



Hamilton - Wentworth District School Board

P02085 Franklin Elementary School

Music Room, Corridors, and Student Washrooms Renovations

500 Franklin Rd.,
Hamilton, Ontario



DRAWING LIST

SHEET ARCHITECTURAL DRAWINGS

- A0.00 COVER PAGE
- A0.01 GENERAL NOTES, SITE LOCATION, LEGENDS & PHASING
- A1.00 OVERALL DEMOLITION PLAN
- A1.01 ENLARGED DEMOLITION PLANS
- A2.00 PROPOSED OVERALL FLOORPLAN & ROOM FINISH SCHEDULE
- A2.01 WASHROOM FLOOR PLAN DETAILS, REFLECTED CEILING PLANS & INTERIOR ELEVATIONS
- A2.02 MUSIC ROOM PLANS AND INTERIOR ELEVATIONS
- A2.03 WASHROOM FLOOR PLAN DETAILS, REFLECTED CEILING PLANS & INTERIOR ELEVATIONS
- A2.04 BOYS WASHROOM FLOOR PLAN DETAILS, REFLECTED CEILING PLAN & INTERIOR ELEVATIONS
- A2.05 WASHROOM FLOOR PLAN DETAILS, REFLECTED CEILING PLANS & INTERIOR ELEVATIONS
- A3.00 OVERALL PROPOSED REFLECTED CEILING PLAN
- A3.01 REFLECTED PARTIAL CEILING PLANS
- A3.02 REFLECTED PARTIAL CEILING PLANS
- A4.00 MILLWORK DETAILS
- A4.01 WASHROOM INFORMATION AND TYPICAL DETAILS
- A4.02 SECTIONS & SECTION DETAILS

MECHANICAL DRAWINGS

- M0-00 MECHANICAL LEGENDS AND DRAWING LIST
- M0-01 CONSTRUCTION BIDDING PLAN
- M1-00 MECHANICAL SYSTEMS - DEMOLITION PLAN
- M1-01 PLUMBING SYSTEMS - DEMOLITION PLAN
- M2-00 MECHANICAL SYSTEMS - NEW OVERALL PLAN
- M2-01 PLUMBING SYSTEMS - NEW OVERALL PLAN
- M2-02 PLUMBING SYSTEMS - NEW ENLARGED PLANS
- M3-00 DETAIL
- M4-00 MECHANICAL SPECIFICATION

ELECTRICAL DRAWINGS

- E0-00 ELECTRICAL LEGEND & DRAWING LIST
- E0-01 CONSTRUCTION BIDDING PLAN
- E1-00 OVERALL PLAN DEMO - ELECTRICAL
- E1-01 ENLARGED PLANS #1 DEMO - ELECTRICAL
- E1-02 ENLARGED PLANS #2 DEMO - ELECTRICAL
- E2-00 OVERALL PLAN NEW - ELECTRICAL
- E2-01 ENLARGED PLANS #1 NEW - ELECTRICAL
- E2-02 ENLARGED PLANS #2 NEW - ELECTRICAL
- E3-00 ELECTRICAL DETAILS
- E4-00 ELECTRICAL SPECIFICATIONS

project number

24-21

DRAWING NO.

A0.00

OBC MATRIX

Table with 2 columns: Item No. and Description. Contains Ontario Building Code Data Matrix Part 11 - Renovation of Existing Building. Includes project details like Name of Practice (AMRA J Architects Inc.), Name of Project (P02085 Franklin Elementary School Music Room, Corridors, and Student Washroom Renovations), Location (500 Franklin Road, Hamilton, ON L8V 2A4), and various code compliance items (11.00 to 11.16).

NOTES AND SPECIFICATIONS

1. GENERAL:

THE PROJECT SCOPE INCLUDES RENOVATION OF EXISTING MUSIC ROOM AND EXISTING WASHROOMS, AND REPLACEMENT OF EXISTING CORRIDOR CEILING.

2. DEMOLITION

ALL DEMOLITION WORK TO BE COORDINATED WITH THE HAZARDOUS MATERIALS ABATEMENT SCOPE OF WORK. REFER TO APPLICABLE DOCUMENTATION INCLUDED WITHIN THE SPECIFICATIONS.

WASHROOM FIXTURES COUNT

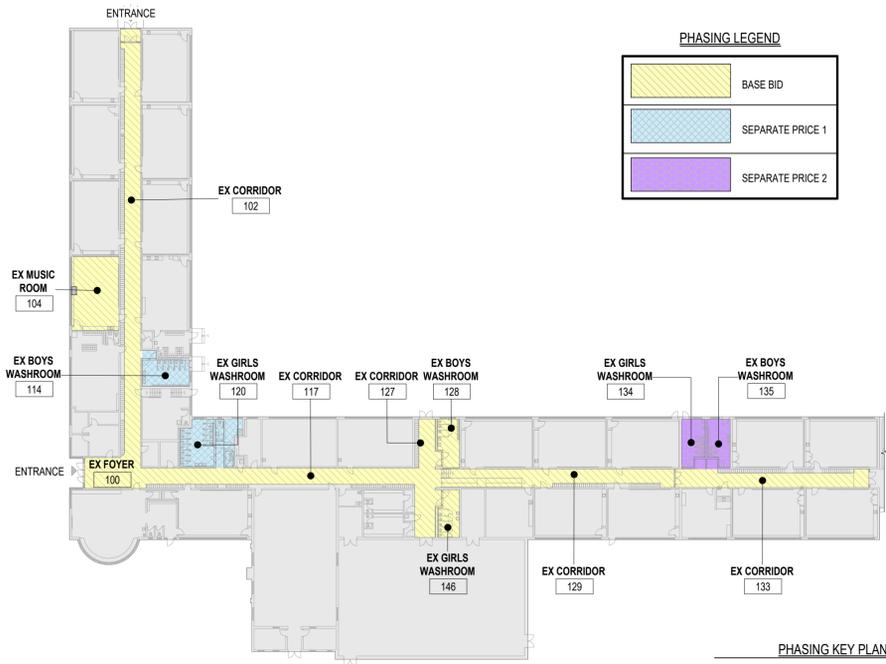
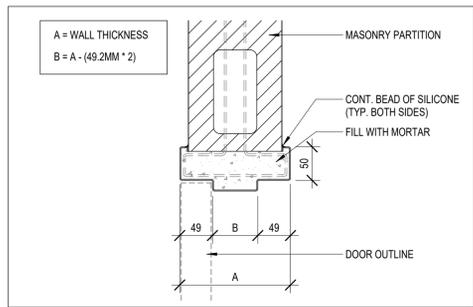
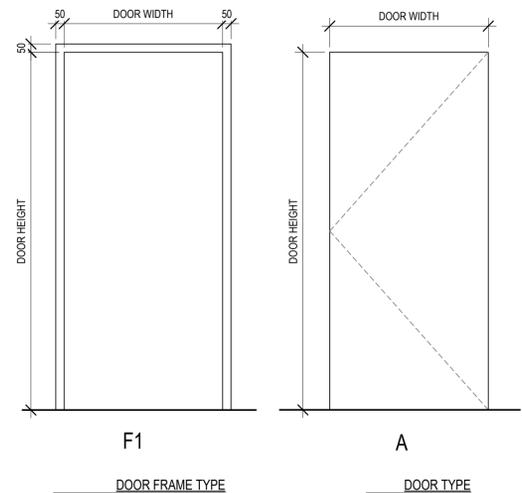
Table with columns: ROOM NAME, BASE BID, SEPARATE PRICE 1, SEPARATE PRICE 2, WC, URINAL. Lists fixtures for existing and new washrooms (e.g., BOYS WASHROOM 128A, GIRLS WASHROOM 120).

Table with columns: MAX OCCUPANT LOAD, OBC REQUIREMENT (MALE), OBC REQUIREMENT (FEMALE). Shows 805 total load, 14 male, 16 female.

Table with columns: WASHROOM TYPE, TOTAL REQUIRED, TOTAL PROVIDED. Lists BOYS WASHROOM (14 required, 16 provided), GIRLS WASHROOM (16 required, 16 provided), STAFF WASHROOM (4 required, 4 provided).

DOOR SCHEDULE

Table with columns: NUMBER, TYPE, WIDTH, HEIGHT, THICKNESS, MATERIAL, FINISH, GLAZING, FRAME, HARDWARE & REMARKS. Lists door specifications for D104, D128B, D146B, D123, D124, D121.



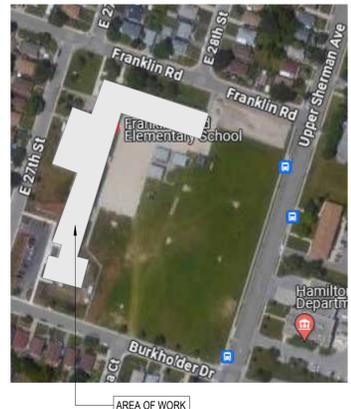
CEILING SCHEDULE: Table listing ceiling types (C1, C2, C3) and materials (Acoustic ceiling tiles, steel stud framing, gypsum board).

PARTITION SCHEDULE GENERAL NOTE: ALL PARTITIONS EXTEND TO UNDERSIDE OF STRUCTURAL SLAB OR ROOF DECKING (+3650) UNLESS OTHERWISE NOTED.

PARTITION SCHEDULE: Table listing partition types (P1, P2, P3, P4) and materials (Concrete block, metal studs, gypsum board).

EXTERIOR WALL INFILL: Table listing infill types (W1) and materials (Face brick, spray foam, block).

FURRING WALL SCHEDULE: Table listing furring wall types (F1, F2) and materials (Concrete block wall, furring channels, acoustic insulation, gypsum board).



SITE LOCATION

SYMBOL LEGEND

Table of symbols for structural grid, elevation reference, section reference, detail reference, exterior elevation reference, interior elevation reference, spot elevation, demolition/construction tag, room name, door tag, wall tag, window/screen tag, floor tag, roof tag, revision tag, and ceiling tag.

ABBREVIATION LEGEND

Table of standards and materials abbreviations (e.g., A.F.F. ABOVE FINISHED FLOOR, ACT ACOUSTICAL CEILING TILE).

DRAWING LEGEND

Table of drawing symbols for existing conditions, area of work, masonry walls, brick, gypsum board partitions, insulation, existing wall to remain, and existing to be demolished.

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE.



Revision table with columns: No., Description, Date. Shows 1 ISSUED FOR TENDER (02/06/2025) and 0 ISSUED FOR PERMIT (12/16/2024).

REVISIONS

Table with columns: SEAL, No., Description, Date.



Hamilton - Wentworth District School Board P02085 Franklin Elementary School Music Room, Corridors, and Student Washrooms Renovations 500 Franklin Rd., Hamilton, Ontario

GENERAL NOTES, SITE LOCATION, LEGENDS & PHASING

Table with columns: Drawn (RMC), Date (11/2024), Scale (As indicated), Project number (24-21), Checked (SG), Date (11/2024), Drawing No. (A0.01), and Revision (1).



OVERALL DEMOLITION PLAN
SCALE: 1 : 200

GENERAL DEMOLITION NOTES

ALL DEMOLITION WORK TO BE COORDINATED WITH THE HAZARDOUS MATERIALS ABATEMENT SCOPE OF WORK. REFER TO APPLICABLE DOCUMENTATION INCLUDED WITHIN THE SPECIFICATIONS. THIS PLAN IS TO BE USED IN CONJUNCTION WITH THE ENTIRE SET OF CONSTRUCTION DRAWINGS. REFER TO DRAWINGS A1.00, A1.01 AND A1.02 FOR FULL SCOPE OF DEMOLITION.

DO NOT REMOVE ANY ITEMS WITHOUT VERIFYING AND COORDINATING WITH ALL GENERAL TRADES AS HOW THEY RELATE TO THE OVERALL PROJECT.

FOR THE FULL SCOPE OF DEMOLITION, ALSO REFER TO THE MECHANICAL, ELECTRICAL AND STRUCTURAL PLANS AND NOTES.

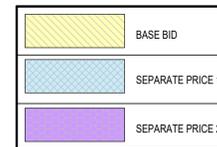
OWNER WILL MARK UP ANY ITEMS THEY WISH TO RETAIN FOR FUTURE USE AND AREA TO BE STORED WITHIN THE EXISTING PREMISES.

PROVIDE TEMPORARY HOARDING AS REQUIRED DURING CONSTRUCTION. REFER TO THE DEMOLITION DRAWINGS FOR EXTENT OF HOARDING.

REPAIR AND MAKE GOOD ALL EXISTING WALLS, FLOORS AND CEILINGS DAMAGED DURING THE DEMOLITION PROCESS AND NOT BEING REPLACED AS PART OF NEW CONSTRUCTION.

GENERAL CONTRACTOR SHALL FULLY ENCLOSED CONSTRUCTION AREA AND COORDINATE DEMOLITION AND ALL NEW WORK IN MANNER NOT TO DISTURB DAY TO DAY USE OF THE SURROUNDING AREA.

PHASING LEGEND



DEMOLITION NOTES

NUMBER	DESCRIPTION
1	COMPLETELY REMOVE EXISTING SUSPENDED TRANSITE CEILING TILES AND SUPPORTING SYSTEM.
2	COMPLETELY REMOVE EXISTING ACOUSTIC CEILING TILES AND SUPPORTING SYSTEM.
3	COMPLETELY REMOVE EXISTING TERRAZZO FLOORING (± 38mm THICK), RAISED URINAL FLOOR AND TERRAZZO WALL BASE AND PREPARE FOR NEW FINISHES AS SPECIFIED.
4	COMPLETELY REMOVE EXISTING VCT FLOORING AND RUBBER BASE AND PREPARE FOR NEW FINISHES AS SPECIFIED.
5	REMOVE EXISTING MILLWORK C/W PLUMBING FIXTURES & ACCESSORIES, WHERE APPLICABLE.
6	DEMOLISH / REMOVE ALL EXISTING PLUMBING FIXTURES C/W WASHROOM PARTITIONS & ACCESSORIES.
7	COMPLETELY REMOVE EXISTING DOOR & FRAME C/W METAL THRESHOLDS AND FLASHING ABOVE DOORS. STONE SILLS ON EXTERIOR TO REMAIN.
8	DEMOLISH EXISTING MASONRY WALL AND DOOR / FRAME WHERE APPLICABLE.
9	CAREFULLY REMOVE EXISTING MILLWORK & HEATERS BELOW WINDOWS IN ITS ENTIRETY.
10	REMOVE EXISTING WALL MOUNTED ACOUSTIC PANELS LOCATED ABOVE EXISTING WINDOWS. TAKE CARE NOT TO DAMAGE THE EXISTING MECHANICAL UNIT DURING REMOVAL.
11	CAREFULLY REMOVE ALL EXISTING WALL MOUNTED ACCESSORIES, INCLUDING BUT NOT LIMITED TO, TACKBOARDS, WHITEBOARDS, PULL-UP SCREENS, BLACKBOARDS, PROJECTORS AND ASSOCIATED SCREENS, ETC. REVIEW WITH OWNER ITEMS TO BE REUSED AND DISPOSE ALL OTHER ITEMS.
12	REMOVE & DISPOSE OF EXISTING DISHWASHER & REFRIGERATOR.
13	REMOVE EXISTING METAL FURRING CHANNELS C/W EXISTING LIGHTING FIXTURES AND PREPARE AREAS TO RECEIVE NEW CEILING.
14	REMOVE EXISTING FLOORING AND PREPARE AREAS TO RECEIVE NEW FLOORING FINISH.
15	REMOVE EXISTING WALL MOUNTED SHELVES. REVIEW WITH OWNER FOR THE STORAGE/ RELOCATION OF CLEANING SUPPLIES & ITEMS TO BE REUSED AND DISPOSE ALL OTHER ITEMS.

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.



NO.	DESCRIPTION	DATE
1	ISSUED FOR TENDER	02/06/2025
0	ISSUED FOR PERMIT	12/16/2024

REVISIONS

SEAL:

BASE BID



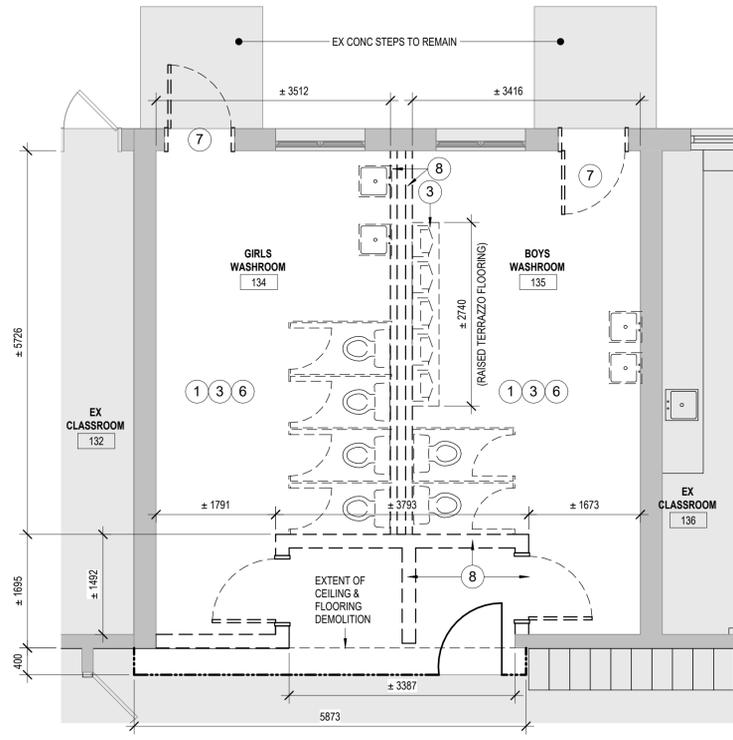
HWDSB

AMRA J
ARCHITECTS INC.
www.aja.design | info@aja.design | 905.920.5121

Project Name: Hamilton - Wentworth District School Board
P02085 Franklin Elementary School Music Room, Corridors, and Student Washrooms Renovations
500 Franklin Rd., Hamilton, Ontario

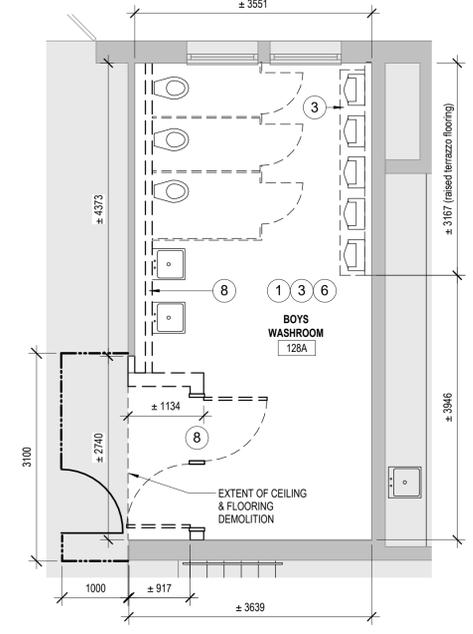
Drawing Title: OVERALL DEMOLITION PLAN

Drawn: RMC	Scale: As indicated
Date: 11/2024	Project Number: 24-21
Checked: SG	Drawing No: A1.00
Date: 11/2024	Revision: 1

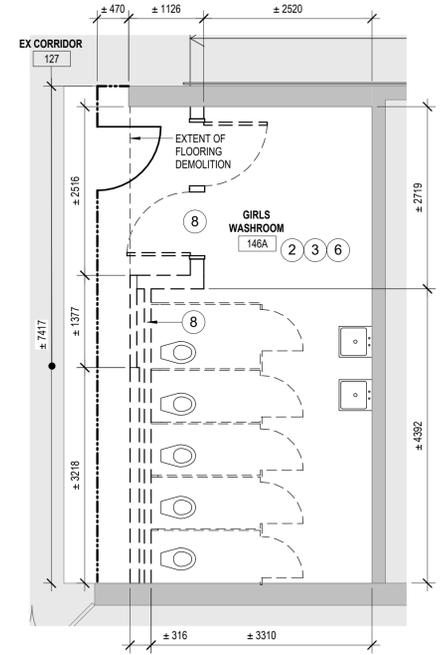


GIRLS WR 134 & BOYS WR 135 DEMOLITION PLAN 6
SCALE: 1:50 A1.00

SEPARATE PRICE 2



BOYS WR 128 DEMOLITION PLAN 3
SCALE: 1:50 A1.00

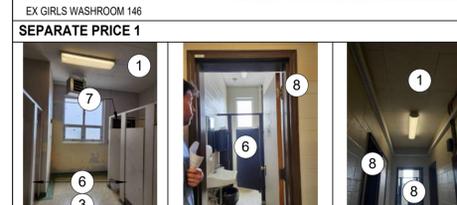
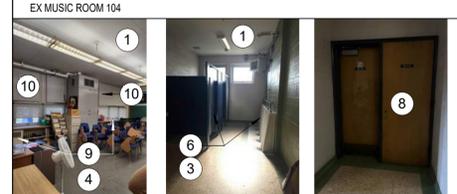


GIRLS WR 146 DEMOLITION PLAN 2
SCALE: 1:50 A1.00

DEMOLITION NOTES	
NUMBER	DESCRIPTION
1	COMPLETELY REMOVE EXISTING SUSPENDED TRANSITE CEILING TILES AND SUPPORTING SYSTEM.
2	COMPLETELY REMOVE EXISTING ACOUSTIC CEILING TILES AND SUPPORTING SYSTEM.
3	COMPLETELY REMOVE EXISTING TERRAZZO FLOORING (± 38mm THICK), RAISED URINAL FLOOR AND TERRAZZO WALL BASE AND PREPARE FOR NEW FINISHES AS SPECIFIED.
4	COMPLETELY REMOVE EXISTING VCT FLOORING AND RUBBER BASE AND PREPARE FOR NEW FINISHES AS SPECIFIED.
5	REMOVE EXISTING MILLWORK C/W PLUMBING FIXTURES & ACCESSORIES, WHERE APPLICABLE.
6	DEMOLISH / REMOVE ALL EXISTING PLUMBING FIXTURES C/W WASHROOM PARTITIONS & ACCESSORIES.
7	COMPLETELY REMOVE EXISTING DOOR & FRAME C/W METAL THRESHOLDS AND FLASHING ABOVE DOORS. STONE SILLS ON EXTERIOR TO REMAIN.
8	DEMOLISH EXISTING MASONRY WALL AND DOOR / FRAME WHERE APPLICABLE.
9	CAREFULLY REMOVE EXISTING MILLWORK & HEATERS BELOW WINDOWS IN ITS ENTIRETY.
10	REMOVE EXISTING WALL MOUNTED ACOUSTIC PANELS LOCATED ABOVE EXISTING WINDOWS. TAKE CARE NOT TO DAMAGE THE EXISTING MECHANICAL UNIT DURING REMOVAL.
11	CAREFULLY REMOVE ALL EXISTING WALL MOUNTED ACCESSORIES, INCLUDING BUT NOT LIMITED TO, TACKBOARDS, WHITEBOARDS, PULL-UP SCREENS, BLACKBOARDS, PROJECTORS AND ASSOCIATED SCREENS, ETC. REVIEW WITH OWNER ITEMS TO BE REUSED AND DISPOSE ALL OTHER ITEMS.
12	REMOVE & DISPOSE OF EXISTING DISHWASHER & REFRIGERATOR.
13	REMOVE EXISTING METAL FURRING CHANNELS C/W EXISTING LIGHTING FIXTURES AND PREPARE AREAS TO RECEIVE NEW CEILING.
14	REMOVE EXISTING FLOORING AND PREPARE AREAS TO RECEIVE NEW FLOORING FINISH.
15	REMOVE EXISTING WALL MOUNTED SHELVES. REVIEW WITH OWNER FOR THE STORAGE/RELOCATION OF CLEANING SUPPLIES & ITEMS TO BE REUSED AND DISPOSE ALL OTHER ITEMS.

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.

BASE BID



1	ISSUED FOR TENDER	02/06/2025
0	ISSUED FOR PERMIT	12/16/2024
No.	DESCRIPTION	DATE

REVISIONS

SEAL:

HWDSB

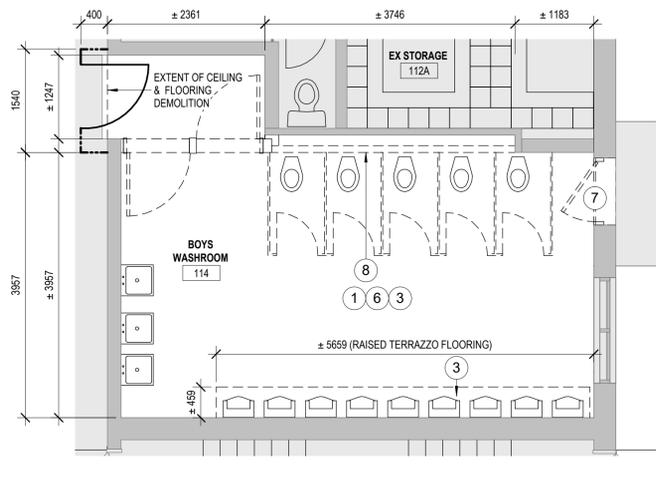
AMRA J ARCHITECTS INC.
www.aja.design | info@aja.design | 905.920.5121

Hamilton - Wentworth District School Board
P02085 Franklin Elementary School
Music Room, Corridors, and Student Washrooms Renovations
500 Franklin Rd., Hamilton, Ontario

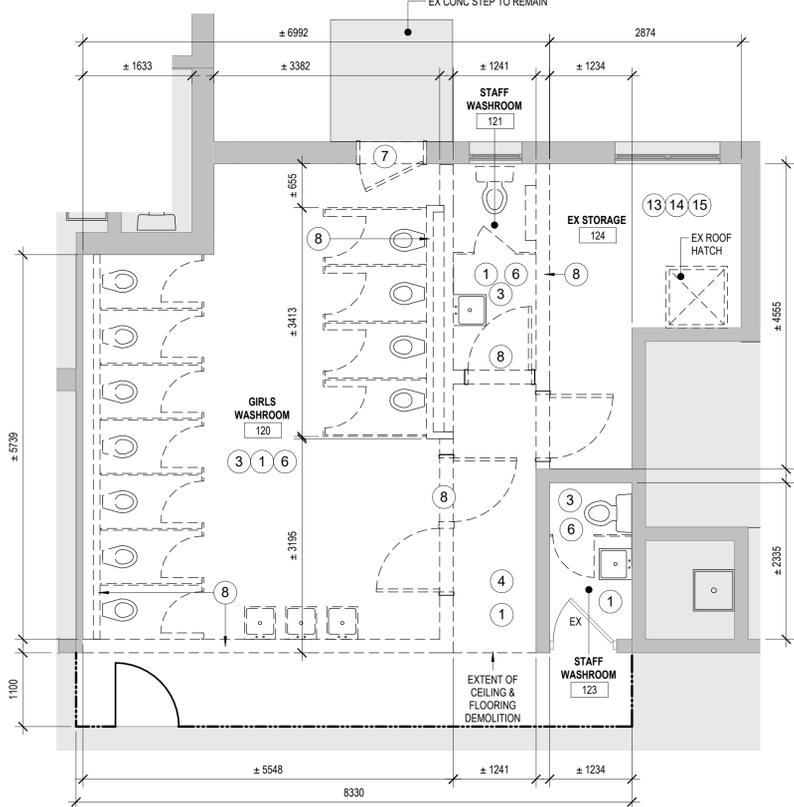
ENLARGED DEMOLITION PLANS

Drawn:	RMC	Scale:	As indicated
Date:	11/2024	Project number:	24-21
Checked:	SG	Drawing No.:	A1.01
Date:	11/2024	Revision:	1

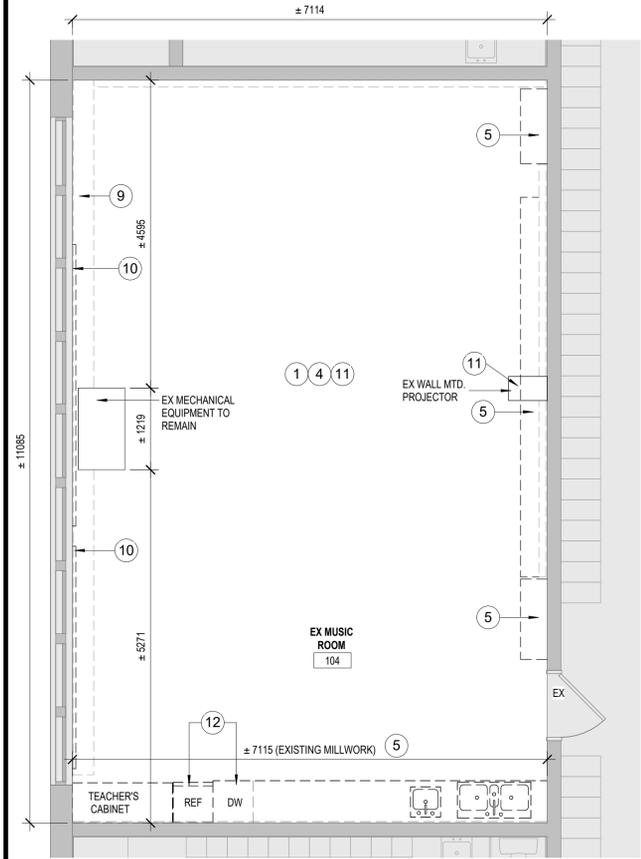
SEPARATE PRICE 1



BOYS WR 114 DEMOLITION PLAN 5
SCALE: 1:50 A1.00

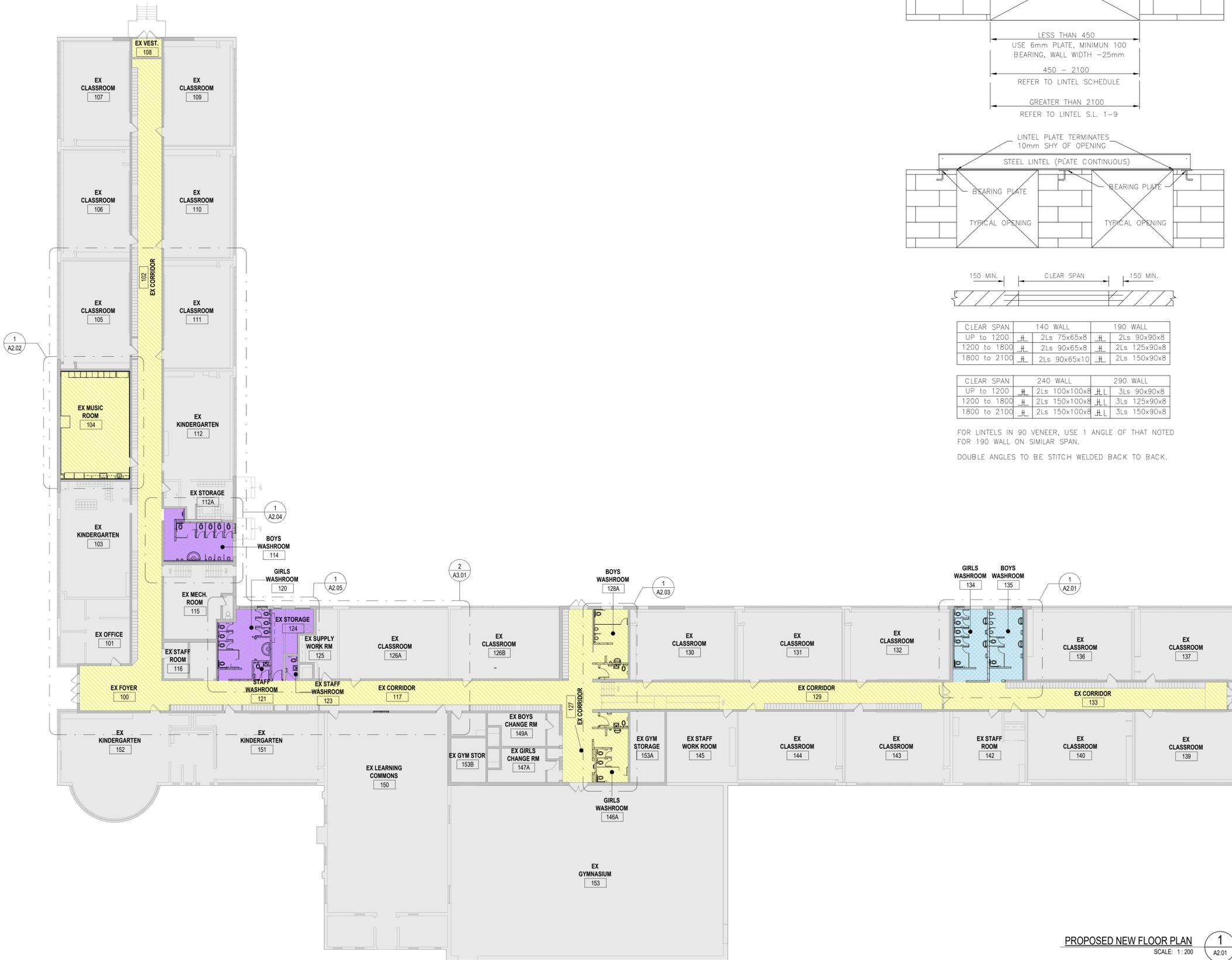


GIRLS WR 120 & STAFF WR 121 & 123 DEMOLITION PLAN 4
SCALE: 1:50 A1.00

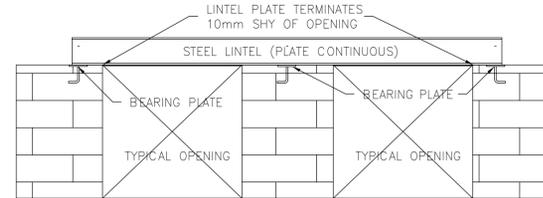
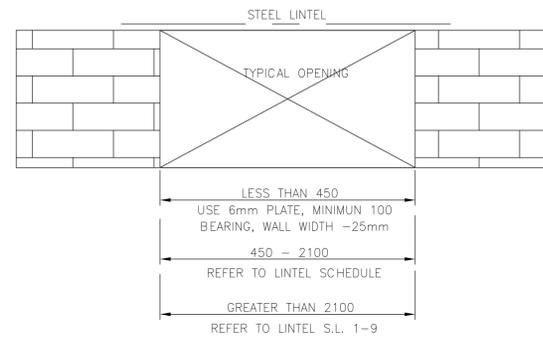


MUSIC ROOM DEMOLITION PLAN 1
SCALE: 1:50 A1.00

BASE BID



STRUCTURAL LINTEL SCHEDULE



CLEAR SPAN	140 WALL	190 WALL
UP to 1200	2Ls 75x65x8	2Ls 90x90x8
1200 to 1800	2Ls 90x65x8	2Ls 125x90x8
1800 to 2100	2Ls 90x65x10	2Ls 150x90x8

CLEAR SPAN	240 WALL	290 WALL
UP to 1200	2Ls 100x100x8	3Ls 90x90x8
1200 to 1800	2Ls 150x100x8	3Ls 125x90x8
1800 to 2100	2Ls 150x100x8	3Ls 150x90x8

FOR LINTELS IN 90 VENEER, USE 1 ANGLE OF THAT NOTED FOR 190 WALL ON SIMILAR SPAN.

DOUBLE ANGLES TO BE STITCH WELDED BACK TO BACK.

