the 3rd floor mezzanine. Air flow space between insulation and roof appears adequate. Arrow shows location towards south end of east perimeter where air flow space is reduced.



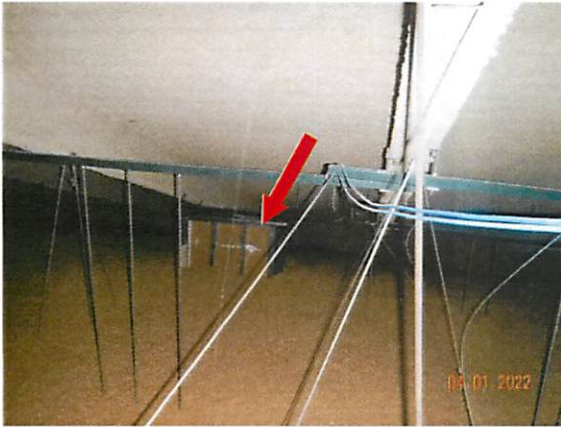
17. IR image shows consistent thermal transfer through insulation in mezzanine attic (orange towards bottom of image). Purple indicates cooler air flowing from air space to lower attic space.



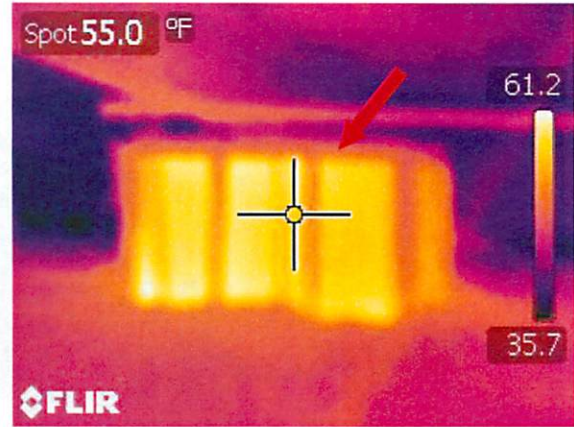
18. IR image shows consistent thermal transfer through insulation in mezzanine attic (purple towards bottom of image). Orange indicates heat transfer due to unknown source sloped ceiling air space.

Photographs 12-18

TADL – Roof Thermal Study Photographs



19. View of the mechanical chase above mezzanine ceiling.



20. View of heat transfer at the mechanical chase above mezzanine ceiling.



21. View of Data Logger #3 placed towards the upper portion of the unconditioned side of the south 3rd floor mezzanine wall.



22. View of Data Logger #4 in the 2nd floor attic space south the 3rd floor mezzanine.



23. View of missing insulation and incomplete/open plastic air/vapor barrier adjacent to the south mezzanine access panel to the attic space.



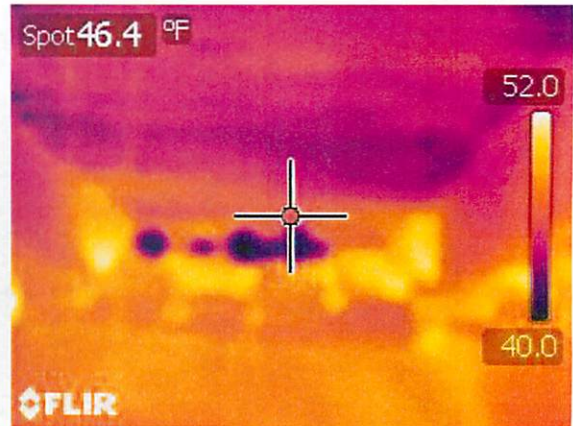
24. IR image of Photo 23. Bright yellow/orange is attic access door and heat-wash.

Photographs 19-24

TADL – Roof Thermal Study Photographs



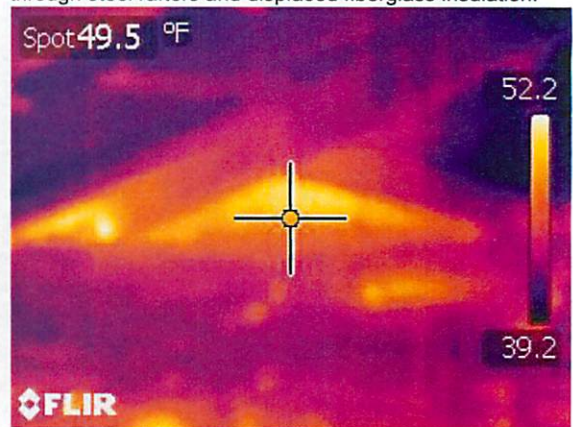
25. View of 10" to 12" metal tubes that have been installed at some of the soffits to provide air flow. West attic/soffit interface of the attic space south of the mezzanine shown.



26. IR image of Photo 25. Cool air flowing into attic is indicated by dark purple. Yellow indicates heat transfer through steel rafters and displaced fiberglass insulation.



27. View of the south valley of the west roof within the attic space south of the mezzanine. Soffit vent tubes were not visible between rafter to the right of the valley.



28. IR image shows heat buildup at hip/valley rafter interface with soffits.



29. View of Data Logger #5 placed towards the upper portion of the unconditioned side of the east 3rd floor mezzanine wall. Note, space between wall and roof deck appears to allow for adequate air flow to mezzanine attic.



30. View of Data Logger #6 in the 2nd floor attic space east of the 3rd floor mezzanine.

Photographs 25-30

TADL – Roof Thermal Study Photographs



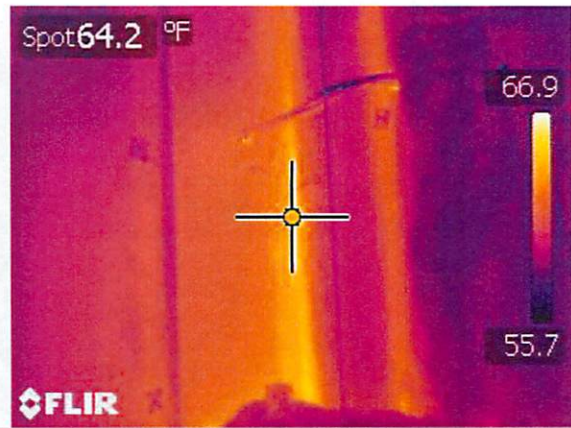
31. View of displaced/missing insulation on unconditioned side of the east mezzanine wall.



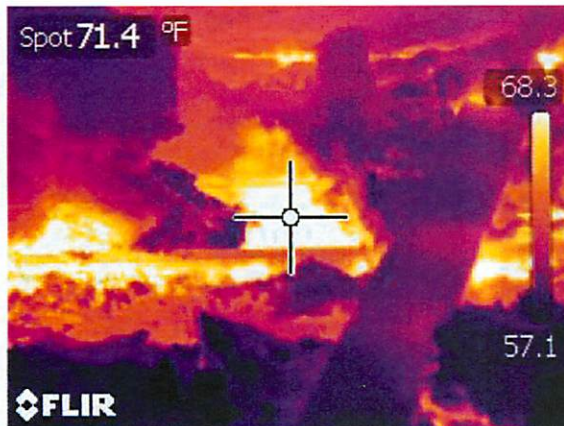
32. View of displaced/missing insulation on unconditioned side of the east mezzanine wall.



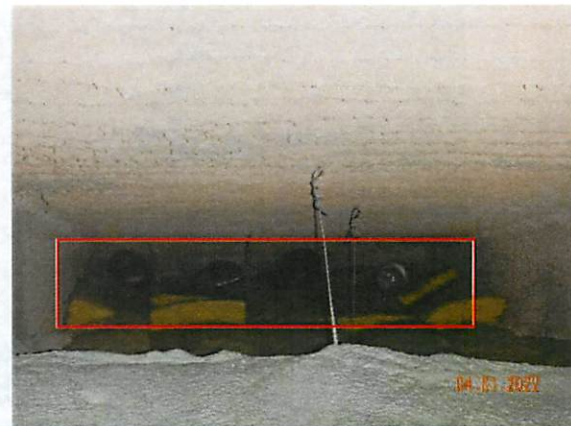
33. Displaced and missing insulation at 2nd floor plenum ceiling in the attic space east of the 3rd floor mezzanine.



34. IR image showing heat transfer into attic space where insulation is missing on mezzanine wall. Reference Photo #32.



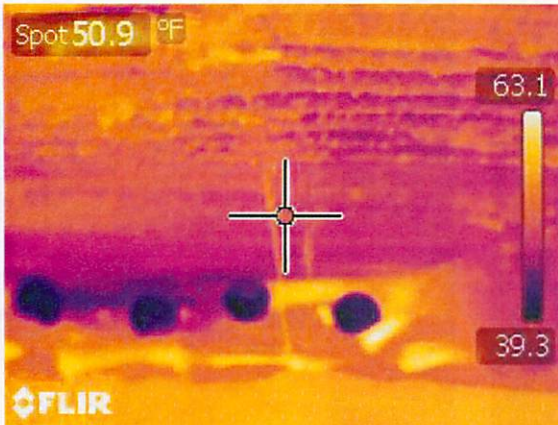
35. IR image showing heat transfer into attic space where insulation is displaced/missing at 2nd floor plenum ceiling. Reference Photo #33.



