

IEA, INC.

2022 - 2023 IAQ Walkthrough



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Saint Paul Public Schools Hamline Elementary School

Walkthrough Date:
Friday, January 13, 2023

Project Description

IEA conducted an Indoor Air Quality (IAQ) walkthrough at Hamline Elementary School by IEA representative, Jon Gorostiaga. 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.

Building Information

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 two (2) floors.
- The building has not had recent construction.
- There are inoperable windows in the exterior rooms within the building.
- The building was originally constructed in 1953.
- 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 ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
OUTDOORS					355	0.2	27.0	19.0
1208 MAINTENANCE OFFICE	1	No		No	331	0.2	18.3	73.0
1000 MAIN OFFICE	2	No		No	438	0.3	17.3	72.9
1001 OFFICE	1	No		No	441	0.2	17.4	72.5
1003 CONFERENCE	0	No		No	425	0.2	17.4	72.1
1005 WORKROOM	1	No		No	391	0.2	17.2	71.8
1010 PRINCIPAL OFFICE	0	No		No	435	0.2	18.7	71.4
1008 OFFICE	0	No		No	456	0.2	18.9	71.2
1004 COT	3	No		No	487	0.2	19.1	72.0
1006 OFFICE	2	No		No	584	0.2	19.1	72.9
1012 LOUNGE	1	No		No	466	0.2	17.6	74.3
1123 KITCHEN	1	No		No	498	0.3	17.7	71.8
1238 KITCHEN OFFICE	0	No		No	523	0.2	19.2	72.0
1120 CAFETERIA	36	No		No	559	0.2	20.2	72.3
1103	1	No		No	483	0.2	19.7	69.6
1105	1	No		No	473	0.2	19.2	70.3
1107	20	No		No	526	0.2	21.7	69.8
1307 GYMNASIUM	0	No		No	434	0.2	18.0	70.9
1401	5	No	• Plants	No	473	0.2	17.1	71.2
1405	1	No	• Plants	No	421	0.2	16.5	72.0
1407	29	No		No	592	0.2	18.2	72.0
1420	0	No		No	419	0.2	16.2	72.3
1414	0	No		No	417	0.2	15.9	72.5

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1412	0	No		No	435	0.2	16.0	72.9
1410	0	No		No	562	0.2	16.5	73.0
1411C OFFICE	2	No		No	421	0.2	16.1	71.6
1411	0	No		No	429	0.2	16.7	71.4
1411B	0	No		No	420	0.2	16.5	71.2
1411A OFFICE	1	No	• Plants	No	451	0.2	16.1	72.5
1515 REC STUDIO	0	No		No	355	0.2	16.0	69.8
1507	0	No	• Plants	No	360	0.2	17.6	67.8
1503 RECEPTION OFFICE	0	No		No	392	0.2	17.7	67.8
1503B OFFICE	0	No		No	357	0.2	17.3	68.5
1501 REC CONFERENCE	0	No		No	352	0.2	16.7	69.4
1504 OFFICE	1	No		No	428	0.2	18.0	69.8
1506 CONFERENCE	0	No		No	358	0.2	16.9	69.3
130B OFFICE	0	Yes Stuffy		No	569	0.2	19.8	71.2
1109	26	No		No	679	0.2	19.8	71.8
1101	20	No		No	607	0.2	19.5	71.4
1223 OFFICE	0	No	• Stained Ceiling Tiles	No	737	0.2	20.2	71.6
1211 OFFICE	0	No		No	809	0.2	21.0	71.1
1213	1	No		No	763	0.2	20.3	71.8
1215 OFFICE	1	No	• Stained Ceiling Tiles	No	746	0.2	20.8	71.2
1217	20	No		No	805	0.2	21.9	69.6
1216	16	No		No	819	0.2	22.3	69.3
1214	18	No		No	847	0.2	23.0	68.9
1202	8	No		No	760	0.2	57.8	68.9
1201	15	No		No	818	0.2	22.4	69.1
1203	15	No		No	826	0.2	22.4	69.3
1205	18	No		No	564	0.2	23.0	69.3

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1206	19	No		No	774	0.3	20.1	73.0
1204	17	No		No	876	0.2	21.4	70.9
2110 LIBRARY	0	No		No	788	0.2	22.1	69.1
2202	18	No		No	871	0.2	22.8	69.6
2203	24	No		No	864	0.2	23.4	69.8
2204	15	No		No	834	0.2	23.0	69.6
2206	23	No		No	881	0.2	24.1	69.4
2205	25	No		No	883	0.2	22.7	70.0
2217	24	No		No	973	0.2	23.3	70.3
2221	0	No		No	774	0.2	21.6	70.2
2222	5	No		No	791	0.2	23.5	69.4
2218	20	No		No	967	0.2	23.5	69.4
2211 OFFICE	0	No		No	790	0.2	21.8	69.4
2213	0	No		No	775	0.2	21.2	70.0
2201	18	No		No	835	0.2	21.7	70.3
2220	5	No		No	818	0.5	22.9	69.1
2219	1	No		No	801	0.2	22.3	70.0

Summary of Concerns & Recommendations

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

Indoor Air Quality Parameters/Guidelines

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-five (65) 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.

IEA recorded area(s) with temperatures outside the recommended range. During the heating season, ASHRAE recommends that temperatures be between 68°F and 75°F. Evaluation of temperature controls and/or ventilation system performance and operation is recommended.

- 1503 RECEPTION OFFICE
- 1507

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.

- 130B OFFICE *Stuffy*

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.

- 1215 OFFICE
- 1223 OFFICE

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.

- 1401
- 1411A OFFICE
- 1405
- 1507