

IEA, INC.

# 2022 - 2023 IAQ Walkthrough



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## Saint Paul Public Schools EXPO Magnet

Walkthrough Date:  
Tuesday, November 22, 2022  
Retest Date: January 26, 2023

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## Project Description

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IEA conducted an Indoor Air Quality (IAQ) walkthrough at EXPO Magnet by IEA representative, Sashya Wandmaker. This walkthrough was conducted with the intent of gathering basic air quality and visual observations which will assist the District in making informed and proactive decisions to improve and maintain acceptable air quality in the building. This walkthrough is based upon the Environmental Protection Agency's (EPA's) Tools for Schools IAQ guidelines.

Some observations gathered during the walkthrough may identify issues which may require additional testing, evaluation or further investigation.

The findings, conclusions and recommendations presented herein are believed to be accurate and representative of the building on the date and time of the walkthrough.

### **GENERAL COMMENTS**

The analysis and opinions expressed in this report are based upon data obtained from Saint Paul Public Schools at the indicated locations. This report does not reflect variations in conditions that may occur across the site, property, or facility. Actual conditions may vary and may not become evident without further assessment.

The report is prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted indoor air quality practices. Other than as provided in the preceding sentence, no warranties are extended or made.

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## Building Information

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General information regarding the building was collected during the walkthrough. The information gathered during this process is a vital component, as it is helpful in determining how these items may play a role in possible IAQ related issues.

Below is a summary of the information gathered during the walkthrough:

- The building has three (3) floors.
- The building has not had recent construction.
- There are operable and inoperable windows in the exterior rooms within the building.
- The building was originally constructed in 1961.
- The building does utilize walk-off mats.
- There are below grade floors.
- There are tunnels under portions of the building.

## Observations Summary and Air Quality Measurements

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO <sub>2</sub> (ppm)	CO (ppm)	RH (%)	Temp (°F)
OUTDOORS					407	0.3	57.0	37.0
1001 MAIN OFFICE	1	No		No	623	0.2	21.0	69.3
1008	0	No		No	646	0.1	22.4	69.8
1003	0	No		No	608	0.2	21.7	68.9
1004	1	No	<ul style="list-style-type: none"> <li>Plants</li> </ul>	No	633	0.1	22.2	68.4
1005	1	No		No	666	0.1	22.5	68.9
1006	0	No		No	594	0.1	21.2	69.3
1007	4	No		No	1,193	0.2	25.9	70.2
RETEST 1007	1	No		No	693	0.2	23.1	70.8
1101 NURSES OFFICE	3	No		No	728	0.2	21.6	70.2
1101A NURSES OFFICE	0	No	<ul style="list-style-type: none"> <li>Stained Ceiling Tiles</li> </ul>	No	688	0.2	22.3	70.0
1102	0	Yes Crayons		No	592	0.2	20.5	70.2
1201 GYM	16	No		No	800	0.2	23.9	70.0
1205	1	No	<ul style="list-style-type: none"> <li>Stained Ceiling Tiles</li> </ul>	No	851	0.2	23.2	70.9
1309	0	No		No	828	0.3	23.7	70.3
1103	6	No		No	663	0.2	21.5	69.6
1104	0	No	<ul style="list-style-type: none"> <li>Stained Ceiling Tiles</li> </ul>	No	520	0.1	18.9	70.7
1105	3	No		No	629	0.2	20.4	70.5
1106	9	No		No	589	0.2	19.8	70.2
1202	4	No	<ul style="list-style-type: none"> <li>Stained Ceiling Tiles</li> </ul>	No	711	0.2	21.3	70.3

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO <sub>2</sub> (ppm)	CO (ppm)	RH (%)	Temp (°F)
1107	7	No	• Plants	No	621	0.1	20.7	70.3
1108	3	No		No	566	0.1	20.1	70.0
0117	1	No	• Plants	No	621	0.3	18.5	74.5
0121	0	No		No	563	0.2	19.3	69.8
0101	0	No		No	582	0.2	19.9	70.3
0102	0	No		No	570	0.2	20.3	70.0
0103	11	No	• Stained Ceiling Tiles	No	856	0.2	23.0	70.0
0104	17	No		No	815	0.3	23.6	71.8
0105	14	No		No	776	0.3	19.9	72.9
0106	16	No		No	1,012	0.3	20.8	72.0
0108	24	No		No	757	0.1	20.8	71.6
0109	0	No	• Plants	No	554	0.1	18.9	70.3
1110	5	No		No	704	0.1	20.9	70.7
0107	25	No		No	703	0.3	21.3	71.4
1111	17	No		No	809	0.2	21.4	71.6
1112	2	No		No	617	0.2	19.6	71.4
1113	11	No	• Plants	No	785	0.2	20.5	72.5
1114	17	No	• Stained Ceiling Tiles	No	761	0.2	21.3	72.0
1115	23	No	• Stained Ceiling Tiles	No	936	0.2	21.9	71.4
1116	3	No	• Plants	No	681	0.2	20.2	70.2
1117	24	No		No	820	0.2	23.4	70.2
1206	23	No		No	800	0.2	23.1	71.2
2108	25	No		No	913	0.2	23.3	70.2
2109	22	No		No	904	0.2	23.7	70.2
2110	25	No	• Plants	No	944	0.2	24.3	70.5
2114	1	No	• Plants	No	561	0.2	20.9	70.7
2112	5	No	• Plants	No	671	0.2	21.4	70.7