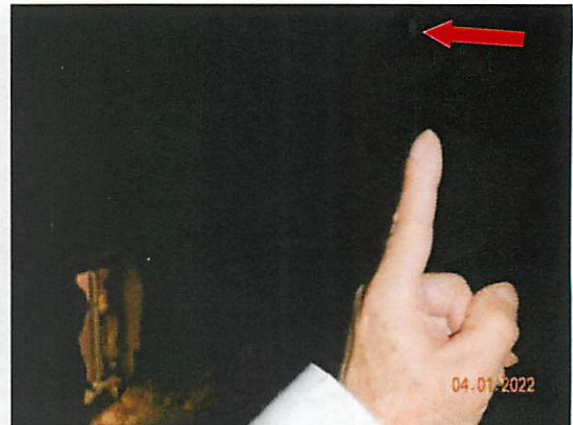
36. View of metal tubes for soffit to attic vents in 2nd floor attic space east of 3rd floor mezzanine.

Photographs 31-36

TADL – Roof Thermal Study Photographs



37. IR image of metal tube soffit vent to attic. Reference Photo #36. Cool air flowing into attic is indicated by dark purple. Yellow indicates heat transfer through steel rafters and displaced fiberglass insulation.



38. View of Data Logger 7 in the 2nd floor attic space north of the 3rd floor mezzanine.



39. Data Logger #8 is placed above the suspended ceiling in the south return air plenum



40. Data Logger #9 is placed above the suspended ceiling in the north return air plenum.



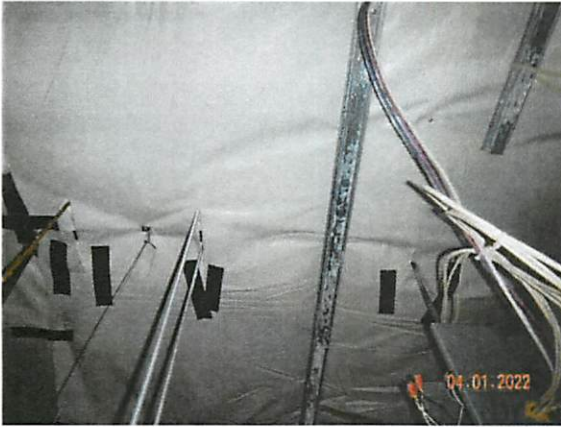
41. View of open interface lap of the plenum air/vapor barrier in the south plenum.



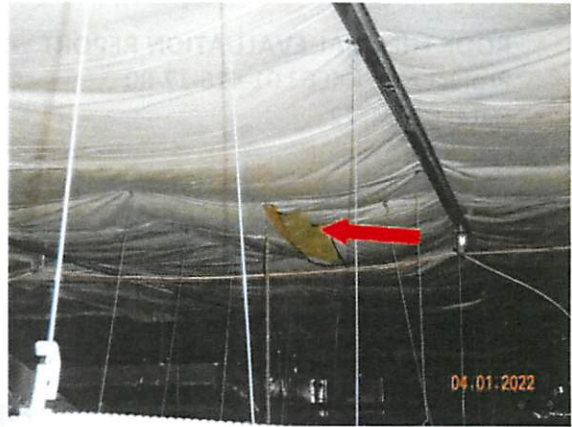
42. Interface lap joints appear to be sealed at some locations in the south plenum.

Photographs 37-42

TADL – Roof Thermal Study Photographs



43. View of multiple small penetrations where plenum air/vapor barrier could be sealed better.



44. Overview of multiple open lap joints of the plenum air/vapor barrier at the north plenum.



45. Cardboard and spray polyurethane foam (SPF) has been installed at the plenum column penetration where Logger #22 was placed in the north plenum.



46. View of taped air/vapor barrier seam in the north plenum that has failed adhesion.



47. View of lapped but unsealed plenum air/vapor barrier.



48. Another view of lapped but unsealed plenum air/vapor barrier.

Photographs 43-48



Total Quality. Assured.

37483 Interchange Drive
Farmington Hills, Michigan 48335

Telephone: 248-957-9911

Facsimile: 248-957-9909

www.intertek.com/building

ROOF THERMAL EVALUATION REPORT

Project No.: N4663.01-416-17-R0

Date: 08/04/22

**Appendix B
Drawings**



Ericksen Architecture Design Partnership, Inc.

© 2011 Ericksen Architecture Design Partnership, Inc.

www.ericksenarchitecture.com

PH 410.370.7100 FAX 410.370.7100

1001 N. MARKET STREET, SUITE 100, BALTIMORE, MD 21202

1001 N. MARKET STREET, SUITE 100, BALTIMORE, MD 21202

1001 N. MARKET STREET, SUITE 100, BALTIMORE, MD 21202

TRaverse AREA DISTRICT LIBRARY

Traverse City, MI

Traverse Area District Library

120 State Street
Traverse City, Michigan 49604-2500

Project No. 10010

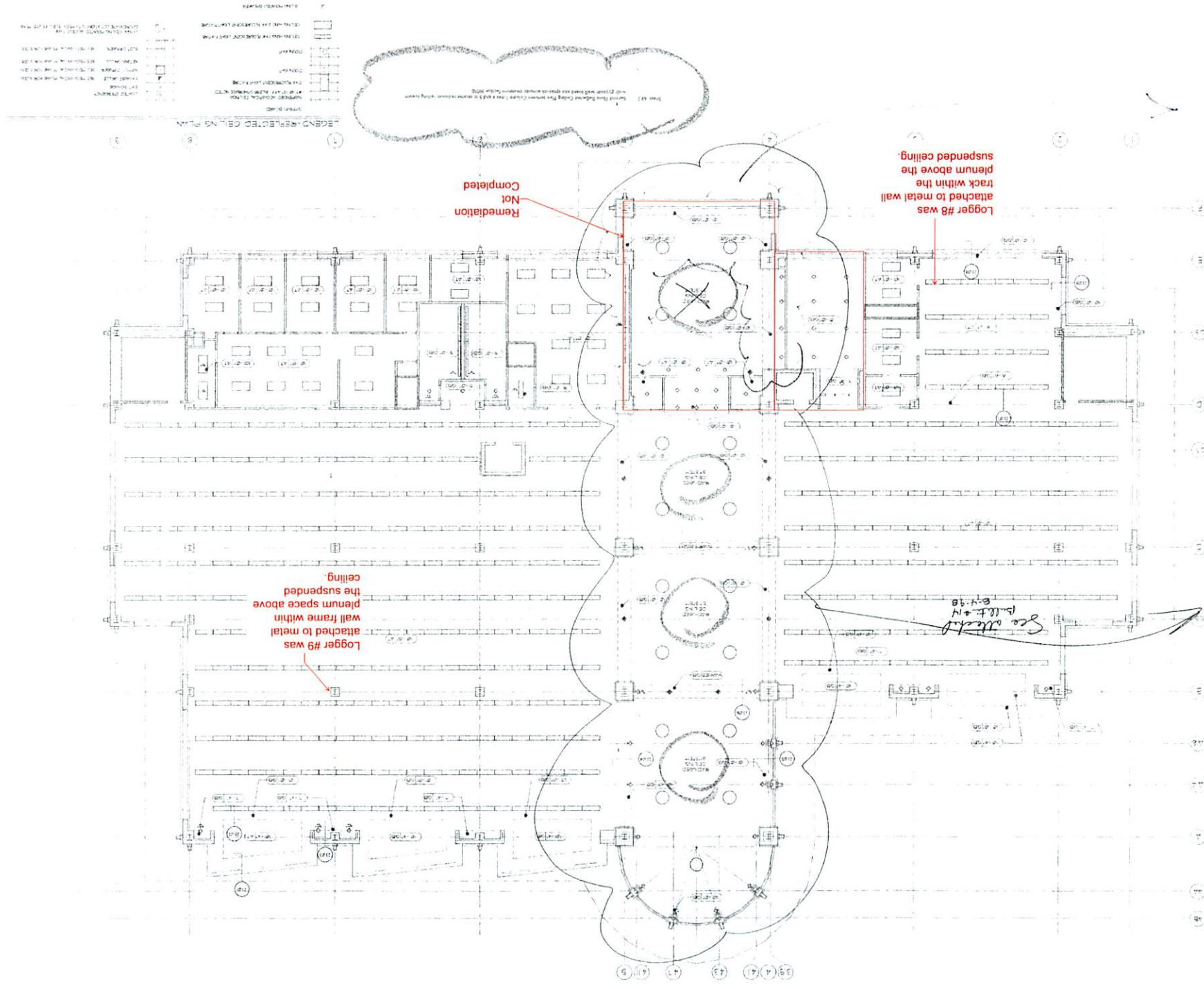
Second Floor

Rev. Description Date

Date: 10/11/10
Drawn By: JAH
Checked By: JAH

Second Floor Reflected Ceiling Plan

A9.2





Engineering Architecture Design Partnership, Inc.