PHASING LEGEND



ROOM FINISH SCHEDULE

NOTE: REFER TO MATERIALS SPECIFICATIONS FOR MORE DETAILS OF THE FINISHES.

ROOM NO.	ROOM NAME	FLOOR FINISH	BASE FINISH	WALL FINISH	CEILING FINISH	HEIGHT
104	EX MUSIC ROOM	VCT	RB	PT	ACT2	3200
134	GIRLS WASHROOM	PORCELAIN TILES	N/A	CERAMIC TILES/PT	GB/PT	3000
135	BOYS WASHROOM	PORCELAIN TILES	N/A	CERAMIC TILES/PT	GB/PT	3000
102	EX CORRIDOR	EX	EX	EX	ACT1	2800
100	EX FOYER	EX	EX	EX	ACT1	2800
117	EX CORRIDOR	EX	EX	EX	ACT1	2800
127	EX CORRIDOR	EX	EX	EX	ACT1	2800
129	EX CORRIDOR	EX	EX	EX	ACT1	2800
133	EX CORRIDOR	EX	EX	EX	ACT1	2800
146A	GIRLS WASHROOM	PORCELAIN TILES	N/A	CERAMIC TILES/PT	GB/PT	3000
146B	STAFF WASHROOM	PORCELAIN TILES	N/A	CERAMIC TILES/PT	GB/PT	3000
128B	STAFF WASHROOM	PORCELAIN TILES	N/A	CERAMIC TILES/PT	GB/PT	3000
128A	BOYS WASHROOM	PORCELAIN TILES	N/A	CERAMIC TILES/PT	GB/PT	3000
114	BOYS WASHROOM	PORCELAIN TILES	N/A	CERAMIC TILES/PT	GB/PT	3000
120	GIRLS WASHROOM	PORCELAIN TILES	N/A	CERAMIC TILES/PT	GB/PT	3000
123	EX STAFF WASHROOM	PORCELAIN TILES	N/A	CERAMIC TILES/PT	GB/PT	2800
121	STAFF WASHROOM	PORCELAIN TILES	N/A	CERAMIC TILES/PT	GB/PT	2800
124	EX STORAGE	VCT	RB	PT	ACT1	3000

NOTES:

- AT WALLS RECEIVING A CERAMIC TILE FINISH, THE TILES EXTEND ALL THE WAY TO THE FLOOR FINISH. REFER TO WASHROOM TILE LAYOUT ELEVATIONS.
- REFER TO WASHROOM TILE LAYOUT ELEVATIONS FOR VERTICAL HEIGHT OF CERAMIC TILE FINISH.
- REVIEW WASHROOM PLANS AND TILE LAYOUT ELEVATIONS TOGETHER TO UNDERSTAND EXTENT OF WALL FINISHES.

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.



No.	DESCRIPTION	DATE
1	ISSUED FOR TENDER	02/06/2025
0	ISSUED FOR PERMIT	12/16/2024

REVISIONS

SEAL:

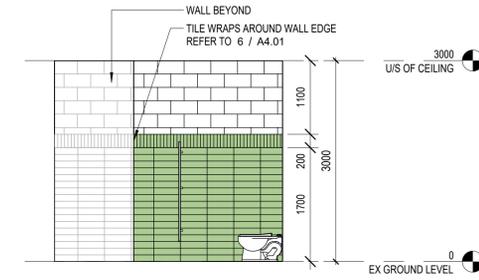


Project No: Hamilton - Wentworth District School Board
P02085 Franklin Elementary School Music Room, Corridors, and Student Washrooms Renovations
500 Franklin Rd., Hamilton, Ontario

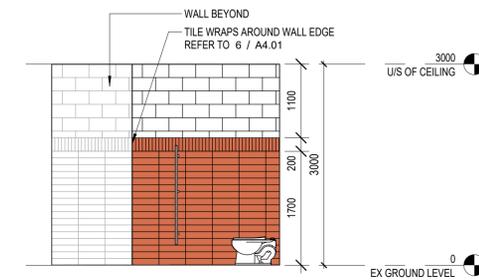
Drawing Title: PROPOSED OVERALL FLOORPLAN & ROOM FINISH SCHEDULE

Drawn	Scale
RMC	As indicated
11/2024	project number: 24-21
checked: SG	DRAWING NO: A2.00
11/2024	1

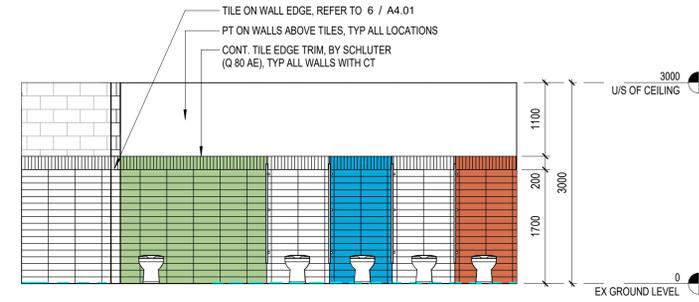
PROPOSED NEW FLOOR PLAN 1
SCALE: 1:200 A2.01



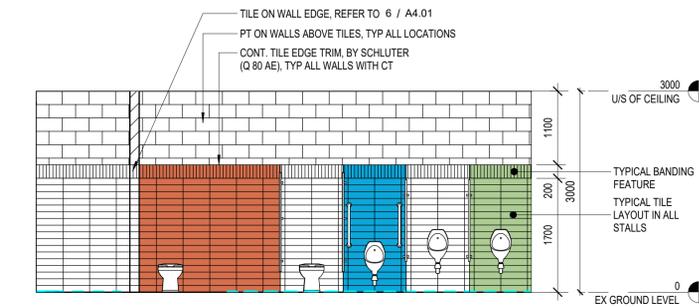
GIRLS WASHROOM (134) SOUTH WALL TILE LAYOUT
SCALE: 1:50 **6** A2.01



BOYS WASHROOM (135) SOUTH WALL TILE LAYOUT
SCALE: 1:50 **4** A2.01



GIRLS WASHROOM (134) WEST WALL TILE LAYOUT
SCALE: 1:50 **5** A2.01



BOYS WASHROOM (135) WEST WALL TILE LAYOUT
SCALE: 1:50 **3** A2.01

WASHROOM GENERAL NOTES

REFER TO TYPICAL WASHROOM STALL PLANS AND WASHROOM FIXTURES TYPICAL MOUNTING HEIGHTS IN DRAWING A4.01 FOR DIMENSIONS & DETAILED INFORMATION
REFER TO WASHROOM PLANS FOR GRAB BARS & ACCESSORY LOCATIONS (TYP. IN ALL WASHROOM STALLS U.N.O.)
REFER TO SPECIFICATION BOOK FOR THE WASHROOM ACCESSORIES AND FINISHES.
SEE MECHANICAL AND ELECTRICAL DRAWINGS AND COORDINATE ANY DISCREPANCIES BEFORE CONSTRUCTION

REFLECTED CEILING PLAN LEGEND

REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR DETAILED FIXTURE INFORMATION.	
	610 X 1220 RECESSED TROFFER LIGHT FIXTURE
	305 X 1220 RECESSED TROFFER LIGHT FIXTURE
	NEW 610 X 1220 ACOUSTIC CEILING TILES IN SUSPENDED PREFINISHED METAL GRID
	RETURN / EXHAUST GRILLE, SIZES VARY (REFER TO MECH DWGS)
	CEILING RECESSED CABINET UNIT HEATERS (REFER TO MECH DWGS)

NOTE:
1. LIGHT FIXTURES TO BE CENTRED WITHIN ROOMS UNLESS DIMENSIONED OTHERWISE, TYPICAL
2. DIMENSIONS ARE TAKEN TO THE CENTRE OF LIGHT FIXTURES, TYPICAL

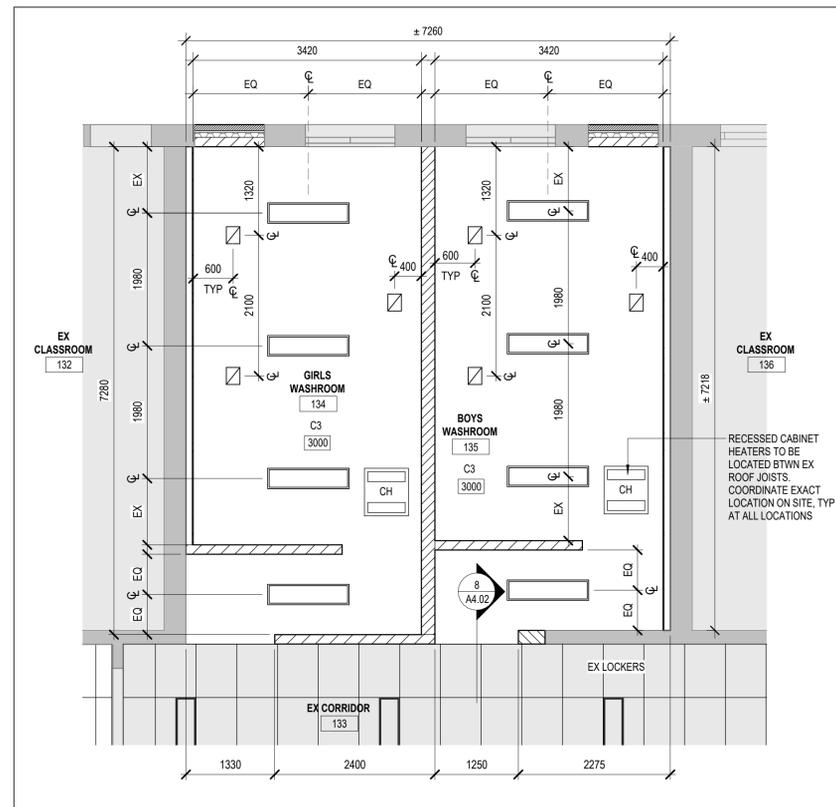
WASHROOM FLOOR PLAN ABBREVIATIONS

CH	COAT HOOK
CT #	CERAMIC TILE (NUMBER SUFFIX DENOTES COLOUR OF TILE, REFER TO LEGEND)
HD	HAND DRYER (SEE ELECTRICAL DWGS)
PTD	PAPER TOWEL DISPENSER
SD	SOAP DISPENSER
TPD	TOILET PAPER DISPENSER
GB1	VERTICAL GRAB BAR
GB2	HORIZONTAL GRAB BAR
GB3	L - SHAPED GRAB BAR
ND	NAPKIN DISPOSAL
MR	MIRROR
WR	WASTE RECEPTACLE
PS	PRIVACY SCREEN
SH	SHELF
WB	WATER BOTTLE FILLER
ADO	AUTOMATIC DOOR OPERATOR
FD	FLOOR DRAIN (REFER TO MECH)

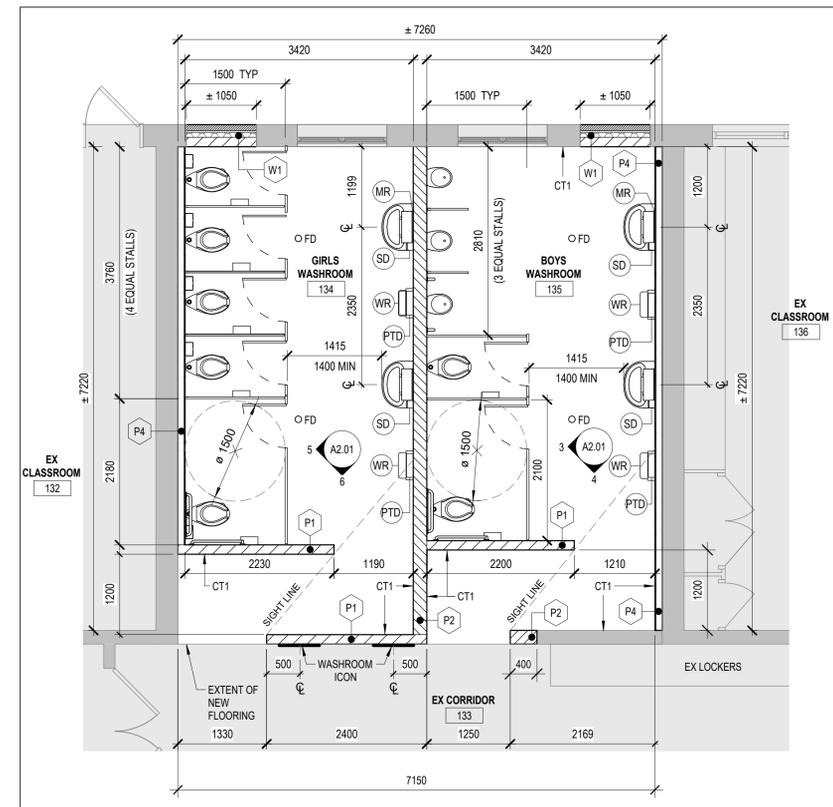
TILE COLOR LEGEND

	CT 1 WHITE - 4X16 GLOSSY BELTILE RAINBOW TILES BY CENTURA
	CT 2 SAGE - 4X16 GLOSSY BELTILE RAINBOW TILES BY CENTURA
	CT 3 SPICE - 4X16 GLOSSY BELTILE RAINBOW TILES BY CENTURA
	CT 4 OCEAN BLUE - 4X16 GLOSSY BELTILE RAINBOW TILES BY CENTURA

NOTE:
1. COLOUR OF CT NOTED ON PLANS WHERE INTERIOR ELEVATIONS ARE NOT PROVIDED
2. BANDING TILE FEATURE: 2X8 GLOSSY BELTILE RAINBOW TILES BY CENTURA. COLOUR TO MATCH TILES BELOW BANDING, TYP



BOYS (134) & GIRLS (135) WASHROOMS REFLECTED CEILING
SCALE: 1:50 **2**



BOYS (134) & GIRLS (135) WASHROOMS FLOOR PLAN
SCALE: 1:50 **1** A2.00

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.



1	ISSUED FOR TENDER	02/06/2025
0	ISSUED FOR PERMIT	12/16/2024
No.	DESCRIPTION	DATE

REVISIONS

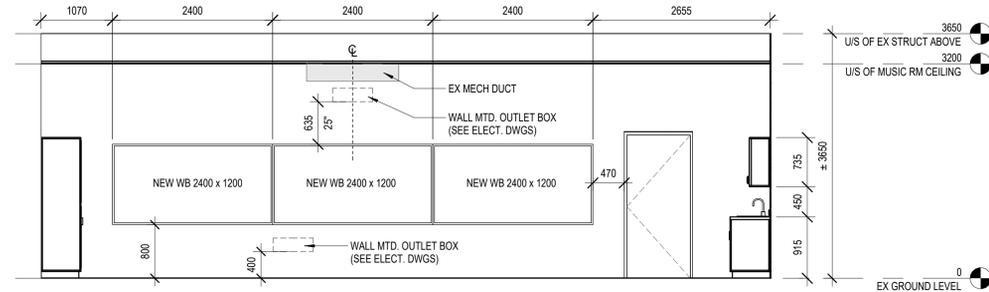
SEAL:



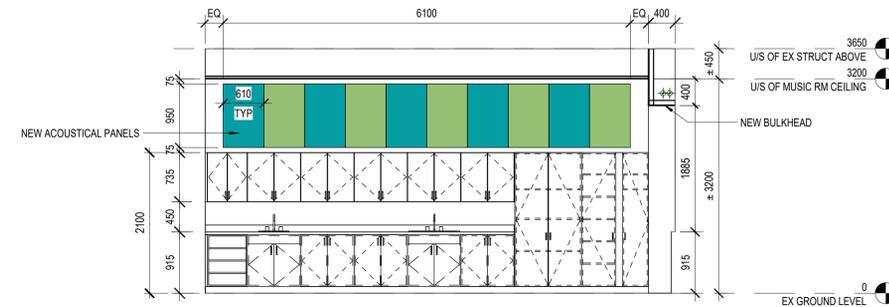
Project No:
Hamilton - Wentworth District School Board
P02085 Franklin Elementary School
Music Room, Corridors, and Student Washrooms Renovations
500 Franklin Rd., Hamilton, Ontario

Drawing Title:
WASHROOM FLOOR PLAN DETAILS, REFLECTED CEILING PLANS & INTERIOR ELEVATIONS

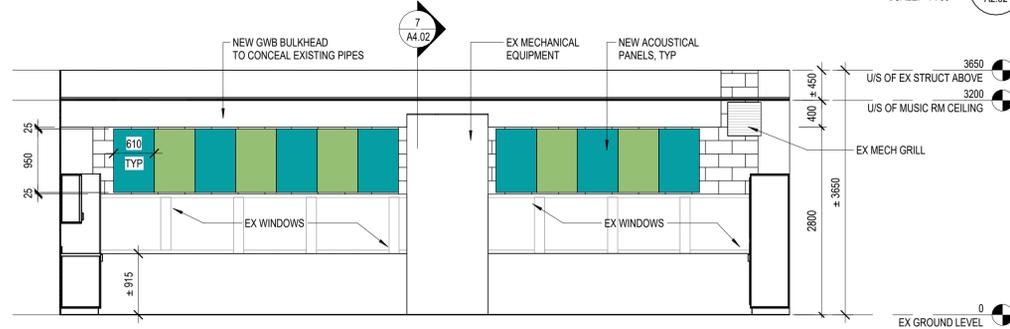
Drawn: RMC	Scale: As indicated
Date: 10/2024	Project Number: 24-21
Checked: SG	Drawing No.:
Date: 11/2024	A2.01
	1



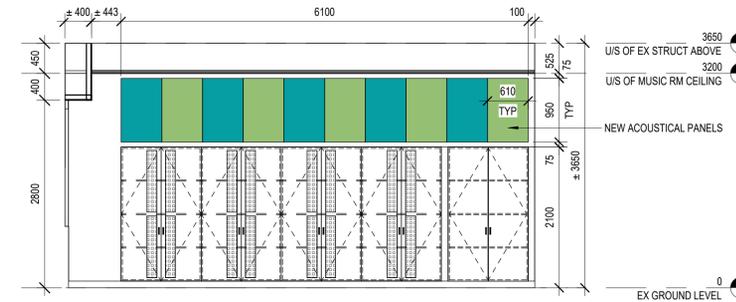
MUSIC ROOM ELEVATION A 6 SCALE: 1:50 A2.02



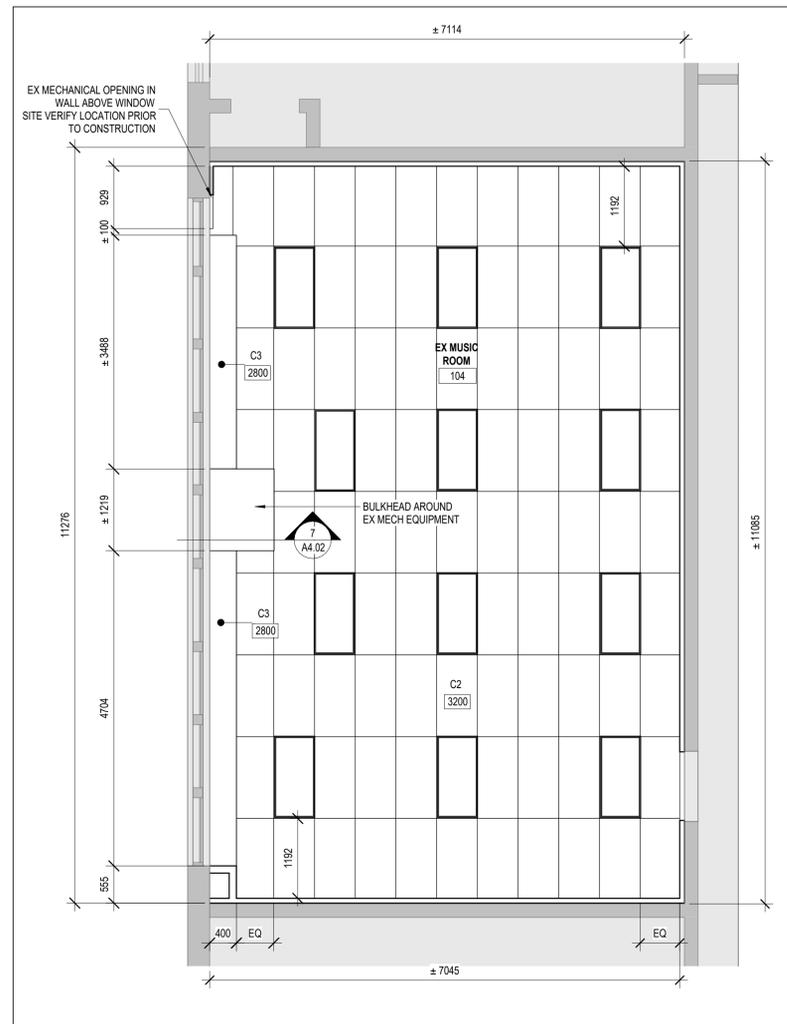
MUSIC ROOM ELEVATION B 5 SCALE: 1:50 A2.02



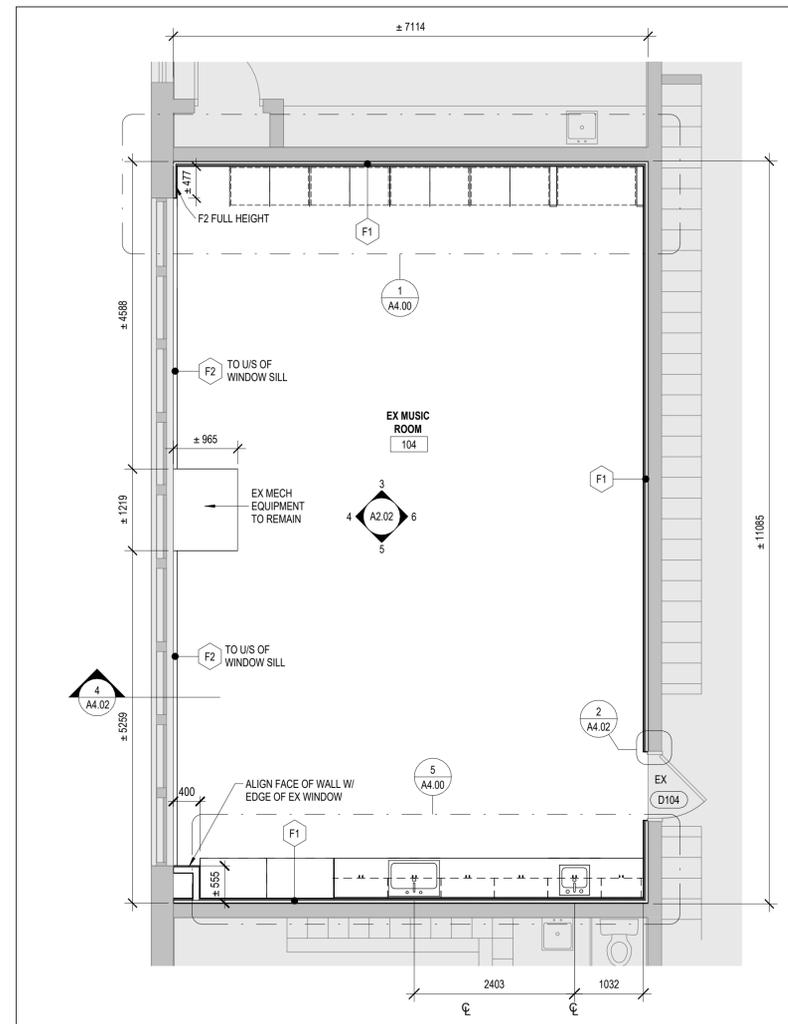
MUSIC ROOM ELEVATION C 4 SCALE: 1:50 A2.02



MUSIC ROOM ELEVATION D 3 SCALE: 1:50 A2.02



PROPOSED MUSIC ROOM REFLECTED CEILING PLAN 2 SCALE: 1:50 A3.00



PROPOSED NEW MUSIC ROOM FLOOR PLAN 1 SCALE: 1:50 A2.00

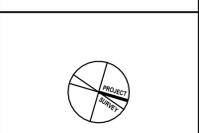
REFLECTED CEILING PLAN LEGEND

REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR DETAILED FIXTURE INFORMATION.

	610 X 1220 RECESSED TROFFER LIGHT FIXTURE
	305 X 1220 RECESSED TROFFER LIGHT FIXTURE
	NEW 610 X 1220 ACOUSTIC CEILING TILES IN SUSPENDED PREFINISHED METAL GRID
	RETURN / EXHAUST GRILLE. SIZES VARY (REFER TO MECH DWGS)
	CEILING RECESSED CABINET UNIT HEATERS (REFER TO MECH DWGS)

NOTE:
 1. LIGHT FIXTURES TO BE CENTRED WITHIN ROOMS UNLESS DIMENSIONED OTHERWISE, TYPICAL.
 2. DIMENSIONS ARE TAKEN TO THE CENTRE OF LIGHT FIXTURES, TYPICAL.

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.



No.	DESCRIPTION	DATE
1	ISSUED FOR TENDER	02/06/2025
0	ISSUED FOR PERMIT	12/16/2024

REVISIONS

SEAL:

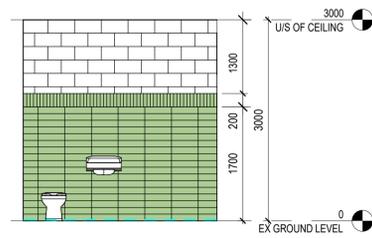


project file:
 Hamilton - Wentworth District School Board
 P02085 Franklin Elementary School
 Music Room, Corridors, and Student Washrooms Renovations
 500 Franklin Rd., Hamilton, Ontario

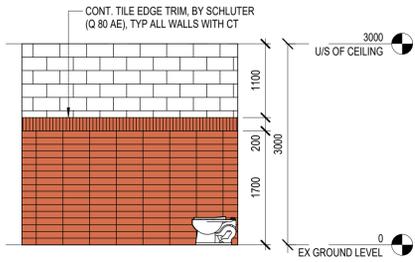
drawing title:
MUSIC ROOM PLANS AND INTERIOR ELEVATIONS

drawn: RMC	scale: 1:50
date: 11/2024	project number: 24-21

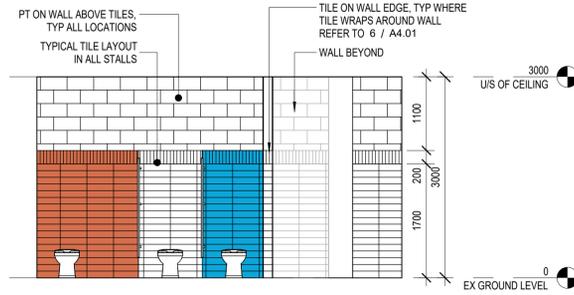
checked: SG	DRAWING NO: A2.02	1
date: 11/2024		Revision



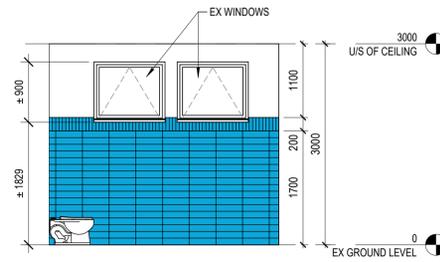
STAFF WASHROOM (146B) WALL TILE LAYOUT 10
SCALE: 1:50
A2.03



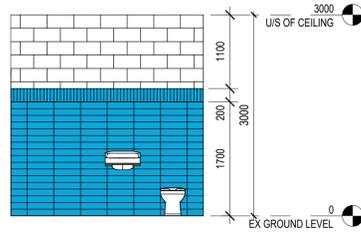
GIRLS WASHROOM (146) SOUTH WALL TILE LAYOUT 9
SCALE: 1:50
A2.03



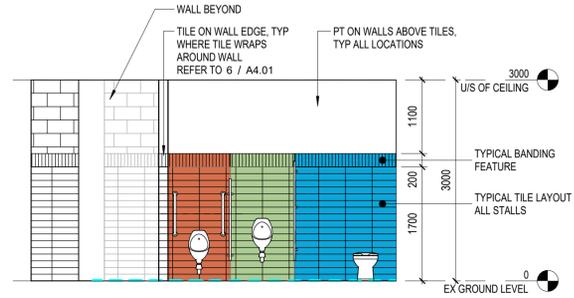
GIRLS WASHROOM (146) WEST WALL TILE LAYOUT 8
SCALE: 1:50
A2.03



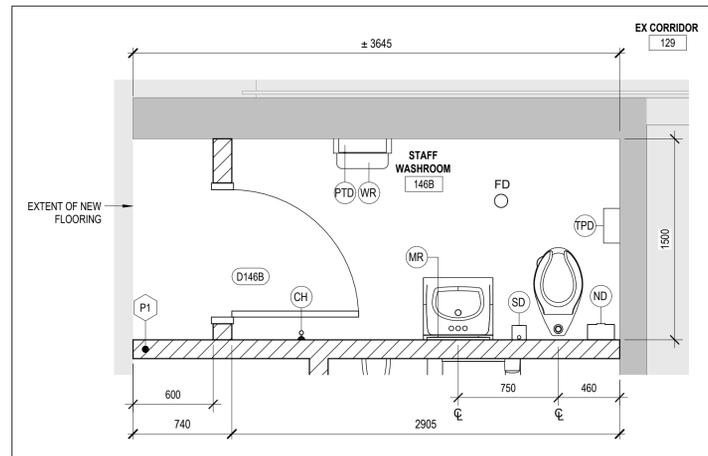
BOYS WASHROOM (128) NORTH WALL TILE LAYOUT 7
SCALE: 1:50
A2.03



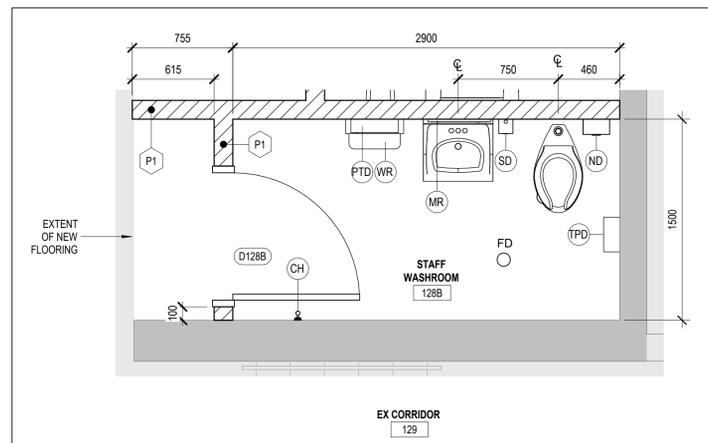
STAFF WASHROOM (128B) WALL TILE LAYOUT 6
SCALE: 1:50
A2.03



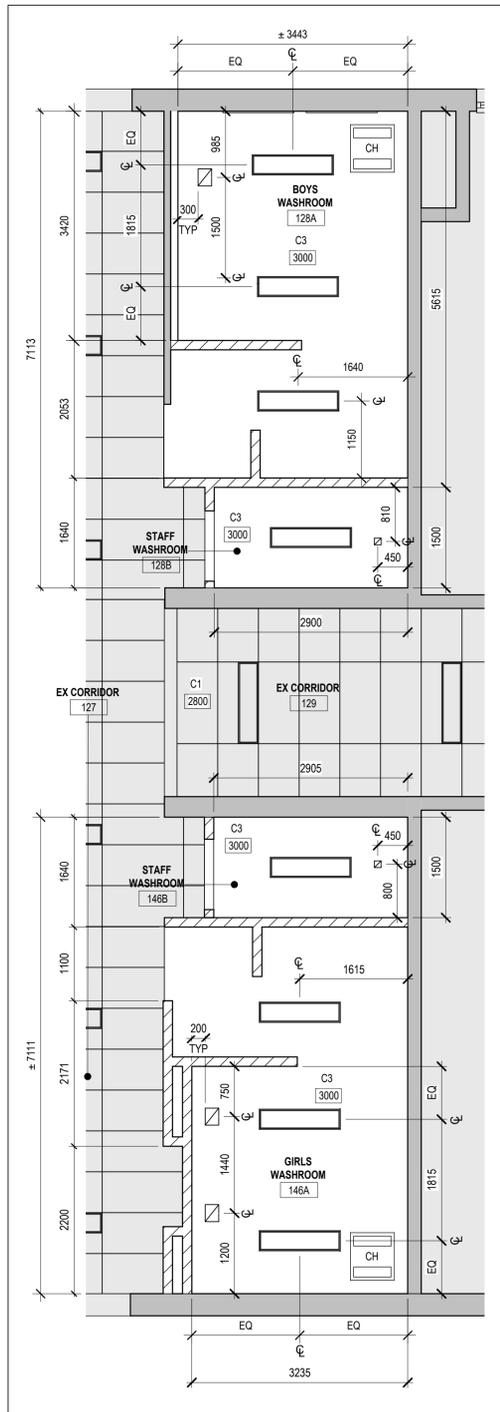
BOYS WASHROOM (128) WEST WALL TILE LAYOUT 5
SCALE: 1:50
A2.03



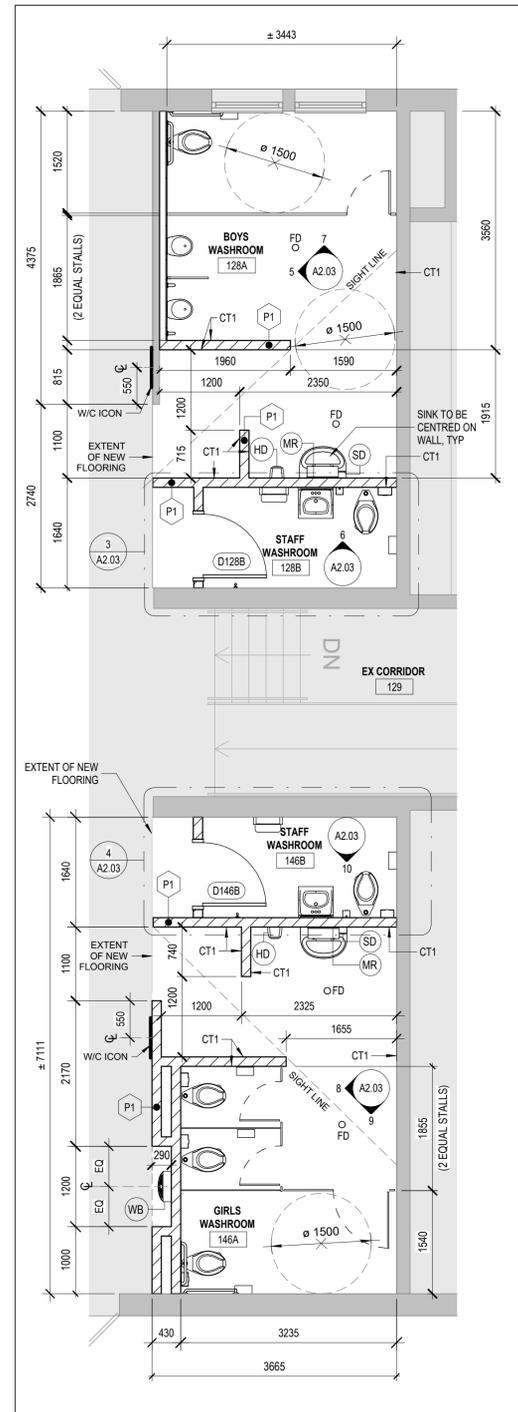
STAFF WASHROOM (146B) FLOOR PLAN 4
SCALE: 1:25
A2.03



STAFF WASHROOM (128B) FLOOR PLAN 3
SCALE: 1:25
A2.03



BOYS 128 & GIRLS 146 WASHROOM RCPS 2
SCALE: 1:50
A3.00



BOYS 128 & GIRLS WASHROOM 146 FLOOR PLAN 1
SCALE: 1:50
A2.00

WASHROOM GENERAL NOTES

- REFER TO TYPICAL WASHROOM STALL PLANS AND WASHROOM FIXTURES TYPICAL MOUNTING HEIGHTS IN DRAWING A4.01 FOR DIMENSIONS & DETAILED INFORMATION
- REFER TO WASHROOM PLANS FOR GRAB BARS & ACCESSORY LOCATIONS (TYP. IN ALL WASHROOM STALLS U.N.O.)
- REFER TO SPECIFICATION BOOK FOR THE WASHROOM ACCESSORIES AND FINISHES.
- SEE MECHANICAL AND ELECTRICAL DRAWINGS AND COORDINATE ANY DISCREPANCIES BEFORE CONSTRUCTION

REFLECTED CEILING PLAN LEGEND

REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR DETAILED FIXTURE INFORMATION.	
	610 X 1220 RECESSED TROFFER LIGHT FIXTURE
	305 X 1220 RECESSED TROFFER LIGHT FIXTURE
	NEW 610 X 1220 ACOUSTIC CEILING TILES IN SUSPENDED PREFINISHED METAL GRID
	RETURN / EXHAUST GRILLE, SIZES VARY (REFER TO MECH DWGS)
	CEILING RECESSED CABINET UNIT HEATERS (REFER TO MECH DWGS)

- NOTE:
- LIGHT FIXTURES TO BE CENTRED WITH ROOMS UNLESS DIMENSIONED OTHERWISE, TYPICAL
 - DIMENSIONS ARE TAKEN TO THE CENTRE OF LIGHT FIXTURES, TYPICAL

WASHROOM FLOOR PLAN ABBREVIATIONS

CH	COAT HOOK
CT #	CERAMIC TILE (NUMBER SUFFIX DENOTES COLOUR OF TILE, REFER TO LEGEND)
HD	HAND DRYER (SEE ELECTRICAL DWGS)
PTD	PAPER TOWEL DISPENSER
SD	SOAP DISPENSER
TPD	TOILET PAPER DISPENSER
GB1	VERTICAL GRAB BAR
GB2	HORIZONTAL GRAB BAR
GB3	L - SHAPED GRAB BAR
ND	NAPKIN DISPOSAL
MR	MIRROR
WR	WASTE RECEPTACLE
PS	PRIVACY SCREEN
SH	SHELF
WB	WATER BOTTLE FILLER
ADO	AUTOMATIC DOOR OPERATOR
FD	FLOOR DRAIN (REFER TO MECH)

TILE COLOR LEGEND

	CT 1 WHITE - 4X16 GLOSSY BELTILE RAINBOW TILES BY CENTURA
	CT 2 SAGE - 4X16 GLOSSY BELTILE RAINBOW TILES BY CENTURA
	CT 3 SPICE - 4X16 GLOSSY BELTILE RAINBOW TILES BY CENTURA
	CT 4 OCEAN BLUE - 4X16 GLOSSY BELTILE RAINBOW TILES BY CENTURA

- NOTE:
- COLOUR OF CT NOTED ON PLANS WHERE INTERIOR ELEVATIONS ARE NOT PROVIDED
 - BANDING TILE FEATURE: 2X8 GLOSSY BELTILE RAINBOW TILES BY CENTURA. COLOUR TO MATCH TILES BELOW BANDING, TYP

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.



