

IEA, INC.

2022 - 2023 IAQ Walkthrough



Contact Us:

BROOKLYN PARK OFFICE

9201 W. BROADWAY, #600
BROOKLYN PARK, MN 55445
763-315-7900

MANKATO OFFICE

610 N. RIVERFRONT DRIVE
MANKATO, MN 56001
507-345-8818

ROCHESTER OFFICE

210 WOOD LAKE DRIVE SE
ROCHESTER, MN 55904
507-281-6664

BRAINERD OFFICE

601 NW 5TH STREET SUITE #4
BRAINERD, MN 56401
218-454-0703

MARSHALL OFFICE

1420 EAST COLLEGE DRIVE
MARSHALL, MN 56258
507-476-3599

VIRGINIA OFFICE

5525 EMERALD AVENUE
MOUNTAIN IRON, MN 55768
218-410-9521

www.ieasafety.com

info@ieasafety.com

800-233-9513

Saint Paul Public Schools Como Park Elementary School

Walkthrough Date:
Monday, November 14, 2022

Project Description

IEA conducted an Indoor Air Quality (IAQ) walkthrough at Como Park Elementary School by IEA representative, Nick Lundgren. 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 three (3) 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 1924.
- There are additions to the building, in the following year(s): 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					384	0.5	87.0	26.0
1301	0	No		Yes Horizontal Surfaces	585	0.4	25.5	68.0
1004	1	No		No	581	0.4	27.0	70.0
1006	1	No		Yes Horizontal Surfaces	500	0.4	25.0	69.4
1001	2	No		Yes Horizontal Surfaces	568	0.1	25.7	69.3
1002	0	No		No	562	0.1	25.6	69.3
1003	0	No	• Plants	No	523	0.1	25.3	69.6
1005	0	Yes Musty		No	489	0.2	23.9	70.0
1133	1	No		No	575	0.4	26.4	69.8
1136	1	No		No	605	0.4	25.9	69.6
1135	2	No		No	610	0.3	25.8	70.3
1132	0	No		No	554	0.3	26.5	70.2
1134	0	No		No	578	0.3	25.4	69.6
1105	43	No		Yes Air Supply	959	0.2	27.8	68.9
1107	17	No		Yes Horizontal Surfaces	634	0.2	26.8	68.0
1112	15	No		No	589	0.2	25.2	69.6
1114	16	No		Yes Horizontal Surfaces	631	0.2	26.1	68.9

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1117	13	No		Yes Horizontal Surfaces, Air Return	732	0.2	26.4	69.4
1118	0	No	• Plants	Yes Horizontal Surfaces	565	0.2	24.9	69.3
1119	2	No		No	606	0.2	26.5	69.3
1118A	0	Yes Musty		No	572	0.2	25.7	68.7
1120	9	No		Yes Air Return	627	0.2	26.2	68.7
1120A	0	No		No	546	0.1	25.3	69.6
1121	0	No		Yes Horizontal Surfaces, Air Return	535	0.2	24.9	68.5
1122	0	No		Yes Air Return	513	0.1	23.3	70.9
1201	10	No		Yes Horizontal Surfaces, Air Return	543	0.2	24.4	70.2
1123	0	No		Yes Horizontal Surfaces, Air Return	575	0.1	26.2	70.5
1124	0	No	• Moisture Impacted Materials: See Appendix A	No	668	0.1	25.9	70.5
1132	1	Yes Musty		No	621	0.1	25.6	70.0
1130	0	No		No	557	0.1	26.7	70.0
1128	9	No	• Housekeeping: Barrier	No	742	0.2	26.7	70.3
1318	0	Yes Dirty or Dusty Carpet		No	502	0.2	24.5	68.9

