MTE Consultants
1016 Sutton Dr., Unit A, Burlington, Ontario L7L 6B8

February 23, 2024

MTE File No.: 53042-100

Michael Iampietro
Project Supervisor, Capital Projects
Hamilton-Wentworth Distract School Board
20 Education Court
Hamilton, Ontario L8N 3L1
E-Mail: miampiet@hwdsb.on.ca

Dear Michael:

RE: Lead Sampling – Surface Dust in Room 311
Mary Hopkins Public School, 211 Mill Street North, Waterdown, ON

MTE Consultants Inc. (MTE) was retained by Hamilton-Wentworth Distract School Board (the Client) to conduct wipe sampling for potential lead in surface dust within Room 311 (the Subject Area) of Mary Hopkins Public School located at 211 Mill Street North in Waterdown, Ontario (the Site).

As part of ongoing Heating, Ventilation and Air Conditioning (HVAC) Upgrades at the Site, a wall surface within the Subject Area was cut to accommodate installation of a new Unit Ventilator. Following cutting of the plaster wall, which was coated in lead-containing paint, staff within the Subject Area reported the presence of visible dust on surfaces within the Subject Area and expressed concerns regarding the potential presence of lead within the dust. The purpose of this sampling was to quantify the concentration of lead within the surface dust and assess whether additional cleaning measures were warranted.

The following sections of this letter summarize sampling activities, analytical results, conclusions and recommendations for abatement (if required).

Scope of Assignment

MTE's scope of work for this assignment included the following:

- Attending the Site on February 21, 2024 to collect wipe samples from various surfaces within the Subject Area;
- Submission of samples to a qualified and accredited laboratory for analysis;
- Interpretation of the laboratory results; and
- Preparation of this report to summarize findings, conclusions and recommendations.

Methodology

Lead Sampling

Sampling at the Site included the following:

- Surfaces with Room 311, which represent lead levels within the area of reported concern; and
- Surfaces within Room 403 and the 4th floor corridor, as these locations have not been subject to active construction activities and were considered to represent baseline or background levels of lead in dust within the building.

For each sample, a 12-inch by 12-inch template was created over the area to be sampled and new gloves were used to prevent cross contamination. The surface area within the template was wiped with a laboratory-supplied Ghost Wipe sampling media using firm pressure and a combination of vertical and horizontal strokes. Following sampling, the wipe was placed into a laboratory-supplied plastic vial and sealed prior to shipment to the laboratory for analysis.

Samples were shipped to Paracel Laboratories Ltd (Paracel) in Ottawa, Ontario for analysis of lead by Inductively Coupled Plasma Mass Spectrometry (ICP-MS) based on NIOSH Method 9102, Elements on Wipes. Paracel is accredited by the Canadian Association of Laboratory Accreditation (CALA) for analysis of lead on wipes.

Assessment Criteria

There are no legislated standards within Ontario for lead in settled dust; however, the Environment Abatement Council of Canada's (EACC) *Lead Guideline for Construction, Renovation, Maintenance or Repair* (October 2014) recommends the following clearance criteria following large scale lead removal operations:

Table 1: Lead Clearance Criteria

Area or Surace to be Tested	Clearance Criteria (µg/ft^2)
Exterior Concrete and Rough Surfaces	800
Interior Concrete, Window Troughs, Rough Surfaces	400
Interior Window Sills	250
Firing Ranges and Work Places Where Lead is Used	200
Floors and Other Surfaces, Non-Residential	200
Floors and Other Surfaces, Residential	40
Child care facilities, primary schools, food preparation, food processing, pediatrics, labour and delivery, and maternity areas of hospitals (all surfaces routinely accessible by occupants or used in food processing)	40

These standards are consistent with those recommended by the United States Department of Housing and Urban Development *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* (2012).

For the purposes of this assignment, MTE has adopted a threshold of 40 µg/ft^2, which is the clearance criteria that applies to primary schools and other child-occupied facilities. This

criterion is conservative and generally applies to clearance of large-scale lead removal operations; however, in the absence of legislated standards, it is considered a best practice guideline for assessing hazardous levels of lead in dust.

Results

A summary of sampling locations and results is provided in Table 2.