1	ISSUED FOR TENDER	02/06/2025
0	ISSUED FOR PERMIT	12/16/2024
No.	DESCRIPTION	DATE

REVISIONS

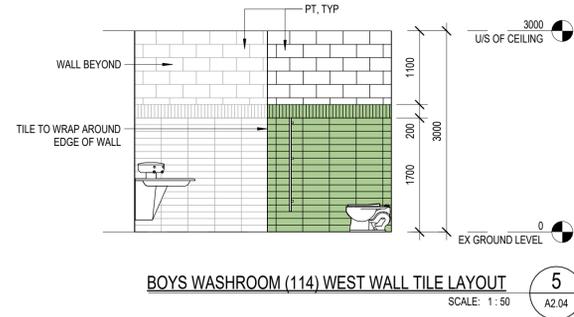
SEAL:



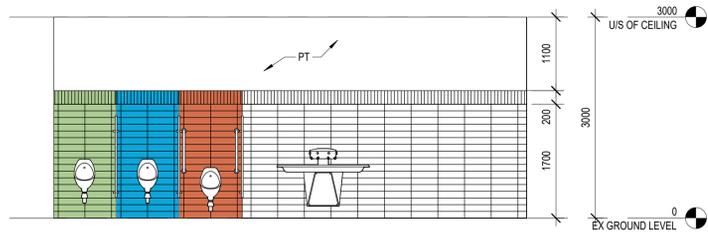
Project No:
Hamilton - Wentworth District School Board
P02085 Franklin Elementary School Music Room, Corridors, and Student Washrooms Renovations
500 Franklin Rd., Hamilton, Ontario

Drawing title:
WASHROOM FLOOR PLAN DETAILS, REFLECTED CEILING PLANS & INTERIOR ELEVATIONS

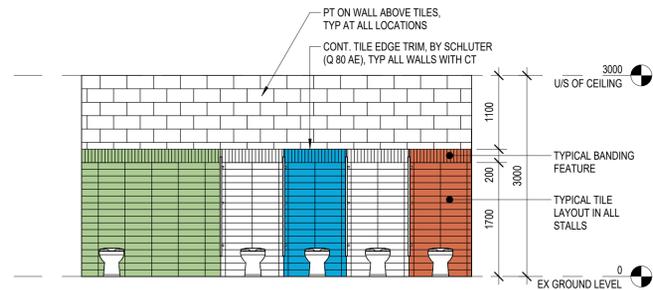
Drawn: RMC	Scale: As indicated
Date: 10/2024	Project number: 24-21
Checked: SG	Drawing No: A2.03
Date: 11/2024	Revision: 1



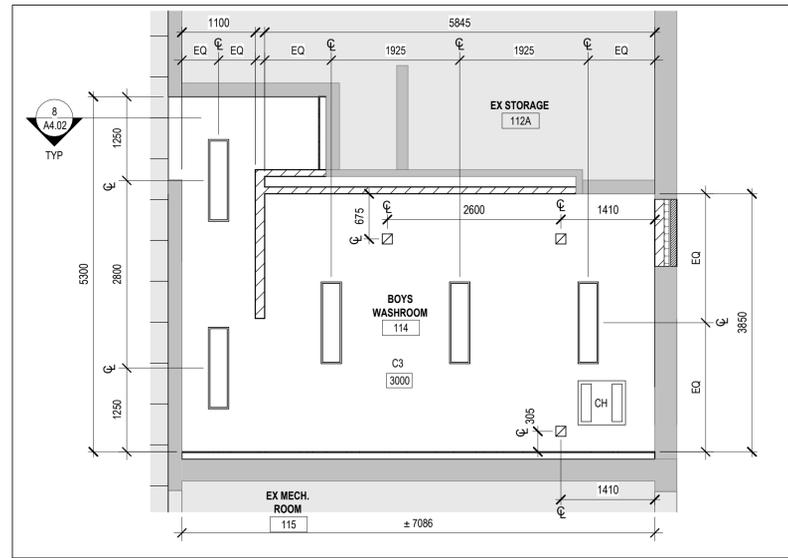
BOYS WASHROOM (114) WEST WALL TILE LAYOUT
SCALE: 1:50



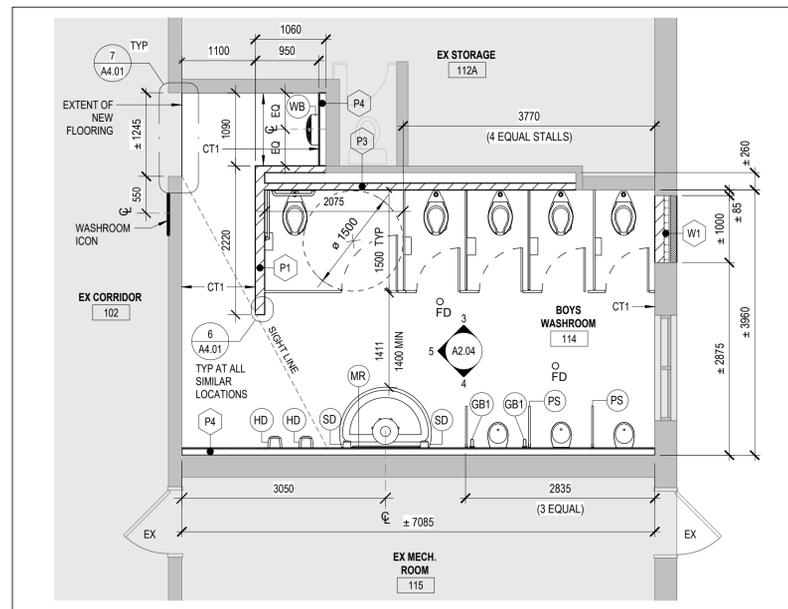
BOYS WASHROOM (114) SOUTH WALL TILE LAYOUT
SCALE: 1:50



BOYS WASHROOM (114) NORTH TILE LAYOUT
SCALE: 1:50



ENLARGED BOYS WASHROOM REFLECTED CEILING PLAN
SCALE: 1:50



ENLARGED BOYS WASHROOM 114 FLOOR PLAN
SCALE: 1:50

WASHROOM GENERAL NOTES

REFER TO TYPICAL WASHROOM STALL PLANS AND WASHROOM FIXTURES TYPICAL MOUNTING HEIGHTS IN DRAWING A4.01 FOR DIMENSIONS & DETAILED INFORMATION

REFER TO WASHROOM PLANS FOR GRAB BARS & ACCESSORY LOCATIONS (TYP. IN ALL WASHROOM STALLS U.N.O.)

REFER TO SPECIFICATION BOOK FOR THE WASHROOM ACCESSORIES AND FINISHES.

SEE MECHANICAL AND ELECTRICAL DRAWINGS AND COORDINATE ANY DISCREPANCIES BEFORE CONSTRUCTION

REFLECTED CEILING PLAN LEGEND

REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR DETAILED FIXTURE INFORMATION.	
	610 X 1220 RECESSED TROFFER LIGHT FIXTURE
	305 X 1220 RECESSED TROFFER LIGHT FIXTURE
	NEW 610 X 1220 ACOUSTIC CEILING TILES IN SUSPENDED PREFINISHED METAL GRID
	RETURN / EXHAUST GRILLE, SIZES VARY (REFER TO MECH DWGS)
	CEILING RECESSED CABINET UNIT HEATERS (REFER TO MECH DWGS)

- NOTE:
- LIGHT FIXTURES TO BE CENTRED WITHIN ROOMS UNLESS DIMENSIONED OTHERWISE, TYPICAL
 - DIMENSIONS ARE TAKEN TO THE CENTRE OF LIGHT FIXTURES, TYPICAL

WASHROOM FLOOR PLAN ABBREVIATIONS

CH	COAT HOOK
CT #	CERAMIC TILE (NUMBER SUFFIX DENOTES COLOUR OF TILE, REFER TO LEGEND)
HD	HAND DRYER (SEE ELECTRICAL DWGS)
PTD	PAPER TOWEL DISPENSER
SD	SOAP DISPENSER
TPD	TOILET PAPER DISPENSER
GB1	VERTICAL GRAB BAR
GB2	HORIZONTAL GRAB BAR
GB3	L - SHAPED GRAB BAR
ND	NAPKIN DISPOSAL
MR	MIRROR
WR	WASTE RECEPTACLE
PS	PRIVACY SCREEN
SH	SHELF
WB	WATER BOTTLE FILLER
ADO	AUTOMATIC DOOR OPERATOR
FD	FLOOR DRAIN (REFER TO MECH)

TILE COLOR LEGEND

	CT 1 WHITE - 4X16 GLOSSY BELTILE RAINBOW TILES BY CENTURA
	CT 2 SAGE - 4X16 GLOSSY BELTILE RAINBOW TILES BY CENTURA
	CT 3 SPICE - 4X16 GLOSSY BELTILE RAINBOW TILES BY CENTURA
	CT 4 OCEAN BLUE - 4X16 GLOSSY BELTILE RAINBOW TILES BY CENTURA

- NOTE:
- COLOR OF CT NOTED ON PLANS WHERE INTERIOR ELEVATIONS ARE NOT PROVIDED
 - BANDING TILE FEATURE: 2X8 GLOSSY BELTILE RAINBOW TILES BY CENTURA. COLOR TO MATCH TILES BELOW BANDING, TYP

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.



1	ISSUED FOR TENDER	02/06/2025
0	ISSUED FOR PERMIT	12/16/2024
No.	DESCRIPTION	DATE

REVISIONS

SEAL:

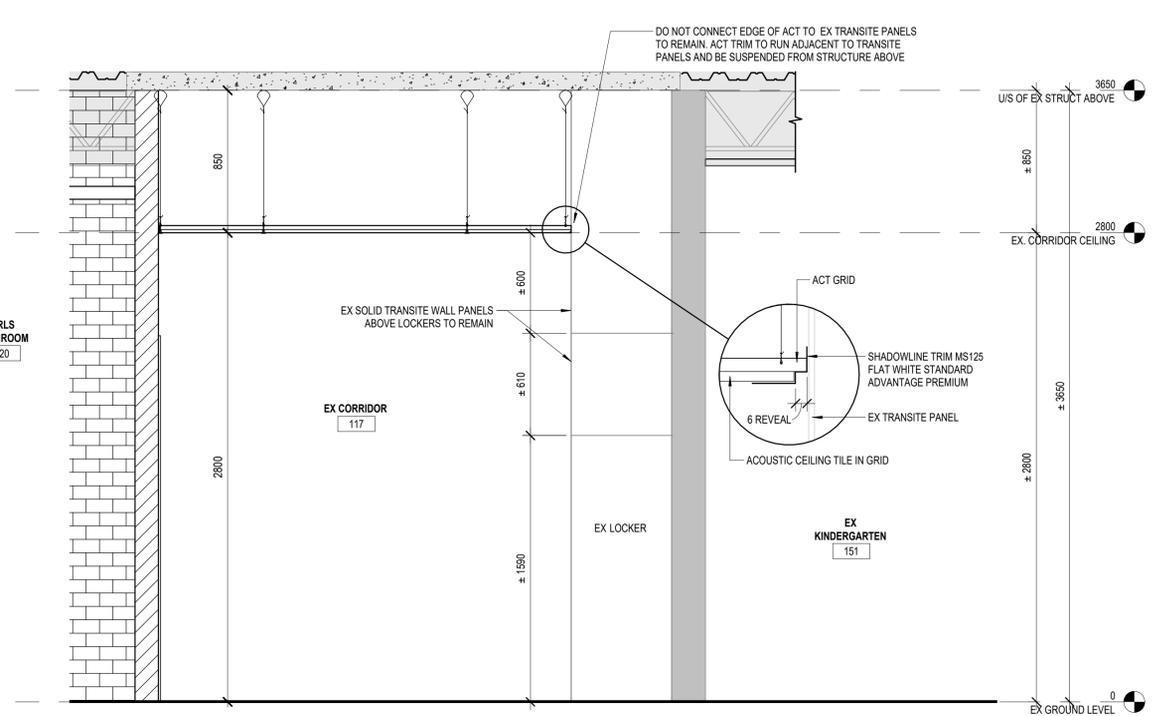
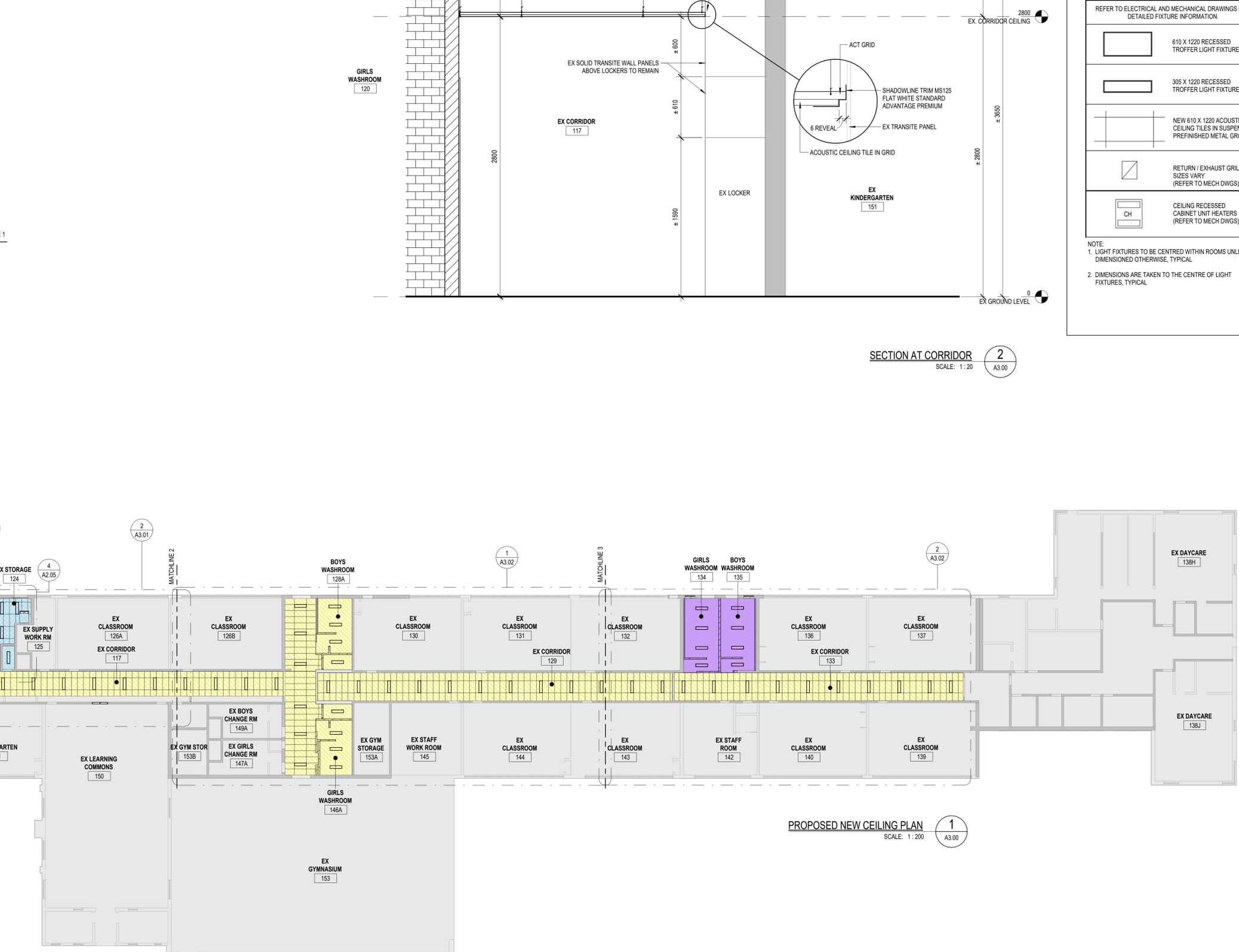
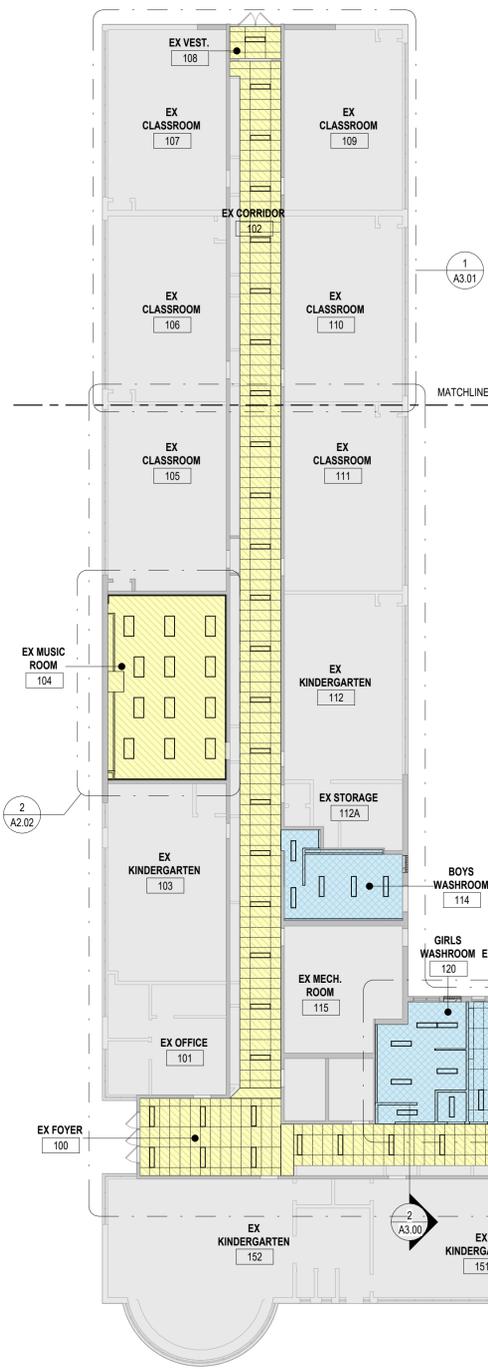
HWDSB

AMRA J
ARCHITECTS INC.
www.aja.design | info@aja.design | 905.920.5121

Project file:
Hamilton - Wentworth District School Board
P02085 Franklin Elementary School Music Room, Corridors, and Student Washrooms Renovations
500 Franklin Rd., Hamilton, Ontario

Drawing file:
BOYS WASHROOM FLOOR PLAN DETAILS, REFLECTED CEILING PLAN & INTERIOR ELEVATIONS

Drawn: RMC	Scale: As indicated
Date: 11/2024	Project number: 24-21
Checked: SG	Drawing No: A2.04
Date: 11/2024	Revision: 1



SECTION AT CORRIDOR 2
SCALE: 1:20 A3.00

PROPOSED NEW CEILING PLAN 1
SCALE: 1:200 A3.00

PHASING LEGEND

[Yellow hatched box]	BASE BID
[Blue hatched box]	SEPARATE PRICE 1
[Purple hatched box]	SEPARATE PRICE 2

REFLECTED CEILING PLAN LEGEND

REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR DETAILED FIXTURE INFORMATION.

[Rectangular symbol]	610 X 1220 RECESSED TROFFER LIGHT FIXTURE
[Rectangular symbol]	305 X 1220 RECESSED TROFFER LIGHT FIXTURE
[Grid symbol]	NEW 610 X 1220 ACOUSTIC CEILING TILES IN SUSPENDED PREFINISHED METAL GRID
[Square symbol]	RETURN / EXHAUST GRILLE, SIZES VARY (REFER TO MECH DWGS)
[CH symbol]	CEILING RECESSED CABINET UNIT HEATERS (REFER TO MECH DWGS)

NOTE:
1. LIGHT FIXTURES TO BE CENTRED WITHIN ROOMS UNLESS DIMENSIONED OTHERWISE, TYPICAL
2. DIMENSIONS ARE TAKEN TO THE CENTRE OF LIGHT FIXTURES, TYPICAL

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.



1	ISSUED FOR TENDER	02/06/2025
0	ISSUED FOR PERMIT	12/16/2024
No.	DESCRIPTION	DATE

REVISIONS

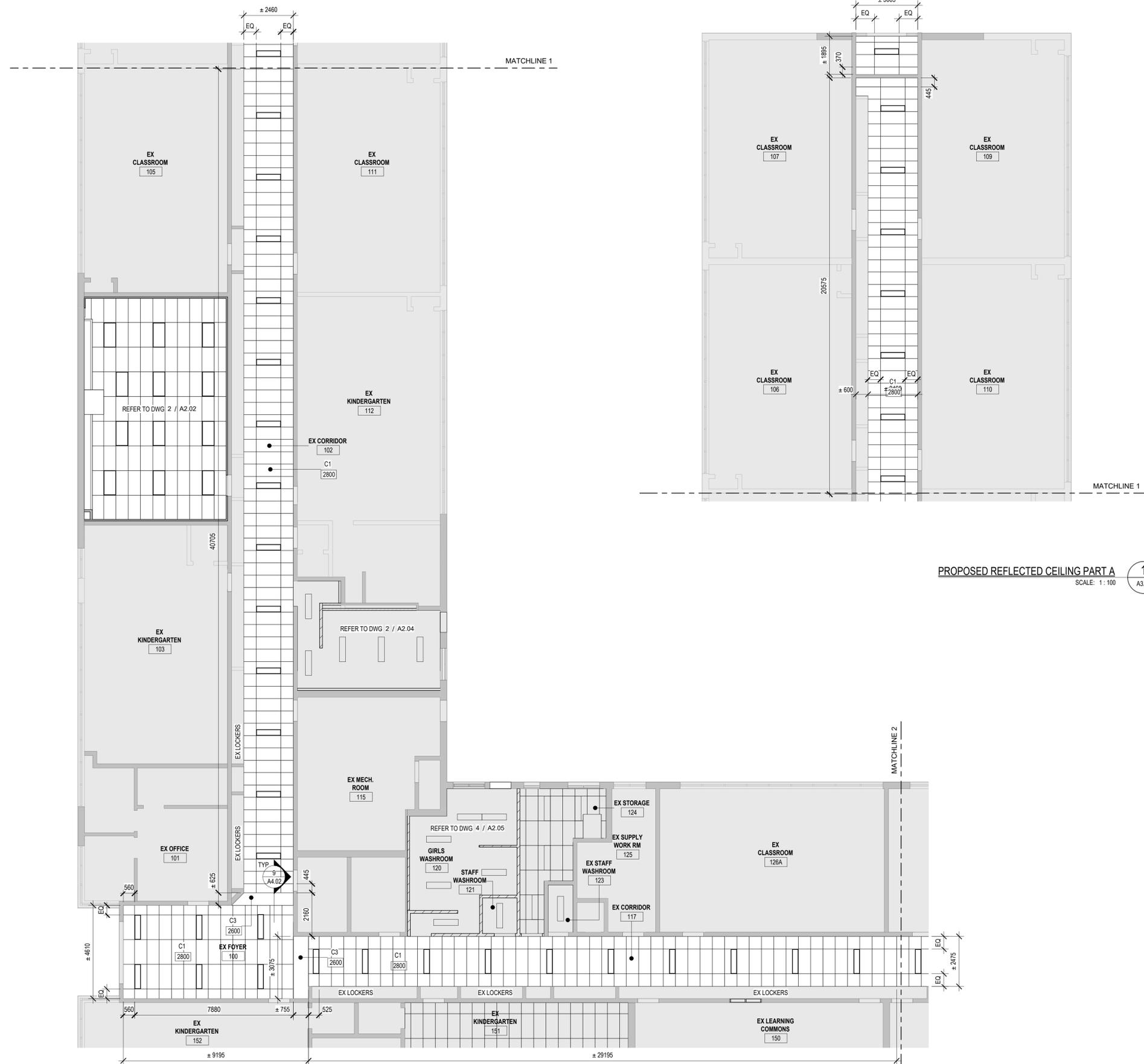
SEAL:



Project No:
Hamilton - Wentworth District School Board
P02085 Franklin Elementary School Music Room, Corridors, and Student Washrooms Renovations
500 Franklin Rd., Hamilton, Ontario

Drawing title:
OVERALL PROPOSED REFLECTED CEILING PLAN

Drawn: RMC	Scale: As indicated
Date: 11/2024	Project number: 24-21
Checked: SG	Drawing No: A3.00
Date: 11/2024	Revision: 1



REFLECTED CEILING PLAN LEGEND

REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR DETAILED FIXTURE INFORMATION.	
	610 X 1220 RECESSED TROFFER LIGHT FIXTURE
	305 X 1220 RECESSED TROFFER LIGHT FIXTURE
	NEW 610 X 1220 ACOUSTIC CEILING TILES IN SUSPENDED PREFINISHED METAL GRID
	RETURN / EXHAUST GRILLE. SIZES VARY (REFER TO MECH DWGS)
	CEILING RECESSED CABINET UNIT HEATERS (REFER TO MECH DWGS)

NOTE:
 1. LIGHT FIXTURES TO BE CENTRED WITHIN ROOMS UNLESS DIMENSIONED OTHERWISE, TYPICAL
 2. DIMENSIONS ARE TAKEN TO THE CENTRE OF LIGHT FIXTURES, TYPICAL

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE.
 ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.



PROPOSED REFLECTED CEILING PART A
 SCALE: 1:100

PROPOSED REFLECTED CEILING PART B
 SCALE: 1:100

1	ISSUED FOR TENDER	02/06/2025
0	ISSUED FOR PERMIT	12/16/2024
No.	DESCRIPTION	DATE

REVISIONS

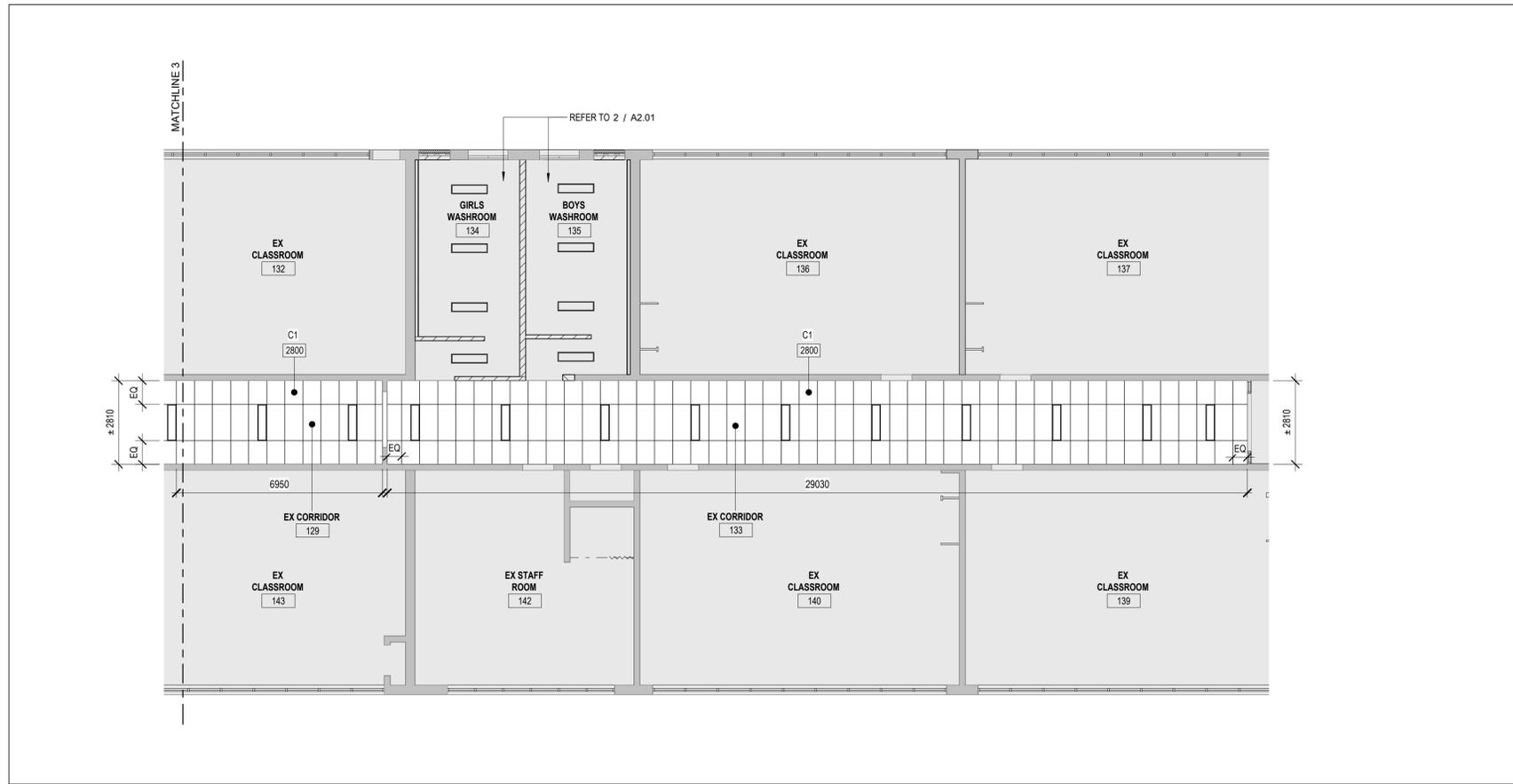
SEAL:



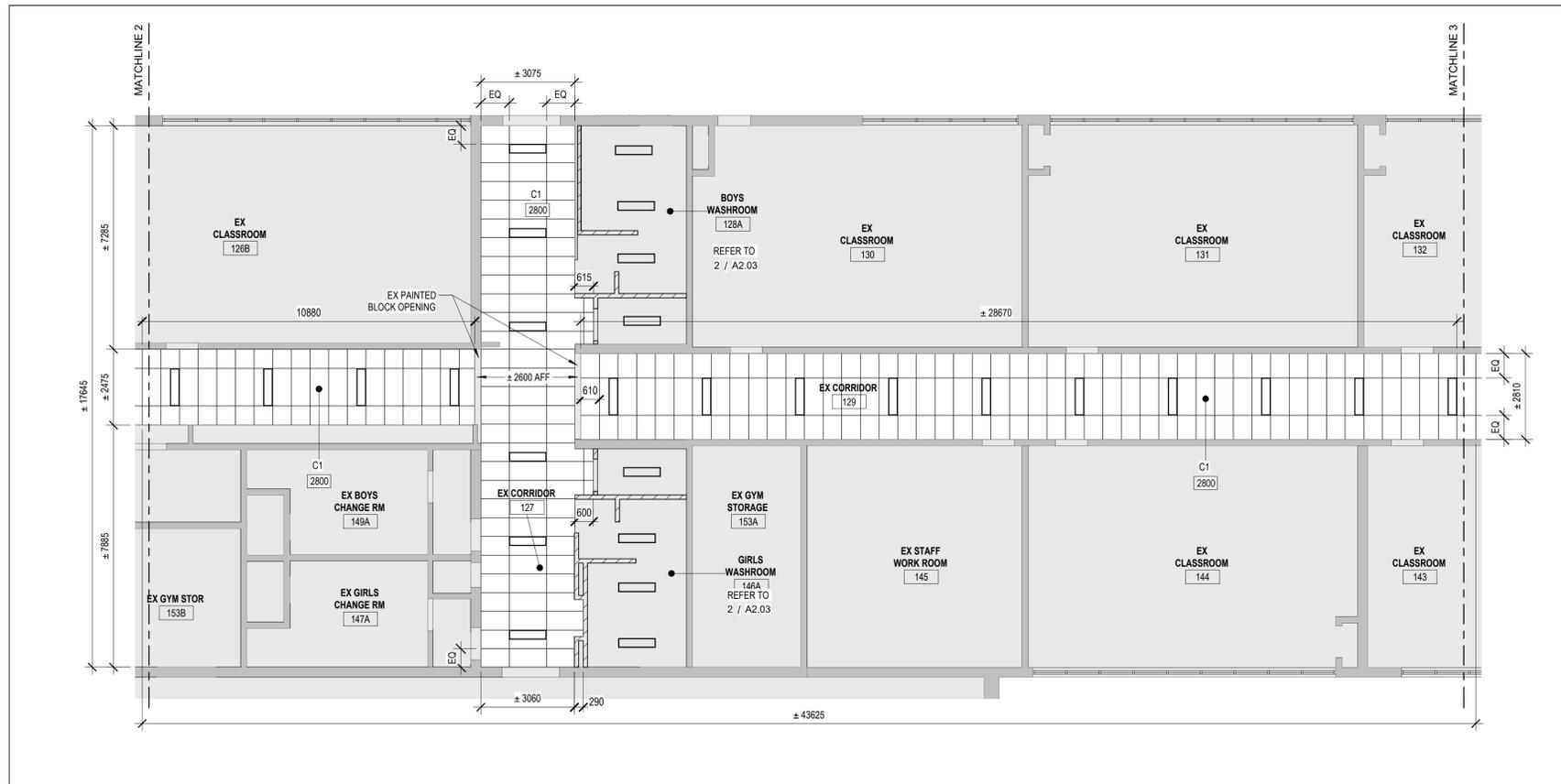
Project No: Hamilton - Wentworth District School Board
 P02085 Franklin Elementary School
 Music Room, Corridors, and Student Washrooms Renovations
 500 Franklin Rd., Hamilton, Ontario

Drawing Title: REFLECTED PARTIAL CEILING PLANS

Drawn: RMC	Scale: As indicated
Date: 11/2024	Project number: 24-21
Checked: SG	Drawing No: A3.01
Date: 11/2024	Revision: 1



ENLARGED PROPOSED REFLECTED CEILING PLAN PART D 2
SCALE: 1:100 A3.00



ENLARGED PROPOSED REFLECTED CEILING PLAN PART C 1
SCALE: 1:100 A3.00

REFLECTED CEILING PLAN LEGEND

REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR DETAILED FIXTURE INFORMATION.	
	610 X 1220 RECESSED TROFFER LIGHT FIXTURE
	305 X 1220 RECESSED TROFFER LIGHT FIXTURE
	NEW 610 X 1220 ACOUSTIC CEILING TILES IN SUSPENDED PREFINISHED METAL GRID
	RETURN / EXHAUST GRILLE. SIZES VARY (REFER TO MECH DWGS)
	CEILING RECESSED CABINET UNIT HEATERS (REFER TO MECH DWGS)

NOTE:
1. LIGHT FIXTURES TO BE CENTRED WITHIN ROOMS UNLESS DIMENSIONED OTHERWISE, TYPICAL.
2. DIMENSIONS ARE TAKEN TO THE CENTRE OF LIGHT FIXTURES, TYPICAL.

