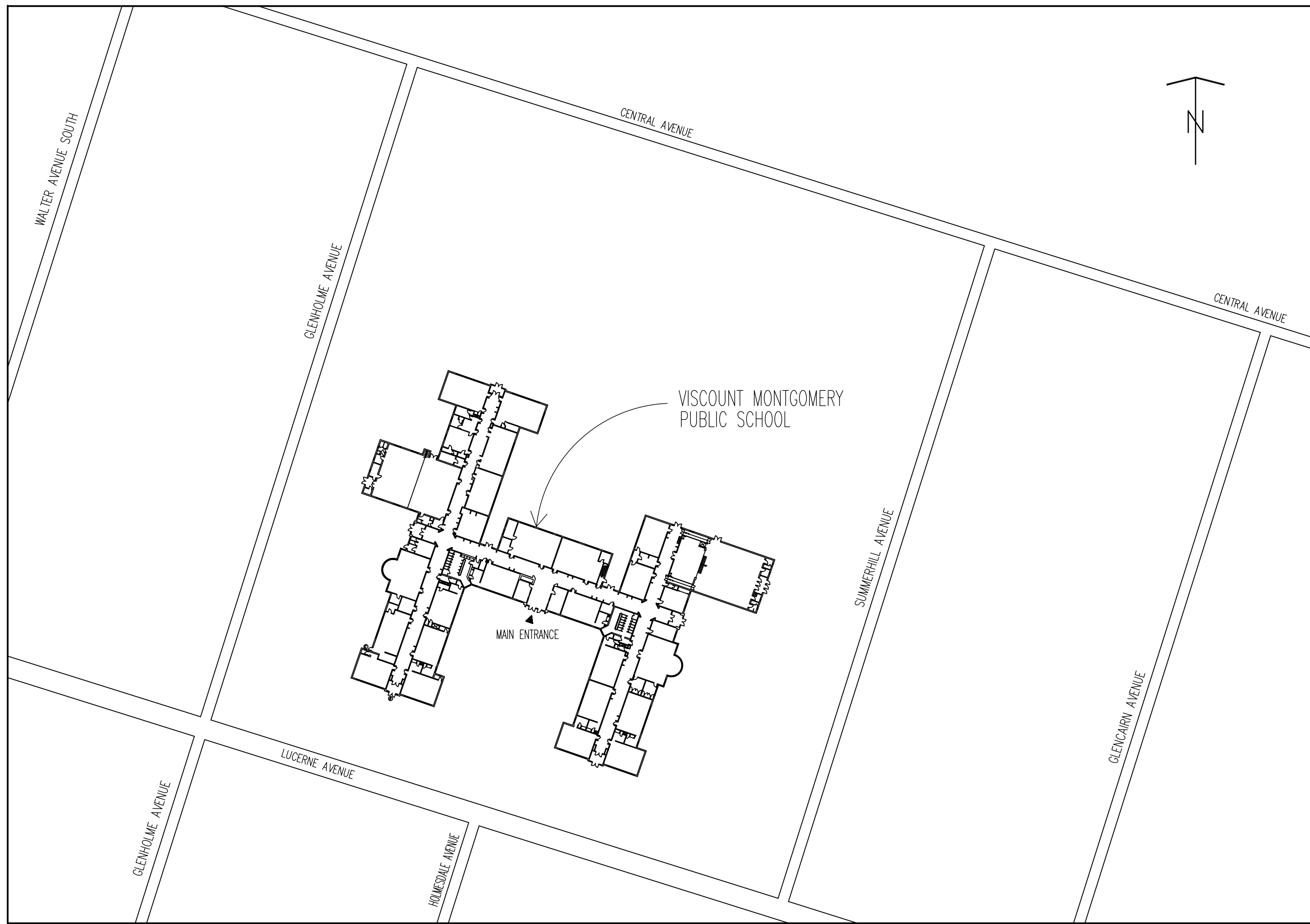


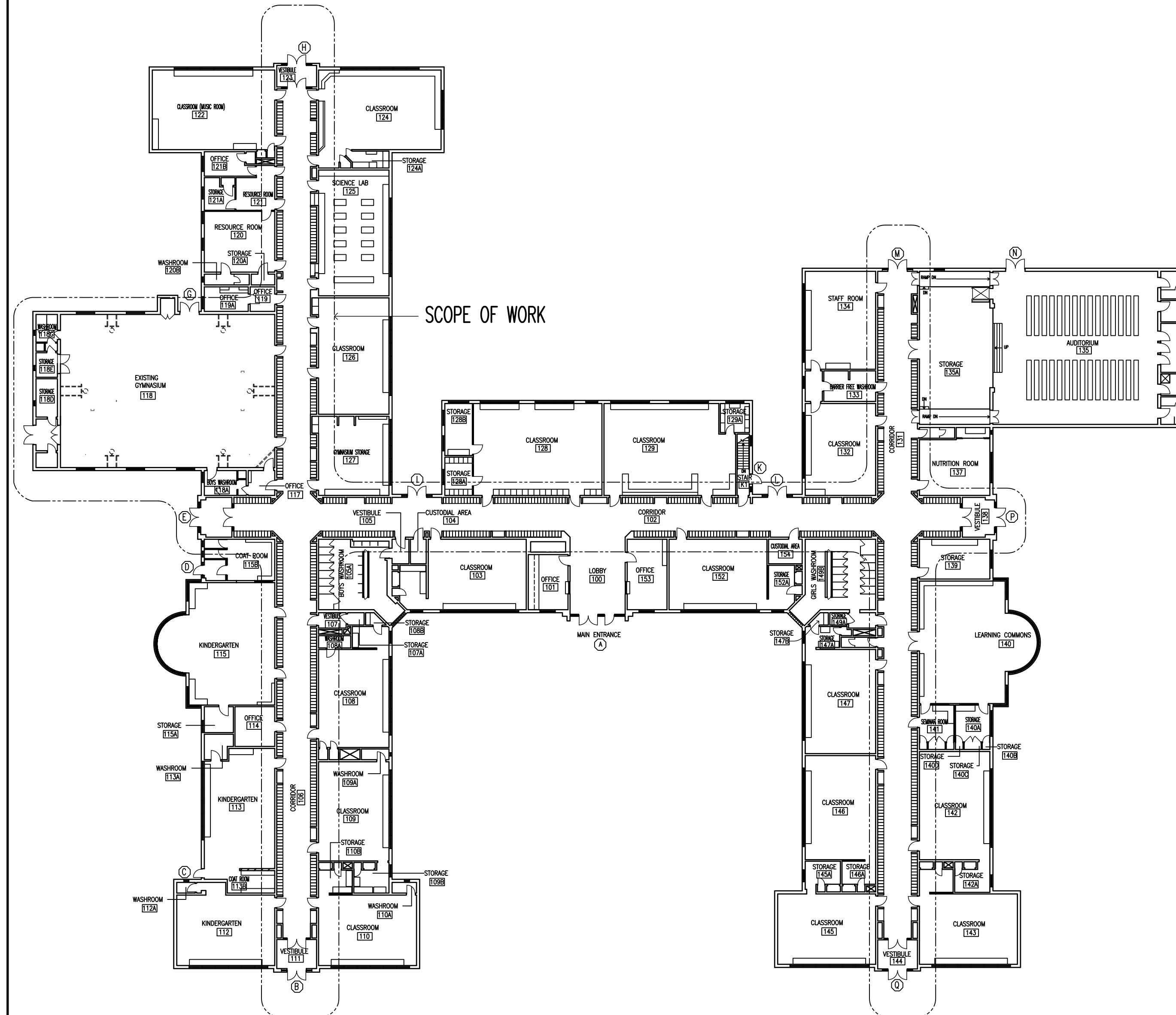
ABBREVIATIONS	
@	- AT
&	- AND
C	- CENTRE LINE
A.C.	- ACOUSTIC
ALUM.	- ALUMINUM
APPROX.	- APPROXIMATE(LY)
A	- ACOUSTIC TILE
BARR.	- BARRIER
BD.	- BOARD
C.J.	- CONTROL JOINT
C/W	- COMPLETE WITH
CAR.	- CARPET
CEIL.	- CEILING
Q	- CENTRE LINE
CER.	- CERAMIC
CONC.	- CONCRETE
DB	- DISPOSAL BAG UNITS
DN	- DOWN
ELEC.	- ELECTRICAL
FIN.	- FINISH(ED)
FL.	- FLOOR
GL	- GLAZING
GR.	- GRADE
GY.	- GYPSUM
HD.	- ELECTRIC HAND DRYER
Hdg.	- HOT DIPPED GALVANIZED
H.M.	- HOLLOW METAL
HR.	- HOUR
H.S.S.	- HOLLOW STRUCTURAL SECTION
H.W.	- HOT WATER
MAX.	- MAXIMUM
MECH.	- MECHANICAL
MIN.	- MINIMUM
N.B.C.	- NATIONAL BUILDING CODE
(N.I.C.)	- NOT IN CONTRACT
O.B.C.	- ONTARIO BUILDING CODE
O.C.	- ON CENTRE
O.W.S.J.	- OPEN WEB STEEL JOISTS
P.G.W.G.	- POLISHED GEORGIAN WIRE GLASS
PT.	- PAPER TOWEL DISPENSER
P.V.C.	- POLY VINYL CHLORIDE
PLY.	- PLYWOOD
POLY.	- POLYETHYLENE
Q.T.	- QUARRY TILE
R.D.	- ROOF DRAIN
R.W.L.	- RAIN WATER LEADER
REV.	- REVERSED
SD.	- SOAP DISPENSER
S.P.F.	- SPRUCE PINE FIR
SIM.	- SIMILAR
TYP.	- TYPICAL
U/S	- UNDERSIDE
V.A.T.	- VINYL ASBESTOS TILE

<b>RICHARD G BUTTERWORTH ARCHITECT INC.</b> 127 JUDITH CRESCENT, ANCASTER, ONTARIO L9G 1L3 TEL: 905-304-0241 CERTIFICATE OF PRACTICE NUMBER: 1409 THE CERTIFICATE OF PRACTICE NUMBER OF THE HOLDER IS THE HOLDER'S BCIN.			
<b>NAME OF PROJECT:</b> <b>VISCOUNT MONTGOMERY PUBLIC SCHOOL</b> <b>HAMILTON WENTWORTH DISTRICT SCHOOL BOARD</b> LOCATION: 1525 LUCERNE AVENUE HAMILTON, ONTARIO			
ONTARIO BUILDING CODE PART 11 REVIEW MATRIX			
PROJECT DESCRIPTION:		BASIC RENOVATION TO VISCOUNT MONTGOMERY PUBLIC SCHOOL	
AGE OF BUILDING (YEARS):	72	ANY ADDITION:	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
AGE OF ADDITION (YEARS):	N/A	WILL ADDITION BE AFFECTED:	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
CONSTRUCTION INDEX: TABLE 11.2.1.1. A.	N/A	HAZARD INDEX (OLD): TABLE 11.2.1.1.	N/A
NUMBER OF STOREYS:	1	HAZARD INDEX (NEW): TABLE 11.2.1.1.	N/A
HEIGHT OF BUILDING (m):	4.3	HAZARD INDEX CREDIT APPLICABLE: TABLE 11.2.1.1. (2)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
NUMBER OF STREETS:	3	FARM BUILDING: TABLE 11.4.2.3. (1)(c)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
STRUCTURAL UPGRADING REQUIRED: TABLE 11.4.2.1.1.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	COMPLIANCE ALTERNATIVE NUMBER: TABLE 11.5.1.1.	N/A
TYPE OF CONSTRUCTION:	<input type="checkbox"/> COMBUSTIBLE <input checked="" type="checkbox"/> NON-COMBUSTIBLE <input type="checkbox"/> HEAVY TIMBER		
EARLY WARNING AND EVACUATION SYSTEM UPGRADE REQUIRED: TABLE 11.3.3.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
BUILDING DETAILS		EXISTING	PROPOSED
MAJOR OCCUPANCY CLASSIFICATIONS: TABLE 3.1.2.1.		GROUP A DIVISION 2	GROUP A DIVISION 2
OCCUPANCY LOAD DETERMINATION: TABLE 3.1.16.1 (3.1.17.1 CORRECTED)		730	730
FRR FLOORS OVER BASEMENT (HOURS):		N/A	N/A
FRR OTHER FLOORS (HOURS):		N/A	N/A
FRR ROOF (HOURS):		N/A	N/A
NUMBER OF SUITES OF GROUP C: OCCUPANCY 11.4.2.3. (1)(b)		N/A	N/A
AREA OF BUILDING (SQ.M.):		4618	NIL
BUILDING SPRINKLERED:		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
FIRE ALARM SYSTEM REQUIRED:		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

WASHROOM FIXTURE CALCULATIONS			
FIXTURES REQUIRED (OBC)	FIXTURES EXISTING	FIXTURES PROVIDED	
MALE STUDENTS = 350 / 30 = 12 FIXTURES	MALE STUDENTS = 24 FIXTURES	MALE STUDENTS = 23 FIXTURES	
FEMALE STUDENTS = 350 / 26 = 14 FIXTURES	FEMALE STUDENTS = 18 FIXTURES	FEMALE STUDENTS = 18 FIXTURES	
MALE STAFF = 15 / 30 = 1 FIXTURES	MALE STAFF = 1 FIXTURES	MALE STAFF = 1 FIXTURES	
FEMALE STAFF = 15 / 26 = 1 FIXTURES	FEMALE STAFF = 1 FIXTURES	FEMALE STAFF = 1 FIXTURES	



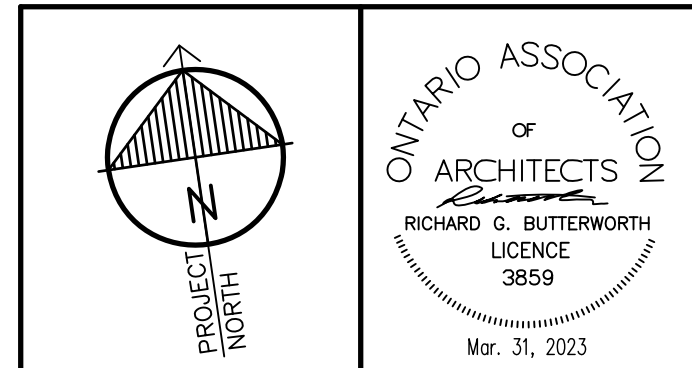
1 SITE KEY PLAN AND O.B.C. MATRIX  
A0.01 N.T.S.



2 GROUND FLOOR KEY PLAN AND GENERAL NOTES  
A0.01 N.T.S.

**GENERAL NOTES**

- BEFORE TENDERING, EXAMINE ALL CONDITIONS AFFECTING THE SITE AND WORK TO BE DONE THEREON. THE DOCUMENTS ARE FURNISHED IN GOOD FAITH FOR THE GUIDANCE OF THE CONTRACTOR, BUT SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF ASCERTAINING, TO HIS OWN SATISFACTION, THE NATURE OF ALL CONDITIONS ON THE SITE.
- REPORT TO THE ARCHITECT ALL DISCREPANCIES, OMISSIONS, ERRORS, DEPARTURES FROM ALL APPLICABLE CODES, BY-LAWS AND REGULATIONS, GOOD PRACTICE AND ANY POINTS CONSIDERED TO BE OF DUBIOUS INTENT, SO THAT THE ARCHITECT MAY IF CONSIDERED DESIRABLE, ISSUE INSTRUCTIONS BY ADDENDA AT LEAST TWO WORKING DAYS BEFORE TENDER CLOSING DATE, THE ARCHITECT WILL NOT BE RESPONSIBLE FOR ORAL INSTRUCTIONS.
- ALL DIMENSIONS AND INFORMATION SHOWN ON THE CONTRACT DRAWINGS MUST BE CHECKED AND VERIFIED ON SITE PRIOR TO CONSTRUCTION AND FABRICATION OF ITS COMPONENTS. SHOULD EXISTING CONDITIONS OR SERVICES BE FOUND TO VARY FOR THAT INDICATED ON THE CONTRACT DRAWINGS, THE ARCHITECT MUST BE NOTIFIED IMMEDIATELY.
- ALL CUTTING AND PATCHING BY GENERAL CONTRACTOR. PERFORM FULL ELECTROMAGNETIC SCANNING OF ALL FLOORS TO DETECT ANY PIPING, CONDUIT OR LIVE WIRES BEFORE CUTTING OR CORE DRILLING. MAKE GOOD ALL SURFACES TO MATCH EXISTING FLUSH.
- REMOVE ALL EXISTING ITEMS SHOWN DOTTED AS INDICATED ON DRAWINGS. MAKE GOOD ALL SURFACES TO MATCH EXISTING. PATCH ALL HOLES FLUSH WITH EXISTING SURFACES AND PAINT TO MATCH.
- PAINT ALL NEW AND EXISTING SURFACES AND ITEMS WITH COLOUR BLOCK PRIMER AND 2 FINISHED COATS (TYP.)
- DO NOT SCALE THE DRAWINGS.



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3. ISSUED FOR CONSTRUCTION	MAR. 31, 2023
2. ISSUED FOR BUILDING PERMIT	FEB. 21, 2023
1. ISSUED FOR REVIEW	DEC. 25, 2022
No. REVISIONS	DATE

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Architecture  
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Ancaster Ontario

**VISCOUNT MONTGOMERY PUBLIC SCHOOL**  
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD  
1525 LUCERNE AVENUE  
HAMILTON, ONTARIO

KEY PLANS AND ONTARIO BUILDING CODE MATRIX

DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
FEBRUARY 2023	22-110
SCALE:	SHEET No.:
1/16"=1'-0"	A0.01

PLOT SCALE: 1/16"=1'-0"



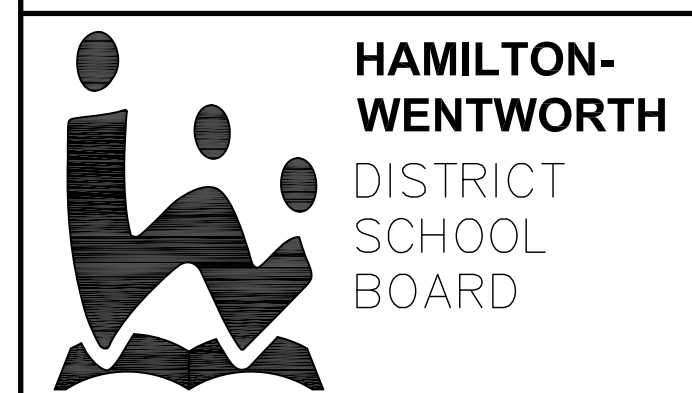
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**DEMOLITION LEGEND**

- ① - REMOVE EXISTING 2'x2' PERFORATED TILE (SEE ABATEMENT SPECIFICATION) AND SUPPORT STRUCTURE COMPLETE
- ② - REMOVE EXISTING 2'x2' PERFORATED TILE AND METAL TRIM MOLDINGS (SEE ABATEMENT SPECIFICATION) AND SUPPORT STRUCTURE COMPLETE

**DEMOLITION NOTES**

1. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR EXISTING DEMOLITION OF ITEMS.
  2. REFER TO ABATEMENT SPECIFICATIONS FOR SCOPE OF DEMOLITION OF EXISTING CEILINGS AND ALL ITEMS ATTACHED TO CEILINGS.
- REL - REMOVE EXISTING LIGHT FIXTURE (SEE ELEC.)