611 First Broadway
 15th Floor
 Traverse City, Michigan 49782
 www.eadp.com
 Tel: 231.947.1000 Fax: 231.947.1008



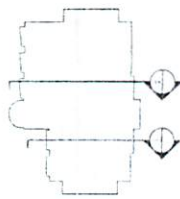
**TRAVERSE AREA
 DISTRICT LIBRARY**

Traverse City, MI

Owner
 Traverse Area District Library
 225 South State Street
 Traverse City, Michigan 49782-1106
 Contact: A. L. L. L.

Project No. 16-00

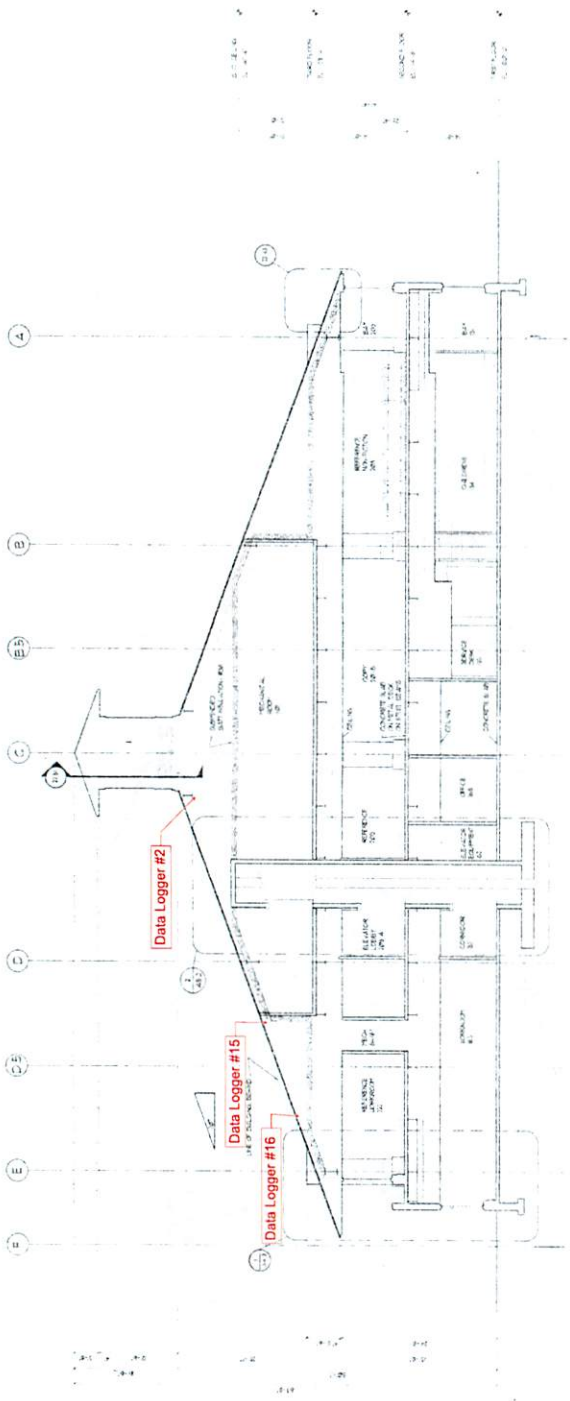
Sheet No. 16-00-04
 Title: Description Date



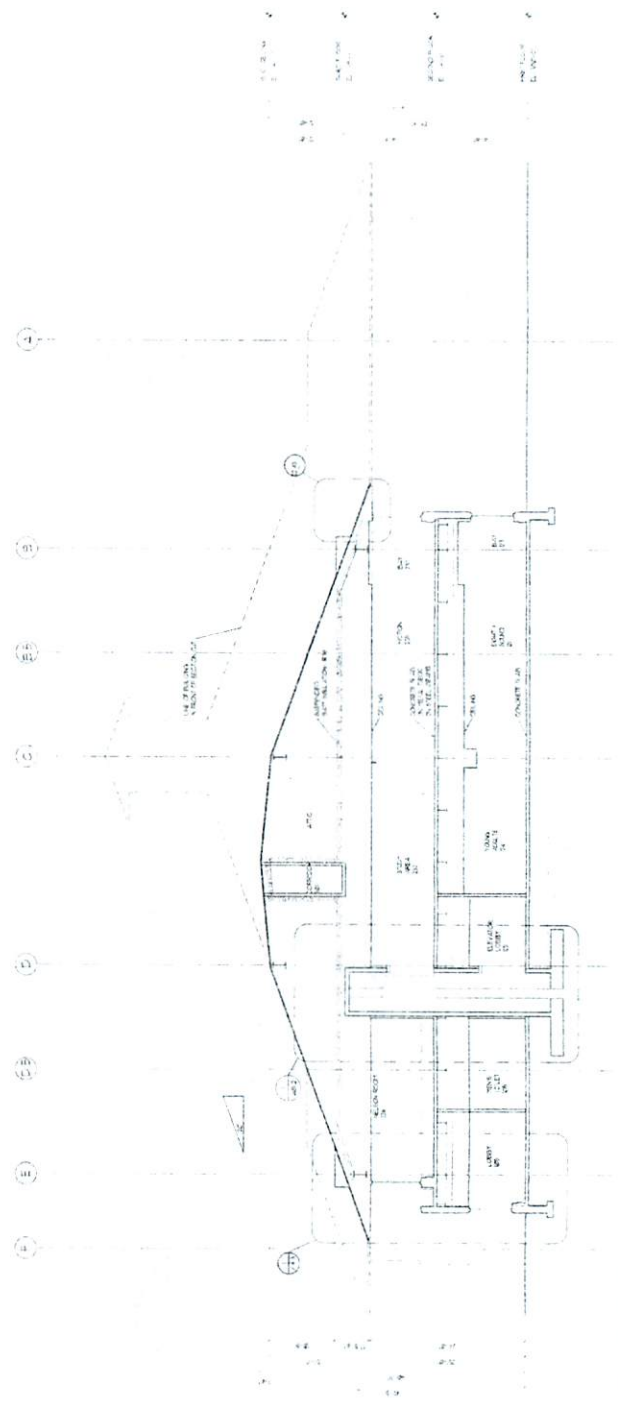
Drawn By: J. L. L. L.
 Checked By: J. L. L. L.
 Date: 10/1/16

Building Sections

A3.4

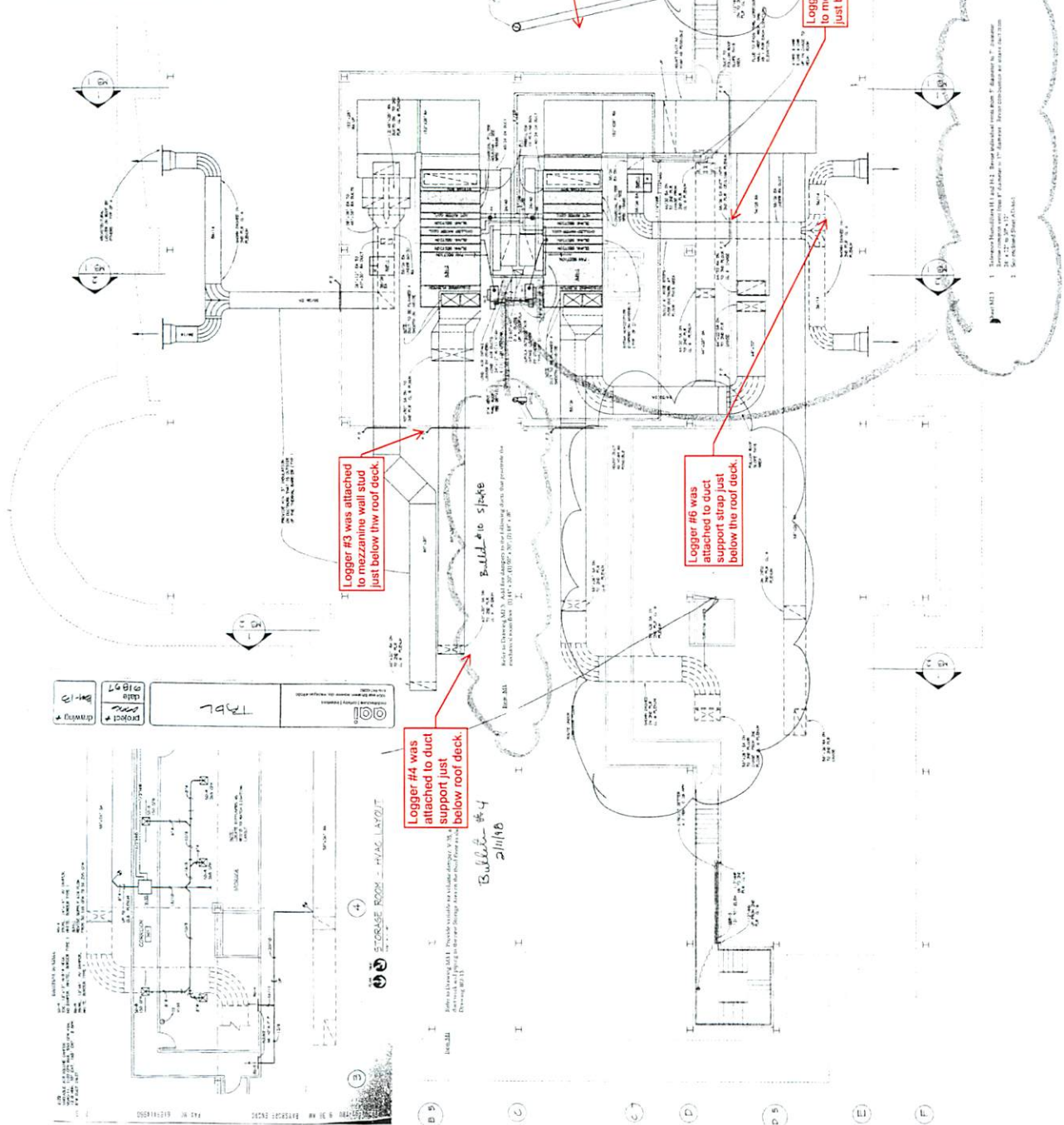
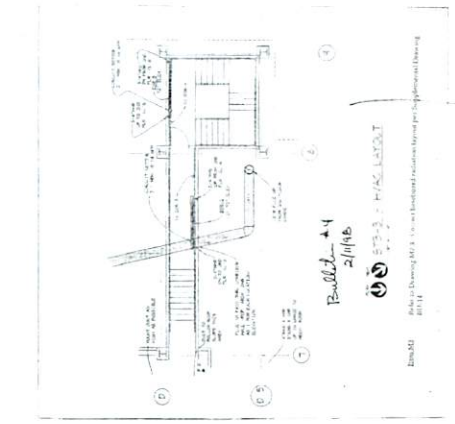