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.



No.	DESCRIPTION	DATE
1	ISSUED FOR TENDER	02/06/2025
0	ISSUED FOR PERMIT	12/16/2024

REVISIONS

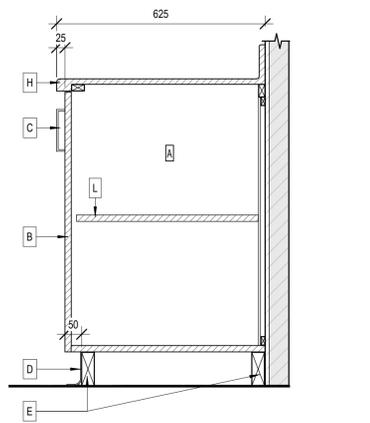
SEAL:



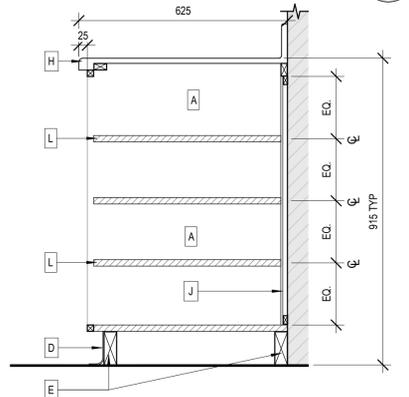
Project No: Hamilton - Wentworth District School Board
P02085 Franklin Elementary School Music Room, Corridors, and Student Washrooms Renovations
500 Franklin Rd., Hamilton, Ontario

Drawing Title: REFLECTED PARTIAL CEILING PLANS

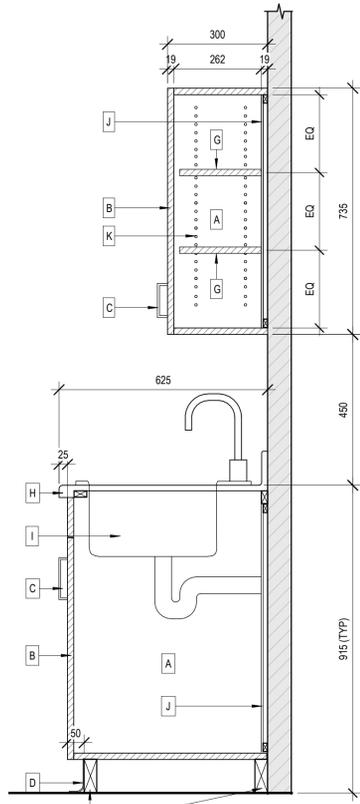
Drawn: RMC	Scale: As indicated
Date: 11/2024	Project Number: 24-21
Checked: SG	Drawing No: A3.02
Date: 11/2024	Revision: 1



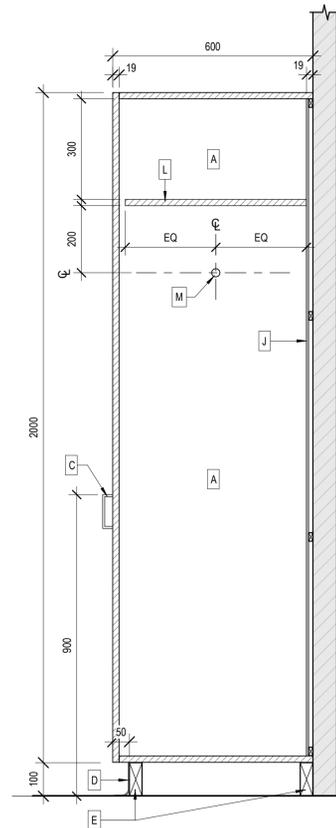
LOWER MILLWORK TYPICAL SECTION
SCALE: 1:10
9
A4.00



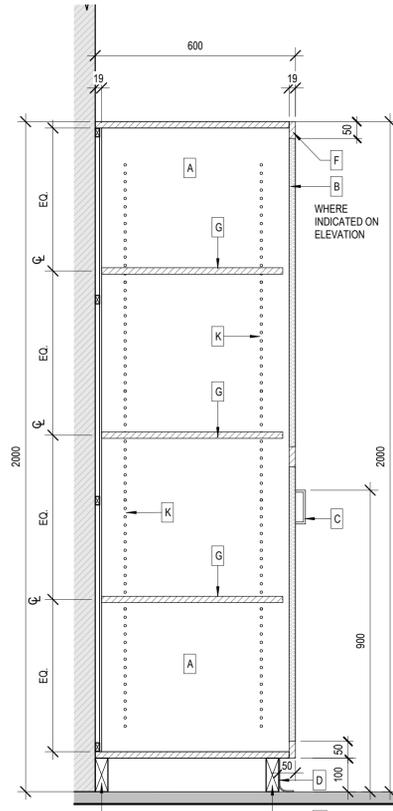
LOWER MILLWORK SHELF SECTION
SCALE: 1:10
8
A4.00



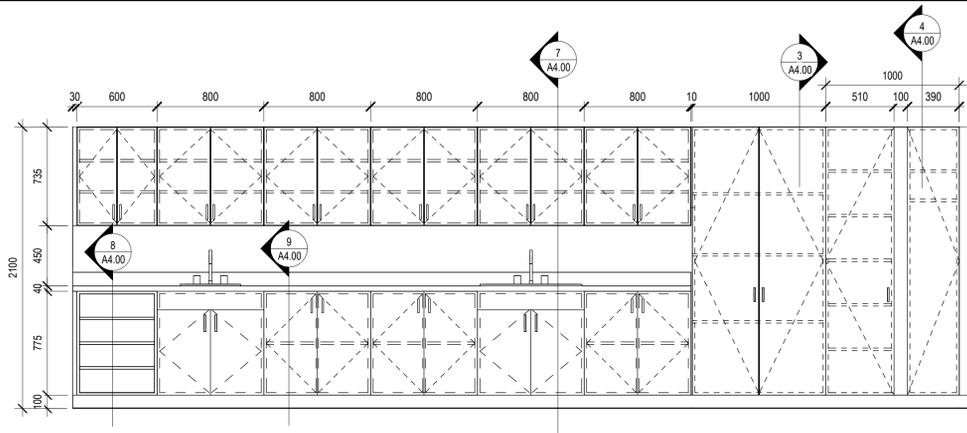
TYPICAL MILLWORK WITH SINK SECTION
SCALE: 1:10
7
A4.00



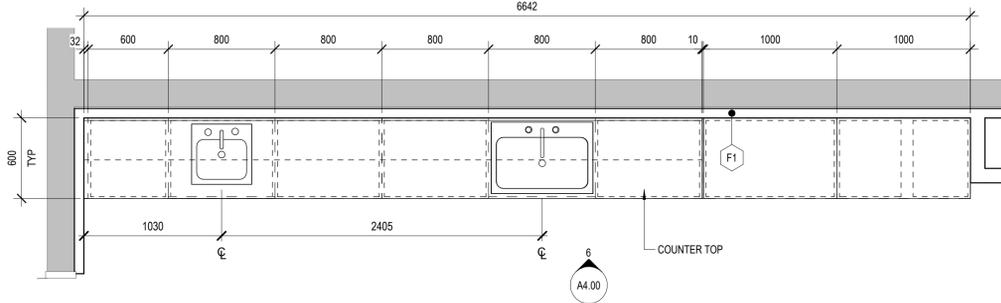
TYPICAL TALL CABINET MILLWORK SECTION
SCALE: 1:10
4
A4.00



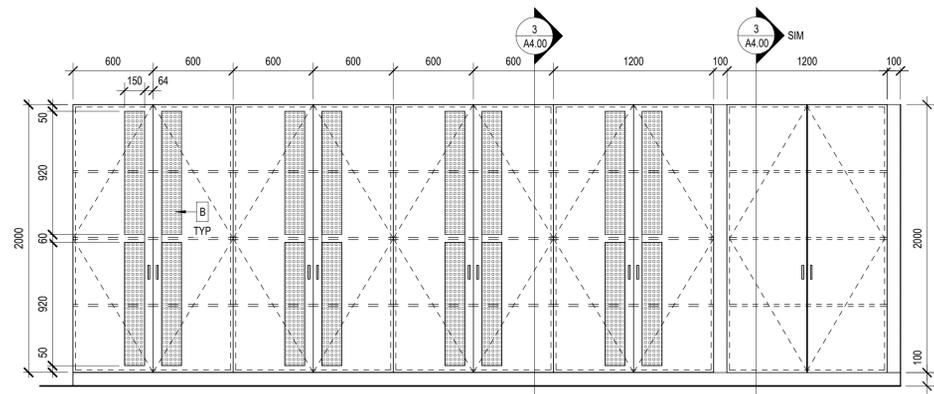
TYPICAL MUSICAL INSTRUMENTS MILLWORK SECTION
SCALE: 1:10
3
A4.00



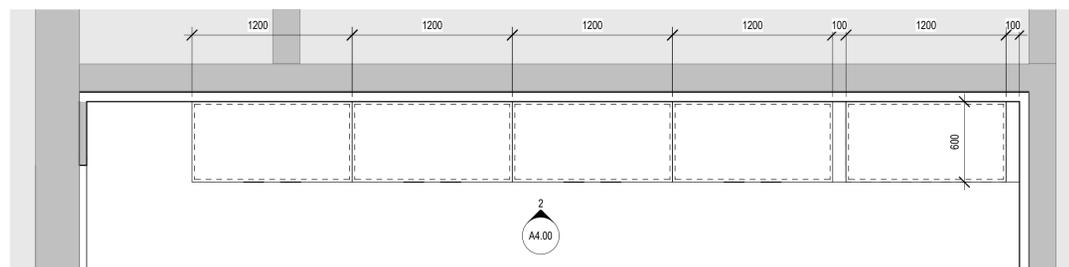
MUSIC ROOM SOUTH WALL ELEVATION
SCALE: 1:25
6
A4.00



MUSIC ROOM SOUTH WALL MILLWORK DETAIL PLAN
SCALE: 1:25
5
A2.02



MUSIC ROOM NORTH WALL MILLWORK ELEVATION
SCALE: 1:25
2
A4.00



MUSIC ROOM NORTH WALL MILLWORK PLAN
SCALE: 1:25
1
A2.02

MILLWORK NOTES:

1. ALL MILLWORK TO BE CONSTRUCTED TO HWDSB CUSTOM STANDARD
2. COORDINATE W/ ELECTRICAL DRAWINGS FOR LOCATIONS OF OUTLETS AND SWITCHES
3. MELAMINE MILLWORK PANELS TO BE 19MM THICK, U.N.O
4. MELAMINE AND P-LAM COLOUR AND STYLE TO BE SELECTED BY ARCHITECT. SAMPLES OF FINISHES TO BE PROVIDED FOR APPROVAL

MILLWORK MATERIALS NOTES

A	CONCEALED CABINET INTERIORS TO BE WHITE MELAMINE FINISH PARTICLE BOARD THROUGHOUT C/W MATCHING TAPES EDGEBANDING
B	PERFORATED METAL SHEET BY AMICO 5/32" SQUARE .231" STRAIGHT CENTERS, 18.74 HOLES PSI, 45.75% OPEN AREA https://amicoarchitectural.com/typical-square-all-across-perforated-metal-patterns/
C	PULL HANDLE (REFER TO SPECS)
D	100 MM HIGH RUBBER BASE BOARD AS PER ROOM FINISH SCHEDULE
E	WOOD SUPPORT BLOCKING (OR CABINET LEVELING LEGS) TO SUIT
F	ALL EXPOSED CABINET BODIES TO BE PLASTIC LAMINATE FINISH BOARD C/W 3 MM MATCHING PVC EDGE BANDING THROUGHOUT
G	REMOVABLE SHELF TO BE PLASTIC LAMINATE
H	P-LAM COUNTERTOP WITH BULLNOSE EDGE & 100MM INTEGRATED BACKSPLASH
I	STAINLESS STEEL SINK BEYOND (REFER TO MECH)
J	BACKER PANEL (6MM, TYP)
K	BORING SHELF & PIN, TYP.
L	FIXED SHELF
M	FIXED METAL COAT ROD, 25mm DIA.

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.

1	ISSUED FOR TENDER	02/06/2025
0	ISSUED FOR PERMIT	12/16/2024
No.	DESCRIPTION	DATE

REVISIONS

SEAL:

HWDSB



Hamilton - Wentworth District School Board
P02085 Franklin Elementary School
Music Room, Corridors, and Student Washrooms Renovations
500 Franklin Rd., Hamilton, Ontario

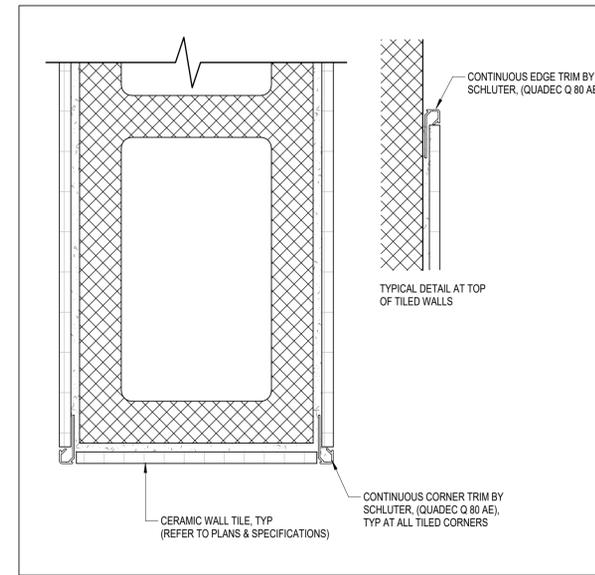
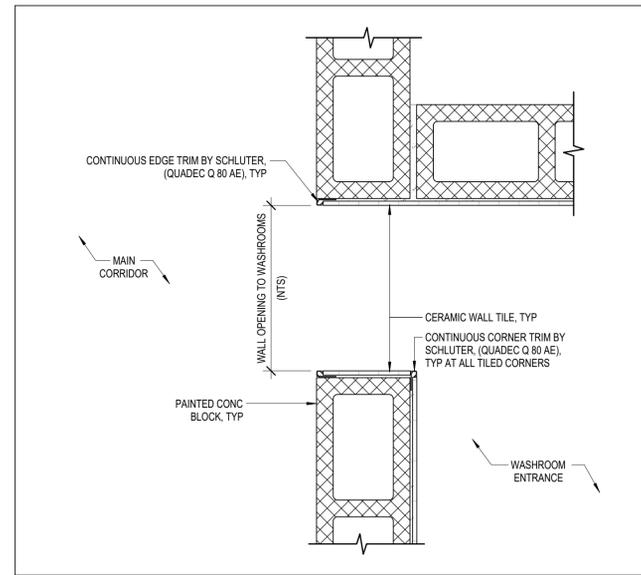
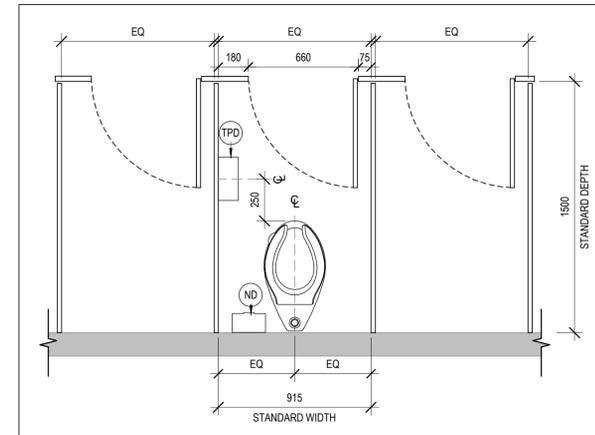
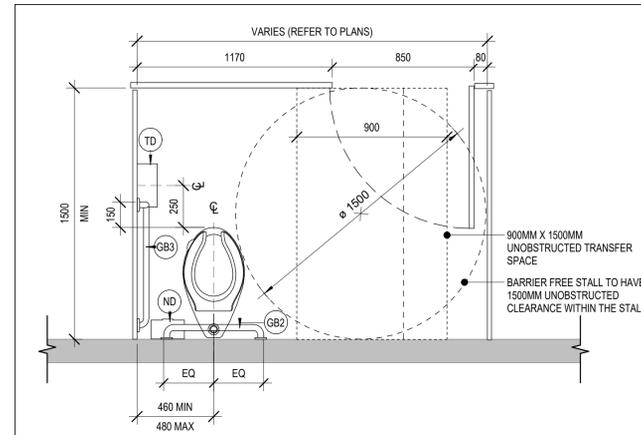
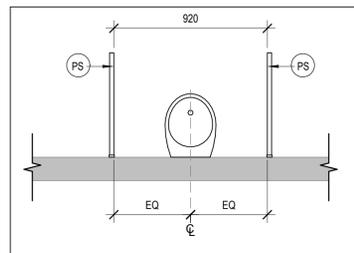
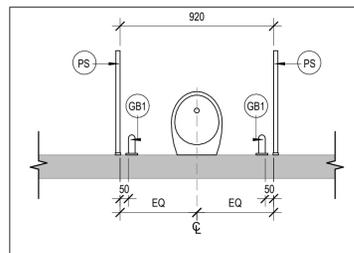
MILLWORK DETAILS

Drawn: RMC	Scale: As indicated
Date: 11/2024	Project Number: 24-21
Checked: SG	Drawing No: A4.00
Date: 11/2024	Revision: 1

WASHROOM FLOOR PLAN ABBREVIATIONS

CH	COAT HOOK
CT #	CERAMIC TILE (NUMBER SUFFIX DENOTES COLOUR OF TILE, REFER TO LEGEND)
HD	HAND DRYER (SEE ELECTRICAL DWGS)
PTD	PAPER TOWEL DISPENSER
SD	SOAP DISPENSER
TPD	TOILET PAPER DISPENSER
GB1	VERTICAL GRAB BAR
GB2	HORIZONTAL GRAB BAR
GB3	L-SHAPED GRAB BAR
ND	NAPKIN DISPOSAL
MR	MIRROR
WR	WASTE RECEPTACLE
PS	PRIVACY SCREEN
SH	SHELF
WB	WATER BOTTLE FILLER
ADO	AUTOMATIC DOOR OPERATOR
FD	FLOOR DRAIN (REFER TO MECH)

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.



TYPICAL TILED WALL TRANSITION DETAIL

SCALE: 1:5 A2.04

TYPICAL TILED WALL EDGE DETAIL

SCALE: 1:2 A2.04

TYPICAL BARRIER FREE URINAL STALL PLAN DETAIL

SCALE: 1:20

TYPICAL URINAL STALL PLAN DETAIL

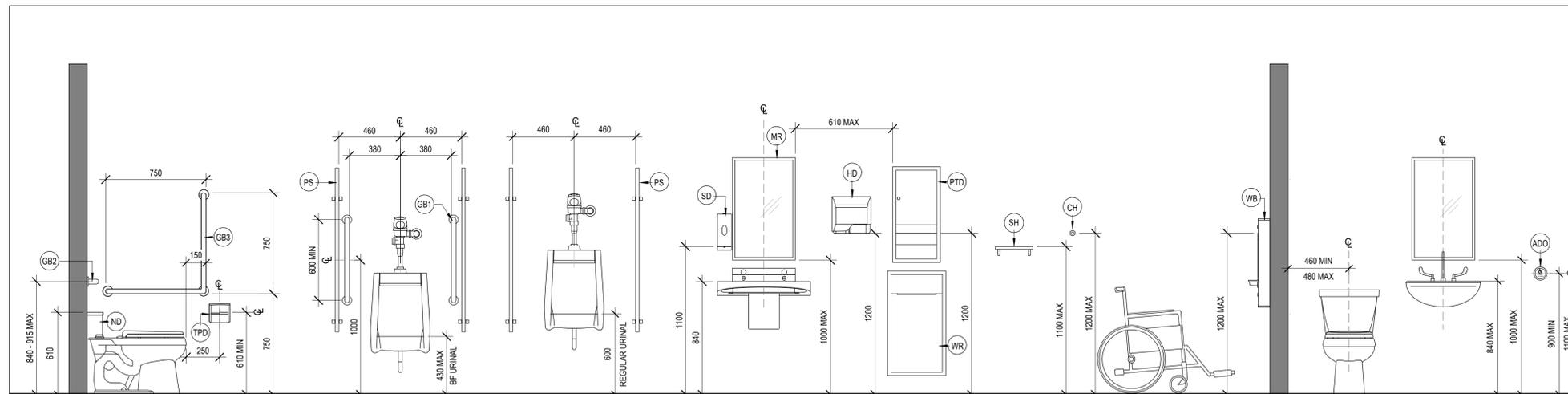
SCALE: 1:20

TYPICAL BARRIER FREE STALL PLAN DETAIL

SCALE: 1:20

TYPICAL WASHROOM STALL PLAN DETAIL

SCALE: 1:20



TYPICAL MOUNTING HEIGHTS

SCALE: 1:20

1	ISSUED FOR TENDER	02/06/2025
0	ISSUED FOR PERMIT	12/16/2024
No.	DESCRIPTION	DATE

REVISIONS

SEAL:

HWDSB

AMRA J
ARCHITECTS INC.
www.aja.design | info@aja.design | 905.920.5121

Project No:
Hamilton - Wentworth District School Board
P02085 Franklin Elementary School Music Room, Corridors, and Student Washrooms Renovations
500 Franklin Rd., Hamilton, Ontario

Drawing Title:
WASHROOM INFORMATION AND TYPICAL DETAILS

Drawn:
RMC

Scale:
As indicated

Date:
11/2024

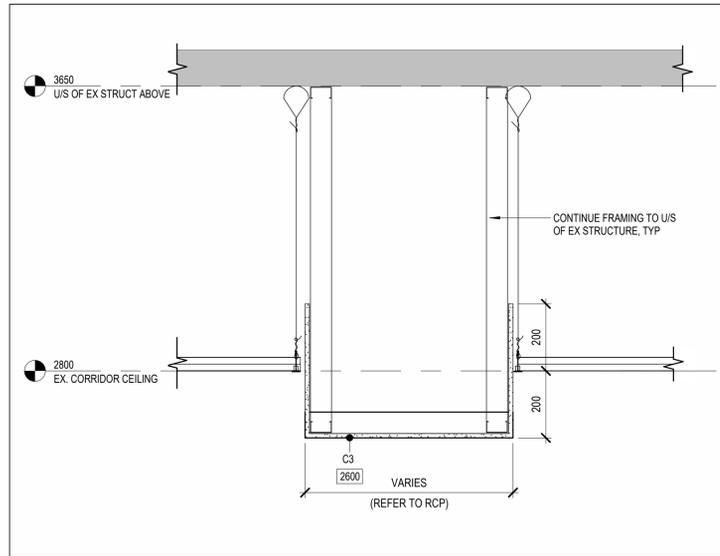
Project number:
24-21

Checked:
SG

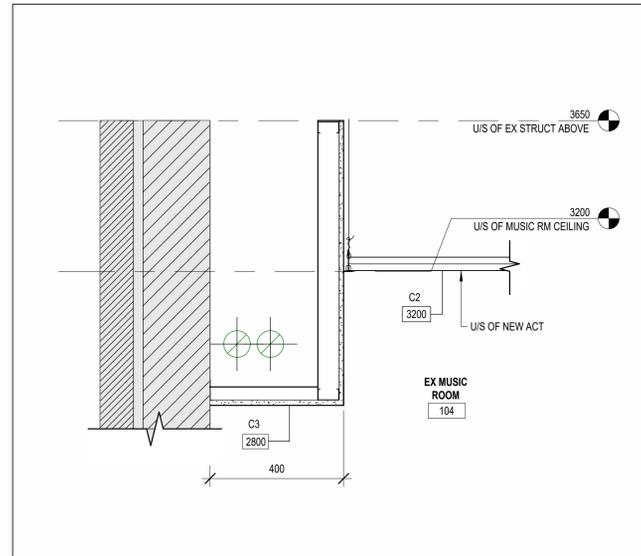
Date:
11/2024

Drawing No:
A4.01

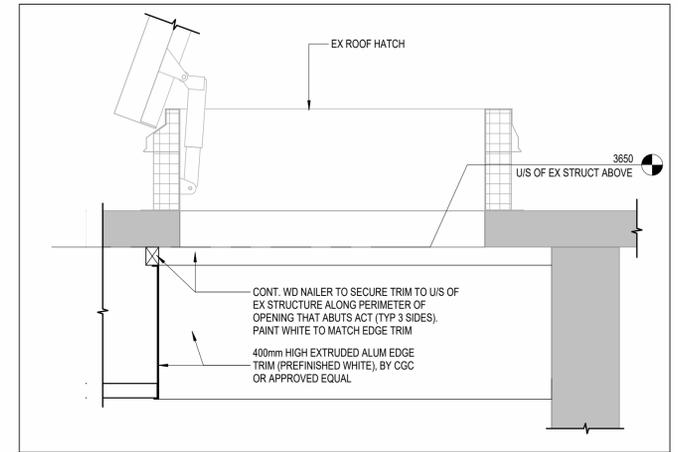
Revision:
1



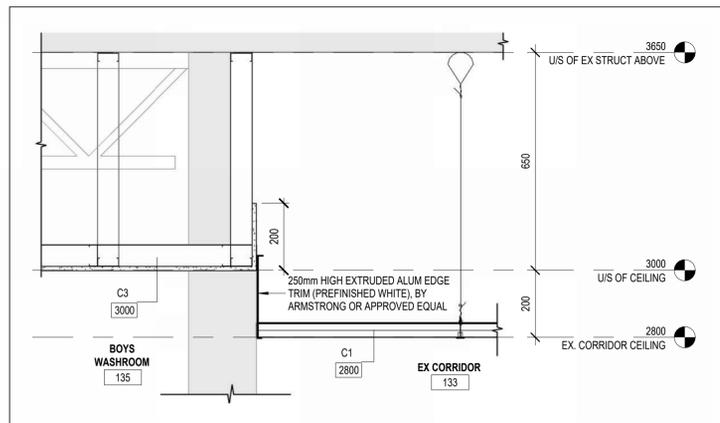
TYPICAL CORRIDOR BULKHEAD SECTION 9
SCALE: 1:10 A3.01



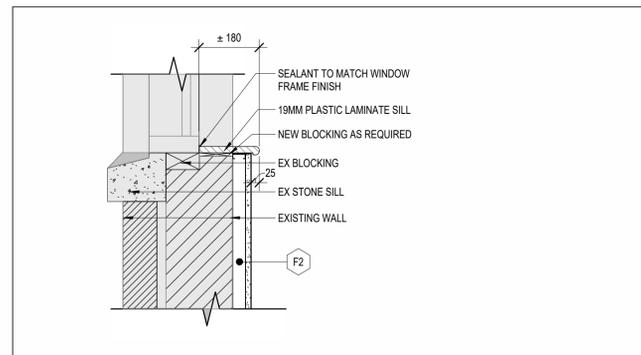
SECTION AT NEW BULKHEAD 6
SCALE: 1:10 A4.02



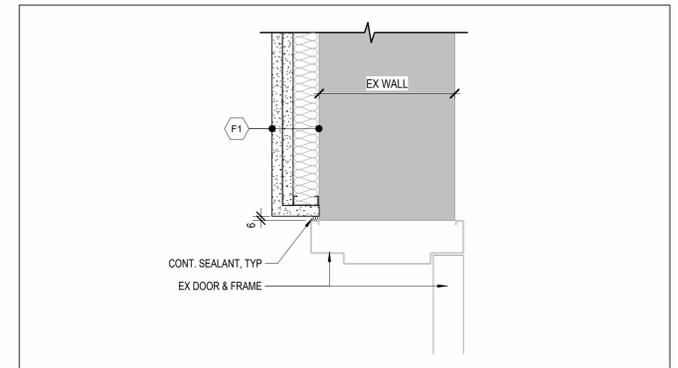
SECTION DETAIL AT EX ROOF HATCH 3
SCALE: 1:10 A2.05



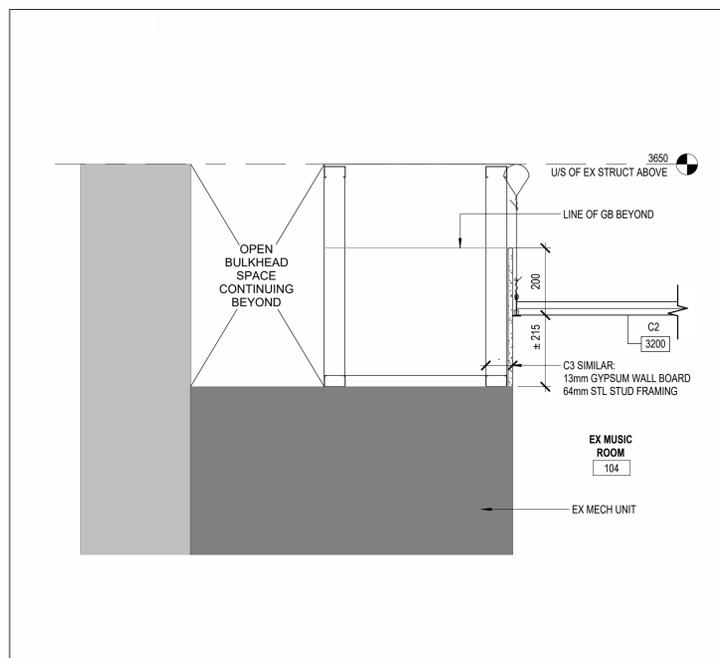
TYPICAL DETAIL AT TRANSITION BETWEEN ACT & GB CEILING 8
SCALE: 1:10 A2.01



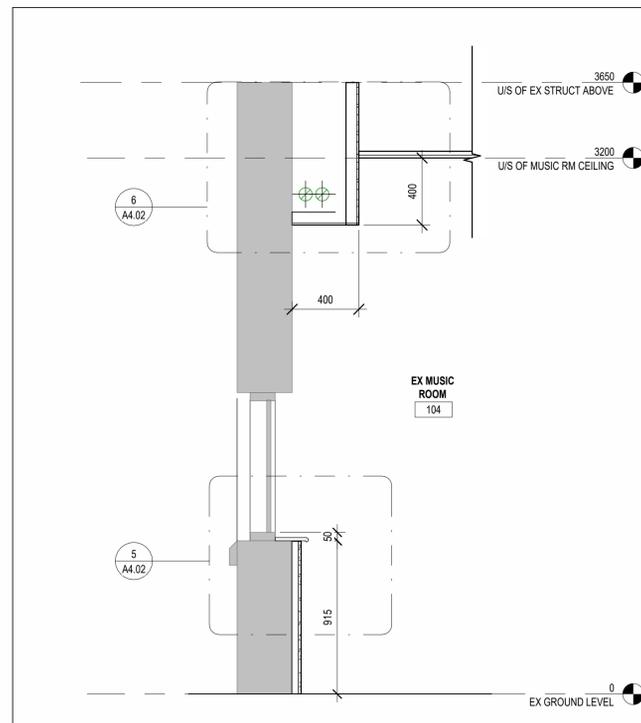
SECTION AT WINDOW WITH NEW SILL DETAIL 5
TYPICAL AT ALL WINDOWS IN MUSIC ROOM
SCALE: 1:10 A4.02



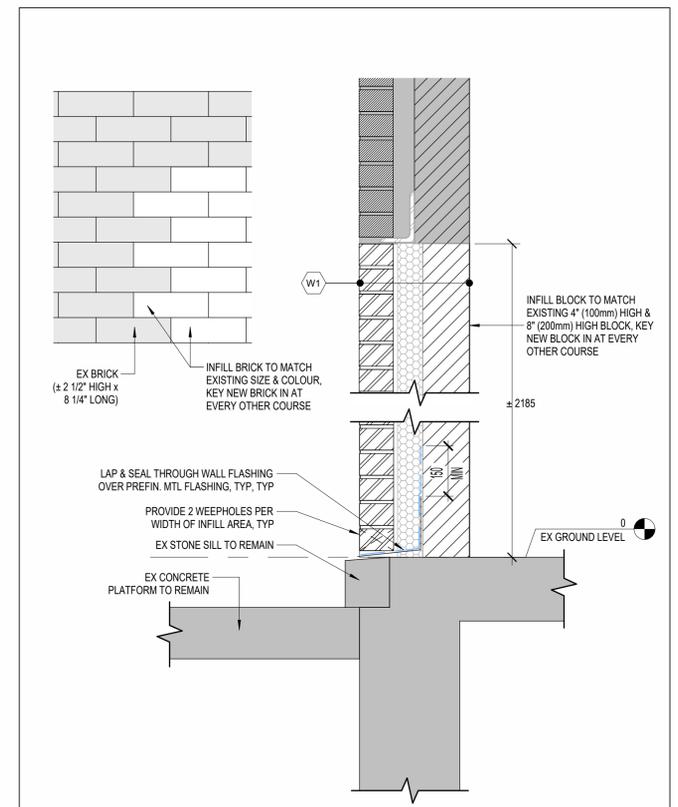
F1' AT EX DOOR FRAME 2
SCALE: 1:5 A2.02



SECTION ABOVE EX MECH UNIT 7
SCALE: 1:10 A2.02



SECTION AT WINDOW WITH NEW SILL 4
SCALE: 1:20 A2.02



TYPICAL EXTERIOR WALL FILL IN SECTION 1
SCALE: 1:10 A4.02

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.