Table 2: Summary of Lead Wipe Samples

Sample ID	Sample Location	Description/Condition of Surface	Lead Concentration (µg/ft^2)
LW01	Room 403 - Wall	Plaster with Grey Paint Good Condition	0.5
LW02	Room 403 – Window Ledge	Wood with Grey Paint Good Condition	1.5
LW03	Room 403 – Desk	Finished Wood Good Condition	0.3
LW04	Room 403 – Floor	Unpainted Vinyl Floor Tile Good Condition	0.6
LW05	4th Floor Corridor – Wall	Plaster with Beige Paint Good Condition	0.3
LW06	Room 311 – Window Ledge	Wood with Grey Paint Good Condition	2.3
LW07	Room 311 – Shelf	Wood with Grey Paint Good Condition	3.5
LW08	Room 311 – Floor	Unpainted Vinyl Floor Tile Good Condition	3.1
LW09	Room 311 – Teacher's Desk	Unpainted Laminate Good Condition	0.6
LW10	Room 311 – Student Desk	Finished Wood Good Condition	0.4
LW11	Room 403 – Blank	Not Applicable	< 0.1
LW12	Room 311 – Blank	Not Applicable	< 0.1

The laboratory certificate of analysis is provided in **Appendix A**. Photographs of sampling locations are provided in **Appendix B**.

Conclusions and Recommendations

Conclusions

Samples collected within Room 403 and the 4th Floor Corridor, which have not been subjected to active construction activities and represent baseline or background lead levels within the building, reported lead concentrations ranging from 0.3 µg/ft^2 – 1.5 µg/ft^2.

Samples collected within Room 311, which represent lead levels within the area of concern, reported lead concentrations ranging from 0.4 µg/ft^2 – 3.5 µg/ft^2.

Based on these results, lead concentrations within both affected and unaffected areas of the building were well below the threshold of 40 µg/ft^2 recommended by the EACC Lead Guideline. These results do not indicate contamination of dust within the Subject Area.

Recommendations

As these sampling results do not indicate contamination of dust within the Subject Area, no additional lead cleaning measures are required or recommended.

Limitations

Services performed by MTE were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the Environmental Engineering and Consulting profession. No other representation expressed or implied as to the accuracy of the information, conclusions or recommendations is included or intended in this report.

This report was completed for the sole use of MTE, and the Client. It was completed in accordance with the approved Scope of Work referred to above. As such, this report may not deal with all issues potentially applicable and may omit issues that are or may be of interest to the reader. MTE makes no representation that the present report has dealt with all-important environmental features, except as provided in the Scope of Work. All findings and conclusions presented in this report are based on building conditions, as they existed during the time period of the assessment. This report is not intended to be exhaustive in scope or to imply a risk-free facility.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such third parties. MTE accepts no responsibility for liabilities incurred by or damages, if any, suffered by any third party as a result of decisions made or actions taken, based upon this report. Others with interest in the site should undertake their own investigations and studies to determine how or if the condition affects them or their plans.

It should be recognized that the passage of time might affect the views, conclusions and recommendations (if any) provided in this report because environmental conditions of a property can change. Should additional or new information become available, MTE recommends that it be brought to our attention in order that we may re-assess the contents of this report.

Yours Truly,

MTE Consultants Inc.

Gavin Oakes, B.Sc., C.E.T., CIH, CRSP
Manager, Indoor Environments
905-639-2552 ext. 2432
goakes@mte85.com

GGO:

\\mte85.local\MTE\Proj_Mgmt\53042\100\Sampling Letters\Room 311 Lead Sampling\53042-100 - Mary Hopkins - Lead Sampling Letter - Feb-22-24.docx

Attachment 1

Laboratory Certificate of Analysis

PARACEL LABORATORIES LTD.

TRUSTED.
RESPONSIVE.
RELIABLE.

351 Nash Road North, unit 9B
Hamilton, ON L8H 7P4
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

MTE Consultants Inc. (Burlington)

1016 Sutton Drive, Unit A
Burlington, ON L7L 6B8
Attn: Gavin Oakes

Client PO:
Project: 53042-100 - Mary Hopkins Lead Sampling
Custody:

Report Date: 22-Feb-2024
Order Date: 22-Feb-2024

Order #: 2408197

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2408197-01	LW01 - RM 403 - Wall
2408197-02	LW02 - RM 403 - Window
2408197-03	LW03 - RM 403 - Desk
2408197-04	LW04 - RM 403 - Floor
2408197-05	LW05 - 4th Flr Corridor - Wall
2408197-06	LW06 - RM 311 - Window
2408197-07	LW07 - RM 311 - Shelf
2408197-08	LW08 - RM 311 - Floor
2408197-09	LW09 - RM 311 - Teachers Desk
2408197-10	LW10 - RM 311 - Student Desk
2408197-11	LW11 - RM 403 - Blank 1
2408197-12	LW12 - RM 311 - Blank 2

Approved By:

Dale Robertson, BSc
Laboratory Director

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising shall be limited to the amount paid by you for this work, and that our employees or agents shall not under circumstances be liable to you in connection with this work

Certificate of Analysis

Report Date: 22-Feb-2024

Client: MTE Consultants Inc. (Burlington)

Order Date: 22-Feb-2024

Client PO:

Project Description: 53042-100 - Mary Hopkins Lead Sampling

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-MS	based on NIOSH 9102, digestion ICP-MS	22-Feb-24	22-Feb-24

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions/Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.

Certificate of Analysis

Report Date: 22-Feb-2024

Client: MTE Consultants Inc. (Burlington)

Order Date: 22-Feb-2024

Client PO:

Project Description: 53042-100 - Mary Hopkins Lead Sampling

Sample Results

Lead

Matrix: Wipe

Paracel ID	Client ID	Sample Date	Units	MDL	Result
2408197-01	LW01 - RM 403 - Wall	21-Feb-24	ug/ft²	0.1	0.5
2408197-02	LW02 - RM 403 - Window	21-Feb-24	ug/ft²	0.1	1.5
2408197-03	LW03 - RM 403 - Desk	21-Feb-24	ug/ft²	0.1	0.3
2408197-04	LW04 - RM 403 - Floor	21-Feb-24	ug/ft²	0.1	0.6
2408197-05	LW05 - 4th Flr Corridor - Wall	21-Feb-24	ug/ft²	0.1	0.3
2408197-06	LW06 - RM 311 - Window	21-Feb-24	ug/ft²	0.1	2.3
2408197-07	LW07 - RM 311 - Shelf	21-Feb-24	ug/ft²	0.1	3.5
2408197-08	LW08 - RM 311 - Floor	21-Feb-24	ug/ft²	0.1	3.1
2408197-09	LW09 - RM 311 - Teachers Desk	21-Feb-24	ug/ft²	0.1	0.6
2408197-10	LW10 - RM 311 - Student Desk	21-Feb-24	ug/ft²	0.1	0.4
2408197-11	LW11 - RM 403 - Blank 1	21-Feb-24	ug/Wipe	0.1	<0.1
2408197-12	LW12 - RM 311 - Blank 2	21-Feb-24	ug/Wipe	0.1	<0.1

Laboratory Internal QA/QC

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Matrix Blank									
Lead	**ND**	**0.1**	**ug/Wipe**						
Matrix Duplicate									
Lead	**0.52**	**0.1**	**ug/ft²**	**0.54**			**2.94**	**35**	
Matrix Spike									
Lead	47.1	0.10	ug/ft²	1.08	92.0	77-120			

PARACEL LABORATORIES LTD.

Paracel ID: 2408197

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2408197	

Client Name: MTE Consultants Inc	Project Ref: 53042-100 - Mary Hopkins Lead Sampling	Page 1 of 2
Contact Name: Aaron Rows/Gavin Oakes	Quote #: MTE Standing Offer	**Turnaround Time**
Address: 1016 Sutton Drive, Unit A Burlington, ON L7L 6B8	PO #:	☐ 1 day ☐ 3 day ☐ 2 day ☐ Regular
Telephone: 905-639-2552	E-mail: arows@mte85.com goakes@mte85.com	Date Required: February 22, 2024

☐ REG 153/04 ☐ REG 406/19

☐ Table 1 ☐ Res/Park ☐ Med/Fine
☐ Table 2 ☐ Ind/Comm ☐ Coarse
☐ Table 3 ☐ Agri/Other
☐ Table ___
For RSC: ☐ Yes ☐ No

Other Regulation

☐ REG 558 ☐ PWQO
☐ CCME ☐ MISA
☐ SU - Sani ☐ SU - Storm
Mun: ___
☐ Other:

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken		Required Analysis: Lead Wipe
					Date	Time	
1	LW01 - RM 403 - Wall	O	144"	1	February 21/24	11:00AM	✔
2	LW02 - RM 403 - Window	O	144"	1	February 21/24	11:00AM	✔
3	LW03 - RM 403 - Desk	O	144"	1	February 21/24	11:00AM	✔
4	LW04 - RM 403 - Floor	O	144"	1	February 21/24	11:00AM	✔
5	LW05 - 4th Flr Corridor - Wall	O	144"	1	February 21/24	11:00AM	✔
6	LW06 - RM 311 - Window	O	144"	1	February 21/24	11:00AM	✔
7	LW07 - RM 311 - Shelf	O	144"	1	February 21/24	11:00AM	✔
8	LW08 - RM 311 - Floor	O	144"	1	February 21/24	11:00AM	✔
9	LW09 - RM 311 - Teachers Desk	O	144"	1	February 21/24	11:00AM	✔
10	LW10 - RM 311 - Student Desk	O	144"	1	February 21/24	11:00AM	✔

Comments: All samples collected from a surface area measureing 144 square inches (i.e. 12" x 12")

Method of Delivery: Paracel

Relinquished By (Sign):	Received at Depot:	Received at Lab: SO	Verified By: SS
Relinquished By (Print): Gavin Oakes	Date/Time:	Date/Time: Feb 22, 2024 9:00am	Date/Time: Feb 22, 24 0908
Date/Time: Feb 21/24 @ 2:30 PM	Temperature: °C	Temperature:	pH Verified: ☐ By:

PARACEL LABORATORIES LTD.

Paracel ID: 2408197

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2408197	

Client Name: MTE Consultants Inc	Project Ref: 53042-100 - Mary Hopkins Lead Sampling	Page 2 of 2
Contact Name:. Aaron Rows/Gavin Oakes	Quote #: MTE Standing Offer	**Turnaround Time**
Address: 1016 Sutton Drive, Unit A Burlington, ON L7L 6B8	PO #:	☐ 1 day ☐ 3 day ☐ 2 day ☐ Regular
Telephone: 905-639-2552	E-mail: arows@mte85.com goakes@mte85.com	Date Required: February 22, 2024

☐ REG 153/04 ☐ REG 406/19

☐ Table 1 ☐ Res/Park ☐ Med/Fine
☐ Table 2 ☐ Ind/Comm ☐ Coarse
☐ Table 3 ☐ Agri/Other
☐ Table
For RSC: ☐ Yes ☐ No

Other Regulation: ☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU - Storm
Mun:
☐ Other:

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Sample Taken: Time	Required Analysis: Lead Wipe
1	LW11 - RM 403 - Blank 1	O	144"	1	February 21/24	11:00AM	✓
2	LW12 - RM 311 - Blank 2	O	144"	1	February 21/24	11:00AM	✓
3							
4							
5							
6							
7							
8							
9							
10							

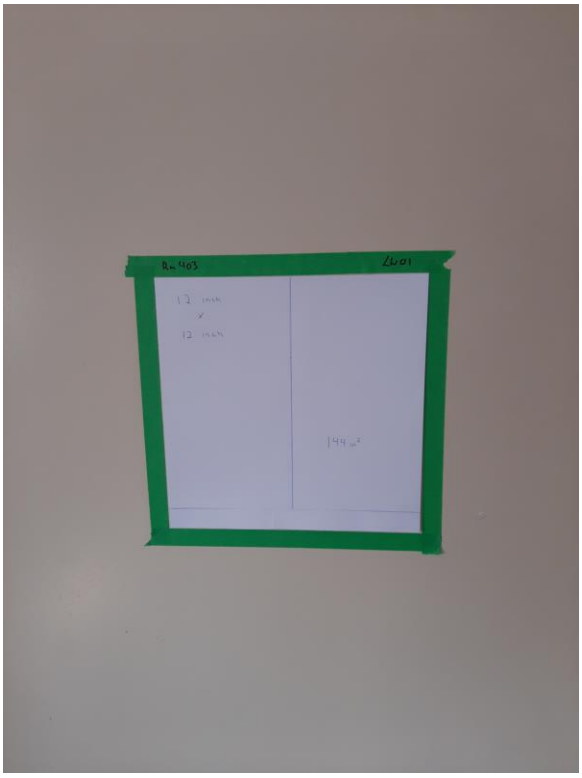
Comments: All samples collected from a surface area measureing 144 square inches (i.e. 12" x 12")