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1137	0	Yes Stuffy		No	601	0.1	26.3	69.4
1138	0	No		No	566	0.2	25.9	69.4
1126	0	No		Yes Air Return	518	0.1	25.2	69.4
1321	10	No		No	625	0.2	25.1	69.4
1141	0	No		Yes Air Return	568	0.1	26.8	69.3
1202	0	No		No	528	0.1	25.2	68.5
1202A	1	No		No	585	0.1	25.4	68.9
1319	1	Yes Fragrance		No	576	0.1	24.6	69.6
1320	9	Yes Chemical		No	564	0.1	25.8	69.4
1314	0	No		No	540	0.1	25.2	69.3
1203	1	No		No	531	0.1	24.4	69.8
1204A	0	No		No	606	0.1	25.0	69.8
1204	0	No	• Housekeeping: Storage	No	520	0.2	24.3	69.8
1206	1	No		No	626	0.2	26.0	72.7
1310	0	No		Yes Horizontal Surfaces, Air Return	534	0.2	24.1	70.5
1311	0	No		No	505	0.2	24.4	69.1
1210	0	No		No	573	0.2	37.0	66.4
1309	1	No		No	578	0.1	24.5	69.8
1308	0	No		No	518	0.2	24.0	70.0
1307	0	No		No	522	0.2	24.3	69.4
CAFETERIA	60	No		No	675	0.2	28.3	69.3
1308A	1	No		No	560	0.1	24.9	69.6
KITCHEN	2	No		No	627	0.2	28.3	71.1

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1302	2	No		No	533	0.2	25.6	70.3
1207	18	No		Yes Horizontal Surfaces, Air Supply	602	0.2	27.3	69.6
2207	1	No		No	510	0.2	25.3	69.1
2209	16	No		No	733	0.1	26.2	70.7
2204	0	No		No	543	0.2	25.2	70.3
2203	0	No		No	517	0.2	25.2	69.1
2202	0	No		Yes Air Return	524	0.2	24.7	69.6
2201	18	No		No	618	0.2	26.2	68.9
2108	1	No		No	568	0.2	26.8	68.2
2313	0	No		No	514	0.1	25.9	68.9
2107	0	No		No	497	0.2	26.5	67.1
2403	17	No		No	1,003	0.2	31.0	69.6
2402	0	No		No	565	0.2	28.8	68.5
2404	18	No		No	768	0.2	30.6	69.6
2401	9	No		No	642	0.2	28.4	70.0
2504	17	No		Yes Ceiling Tiles Around Air Supply	681	0.2	26.8	70.9
2505	0	No		No	631	0.3	26.3	70.0
2511	1	No		Yes Air Return	631	0.2	24.5	73.2
2510	0	Yes Stuffy		No	624	0.3	24.8	72.7
2509	0	No		No	588	0.3	24.6	72.1
2506	17	No		No	782	0.3	27.0	71.6
2701 ENTRY	3	No		Yes Air Return	552	0.2	24.8	70.9

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
2704	0	Yes Dirty or Dusty Carpet		No	556	0.2	25.0	70.3
2608	1	No		No	636	0.2	27.1	69.8
2607	16	No		No	740	0.2	28.1	69.4
2609	0	No		No	576	0.1	26.0	70.3
2606	1	No	<ul style="list-style-type: none"> Moisture Impacted Materials: Rust dripping down the S wall Stained Ceiling Tiles 	No	594	0.2	26.1	70.5
2610	0	No		No	590	0.2	24.8	72.5
2611	0	No		Yes Air Return	593	0.3	24.7	72.3
2605	0	No		No	601	0.3	24.3	73.2
2604	11	No		No	802	0.2	27.3	71.8
2614	0	No		No	587	0.2	24.3	72.7
2308	10	No		No	591	0.2	26.0	68.4
2309	20	No		No	568	0.1	24.7	70.3
2310	16	No		No	504	0.1	23.5	72.0
2307	0	No		No	484	0.1	26.1	69.1
2321	0	No		No	890	0.2	25.8	68.5
2304	0	No		No	526	0.1	26.5	68.0
2303	0	No		Yes Horizontal Surfaces, Air Return	514	0.1	25.5	68.7
2001	0	No		No	494	0.1	25.5	68.4
2004	0	No		No	513	0.1	26.3	68.3
2002	0	No		No	562	0.1	26.1	68.5
2302	0	No		No	486	0.1	26.0	68.0
2301	0	Yes Fragrance	<ul style="list-style-type: none"> Plants 	Yes Horizontal Surfaces, Air Return	481	0.1	24.6	70.0