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO <sub>2</sub> (ppm)	CO (ppm)	RH (%)	Temp (°F)
2113	0	No		No	616	0.2	20.9	70.5
2111	0	No		No	559	0.2	21.2	70.2
2115	23	No	<ul style="list-style-type: none"> <li>Plants</li> </ul>	No	662	0.2	23.6	70.3
2116	16	No	<ul style="list-style-type: none"> <li>Aquariums (fish)</li> <li>Live Animals</li> <li>Plants</li> </ul>	No	682	0.1	22.6	70.5
2117A	0	No		No	551	0.2	21.1	69.6
2117B	0	No		No	513	0.1	20.4	69.8
2207	1	No		No	670	0.3	20.6	71.6
2206	2	No	<ul style="list-style-type: none"> <li>Stained Ceiling Tiles</li> </ul>	No	692	0.1	22.2	71.4
2119	26	No		No	691	0.2	23.0	70.2
2120	0	No		No	475	0.2	19.3	70.9
2208	0	No		No	488	0.1	19.5	70.5
2121	16	No	<ul style="list-style-type: none"> <li>Plants</li> </ul>	No	736	0.1	22.8	70.7
2102	15	No		No	720	0.2	21.6	70.5
2102B	6	No		No	750	0.1	22.1	70.0
2103	20	No		No	802	0.1	23.2	70.0
2104	26	No	<ul style="list-style-type: none"> <li>Plants</li> </ul>	No	937	0.2	25.2	70.3
2106	1	No		No	511	0.1	20.1	70.2
2106	1	No		No	510	0.1	19.9	70.2
2105	16	No		No	565	0.2	20.2	70.2
0201	95	No		No	918	0.3	24.4	71.1
0202 KITCHEN	2	No		No	667	0.2	20.9	70.9
0205 KITCHEN OFFICE	0	No		No	643	0.2	20.7	70.7

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## Summary of Concerns & Recommendations

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See below for IEA's list of concern areas and recommendations:

### **Indoor Air Quality Parameters/Guidelines**

After IEA completed the initial IAQ walkthrough, the ventilation system(s) serving rooms with carbon dioxide measurements at or above 1,100 ppm were evaluated by SPPS. After ventilation adjustments or repairs were made, IEA returned to those rooms on March 20, 2023, to repeat the walkthrough. The “retest” data is included in this report for reference.

IEA recorded area(s) with humidity levels outside the ASHRAE recommended range of 30 - 60%. Relative humidity levels identified in area(s) listed below were found to be outside these guidelines. Low humidity levels tend to dry mucous membranes which may result in increased susceptibility to irritation. Elevated humidity levels can lead to condensation and provide conditions conducive to fungal growth. Low relative humidity is common in buildings during the heating season. An evaluation of the ventilation system controls, performance and operation is recommended.

- IEA identified sixty-eight (68) rooms with relative humidity levels below 30%. However, this is common for non-humidified buildings during the heating season and is not considered an issue.

### **Odors**

Odors were detected during the site visit in the building. If the source of the odor cannot be easily identified, IEA can provide further investigation or recommendations.

- 1102 *Crayons*

### **Stained Ceiling Tiles**

Stained ceiling tiles were found in the room(s) shown below. The impacted ceiling tiles should be removed and replaced, and the cause of the moisture repaired.

- 0103
- 1101A NURSES OFFICE
- 1104
- 1114
- 1115
- 1202
- 1205
- 2206

### **Plants**

Plants in an occupied location can be a source of allergens to sensitized individuals due to the pollen and soil mold. It is recommended that plants be removed from locations occupied by sensitized individuals. If plants are to remain in the area, IEA recommends that plants should not be placed near air unit ventilators or air supply diffusers. Additionally, plants should be watered from the bottom. These measures will help control pollen and mold spores from becoming airborne.

- 0109      • 2110
- 0117      • 2112
- 1004      • 2114
- 1107      • 2115
- 1113      • 2116
- 1116      • 2121
- 2104

### **Live Animals / Aquariums**

IEA observed live animal(s). Prior to having animals, the Building Principal should be consulted. Consult parents about potential allergies in a take-home note with students or during parent-teacher conferences. IEA recommends that the animal and cages/cases are regularly cleaned/maintained and stored away from air supply and return vents.

- 2116      • 2116