2 EAST-WEST SECTION LOOKING SOUTH
 18' x 11' @



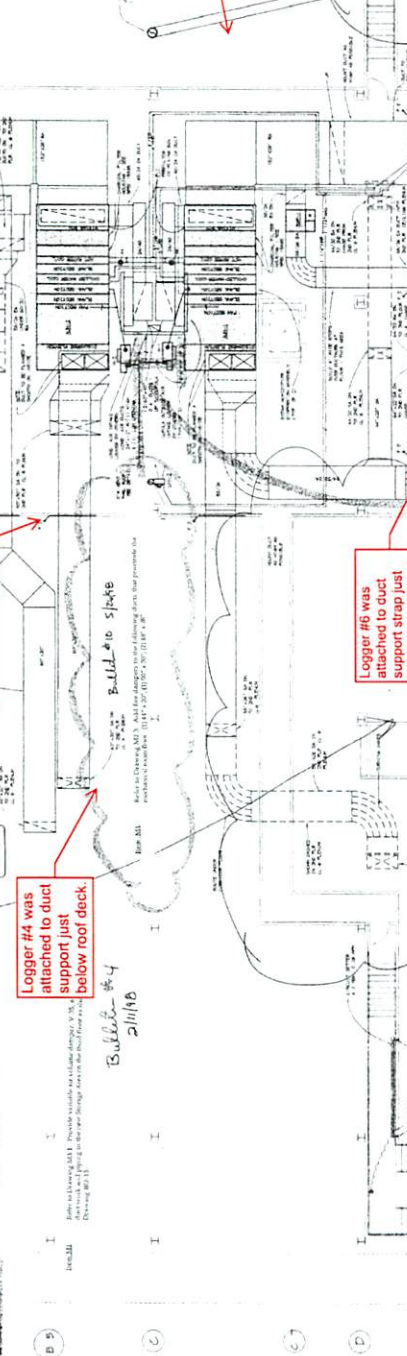
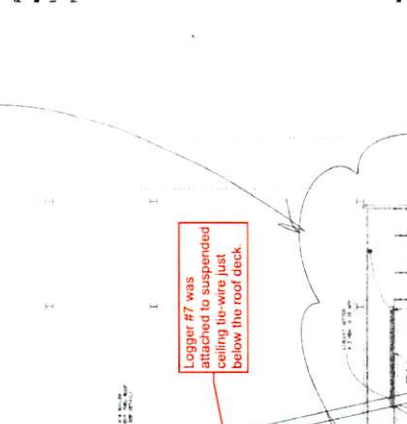
1 EAST-WEST SECTION LOOKING SOUTH
 18' x 11' @

PROJECT NO. 9600
 DRAWING NO. 1-12
 DATE 1/19/98
 PROJECT TITLE
 REA BARY
 PROJECT NO. 9600
 DRAWING NO. 1-12
 DATE 1/19/98
 PROJECT TITLE
 REA BARY



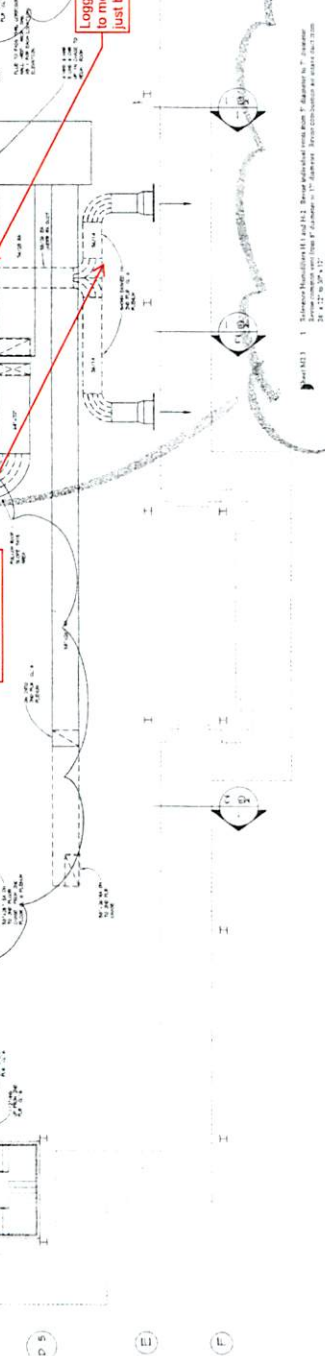
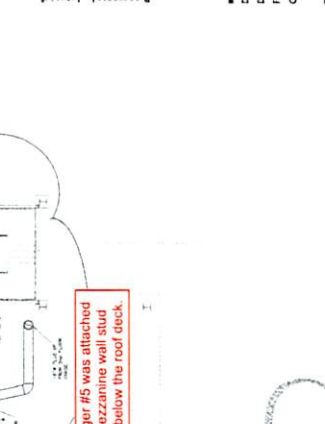
PROJECT NO. 9600
 DRAWING NO. 1-12
 DATE 1/19/98
 PROJECT TITLE
 REA BARY

PROJECT NO. 9600
 DRAWING NO. 1-12
 DATE 1/19/98
 PROJECT TITLE
 REA BARY



PROJECT NO. 9600
 DRAWING NO. 1-12
 DATE 1/19/98
 PROJECT TITLE
 REA BARY

PROJECT NO. 9600-06
 DRAWING NO. 1-12
 DATE 1/19/98
 PROJECT TITLE
 REA BARY



PROJECT NO. 9600
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 REA BARY



PROJECT NO. 9600
 DRAWING NO. 1-12
 DATE 1/19/98
 PROJECT TITLE
 REA BARY



MAY 2023 DIRECTOR'S REPORT - VICTORIA SHURLY

In case you didn't catch it, Peninsula Community Library is listed in the credits of the television show, *In With the Old*, in the segment that highlights the restoration of the Carter and Amy Oosterhouse barn. Our local history librarian Mary Morgan and I assisted with the historical research!

The Friends of Peninsula Library have donated new playground certified climbing boulders for the Children's Garden, an Epson scanner for historical documents that is capable of scanning old negatives and a mobile cart to store items from our Library of Things. We are so very grateful to this hardworking group for their never-ending support of PCL!

We have contracted with Top Line Electric in Traverse City to replace the defective smart lighting system. The new system is wireless and can be controlled by staff from each panel. The system to be installed has been used successfully by TCAPS for eight years with no issues.

The summer concert series has been scheduled with music variations from contemporary to sixties music to jazz and bluegrass to songs we all know and love. We invite families to bring a picnic and enjoy. The full schedule will be on our website soon.

We are once again collaborating with U of M's Michigan Medicine on a lecture series with world renowned physicians. This year's programs will include presentations on cardio health, diabetes and skin cancer. Programs will happen in July, August and October. This is a big deal for a small library. U of M is redoing the fabulous promotional video they produced last year, highlighting a "small library and a global institution!" The programs will be recorded for people who are not able to attend. Following each program, we will offer fireside chats so that attendees can ask one on one questions of the physicians.