1	ISSUED FOR TENDER	02/06/2025
0	ISSUED FOR PERMIT	12/16/2024
No.	DESCRIPTION	DATE

REVISIONS

SEAL:

HWDSB

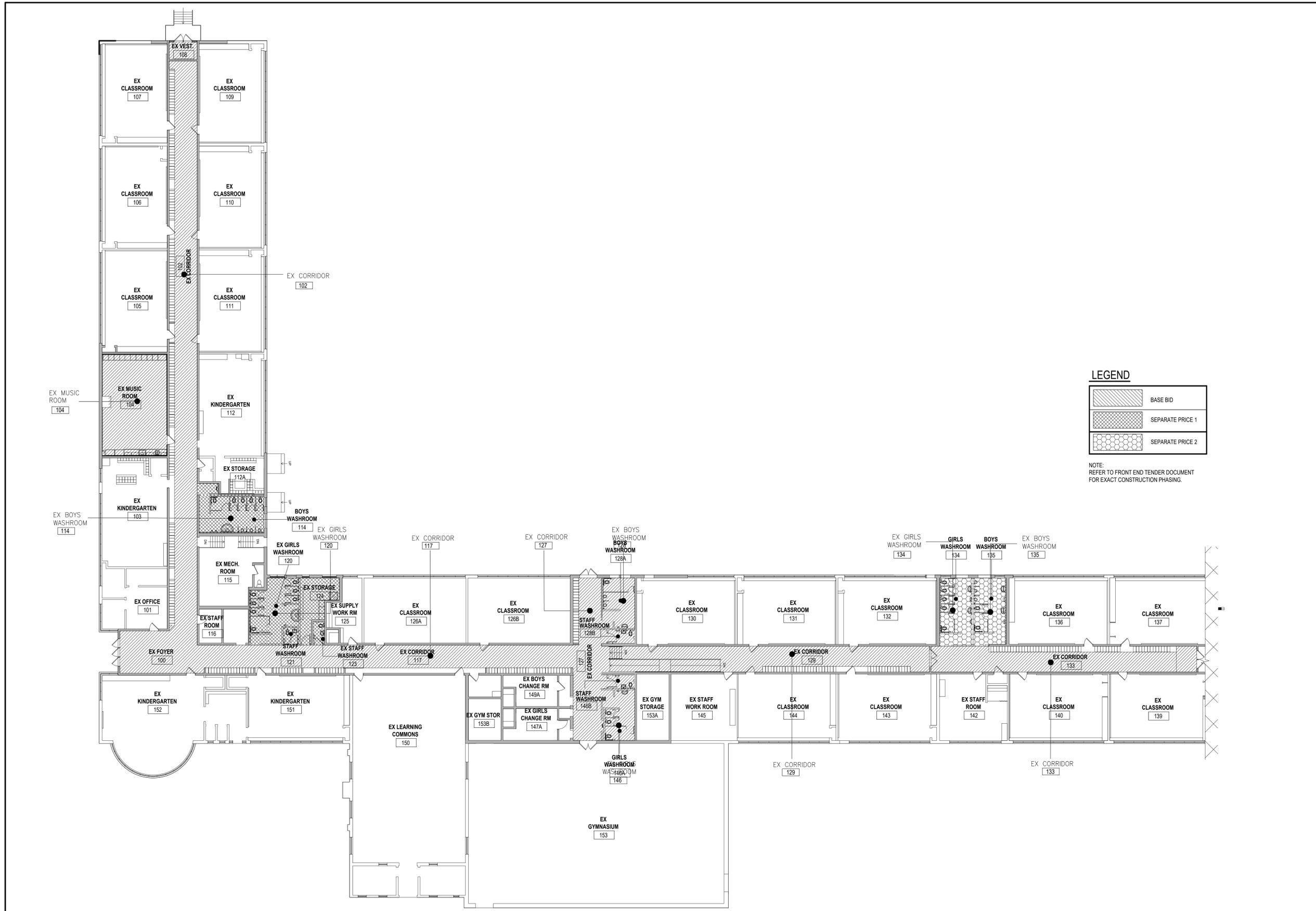
AMRA J ARCHITECTS INC.
www.aja.design | info@aja.design | 905.920.5121

Project Name: Hamilton - Wentworth District School Board
P02085 Franklin Elementary School Music Room, Corridors, and Student Washrooms Renovations
500 Franklin Rd., Hamilton, Ontario

Drawing Title: SECTIONS & SECTION DETAILS

Drawn: RMC	Scale: As indicated
Date: 11/2024	Project Number: 24-21

Checked: SG	Drawing No: A4.02	1
Date: 11/2024	Revision:	



LEGEND

	BASE BID
	SEPARATE PRICE 1
	SEPARATE PRICE 2

NOTE:
REFER TO FRONT END TENDER DOCUMENT
FOR EXACT CONSTRUCTION PHASING.

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE.
ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.

2	ISSUED FOR TENDER	2025-02-11
1	ISSUED FOR PERMIT	2024-12-16
B	85% PROGRESS	2024-11-27
A	30% PROGRESS SUBMISSION	2024-11-01
No.	DESCRIPTION	DATE

REVISIONS	

24076
Seal KS

E & M
Consulting Engineers Inc.
1000 Cherry Trail
Mississauga, ON L5B 1G1
www.emconsultingeng.com

HWDSB
AMRA J
ARCHITECTS INC.
www.aja.design | info@aja.design | 905.920.5121

project title:
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
P02085 - FRANKLIN RD ELEMENTARY SCHOOL RENOVATIONS
500 FRANKLIN ROAD HAMILTON, ONTARIO.

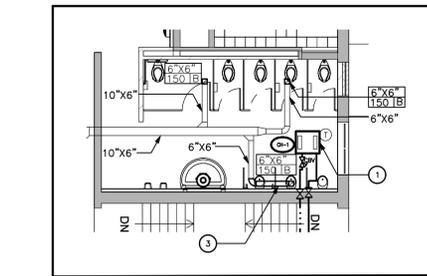
drawing title:
CONSTRUCTION BIDDING PLAN.

drawn: MH	scale: AS SHOWN
date:	project number: 24-21
checked: KS	DRAWING NO: M0-01 0
date: 12/20/24	Revision

CONSTRUCTION BIDDING PLAN.
SCALE - 1:200

1
M2-00

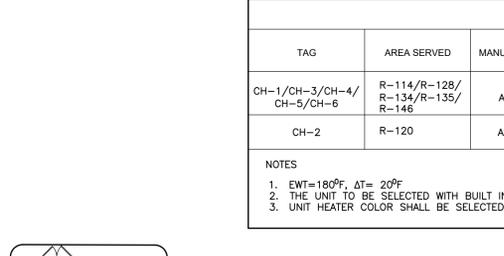
3
M2-00
**HEATING & VENTILATION-
GIRLS W/ROOM(120/121/123)**
SCALE- 1:100



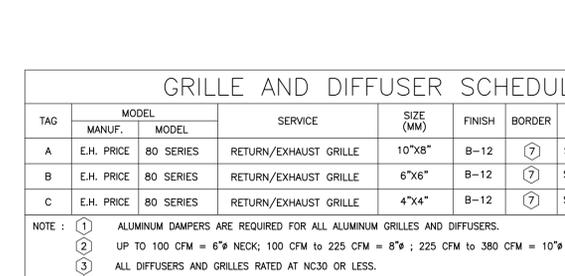
2
M2-00
**HEATING & VENTILATION-
EXIST. BOYS W/ROOM(114)**
SCALE- 1:100



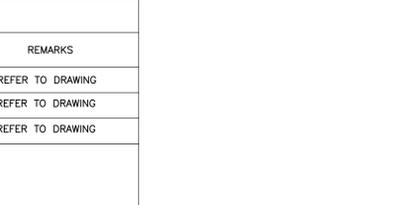
4
M2-00
**HEATING & VENTILATION-
EXIST. BOYS & GIRLS WASH ROOMS
(128A/128B & 146A/146B)**
SCALE- 1:100



5
M2-00
**HEATING & VENTILATION-
EXIST. BOYS & GIRLS W/ROOM(134/135)**
SCALE- 1:100



1
M2-00
**HEATING & VENTILATION-
EXIST. MUSIC ROOM(104)**
SCALE- 1:100



GRILLE AND DIFFUSER SCHEDULE

TAG	MANUF.	MODEL	SERVICE	SIZE (MM)	FINISH	BORDER	REMARKS
A	E.H. PRICE	80 SERIES	RETURN/EXHAUST GRILLE	10"x8"	B-12	⑦	SIZE REFER TO DRAWING
B	E.H. PRICE	80 SERIES	RETURN/EXHAUST GRILLE	6"x6"	B-12	⑦	SIZE REFER TO DRAWING
C	E.H. PRICE	80 SERIES	RETURN/EXHAUST GRILLE	4"x4"	B-12	⑦	SIZE REFER TO DRAWING

NOTE : ① ALUMINUM DAMPERS ARE REQUIRED FOR ALL ALUMINUM GRILLES AND DIFFUSERS.
 ② UP TO 100 CFM = 6" NECK; 100 CFM TO 225 CFM = 8" ; 225 CFM TO 380 CFM = 10" NECK
 ③ ALL DIFFUSERS AND GRILLES RATED AT NC30 OR LESS.
 ④ EACH GRILLE AND DIFFUSER SHALL HAVE BALANCING DAMPER.
 ⑤ COLOR SHALL BE SELECTED BY THE CLIENT.
 ⑥ COORDINATE WITH THE GENERAL CONTRACTOR FOR GRILLS INSTALLATION.
 ⑦ REFER TO ARCH. DRAWING FOR BOARDER TYPE.

UNIT HEATER SCHEDULE (HYDRONICS)

TAG	AREA SERVED	MANUFACTURE	MODEL NUMBER	ARRANGEMENT NUMBER	DIMENSION (L X D X H)	HEATING MBH	GPM	COIL PRESSURE DROP FT. WG	AIR FLOW CFM	MOTOR HP	RPM	MOTOR AMPS	# OF FANS	POWER	ELECTRICAL WIRING INSTRUCTION
CH-1/CH-3/CH-4/CH-5/CH-6	R-114/R-128/ R-134/R-135/ R-146	AIRTEX	CUH-3	24	660X711X241	21.45	2.17	3.57	300	1/25	1050	0.6	1	115/160	DIV 15 TO PROVIDE A UNIT WITH BUILT IN THERMOSTAT. DIVISION 16 TO PROVIDE THE POWER WIRING
CH-2	R-120	AIRTEX	CUH-4	24	965X711X241	30.50	3.07	1.44	370	1/20	1075	1.2	2	115/160	

NOTES
 1. EWT=180°F, ΔT= 20°F
 2. THE UNIT TO BE SELECTED WITH BUILT IN THERMOSTAT.
 3. UNIT HEATER COLOR SHALL BE SELECTED BY ARCHITECT. ALLOW FOR FACTORY FINISH FINAL COAT.

- GENERAL NOTES:**
- REFER TO CONSTRUCTION PHASING PLAN BEFORE COMMENCING WORK. INCLUDE ALL NECESSARY REQUIREMENTS TO MEET THE PHASING PLAN.
 - COORDINATE DUCT INSTALLATIONS WITH PIPES, ELECTRICAL LIGHTING & BUILDING STRUCTURE.
 - ALL MECHANICAL DUCTWORK SHALL BE CONCEALED IN CEILING SPACES, BETWEEN JOISTS OR IN BULKHEADS.
PROVIDE RETURN AIR GRILLES IN CEILING WHERE NOTED.
 - PROVIDE BALANCING DAMPERS AT ALL AIR SUPPLY TAKE OFFS:-
1) AT BRANCH DUCT OFF OF THE MAIN TRUNK.
2) IN DRYWALL AREAS, PROVIDE DAMPERS AT GRILLE WITH APPROVED LOCKING DEVICES TO ENGINEER'S APPROVAL.
 - CUTTING FOR DUCTS SHALL BE DONE BY THIS CONTRACTOR. OBTAIN APPROVAL PRIOR TO CUTTING OPENINGS IN ANY WALL, STRUCTURE, FLOOR AND ROOF.
 - COORDINATE LOCATION OF EACH S.A. & R.A. (SUPPLY & RETURN AIR) GRILLE AND EXISTING RETURN AIR GRILLE ON SITE PRIOR TO CUTTING AND ROUGH-IN.
 - INSULATE ALL SUPPLY AIR DUCT ON COMPLETE RUN. INSULATE EXHAUST AIR DUCTS MIN. 6" FROM WALLS OR ROOF. REFER TO SPECIFICATIONS.
 - COORDINATE LOCATION OF EACH DIFFUSER AND GRILLE IN CEILING WITH LIGHT FIXTURES.
 - INSTEAD OF RELYING ON RECORD DRAWINGS, AIR BALANCING CONTRACTOR SHALL RUN THE HVAC UNIT AND MEASURE CURRENT AIR FLOWS AT EACH OUTLET OF A COMPLETE BRANCH DUCT & THEN PLAN TO PROVIDE THE AIR FLOWS SPECIFIED ON THIS DRAWING. SEE SPECIFICATIONS FOR ADDITIONAL DETAILS.

DRAWING NOTES NEW:

- SUPPLY & INSTALL TWO NEW FAN POWERED HYDRONIC CEILING CONCEALED HEATERS CH-1, CH-2 AS SHOWN. CEILING CONCEALED HEATERS SHALL BE INSTALLED IN CEILING SPACE. NEW INSULATED 20MM(3/4") HWS/HWR PIPES SHALL BE CONNECTED TO CH-1, CH-2 FROM THE MAIN PIPES IN THE CEILING. SUPPLY NEW CIRCUIT BALANCING VALVES AT HWR. ALSO PROVIDE SHUTOFF VALVES FOR HWS/HWR PIPES.
- SUPPLY & INSTALLATION OF RETURN AIR GRILLE AS SHOWN IN THE DRAWING. REQUIRED TO USE THE PROPER INSULATION. CONTRACTOR MUST COORDINATE WITH ELECTRICAL AND OTHER FIXTURES TO ENSURE PROPER ALIGNMENT WITH THE GRILLE LOCATION.
- TO PROVIDE A NEW GRILLES SUPPLY AND INSTALL NEW DUCTWORK AND CONNECT TO EXISTING.
- EXISTING HWS/HWR PIPES TO REMAIN.
- EXISTING HWS/HWR PIPES SHALL BE RELOCATED TO WALL SPACE.

A
M2-00
MECHANICAL SYSTEMS-NEW OVERALL PLAN.
SCALE- 1:200



DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE.
 ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.

NO.	DESCRIPTION	DATE
2	ISSUED FOR TENDER	2025-02-11
1	ISSUED FOR PERMIT	2024-12-16
B	50% PROGRESS	2024-11-27
A	50% PROGRESS SUBMISSION	2024-11-01

REVISIONS

24076
Seal KS

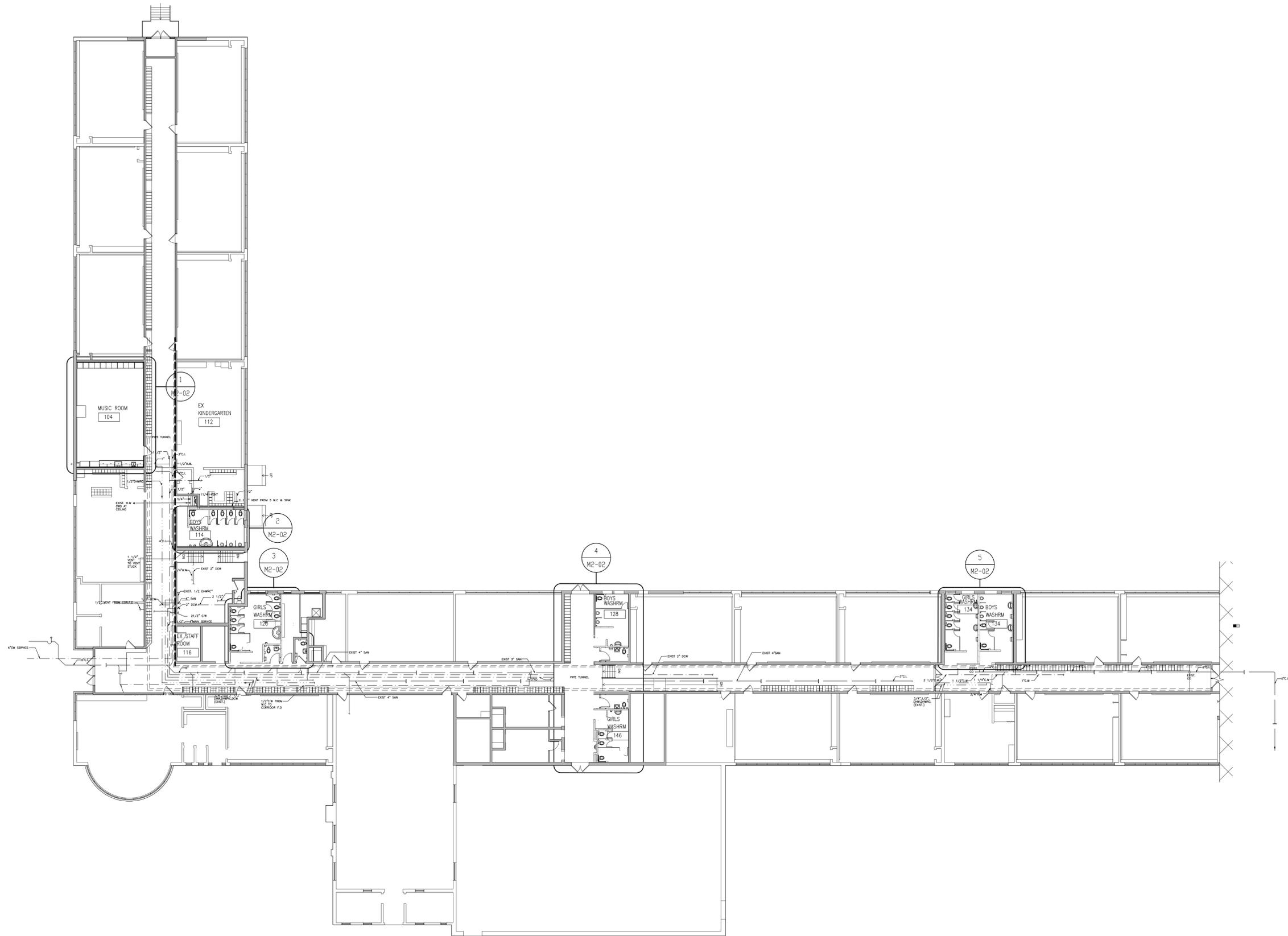
E & M
Consulting Engineers Inc.
2000 Highway 104
Hamilton, ON L8N 3A1
Canada
www.emconsultingeng.com

HWDSB
AMRA J
ARCHITECTS INC.
www.aja.design | info@aja.design | 905.920.5121

Project 001:
HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD
P2085 - FRANKLIN RD ELEMENTARY SCHOOL RENOVATIONS
500 FRANKLIN ROAD HAMILTON, ONTARIO.

Drawing 001:
MECHANICAL SYSTEMS - NEW OVERALL PLAN.

drawn:	scale:
MH	AS SHOWN
date:	project number:
	24-21
checked:	DRAWING NO.:
KS	M2-00
date:	0
12/2024	Revision



DO NOT SCALE DRAWING DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE.
 ALL DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.

2	ISSUED FOR TENDER	2025-02-11
1	ISSUED FOR PERMIT	2024-12-16
B	85% PROGRESS	2024-11-27
A	30% PROGRESS SUBMISSION	2024-11-01
No.	DESCRIPTION	DATE

REVISIONS	

24076
 Seal KS

E & M
 Consulting Engineers Inc.
 6601 Ogony Blvd
 Mississauga, ON L5V 0K1
 Canada
 www.enrconsulting.com

HWDSB

AMRA J
 ARCHITECTS INC.
 www.aja.design | info@aja.design | 905.920.5121

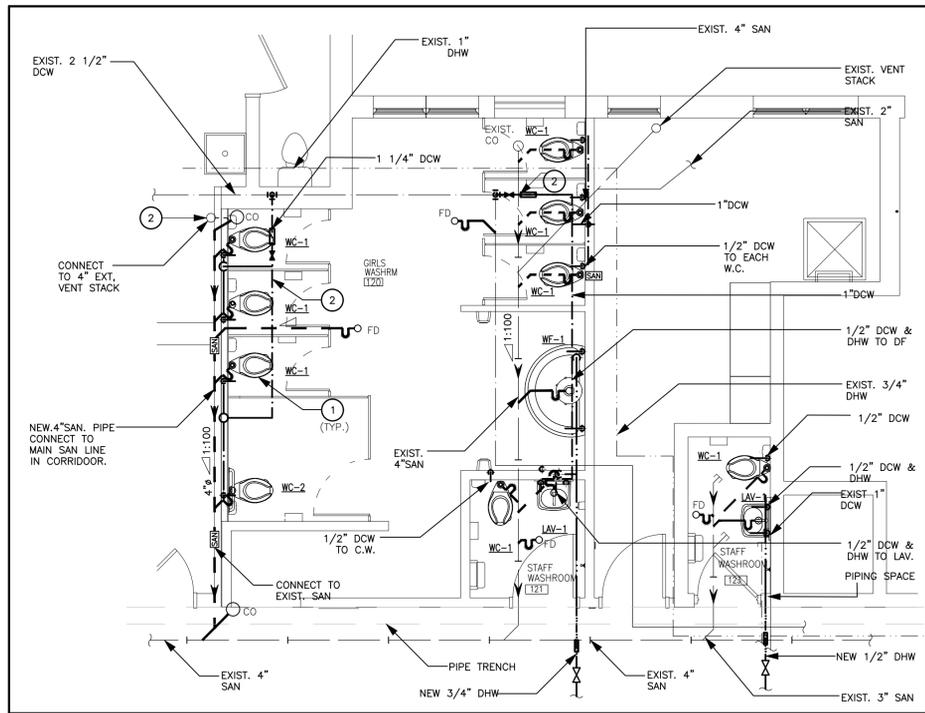
Project title:
 HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD
 P02085 - FRANKLIN RD ELEMENTARY SCHOOL RENOVATIONS,
 500 FRANKLIN ROAD HAMILTON, ONTARIO.

Drawing title:
 PLUMBING SYSTEMS - NEW OVERALL PLAN.

Client: MH Scale: AS SHOWN
 Date: project number: 24-21

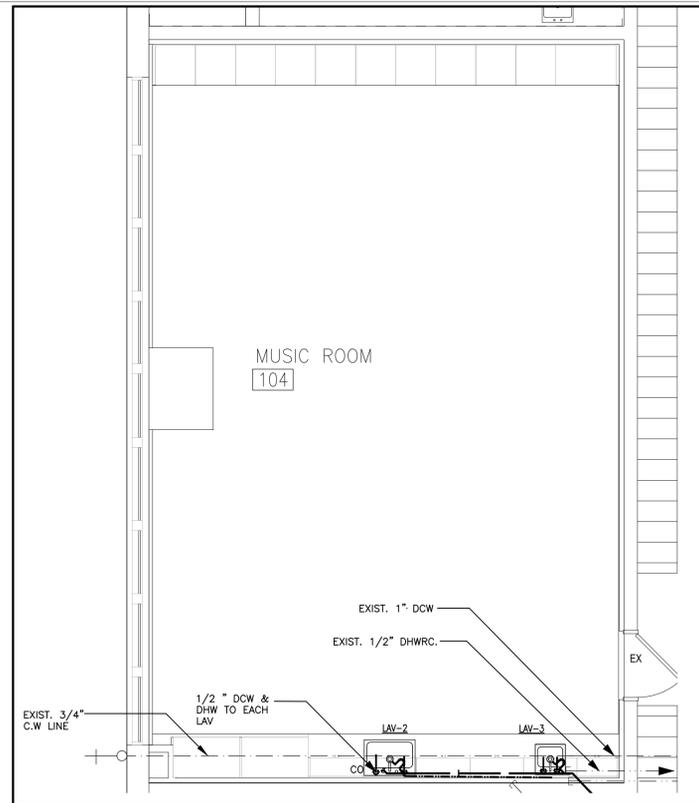
Checked: KS DRAWING NO: M2-01 0
 Date: 12/2024
 Revision

PLUMBING SYSTEMS- NEW OVERALL PLAN.
 SCALE= 1:200



3 PLUMBING & DRAINAGE-GIRLS W/ROOM(120/121/123)

SCALE- 1:50



1 PLUMBING & DRAINAGE-MUSIC ROOM(104)

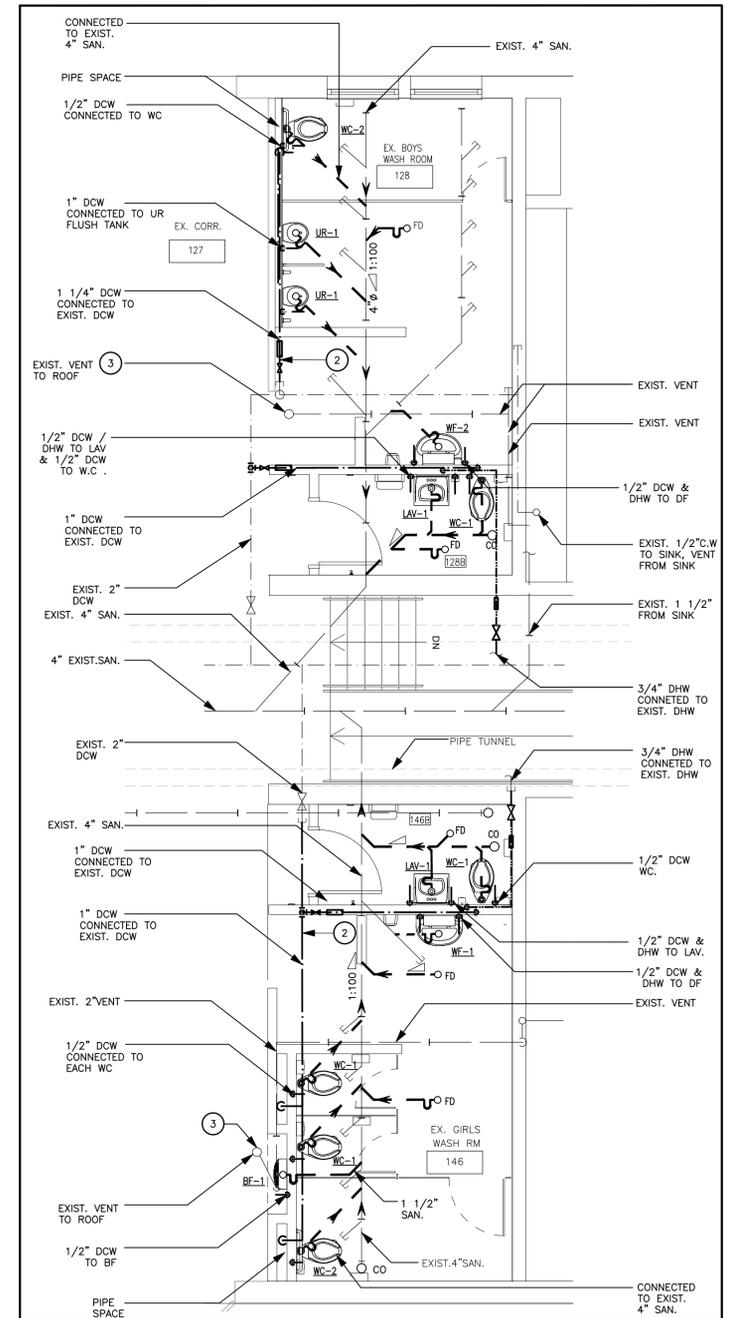
SCALE- 1:50

PLUMBING GENERAL NOTES:

- A) REFER TO CONSTRUCTION PHASING PLAN BEFORE COMMENCING WORK. INCLUDE ALL NECESSARY REQUIREMENTS TO MEET THE PHASING PLAN.
- B) ALL PLUMBING WORK TO CONFORM TO ONTARIO BUILDING CODE, ONTARIO WATER REGULATION ACT No. 615/64, CONSTRUCTION SAFETY ACT AND REGULATIONS OF THE CITY AND LOCAL AUTHORITIES.
- C) ALL SANITARY DRAINS TO BE INSTALLED BURIED (MIN. 300mm BELOW FIN. FLOOR) AND SLOPED AS SHOWN UNLESS OTHERWISE NOTED.
- D) COORDINATE PIPE INSTALLATION WITH ELECTRICAL CONDUITS, DUCT & STRUCTURAL MEMBERS. OFFSET PIPES AS REQUIRED.
- E) CONTRACTOR TO FIELD VERIFY WORKSITE CONDITIONS.
- F) PROVIDE ACCESS DOOR FOR EACH WATER VALVE INSTALLED IN CONCEALED SPACES.
- G) DO NOT INSTALL DHW & DCW PIPES IN EXPOSED EXTERIOR OR PERIMETER WALLS.
- H) SANITARY DRAINAGE AND VENT PIPES ABOVE GRADE SHALL BE CERTIFIED TO CAN/CSA-B181.2 "PVC DRAIN, WASTE, AND VENT PIPE AND PIPE FITTINGS"
- I) DOMESTIC HOT AND COLD WATER PIPES SHALL BE TYPE "L" HARD COPPER TUBING WITH SOLDERED FITTINGS.
- J) INSULATE ALL NEW DOMESTIC WATER PIPES WITH MINIMUM 50 mm THICK INSULATION. COVER EXPOSED PIPES WITH PVC JACKETS.
- K) PRIOR TO ANY INSTALLATION SURVEY THE EXISTING SPACE AND NOTE DOWN ALL EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT UNDERGROUND AND BURIED CABLES AND CONDUITS WITH THE ASSISTANCE OF A LOCATION SERVICE.

