

IEA, INC.

2022 - 2023 IAQ Walkthrough



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Saint Paul Public Schools Adams Spanish Immersion

Walkthrough Date:
Friday, February 17, 2023

Project Description

IEA conducted an Indoor Air Quality (IAQ) walkthrough at Adams Spanish Immersion 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.

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 1923.
- There are additions to the building, in the following year(s): 1973, 1999 and 2018.
- 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					411	2.9	50.0	19.0
1306	1	No		No	650	0.1	15.8	68.9
1201	21	No		No	866	0.0	17.4	72.1
1202	23	No		No	1,108	0.1	16.5	72.5
1203	23	No		No	989	0.2	16.5	71.7
1301	21	No		No	758	0.1	14.9	71.0
1302	26	No		Yes Air Supply	718	0.0	14.2	71.7
1303	0	No		No	513	0.1	11.4	71.5
1011	2	No		No	512	0.0	10.4	71.4
1011A	0	No		No	503	0.1	9.6	71.6
MAIN OFFICE	2	No		No	531	0.1	9.6	72.2
1002	0	No	• Aquariums (fish)	No	470	0.0	9.1	72.9
1006	0	No		No	470	0.1	8.2	72.6
1001	0	No		No	533	0.1	9.0	72.5
1004	0	No		No	496	0.0	8.7	72.7
1007	0	No		No	495	0.2	8.4	72.8
1008	1	Yes Plastic, laminator in room		No	485	0.0	8.4	72.7
1009	1	No	• Plants	No	493	0.0	7.6	72.4
1010	1	No		No	583	0.0	8.9	72.1
1103	18	No		No	573	0.1	9.9	71.5
1103D	0	No		No	573	0.0	10.1	71.2
1103C	0	No		No	595	0.1	10.2	71.2

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
1505	0	No		No	478	0.0	10.6	71.1
1400	0	No		No	544	0.1	9.3	70.3
1509	0	No		No	609	0.0	12.1	70.3
GYMNASIUM	19	No		Yes Air Supply	648	0.1	12.1	66.2
CAFETERIA	60	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	Yes Air Return	697	0.0	12.8	69.0
STAGE NEXT TO CAFETERIA	15	No		No	551	0.0	10.4	68.5
1405	18	No		No	585	0.0	12.1	70.6
1404	16	No	<ul style="list-style-type: none"> Plants 	No	534	0.0	10.9	70.7
1403	24	No		Yes Air Supply	819	0.1	15.4	71.6
KITCHEN	0	No		No	747	0.0	16.8	71.9
KITCHEN OFFICE	0	No		No	554	0.0	12.1	74.1
1402	23	No		No	604	0.0	12.1	71.6
1401	16	No		No	796	0.1	14.9	71.5
1406	21	No		Yes Air Supply	641	0.1	12.9	69.6
1520A	1	No		Yes Air Return	590	0.0	12.6	69.9
2802	1	No		No	552	0.1	12.3	70.1
3307	0	No		No	472	0.0	12.7	69.4
2803	0	No	<ul style="list-style-type: none"> Stained Ceiling Tiles 	No	431	0.0	11.1	69.0
2803A	0	No		No	450	0.1	10.4	69.3
2605	21	No		No	827	0.0	15.6	72.7
3308	24	No	<ul style="list-style-type: none"> Plants 	Yes Air Return	644	0.0	14.2	70.9
3305	24	No	<ul style="list-style-type: none"> Plants 	No	689	0.1	14.1	70.7
3201	0	No		No	495	0.2	14.1	70.5

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
3309	20	No	• Live Animals	No	831	0.2	15.6	70.9
3303	1	No	• Plants	No	609	0.0	13.5	71.5
3202	0	No		No	471	0.1	13.2	71.1
3203	0	No	• Stained Ceiling Tiles	No	475	0.1	13.2	71.2
3302	0	No	• Plants	No	545	0.0	13.0	71.1
3304	0	No	• Plants	No	536	0.2	12.6	70.7
3306	0	No		No	912	0.0	15.0	70.9
3301	0	No		No	621	0.0	13.9	70.8
2604	0	No	• Plants	Yes Air Return	428	0.1	10.4	71.2
2801	0	No		No	448	0.1	10.2	71.2
2603	29	No	• Plants	No	815	0.0	13.4	72.5
2602	26	No	• Plants	No	574	0.1	13.5	72.1
2601	1	No	• Plants	No	457	0.1	11.3	71.9
2505	0	No		No	444	0.1	10.8	71.7
2404	0	No		No	470	0.0	10.4	70.8
2403	2	No		No	521	0.0	11.6	69.9
2504	1	No		Yes Air Return	512	0.0	9.9	69.7
2502	22	No	• Plants • Taxidermy	No	628	0.0	12.2	71.1
2501	3	No		No	634	0.0	10.2	71.8
2307	0	No		No	496	0.0	11.2	71.8
2306	26	No	• Plants	No	662	0.0	12.5	72.4
2304	24	No	• Plants	No	756	0.0	13.6	72.4
2308	2	No		No	544	0.0	11.8	73.4
2303	0	No	• Plants	No	494	0.2	11.0	72.5
2302	6	No	• Plants	No	717	0.0	13.7	71.9
2310	0	No		No	495	0.1	12.2	71.4

Room / Location	Number of Occupants	Odor Present	Observations	Dust Accumulation	CO ₂ (ppm)	CO (ppm)	RH (%)	Temp (°F)
2201	22	No	• Plants	No	1,167	0.1	18.4	71.9
2203	21	No	• Plants	No	968	0.0	17.6	72.8
2202	26	Yes Sour	• Plants	No	1,145	0.0	19.9	71.8

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-three (73) 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.

- GYMNASIUM

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.

- 1008 *Plastic, laminator in room*
- 2202 *Sour*

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.

- 2803
- CAFETERIA
- 3203

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.

- 1009
- 1404
- 2201
- 2202
- 2203
- 2302
- 2303
- 2304
- 2306
- 2502
- 2601
- 2602
- 2603
- 2604
- 3302
- 3303
- 3304
- 3305
- 3308

Taxidermy

IEA observed area(s) with taxidermy mounts present. Individuals with allergies or asthma may be sensitive to dust, animal fur, or dander, and may have a reaction when exposed to these allergens. IEA recommends using an alternative to taxidermy mounts if allergen symptoms are found by occupants within the classroom.

- 2502

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.

- 1002
- 3309

Dust Accumulation

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

- 1302 *Air Supply*
- 1403 *Air Supply*
- 1406 *Air Supply*
- 1520A *Air Return*
- 2504 *Air Return*
- 2604 *Air Return*
- 3308 *Air Return*
- CAFETERIA *Air Return*
- GYMNASIUM *Air Supply*