A walking path will be mowed around our five and a half acres this summer. It was a part of our special use permit and our hope is to develop this further in coming years.

PCL Fun Fact: *The retention pond on our property has formed its own "ecosystem" which is attracting birds, dragonflies and lilies. An Eagle Scout project resulted in nesting boxes to attract indigenous birds.*

Circulation April 2023: 1988 + 61 manual checkouts, April 2022: 2339

April Volunteers: 12 people (1 teens), 34 hours of time to PCL.

Curbside pickups: 1. Home delivery: 2. New library cards: 15

Hold Transit Counts April: 591 to other libraries from PCL, 316 from other libraries to PCL

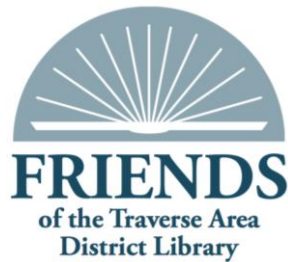
Programs April: 23 Programs Participation April: 380 Reference Questions: 423

Website Hits: 1158, Twilight Baby Bags: 0, 1000 Books Before Kindergarten: 2

State of Michigan COVID Kit Distribution: 2100, COVID card protectors: 800

PENINSULA COMMUNITY LIBRARY 2893 ISLAND VIEW ROAD, TRAVERSE CITY, MI 49686231-223-7700

www.peninsulacommunitylibrary.org



To: TADL Board

May 2023

The FTADL Annual Meeting was held in person in the Maguire Room on Wednesday, May 10, at 5:30 p.m. The business meeting was a recap of what we have done since the last Annual Meeting, a description of the June book sale which will be the first week end in June, and an election of 6 board members and as well as officers.

Jud Barclay was elected President for the May 2023-May 2024 term. Other officers who were elected were Margaret Monsour as Vice President, Marika BeVier as Secretary, and Megan Holtrey as Treasurer. Board members who were elected for May 2023-May 2025 were Meagan Belden, Marika BeVier, Kathy Kelto, Margaret Monsour, Kerri Moses, and Pam Ward.

The speakers at the Annual Meeting were Michele Howard, Benjamin Marentette, and Christal Frost Anderson, speaking about books that impacted their lives.

We were delighted that so many people attended the meeting and enjoyed the program and food.

We have created a Sign-Up Genius form for people to volunteer for the book sale and slots are filling up.

Reba Leiding reported that she had filled out an on-line form to apply for a grant from Michigan's Nonprofit Relief Fund, to make up for our losses due to COVID.

At our June board meeting, board members will look at committee assignments and decide which ones they wish to be on.

Donna S. Hornberger
President

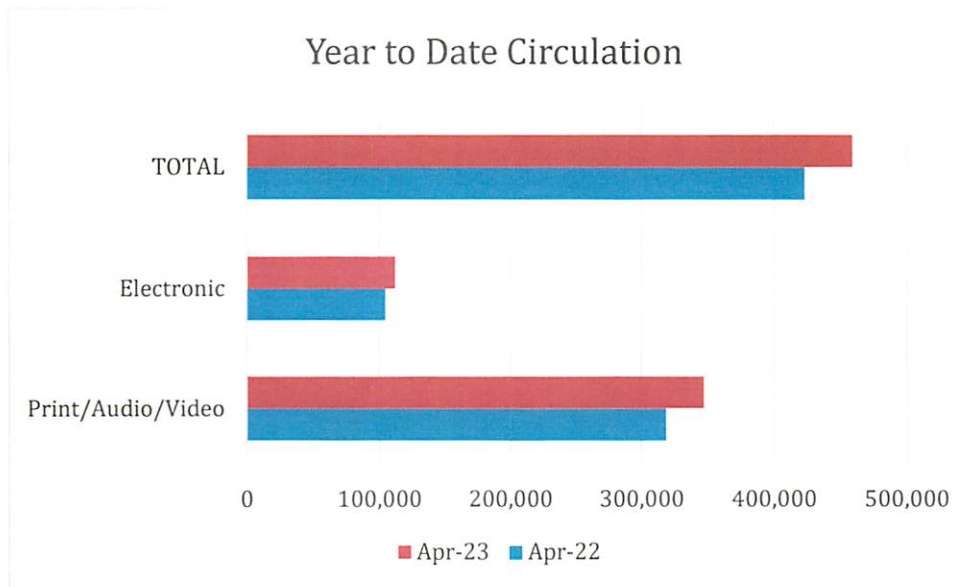


TRAVERSE AREA
DISTRICT
LIBRARY

Board of Library Trustees Regular Meeting
Library Director Report
Meeting Date: May 18, 2023

Library Activity

For a graphical presentation of the statistical information included below, please visit the link: [online TADL dashboard](#).



E-Book, magazine, downloadable audiobook, and database utilization

Again, Hoopla continues to run over budget. I am going to watch one more month but I think we need to again reduce the number of monthly check-outs.

Visitors – Woodmere, East Bay, and Kingsley Facilities

The busiest day for April was Friday, the 14th, with 1,062 patrons. In April 2023, there were 28,365 visitors at East Bay, Kingsley and the Main library. In April 2023, TADL added 1,906 new patrons district-wide. Many are these are due to the TCAPS library card mailing.

Public Computing

In the Technology Center and other computer services throughout the district, there was a decrease in visitors in April. This equates to 2,061 as opposed to 2,231 sessions in March 2023.

Additions to the Collection

In April 2023, 2,370 items were added to the district.

Behavior Issues

There were 11 incidents in April 2023 resulting in 1 suspension. During April of 2022, there were 25 incidents resulting in 17 suspensions mostly for 6 months or more. Safe Harbor closed for the season on April 15th. Jubilee House remains open. That is a 56% reduction of incidents and a 94% reduction in suspensions.

Intellectual Freedom

As book banning is constantly in the news, I am having more patrons express support for Intellectual Freedom to me as I am out and about. We did have one protestor who was very respectful and followed the rules by staying out by the bus stop.

April Outreach, Partnership & Community Activities

Purposeful Partnerships

- Drove the bookmobile and attended the Michigan Library Association Advocacy Day at the State Capital. Over 125 librarians met with every single elected official or their staff that day. The front of the capital was lined with Bookmobiles. I met with Representative Coffia and her staff, Representative Roth's staff and Senator John Damoose. The meetings focused around funding for libraries and the importance of libraries in our communities.



Innovative Engagement

- Helped at Poets' Night Out.
- Helped at MakerFest.

Community Activities

- Elected to the Michigan Library Association Board
- Attended the Interlochen music fundraiser for Interlochen Public Library.
- Participated as a community member in the TC Central High School Senior Led Conference Day.



Spring is here!

Michele P. Howard, MILS

TADL LIBRARIANS —

THANKS FOR:

A GREAT FACILITY!

THE CIRCULATION DESK —

CHAIRS BY THE WINDOWS!

ORGANIZATION —

KNOWLEDGE OF BOOKS

& COMPUTERS —

TIME YOU GENEROUSLY

GIVE TO HELP OTHERS!

YOUR CARE + CONCERN —

THANK YOU

SO MUCH!

Sincerely —



~ Traverse Area District Library ~

We want to hear from YOU!

Comments & Item Suggestions*

Date: _____



Say's me
Joshua

you guys Rock!

NO ITEMS... Just wanted to say it!

*Please hold this item for me

Name _____ Contact _____

BOARD MEMO

TO: TADL BOARD
FROM: MICHELE P HOWARD, MILS
SUBJECT: BUILDING CONTROL SYSTEM
DATE: 5/18/23

TADL administration has know that the current Building Management system needed updating since it is our original software/hardware (with upgrades) currently running our HVAC. Bret Boulter has been working with our consultants at Keen Technical to obtain 3 quotes for this system. See the chart below and the attached quotes.

Item	Trane Tracer System Controller (SC+) *	Smart Building Niagara N4 JACE	Airtech JENE-PC8000 (Tridium Niagara N4)
Replace existing Trane Building Control Unit (BCU)	\$25,400.00	\$28,985.00	\$28,670.00
Upgrade Air Handling Unit (AHU) and Chiller controllers	\$14,500.00	incl in BCU	\$21,080.00
Upgrade all Variable Air Volume (VAV) unit controllers	\$37,500.00	\$62,970.00	\$57,084.00
Upgrade Boiler control	\$8,500.00	incl in BCU	\$19,562.00
Total	\$85,900.00	\$91,955.00	\$126,396.00

*2022 quote; waiting on updated pricing

I am recommending we proceed with Smart Building Niagara without the upgrades to the Variable Air Volume (VAV) unit controllers. This amount is over my spending limit and I need approval to forgo the competitive bid process as allowed in Policy 2.2(12) Exceptions since the building control unit has specialized equipment.