Method of Delivery: Courier

Relinquished By (Sign):	Received at Depot:	Received at Lab: SD	Verified By: SS
Relinquished By (Print): Gavin Oakes	Date/Time:	Date/Time: Feb 22, 2024 9:08am	Date/Time: Feb 22, 24 0908
Date/Time: Feb 21/24 @ 2:30 PM	Temperature: °C	Temperature:	pH Verified: ☐ By:

Attachment 2

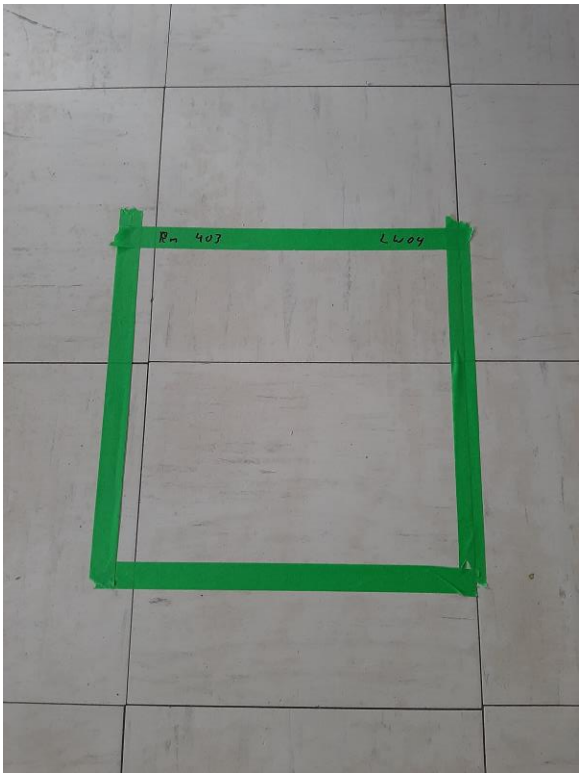
Photographs



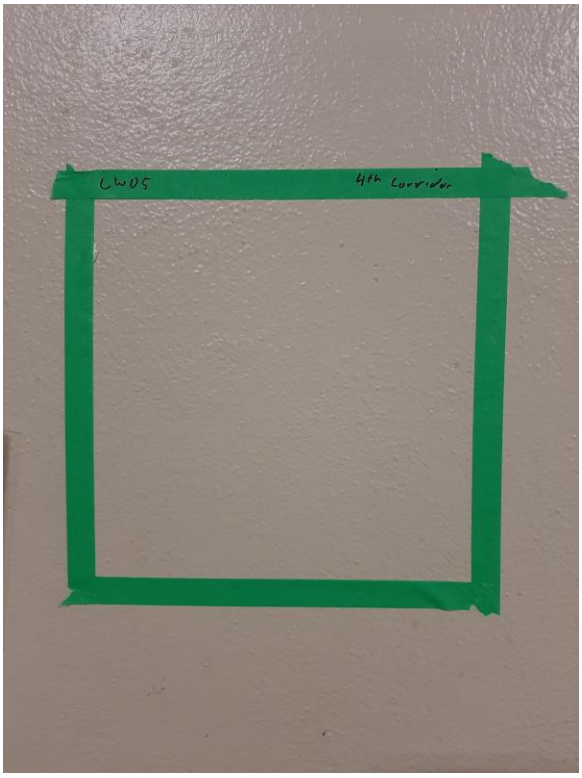
Photograph No. 1 – LW01 – Room 403 - Wall

