

IEA, INC.

2022 - 2023 IAQ Walkthrough



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Saint Paul Public Schools Wellstone Elementary School

Walkthrough Date :
Friday, December 9, 2022

Project Description

IEA conducted an Indoor Air Quality (IAQ) walkthrough at Wellstone 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 four (4) floors.
- The building has not had recent construction.
- There are operable windows in the exterior rooms within the building.
- The building was originally constructed in 1974.
- 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					223	0.4	33.1	28.0
1005 MAIN RECEPTION	3	No		No	376	0.2	22.5	68.7
1007 CONFERENCE	0	No		No	305	0.2	20.7	69.8
1006 PRINCIPAL	1	No		No	302	0.2	20.2	70.3
1012 NURSE	0	No		No	341	0.2	20.0	72.3
1014 NURSE OFFICE	1	No		No	451	0.3	20.2	73.0
1024 OFFICE	0	Yes Fragrance		No	361	0.2	19.6	73.4
1025 OFFICE	0	No		No	333	0.3	18.7	73.2
1023 ISOLATION ROOM	0	No		No	304	0.2	18.4	73.4
1022 QUIET ROOM	0	No		No	299	0.3	18.6	72.0
1019 OFFICE	0	Yes Fragrance		No	338	0.2	19.2	71.6
1020 STORAGE	0	No		No	307	0.2	18.7	72.3
1021 ASSISTANT PRINCIPAL	0	No		No	326	0.2	18.8	72.7
1026	0	No		No	396	0.2	19.2	73.0
1027 OFFICE	0	No		No	325	0.2	18.1	73.6
1028	0	No		No	359	0.2	18.0	74.5
1034 STAFF LOUNGE	1	No		No	329	0.3	17.9	74.3
1033 OFFICE	0	No		No	323	0.3	18.4	73.0
1220 OFFICE	0	No		No	332	0.2	20.1	71.1

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1217 COMPUTER LAB	2	No		No	359	0.2	20.9	70.0
1215 MUSIC	0	No		No	325	0.2	20.3	69.8
2111	1	No		No	461	0.2	22.8	68.4
1207	0	No		No	462	0.2	21.8	70.5
1203	20	No		No	650	0.2	22.4	72.7
1113	0	No		No	598	0.3	21.9	72.1
1110	0	No		No	405	0.2	20.4	70.0
1111	0	No		No	414	0.2	19.9	71.4
1130	0	No		No	326	0.2	19.9	70.9
1150	27	No		No	720	0.2	23.8	70.7
1071	2	No		No	406	0.3	21.5	69.1
1128 RECIEVING	0	No		No	396	0.2	21.0	70.9
1026 CUSTODIAL OFFICE	1	No		No	429	0.2	21.9	70.3
1070 BREAKROOM	3	No		No	433	0.2	21.9	70.0
1065 GYMNASIUM	0	No		No	288	0.3	19.0	72.0
1064	0	No		No	307	0.2	19.4	72.1
1062	0	No		No	294	0.2	19.6	71.4
1053 OFFICE	0	No		No	314	0.2	19.6	71.8
1051	0	No		No	299	0.2	19.3	72.3
1059 LOBBY	0	No		No	310	0.2	20.1	72.9
0045 CAFETERIA	90	No		No	613	0.2	29.4	73.8
046 KITCHEN	3	No		No	607	0.2	27.9	75.2
0047 KITCHEN OFFICE	0	No		No	557	0.3	25.5	75.4
0111 LOBBY	2	No		No	396	0.6	20.7	72.9
0122	1	No		No	360	0.2	19.7	73.8
0136 OFFICE	0	No		No	351	0.3	19.7	73.0

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
0135 OFFICE	0	No		No	340	0.3	19.7	72.7
0131 SMALL KITCHEN	0	No		No	341	0.2	19.6	73.2
0130 OFFICE	0	No		No	339	0.3	20.5	73.0
0127 OFFICE	1	Yes Fragrance		No	396	0.3	20.3	73.0
0126 OFFICE	1	No		No	378	0.2	20.0	73.4
0125 OFFICE	1	No		No	408	0.2	19.7	74.7
0124 OFFICE	1	No	• Plants	No	377	0.3	19.3	75.0
0117 COPY ROOM	0	No		No	355	0.4	20.2	72.1
0121 LOUNGE	4	No	• Stained Ceiling Tiles	No	363	0.2	19.8	73.2
0120 OFFICE	0	No		No	373	0.3	19.9	73.8
0119 OFFICE	0	No		No	342	0.2	18.6	74.5
0118 OFFICE	1	No		No	380	0.4	19.0	74.8
2050	0	No	• Plants	No	502	0.3	22.2	71.1
2052	23	No		No	530	0.2	23.9	69.4
2058	19	Yes Stuffy		No	567	0.2	24.4	69.3
2063	3	Yes Stuffy		No	497	0.2	25.3	69.1
2106	22	Yes Fragrance		No	516	0.2	22.7	70.0
2107	0	No		No	488	0.2	33.6	70.9
2108 OFFICE	1	Yes Fragrance		No	791	0.2	22.8	71.6
2110	3	Yes Fragrance		No	552	0.2	22.6	71.1
2130	1	No		No	723	0.2	21.6	70.5