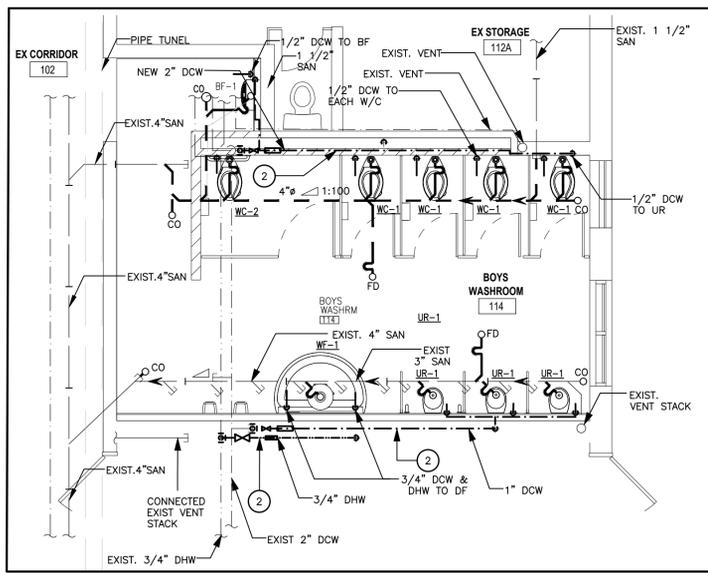
PLUMBING DRAWING NOTES

- 1 PROVIDE COMPLETE SANITARY PLUMBING FIXTURES & SERVICE PIPING AS SHOWN ON THIS DRAWING.
- 2 CONNECTED TO THE EXISTING SERVICE LINE AS SHOWN WITH REQUIRED INSULATION. PROVIDE NEW SHUTOFF VALVE IN DCE/DHW PIPE FOR NEW FIXTURES.
- 3 CONNECTED TO THE EXISTING VENT STACK



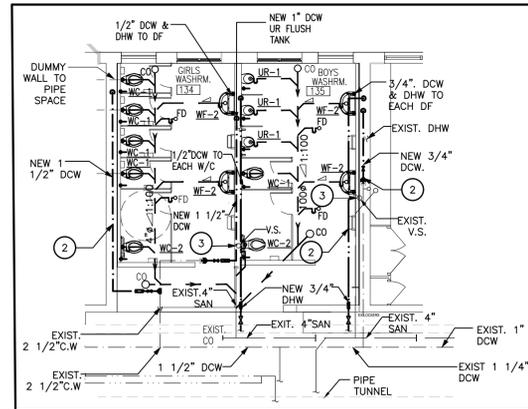
4 PLUMBING & DRAINAGE-BOYS & GIRLS W/ROOM (128A/128B,146A/146B)

SCALE- 1:50



2 PLUMBING & DRAINAGE-BOYS W/ROOM(114)

SCALE- 1:50



5 PLUMBING & DRAINAGE-BOYS & GIRLS W/ROOM (134/135)

SCALE- 1:100

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE DESCRIPTION	MANUFACTURER	CONNECTION SIZE			
			DCW	DHW	SANITARY	VENT
WC-1	WATER CLOSET	AMERICAN STANDARD MADERA™ Flowise® 15" HEIGHT ELONGATED WITH EVERCLEAN® PRESSURE-ASSISTED 6L TOILET 3451.001 ELONGATED 15" (381MM) BOWL ONLY, TOP SPUD WITH 2 BOLT CAPS.	1"	-	3"	1 1/4"
	FLUSH VALVE	DELTA MODEL 81T201 FLUSH VALVE FOR 1-1/2" TOP SPUD WATER CLOSET MAXIMUM 282MM(11-1/2") FROM CENTERLINE OF VALVE INLET TO TOP OF WATER CLOSET, 1" COPPER SWEAT INLET ADAPTOR FOR ANGLE CHECK STOP WITH PROTECTING CAP ADJUSTABLE 121MM ±11MM INLET/VALVE OUTLET CENTERS, C/W COVER TUBE AND SS WALL FLANGE.	1"	-	-	-
	WATERCLOSET SEAT	HEAVY DUTY SOLID PLASTIC SEAT CENTOCO #500STSCC (HEAVY-DUTY, OPEN FRONT, LESS COVER FOR ELONGATED BOWL.)	-	-	-	-
WC-2	BARRIER FREE WATER CLOSET	AMERICAN STANDARD MADERA™ Flowise® 15" HEIGHT ELONGATED WITH EVERCLEAN® PRESSURE-ASSISTED 6L TOILET 3451.001 ELONGATED 17" (431.8MM) BOWL ONLY, TOP SPUD WITH 2 BOLT CAPS.	1"	-	3"	1 1/4"
	FLUSH VALVE	DELTA MODEL 81T201 FLUSH VALVE FOR 1-1/2" TOP SPUD WATER CLOSET MAXIMUM 282MM(11-1/2") FROM CENTERLINE OF VALVE INLET TO TOP OF WATER CLOSET, 1" COPPER SWEAT INLET ADAPTOR FOR ANGLE CHECK STOP WITH PROTECTING CAP ADJUSTABLE 121MM ±11MM INLET/VALVE OUTLET CENTERS, C/W COVER TUBE AND SS WALL FLANGE.	1"	-	-	-
	WATERCLOSET SEAT	HEAVY DUTY SOLID PLASTIC SEAT CENTOCO #500STSCC (HEAVY-DUTY, OPEN FRONT, LESS COVER FOR ELONGATED BOWL.)	-	-	-	-
LAV-1	LAVATORY	*AMERICAN STANDARD* LUCERNE™ WALL-HUNG LAVATORY MODEL No. 0355.027 FOR EXPOSED BRACKET SUPPORT, FAUCET HOLES ON 102MM (4") CENTERS.	-	-	1 1/2"	1 1/4"
	FAUCET	DELTA MIXING METERING HANDWASH FAUCET MODEL No. 86T1153	1/2"	1/2"	-	-
	DRAIN AND P-TRAP	*OS&B* 19HOLE GRID p.o. BODY ASSEMBLY 17 GAUGE TAILPIECE DRAIN, ZURN SEMI-CAST P-TRAPS WITH WALL BEND PRODUCT NUMBER 28700-PC CHROME-PLATED CAST BRASS (COPPER ALLOY) BODY P-TRAP WITH CLEANOUT	-	-	1 1/4"	-
LAV-2	LAVATORY	*KINDRED* TOP MOUNT/DROP IN STAINLESS STEEL LAVATORY MODEL No. OSL2031-8-1, FAUCET HOLES ON 203MM (8") CENTERS.	-	-	1 1/4"	1 1/4"
	FAUCET	CHICAGO MANUAL SINK FAUCET MODEL No. 431-ABCP c/w ACCESSORIES.	1/2"	1/2"	-	-
	DRAIN AND P-TRAP	*OS&B* 19HOLE GRID p.o. BODY ASSEMBLY 17 GAUGE TAILPIECE DRAIN, ZURN SEMI-CAST P-TRAPS WITH WALL BEND PRODUCT NUMBER 28700-PC CHROME-PLATED CAST BRASS (COPPER ALLOY) BODY P-TRAP WITH CLEANOUT	-	-	1 1/4"	-
LAV-3	LAVATORY	*KINDRED* TOP MOUNT/DROP IN STAINLESS STEEL LAVATORY MODEL No. OSL2020/10, FAUCET ONE HOLE ON CENTER.	-	-	1 1/4"	1 1/4"
	FAUCET	CHICAGO MANUAL SINK FAUCET MODEL No. 434-ABCP c/w ACCESSORIES.	1/2"	1/2"	-	-
	DRAIN AND P-TRAP	*OS&B* 19HOLE GRID p.o. BODY ASSEMBLY 17 GAUGE TAILPIECE DRAIN, ZURN SEMI-CAST P-TRAPS WITH WALL BEND PRODUCT NUMBER 28700-PC CHROME-PLATED CAST BRASS (COPPER ALLOY) BODY P-TRAP WITH CLEANOUT	-	-	1 1/4"	-
UR-1	URINAL	*AMERICAN STANDARD* WASHBROOK® Flowise® UNIVERSAL URINAL WITH EVERCLEAN 6590.001 TOP SPUD	3/4"	-	2"	1 1/2"
	FLUSH VALVE	SLOAN MODEL 186-0.5 FLUSHMETER EXPOSED URINAL FLUSHMETER FOR 3/4" TOP SPUD URINALS.	3/4"	-	-	-
	ACCESSORIES	DRAIN, P-TRAP, ALL ACCESSORIES AND WALL MOUNTING BRACKET.	-	-	1 1/4"	-
BF-1	BOTTLE FILLER	MURDOCK® BF16 SERIES SURFACE MOUNT SENSOR OPERATED NON-REFRIGERATED BOTTLE FILLER, 1.0GPM FILL RATE, 100-MESH INLET STRAINER, 1.20VAC/12VDC PLUG-IN TRANSFORMER.	-	1/2"	1 1/4"	-
	WASHING FOUNTAIN	BRADLEY TERRAZZO QUADRA-FOUNTAIN WASHFOUNTAINS MF2844, ONTARIO BUILDING CODE HEIGHT, INFRARED, NAVIGATOR® THERMOSTATIC MIXING ASSEMBLY (HOT & COLD SUPPLIES), 120VAC/12VDC PLUG IN ADAPTER, PLUGS INTO A STANDARD GFCI PROTECTED ELECTRICAL OUTLET.	1/2"	1/2"	1 1/2"	1 1/4"
WF-2	WASHING FOUNTAIN	BRADLEY TERRAZZO QUADRA-FOUNTAIN WASHFOUNTAINS S93-574, ONTARIO BUILDING CODE HEIGHT, INFRARED, NAVIGATOR® THERMOSTATIC MIXING ASSEMBLY (HOT & COLD SUPPLIES), 120VAC/12VDC PLUG IN ADAPTER, PLUGS INTO A STANDARD GFCI PROTECTED ELECTRICAL OUTLET.	1/2"	1/2"	1 1/2"	1 1/4"
	FLOOR DRAIN	WATTS FD-100-C-A 125mm NICKEL BRONZE STRAINER	-	-	3"	-

NOTES: 1. INCLUDING ALL ACCESSORIES, TRAP SEAL PRIMERS ETC. 2. INCLUDING THERMOSTATIC MIXING VALVE AT HWF. 3. POWER CONVERTERS ACTUAL QUANTITIES HAVE NOT BEEN GIVEN ACCURATELY. 4. ALL PIPING SHALL BE CONCEALED WITHIN WALLS. 5. PROVIDE SHOCK STOPS ON HOT/COLD WATER SUPPLIES TO ALL FIXTURE GROUPS. 6. ALL VENTING SHALL CONFIRM TO OBC PART INCREASE VENT SIZING AS REQUIRED WHERE TOTAL VENT LENGTH EXCEEDS SIZES LISTED ABOVE. 7.

DO NOT SCALE DRAWING DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.

NO.	DESCRIPTION	DATE
2	ISSUED FOR TENDER	2025-02-11
1	ISSUED FOR PERMIT	2024-12-16
B	50% PROGRESS	2024-11-27
A	30% PROGRESS SUBMISSION	2024-11-01

NO.	DESCRIPTION	DATE
24076		

Seal KS
E & M
 Consulting Engineers Inc.
 500 Franklin Road
 Hamilton, ON L8S 4S1
 Canada
 www.eandmconsulting.com

HWDSB
AMRA J
 ARCHITECTS INC.
 www.aja.design | info@aja.design | 905.920.5121

Project No:
 HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD
 P20205 - FRANKLIN RD ELEMENTARY SCHOOL RENOVATIONS
 500 FRANKLIN ROAD HAMILTON, ONTARIO.

drawn	scale	AS SHOWN
MH		
date	project number	24-21
checked	DRAWING NO.	M2-02
KS		0
date		2024

MECHANICAL SPECIFICATIONS

A GENERAL CONDITIONS

- 1.1 GENERAL
- THE WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, THE ONTARIO WATER RESOURCES ACT, THE MINISTRY OF LABOUR, THE CITY OF HAMILTON AND ALL CODES HAVING JURISDICTION, WHICH ARE TO BE CONSIDERED AN INTEGRAL PART OF THESE SPECIFICATIONS. THE GENERAL CONDITIONS OF THE ARCHITECTURAL SPECIFICATIONS ARE HEREBY MADE PART OF THESE SPECIFICATIONS.
 - ALL LABOUR, MATERIALS, EQUIPMENT, FEES, PERMITS AND CHARGES TO PERFORM THE OPERATIONS FOR THE COMPLETE INSTALLATION OF THE PLUMBING, PIPING, VENTILATION AND HEATING WORK, AS INDICATED ON THE DRAWINGS.
 - VISIT THE JOB SITE AND EXAMINE ALL EXISTING CONDITIONS WHICH AFFECT THE WORK.
 - PAY FOR AND OBTAIN ALL REQUIRED PERMITS, FEES, LICENCES, CERTIFICATES OF INSPECTION, ETC. PROVIDE AND SUBMIT REQUIRED DRAWINGS TO THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE IN ACCORDANCE WITH LAWS AND OF THE AUTHORITIES HAVING JURISDICTION. PROVIDE THE EQUIPMENT WITH APPLICABLE CGA, CSA AND ULG LABELS.
 - CONFORM TO THE ONTARIO BUILDING CODE, CSA STANDARDS, MINISTRY OF ENVIRONMENT (MOE), LOCAL BY-LAWS AND AUTHORITIES HAVING JURISDICTION.
 - CO-ORDINATE WITH OTHER TRADES REGARDING THE LOCATIONS OF EQUIPMENT, CONTROL DEVICES, LOCATIONS, DISTRIBUTION SYSTEM, ETC.
 - SCHEDULE WORKING HOURS WITH THE OWNER.
 - THE CONTRACTOR IS TO LOCATE THE EXACT DIMENSIONS AND POSITIONS OF OPENINGS AND HOLES WHERE CUTTING MAY BE REQUIRED IN FLOORS, ROOFS, CEILING AND/OR WALLS FOR THE PASSAGE OF PIPES, DUCTS, ETC. WHERE CUTTING, PATCHING IS NECESSARY, IT SHALL BE DONE BY THE MECHANICAL.
 - CONNECTIONS INTO EXISTING SYSTEMS TO BE MADE AT TIME APPROVED BY OWNER. REQUEST WRITTEN APPROVAL OF TIME WHEN CONNECTIONS CAN BE MADE. BE RESPONSIBLE FOR DAMAGE TO EXISTING PLANT BY THIS WORK.
 - CLEAN INTERIOR AND EXTERIOR OF ALL SYSTEMS. VACUUM INTERIOR OF DUCTWORK AND AIR HANDLING UNITS. IN PREPARATION FOR FINAL ACCEPTANCE, CLEAN AND REFURBISH ALL EQUIPMENT AND LEAVE IN OPERATING CONDITION INCLUDING REPLACEMENTS OF ALL FILTERS IN ALL SYSTEMS.
 - FOR ALL CONCEALED VALVES AND VOLUME DAMPERS, PROVIDE ACCESS DOORS AND ARRANGE THESE DOORS TO BE INSTALLED BY THE RESPECTIVE TRADES SUCH AS MAINTENANCE INSTRUCTIONS FROM THE MANUFACTURER.
 - PROVIDE MANUFACTURER RECOMMENDED SPACE FOR SERVICING, DISASSEMBLY AND REMOVAL OF EQUIPMENT AND COMPONENTS. PIPE EQUIPMENT DRAINS TO NEAREST DRAIN.
 - PROVIDE SCHEDULE 40 PIPE SLEEVES AT POINTS WHERE PIPES PASS THROUGH MASONRY, CONCRETE OR FIRE RATED ASSEMBLIES. SLEEVE SIZES: MINIMUM 6 MM CLEARANCE ALL AROUND BETWEEN SLEEVE AND UNSULATED PIPER BETWEEN SLEEVES AND PIPE IN FOUNDATION WALLS AND BELOW GRADE FLOORS WITH WATERPROOF FIRE RETARDANT NON-HARDENING MASTIC. WHERE SLEEVES PASS THROUGH WALLS OR FLOORS, PROVIDE SPACE FOR FIRE STOPPING. WHERE PIPES/DUCTS PASS THROUGH FIRE RATED WALLS, FLOORS AND PARTITIONS, MAINTAIN
 - SUPPLY TOOLS, EQUIPMENT AND PERSONNEL TO DEMONSTRATE AND INSTRUCT OPERATING AND MAINTENANCE PERSONNEL IN OPERATING, CONTROLLING, ADJUSTING, TROUBLE-SHOOTING AND SERVICING OF ALL SYSTEMS AND EQUIPMENT DURING REGULAR WORK HOURS, PRIOR TO ACCEPTANCE.
 - GUARANTEE IN WRITING FOR THE MATERIAL AND WORKMANSHIP INCLUDING THE MANUFACTURER'S GUARANTEE FOR THE PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE.
 - CERTIFY IN WRITING FOR ALL WORK COMPLETED IN ACCORDANCE WITH THE SPECIFICATIONS AND DRAWINGS. SUBMIT AS-BUILT DRAWINGS WHERE REVISIONS
 - WHERE THESE STANDARDS ARE SUPERCEDED BY PUBLISHED LOCAL MUNICIPAL STANDARDS AND DESIGN CRITERIA, THE MUNICIPAL STANDARDS SHALL APPLY. THESE STANDARDS APPLY TO ALL PHASES OF THE WORK.
- 1.2 DESCRIPTION OF WORK
- SELECTIVE DEMOLITION WORK.
 - RENOVATION OF WASHROOM PLUMBING SYSTEMS.
 - RENOVATION OF WASHROOM AND MUSIC ROOM HVAC SYSTEMS.
 - OTHER MISCELLANEOUS WORK AS SHOWN ON DRAWING.
- 1.3 SHOP DRAWINGS
- SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:
- HVAC EQUIPMENT INCLUDING HEATERS.
 - AIR GRILLE.
 - PLUMBING FIXTURES DESIGNATED.
- 1.4.1 STANDARDS OF MATERIAL AND EQUIPMENT
- MATERIAL AND EQUIPMENT ARE SPECIFICALLY DESCRIBED AND NAMED IN THIS SPECIFICATION AS EITHER BASE BID, BASE BID ALTERNATES AND ACCEPTABLE PRODUCTS.
- WHERE THE TERM "ACCEPTABLE PRODUCTS" IS USED, THE BID MAY BE BASED ON ANY OF THE ACCEPTABLE PRODUCTS.
 - WHERE THE "BASE BID" SPECIFICATION IS USED, THE BID MUST BE BASED ON THE SPECIFIED EQUIPMENT. THE "ALTERNATE PRODUCTS" SHALL BE LISTED ON THE SUPPLEMENTARY TENDER FORM WITH THE COST SAVINGS (IF ANY), AND THE OWNER SHALL HAVE THE FINAL OPTION OF ACCEPTING OR REJECTING ALTERNATE EQUIPMENT.
 - IF THIS DIVISION STATES THE USE OF "ALTERNATE PRODUCTS", THE BIDDER SHALL HAVE MADE ALLOWANCE IN HIS SAVINGS FOR ANY STRUCTURAL OR ELECTRICAL CHANGES NECESSARY, AND SAID CHANGES SHALL BE AT THE EXPENSE OF THIS DIVISION.
- 1.5 INTERRUPTION OF EXISTING SERVICES
- ALL INTERRUPTIONS OF EXISTING MECHANICAL SYSTEMS MUST BE APPROVED BY AND CO-ORDINATED WITH THE OWNER.
 - DISRUPTION OF NORMAL OPERATIONS WILL NOT BE ALLOWED. ALL INTERRUPTIONS SHALL OCCUR AFTER THE CLOSE OF NORMAL HOURS. PREMIUM TIME TO BE INCLUDED IN THE TENDER PRICE.
- 1.6 SLEEVES, CUTTING, PATCHING AND FIRE STOPPING
- INSTALL SLEEVES AND FRAMES FOR PIPING AND SIMILAR EQUIPMENT TO BE BUILT INTO THE BUILDING AS THE CONSTRUCTION PROGRESSES. IF THESE ARE NOT INSTALLED AT THE TIME OF CONSTRUCTION, THE COST OF CUTTING AND PATCHING AT A LATER DATE, WILL BE AT THE EXPENSE OF THIS CONTRACTOR.
 - THE PRIME MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE CUTTING AND PATCHING OF ALL HOLES AND OPENINGS UP TO AND INCLUDING 200 mm (8") DIAMETER.
 - THE PRIME MECHANICAL CONTRACTOR IS TO LOCATE THE EXACT POSITIONS AND DIMENSIONS OF LARGER OPENINGS FOR CUTTING BY THE GENERAL DIVISION.
 - THE PRIME MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE SUPPLY AND INSTALLATION OF APPROVED FIRE STOPPING FOR ALL NEW MECHANICAL PENETRATIONS THROUGH BOTH EXISTING AND NEW FIRE SEPARATIONS. VERIFY ALL FIRE SEPARATIONS WITH THE ARCHITECTURAL DRAWINGS. FIRE STOPPING IS TO BE RATED TO MATCH AND MAINTAIN THE INTEGRITY OF THE RATED ASSEMBLY.
- 1.7 RECORD DRAWINGS AND EQUIPMENT MANUALS
- AS THE PROJECT PROGRESSES, RECORD, ON A SET OF WHITE PRINTS, ALL ADDENDA, CHANGES TO AND DEVIATIONS FROM THE PLANS MADE DURING THE CONSTRUCTION PERIOD. ALSO, RECORD THE LOCATION OF ALL DIFFUSERS, GRILLES AND OTHER MECHANICAL EQUIPMENT.
 - MAKE THESE PROGRESS RECORD DRAWING WHITE PRINTS AVAILABLE TO THE CONSULTANTS FOR THEIR REVIEW AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
 - AT THE CONCLUSION OF THE PROJECT, TRANSFER ALL RECORD DRAWING INFORMATION ONTO AUTOCAD RELEASE 2010 OR LATER TO A UNIVERSAL SERIAL BUS STICK (USB).
 - THE CONSULTANT SHALL PROVIDE TO THE CONTRACTOR A USB CONTAINING GRAPHIC (ELECTRONIC) REPRESENTATION OF THE DRAWINGS. A RELEASE FORM "TRANSFER OF FILES ON ELECTRONIC MEDIA" WILL BE PROVIDED BY THE CONSULTANT TO THE CONTRACTOR FOR SIGNING IN ORDER TO RECEIVE AND USE THE ELECTRONIC FILES.
 - BEFORE SUBSTANTIAL PERFORMANCE OF THE CONTRACT, COMPLY WITH THE FOLLOWING:
 - PROVIDE CD CONTAINING ALL UPDATED RECORD DRAWING INFORMATION AS SPECIFIED HEREIN.
 - PROVIDE TWO (2) SETS OF EQUIPMENT DATA SHEETS AND/OR MANUFACTURER'S MAINTENANCE MANUALS COVERING EACH SYSTEM AND ITS COMPONENTS IN ACCORDANCE WITH REQUIREMENTS OF EACH APPROPRIATE SECTION. THE BINDER IS TO BE DIVIDED INTO SECTIONS WITH TABS CLEARLY MARKED INDICATING THE SYSTEMS, ETC.

B. BALANCING IDENTIFICATION AND START-UP

- OBTAIN EXISTING RECORD DRAWINGS FROM THE OWNER FOR INFORMATION BEYOND THIS PROJECT AND USE IT FOR AIR AND WATER BALANCING AS REQUIRED.
 - IDENTIFICATION IS TO BE CARRIED OUT BY THE RESPECTIVE TRADE WITH NAME TAGS IDENTIFYING THE USE OR SERVICE OF ALL NEW MAIN VALVES AND NEW EQUIPMENT.
 - CLEAN ALL NEW EQUIPMENT AND OTHER INSTALLATIONS.
 - PROVIDE MAINTENANCE INSTRUCTIONS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - SUBMIT TWO (2) COPIES OF MANUFACTURER'S MAINTENANCE MANUALS TO OWNER FOR ALL NEW EQUIPMENT.
 - PROVIDE TWO BOUND COPIES OF THE AIR BALANCING REPORT TO OWNER.
 - AIR BALANCING SHALL BE DONE BY PROFESSIONAL TESTING AND BALANCING FIRM. AIR QUANTITIES OF EACH OUTLET SHALL BE AS INDICATED ON THE DRAWINGS. THE AIR BALANCING REPORT SHALL SHOW THE QUANTITIES, VELOCITIES, AND AREA OF EACH OUTLET, TYPE AND MODEL NUMBER OF FANS AND MOTORS INSTALLED, ACTUAL AIR DELIVERED BY THE FAN WITH TOTAL STATIC PRESSURE AND VOLTAGE DRAWN BY THE MOTORS. ADJUST AND RESET THE SYSTEMS TO THE SATISFACTION OF THE PROJECT CO-ORDINATOR. PROVIDE AN ADDITIONAL COPY OF THE AIR BALANCING REPORT TO THE MECHANICAL CONSULTANT.
 - APPLICATION TOLERANCES: HVAC SYSTEMS: PLUS 5%, MINUS 5%
 - AIR SYSTEMS: TO TAB STANDARDS OF AABC.
 - THE HVAC CONTRACTOR SHALL CO-OPERATE WITH TAB AGENCY, PROVIDE REQUIRED PERSONNEL ATTENDANCE AND AT NO ADDITIONAL COST, CHANGE OR ADJUST THE SHEAVES, MOTOR AND BELTS IF NECESSARY TO ACHIEVE THE SPECIFIED AIR VOLUME.
 - SUBMIT THREE (3) COPIES OF TAB REPORT WITH SCHEMATICS FOR ENGINEERS APPROVAL.
- C VENTILATION
- VENTILATION MATERIALS
ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND FREE FROM DEFECTS, CSA APPROVED.
 - AIR DISTRIBUTION
ALL DUCTWORK SHALL BE FABRICATED TO SMACNA DUCT MANUAL STANDARDS, SECTION NO. 1, AND AS FOLLOWS
 - MATERIAL AND THICKNESS
DUCTWORK SHALL BE FABRICATED FROM BEST QUALITY LOCK-FORMING GALVANIZED STEEL SHEETS AS MANUFACTURED BY STELCO OR DOFASCO OF THE FOLLOWING THICKNESS:
- | SIZE OF DUCT | GUAGE OF SHEET STEEL |
|---|----------------------|
| 300 OR LESS IN WIDTH OR DEPTH OF UP TO 200 DIAMETER | NO.26 US |
| 325 TO 750 IN WIDTH OR DEPTH OF 225 TO 550 DIAMETER | NO.24 US |
| 750 TO 1350 IN WIDTH OR DEPTH | NO.22 US |
4. CONSTRUCTION
- LONGITUDINAL SEAMS SHALL BE MADE WITH PITTSBURGH LOCK OR BUTT PUNCH SEAMS IN ALL SIZES. ALL DUCTWORK SHALL BE CROSS BROKEN OR BEADED 12" O.C. FOR RIGIDITY.
- DUCTS SHALL HAVE PLAIN "S" SLIPS ON THE LONG SIDES, AND DRIVE CLEATS ON THE SHORT SIDES, FOLDED OVER TO PREVENT AIR LEAKAGE. MINIMUM END JOINT SPACING IS 300mm
- ALL BENDS OR ELBOWS SHALL BE MADE WITH A RADIUS OF NOT LESS THAN 1-1/2 TIMES THE WIDTH OF THE DUCT. WHERE IT IS NOT POSSIBLE, TURNING VANES SHALL BE USED. VANES SHALL BE OF SINGLE VANE CONSTRUCTION WITH SPACE UP TO 600 WIDTH AND 80mm SPACING OVER 600
5. HANGERS
- DUCTWORK SHALL HAVE SUBSTANTIAL HANGERS ATTACHED TO STRUCTURE WITH CONCRETE INSERTS TO SECURE THE DUCTS IN PLACE, AND PREVENT VIBRATION, NO CADDY CLIPS OR PLUMBERS TAPE PERMITTED FOR HANGING DUCTS.
- HORIZONTAL DUCTWORK UP TO 725 WIDE SHALL BE SUPPORTED BY GALVANIZED 25mm 16 GAUGE OR HEAVIER HANGERS PLACED NOT OVER 1800mm APART, WITH ENDS TURNED UNDER THE DUCT. SECURE TO DUCT WITH SHEET METAL SCREWS, TWO (2) PER SIDE, AND ONE (1) IN BOTTOM.
- HORIZONTAL DUCTWORK OVER 750 mm WIDE SHALL REST ON GALVANIZED ANGLE IRON SUPPORTS OR UNISTRUT CHANNELS, WITH ROD HANGERS AT 1800mm SPACING AS FOLLOWS:
- | DUCT SIZE | ROD | ANGLE |
|-------------|-----|-------------------|
| 750 TO 1225 | 6mm | 40mm X 40mm X 3mm |
6. DUCT SEALING
- ALL JOINTS DURING MANUFACTURE OF LOW VELOCITY DUCTWORK SHALL BE SEALED WITH 3-M, HIGH VELOCITY SEALER, TOUGH BOND OR DURO DYNE S-2H.V. SEALER ON THE FACES OF THE JOINTS AND AFTER CLEATS HAVE BEEN INSTALLED.
7. BALANCING DAMPERS
- PROVIDE BALANCING DAMPERS IN DUCTWORK WHERE SHOWN AND WHERE REQUIRED FOR PROPER ADJUSTMENT OF AIR QUANTITIES. OPEN AND CLOSED POSITIONS MUST BE CLEARLY MARKED.
- SPLITTER DAMPERS: SHALL BE AIRFOIL SHAPE DOUBLE THICKNESS ON GAUGE HEAVIER THAN DUCT WITH LOCKING QUADRANT ON EXTERIOR OF DUCT.
 - SINGLE BLADE ROUND BUTTERFLY U.S. 22 GA THICK WITH LOCKING QUADRANT.
 - MULTI-LEAF OPPOSED BLADE DAMPERS DESIGNED TO SMACNA DETAILS WITH LOCKING QUADRANT.
8. DUCT INSULATION
- COMPONENTS OF INSULATION SYSTEM TO HAVE MAXIMUM FLAME SPREAD RATING OF 25 AND MAXIMUM SMOKE DEVELOPED RATING OF 50 IN ACCORDANCE WITH CAN/ULC-S102 MATERIALS TO BE TESTED IN ACCORDANCE WITH ASTM C411.
- PROVIDE CAN/CGSB-51.10, RIGID MINERAL FIBRE BOARD; CGSB 51-GP-52MA VAPOUR BARRIER, JACKET AND FACING MATERIAL INSULATION ON RECTANGULAR DUCTING LARGER THAN 300x150 SIZE FOR SUPPLY AIR DUCTING, FROM FAN TO SUPPLY GRILLE.
- THICKNESS: ONE 25 MM LAYER ON SUPPLY AIR DUCTS. INSTALL IN ACCORDANCE WITH ANS/NFPA 90A AND ANS/NFPA 90B.
- PROVIDE 25mm THICKNESS MINERAL FIBRE BLANKET WITH RFRK FACING TO CAN/CGSB-51.11 ON ROUND AND RECTANGULAR SUPPLY AIR DUCTWORK UP TO 300x150 SIZE.
- JACKETS:
INDOOR EXPOSED: ULC LISTED PLAIN WEAVE COTTON FABRIC.
OUTDOOR: GLASSFIBRE MEMBRANE FINISHED WITH TWO (2) COATS BAKELITE #110-14.
- INSULATE:
ALL SUPPLY AIR DUCTWORK INCLUDING DUCTS IN CEILING RETURN AIR PLENUMS.
- DO NOT INSULATE:
RETURN AIR DUCTS, ACOUSTICALLY LINED DUCTS

D PIPE AND FITTINGS - PRODUCTS

- 1.1 PLUMBING & DRAINAGE
- PIPE MATERIALS
 - SOIL, VENT AND RAINWATER LEADERS NOT BURIED 3" (80 MM) AND LARGER:
 - CLASS 4000 CAST IRON SHALL BE CERTIFIED TO CSA B70 - MECHANICAL JOINT.
 - DRAINAGE VENTS AND WASTES 2-1/2" (65 MM) AND SMALLER:
 - CLASS 4000 CAST IRON SHALL BE CERTIFIED TO CAN/CSA B70-M91 - MECHANICAL JOINT.
 - DRAINAGE COPPER PIPE DWV SHALL COMPLY WITH ASTM B306 - SOLDER JOINTS.
 - SCHEDULE 40 GALVANIZED STEEL - THREADED JOINTS.
 - ALL BURIED DRAINAGE PIPING WITHIN BUILDING:
 - CLASS 4000 CAST IRON SHALL BE CERTIFIED TO CAN/CSA B70-M91 - MECHANICAL JOINT.
 - DWV PLASTIC PIPE ABS AND SOLVENT WELD, 4" (100 MM) AND SMALLER.
 - PVC SOLE, 6" (150 MM) AND LARGER.
 - STEEL PIPE AND FITTINGS
 - SERVICE: HOT WATER HEATING.
 - PIPING: CONTINUOUS WELDED SCHEDULE 40 ASTM-A120 FOR SCREWED PIPING AND MECHANICAL JOINTS AND ASTM-A53 FOR WELDING.
 - JOINTS:
 - 15 MM TO 65 MM CLASS 150 MI THREADED UNIONS, CLASS 150 DART PATTERN MI THREADED BRASS TO IRON GROUND SEAT.
 - VALVES:
 - ALL INSULATED VALVES SHALL HAVE EXTENDED NECKS OR SHAFTS WHERE THE THICKNESS OF THE INSULATION INTERFERES WITH THE OPERATING HANDLE.
 - BALL:
 - 15 MM TO 50 MM CLASS 150 STANDARD PORT BRONZE BODY BRONZE FITTED SCREWED ENDS PIPE SEATS AND PACKING, LEVER HANDLE.
 - ACCEPTABLE PRODUCTS:
 - CRANE 9202
 - JENKINS 201J
 - NEWMAN-HATTERSLEY 1969
 - VICTAULIC 726
 - MILWAUKEE BA-200
 - CHECK:
 - 15 MM TO 65 MM CLASS 125 BRONZE BODY, SCREWED ENDS, SWING DISC, SCREW-ON CAP.
 - ACCEPTABLE PRODUCTS:
 - CRANE 37/1707
 - JENKINS 4092
 - MILWAUKEE 509
 - NEWMAN-HATTERSLEY A60
 - STRAINERS:
 - 15 mm TO 50 mm CAST IRON "Y" BODY PATTERN, SCREWED ENDS AND CAP WITH BRASS FLUX, STAINLESS STEEL SCREEN WITH 0.125 PERFORATIONS FOR WATER SERVICE.
 - ACCEPTABLE PRODUCTS:
 - SARCO
 - ITT
- 1.3 COPPER PIPE AND FITTINGS
- SERVICE: ALL DOMESTIC WATER PIPING
 - PIPING: PLAIN END TYPE "L" HARD DRAWN COPPER.
 - FITTINGS: SOLDER END WROUGHT COPPER.
 - JOINTS: ALL DOMESTIC HOT AND COLD POTABLE WATER PIPING SHALL BE JOINED USING 95/5 SOLDER CONTAINING NO LEAD COMPOUNDS (95% TIN/5% ANTIMONY). NON-POTABLE WATER PIPING SHALL BE JOINED USING A STANDARD 50/50 TIN/LEAD COMPOUND SOLDER.
 - VALVES:
 - BALL: 15 MM TO 65 MM FULL PORT BRASS OR BRONZE BODY, BRONZE FITTED SOLDER ENDS, PIPE SEATS AND PACKING, LEVER HANDLE.
 - ACCEPTABLE PRODUCTS:
 - CRANE F9222
 - JENKINS 902
 - APOLLO 77FLF-200
 - NIBCO 585-80-LF

