

IEA, INC.

2022 - 2023 IAQ Walkthrough



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Saint Paul Public Schools Bruce F. Vento Elementary School

Walkthrough Date:
Tuesday, January 17, 2023

Project Description

IEA conducted an Indoor Air Quality (IAQ) walkthrough at Bruce F. Vento 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 one (1) floor.
- 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 1970.
- There are additions to the building, in the following year(s): 2002.
- The building does utilize walk-off mats.
- There are below grade floors.
- There are no 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					410	0.2	33.0	34.0
1317 CUSTODIAN OFFICE	1	No		No	606	0.2	29.8	70.2
1312 KITCHEN	3	No		No	669	0.2	29.4	70.7
1321 OFFICE	1	No		No	672	0.2	29.1	70.7
1311 CAFETERIA	2	No		No	611	0.2	28.6	70.3
1420	24	No		No	945	0.2	31.4	70.7
1419	21	Yes Stuffy		No	851	0.2	29.5	71.2
1418	16	Yes Stuffy		No	823	0.2	29.3	71.8
1417	22	Yes Fragrance		No	797	0.2	29.1	72.1
1411 OFFICE	1	No		No	699	0.5	27.5	71.8
1415 OFFICE	0	No		No	684	0.2	27.4	71.6
1409 OFFICE	0	No		No	596	0.2	26.4	73.8
1407 OFFICE	0	No		No	578	0.2	24.5	76.1
1406	14	No		No	790	0.3	26.0	76.8
1404	24	No		No	866	0.4	27.7	75.0
1403	25	No		No	1,138	0.3	30.1	74.5
1402	4	No		No	741	0.2	30.0	73.8
1408 LOINGE	0	No		No	570	0.2	25.5	74.7
1304	5	No		No	456	0.2	26.8	70.9
1300B	0	No		No	440	0.2	26.8	70.5
1309	0	No		No	633	0.2	29.0	69.3
1309A	0	No		No	587	0.2	29.4	68.7

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1302 OFFICE	0	No	• Plants	No	457	0.2	27.9	69.4
1301 OFFICE	2	No		No	497	0.2	28.2	69.3
1306 WORKROOM	1	No		No	497	0.2	29.0	69.3
1310 OFFICE	0	No		No	571	0.2	29.2	68.5
1215	6	No		No	608	0.2	29.0	69.8
1214	0	No		No	618	0.2	28.8	70.3
1213	19	No		No	667	0.2	29.1	70.7
1212	17	No		No	534	0.2	27.7	70.9
1211	3	No		No	605	0.2	28.4	71.2
1210	20	No		No	626	0.2	28.2	71.6
1207	0	No		No	490	0.2	26.8	71.6
1206	25	No		No	502	0.2	27.1	71.4
1208 OFFICE	0	No		No	498	0.2	27.2	71.2
1203 OFFICE	0	No		No	501	0.2	27.4	71.1
1204	23	No		No	552	0.2	28.3	71.1
1610 MEDIA CENTER	25	No		No	532	0.2	27.3	71.2
1608 OFFICE	0	No		No	526	0.2	26.8	71.8
1607	0	No		No	489	0.2	27.0	70.9
1606	1	No		No	514	0.2	26.7	71.2
1604 CONFERENCE	5	No	• Stained Ceiling Tiles	No	564	0.2	27.5	71.6
1605 OFFICE	0	No		No	553	0.2	27.3	72.0
1601 GYMNASIUM	11	No		No	439	0.2	27.2	70.9
1517	18	No		No	1,044	0.2	31.2	70.9
1515	18	No		No	957	0.2	30.0	71.2
1514	19	No		No	898	0.2	31.6	71.1
1513 OFFICE	0	No		No	880	0.2	29.6	71.2
1512	2	No		No	929	0.2	30.6	71.1
1511 OFFICE	2	No		No	879	0.2	28.6	71.4
1510	17	No		No	1,109	0.2	31.1	71.6

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1516	14	No		No	851	0.2	29.7	71.4
1507	15	No		No	793	0.2	29.4	71.6
1504	17	No		No	659	0.2	28.8	72.1
1506	18	No		No	903	0.2	29.0	72.1
1505	14	No		No	819	0.2	29.1	71.4
1503	1	No		No	856	0.2	29.0	72.5
1502	16	No		No	857	0.2	28.6	73.9
1107	2	No		No	526	0.2	27.9	71.1
1104	17	No		No	568	0.2	28.0	71.8
1102	14	No		No	478	0.2	26.5	71.8
1106	16	No		No	483	0.2	27.5	71.4
1103	2	No		No	529	0.2	26.7	72.3
1104	17	No		No	562	0.2	27.1	72.3
1108	15	No		No	580	0.2	27.3	72.0
1110	16	No		No	577	0.2	28.2	71.4
1111	7	No		No	599	0.2	27.6	71.6
1112	13	No		No	633	0.2	28.3	71.6
1113	16	No		No	593	0.2	27.8	71.8
1114	8	No		No	562	0.2	27.3	71.6
1115	15	No		No	619	0.2	28.1	71.4
1000 RECEPTION WAITING	0	No		No	543	0.2	27.6	70.9
1002 NURSE OFFICE	2	No		No	522	0.2	28.0	71.4
1003 COT ROOM	0	No		No	528	0.2	27.4	72.1
1001 MAIN OFFICE	3	No		No	522	0.2	27.1	72.5
1005 CONFERENCE	0	No		No	635	0.2	28.3	72.1
1006 OFFICE	0	No		No	565	0.2	27.7	71.6
1008 WORKROOM	1	No		No	565	0.2	28.1	71.6
1007 OFFICE	0	No		No	513	0.2	27.1	71.8

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1009 OFFICE	0	Yes Fragrance		No	541	0.2	27.7	72.3
1010 PRINCIPAL	1	No		No	617	0.2	27.8	72.3

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 seventy-two (72) 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.

- 1406
- 1407 OFFICE

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.

- 1009 OFFICE *Fragrance*
- 1417 *Fragrance*
- 1418 *Stuffy*
- 1419 *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.

- 1604 CONFERENCE

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.

- 1302 OFFICE