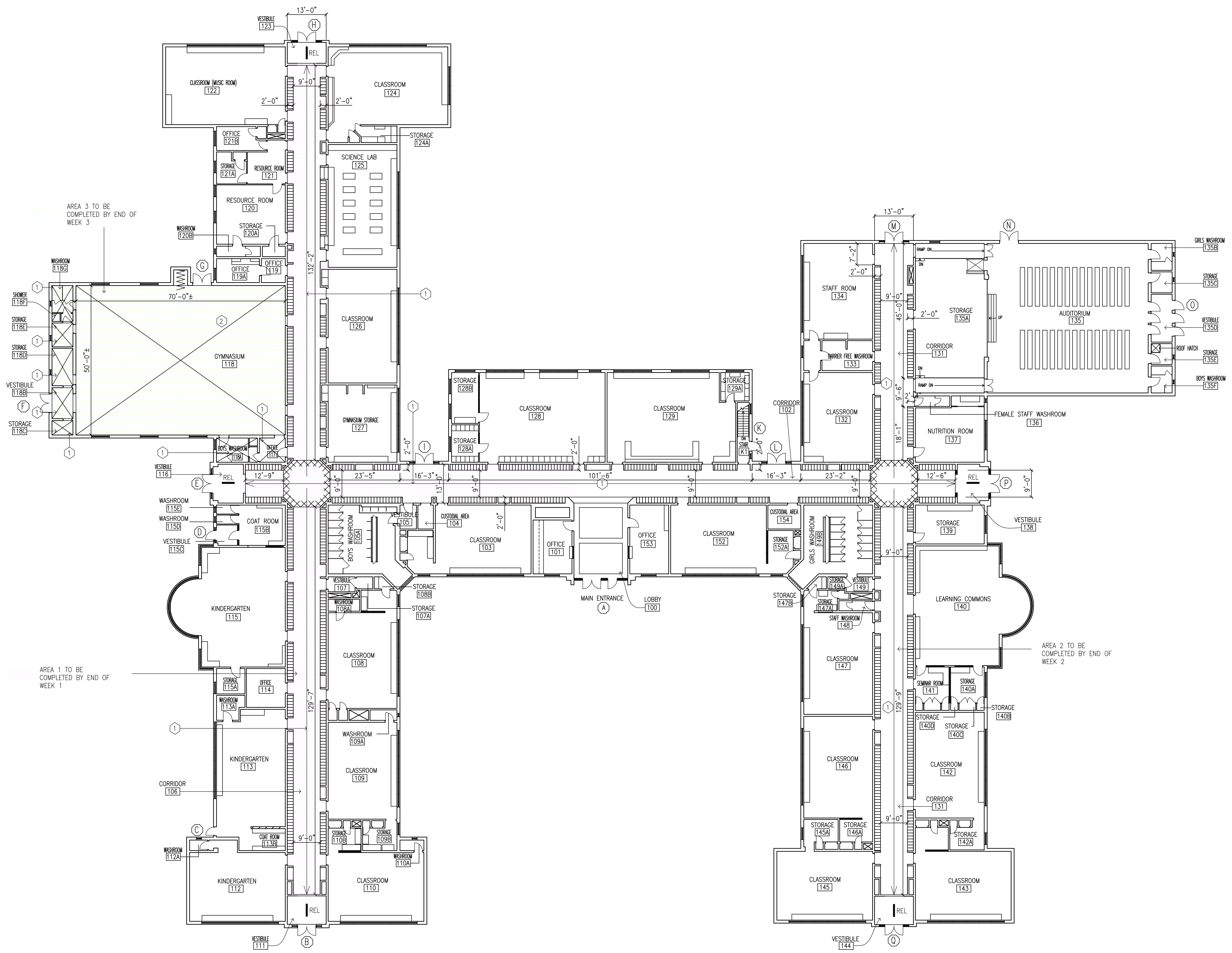
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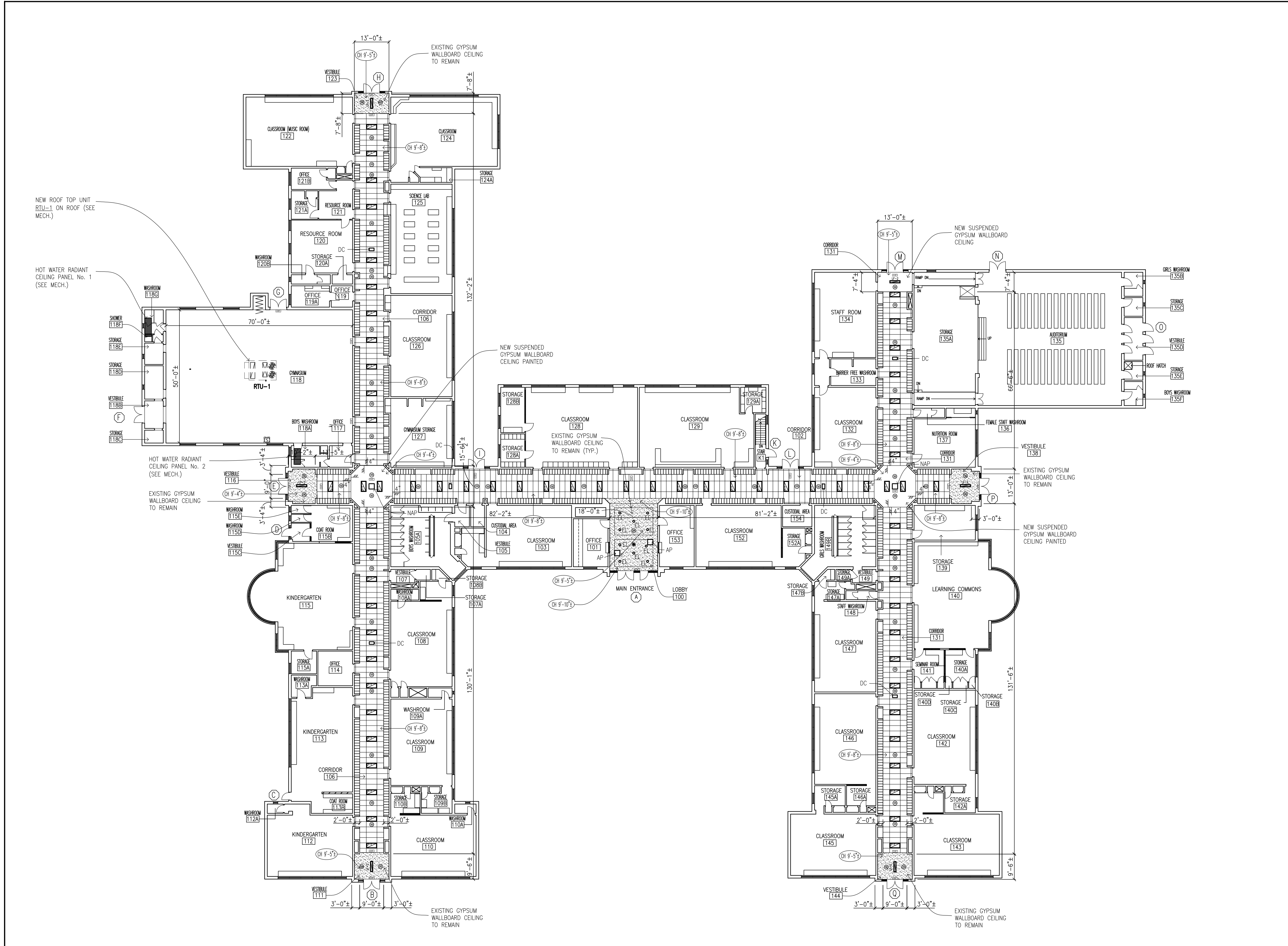
• GROUND FLOOR REFLECTED CEILING PLAN - DEMOLITION

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DATE:	JOB No.:
MARCH 2023	22-110
SCALE:	SHEET No.:
1/16"=1'-0"	A1.01

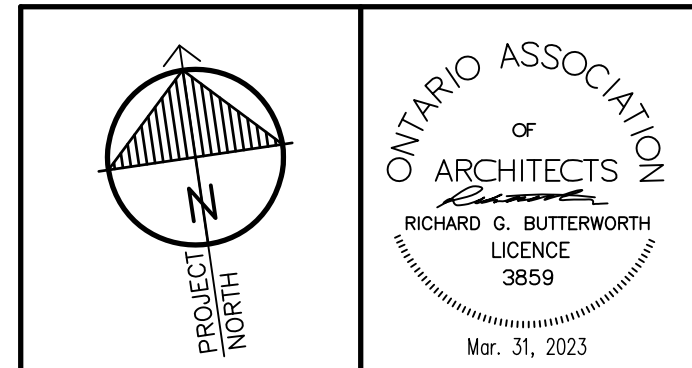


1 GROUND FLOOR REFLECTED CEILING PLAN - DEMOLITION  
 1/16"=1'-0"

PLOT SCALE: 1/16"

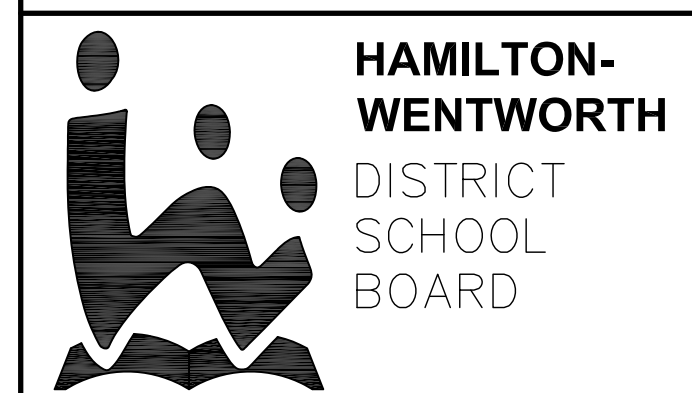


1 GROUND FLOOR REFLECTED CEILING PLAN - PROPOSED  
 A1.02 1/16"=1'-0"



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- PROPOSED LEGEND**
- [Grid Pattern] NEW 2'x4' SUSPENDED ACOUSTIC TILE CEILING (SEE SPEC'S)
  - [Solid Line] NEW SUSPENDED GYPSUM WALLBOARD CEILING, 1-LAYER 8" GYPSUM WALLBOARD PAINTED (TYP.)
  - [Cross-Hatch] LF-1 NEW 2'x4' RECESSED/SURFACE MOUNT LED LIGHT FIXTURE (SEE ELEC.)
  - [Cross-Hatch] LF-2 NEW 1'x4' RECESSED OR SURFACE MOUNT LED LIGHT FIXTURE (SEE ELEC.)
  - [Circle with 'EL'] EXISTING 6" LED POT LIGHT TO REMAIN.
  - [Circle with 'AP'] EXISTING 2'x2' ACCESS PANEL TO REMAIN.
  - [Circle with 'NAP'] NEW 2'x2' ACCESS PANEL.
  - [Circle with 'DC'] NEW DOUBLE DIGITAL CLOCK (SEE ELEC.)
  - [Circle with 'G'] NEW GYPSUM WALLBOARD BULKHEAD PAINTED.
  - [Circle with 'ELEC'] NEW EXIST SIGN (SEE ELEC.)
  - [Circle with 'OS'] CEILING MOUNTED OCCUPANCY SENSOR (SEE ELEC.)
  - [Circle with 'SD'] CEILING MOUNTED SMOKE ALERT DETECTOR (SEE ELEC.)



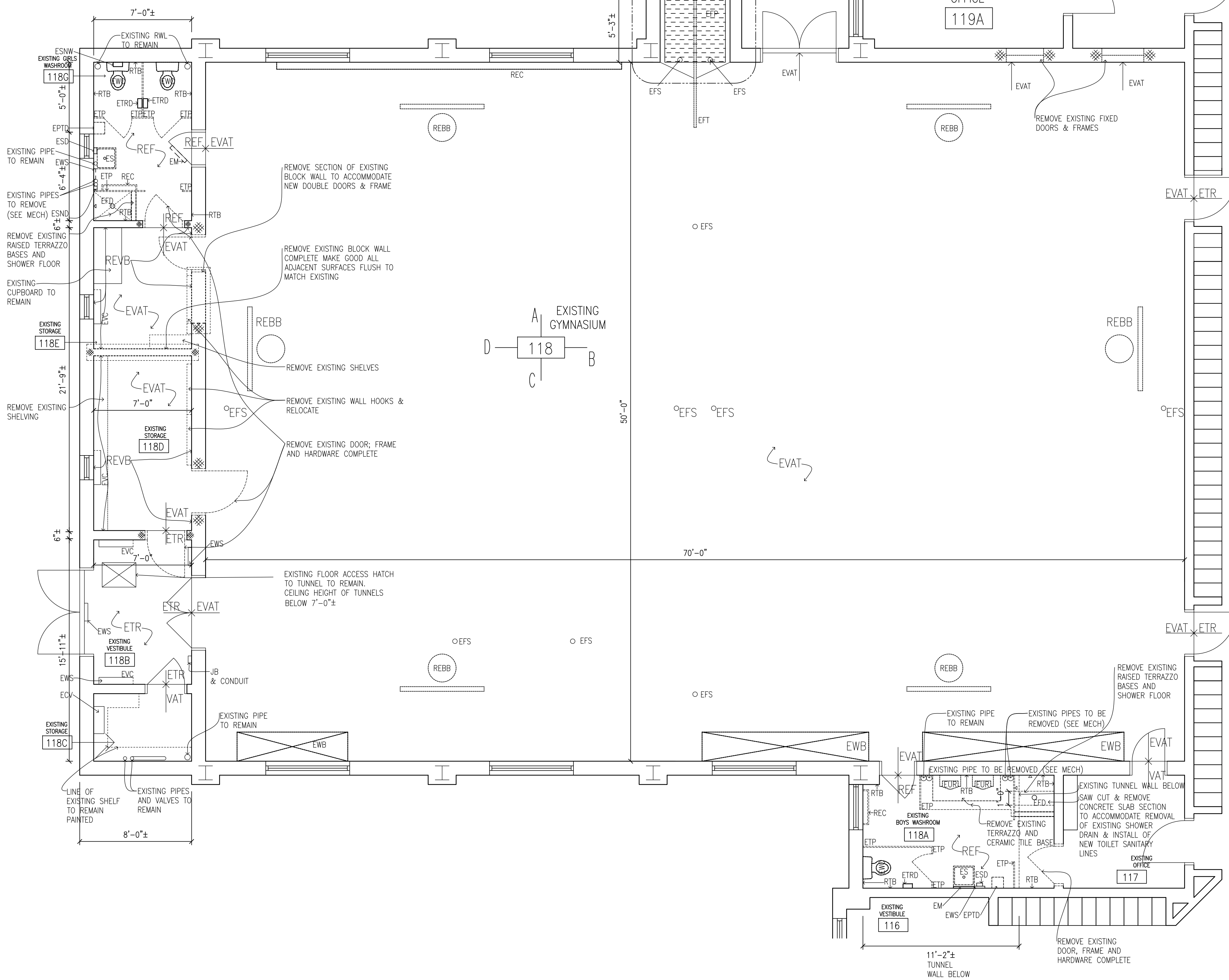
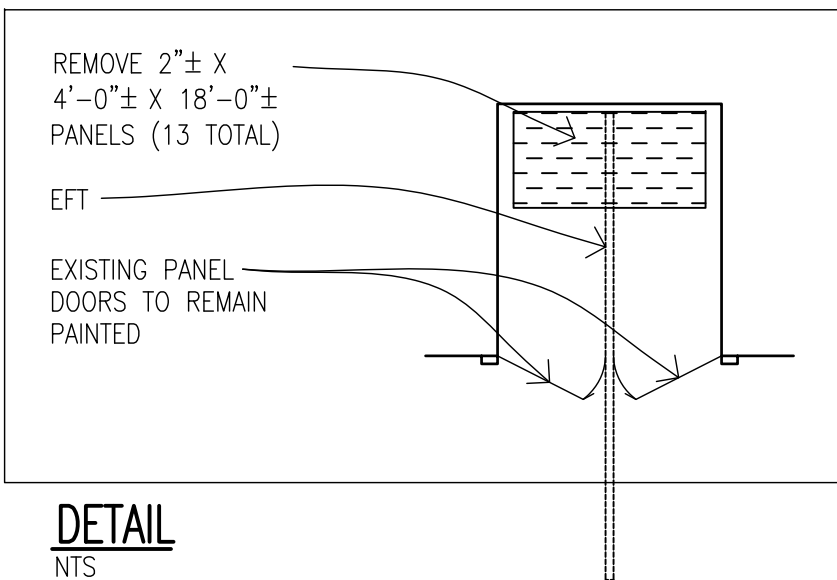
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• GROUND FLOOR REFLECTED CEILING PLAN - PROPOSED

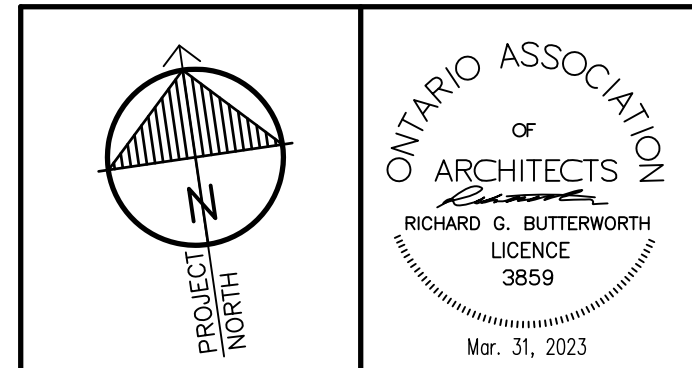
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MS	RGB
DATE:	JOB No.:
FEBRUARY 2023	22-110
SCALE:	SHEET No.:
1/16"=1'-0"	A1.02