Photograph No. 2 – LW02 – Room 403 – Window Ledge

Photograph No. 3 – LW03 – Room 403 - Desk



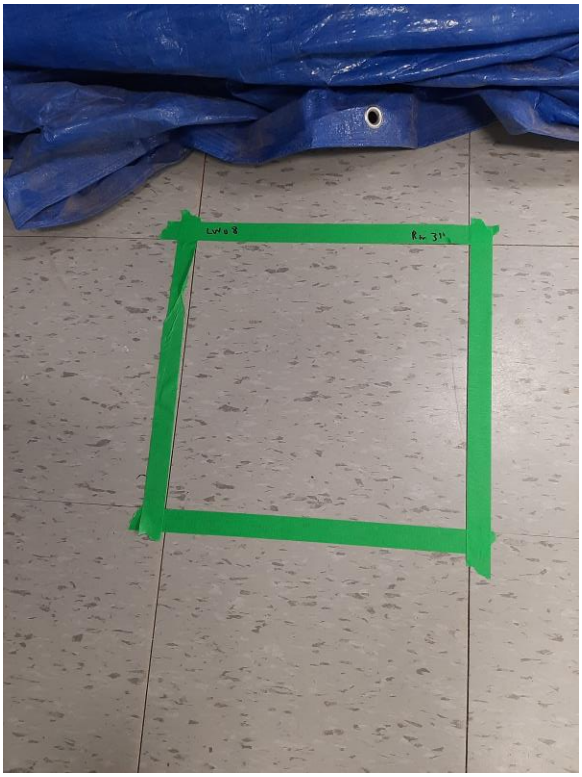
Photograph No. 4 – LW04 - Room 403 - Floor



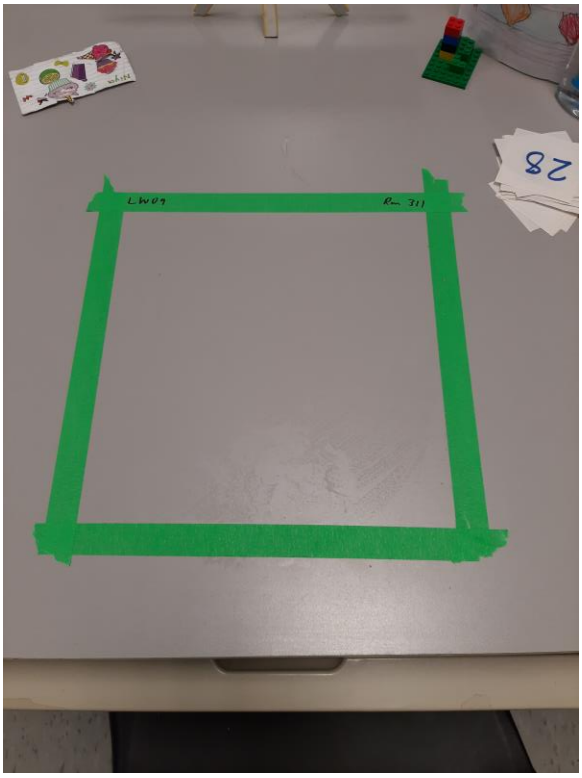
Photograph No. 5 – LW05 – 4th Floor Corridor - Wall

Photograph No. 6 – LW06 – Room 311 – Window Ledge

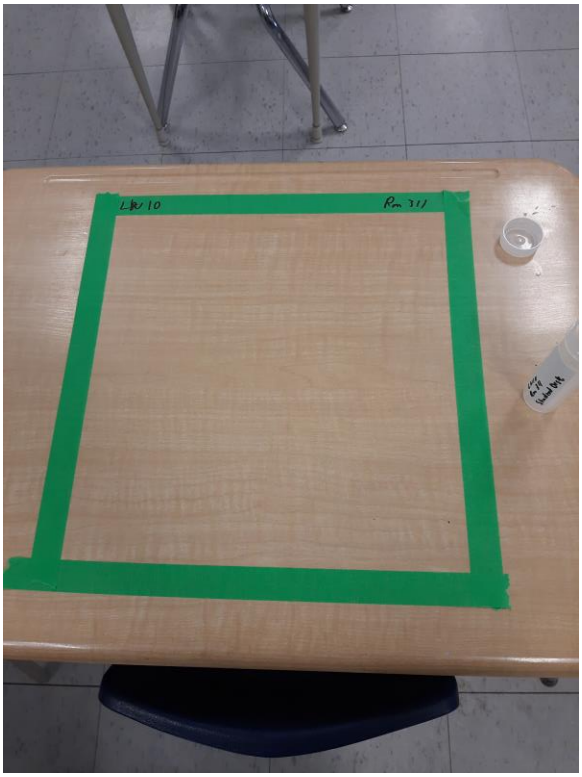
Photograph No. 7 – LW07 – Room 311 - Shelf



Photograph No. 8 – LW08 – Room 311 - Floor



Photograph No. 9 – LW09 – Room 311 – Teacher's Desk



Photograph No. 10 – LW10 – Room 311 – Student Desk