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
2120 GYMNASIUM	19	No		No	408	0.2	21.6	70.0
2132 GYMNASIUM OFFICE	0	No		No	399	0.2	21.1	70.7
2115 LOBBY	0	No		No	481	0.2	22.0	71.4
2203	24	No		No	830	0.3	25.8	70.9
2207	1	No		No	484	0.2	23.0	70.3
2211	19	No		No	663	0.2	24.6	70.5
2206	0	No		No	441	0.2	22.7	70.7
2208	1	No		No	441	0.2	22.2	70.7
2215	0	No		No	470	0.2	23.0	70.5
OFFICE CONNECTED TO 2115	0	Yes Fragrance		No	476	0.2	22.7	70.2
2217	0	No		No	462	0.2	23.2	69.3
2220	25	No		No	587	0.2	24.2	71.1
2005	0	No		No	432	0.2	22.6	71.1
2015	17	No		No	533	0.3	23.9	71.1
2027	17	No		No	592	0.2	24.5	71.1
2028	1	No		No	469	0.2	22.4	72.7
3050	0	No		No	447	0.3	22.5	72.1
3052	0	No		No	445	0.2	21.5	74.1
3051	18	No		No	612	0.3	22.0	73.6
3110 MEDIA CENTER	0	No	• Plants	No	463	0.3	21.0	72.3
3115	0	No		No	467	0.2	20.5	72.7
3054	0	No		No	434	0.3	22.3	72.0
3058	22	No		No	613	0.2	24.6	71.8
3060	3	No		No	562	0.2	25.3	71.6
3063	23	No		No	602	0.2	24.6	72.0

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
3005	0	No		No	483	0.3	22.7	71.8
3015	21	No		No	708	0.2	25.8	71.4
3016 OFFICE	0	No		No	572	0.2	24.2	71.1
3027	21	No		No	866	0.3	27.7	69.8
3028	1	No		No	461	0.2	24.1	69.4
3030	16	No		No	808	0.2	27.1	70.3
3031	0	No		No	668	0.2	25.6	71.4
3113	16	No		No	646	0.2	24.5	71.6
3112	0	No		No	905	0.3	25.4	71.1
3203	19	Yes Fragrance		No	502	0.2	24.6	71.1
3205	0	No		No	392	0.2	22.2	71.1
3207	0	No	• Plants	No	693	0.2	25.4	72.0
3214	2	No		No	501	0.3	22.5	71.8
3215	20	No		No	702	0.2	24.7	71.8
3216	0	No		No	510	0.2	22.7	71.1
3220	20	No	• Live Animals • Plants	No	543	0.2	23.2	72.5
3209	0	Yes Stuffy	• Plants	No	980	0.3	28.1	74.7
3201 OFFICE	0	No		No	436	0.4	20.8	73.0

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 one hundred and seven (107) 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.

- 0047 KITCHEN OFFICE
- 046 KITCHEN

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.

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|---------------|------------------|-----------|------------------|
| • 0127 OFFICE | <i>Fragrance</i> | • 2110 | <i>Fragrance</i> |
| • 1019 OFFICE | <i>Fragrance</i> | • 3203 | <i>Fragrance</i> |
| • 1024 OFFICE | <i>Fragrance</i> | • 3209 | <i>Stuffy</i> |
| • 2058 | <i>Stuffy</i> | • OFFICE | <i>Fragrance</i> |
| • 2063 | <i>Stuffy</i> | CONNECTED | |
| • 2106 | <i>Fragrance</i> | TO 2115 | |
| • 2108 OFFICE | <i>Fragrance</i> | | |

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.

- 0121 LOUNGE

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.

- 0124 OFFICE
- 2050
- 3110 MEDIA CENTER
- 3207
- 3209
- 3220

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.

- 3220