**DEMOLITION & PROPOSED LEGEND**

- EXISTING ELEMENTS TO BE REMOVED MAKE GOOD ALL ADJACENT SURFACES FLUSH TO MATCH EXISTING TOOTH IN NEW MASONRY TO MATCH EXISTING SIZES & COURSING
- EXISTING ELEMENTS TO BE REMOVED MAKE GOOD ALL EXISTING ADJACENT SURFACES FLUSH TO MATCH EXISTING
- RWL — EXISTING RAINWATER PIPE TO REMAIN
- REBB — REMOVE EXISTING SWING UP BASKETBALL BACKSTOP AND STRUCTURE COMPLETE
- HS — EXISTING HORN STROBE AND WIRE GUARD REMOVE (SEE ELEC.)
- WIFI — EXISTING WIFI AND WIRE GUARD REMOVE AND REINSTALL FOR PAINTING.
- NX — NEW EXIT SIGN / FIXTURE (SEE ELEC.)
- EX — REMOVE EXISTING EMERGENCY LIGHT FIXTURE AND WIRE GUARD (SEE ELEC.)
- EX — PAINT COLOUR SYMBOL
- REMOVE EXISTING SHOWER HEAD & VALVE (SEE MECH)
- S — EXISTING SIGN REMOVE AND/OR REINSTALL FOR PAINTING (SEE OWNER)
- SS — EXISTING SECURITY SENSOR AND WIRE GUARD REMOVE AND REINSTALL FOR PAINTING.
- C — EXISTING OR NEW CONDUIT (PAINT)
- JB — EXISTING JUNCTION BOX (PAINT)
- PS — EXISTING PULL STATION TO REMAIN (SEE ELEC.)
- NS — NEW WALL SWITCH (S) (SEE ELEC.)
- NTS — NEW THERMOSTAT AND GUARD (SEE ELEC.)
- EML — EXISTING EMERGENCY LIGHT & WIRE GUARD REMOVE (SEE ELEC.)
- RSD — REMOVE EXISTING SMOKE DETECTION & GUARD (SEE ELEC.)
- R — EXISTING RECEPTACLE REMOVE AND INSTALL NEW RECEPTACLE COVER PLATE (SEE ELEC.)
- RAG — EXISTING RETURN AIR GRILLE REMOVE (SEE MECH.)
- RWP — EXISTING WALL PADDING REMOVE
- RDP — EXISTING DOOR PADDING REMOVE
- CB — EXISTING CABLE REMOVE
- ED — REMOVE EXISTING DRAIN VALVE & PLYWOOD COVER (SEE MECH.)
- CP — REMOVE EXISTING COPPER PIPE (SEE MECH.)
- RSB — REMOVE EXISTING SCORE BOARD CASE AND WIRING COMPLETE
- RECB — REMOVE EXISTING CHALK BOARD
- SBR — REMOVE EXISTING SCORE BOARD RECEPTACLE AND WIRE
- ETS — REMOVE EXISTING THERMOSTAT & WIRE GUARD (SEE MECH./ WIRING & CONDUIT ELEC.)
- REW — REMOVE EXISTING WIRE (SEE ELEC.)
- VAT — EXISTING FLOOR TILE TO REMAIN
- EVAT — REMOVE EXISTING FLOOR TILE (SEE ABATEMENT SPECIFICATION)
- ETR — EXISTING TERRAZZO FLOOR TO REMAIN
- EBP — EXISTING BLANK COVER & BOX TO REMAIN (SEE ELEC.)
- RSW — REMOVE EXISTING SWITCH, BACK BOX WIRE (SEE ELEC.)
- RR — REMOVE EXISTING RECEPTACLE BACK BOX & CONDUIT (SEE ELEC.)
- NHS — NEW HORN/STROBE WITH WIRE GUARD (SEE ELEC.)
- NC — NEW CONDUIT (SEE ELEC.)
- RW — REMOVE EXISTING WALL HOOKS
- ETP — REMOVE EXISTING TOILET PARTITION
- EPTD — REMOVE EXISTING PAPER TOWEL DISPENSER
- ETRD — REMOVE & RELOCATE EXISTING TOILET ROLL DISPENSER
- EM — REMOVE EXISTING MIRROR
- ES — REMOVE EXISTING SINK (SEE MECH.)
- EWS — REMOVE EXISTING WALL SIGN
- ESND — REMOVE EXISTING SANITARY NAPKIN DISPENSER
- EUR — REMOVE EXISTING URINAL (SEE MECH.)
- EOS — REMOVE EXISTING SENSOR (SEE ELEC.)
- REVB — REMOVE EXISTING RUBBER BASE
- M — NEW MIRROR (SEE SPEC'S)
- REF — PATCH EXISTING TERRAZZO FLOOR & BASE TO MATCH EXISTING WHERE EXISTING TOILET PARTITIONS, AND OTHER FIXTURES, PIPES, ETC. ARE REMOVED & REFINISH ALL FLOOR & BASE
- NWB — NEW WASTE RECEPTACLE (SEE SPEC'S)
- DS — REMOVE EXISTING FOLDING PARTITION SWITCH (SEE ELEC.)
- SW — EXISTING SWITCH REMOVE AND INSTALL NEW SWITCH & COVER PLATE (SEE ELEC.)
- EW — REMOVE EXISTING WINCH, PULLEY, EYE BOLTS COMPLETE
- EP — REMOVE EXISTING PULLEY.
- EWB — REMOVE EXISTING WOODEN BLEACHER COMPLETE
- DB — REMOVE EXISTING WOOD DOOR BUMPER COMPLETE
- EH — FILL EXISTING (6) HOLES FLUSH
- RVS — REMOVE EXISTING VELCRO STRIP.
- NWP — NEW WALL PADDING (SEE SPEC'S).
- NDP — NEW DOOR PADDING (SEE SPEC'S).
- REBB — REMOVE EXISTING BASKETBALL BACKSTOP AND STRUCTURE MAKE GOOD ALL SURFACES TO MATCH EXISTING FLUSH.
- NBB — NEW WING TO SIDE BASKETBALL BACKSTOP & NET C/W HEIGHT ADJUSTERS (SEE SPEC'S)
- PA — NEW PUBLIC ADDRESS SPEAKER AND GUARD C/W CALL BACK BUTTON (SEE ELEC.)
- NSB — NEW SCORE BOARD (SEE ELEC. & SPEC'S)
- MP — INSULATED MECHANICAL PIPING TO BE REMOVED (SEE MECH.)
- RES — REMOVE EXISTING SPEAKER AND GUARD (SEE ELEC.)
- RVS — REMOVE EXISTING VELCRO STRIP
- ET — REMOVE EXISTING THERMOSTAT AND GUARD (SEE MECH.)
- EB — REMOVE EXISTING EYE BOLTS.
- EC — REMOVE EXISTING CLOCK AND GUARD (SEE ELEC.)
- BP — EXISTING BRASS PLATE TO REMAIN
- REC — REMOVE EXISTING CONVECTOR (SEE MECH.)
- REF — REMOVE EXISTING FAN/LOUVER (SEE MECH.)
- RC — REMOVE EXISTING CONDUIT (SEE ELEC.)
- NWB — NEW WHITE BOARD 4"X8" (SEE SPEC'S)
- CT — REMOVE EXISTING CONTROLS AND WIRING/CONDUITS (SEE MECH./ELEC.)
- EFS — REMOVE EXISTING FLOOR SOCKET PATCH FLUSH
- EFT — REMOVE EXISTING FLOOR TRACK PATCH FLUSH
- EFP — REMOVE EXISTING FOLDING PARTITION PANELS TRACK, HARDWARE, MOTOR, DRIVE CHAINS, CONTROLS & SUPPORT STRUCTURE COMPLETE
- WR — REMOVE AND REINSTALL EXISTING WALL RACK FOR PAINTING
- BX — REMOVE EXISTING BX WIRE (SEE ELEC.)
- EJB — REMOVE EXISTING JUNCTION BOX (SEE ELEC.)
- GL — EXISTING GLASS TO REMAIN
- BPP — EXISTING BRASS PLATE TO BE REMAINED
- RI — REMOVE EXISTING INTERCOM, BACK BOX, & WIRE (SEE ELEC.)
- RIS — REMOVE EXISTING INTERCOM, SWITCH, BACK BOX WIRE (SEE ELEC.)
- RES — REMOVE EXISTING SENSOR (SEE ELEC.)
- RW — EXISTING WIRE REMOVE (SEE ELEC.)
- SKP — NEW STAINLESS STEEL KICK PLATES (SEE SPEC'S)
- REL — REMOVE EXISTING LIGHT FIXTURE (SEE ELEC.)
- TR — EXISTING STEEL TRUSS ASSUMED
- RTB — REPAIR & REFINISH EXISTING TERRAZZO BASE & PATCH FLOOR FLUSH
- REF — FLUSH & REFINISH EXISTING TERRAZZO FLOOR
- EWB — REMOVE EXISTING WATER CLOSET (SEE MECH.)
- WS — NEW WALL SIGN (SEE SPEC'S)
- TP — NEW TOILET PARTITION (SEE SPEC'S)
- SND — NEW SANITARY NAPKIN DISPENSER (SEE SPEC'S)
- TRD — NEW OR RELOCATED TOILET ROLL DISPENSER (SEE SPEC'S)
- SD — NEW SOAP DISPENSER (SEE SPEC'S)
- EVC — EXISTING CONVECTOR TO REMAIN
- EDF — EXISTING FLOOR DRAIN REMOVE (SEE MECH)
- FD — NEW FLOOR DRAIN (SEE MECH)
- S — NEW SINK (SEE MECH)
- HD — NEW ELECTRIC HAND DRYER (SEE ELEC)
- ESNW — REMOVE EXISTING SANITARY WAST UNIT
- OS — NEW OCCUPANCY SENSOR (SEE ELEC.)
- NS — NEW INTERCOM SPEAKER (SEE ELEC.)
- WC — NEW WATER CLOSET (SEE MECH.)
- BN — BULLNOSE BLOCK CORNER

1 PARTIAL GROUND FLOOR PLAN - DEMOLITION  
A1.03 1/4"=1'-0"



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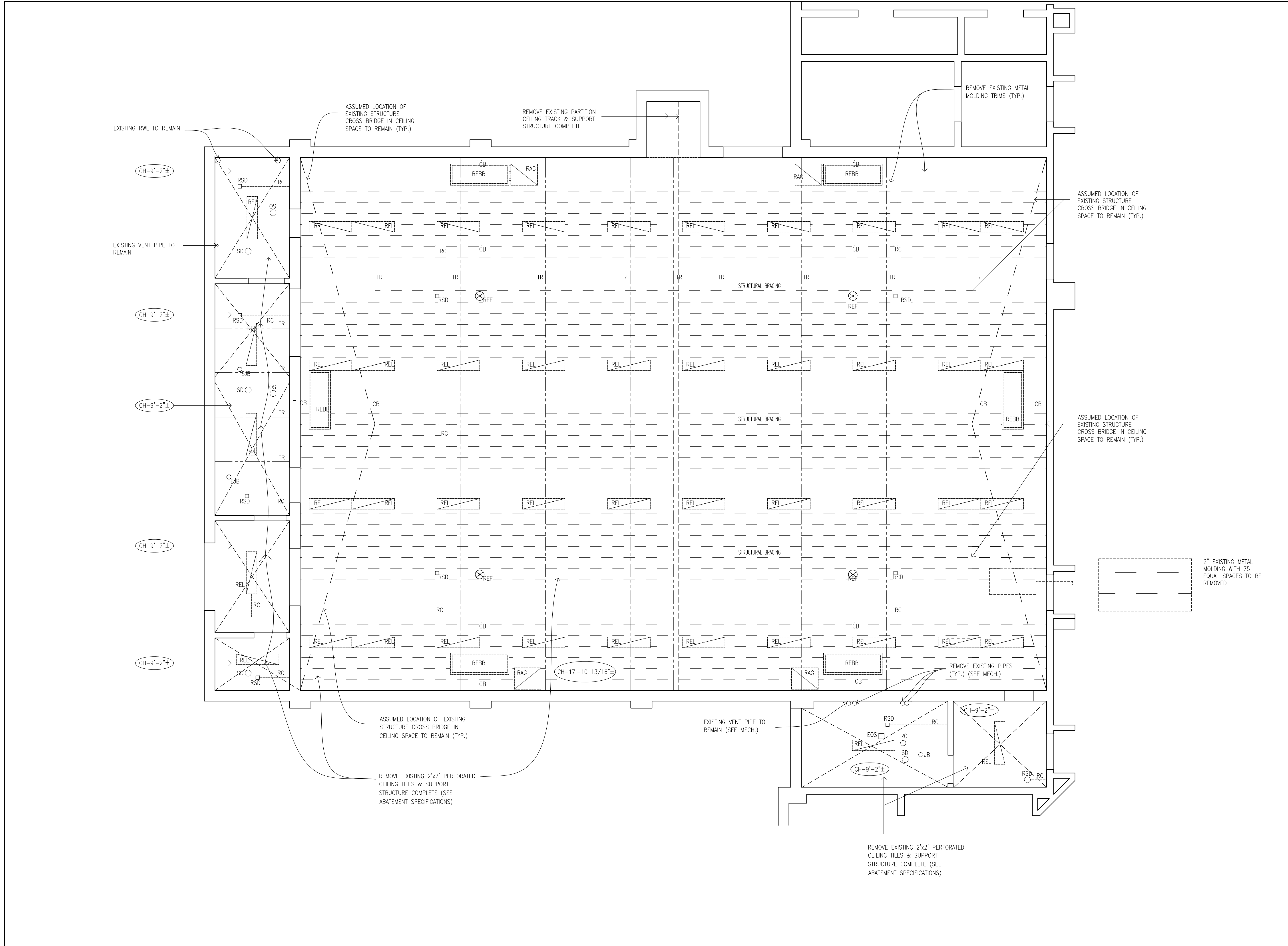
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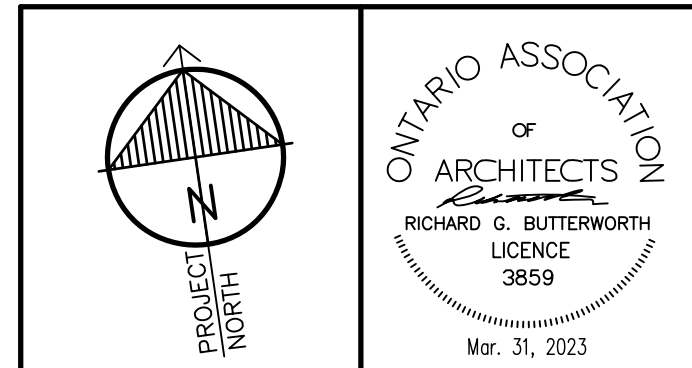
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HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD  
1525 LUCERNE AVENUE  
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• PARTIAL GROUND FLOOR PLAN - DEMOLITION

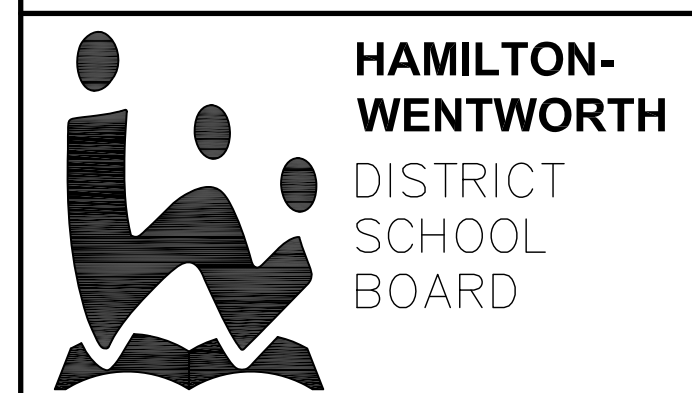
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SCALE:	SHEET No.:
1/4"=1'-0"	A1.03



1 GYM REFLECTED CEILING PLAN - DEMOLITION  
A1.04 1/4"=1'-0"



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3.	ISSUED FOR CONSTRUCTION	MAR. 31, 2023
2.	ISSUED FOR BUILDING PERMIT	FEB. 21, 2023
1.	ISSUED FOR REVIEW	DEC. 25, 2022
No.	REVISIONS	DATE

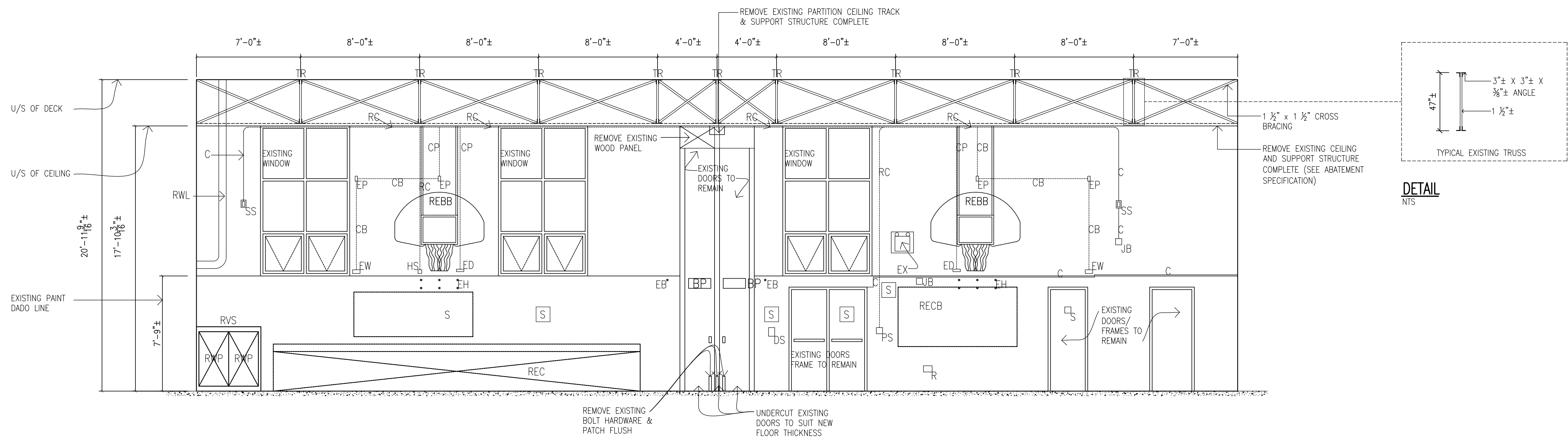
**RICHARD G. BUTTERWORTH**  
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ARCHITECTURE  
INTERIOR  
URBAN PLANNING  
Ancaster Ontario