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
2101	20	No		Yes Air Return	630	0.3	26.6	68.2
2102	1	No		No	548	0.2	27.1	68.0
2103	0	No		No	494	0.1	27.4	68.7
2104	2	No		No	577	0.1	28.0	67.3
2105	6	No		No	572	0.1	25.4	70.3
2106	0	No		No	510	0.3	26.6	68.2
OUTDOORS					445	0.6	88.0	31.0

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 one (101) 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.

- 1210
- 2107
- 2104

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.

- 1005 *Musty*
- 1118A *Musty*
- 1132 *Musty*
- 1137 *Stuffy*
- 1318 *Dirty or Dusty Carpet*
- 1319 *Fragrance*
- 1320 *Chemical*
- 2301 *Fragrance*
- 2510 *Stuffy*
- 2704 *Dirty or Dusty Carpet*

Moisture-Impacted Building Material Concerns

Moisture-impacted building materials should be repaired or replaced when discoloration or water staining is observed. Moisture-impacted building materials can be a source for microbial growth. The source for the moisture infiltration should be investigated and repaired if not easily identified.

- 1124
- 2606 *Rust dripping down the S wall*

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.

- 2606

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.

- 1003 • 2301
- 1118

Poor Housekeeping

Area(s) identified by IEA as having poor housekeeping (excessive clutter, excessive dust/debris on horizontal surfaces, etc.) were documented within the building. Poor housekeeping can limit building maintenance from conducting a proper cleaning of the area. This can result in elevated potential for allergen issues in sensitized individuals due to dirt and debris loading. Poor housekeeping can also allow for pest (insects and rodents) issues in the space.

- 1128 *Barrier* • 1204 *Storage*

Dust Accumulation

IEA observed dust accumulation in the following room(s) and recommend that the specified area is wiped clean using a damp rag.

- | | |
|---|---|
| • 1001 <i>Horizontal Surfaces</i> | • 1207 <i>Horizontal Surfaces, Air Supply</i> |
| • 1006 <i>Horizontal Surfaces</i> | • 1301 <i>Horizontal Surfaces</i> |
| • 1105 <i>Air Supply</i> | • 1310 <i>Horizontal Surfaces, Air Return</i> |
| • 1107 <i>Horizontal Surfaces</i> | • 2101 <i>Air Return</i> |
| • 1114 <i>Horizontal Surfaces</i> | • 2202 <i>Air Return</i> |
| • 1117 <i>Horizontal Surfaces, Air Return</i> | • 2301 <i>Horizontal Surfaces, Air Return</i> |
| • 1118 <i>Horizontal Surfaces</i> | • 2303 <i>Horizontal Surfaces, Air Return</i> |
| • 1120 <i>Air Return</i> | • 2504 <i>Ceiling Tiles Around Air Supply</i> |
| • 1121 <i>Horizontal Surfaces, Air Return</i> | • 2511 <i>Air Return</i> |
| • 1122 <i>Air Return</i> | • 2611 <i>Air Return</i> |
| • 1123 <i>Horizontal Surfaces, Air Return</i> | • 2701 ENTRY <i>Air Return</i> |
| • 1126 <i>Air Return</i> | |
| • 1141 <i>Air Return</i> | |
| • 1201 <i>Horizontal Surfaces, Air Return</i> | |

Appendix A

Photo Documentation



1124

Moisture Impacted Materials