E PIPES AND FITTINGS - EXECUTION

- 1.1 PIPING INSTALLATION
- PROVIDE ALL NECESSARY PIPING INCLUDING FITTINGS AND UNIONS TO COMPLETE SYSTEMS SHOWN. CUT PIPES TRUE AND SQUARE. REAM FILE ENDS TO SMOOTH SURFACE, ALL TO PIPE MANUFACTURER'S AND ACCEPTED TRADE STANDARDS. FITTINGS SHALL BE OF EQUIVALENT BORE AS PIPE, OF EQUAL STRENGTH AND WEIGHT. INSTALL PIPING TO MANUFACTURER'S SPECIFICATIONS AND PUBLISHED DIRECTIONS. INSTALL PIPING TO CONFORM TO ONTARIO BUILDING CODE (CHAPTER 7).
 - INSTALL ABOVE GROUND PIPING TO CLEAR OTHER PIPING, INSULATION, OBSTRUCTIONS, ACCESS DOORS AND CONTROLS. TAKE BRANCHES OFF MAINS WITH FITTINGS AND 45° AND 90° ELBOWS. LOCATE VALVES FOR EACH OPERATION. LOCATE CLEANOUTS IN ACCESSIBLE LOCATIONS TO APPROVAL AND TO SUIT ACCESS.
 - DO NOT USE FERROUS PIPING, FITTINGS, BUSHINGS, NIPPLES OR FLUOS IN COPPER PIPING. PROVIDE DIELECTRIC BUSHINGS AT CONNECTIONS TO FERROUS MATERIALS OR EQUIPMENT ON WATER SYSTEMS.
 - SUPPLY AND INSTALL FLANGES, UNIONS OR COMPRESSION FITTINGS ON EQUIPMENT SIDE OF SHUT-OFF VALVES IN PIPING CONNECTIONS TO EQUIPMENT, TANKS AND FIXTURES SO SAME CAN BE DISCONNECTED FOR SERVICE. FLANGES AND UNIONS SHALL BE OF SAME MATERIAL AS PIPING.
 - CO-ORDINATE ROUTING OF PIPING WITH OTHER TRADES. PROVIDE INTERFERENCE DRAWINGS AS REQUIRED.
 - REFER TO MANUFACTURER'S INSTALLATION DRAWINGS.
 - INSTALL SYSTEMS SO THAT THEY CAN BE THOROUGHLY DRAINED AND ALL AIR ELIMINATED.
 - DURING WELDING OR SOLDERING PROCEDURES, PROVIDE A FIRE RETARDANT CLOTH, MAT OR BLANKET TO PROTECT THE STRUCTURE, AND ADEQUATE FIRE PROTECTION EQUIPMENT AT ALL LOCATIONS WHERE WORK IS BEING DONE.
 - PLUG AND/OR CAP ALL PIPE OPENINGS/FITTINGS DURING CONSTRUCTION.
 - CAST IRON PIPE TO HAVE ANTHES RUBBER GASKET MECHANICAL JOINTS, PC4 COLD CAULKING COMPOUND HUB AND SPOUT JOINTS, CAULKED LEAD JOINTS WITH OAKUM AND SOFT PIG LEAD, OR BIBBY BISEAL. CONFINED SPACES TO BE MECHANICAL JOINTS.
 - THREADED PIPE JOINTS TO BE TRUE AND ROUND WITH FULL CUT THREADS, ENDS REAMED AND FILED WITH ALL BURRS REMOVED IRON TO IRON WITH A FILLER OF GRAPHITE AND OIL.
 - SOLDER JOINTS SHALL BE CAREFULLY CLEANED WITH EMERY CLOTH. USE "SILFOS" SILVER SOLDER FOR BURIED PIPING. SEE SECTION 15700 FOR TYPE OF SOLDER TO BE USE ON VARIOUS PIPING SYSTEMS.
 - MAKE JOINTS IN COPPER PIPING WITH 95/5 TIN/ANTIMONY SOLDER WITH NON-CORROSIVE SOLDERING FLUX. CLEAN, REAM AND THOROUGHLY TIN EACH JOINT AND REMOVE EXCESS SOLDER AND FLUX.
 - GRADING: UNLESS OTHERWISE NOTED, DRAINAGE AND WASTE SHALL GRADE DOWN IN THE DIRECTION OF FLOW, AS FOLLOWS:
 - UP TO AND INCLUDING 3" (80 MM): 1/4" IN 1 FOOT (1:50).
 - 4" (100 MM) AND LARGER: 1/8" IN 1 FOOT (1:100).
 - GRADE VENT PIPING UP FROM FIXTURES SO IT IS SELF DRAINING.
 - IN ADDITION TO TESTS REQUIRED BY LOCAL AUTHORITIES, TEST PIPING AND DRAINS IN THE PRESENCE OF CONSULTANT AS HEREINAFTER DESCRIBED.
 - NOTIFY THE CONSTRUCTION MANAGER IN WRITING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO START OF TESTS. FAILURE TO DO SO MAY REQUIRE TEST TO BE RE-DONE.
 - PERFORM TESTS BEFORE APPLICATION OF PIPE INSULATION AND COVERING. TEST BURIED AND CONCEALED PIPING BEFORE BACKFILLING OR CONCEALING IN STRUCTURE. PROTECT EQUIPMENT AND PARTS NOT CAPABLE OF WITHSTANDING TEST PRESSURE DURING TESTS. MAKE LEAKS TIGHT WHILE SYSTEMS ARE STILL UNDER TEST. IF THIS IS IMPOSSIBLE, REMOVE AND RE-FIT DEFECTIVE PARTS. CAULKING OF THREADED JOINTS OR WELDS WILL NOT BE PERMITTED.
 - AFTER LEAKS HAVE BEEN REPAIRED, REPEAT TESTS AS OFTEN AS NECESSARY, AND TO ENSURE TIGHTNESS OF EACH SYSTEM.
 - INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION COMPLETE WITH SWING JOINTS, EXPANSION LOOPS, AND ANCHORS AS NECESSARY. SILVER SOLDER EACH JOINT IN EXPANSION LOOPS WHERE USED.
 - PRESSURE TEST HOT WATER HEATING PIPING WITH 150 PSI (1034 KPA) FOR NOT LESS THAN FOUR (4) HOURS WITHOUT DECREASE IN PRESSURE.
- 1.2 PIPE HANGERS
- ALL HORIZONTAL PIPING SHALL BE SUPPORTED AT LEAST EVERY 10'-0" (3000 MM), EXCEPT FOR PIPE 1-1/4" (32 MM) AND SMALLER WHERE 8'-0" (2400 MM) SPACING IS REQUIRED. PIPE HANGERS FOR COPPER PIPING SHALL BE ADJUSTABLE. CLEVIS TYPE ANVIL FIG. 260 COMPLETE WITH INSULATION SHIELD SIMILAR TO ANVIL FIG. 168. HANGER ROD SHALL BE STEEL WITH COPPER NUT. CLEVIS HANGERS TO BE OUTSIDE PIPE INSULATION BETWEEN THE SHIELD AND THE PIPE. INSTALL A SECTION OF HIGH DENSITY INSULATION EQUAL TO FOAMED GLAS (3.75 TO 5.0 LB DENSITY MATERIAL) COMPLETE WITH CONTINUOUS VAPOUR BARRIER. EXTEND HIGHER DENSITY INSULATION 2" (50 MM) BEYOND SHIELD. PIPE HANGERS AND SUPPORTS SHALL BE SECURED TO BEAMS, STEEL JOISTS, WALLS, FLOORS, ETC. DO NOT SUPPORT FROM METAL DECK.
 - ALL HANGERS AND RODS SHALL BE OF A SIZE AND WEIGHT TO SAFELY SUPPORT THE PIPING SYSTEM.
 - ALL HANGER RODS SHALL BE RUST RESISTANT GALVANIZED DIPPED.
 - ACCEPTABLE PRODUCTS: ANVIL, MYATT, TAYLOR
- 1.3 PIPING INSULATION
- INSULATION SHALL CONFORM TO ASHRAE STANDARD 90.1 (LATEST EDITION).
 - ALL NEW PIPING AND FITTINGS SHALL BE INSULATED WITH INORGANIC GLASS FIBRES, BONDED WITH A THERMOSETTING RESIN COMPLETE WITH SELF SEALING LAP, "ASJ" ALL SERVICE JACKET AND 3" (80 MM) WIDE "ASJ" BUTT STRIPS.
 - DOMESTIC COLD AND HOT WATER PIPING INSULATION THICKNESS TO BE 1/2" (15 MM) FOR PIPE SIZES 1/2" TO 3" (13 MM TO 80 MM), COMPLETE WITH VAPOUR BARRIER, USING INSULATION K FACTOR .24 AT 75F (24C).
 - HOT WATER HEATING PIPING INSULATION THICKNESS TO BE 1" (25 MM) FOR PIPE SIZES 1/2" TO 3" (13 MM TO 80 MM), 1 1/2" (40 MM) THICK FOR PIPES SIZES 4" (100 MM) AND LARGER COMPLETE WITH VAPOUR BARRIER, USING INSULATION K FACTOR .24 AT 75F (24C).
 - ACCEPTABLE PRODUCTS: KNAUF, MANVILLE SCHULLER INTERNATIONAL, MANSON
 - ALL INSULATION SHALL BE APPLIED OVER A CLEAN, DRY SURFACE, AFTER ALL PRESSURE TESTING HAS BEEN CARRIED OUT AND REVIEWED BY THE CONSULTANT.
 - INSTALL INSULATION SHIELDS SUPPLIED BY MECHANICAL DIVISION.
 - THE INSULATION JOINTS SHALL BE BUTTED TIGHTLY. ADHERE THE VAPOUR BARRIER JACKET LAP WITH VAPOUR BARRIER ADHESIVE AND ADHERE THE 3" (80 MM) WIDE BUTT JOINT STRIPS OVER ALL END JOINTS WITH ADHESIVE TO ENSURE CONTINUOUS VAPOUR BARRIER. INSULATE ALL FITTINGS UP TO 2" (50 MM) WITH MITRE-CUT PIECES OF INSULATION AND PRESSURE-SENSITIVE, COLOUR-MATCHING TAPE. ALL EXPOSED FITTINGS 2" (50 MM) AND LARGER SHALL HAVE PRE-MOLDED "PVC" INSULATING FITTINGS COVERS.
 - ALL EXPOSED INSULATED PIPING AND FITTINGS SHALL BE FINISHED WITH A FIRE RETARDANT PVC JACKET.
 - NO ADDITIONAL FINISH NEED BE APPLIED TO CONCEALED PIPING.

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.

2	ISSUED FOR TENDER	2025-02-11
3	ISSUED FOR PERMIT	2024-12-16
4	85% PROGRESS	2024-11-27
5	30% PROGRESS SUBMISSION	2024-11-07
No.	DESCRIPTION	DATE

REVISIONS

24076	Seal	KS
-------	------	----

E & M
Consulting Engineers Inc.
1000 Highway 104, Unit 841
Cambridge, Ontario N3H 5K1
www.emconsulting.com

HWDSB
AMRA J
ARCHITECTS INC.
www.aja.design | info@aja.design | 905.920.5121

project title:
HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD
P02085 - FRANKLIN RD ELEMENTARY SCHOOL RENOVATIONS
500 FRANKLIN ROAD HAMILTON, ONTARIO.

drawing title:
SPECIFICATIONS

drawn: MH	scale: AS SHOWN
date:	project number: 24-21
checked: KS	DRAWING NO.:
date: 12/2024	M4-00 0
	Revision

ELECTRICAL LEGEND

POWER & DISTRIBUTION SYSTEMS

	UTILITY DISCONNECT.
	DELTA STAR POWER TRANSFORMER.
	CIRCUIT BREAKER.
	CIRCUIT BREAKER. (DRAW OUT TYPE).
	CIRCUIT BREAKER. (DRAW OUT TYPE) WITH MICROPROCESSOR BASED TRIP UNIT.
	FUSED DISCONNECT.
	NON FUSED DISCONNECT.
	HI OR LOW VOLTAGE FUSE.
	CUSTOMER OR UTILITY ENERGY METER.
	ELECTRICAL GROUND.
	LIGHTNING, ARRESTORS(03) AND GROUND.
	PANELBOARD (SURFACE MOUNT).
	PANELBOARD (RECESSED MOUNT).
	ENCLOSED BUS ASSEMBLY.
	CABLE TRAY (LADDER OR TROUGH)

RECEPTACLE/DIRECT CONNECTIONS

	120V, 2P, 3W, 15A DUPLEX RECEPTACLE (CSA #5 SERIES).
	120V, 2P, 3W, 15A SPLIT TYPE DUPLEX RECEPTACLE.
	120V, 2P, 3W, 15/20A T-SLOT TYPE DUPLEX RECEPTACLE. CSA#5 SERIES FOR OFFICE AND GENERAL AREAS.
	120V, 2P, 3W, 15A FOUR PLEX RECEPTACLE 2. DUPLEXES UNDER COMMON PLATE).
	120V, 2P, 3W, 15A DUPLEX RECEPTACLE WITH USB CHARGING PORT.
	120V, 2P, 3W SINGLE RECEPTACLE (CSA #5 SERIES).
	250V, 2P, 3W SINGLE RECEPTACLE (CSA #6 SERIES).
	125/250V, 3P, 4W SINGLE RECEPTACLE (CSA #14 SERIES).
	250VDC/600VAC, 3P, 4W SINGLE RECEPTACLE (CSA #17 SERIES).
	1 PHASE, 3W DIRECT CONNECTION (L, N, G) OR (L1, L2, G).
	3 PHASE, 4W DIRECT CONNECTION (L1, L2, L3, G).
	3 PHASE, 5W DIRECT CONNECTION (L1, L2, L3, N, G).
	1 PHASE, 4W DIRECT CONNECTION (L1, L2, N, G).
	FLOOR FLUSH MOUNTED OUTLET BOX C/W THREE(3) 120V, 2P, 3W, 15A DUPLEX RECEPTACLE, TWO(2) DATA OUTLETS.
	FLOOR FLUSH MOUNTED OUTLET BOX C/W TWO(2) 120V, 2P, 3W, 15A DUPLEX RECEPTACLE
	MODULAR SYSTEM FURNITURE POWER & COMMUNICATION CABLING CONNECTION POINT OUTLET BOX. SUBSCRIPT 'F' DENOTES FLUSH MOUNTED IN FLOOR.
	FLOOR MOUNTED STATIC GROUNDING RECEPTACLE
	HAND DRYER
	THERMOSTAT.
	MAGNETIC DOOR HOLD OPEN DEVICE.

NOTES

- DIRECT CONNECTION VOLTAGE INFORMATION INDICATION BY CIRCUIT No.
- UNLESS NOTED OTHERWISE MOUNTING HEIGHT OF ALL OUTLETS IS 455mm (18") A.F.F.
- UNLESS NOTED OTHERWISE (IE: 30A, 20A) ALL RECEPTACLES/DIRECT CONNECTIONS RATED FOR 15A.

MISCELLANEOUS

	ROOM MODULAR CONTROL PANEL.
	NURSE CALL MASTER CONTROL WITH HANDSET
	NURSE CALL DOME LIGHT (WALL MOUNTED).
	NURSE CALL DOME LIGHT (CEILING MOUNTED).
	PUSH BUTTON
	BELL

KITCHEN/LAUNDRY APPLIANCES

	15A, 120V-1Ø DUPLEX RECEPTACLE FOR DISHWASHER, LOCATED AS PER ARCHITECTURAL DRAWINGS.
	15A, 120V-1Ø DUPLEX RECEPTACLE FOR FRIDGE, LOCATED AS PER ARCHITECTURAL DRAWINGS.
	15A, 120V-1Ø DUPLEX RECEPTACLE FOR UNDER-COUNTER FRIDGE, LOCATED AS PER ARCHITECTURAL DRAWINGS.
	15A, 120V-1Ø DUPLEX RECEPTACLE FOR KITCHEN HOOD, LOCATED AS PER ARCHITECTURAL DRAWINGS.
	30A, 120V/208V-1Ø(14-3ØR) RECEPTACLE FOR DRYER, LOCATED AS PER ARCHITECTURAL DRAWINGS.
	15A, 120V-1Ø DUPLEX RECEPTACLE FOR WASHER, LOCATED AS PER ARCHITECTURAL DRAWINGS.
	15A, 120V-1Ø DUPLEX RECEPTACLE FOR WASHER, AND 30A, 120/208V-1Ø(14-3ØR) RECEPTACLE FOR DRYER, LOCATED AS PER ARCHITECTURAL DRAWINGS.
	50A, 120V/208V-1Ø(14-5ØR) RECEPTACLE FOR STOVE, LOCATED AS PER ARCHITECTURAL DRAWINGS.
	20A, 120V-1Ø DUPLEX RECEPTACLE FOR MICROWAVE, LOCATED AS PER ARCHITECTURAL DRAWINGS.
	20A, 120V-1Ø DIRECT CONNECTION FOR BUILT-IN OVEN, LOCATED AS PER ARCHITECTURAL DRAWINGS.
	15A, 120V/208V-1Ø DUPLEX RECEPTACLE FOR EXHAUST FAN, LOCATED AS PER ARCHITECTURAL DRAWINGS.
	40A, 120V/208V-1Ø DIRECT CONNECTION FOR BUILT-IN COOKTOP, LOCATED AS PER ARCHITECTURAL DRAWINGS.

COMMUNICATION SYSTEMS

	COMBINATION DATA/TELEPHONE OUTLET.
	SECOND DIGIT (NUMBER 2,) INDICATES QUANTITY OF TELEPHONE CABLES AND TELEPHONE JACKS IN OUTLET.
	FIRST DIGIT (NUMBER 1,) INDICATES QUANTITY OF DATA CABLES AND DATA JACKS IN OUTLET. IF FIRST DIGIT INCLUDES A SUFFIX "T", IT INDICATES "FITLNX" DATA CABLE AND OUTLET.
	ALL JACKS UNDER ONE(1) COMMON PLATE. REFER TO FLOOR PLANS FOR CABLE AND JACKS QUANTITIES.
	SUBSCRIPT "M" INDICATES C/W VOICE JACK FOR WALL MOUNTED TELEPHONE AT 1500mm A.F.F.
	SUBSCRIPT "P" INDICATES PAY TELEPHONE.
	DATA OUTLET - COMPUTER OR PRINTER.
	TELEPHONE - SUBSCRIPT "P" INDICATES PAY TELEPHONE.
	COMBINATION MULTI-FUNCTION COMMUNICATION OUTLET.
	WIRELESS ACCESS POINT

INTERCOM SYSTEM

	INTERCOM MASTER STATION
	INTERCOM STATION

PAGING AND SOUND SYSTEM

	RECESSED CEILING MOUNTED SPEAKER.
	COMBINATION WALL MOUNTED SPEAKER AND TALK-LISTEN PRIVACY SWITCH.
	SPEAKER MOUNTED IN ROOM MODULAR CONTROL PANEL.
	RECESSED WALL MOUNTED SPEAKER.
	RECESSED CEILING MOUNTED SPEAKER COMPLETE WITH HANDSFREE MIC. AND INTERCONNECTED TO WALL MOUNTED EMERGENCY PULLCORD ALARM DEVICE.
	SURFACE WALL MOUNTED SPEAKER.
	SURFACE CEILING MOUNTED SPEAKER.
	P.A. CALL SWITCH OR HANDSET.
	ADMINISTRATIVE CONSOLE UNIT OUTLET.
	LOCAL VOLUME CONTROLLER.
	AMPLIFIER.
	MICROPHONE OUTLET

TELEVISION AND AV.

	TELEVISION OUTLET.
	AUDIO/VIDEO STATION

CLOCK SYSTEM

	CLOCK RECEPTACLE. 120V, 15A, 1-GANG RECESSED SINGLE RECEPTACLE
--	--

MECHANICAL WIRING SYSTEMS

	MECHANICAL EQUIPMENT/MOTOR.
	DISCONNECT SWITCH (UNFUSED). SUBSCRIPT INDICATES SIZE. SUBSCRIPT 'N' INDICATES COMPLETE WITH SOLID NEUTRAL.
	DISCONNECT SWITCH (FUSED). SUBSCRIPT INDICATES FUSE RATING. SUBSCRIPT 'N' INDICATES COMPLETE WITH SOLID NEUTRAL.
	MANUAL STARTER COMPLETE WITH PILOT LIGHT.
	MAGNETIC STARTER.
	COMBINATION MAGNETIC STARTER.
	TIME SWITCH.

FIRE ALARM SYSTEM

	MANUAL PULL STATION C/W PROTECTIVE 9VDC BATTERY OPERATED LEXAN COVER.
	HEAT DETECTOR, COMBINATION, FIXED 57°C AND RATE OF RISE. SUBSCRIPT 'X' INDICATES 88°C FIXED TEMPERATURE.
	HEAT DETECTOR, FIXED ONLY (57°C) SUBSCRIPT 'X' INDICATES 88°C RATING.
	SMOKE DETECTOR, IONIZATION TYPE. SUBSCRIPT "R" INDICATES RELAY BASE.
	120V LOCAL SMOKE ALARM CEILING MOUNTED. IONIZATION TYPE.
	120V LOCAL SMOKE ALARM WITH STROBE.
	CARBON MONOXIDE.
	COMBINATION SMOKE/CARBON MONOXIDE/STROBE.
	AIR DUCT TYPE SMOKE DETECTOR.
	REMOTE INDICATING LIGHT. SUBSCRIPT INDICATES FAN SYSTEM.
	FIRE ALARM HORN.
	FIRE ALARM BELL.
	FIRE ALARM STROBE
	COMBINATION FIRE HORN/STROBE LIGHT.
	SUPERVISED VALVE - SPRINKLER. SUBSCRIPT "P" DENOTES STANDPIPE.
	SPRINKLER FLOW SWITCH.
	SPRINKLER LOW PRESSURE SWITCH.
	MAGNETIC DOOR HOLD OPEN DEVICE.
	RECESSED FIRE ALARM SPEAKER (CEILING MOUNTED).
	RECESSED FIRE ALARM SPEAKER AND STROBE (CEILING MOUNTED).
	FIRE ALARM SPEAKER (WALL MOUNTED).
	FIRE ALARM SPEAKER AND STROBE (WALL MOUNTED).
	SURFACE FIRE ALARM SPEAKER (CEILING MOUNTED).
	SURFACE FIRE ALARM SPEAKER AND STROBE (CEILING MOUNTED).
	FIREFIGHTER HANDSET.
	FIRE ALARM ZONE DEMARCATION
	FIRE ALARM ZONE. NUMBER INDICATES ZONE NUMBER.

ELECTRICAL CAR CHARGING STATION

	PROVIDE SINGLE GANG BOX, 20mmØC CONDUIT AND 20A, 120V-1Ø (5-20Ø) RECEPTACLE FOR "TYPE 1" ELECTRICAL CAR CHARGE STATION. LOCATED AS SHOWN ON FLOOR PLANS.
	PROVIDE TWO GANG BOX, 25mmØC CONDUIT AND 50A, 208V-1Ø (5-6ØR) RECEPTACLE FOR "TYPE 2" ELECTRICAL CAR CHARGE STATION. LOCATED AS SHOWN ON FLOOR PLANS.

SECURITY SYSTEM

	ELECTRIC DOOR STRIKE.
	SECURITY SYSTEM KEY PAD
	REQUEST TO EXIT BUTTON
	AUTOMATIC DOOR OPERATOR.
	DOOR ACTUATOR
	MAGNETIC DOOR LOCK.
	LOW VOLTAGE POWER SUPPLY FOR THE DOOR STRIKE.
	PUSH BUTTON.
	KEY PAD.
	SECURITY KEYSWITCH FOR ALARM SHUT OFF
	CARD READER.
	INFRA RED AUTOMATIC DOOR OPERATOR.
	EGRESS MOTION DETECTOR.
	AUDIBLE ALARM (BUZZER)
	INTRUSION ALARM WITH STROBE
	GLASS BREAK DETECTOR
	SECURITY SYSTEM MONITORING STATION
	PANIC ALARM
	MOTION DETECTOR. SUBSCRIPT "G" DENOTES GLASS BREAK
	DOOR/WINDOW CONTACT.
	CCTV CAMERA
	CEILING MOUNTED DOME CAMERA

EMERGENCY CALL ASSISTANCE

	EMERGENCY CALL BUTTON.
	EMERGENCY CALL ASSISTANCE HORN.
	CEILING MOUNTED DOME LIGHT.
	WALL MOUNTED DOME LIGHT.
	"PUSH TO LOCK" PUSH BUTTON.
	"WAVE TO LOCK" BUTTON.

LIGHTING

	LIGHT SWITCH
	SUBSCRIPTS: 2 - DOUBLE POLE (DPST). 3 - THREE WAY. 4 - FOUR WAY. D - DIMMER. K - KEY OPERATED. P - PILOT. S - SPEED SWITCH. LV - LOW VOLTAGE 2LVD - MULTI-ZONE/MULTI-BUTTON LOW VOLTAGE DIMMING SWITCH. NUMBER REPRESENTS NUMBER OF BUTTONS TO BE PROVIDED PLUS DIMMER.
	MULTIPLE SWITCH INSTALLATION UNDER COMMON PLATE.
	LOW VOLTAGE COMBINATION SWITCH AND OCCUPANCY SENSOR.
	LIGHTING FIXTURES. LETTER WITHIN INDICATES TYPE. A - ABOVE COUNTER B - BENCH MOUNTED. C - CEILING SPACE MOUNTED. CL - CONTROLLED LOAD. D/1 - WITH DISCONNECT AND VISIBLE ISOLATION. EXP/EP - EXPLOSION PROOF. F - FLOOR MOUNTED. GF - GROUND FAULT CIRCUIT INTERRUPTER. IG - ISOLATED GROUND TYPE. MH - MOUNTING HEIGHT. NL - NIGHT LIGHT
	CROSS HATCHING INDICATES WIRED TO EMERGENCY CIRCUIT. SUBSCRIPT "NL" INDICATES NIGHT LIGHT.
	EXIT SIGNS ARROWS INDICATE DIRECTION CEILING MOUNT, SINGLE FACE CEILING MOUNT, DOUBLE FACE WALL MOUNT, SINGLE FACE WALL MOUNT, DOUBLE FACE END WALL MOUNT, DOUBLE FACE EXIT SIGN & REMOTE HEAD COMBO
	DUAL TECHNOLOGY OCCUPANCY SENSOR LV - DENOTES LOW VOLTAGE W - DENOTES WALL MOUNT
	PHOTOCCELL
	DAYLIGHT SENSOR
	WALL MOUNTED EMERGENCY LIGHTS. ARROW DENOTES AIMING DIRECTION.
	BATTERY UNIT (REFER TO LIGHTING FIXTURE SCHEDULE FOR DETAILS)

SMART BOARD/PROJECTOR REQUIREMENTS

	15A, 120V, 1P, ISOLATED GROUND RECEPTACLE, 1 DATA OUTLET(COMPUTER) W/ 4 PORT COVER.
	15A, 120V, 1P, ISOLATED GROUND RECEPTACLE, 2 DATA OUTLET(COMPUTER) W/ 4 PORT COVER.
	4"x4" RECESSED BOX W/ BLANK COVER PLATE

MISCELLANEOUS ABBREVIATIONS/SUBSCRIPTS/SYMBOLS

A	- MOUNTING HEIGHT FOR DEVICES ABOVE COUNTER/SINK MILLWORK TO BE 1020mm FROM TOP OF DEVICE TO A.F.F. (UNLESS NOTED OTHERWISE).
1-3	- TYPICAL NORMAL POWER CIRCUIT NUMBER EG. PANELBOARD LP-1 CIRCUIT NUMBER 3.
E1-3	- TYPICAL ESSENTIAL POWER CIRCUIT NUMBER EG. PANELBOARD LPE-1 CIRCUIT NUMBER 3.
1A-3	- TYPICAL CONTROL PANEL CIRCUIT NUMBER EG. PANELBOARD LP-1A CIRCUIT NUMBER 3.
3P+N	- 3 POLE & UNSWITCHED NEUTRAL.
AFF	- ABOVE FINISHED FLOOR.
A	- ABOVE COUNTER
B	- BENCH MOUNTED.
C	- CEILING SPACE MOUNTED.
CL	- CONTROLLED LOAD.
D/1	- WITH DISCONNECT AND VISIBLE ISOLATION.
EXP/EP	- EXPLOSION PROOF.
F	- FLOOR MOUNTED.
GF	- GROUND FAULT CIRCUIT INTERRUPTER.
IG	- ISOLATED GROUND TYPE.
MH	- MOUNTING HEIGHT.
NL	- NIGHT LIGHT
HL	- MOUNT AT 1188mm A.F.F.(TO THE BOTTOM)
S	- SURGE SUPPRESSION TYPE DEVICE.
T	- LOCKING TYPE (TWISTLOCK).
V	- MOUNT IN VERTICAL FACE.
WG	- WIREGUARD.
WP	- WEATHERPROOF TYPE.
Z	- MOUNT 42" (1065mm) A.F.F.
PTZ	- PAN, TILT, ZOOM
E	- EXISTING TO REMAIN.
ER	- EXISTING TO BE RELOCATED.
RE	- RELOCATED DEVICE AT NEW LOCATION
R	- EXISTING TO BE REMOVED
N	- EXISTING TO BE REPLACED WITH NEW
SR	- MOUNTED ON SURFACE RACEWAY

IDENTIFICATION

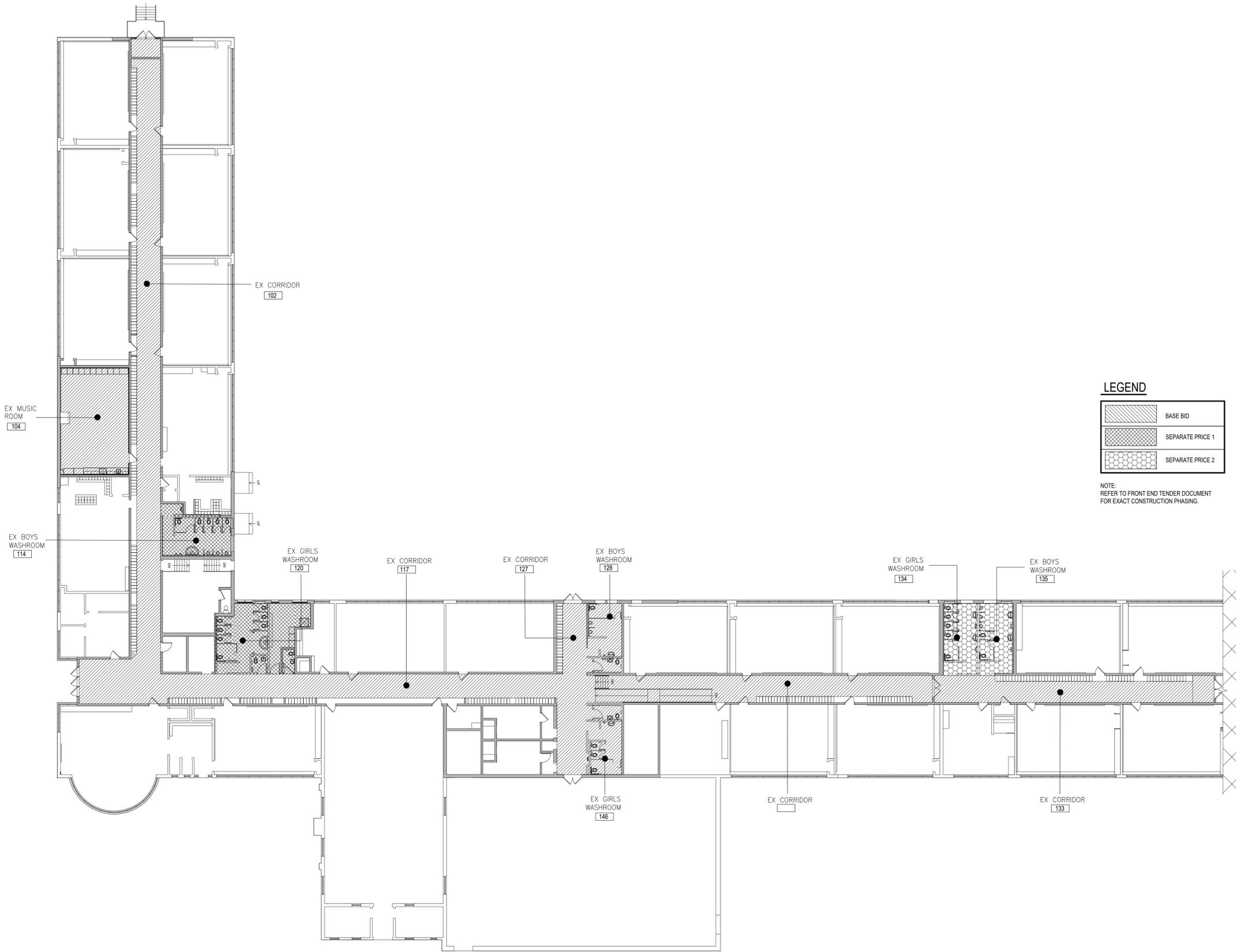
ACB	- AIR CIRCUIT BREAKER.
ATS	- AUTOMATIC TRANSFER SWITCH.
AV	- AUDIO VISUAL.
CM	- COFFEE MAKER.
CR	- CASH REGISTER.
CS	- COMMUNICATION STATION.
DP	- DISTRIBUTION PANEL.
EVR	- ELECTRONIC VOLTAGE REGULATOR.
FR	- FRIDGE.
GEN	- ELECTRICAL GENERATOR.
HW	- HOT WATER DISPENSER
IM	- ICE MACHINE
MCB	- MINIATURE CIRCUIT BREAKER.
MCCB	- MOULDED CASE CIRCUIT BREAKER.
MSB	- MAIN SWITCH BOARD (SERVICE ENTRANCE RATED).
PC	- PHOTOCOPIER.
PF	- POWER FACTOR CORRECTION CAPACITOR BANKS.
PR	- PRINTER.
SB	- SMARTBOARD.
SP	- SPLITTER.
SPD	- SURGE PROTECTION DEVICE
TR	- LOW VOLTAGE TRANSFORMER.
TV	- TELEVISION.
TVSS	- TRANSIENT VOLTAGE SURGE SUPPRESSOR.
UPS	- UNINTERRUPTIBLE POWER SUPPLY.
VM	- VENDING MACHINE.
XFMR	- TRANSFORMER.

DRAWING LIST

E0-00	ELECTRICAL LEGEND & DRAWINGS LIST
E0-01	CONSTRUCTION BIDDING PLAN
E1-00	OVERALL PLAN DEMO - ELECTRICAL
E1-01	ENLARGED PLANS #1 DEMO - ELECTRICAL
E1-02	ENLARGED PLANS #2 DEMO - ELECTRICAL
E2-00	OVERALL PLAN NEW - ELECTRICAL
E2-01	ENLARGED PLANS #1 DEMO - ELECTRICAL
E2-02	ENLARGED PLANS #2 DEMO - ELECTRICAL
E3-00	ELECTRICAL DETAILS
E4-00	ELECTRICAL SPECIFICATION

DO NOT SCALE DRAWING DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE. ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.

2 ISSUED FOR TENDER	2025-02-11
1 ISSUED FOR PERMIT	



LEGEND

	BASE BID
	SEPARATE PRICE 1
	SEPARATE PRICE 2

NOTE:
REFER TO FRONT END TENDER DOCUMENT
FOR EXACT CONSTRUCTION PHASING.

DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE.
ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.

2	ISSUED FOR TENDER	2025-02-11
1	ISSUED FOR PERMIT	2024-12-16
B	50% PROGRESS	2024-11-27
A	30% PROGRESS SUBMISSION	2024-11-01
No.	DESCRIPTION	DATE

REVISIONS	

24076
Seal

E & M
Consulting Engineers Inc.
One Kingsway Blvd.
Markham, ON L3R 9K1
Canada
www.eandmconsulting.com

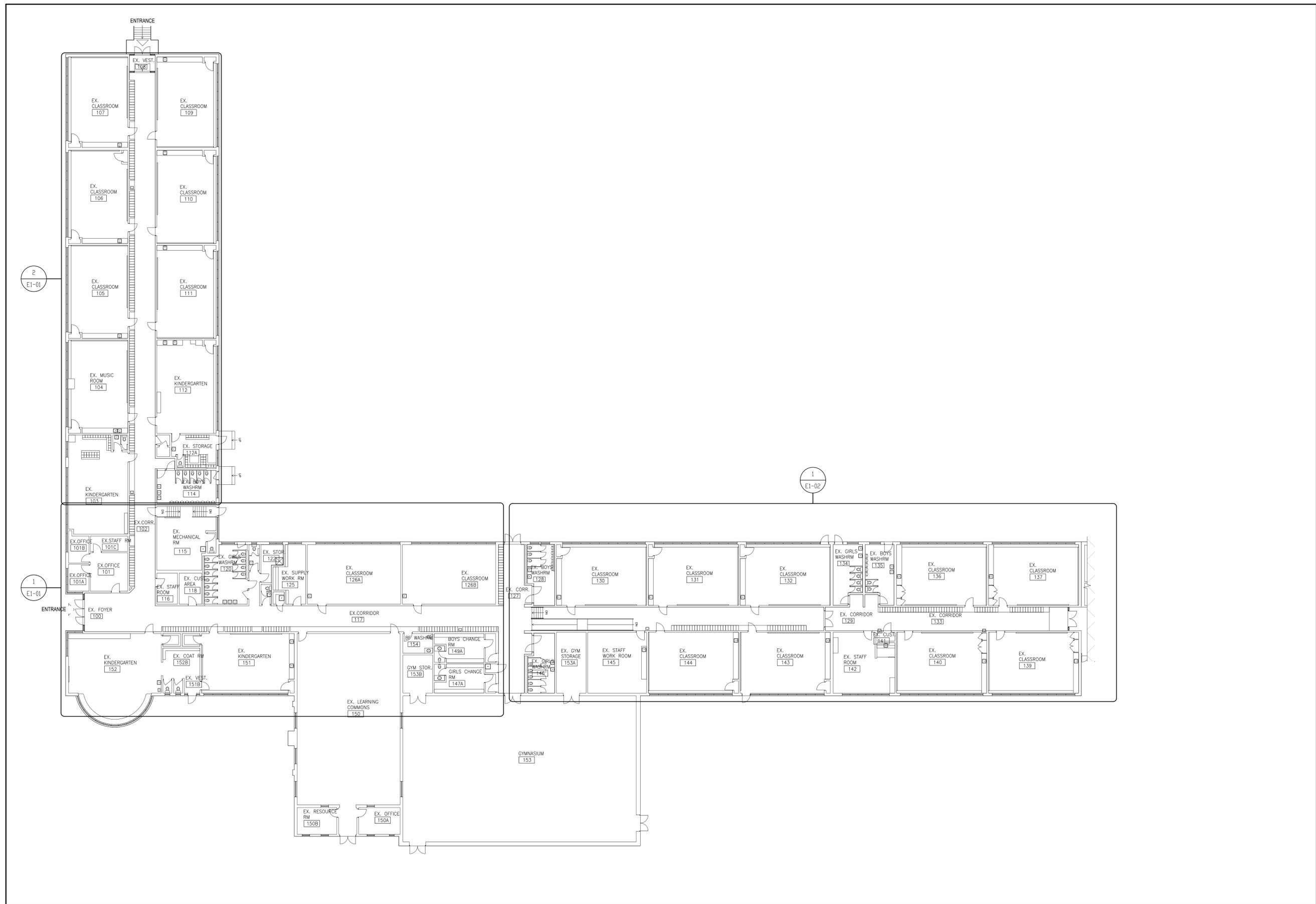
HWDSB
AMRA J
ARCHITECTS INC.
www.aja.design | info@aja.design | 905.920.5121

Project 096
HAMILTON - WENTWORTH
DISTRICT SCHOOL BOARD
P02085 - FRANKLIN RD
ELEMENTARY SCHOOL
RENOVATIONS
500 FRANKLIN ROAD
HAMILTON, ONTARIO.