Trane U.S. Inc.
5005 Corporate Exchange Blvd SE
Grand Rapids, MI 49512
Phone: (616) 971-1400
Fax: (616) 971-1401
Service Contact: (616) 971-1400

February 2022

John Jass
Traverse Area District Library
610 Woodmere
TRAVERSE CITY, MI 49686 U.S.A.
(231) 932-8500

Site Address:
Traverse Area District Library
610 Woodmere TRAVERSE CITY, MI 49686
United States

PROJECT NAME: BCU to SC+ Control Upgrade

Trane proposes to upgrade the existing Summit Building Control Unit with a New Web Based Tracer System Controller and update the down stream controllers.

Step 1

- Demo of the existing Building Control Unit (BCU)
- Furnish and Install a Web Based Tracer System Controller (SC+)
- Programming/Verification of existing Controllers
- Engineered Control Drawings
- Custom Graphics Modifications
- Owner Training
- 1 year parts/labor warranty on new components

- Option 1 Upgrade Controllers on AHU 1, 2, and chilled water
- Option 2 Upgrade Controllers All VAVs
- Option 3 Upgrade Boiler control

STEP 1 SC+BUDGET PRICE:	\$25,400.00
OPTION 1 BUDGET PRICE:	\$14,500.00
OPTION 2 BUDGET PRICE:	\$37,500.00
OPTION 3 BUDGET PRICE:	\$8,500.00

CLARIFICATIONS

- 1. This is a Budget

I appreciate the opportunity to earn your business, and look forward to helping you with all of your service needs. Please contact me if you have any questions or concerns.

Sincerely,

Jim Spero
Account ManagerSupersedes 1-10.48 (0919)

Keen Technical Solutions-Traverse Area District Library- HVAC DDC Controls Retrofit

Date: 04/06/2023

Smart Building Services (SBS) is pleased to provide a temperature controls proposal based on a walkthrough completed on 3/21/23.

Due to the proprietary nature of the current Trane temperature controls system, for the air handling equipment to be seamlessly integrated with the zone VAV boxes, it will be necessary to replace the VAV controllers. The existing VAV box dampers are a "worm gear" actuation type that modern VAV controllers are not able to actuate. For this reason, retro fit kits will need to be installed on the VAV boxes. This will require a sheet metal contractor to install. This work could be completed in stages. If budgeting is an issue, we would propose first converting the core HVAC equipment, i.e. AHU's, Boiler System, Chilled Water system. Then the 2nd phase will consist of installing the retrofit kits and new DDC controllers.

We have broken up our proposal into (2) phases.

Phase 1-Scope of Work

Building Management System (BMS)

- Provide (1) Niagara N4 JACE.
- Provide programming for a complete web-based Niagara BMS including HVAC system graphics, floor plans, building dashboard, alarms, trends/histories.
- Existing communication cabling will be reused.

Will require (1) Owner furnished internet network connection if remote access if desired (recommended).

Air Handling Units (Qty 2)

- SBS to furnish and install a new DDC controller.
- All existing sensors, relays and wiring are assumed to be in working order and can be reused. If these components are found to be faulty, replacement will be quoted separately from this project.

Hot Water System (Qty. 1)

- SBS to furnish and install a new DDC controller.
- All existing sensors, relays and wiring are assumed to be in working order and can be reused. If these components are found to be faulty, replacement will be quoted separately from this project.

Chilled Water System (Qty. 1)

- SBS to furnish and install a new DDC controller.
- All existing sensors, relays and wiring are assumed to be in working order and can be reused. If these components are found to be faulty, replacement will be quoted separately from this project.



smart building services

Phase 2-Scope of Work

VAV Boxes (Qty. 36)

- Provide and install new DDC controllers.
- Provide and install new zone temperature sensors.
- All existing discharge air temperature sensors and wiring are assumed to be in working order and can be reused. If these components are found to be faulty, replacement will be quoted separately from this project.
- Provide, **for installation by a sheet metal contractor**, Trane Vari-Trane VAV box retrofit kits.

Not Included

- Fire alarm or smoke detection work
- Sheet metal installation of VAV retrofit kits.
- Existing reheat control valves at VAV boxes to be reused.
- Any other work not stated above.

PHASE 1 PROPOSAL PRICE \$28,985.00
 (TWENTY EIGHT THOUSAND NINE HUNDRED EIGHTY FIVE DOLLARS)

PHASE 2 PROPOSAL PRICE \$62,970.00
 (SIXTY TWO THOUSAND NINE HUNDRED SEVENTY DOLLARS)

This proposal is hereby accepted, and Smart Building Services LLC is authorized to proceed with the work.

Purchaser's Company Name _____ Date _____

Printed Name _____ Title _____

PO # (If applicable) _____

Thank you!

Proposal by: Randy Stockfisch
 Smart Building Services LLC
 (231) 357-1650
randys@sbsmi.com



8815 S. Sprinkle Rd
 Portage, MI 49002
 Telephone: (269) 716-1150
 Email: service@airtechequipment.com

April 27th, 2023

Attn: All Bidders

SUBJECT: Traverse Area District Library BMS Upgrade **Quotation#04272023-01**

AIRTECH AUTOMATION, LLC is pleased to submit the following quotation:

- (1) Replace the existing Trane BCU with Lynxspring JENE-PC8000 network controller
 - a. JENE-PC8000 (Tridium N4 Software)
 - b. Integrate existing equipment control devices (2 AHU, 34VAV, Boiler & 2 Chillers)
 - c. Setup and configure Schedules, Alarming, & Trend History
 - d. Provide HTML5 Web Based Graphics
 - e. 3D Floor Plans

Front End Upgrade Price.....\$28,670.00

- (2) Replace the existing Trane PCM with Lynxspring JENE-EG534 N4 Edge Controller for AHU-01 & AHU-02
 - a. JENE-EG534 N4 Edge Controller (Tridium N4 Software)
 - b. Replace AHU sensors and damper actuators
 - c. Add CO2 Sensor in Return Air for Demand Ventilation
 - d. New IP based network communication cabling
 - e. Integrate AHUs into JENE-PC8000

Option 2 AHU Controls Upgrade Price.....\$21,080.00

- (3) Replace the existing Trane VAV controllers with Lynxspring JENE-EGVAV N4 Edge Controller (34 total)
 - f. JENE-EGVAV N4 Edge Controller (Tridium N4 Software)
 - g. Replace VAV temperature sensors
 - h. New IP based network communication cabling
 - i. Integrate VAVs into JENE-PC8000

Option 3 VAV Controls Upgrade Price.....\$57,084.00

- (4) Replace the existing Trane Boiler & Pump controllers with Lynxspring JENE-EG534 N4 Edge Controller
 - j. JENE-EGVAV N4 Edge Controller (Tridium N4 Software)
 - k. Replace Temperature Sensors
 - l. New IP based network communication cabling
 - m. Integrate into JENE-PC8000

Option 4 Price.....\$19,562.00

Clarifications:

Front End Upgrade

- All existing field controller devices to remain and be integrated.
- Must be performed before accepting optional Upgrades.

AHU Controls Upgrade – Option 2

- Hot Water and Chilled Water valves are not included in this upgrade. Existing to remain.
- Existing wiring will be reused as applicable. New wiring as needed

VAV Controls Upgrade – Option 3

- VAV Damper Actuators presumed functional and are not included in this upgrade
- Reheat Valves presumed functional and are not included in this upgrade
- Existing wiring will be reused as applicable. New wiring as needed

Boiler Control Upgrade – Option 4

- Existing wiring will be reused as applicable. New wiring as needed

General Clarifications:

- Work to be performed during normal working hours
- Remote Access is required during the installation and throughout the warranty period
- Quote includes all labor and parts for the items listed above
- One year parts and labor warranty

This quotation will remain in effect for 30 days from the above date. Purchase orders are subject to acceptance by the unit manufacturer and/or **Airtech Equipment, Inc.**

All parts are returnable and subject to a 20% re-stocking fee, unless otherwise stated.

To the above prices, please **ADD** any state or local taxes payable on the transaction under any Federal, State, or Local Statute.

Freight is **not** included, unless otherwise stated.

TERMS: Cash on delivery or Net 30 Days upon receipt of satisfactory credit information. Unpaid balance subject to 1-1/2% service charge per month (18% per annum). Back charges by any and all parties must be approved in writing, by **Airtech Equipment, Inc.**, and/or the equipment manufacturer prior to any work or service.

Thank you for allowing **Airtech Equipment, Inc.** to provide the above information. If you need further information, or technical assistance, please do not hesitate to contact our office.

Sincerely,

AIRTECH EQUIPMENT, INC.