**VISCOUNT MONTGOMERY PUBLIC SCHOOL**  
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD  
1525 LUCERNE AVENUE  
HAMILTON, ONTARIO

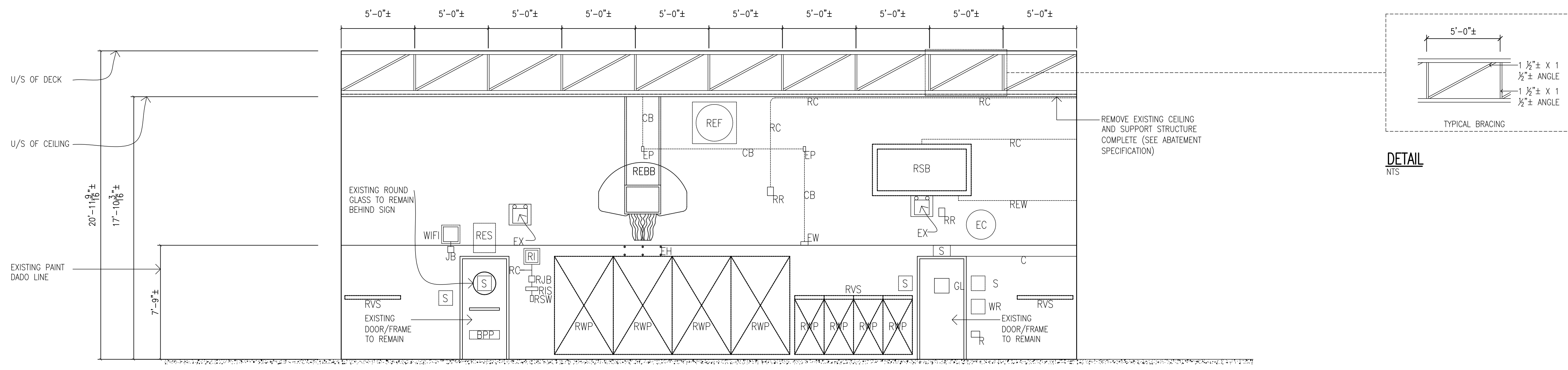
GYM 118 REFLECTED CEILING PLAN - DEMOLITION

DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
FEBRUARY 2023	22-110
SCALE:	SHEET No.:
1/4"=1'-0"	A1.04

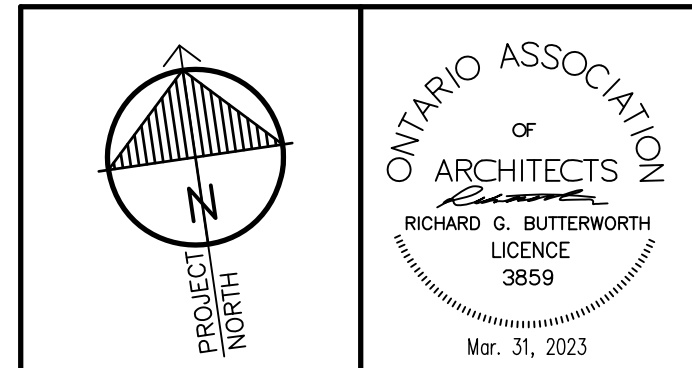
PLOT SCALE: 1/4"=1'-0"



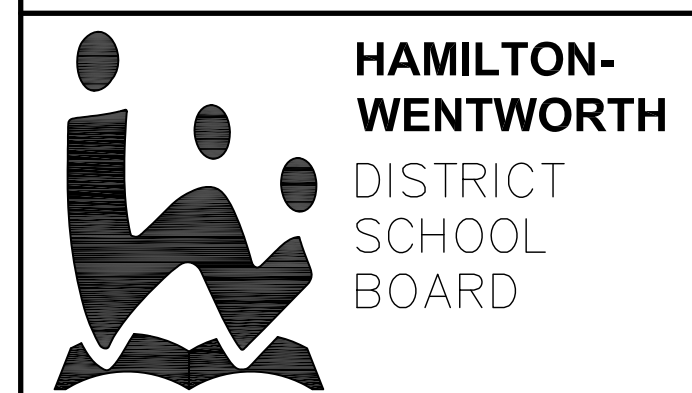
GYM 118 A - DEMOLITION



GYM 118 B - DEMOLITION



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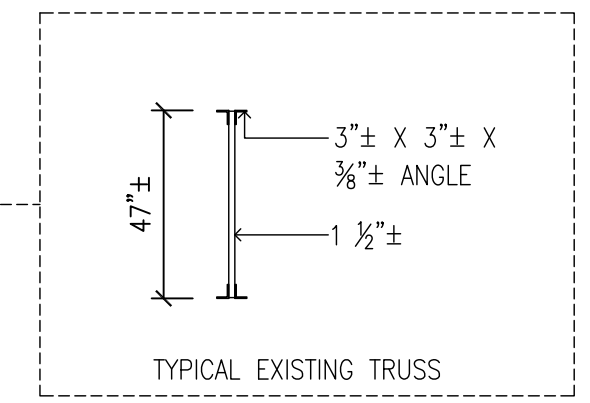
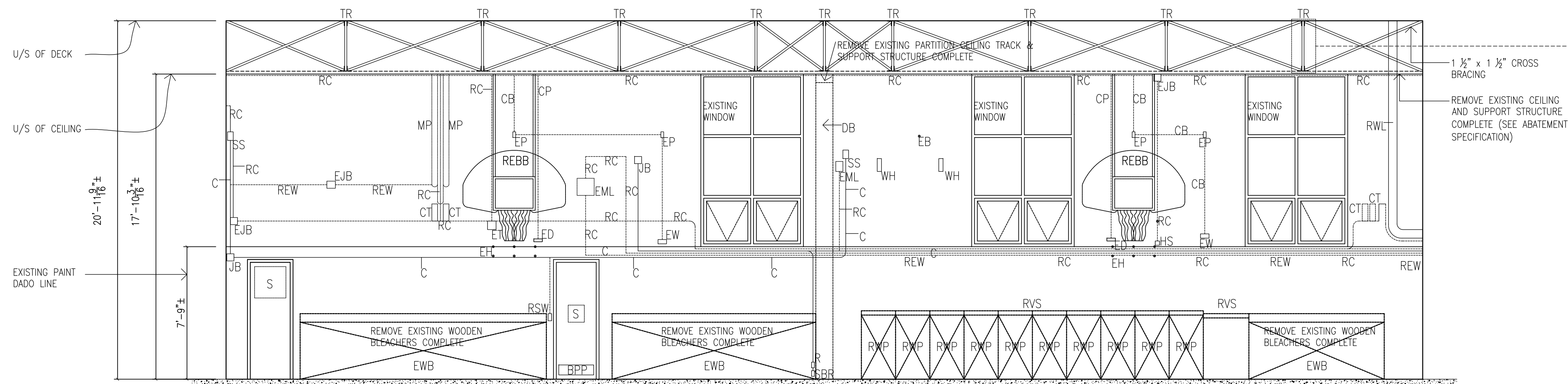
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Ancaster Ontario

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• GYM 118 ROOM ELEVATION A & B - DEMOLITION

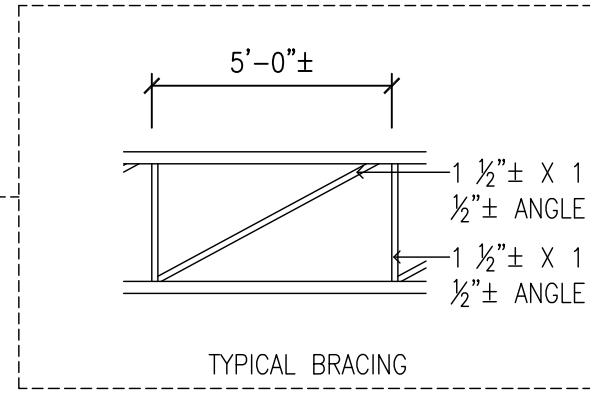
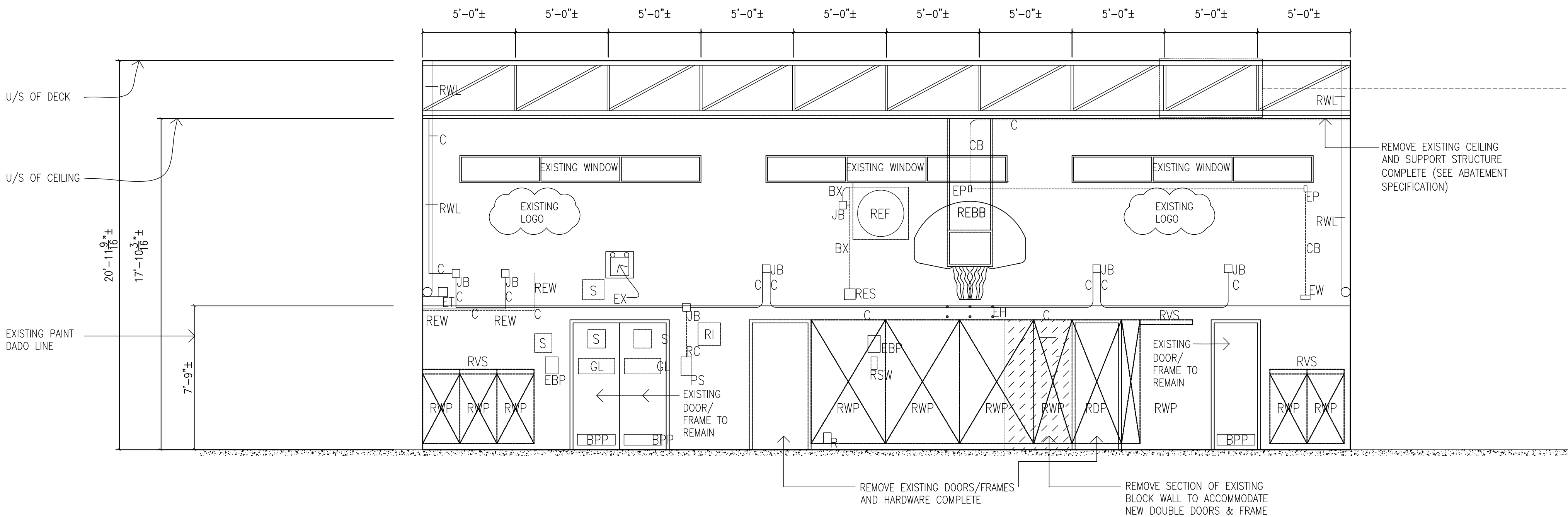
DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
FEBRUARY 2023	22-110
SCALE:	SHEET No.:
1/4"=1'-0"	A1.05

PLOT SCALE: 1/4"=1'-0"



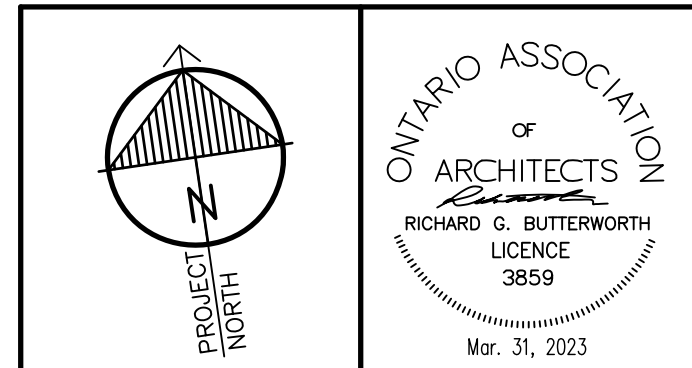
DETAIL  
NTS

GYM 118 C - DEMOLITION

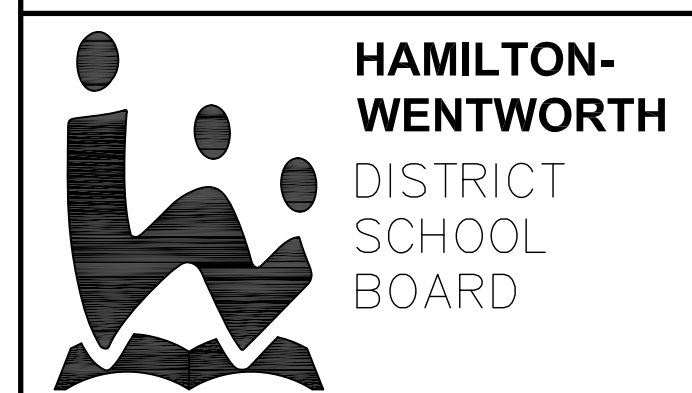


DETAIL  
NTS

GYM 118 D - DEMOLITION



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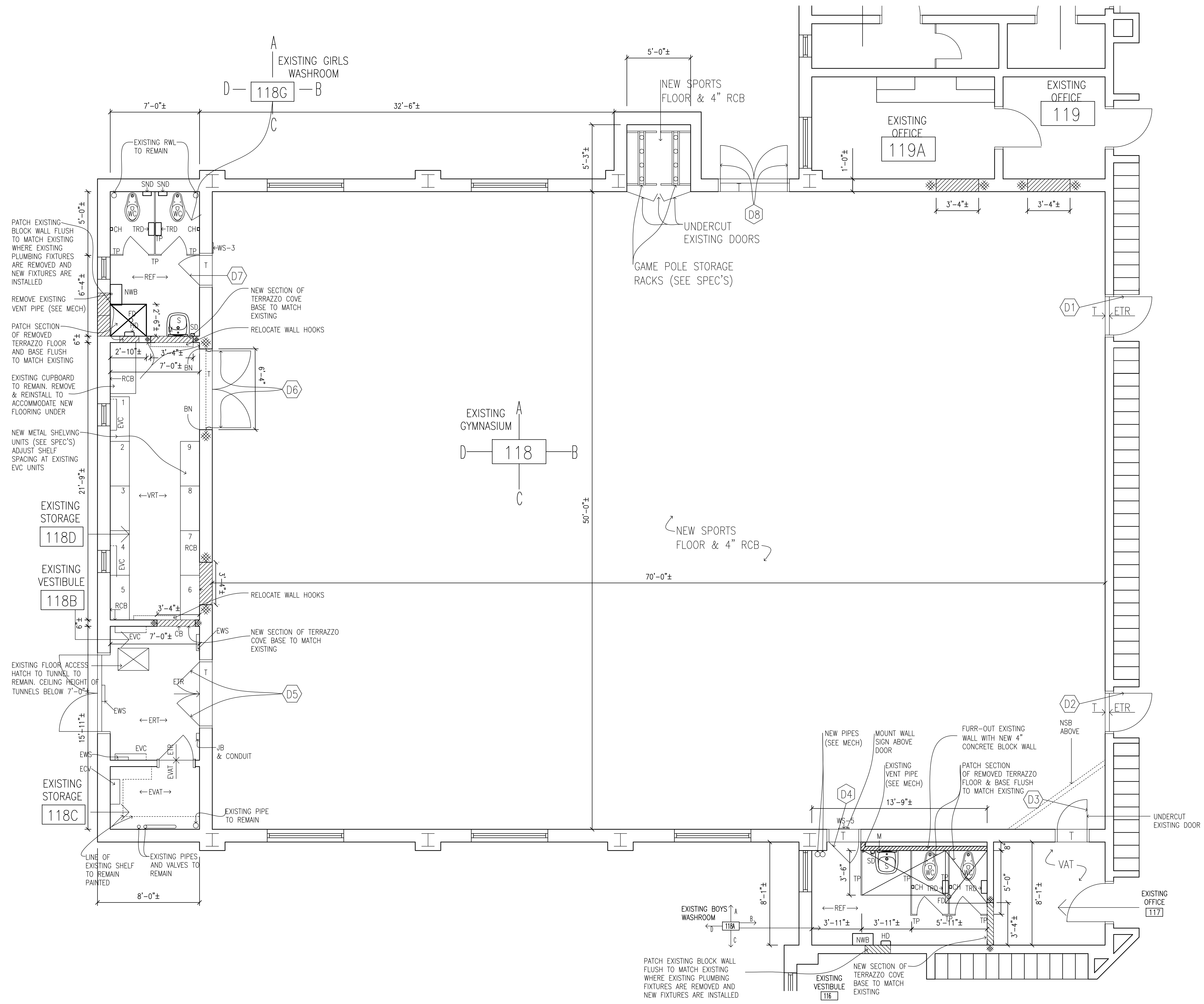
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ARCHITECTURE  
INTERIOR  
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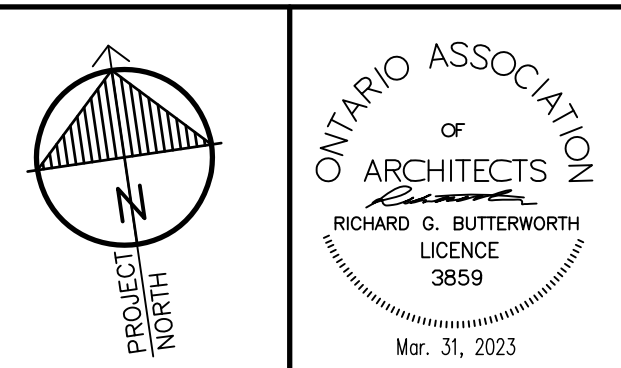
• GYM 118 ROOM ELEVATION C & D - DEMOLITION

DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
FEBRUARY 2023	22-110
SCALE:	SHEET No.:
1/4"=1'-0"	A1.06

PLOT SCALE: 1/4"=1'-0"