Drawing 096:
CONSTRUCTION BIDDING
PLAN

drawn: MD	scale: AS SHOWN
date:	project number: 24-21
checked: MD	DRAWING NO: E0-01
date: 08/2024	Revision: 0

CONSTRUCTION BIDDING PLAN
SCALE - 1:200



DO NOT SCALE DRAWING. DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE.
 ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.

2	ISSUED FOR TENDER	2025-02-11
1	ISSUED FOR PERMIT	2024-12-16
B	50% PROGRESS	2024-11-27
A	30% PROGRESS SUBMISSION	2024-11-01
No.	DESCRIPTION	DATE

REVISIONS	

24076
 Seal

E & M
Consulting Engineers Inc.
One Kingsway Plaza
 North York, ON, L4X 1A1
 Canada
 www.eandmconsulting.com



Project No:
 HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD
 P02085 - FRANKLIN RD
 ELEMENTARY SCHOOL
 RENOVATIONS
 500 FRANKLIN ROAD
 HAMILTON, ONTARIO.

Drawing Title:
 OVERALL PLAN DEMO - ELECTRICAL

drawn: MD	scale: AS SHOWN
date:	project number: 24-21
checked: MD	DRAWING NO: E1-00
date: 08/2024	0

1 OVERALL PLAN DEMO -ELECTRICAL
 E1-00 SCALE- 1:200

ELECTRICAL SPECIFICATIONS

1. RELATED INSTRUCTIONS

- 1.1. THIS SPECIFICATION SHALL APPLY TO AND GOVERN ALL WORK BY DIVISION 16.
- 1.2. FURNISH ALL LABOUR, MATERIAL, TOOLS, EQUIPMENT, ETC., REQUIRED TO COMPLETE ALL WORK SHOWN ON THE DRAWINGS AND HEREIN SPECIFIED. THE WORK SHALL BE IN ACCORDANCE WITH RULES AND REGULATIONS OF ALL AUTHORITIES HAVING LEGAL JURISDICTION OVER THE WORK. PROVIDE ANY SMALL ITEMS OF WORK NOT SPECIFICALLY CALLED FOR BUT REQUIRED TO COMPLETE THE INTENDED INSTALLATION.
- 1.3. DEVICE/EQUIPMENT LOCATIONS ARE APPROXIMATE. CHANGE LOCATION OF ANY DEVICE/EQUIPMENT WITHIN 3M OF INDICATED LOCATION AT NO ADDITIONAL COST TO OWNER PROVIDED INSTRUCTIONS ARE RECEIVED PRIOR TO COMMENCING ROUGH-IN WORK. PRIOR TO COMMENCING ANY ROUGH-IN OR INSTALLATION WORK VISIT SITE, MEET WITH THE OWNERS REPRESENTATIVE AND CONFIRM EXACT LOCATION OF ALL DEVICES.

2. LIABILITY INSURANCE

- 2.1. OBTAIN AND CARRY PROPER INSURANCE TO FULLY PROTECT BOTH THE OWNER AND HIMSELF FROM ANY AND ALL CLAIMS DUE TO ACCIDENTS, MISFORTUNES, ACTS OF GOD, ETC.

3. CODES, PERMITS AND INSPECTION

- 3.1. BUILDING PERMIT SHALL BE OBTAINED BY OWNER.
ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR, AND OBTAIN ALL OTHER PERMITS, INSPECTIONS, VERIFICATIONS, ETC., AS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION OVER THIS WORK AND PAY FOR ALL FEES RELATED TO SAME.
- 3.2. DELIVER ALL PERMITS TO THE OWNER AS SOON AS THEY BECOME AVAILABLE.
- 3.3. AT THE CONCLUSION OF THE PROJECT, SUBMIT TO THE OWNER, THE ELECTRICAL SAFETY AUTHORITY FINAL ACCEPTANCE CERTIFICATE.

4. RECORD DRAWINGS AND EQUIPMENT MANUALS

- 4.1. AS THE PROJECT PROGRESSES, RECORD, ON A SET OF WHITE PRINTS, ALL ADDENDA, CHANGES TO AND DEVIATIONS FROM THE PLANS MADE DURING THE CONSTRUCTION PERIOD. ALSO, RECORD THE LOCATION OF ALL LIGHT FIXTURES AND OTHER ELECTRICAL EQUIPMENT AND WIRING FOR SAME.
- 4.2. MAKE THESE PROGRESS RECORD DRAWING WHITE PRINTS AVAILABLE TO THE CONSULTANTS FOR THEIR REVIEW AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
- 4.3. AT THE CONCLUSION OF THE PROJECT, TRANSFER ALL RECORD DRAWING INFORMATION TO A USB FLASH DRIVE.
- 4.4. THE CONSULTANT SHALL PROVIDE TO THE CONTRACTOR A COPY OF THE DRAWINGS IN AUTOCAD FORMAT. COMPLETE AND RETURN THE RELEASE FORM "TRANSFER OF FILES ON ELECTRONIC MEDIA" IN ORDER TO RECEIVE AND USE THE ELECTRONIC FILES. (SAMPLE OF THE FORM CAN BE PROVIDED ON REQUEST).
- 4.5. BEFORE SUBSTANTIAL PERFORMANCE OF THE CONTRACT, COMPLY WITH THE FOLLOWING:
 - 4.5.1. PROVIDE USB FLASH DRIVE CONTAINING ALL UPDATED RECORD DRAWING INFORMATION IN AUTOCAD FORMAT AS SPECIFIED HEREIN.
 - 4.5.2. PROVIDE TWO (2) SETS OF EQUIPMENT DATA SHEETS AND/OR MANUFACTURER'S MAINTENANCE MANUALS COVERING EACH SYSTEM AND ITS COMPONENTS IN ACCORDANCE WITH REQUIREMENTS OF EACH APPROPRIATE SECTION. THESE SETS ARE TO BE IN GOOD QUALITY BINDERS EQUAL TO YN6-1-LINE #W-3096-B 2" (51mm) RINGS. THE BINDER IS TO BE DIVIDED INTO SECTIONS WITH TABS CLEARLY MARKED INDICATING THE SYSTEMS, ETC.

5. EQUIPMENT AND MATERIAL

- 5.1. ALL EQUIPMENT AND MATERIAL, UNLESS SPECIFICALLY NOTED OTHERWISE, SHALL BE NEW AND WITHOUT BLEMISH OR DEFECT. ALL MATERIAL AND EQUIPMENT SHALL BEAR ULC, OR CSA LABELS.

6. ACCESSIBILITY

- 6.1. INSTALL ALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION MAINTENANCE AND REPAIRS.

7. RESPONSIBILITY

- 7.1. BE RESPONSIBLE FOR WORK UNTIL COMPLETION AND FINAL ACCEPTANCE, FOR REPLACING ANY ITEM THAT MAY BE DEFECTIVE, DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY TO THE COMPLETION OF THE PROJECT.

8. CONDUIT, AND WIRING

- 8.1. USE EMT CONDUIT FOR ALL WIRING UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL BE INSTALLED PARALLEL TO BUILDING LINES AND SECURELY FASTENED.
- 8.2. UNLESS NOTED OTHERWISE, CONDUITS SHALL BE CONCEALED EMT COMPLETE WITH STEEL SET SCREW TYPE CONNECTORS AND COUPLINGS.
- 8.3. DO NOT RUN CONDUITS IN FIRE RATED CEILING ASSEMBLIES.
- 8.4. SURFACE RACEWAY SYSTEM WITH WIRING LAID IN SHALL BE ACCEPTABLE BUT KEPT TO A MINIMUM IN AREAS WHERE EMT CONDUIT CAN NOT BE CONCEALED. TWO PIECE STEEL ASSEMBLY MANUFACTURED AS LAY-IN TYPE RACEWAY C/W TEES, ELBOWS AND HANGER FITTING AND SUPPORTS REQUIRED FOR A COMPLETE SYSTEM - WIREMOLD OR APPROVED EQUAL.
- 8.6. ALL SURFACE MOUNTED RACEWAYS IN AREAS OTHER THAN SERVICE ROOMS SHALL BE WIREMOLD OR EQUIVALENT. COLOUR TO MATCH WALL.
- 8.7. ALL CONDUCTORS SHALL BE COPPER, RW90 XLPE #12 AWG MINIMUM UNLESS NOTED OTHERWISE. WHERE THE DISTANCE FROM THE PANELBOARD TO THE LAST OUTLET EXCEEDS 50', #10 AWG CONDUCTOR MUST BE USED FOR THE FULL LENGTH OF THE CIRCUIT.

9. WIRING DEVICES

- 9.1. SWITCHES: RATED 125VAC, 20 AMPERES AND LOW VOLTAGE WHITE TOGGLE TYPE COMPATIBLE WITH EXISTING.
- 9.2. INSTALL SINGLE THROW SWITCHES WITH HANDLE IN "UP" POSITION WHEN SWITCH CLOSED (ON).
- 9.3. INSTALL SWITCHES IN GANG-TYPE OUTLET BOX WHEN MORE THAN ONE SWITCH IS REQUIRED IN ONE LOCATION AND AT 1200mm(48") ABOVE FINISHED FLOOR UNLESS INDICATED OTHERWISE.
- 9.4. 125V SWITCHES AS SHOWN SHALL BE LOW VOLTAGE COMPLETE WITH TRANSFORMERS AND CONTROL RELAYS LOCATED CONCEALED IN CEILING SPACES
- 9.5. RECEPTACLES: 3-WIRE, U-GROUND TYPE GENERAL PURPOSE, HEAVY DUTY, NEMA 5-15R.
- 9.6. INSTALL RECEPTACLES IN GANG-TYPE OUTLET BOX WHEN MORE THAN ONE SWITCH IS REQUIRED IN ONE LOCATION AND AT 450mm(18") ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
- 9.7. FLOOR BOX : RF84 SERIES BY LEGRAND WITH ALL REQUIRED ACCESSORIES FOR A COMPLETE SYSTEM. PROVIDE FLOOR SCANNING PRIOR TO CUTTING INTO EXISTING FLOORS.

9.8. COVERPLATES:

- 9.8.1. PROVIDE No.301 STAINLESS STEEL, BRUSHED COVERPLATES C/W PROTECTIVE PLASTIC FILM UNTIL PAINTING AND OTHER WORK IS FINISHED FOR ALL WIRING DEVICES MOUNTED IN A FLUSH MOUNTED OUTLET BOX. PROVIDE COMMON COVERPLATE WHEN WIRING DEVICES ARE GROUPED TOGETHER.
 - 9.8.2. PROVIDE FITTING SHEET METAL (CAST) COVERPLATES FOR WIRING DEVICES MOUNTED IN SURFACE FS OR FD TYPE CONDUIT BOXES.
 - 9.8.3. DO NOT USE COVERPLATES MEANT FOR FLUSH OUTLET BOXES ON SURFACE MOUNTED BOXES.
- 9.9. ACCEPTABLE MANUFACTURERS ARE:
- 9.9.1. BRYANT
 - 9.9.2. CROUSE-HINDS
 - 9.9.3. HUBBELL
 - 9.9.4. LEVITON
 - 9.9.5. PASS & SEYMOUR
 - 9.9.6. LEGRAND
 - 9.9.7. OR OTHER APPROVED EQUALS

10. WIRING FOR MECHANICAL EQUIPMENT

- 10.1. SUPPLY AND INSTALL ALL STARTERS, DISCONNECTS, RELAYS, WIRING, ETC., TO ACCOMMODATE THE COMPLETE MECHANICAL SYSTEM, UNLESS NOTED OTHERWISE.
- 10.2. OTHER DIVISIONS SUPPLYING MOTOR-DRIVEN EQUIPMENT SHALL SUPPLY AND INSTALL ALL NECESSARY MOTORS WITH SUCH EQUIPMENT. ALL INTERNAL CONTROL WIRING IN SUCH EQUIPMENT SHALL BE FACTORY INSTALLED, OR SHALL BE SUPPLIED AND INSTALLED BY THOSE SUPPLYING THE EQUIPMENT.
- 10.3. REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS DURING TENDERING AND CONSTRUCTION TO ENSURE ENTIRE MECHANICAL EQUIPMENT WIRING SCOPE OF WORK IS UNDERSTOOD.
- 10.4. THIS DIVISION IS RESPONSIBLE FOR THE FOLLOWING:
 - 10.4.1. SUPPLY AND INSTALLATION OF ALL STARTERS, DISCONNECT SWITCHES, PUSHBUTTON STATIONS, SPLITTER TROUGHS, JUNCTION BOXES AND TIME SWITCHES, ETC., AS NOTED ON DRAWING.
 - 10.4.2. INSTALLATION AND WIRING OF ALL SEPARATELY MOUNTED THERMOSTATS, MOTOR CONTROLLERS AND CONTROL UNITS WHICH ARE SUPPLIED BY MECHANICAL.
 - 10.4.3. SUPPLY AND INSTALLATION OF ALL POWER WIRING AND CONDUITS FROM THE DISTRIBUTION PANEL THROUGH THE STARTER AND DISCONNECT SWITCH ONTO THE MOTOR (OR EQUIPMENT).
 - 10.4.4. SUPPLY AND INSTALLATION OF ALL CONTROL WIRING FROM REMOTE SWITCHES OR PUSHBUTTON STATIONS TO CONTROL STARTERS.
 - 10.4.5. SUPPLY AND INSTALLATION OF ALL WIRING TO PROVIDE INTERLOCKING BETWEEN STARTERS COMPLETE WITH NECESSARY DOUBLE VOLTAGE RELAYS.
 - 10.4.6. SUPPLY AND INSTALLATION OF TRANSIENT (SURGE) SUPPRESSERS ON HOLDING COILS OF MAGNETIC STARTERS, RELAYS, ETC., WHERE INDICATED FOR PROTECTION TO SOLID STATE EQUIPMENT THAT IS SENSITIVE TO SURGES, SPIKES, ETC.

11. MOTOR STARTERS

- 11.1. MANUAL STARTER SHALL HAVE QUICK-MAKE, QUICK-BREAK, SWITCHING MECHANICAL COMPLETE WITH OVERLOAD HEATERS, MANUAL RESET, TRIP INDICATING HANDLE, AND LOCKING TAB TO PERMIT PADLOCKING IN "ON" OR "OFF" POSITION.
- 11.2. MAGNETIC AND COMBINATION MOTOR STARTERS TO BE MINIMUM SIZE 1 TYPE, AND RATING TO SUIT MOTOR LOAD, C/W CONTROL TRANSFORMER, CONTACTOR SOLENOID OPERATED, MOTOR OVERLOAD PROTECTIVE DEVICE IN EACH PHASE, MANUALLY RESET, POWER AND CONTROL TERMINALS, PUSHBUTTONS AND SELECTOR SWITCHES, TWO N/O AND TWO N/C AUXILIARY CONTACTS, PROVISION FOR PREVENTING SWITCHING TO "ON" POSITION WHILE ENCLOSURE DOOR IS OPEN.

12. LIGHTING

- 12.1. REFER TO LIGHTING FIXTURE SCHEDULE ON DRAWINGS FOR DETAILS.
- 12.2. MINIMUM CRI OF 80
- 12.3. 50,000+ HOURS L70 LUMEN PERFORMANCE
- 12.4. EFFICACY OF >110 LUMENS PER WATT
- 12.5. MINIMUM 5 YEARS WARRANTY
- 12.6. PROVIDE DLC LISTING NUMBER AND ENERGY STAR CERTIFICATION

13. FIRE ALARM SYSTEM

- 13.1. ALL NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH THE EXISTING SIMPLEX 4010 FIRE ALARM PANEL, CONTRACTOR SHALL OBTAIN ADDITIONAL INFORMATION FROM THE SYSTEM MAINTENANCE COMPANY(SEE BELOW). TEST AND VERIFY SYSTEM UPON COMPLETION AND SUBMIT REPORT TO CONSULTANTS.
PASSWORD AT 1800-561-3009 TO PERFORM ALL MODIFICATIONS & ADDITIONS TO THE EXISTING SYSTEM AND INCLUDE ALL ASSOCIATED COSTS. CONFIRM SPACE FOR NEW DEVICES IN THE PANEL.
- 13.2. UPGRADE, RE-PROGRAM EXISTING CONTROL PANEL AND ALL REMOTE ANNUNCIATOR PANELS AS REQUIRED TO ACCOMMODATE NEW DEVICES AND INITIATING ZONES AS INDICATED ON PLANS FOR THE ADDITION OF NEW DEVICES AND NEW INITIATING ZONES TO THE EXISTING.
- 13.3. UNLESS INDICATED OTHERWISE ON PLANS, WIRE NEW DEVICES TO EXISTING LOCAL FIRE ALARM INITIATING ZONE AND NEW SPEAKERS TO EXISTING LOCAL SIGNAL CIRCUITS.
- 13.4. CODES AND STANDARDS
 1. AUDIBLE SIGNAL APPLIANCES STANDARD ULC-SS25
 2. SMOKE DETECTORS STANDARD ULC-SS29
 3. SYSTEM INSTALLATION STANDARD CAN/ULC-5524
 4. SYSTEM VERIFICATION STANDARD CAN/ULC-5537
- 13.5. PRODUCTS
 1. FIRE ALARM PULL STATION
 1. PANEL #
 2. SMOKE DETECTOR IONIZATION TYPE
 1. PANEL #
 3. HEAT DETECTOR FIXED TEMPERATURE
 1. PANEL #
 4. HEAT DETECTOR FIXED TEMPERATURE AND RATE OF RISE
 1. PANEL #
 5. HORN & STROBE
 1. PANEL #
 6. CONTROL RELAY MODULES
 1. PANEL # (RELAY IAM) WITH ONE FORM "C" DRY RELAY PER MODULE WITH CONTACTS RATED: 2A @24VDC AND 1.0A @120VAC.
- 13.6. TESTING AND VERIFICATION
 1. PERFORM SYSTEM TESTING AND VERIFICATION AND SUBMIT REPORT TO CONSULTANTS.

14. REVISIONS TO EXISTING PANEL BOARDS

- 14.1. ALL EXISTING PANEL BOARDS ON DRAWINGS TO REMAIN AND BE REUSED TO FEED NEW DEVICES. FOR IDENTIFIED PANELBOARDS WHERE APPLICABLE ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL NEW BRANCH AND FEEDER BREAKERS, TYPE, QUANTITY AND CAPACITY AS IDENTIFIED ON DRAWING AND INSTALL IN EXISTING PANEL ON EACH PANEL BOARD MODIFIED PROVIDE REVISED AND UPDATED PANEL BOARD SCHEDULE TO REFLECT NEW LOADS. RE-USE ALL SPARE BREAKERS MADE REDUNDANT IN DEMOLITION PHASE AND UPDATE PANEL BOARD SCHEDULES TO REFLECT ALL NEW AND REVISED CIRCUITS.

15. MILLWORK, FURNITURE, AND EQUIPMENT WIRING

- 15.1. ALL EQUIPMENT MUST BE CAREFULLY COORDINATED FOR EXACT FLOOR OR WALL LOCATIONS PRIOR TO DRILLING CONDUIT SLEEVES THROUGH FLOOR SLABS OR WALLS.

16. LIGHTING CONTROL

- 16.1. BASIS OF DESIGN IS A WATTSTOPPER DLM LOW VOLTAGE CONTROLS FOR A COMPLETE SYSTEM.
- 16.2. EXTENT OF LIGHTING CONTROL SYSTEM WORK IS INDICATED ON DRAWINGS ALONG WITH SEQUENCE OF OPERATIONS. THE SYSTEM IS DEFINED TO INCLUDE, BUT NOT BY WAY OF LIMITATION.
 - 16.2.1. OCCUPANCY SENSORS
 - 16.2.2. DAYLIGHT SENSORS
 - 16.2.3. DIGITAL ROOM CONTROLLERS
 - 16.2.4. NETWORK DEVICES
 - 16.2.5. WALL STATIONS
 - 16.2.6. SOFTWARE
- 16.3. CORRIDOR LIGHTING SHALL BE TIED INTO BAS. REFER TO DRAWINGS FOR MORE DETAILS.
- 16.4. ACCEPTABLE MANUFACTURERS
 - 16.4.1. LEGRAND WATTSTOPPER
 - 16.4.2. ACUITY N-LIGHT
 - 16.4.3. COOPER

17. COMMUNICATION

- 17.1. THE CABLE INFRASTRUCTURE SPECIFICATION IS TO BE READ IN CONJUNCTION WITH THE HWDSB NETWORK INFRASTRUCTURE STANDARDS FOR SCHOOL TELECOMMUNICATION VOICE AND DATA SYSTEMS.
- 17.2. IT IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO COORDINATE ALL ASPECTS OF WORK UNDER THIS SECTION WITH THE BOARD APPROVED DATA SUBCONTRACTOR AND BOARD'S I.T REPRESENTATIVE.
- 7.3. THE SUPPLY, INSTALLATION, AND USE OF RACETRAYS AND CABLING PATHWAYS SHALL COMPLY WITH ANSI/TIA/EIA-569-A.
- 7.4. THE CATEGORY 6 PORTION OF THE CABLING SYSTEM SHALL COMPLY WITH THE LINK AND CHANNEL PERFORMANCE REQUIREMENTS OF TIA/EIA-568-B.
- 7.5. THE CONTRACTOR SHALL CONFORM TO CERTIFICATION IN THE INSTALLATION OF PANDUIT, COMSCOPE (SYSTEMX) WHERE UPON COMPLETION THE CONTRACTOR MUST PROVIDE OFFICIAL CERTIFICATION DOCUMENTS.
- 7.6. UNCONDITIONALLY GUARANTEE IN WRITING THE MATERIALS, EQUIPMENT, AND WORKMANSHIP FOR A PERIOD OF NOT LESS THAN FIFTEEN (15) YEARS FROM DATE OF ACCEPTANCE BY THE OWNER SHALL DEEM ACCEPTANCE AS BENEFICIAL USE.
- 7.7. TRANSFER MANUFACTURER'S WARRANTIES TO THE OWNER IN ADDITION TO THE GENERAL SYSTEM GUARANTEE. SUBMIT THESE WARRANTIES ON EACH ITEM IN LIST FORM WITH SHOP DRAWINGS, DETAIL, SPECIFIC PARTS WITHIN EQUIPMENT THAT ARE SUBJECT TO SEPARATE CONDITIONAL WARRANTY. PROPRIETARY EQUIPMENT AND SYSTEMS INVOLVED IN THIS CONTRACT DURING THE GUARANTEE PERIOD. FINAL PAYMENT SHALL NOT RELIEVE YOU OF THESE OBLIGATIONS.
- 7.8. SUBMIT SCHEDULE FOR INSTALLATION OF EQUIPMENT AND CABLING.
- 7.9. APPROVED CABLING CONTRACTORS ARE:
 - 7.9.1. COMU NETWORKS - MIKE ONCAL, 289-253-9289, MIKEJ.ONCAL@COMU.CA
 - 7.9.2. CONNEX TELECOMMUNICATIONS INC. - ED BALIAN, 905-944-8516, ESTIMATING@CONNEXSERVICE.CA
 - 7.9.3. M ARCOM INTEGRATED BUSINESS SOLUTIONS - ADAM LUCIA, 416-938-3730, ADAM.LUCIA@TELECOM.CA
 - 7.9.4. RAMCOM COMMUNICATIONS INC. - STEPHEN STIPAC, 647-404-5811, STIPAC@RAMCOM.CA
 - 7.9.5. TBD TELECOM BY DESIGN INC. - JAMES PATARAN, 416-244-2525, ESTIMATING@TELECOMBYDESIGN.CA

- 7.10. PROVIDE PRODUCTS OF MANUFACTURERS AS NAMED IN INDIVIDUAL ARTICLES. WHERE NO MANUFACTURER IS SPECIFIED, PROVIDE PRODUCTS OF MANUFACTURERS IN COMPLIANCE WITH REQUIREMENTS.
- 7.11. VOICE AND DATA CABLE ARE SOLID COPPER, 24AWG, FT6 PLENUM, 1000HM BALANCED TWISTED PAIR (UTP) CATEGORY 6 CABLES WITH FOUR INDIVIDUALLY TWISTED PAIRS WHICH MEET OR EXCEED THE MECHANICAL AND TRANSMISSION PERFORMANCE SPECIFICATIONS IN ANSI/TIA/EIA-568-B.2 UP TO 100 MHz.
- 7.12. ALL OUTLETS SHALL BE INSTALLED WITH CABLES COILED IN THE WALL (OR IN SURFACE MOUNTED BOXES) IF ADEQUATE SPACE IS PRESENT TO HOUSE THE CABLE COIL WITHOUT EXCEEDING THE MANUFACTURER'S BEND RADIUS. NO MORE THAN 12" OF SLACK SHALL BE STORED IN AN IN WALL BOX OR INSULATED WALL.
- 7.13. VOICE JACKS, UNLESS NOTED OTHERWISE SHALL BE LOCATED IN THE BOTTOM POSITION(S) OF EACH FACEPLATE. VOICE JACKS IN HORIZONTALLY ORIENTED FACEPLATES SHALL OCCUPY THE RIGHT MOST POSITION(S) (WHITE IN COLOUR).
- 7.14. DATA JACKS SHALL OCCUPY THE TOP POSITION(S) ON THE FACEPLATE. DATA JACKS IN HORIZONTALLY ORIENTED FACEPLATES SHALL OCCUPY THE LEFT MOST POSITION(S) (RED IN COLOUR).
- 7.15. VOICE AND DATA PATCH CABLES SHALL BE STRANDED COPPER, 24AWG, 1000HM BALANCED TWISTED PAIR (UTP) CATEGORY 6 CABLES WITH FOUR INDIVIDUALLY TWISTED PAIRS WHICH MEET OR EXCEED THE MECHANICAL AND TRANSMISSION PERFORMANCE SPECIFICATIONS IN ANSI/TIA/EIA-568-B.2 UP TO 100 MHz. PATCH CABLES ARE TO BE PROVIDED IN THE FOLLOWING QUANTITIES BASED ON THE TOTAL NUMBER OF DATA DROPS MULTIPLIED BY 2 TO ACCOMMODATE NODE AND PATCH PANEL. 50% ARE 7FT; 25% ARE 5FT; 15% ARE 3FT; 10% ARE 10 FT.
- 7.16. PATCH PANELS SHALL BE 19" RACK MOUNTABLE, 8 PIN MODULAR TO INSULATION DISPLACEMENT CONNECTOR (IDC) MEETING CATEGORY 6 PERFORMANCE STANDARDS, AND PINNED TO EITHER T568 (A OR B) STANDARDS.
- 7.17. PRIOR TO STANT OF SYSTEMS INSTALLATION, MEET AT THE PROJECT SITE WITH THE OWNER'S REPRESENTATIVE AND REPRESENTATIVES OF TRADES PERFORMING RELATED WORK TO COORDINATE EFFORTS. REVIEW AREAS OF POTENTIAL INTERFERENCE AND RESOLVE CONFLICTS BEFORE PROCEEDING WITH THE WORK.
- 7.18. HORIZONTAL DISTRIBUTION CABLE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND BEST INDUSTRY PRACTICES.

- 7.19. ATTACH CABLE TO PERMANENT STRUCTURE WITH SUITABLE ATTACHMENTS AT INTERVALS OF 48". SUPPORT CABLES INSTALLED ABOVE REMOVABLE CEILING.
- 7.20. INSTALL ADEQUATE SUPPORT STRUCTURES FOR 10 FOOT OF SERVICE SLACK AT TERMINATION ROOM.
- 7.21. DO NOT SPLICE CABLES.
- 7.22. INSTALL STATION CABLING TO THE NEAREST WIRING CLOSET UNLESS OTHERWISE NOTED.
- 7.23. CABLES SHALL NOT BE ATTACHED TO THE CEILING GRID OR LIGHTING SUPPORT WIRES.
- 7.24. REPLACE ALL DAMAGED OR DEFECTIVE PRODUCT.
- 7.25. LABEL EACH CABLE WITH PERMANENT SELF ADHESIVE ON FRONT RECEPTACLE BOX FOR EACH JACK AT COMPUTER NODE END AND ON FRONT PANEL OF THE WIRING CLOSET PATCH PANEL OR PUNCH BLOCK.
- 7.26. NAMING CONVENTION USED SHALL BE AS FOLLOWS FOR THE COMPUTER NODE END: CLOSETS#- PATCHPANEL#- PORT#.

- 7.27. NAMING CONVENTION USED SHALL BE AS FOLLOWS FOR THE WIRING CLOSET END: EACH RACK LABELED WITH A NUMBER STARTING AT 1 PER CLOSET; EACH PATCH PANEL LABELED WITH A NUMBER STARTING AT 1 PER CLOSET; EACH PORT ON PATCH PANEL LABELED WITH A NUMBER STARTING AT 1 PER PATCH PANEL.
- 7.28. LABELS SHALL BE MACHINE PRINTED. HAND LETTERED LABELS SHALL NOT BE ACCEPTABLE.
- 7.29. TESTING SHALL CONFORM TO ANSI/TIA/EIA-568-B.1 STANDARD. TESTING SHALL BE ACCOMPLISHED USING LEVEL III OR HIGHER FIELD TESTERS.
- 7.30. TEST EACH PAIR AND SHIELD OF EACH CABLE FOR OPENS, SHORTS, GROUNDS, AND PAIR REVERSAL. CORRECT GROUNDED, AND REVERSED PAIRS. EXAMINE OPEN AND SHORTED PAIRS TO DETERMINE IF PROBLEM IS CAUSED BY IMPROPER TERMINATION. IF TERMINATION IS PROPER, TAG BAD PAIRS AT BOTH ENDS AND NOTE ON TERMINATION SHEETS. IF CABLE CONTAINS BAD CONDUCTORS OR SHIELD, REMOVE AND REPLACE CABLE.
- 7.31. SUBMIT USB WITH TEST RESULTS AND PROGRAM TO VIEW RESULTS.
- 7.32. WHEN REPAIRS AND RE-TESTS ARE PERFORMED, THE PROBLEM FOUND AND CORRECTIVE ACTION TAKEN SHALL BE NOTED, AND BOTH THE FAILED AND PASSED TEST DATA SHALL BE COLLOCATED IN THE BINDER.
- 7.33. THE CONTRACTOR SHALL PROVIDED A SYSTEM WARRANTY COVERING THE INSTALLED CABLING SYSTEM AGAINST DEFECTS IN WORKMANSHIP, COMPONENTS, AND PERFORMANCE, AND FOLLOW- ON SUPPORT AFTER PROJECT COMPLETION.
- 7.34. THE CONTRACTOR SHALL WARRANT THE CABLING SYSTEM AGAINST DEFECTS IN WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF SYSTEM ACCEPTANCE. THE WARRANTY SHALL COVER ALL LABOR AND MATERIALS NECESSARY TO CORRECT A FAILED PORTION OF THE SYSTEM AND TO DEMONSTRATE PERFORMANCE WITHIN THE ORIGINAL INSTALLATION SPECIFICATIONS AFTER REPAIRS ARE ACCOMPLISHED. THIS WARRANTY SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- 7.35. THE CONSULTANT WILL MAKE PERIODIC INSPECTION OF THE PROJECT IN PROGRESS. ONE INSPECTION WILL BE PERFORMED AT THE CONCLUSION OF CABLE PULLING, PRIOR TO CLOSING OF THE FALSE CEILING, TO INSPECT THE METHOD OF CABLE ROUTING AND SUPPORT, AND THE FIRESTOPPING OF PENETRATIONS. A SECOND INSPECTION WILL BE PERFORMED AT COMPLETION OF CABLE TERMINATION TO VALIDATE THAT CABLES WERE DRESSED AND TERMINATED IN ACCORDANCE WITH TIA/EIA SPECIFICATIONS FOR JACKET REMOVAL AND PAIR UNTWIST, COMPLIANCE WITH MANUFACTURER'S MINIMUM BEND RADIUS, AND THAT CABLE ENDS ARE DRESSED NEATLY AND ORDERLY.

- 7.36. UPON COMPLETION OF THE PROJECT, THE CONSULTANT WILL PERFORM A FINAL INSPECTION OF THE INSTALLED CABLING SYSTEM WITH THE CONTRACTOR'S PROJECT FOREMAN. THE FINAL INSPECTION WILL BE PERFORMED TO VALIDATE THAT ALL HORIZONTAL AND BACKBONE CABLES WERE INSTALLED AS DEFINED IN THE DRAWING PACKAGE, AND THAT THE INSTALLATION MEETS THE AESTHETIC EXPECTATIONS OF THE CONSULTANT.
- 7.37. UPON RECEIPT OF THE TEST DOCUMENT, THE CONSULTANT RESERVES THE RIGHT TO PERFORM SPOT TESTING OF THE CABLING SYSTEM TO VALIDATE RESULTS FROM THE TEST DOCUMENTATION.
- 7.38. DURING THE THREE WEEK PRIOR BETWEEN FINAL INSPECTION AND DELIVERY OF THE TEST AND AS-BUILT DOCUMENTATION, THE OWNER WILL ACTIVATE THE CABLING SYSTEM. THE CONSULTANT WILL VALIDATE OPERATION OF THE CABLING SYSTEM DURING THIS PERIOD.
- 7.39. COMPLETION OF THE INSTALLATION, IN PROGRESS AND FINAL INSPECTIONS; RECEIPT OF THE TEST AND AS-BUILT DOCUMENTATION; AND SUCCESSFUL PERFORMANCE OF THE SYSTEM FOR THREE WEEK PERIOD WILL CONSTITUTE ACCEPTANCE OF THE SYSTEM.

DO NOT SCALE DRAWING DIMENSIONS ARE TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE
ALL DRAWINGS, SPECIFICATIONS, AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE ARCHITECT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN WHOLE OR IN PART IS STRICTLY FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.

No.	DESCRIPTION	DATE
2	ISSUED FOR TENDER	2025-02-11
1	ISSUED FOR PERMIT	2024-12-16
B	85% PROGRESS	2024-11-27
A	30% PROGRESS SUBMISSION	2024-11-07

REVISIONS

24076
Seal

E & M
Consulting Engineers Inc.
2800 Highway 704
Windsor, ON, L9A 4K1
Canada
www.emconsultingeng.com

HWDSB
AMRA J
ARCHITECTS INC.

www.eja.design | info@eja.design | 905.920.5121

PROJECT INFO
HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD
P02085 - FRANKLIN RD ELEMENTARY SCHOOL RENOVATIONS
500 FRANKLIN ROAD HAMILTON, ONTARIO.

Drawing title:
ELECTRICAL SPECIFICATION

drawn:	scale:
MD	AS SHOWN
date:	project number:
	24-21
checked:	DRAWING NO.:
MD	E4-00
date:	0
	Revision