Kevin Richmond

AIRTECH EQUIPMENT, INC. TERMS & CONDITIONS

1. The Agreement.

A. Scope of Agreement. These Airtech Equipment, Inc. Terms and Conditions ("Terms and Conditions") and the attached proposal, agreement, or purchase order together constitute the agreement ("Agreement") of Buyer and Seller. All sales or provisions of goods or services by Airtech Equipment, Inc. ("Seller") to Buyer, pursuant to the Agreement, are governed by these Terms and Conditions. If these Terms and Conditions in any way conflict with other parts of the Agreement, these Terms and Conditions will govern such conflict and supersede the other parts of the Agreement, except to the extent the parties explicitly agree in writing. Regardless of whether Buyer signs the Agreement, Buyer's acceptance of delivery of, or Buyer's payment for, the goods or services shall constitute Buyer's agreement to the terms of, and entry into, the Agreement.

Definitions. "Buyer" means the entity or person, other than Seller, that accepted and signed the attached proposal, agreement, or purchase order. Products, equipment, supplies, parts or goods provided or sold by Seller to Buyer are referred to in this Agreement as "goods." Services provided or sold by Seller to Buyer are referred to in this Agreement as "services."

2. Payment Terms. Unless otherwise specified in Seller's quotation or acknowledgment, payment in full of the price is due thirty (30) days after shipment of the goods or performance of the services, without discount, except that, at any time, Seller, in its sole discretion, may require advance payment or may ship C.O.D. Any payment that is not made when it is due shall accrue a late charge of 1-1/2% per month. Payment must be made at Seller's office address listed below. Seller may increase its prices at any time upon notice to Buyer to reflect any unusual or unforeseen increase in Seller's costs, including, but not limited to, an increase in the cost of materials.

Delivery and Risk of Loss. Unless Seller agrees otherwise in writing, Seller shall deliver goods F.O.B. (Uniform Commercial Code term) Seller's facility and risk of loss of the goods shall pass to Buyer at Seller's facility. Shipping, delivery, and performance dates are estimates only, and time is not of the essence. Seller shall not in any event be required to ship the goods unless and until Buyer shall have paid in full the purchase price of all tooling that Seller shall have ordered for use in producing the goods. Seller may ship all goods at one time or in portions from time to time. Seller shall have the right, but not the obligation, to determine the method of shipment and routing of the goods, unless otherwise stated in Seller's quotation or acknowledgment.

3. Freight and Taxes. Seller's price does not include any freight, shipping, or carrier charges, or any privilege, occupation, personal property, value-added, sales, excise, use, or other tax, and Buyer shall be liable for all such charges or taxes, regardless of whether Seller invoices Buyer for them.

Unavoidable Delay. If Seller is not able to finish and deliver the goods to Buyer, or to perform the services on time because of anything Seller cannot control (including, but not limited to, casualty, labor trouble, accidents, unavailability of supplies or transportation, acts of God, disease, injury, pandemic, epidemic, national, state or local emergency, or Buyer's failure to timely approve production samples or perform any obligation under this Agreement), then the estimated delivery or performance time shall be extended accordingly, and Seller shall not be liable to Buyer for any damages caused by the delay.

4. Changes. Seller shall have the right to make design or engineering changes to goods or services, but Seller will not, without Buyer's prior approval, make any changes in operational or dimensional specifications that Buyer submits. Stenographical and clerical errors in quotations are subject to correction.

Inspection. Buyer may not return any goods that Buyer has accepted. Buyer will be deemed to have accepted all goods for which it does not deliver to Seller a proper notice of rejection, in writing, within ten (10) days of delivery of such goods. All notices of rejections of goods must be in writing and must correctly state in detail the defects or deficiencies in the goods.

5. Warranty.

A. Goods Manufactured by Seller. Subject to the limitations and other terms of this Agreement (including, but not limited to, those in Section 8 or Section 9 of this Agreement), Seller warrants the goods that it manufactures against defects in materials or workmanship under normal use consistent with product instructions for a period of one (1) year from the date the Buyer purchases the product. This warranty extends only to the Buyer and cannot be assigned to any other party. If warranted products contain defects covered under this warranty, Seller's obligation shall be limited to, in Seller's sole and absolute discretion, repairing or replacing the defective parts. Repaired or replaced parts are warranted for the remainder of the original warranty period. Buyer agrees to inspect the goods immediately upon receipt of such goods from Seller. If, prior to alteration by Buyer, any item of goods not subject to abuse or misuse proves to be defective (as defined below) within one (1) year following the date of shipment, and if Buyer gives written notice to Seller of such defect within that period and does not alter the goods, then Seller shall, at Seller's option, either repair (or have repaired) or replace the defective item, at Seller's expense. Notice of a breach of Seller's warranty must be made in writing addressed to Seller, setting forth sufficient detail to permit identification by Seller of the claimed defect. Samples should accompany such notification. If Buyer alters the goods or fails to notify Seller within the one (1) year period following shipment of the goods, any claim for breach of warranty shall be conclusively deemed to have been waived by Buyer with respect to the alleged defect. In the event of a defect in any goods constituting a breach of the warranty provided herein, Seller shall furnish instructions for the disposition of the defective goods. If Seller fails to repair or replace any defective item within a reasonable time, then Seller shall be liable to Buyer for the lesser of (i) the reasonable costs of repair or replacement by a third party or (ii) that part of the purchase price of the defective goods that shall have been paid by Buyer, but Buyer shall not obtain repair or replacement by a third party without giving Seller at least fifteen (15) days prior written notice, during which time Seller may repair or replace the defective item. An item shall be considered "defective" if it is found by Seller to have been defective in materials or workmanship and if the defect materially impairs the value of the goods to Buyer, except that the goods shall not be defective to the extent that (i) they conform with drawings, specifications, goods, testing results, dimensional layouts, or manufacturing methods that have been submitted or approved by Buyer or (ii) they are damaged due to misapplication, faulty installation, or insufficient or unauthorized startup or service. Seller does not warrant that the goods or services will meet Buyer's specifications, drawings, or samples unless expressly agreed in writing. Seller does not warrant the workmanship of others who have performed work on or used the goods. Neither Buyer nor any other person may modify or expand the warranty provided herein, waive any of the limitations, or make any different or additional warranties with respect to the goods. Any statements to the contrary are hereby rendered null and void unless made in a writing signed by an authorized officer for Seller.

Goods Not Manufactured by Seller. Seller does not in any way warrant, and shall not be liable for, goods manufactured by other persons. Buyer's sole recourse with respect to those goods, or defects in or damages caused by or related to those goods, shall be against the manufacturers.

B. Services. If a service proves to be defective (as defined below) within one (1) year after Seller performs the service (and if, in the case of a service involving Seller's processing of products furnished by Buyer, Buyer returns the products to Seller within that period, F.O.B. Seller's facility) then Seller shall, at its option, either re-perform the service, at Seller's expense, or refund to Buyer the price that Buyer paid to Seller for that part of the service that was defective and shall reimburse Buyer for reasonable freight charges incurred in returning the products to Seller. A service shall be considered "defective" if it is found by Seller to have failed to meet the standards in Seller's industry and if that failure materially impairs the value of the service to Buyer, except that if Buyer shall have approved or furnished to Seller specifications for the service, then the service shall not be considered defective to the extent it conforms to the specifications.

6. Limitations. EXCEPT AS EXPLICITLY STATED IN SECTION 8, SELLER HEREBY DISCLAIMS, AND DOES NOT MAKE, ANY WARRANTY AS TO THE GOODS OR SERVICES AND, IN PARTICULAR, DISCLAIMS, AND DOES NOT MAKE, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE; AND BUYER IS SOLELY RESPONSIBLE FOR DETERMINING THE PROPER APPLICATION AND USE OF THE GOODS. SELLER

DISCLAIMS ALL IMPLIED WARRANTIES, AND BUYER AGREES THAT THERE ARE NO IMPLIED WARRANTIES. SELLER SHALL HAVE NO LIABILITY FOR LOSS OR DISCLOSURE OF CONFIDENTIAL OR OTHER INFORMATION, OR FOR DATA OR COMPUTER SYSTEM BREACHES OR DAMAGE OF ANY KIND.

BUYER SHALL HAVE NO REMEDY OR RIGHT AGAINST SELLER IN RELATION TO THIS AGREEMENT, INCLUDING, BUT NOT LIMITED TO, FOR ANY BREACH OR DEFAULT UNDER THE AGREEMENT, OR IN RELATION TO ANY GOODS OR SERVICES PROVIDED BY SELLER PURSUANT TO THIS AGREEMENT, EXCEPT AS SPECIFICALLY PROVIDED IN SECTION 8 OF THIS AGREEMENT. SELLER SHALL NOT HAVE ANY TORT LIABILITY TO BUYER OR ANY OTHER PERSON WITH RESPECT TO THIS AGREEMENT OR ANY OF THE GOODS OR SERVICES. SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL, EXEMPLARY, INDIRECT OR PUNITIVE DAMAGES IN RELATION TO THIS AGREEMENT, INCLUDING, BUT NOT LIMITED TO, DAMAGES ARISING FROM ANY PRODUCT DEFECT, DELAY, NONDELIVERY, RECALL, OR OTHER BREACH. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, SELLER'S LIABILITY TO BUYER UNDER THIS AGREEMENT FOR ANY MATTER OR CLAIM (INCLUDING, BUT NOT LIMITED TO, FOR MATTERS RELATED TO THIRD-PARTY CLAIMS, INDEMNIFICATION CLAIMS, OR WARRANTY CLAIMS) WILL NOT EXCEED THE LESSER OF BUYER'S ACTUAL DAMAGES OR THE AMOUNT PAID BY BUYER WITH RESPECT TO THE SPECIFIC GOODS OR SERVICES FROM WHICH THE DAMAGES OR CLAIM ARISE. FOR EXAMPLE, IF THE AGREEMENT CALLS FOR SELLER TO PROVIDE TEN ITEMS AND BUYER CLAIMS DAMAGES ONLY WITH RESPECT TO ONE ITEM, SELLER'S LIABILITY TO BUYER WILL NOT EXCEED THE LESSER OF BUYER'S ACTUAL DAMAGES OR THE AMOUNT PAID BY BUYER WITH RESPECT TO THAT ONE ITEM.