1 PARTIAL GROUND FLOOR PLAN - PROPOSED  
 A2.01 1/4"=1'-0"



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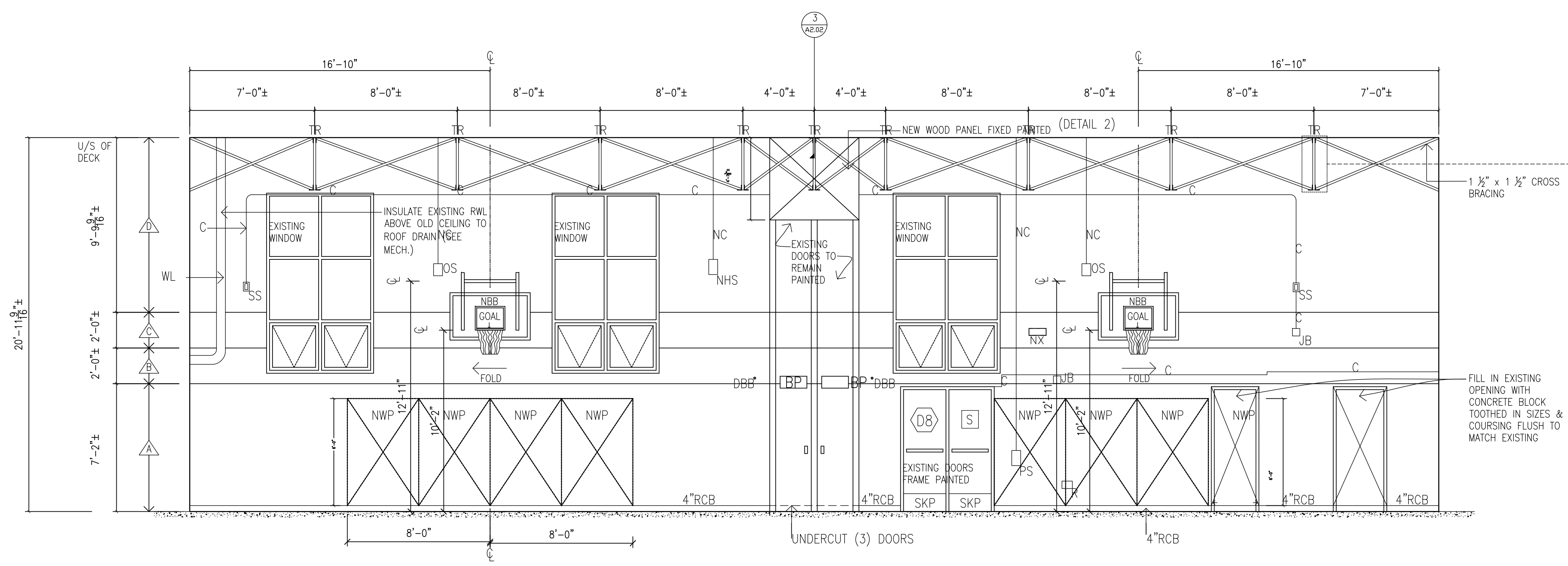
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 Architecture  
 Interiors  
 Urban Planning  
 Ancaster Ontario

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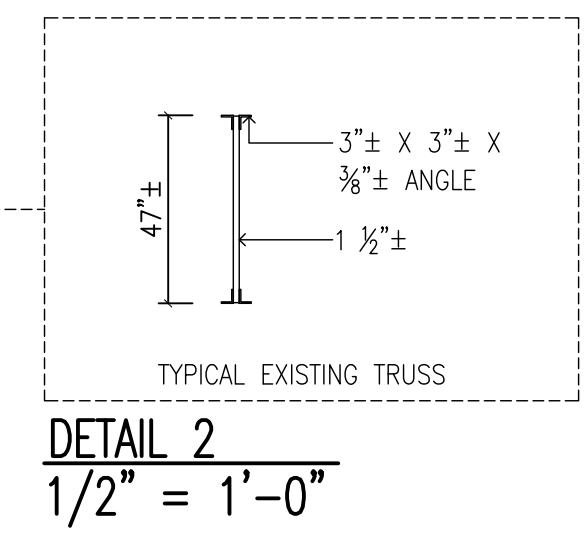
• PARTIAL GROUND FLOOR PLAN  
 PROPOSED BOYS AND GIRLS WASHROOMS

DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
FEBRUARY 2023	22-110
SCALE:	SHEET No.:
1/4"=1'-0"	A2.01

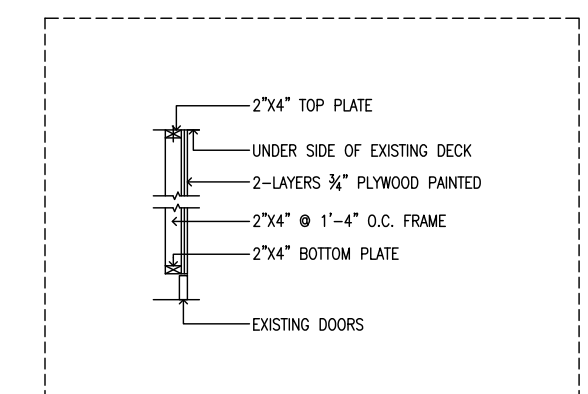
PLOT SCALE: 1/4"=1'-0"



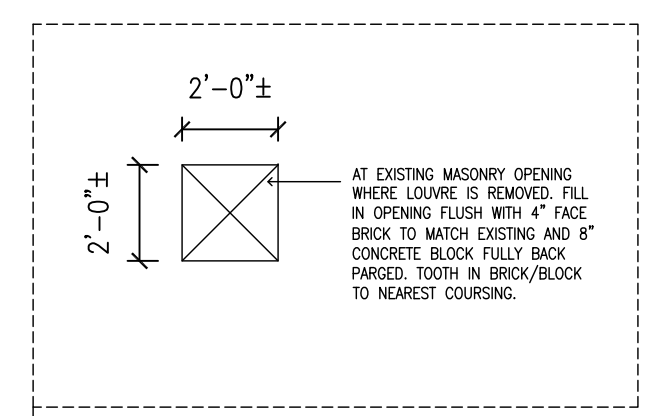
GYM 118 A - PROPOSED



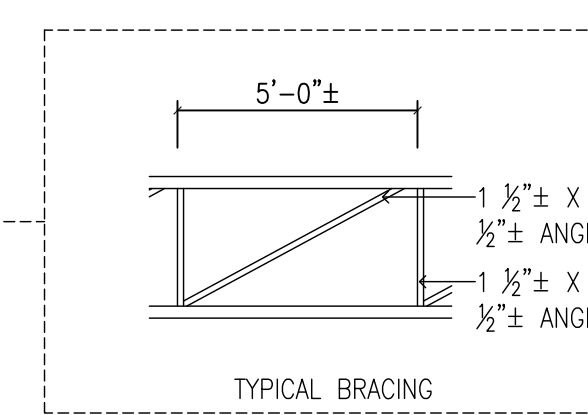
DETAIL 2  
1/2" = 1'-0"



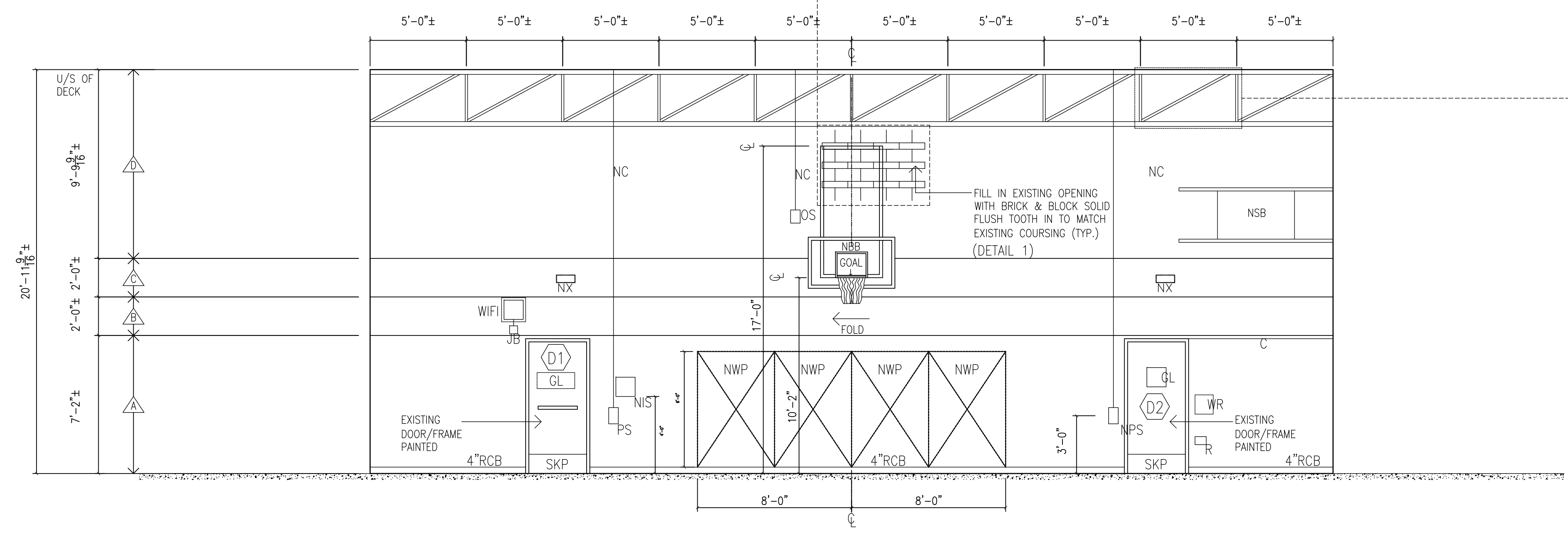
DETAIL 3  
1/2" = 1'-0"



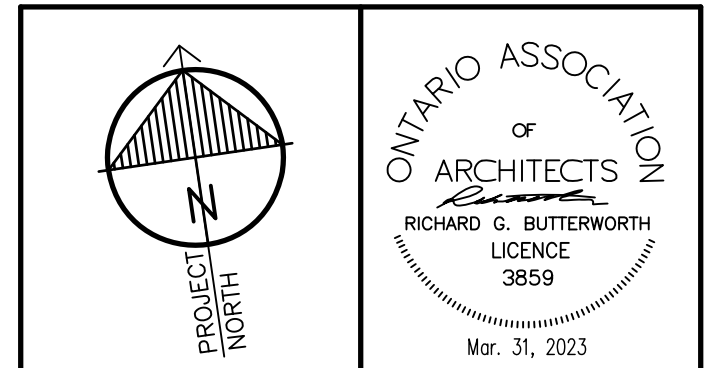
DETAIL 1  
1/2" = 1'-0"



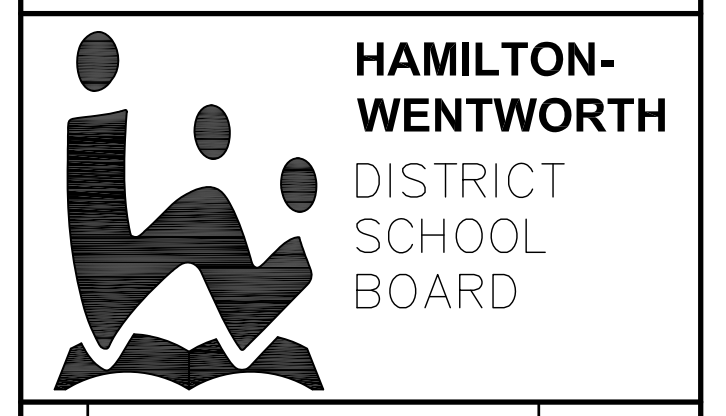
DETAIL 4  
1/2" = 1'-0"



GYM 118 B - PROPOSED



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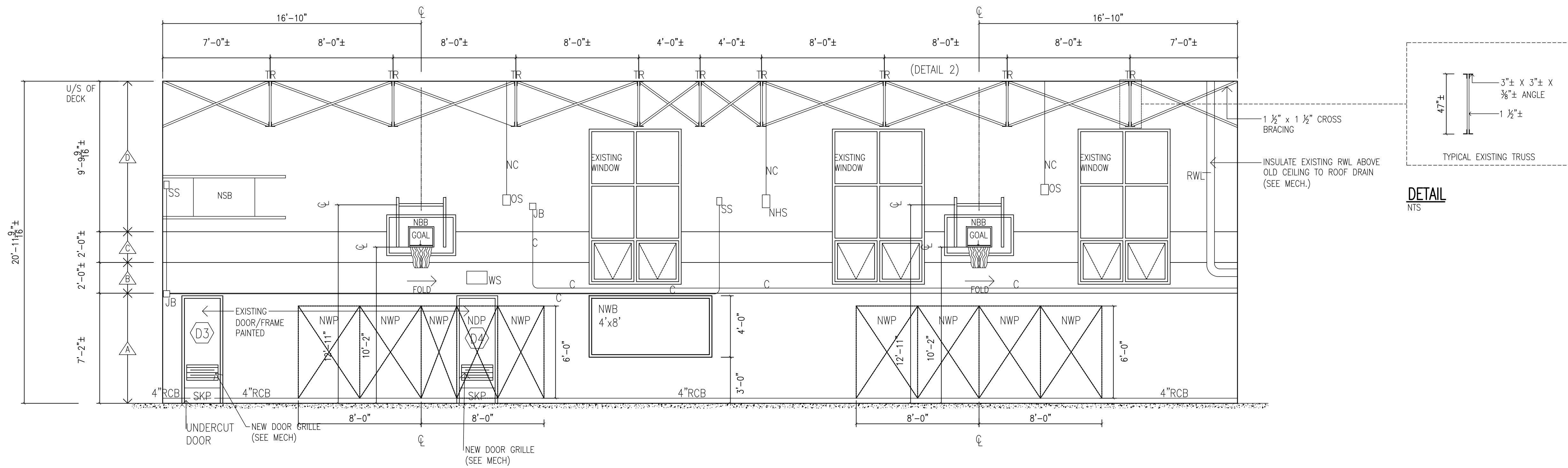
3.	ISSUED FOR CONSTRUCTION	MAR. 31, 2023
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ARCHITECT  
ARCHITECTURE  
INTERIORS  
URBAN PLANNING  
Ancaster Ontario

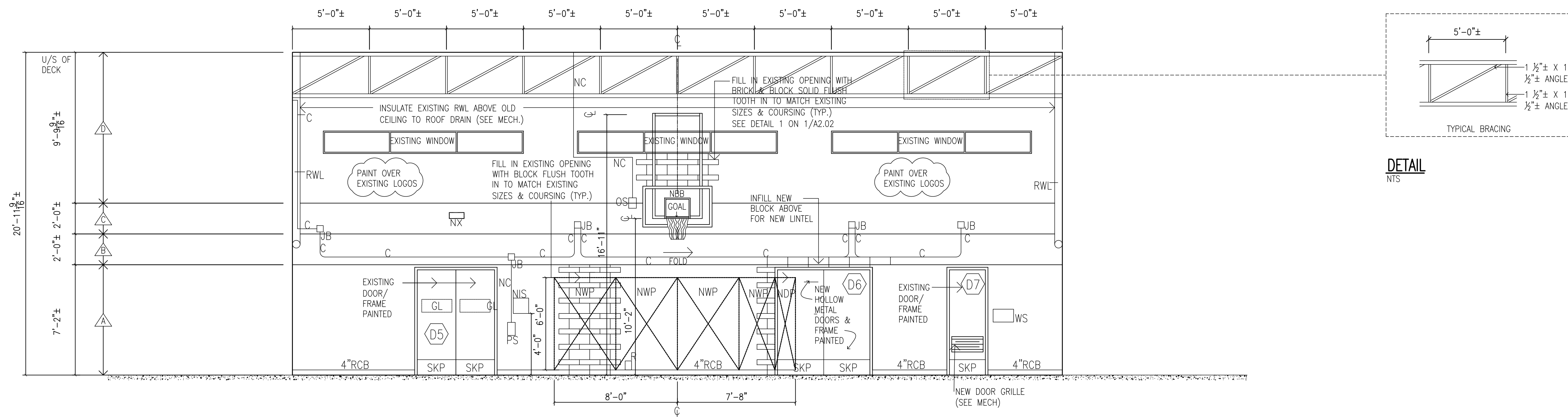
**VISCOUNT MONTGOMERY PUBLIC SCHOOL**  
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD  
1525 LUCERNE AVENUE  
HAMILTON, ONTARIO

• PROPOSED GYMNASIUM 118  
ELEVATION A & B

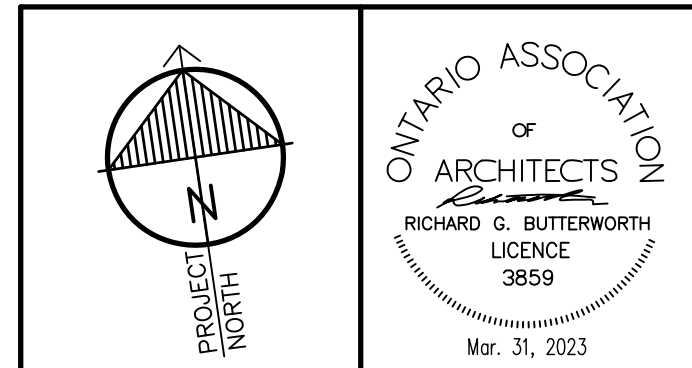
DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
FEBRUARY 2023	22-110
SCALE:	SHEET No.:
1/4"=1'-0"	A2.02



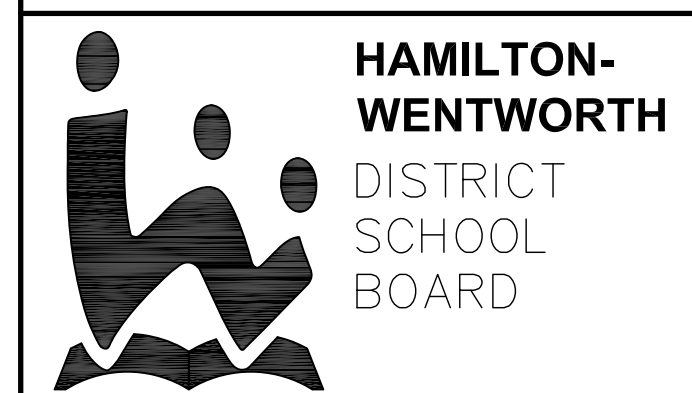
GYM 118 C - PROPOSED



GYM 118 D - PROPOSED



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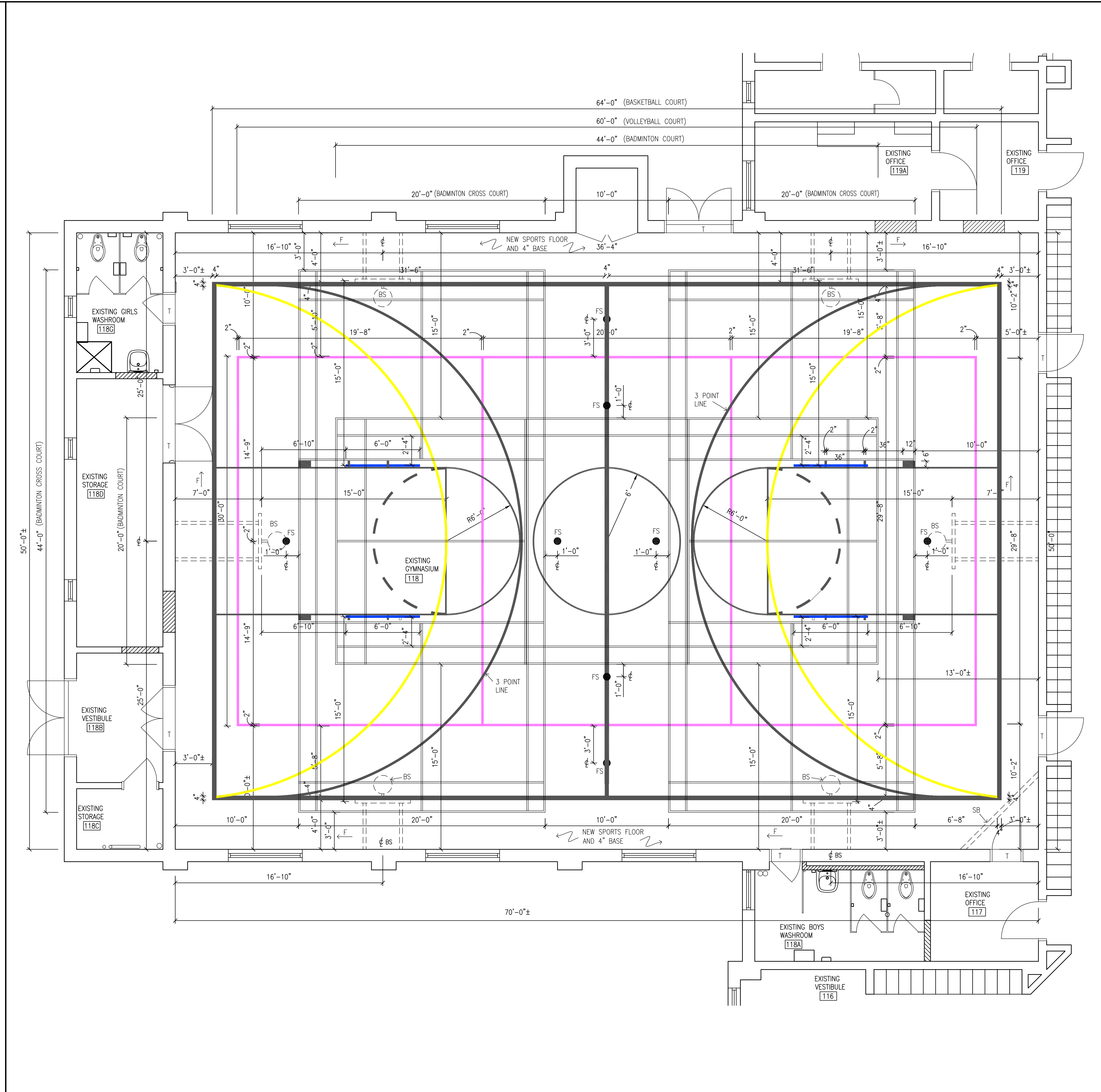
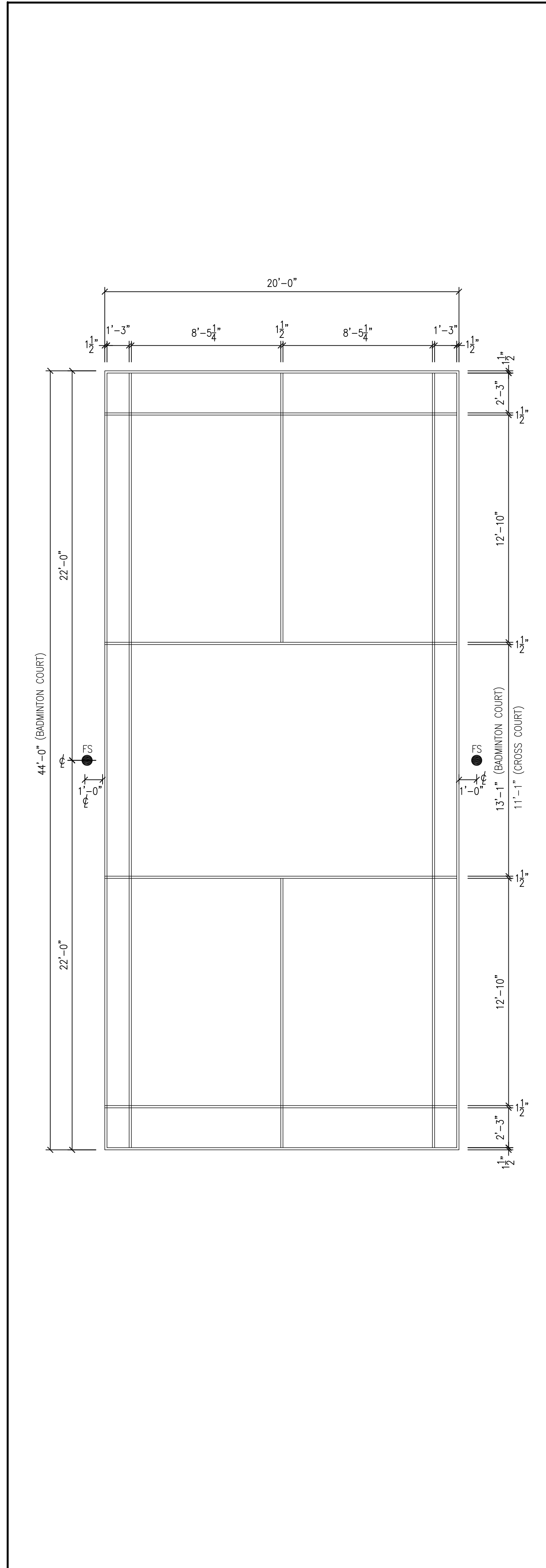
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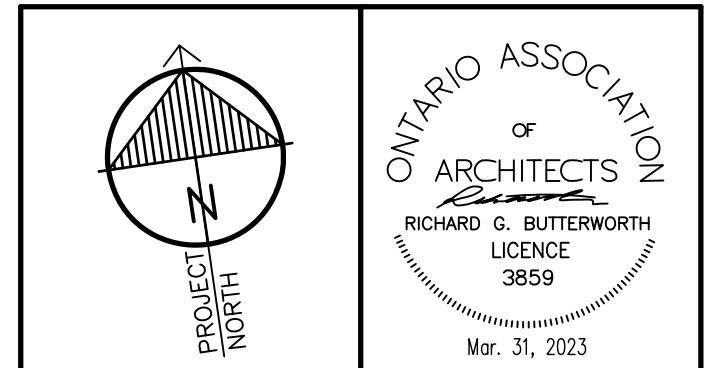
• PROPOSED GYMNASIUM 118  
ELEVATION C & D

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FEBRUARY 2023	22-110
SCALE:	SHEET No.:
1/4"=1'-0"	A2.03



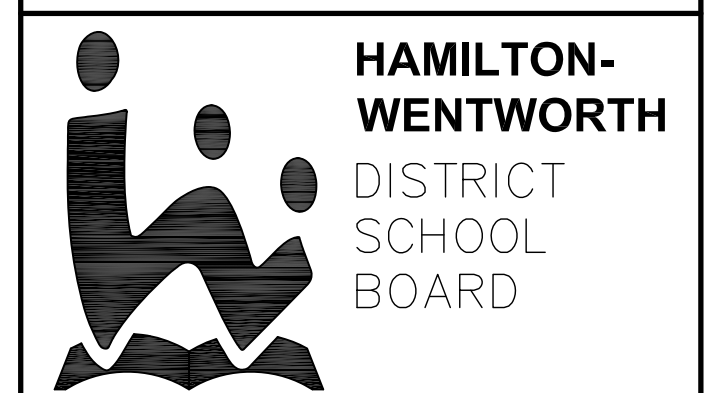
1 PROPOSED GYMNASIUM BADMINTON COURT DIMENSIONS  
A2.04 1/4"=1'-0"

2 PROPOSED GYMNASIUM 118 SPORTS FLOOR PLAN  
A2.04 1/4"=1'-0"



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- PROPOSED LEGEND**
- 2"-4" WIDE BASKETBALL LINE (BLACK)
  - 2" WIDE VOLLEYBALL (CUSTOM PURPLE COLOUR)
  - 2" WIDE BASKETBALL PRACTICE LINE (BLUE)
  - 1 1/2" WIDE BADMINTON (WHITE)
  - 2" WIDE HANDBALL LINE (CUSTOM YELLOW COLOUR)
- FS - NEW FLOOR SOCKETS (SEE SPEC'S)  
T - NEW ALUMINUM TRANSITION THRESHOLD (SEE SPEC'S)  
BS - NEW ADJUSTABLE HEIGHT BACKSTOP /NET FOLD TO SIDE (SEE SPEC'S)  
SB - NEW SCORE BOARD (SEE SPEC'S)  
F - DIRECTION OF FOLD (30'-0"x60'-0")  
1 - VOLLEYBALL COURT (30'-0"x60'-0")  
1 - BADMINTON COURT (20'-0"x44'-0")  
2 - BADMINTON CROSS COURT (20'-0"x44'-0")  
1 - BASKETBALL COURT (42'-0"x64'-0")



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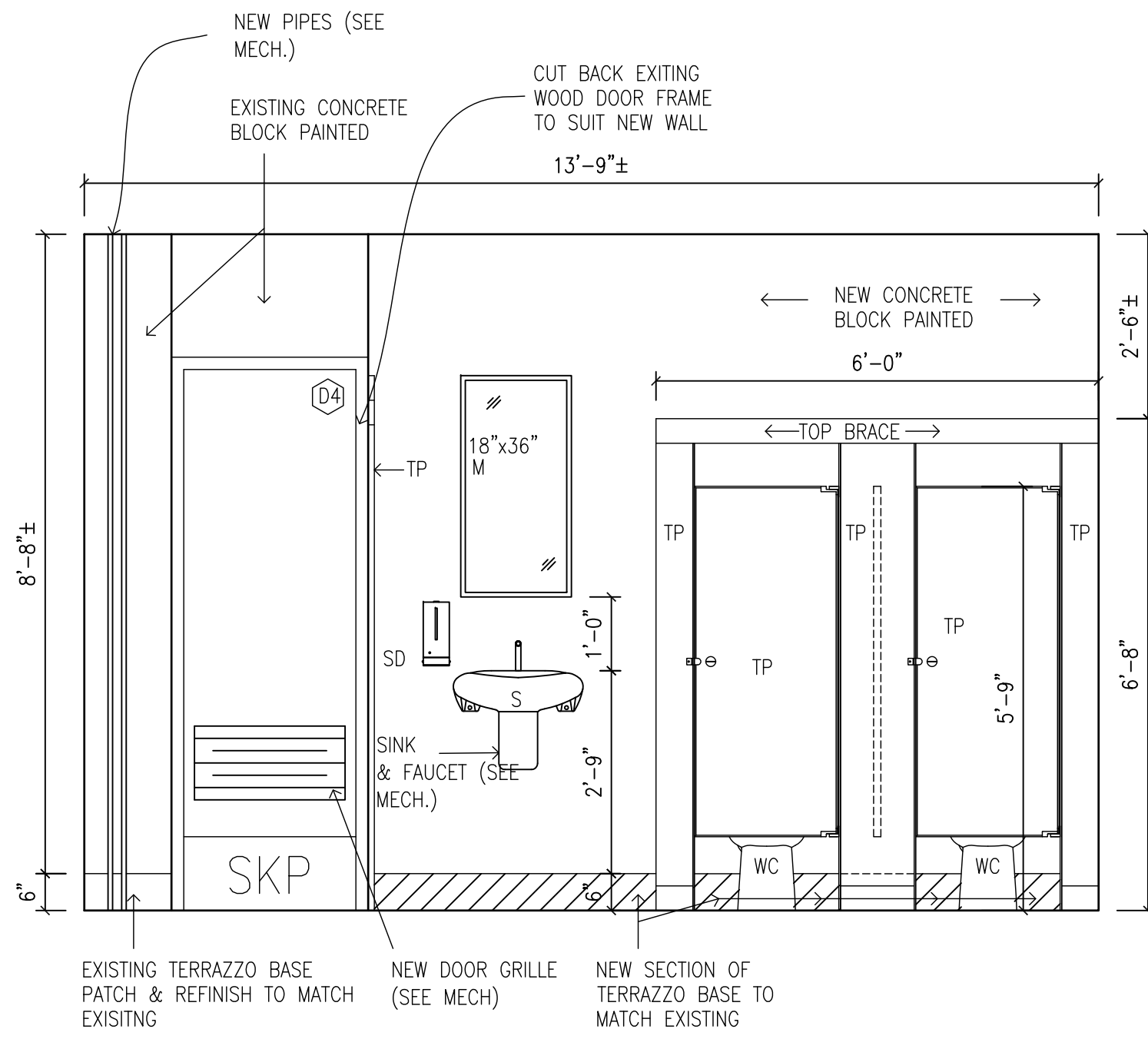
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ARCHITECTURE  
INTERIORS  
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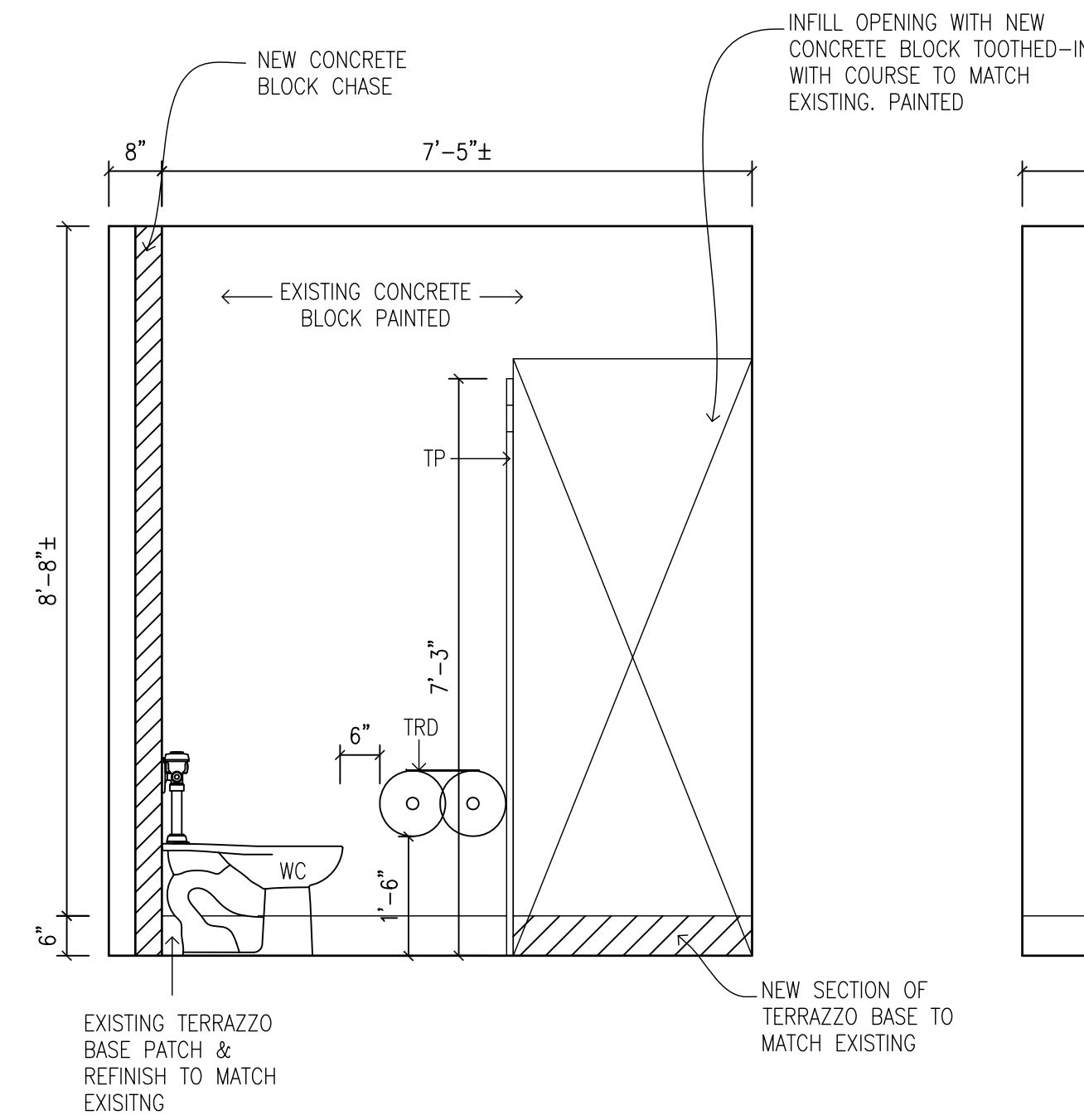
• PARTIAL GROUND FLOOR PLAN  
PROPOSED GYMNASIUM 118

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SCALE:	SHEET No.:
1/4"=1'-0"	A2.04

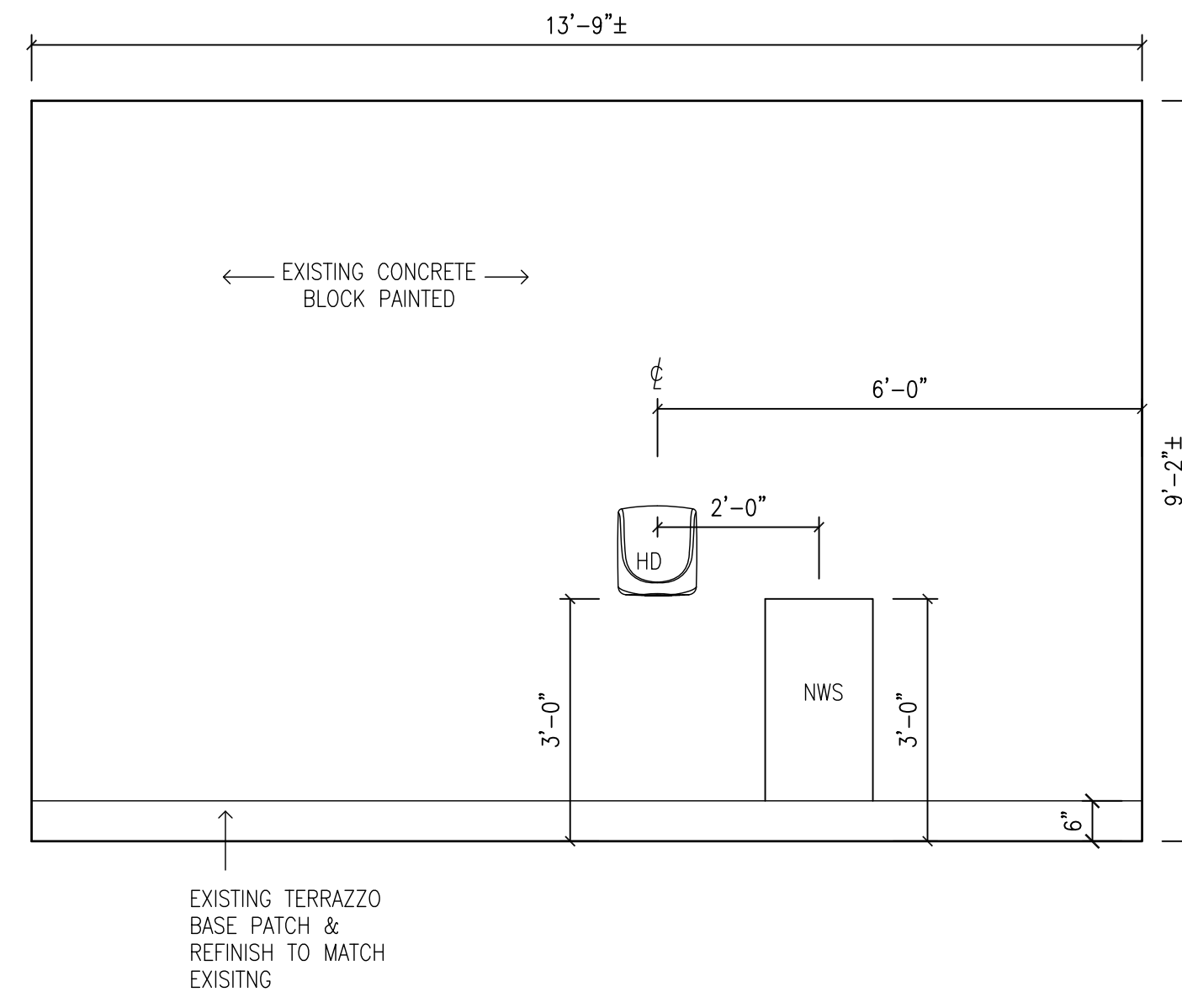
PLOT SCALE: 1/4"=1'-0"