7. Permits, Review, Approval, and Compliance. Seller is not responsible for obtaining any permit, inspection, or license that is required for installation or operation of the goods or performance of the services, except to the extent the law imposes such responsibility solely on Seller. Seller does not make any promise or representation that the goods will conform to any law, ordinance, regulation, code, or standard. Any specifications or products marked as "reviewed" by any party for use related to this contract shall be deemed to have been approved by that party.

Safety Features. Buyer shall install and operate the goods properly and according to Seller's operating instructions and shall not remove or change any safety device, warning, or operating instructions that Seller places on the goods.

8. Components of Another Product. If any of the goods are incorporated into or become part of, or if any of the services relate to, equipment, goods, or property that are not manufactured or constructed by Seller, then (i) Buyer shall be responsible for obtaining all related permits, inspections, and licenses, (ii) Buyer shall cause the equipment, goods, or property to conform to all applicable laws, ordinances, regulations, codes, and standards, and (iii) Buyer shall place on the equipment, goods, or property all safety devices and warnings, and shall furnish to the end user all operating instructions, that are necessary or desirable to satisfy the law or prevent any death, personal injury, or property damage from being caused by any use or operation of the equipment, goods, or property.

Intellectual Property and Confidentiality. This Agreement will not be deemed to transfer, assign, or license to Buyer any right, title, or interest in or to, any idea, invention, technology, idea, concept, discovery, work of authorship or composition, patent, copyright, trademark, trade secret, know-how, formula, design, engineering drawing, device, information compilation, system, software, proprietary item, manufacturing, fabrication, installation or service method or process, tooling, or other intellectual property owned by Seller or its third party licensors (collectively "Intellectual Property"). All Intellectual Property will be Seller's sole property. Buyer hereby assigns to Seller all right, title, and interest that Buyer now has or may in the future acquire in the Intellectual Property. Buyer agrees to execute any waiver, assignment, document, or release requested by Seller to evidence Seller's clear title to Intellectual Property. Buyer shall keep confidential, not disclose to any person, and not use for any purpose (other than the permitted purposes of this Agreement), any of the Intellectual Property or any information about Seller's business, operations activities, or owners, except as consented to by Seller in writing. Buyer will not use any Intellectual Property, in whole or in part, to copy, redesign, reverse engineer, replicate, or manufacture (or enable manufacture or performance by itself or any third party) all or any portion of the goods or services.

9. Cyber Security.

A. Data Security. "Seller's Data" will include all data of Seller, including, but not limited to, business information, personal information, customer information, proprietary information, confidential information, and Intellectual Property. Buyer shall protect Seller's Data from unauthorized access, acquisition, or disclosure, destruction, alteration, accidental loss, misuse, or damage, and shall ensure that all measures taken to protect Seller's Data comply with applicable data protection and privacy laws, as well as this Agreement.

Payment Fraud Prevention. Seller shall provide wire, ACH, or credit card payment instructions ("Payment Instructions") to Buyer to allow Buyer to pay Seller invoices. Seller's Payment Instructions may include confidential information regarding Seller's bank account, routing, credit card payment processing account, and other financial account information related to making payments to Seller. Buyer must verbally confirm Payment Instructions with Seller's CFO prior to making any payment based on those Payment Instructions. Buyer shall be liable for any payments not received by Seller arising from Buyer's failure to confirm Seller's Payment Instructions.

B. Cyber Insurance. Buyer shall at its sole cost and expense procure and maintain in force during the term of this Agreement and for two (2) years following the termination or expiration of this Agreement cyber liability and cyber errors and omissions liability insurance from an insurance company having an A.M. Best (or similar rating agency) rating of A- or better with limits of not less than Two Million Dollars (\$2,000,000.00) per claim and in the aggregate ("Cyber Policy"). The Cyber Policy shall include, but not be limited to, insurance coverage for the unauthorized access, acquisition, physical taking, loss, destruction, or disclosure of Seller Data or Buyer data, which may include personal information, customer information, or information regarding Intellectual Property. The Cyber Policy shall include, at a minimum, coverage for (i) data privacy and computer network security incidents and breaches, (ii) internet and electronic media liability, (iii) professional services liability, (iv) wire funds transfer, payment, or financial account fraud, (v) business interruption coverage, (vi) cyber extortion (for example, ransomware) coverage for threats against data and identity theft, (vii) claims related to computer viruses or other malicious code, (viii) claims related to theft or destruction of data, (ix) claims of intellectual property rights infringement (excluding patent infringement), (x) breaches of this Agreement related to data privacy or network security, and (xi) reimbursement for all expenses and costs associated with investigating and responding to a security breach, recovery of encrypted or stolen data or property, legal expenses, providing notice to affected parties and regulators, mitigation of damages, consultants, credit monitoring for parties affected by a security breach, data privacy regulatory fines and penalties. Upon request, Buyer shall provide evidence of continuous coverage to Seller. Buyer will notify Seller at least thirty (30) days prior such insurance coverage being reduced or terminated.

10. Cancellation. Buyer has no right to, and shall not, cancel all or any part of this Agreement. However, if Buyer fails to make any payment or perform any obligation that Buyer at any time owes to Seller, whether or not related to this Agreement, Seller may consider Buyer's failure to be an anticipatory repudiation of any or all outstanding contracts that provide for Seller to sell goods or services to Buyer, and Seller may, without liability to Buyer, cancel any or all of those outstanding contracts (including, but not limited to, this Agreement).

Indemnity. Buyer shall indemnify and hold harmless Seller with respect to all damages, losses, liabilities, claims, and expenses (including, but not limited to, all court costs and attorneys fees), that Seller incurs or becomes subject to in relation to: (i) Buyer's breach of any of Buyer's obligations under the Agreement; (ii) any claimed unfair competition, any claimed patent, trademark or copyright infringement, or any other claim relating to Seller's manufacture of the goods, or performance of the services, to Buyer's specifications; or (iii) Buyer's assertion of any claim, or commencement of any proceeding, against Seller to the extent that it is not provided for by Section 8 of this Agreement, or is precluded by Section 9 or any other provision of this Agreement.

11. Seller's Rights. Seller has all rights and remedies that applicable law gives to sellers. Seller's rights and remedies are cumulative, and Seller may exercise them from time to time. Seller's waiver of any right on one occasion shall not be a waiver of any future exercise of that right.

Time for Bringing Action. In addition to the other limitations on claims or proceedings in this Agreement, Buyer may not commence any legal or equitable action or proceeding against Seller for breach of this Agreement or for any other claim that arises out of or relates to this Agreement, or the goods or services provided under this Agreement, unless Buyer commences such action or proceeding within one (1) year after Seller's delivery or performance of the relevant goods or services; and all proceedings not commenced within such time period, and all related claims, shall be deemed forever waived and barred.

12. Notices. All notices from Buyer to Seller in relation to this Agreement (including, but not limited to, all claims or notices related to goods or services) shall be in writing and shall be delivered or sent to Seller at the following address:

Airtech Equipment, Inc.
Attn: Tom Caryl
3523 Lousma Dr SE
Grand Rapids, MI 49548

13. Applicable Law. This agreement between Seller and Buyer shall be considered to have been made in the State of Michigan, and it shall be governed by and interpreted according to Michigan law. All actions or proceedings that arise out of or relate to this Agreement shall be commenced and take place in an appropriate forum or court in Kent County, Michigan; and Buyer irrevocably consents that any such court shall have personal jurisdiction over Buyer and hereby waives any objection that the court is an inconvenient forum or that venue in such court is not proper.

Complete Agreement; Amendment; Assignment. This Agreement contains the entire agreement between Buyer and Seller relating to the transactions or matters provided for in this Agreement. No oral statement or agreement is part of the Agreement. No prior written agreement or provision is part of this Agreement. No change or modification of this Agreement will be valid unless the same is in writing and signed by all parties to this Agreement. No other person is a party to, or beneficiary of, this Agreement. Buyer may not assign its rights or obligations under this Agreement without Seller's written consent.