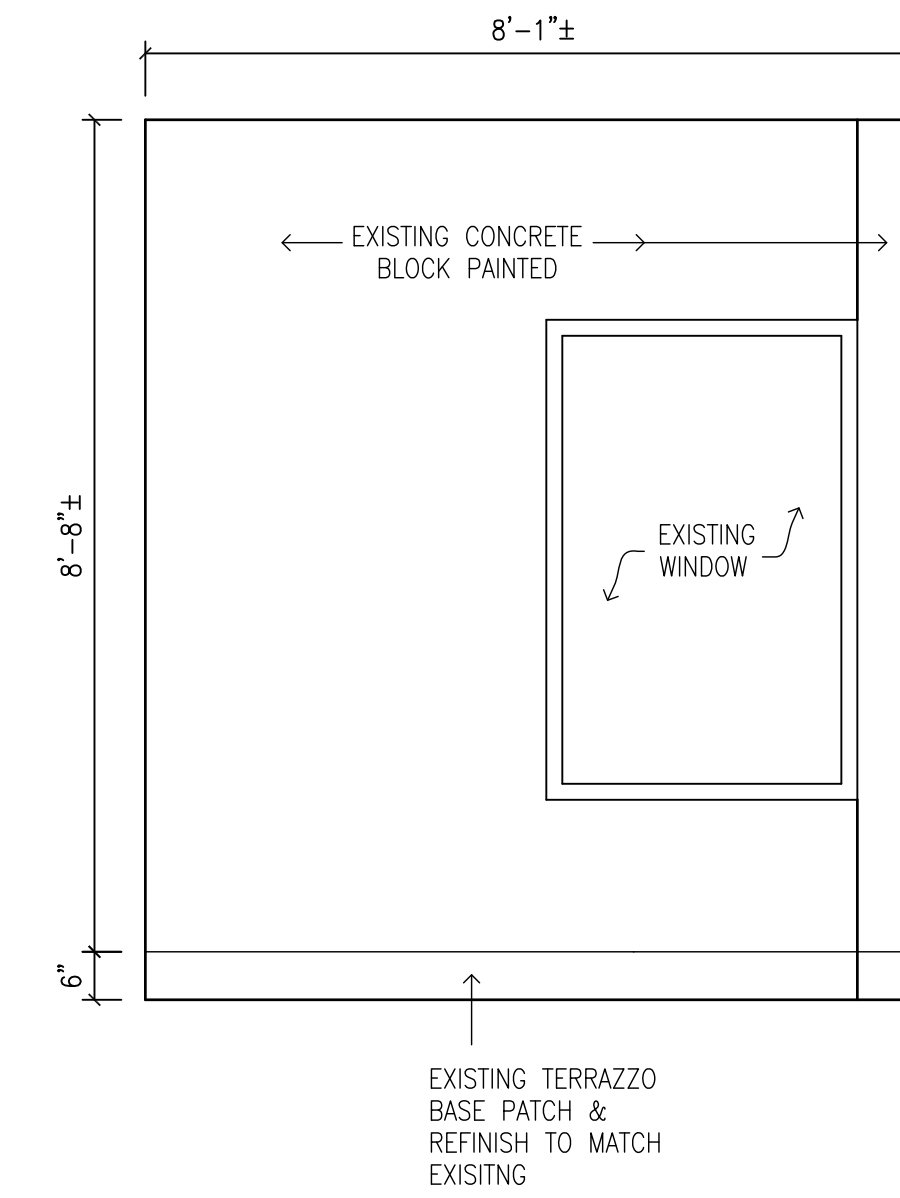
BOYS WASHROOM 118A A - PROPOSED



BOYS WASHROOM 118A B - PROPOSED

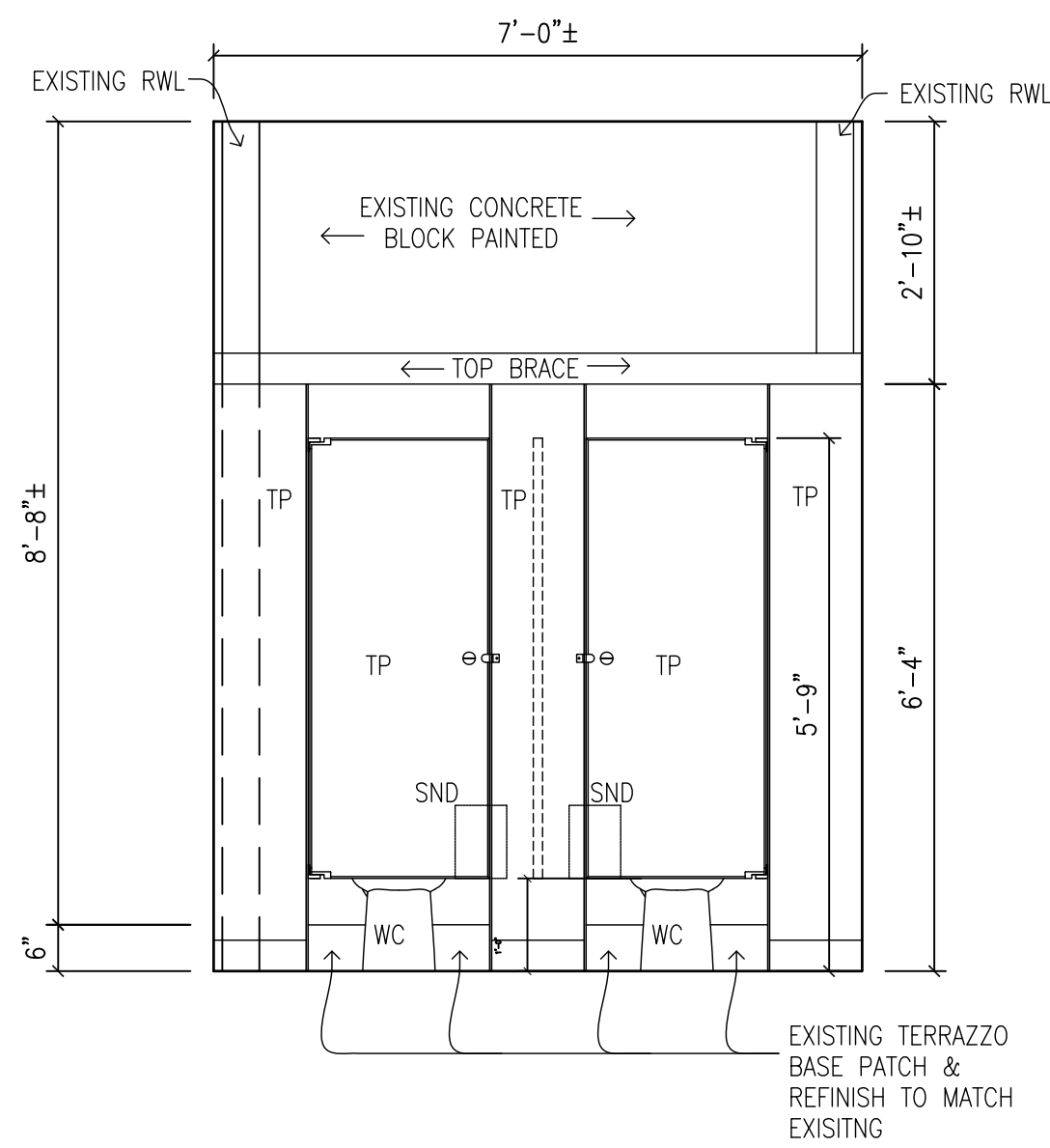


BOYS WASHROOM 118A C - PROPOSED

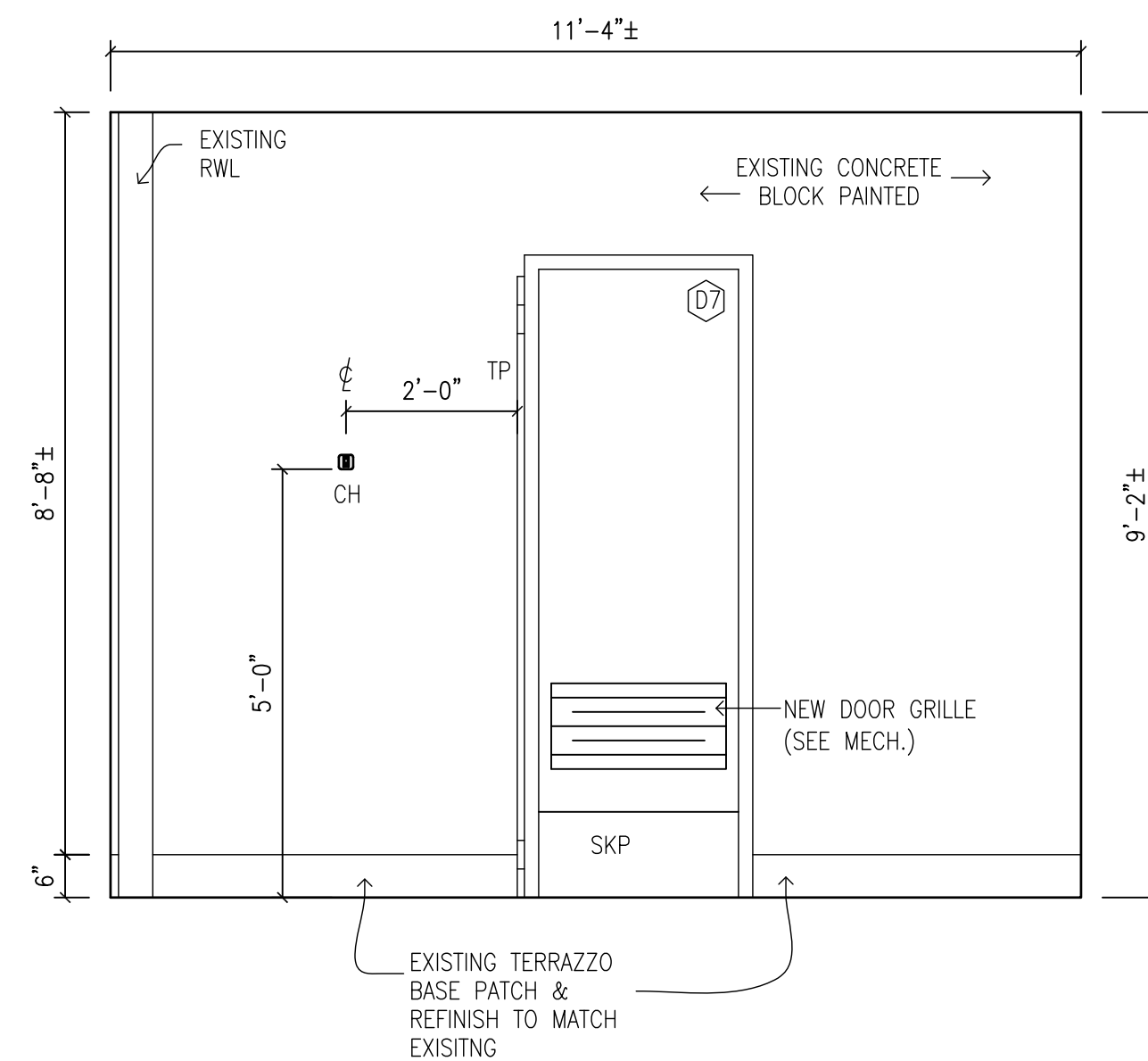


BOYS WASHROOM 118A D - PROPOSED

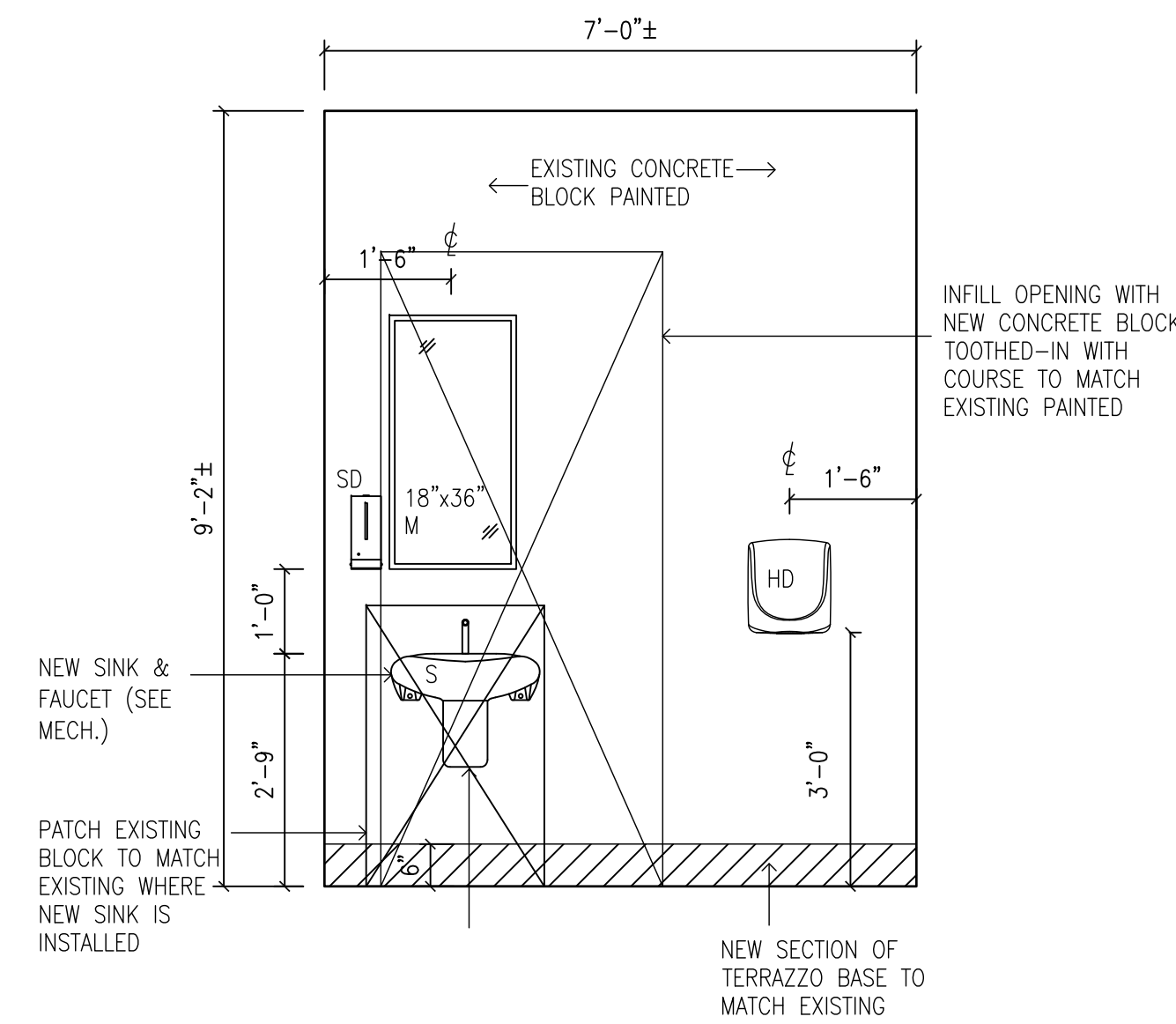
1 BOYS WASHROOM 118A  
A2.05 1/2"=1'-0"



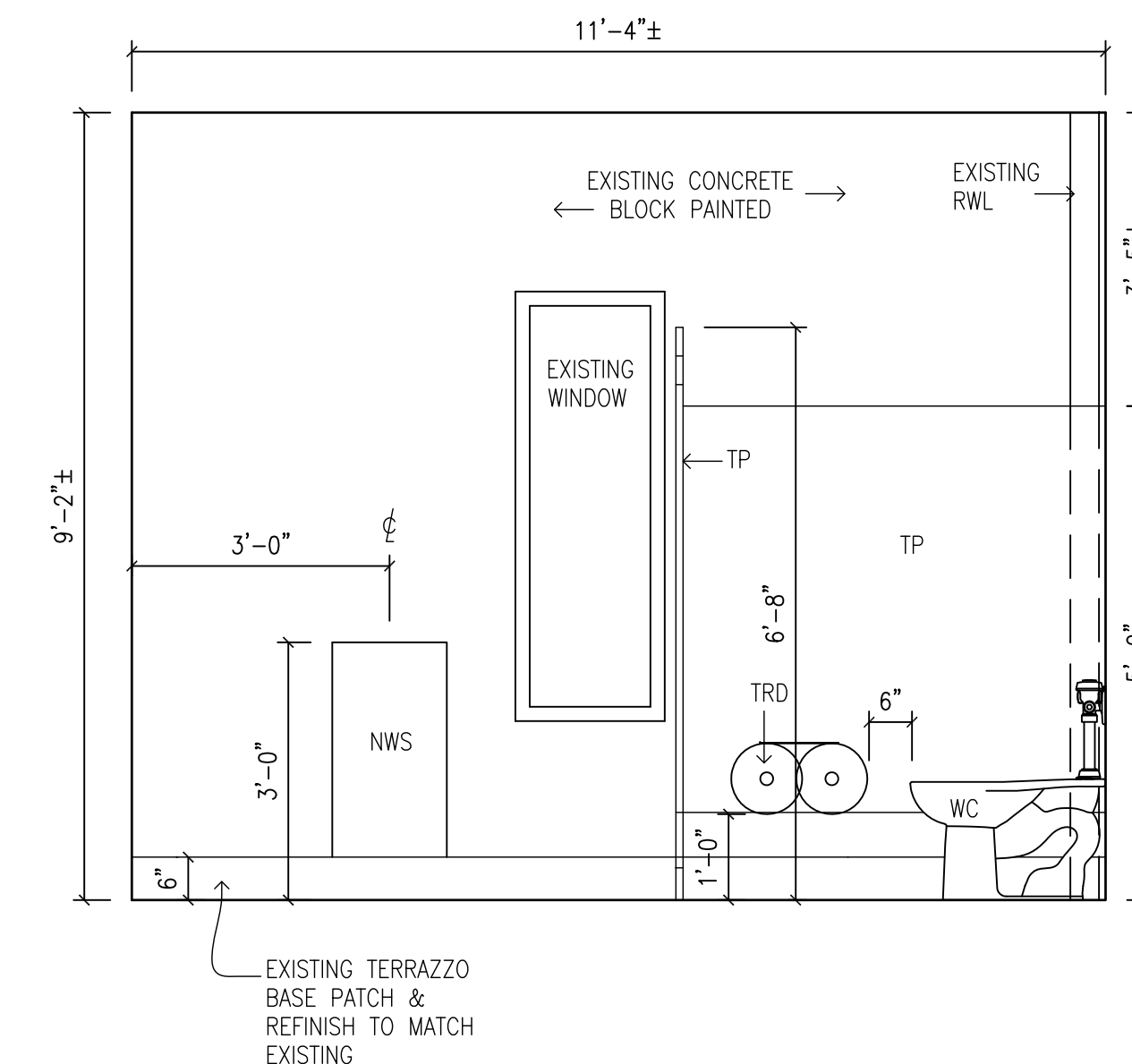
GIRLS WASHROOM 118G A - PROPOSED



GIRLS WASHROOM 118G B - PROPOSED

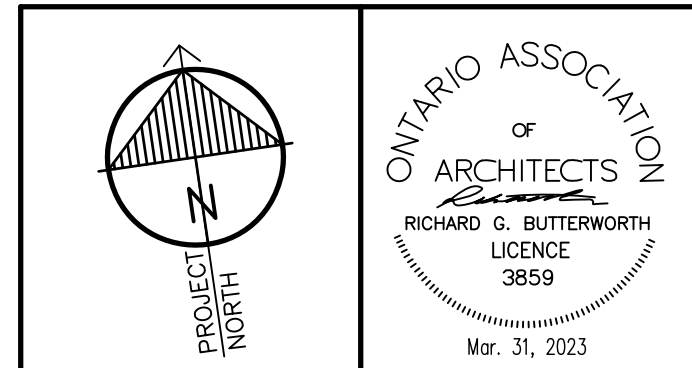


GIRLS WASHROOM 118G C - PROPOSED



GIRLS WASHROOM 118G D - PROPOSED

2 GIRLS WASHROOM 118G  
A2.05 1/2"=1'-0"



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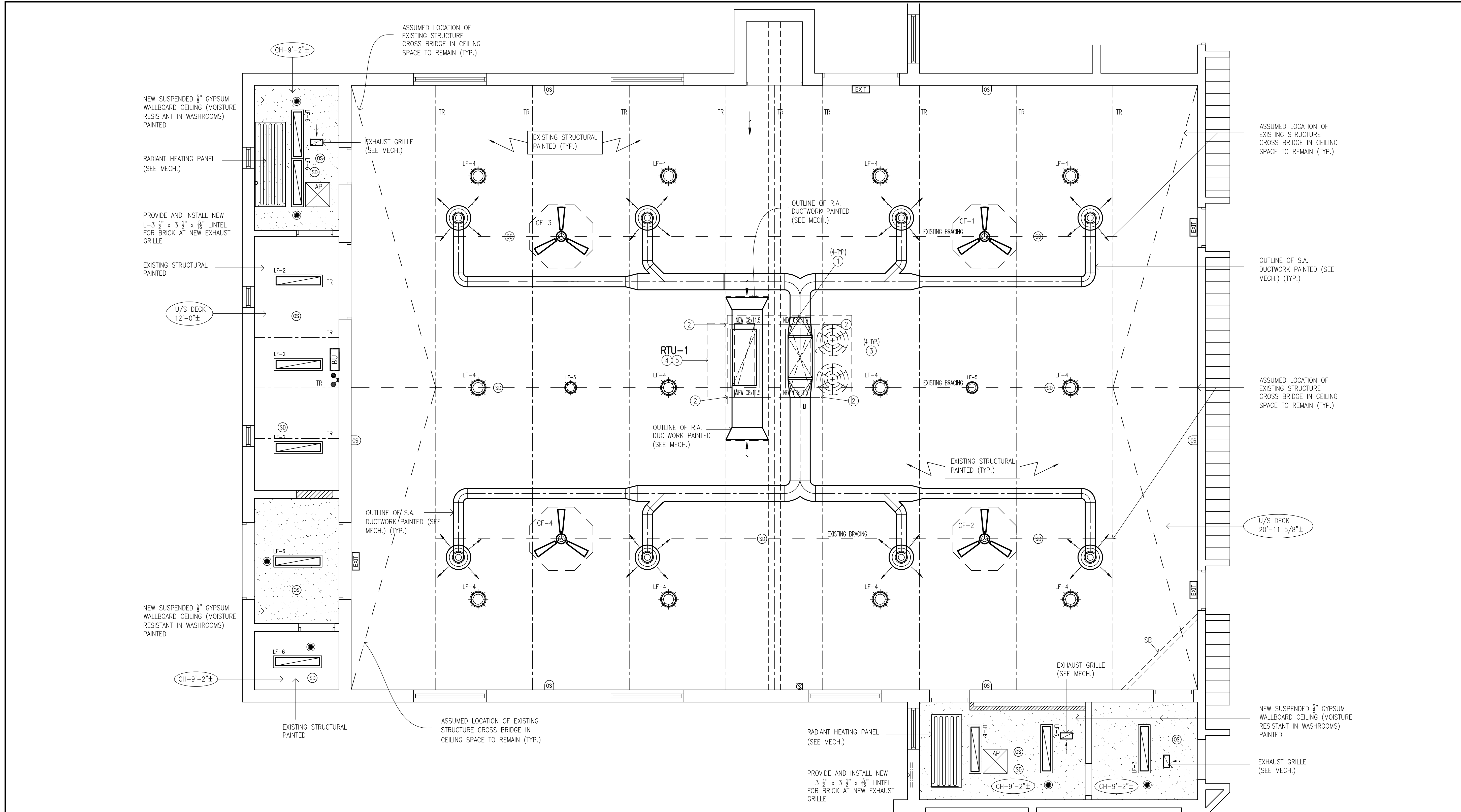
**RICHARD G. BUTTERWORTH**  
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ARCHITECTURE  
INTERIOR  
URBAN PLANNING  
Ancaster Ontario

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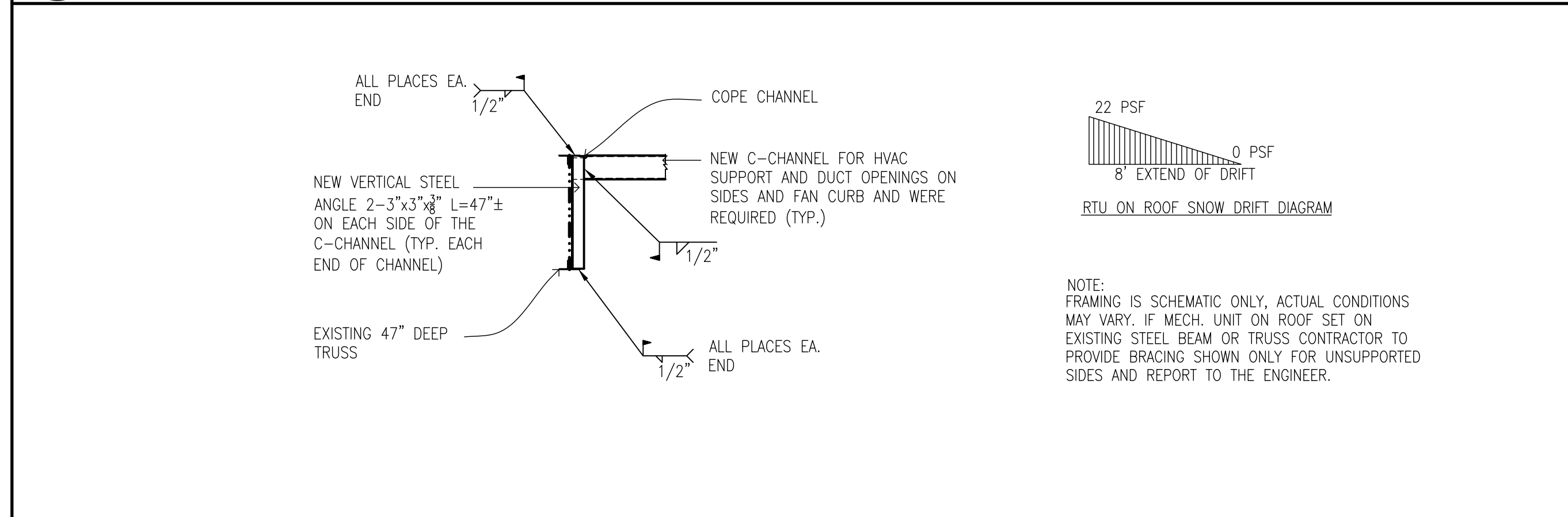
\* BOYS AND GIRLS WASHROOM ELEVATIONS

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MS	RGB
DATE:	JOB No.:
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SCALE:	SHEET No.:
1/2"=1'-0"	A2.05

PLOT SCALE: 1/4"=1'-0"

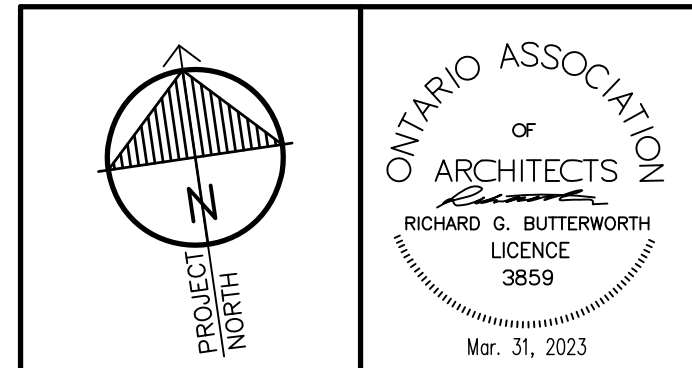


1 PROPOSED REFLECTED CEILING AND RTU FRAMING PLAN  
A2.06 1/4"=1'-0"



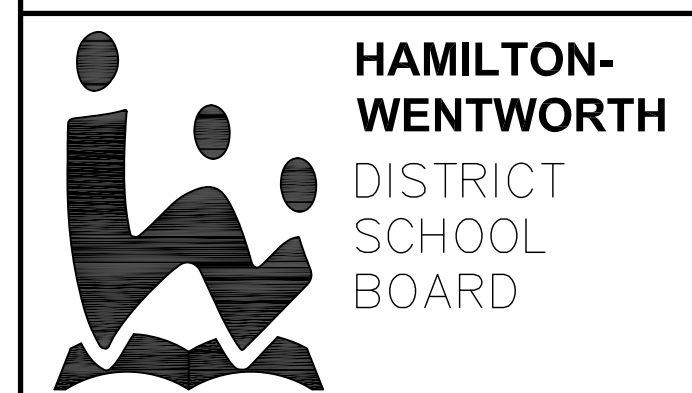
2 STRUCTURAL REINFORCEMENT DETAIL TO EXISTING OWSJ  
A2.06 N.T.S.

- STRUCTURAL DRAWING NOTES**
- 1 - WELD NEW STEEL CHANNELS / STEEL ANGLES SUPPORT FRAMING TO EXISTING TRUSS (TYP.). INSTALL FRAMING TIGHT TO UNDERSIDE OF EXISTING STEEL DECK.
  - 2 - WELD NEW STEEL ANGLES 2-3"x3"x3/8" L=47"± ON EACH SIDE OF THE C-CHANNEL ALONG EXISTING TRUSS VERTICALLY AT NEW CHANNEL TO EXISTING TRUSS JOINING POINT. SEE SECTION DETAILS (TYP. ALL LOCATION).
  - 3 - INSTALL NEW STEEL ANGLES L4"x4"x1/2" WHERE NEW DUCTWORK ROOF OPENING MADE (TYP. ALL LOCATION).
  - 4 - INSTALL NEW L1 1/2"x1 1/2"x3/8" STEEL ANGLE FOR ALL DUCTWORK OPENINGS. COORDINATE WITH ARCHITECTURAL ROOF CURB DETAIL ON A2.07.
  - 5 - NEW ROOF TOP UNIT ON ROOF OPERATING WEIGHT 2550± LBS COMPLETE WITH RTU CURB ON ROOF DECK FASTENINGS TO ROOF STRUCTURAL FRAMING SYSTEM (SEE MECH.).



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- PROPOSED LEGEND**
- AP - NEW 2'x2' ACCESS PANEL (SEE SPEC'S)
  - CF-1 - NEW CEILING MOUNTED CIRCULATING FAN (SEE MECH.)
  - TR - EXISTING STRUCTURAL TRUSS TO REMAIN
  - OS - CEILING OR WALL MOUNTED OCCUPANCY SENSOR (SEE ELEC.)
  - SD - CEILING MOUNTED SMOKE ALERT DETECTOR (SEE ELEC.)
  - LF-4 - SUPPLY AIR DIFFUSER (SEE MECH.)
  - LF-4 - HIGH BAY LED LIGHT FIXTURE SIZE 16" (SEE ELEC.)
  - RE - AMLITE RECESSED REMOTE EMERGENCY LIGHT LED SUSPENDED CEILING (SEE ELEC.)
  - BU - BATTERY UNIT (SEE ELEC.)
  - RE - NEW WALL MOUNT EMERGENCY LIGHT FIXTURE (SEE ELEC.)



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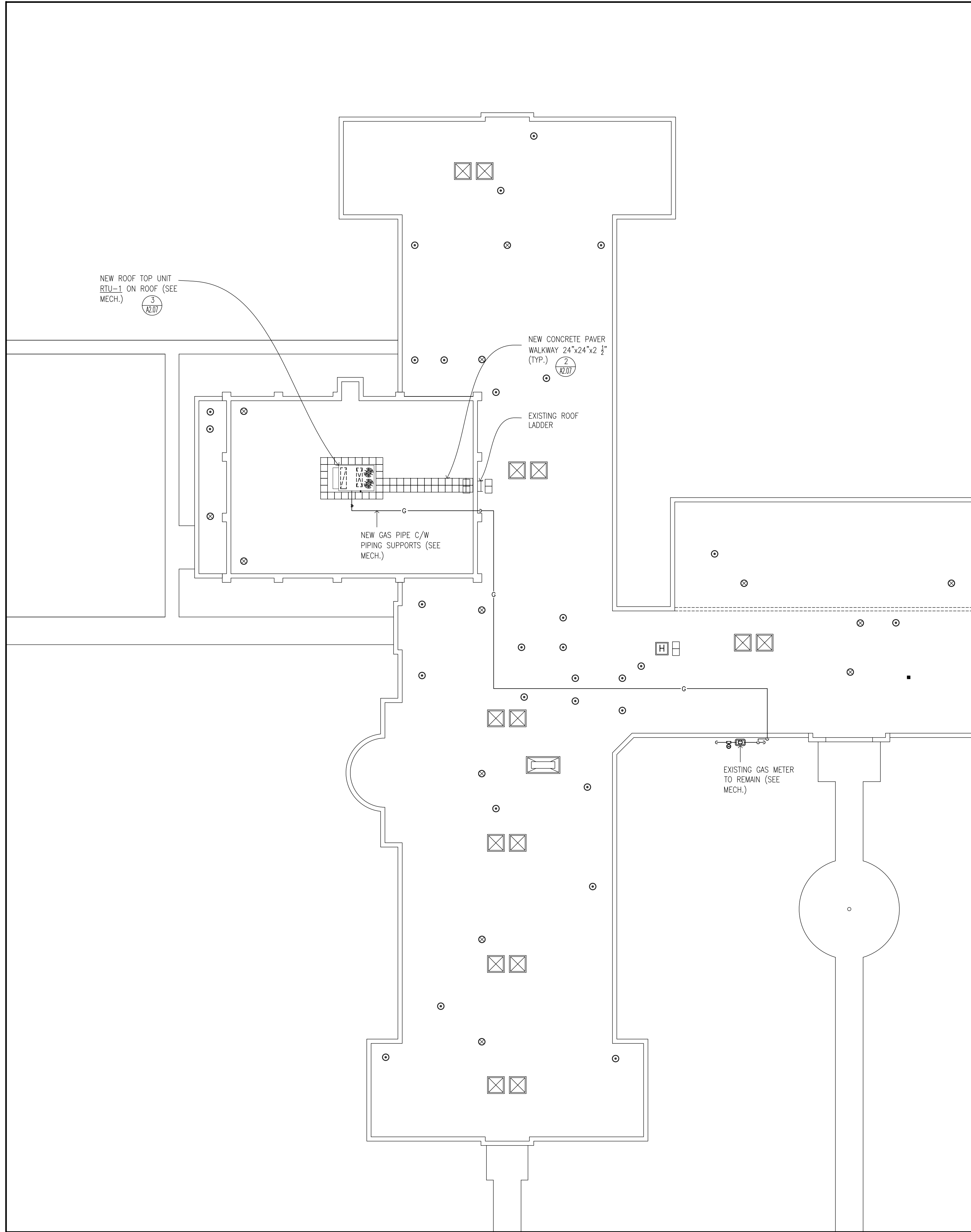
**RICHARD G. BUTTERWORTH**  
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ARCHITECTURE  
INTERIORS  
URBAN PLANNING  
Ancaster Ontario

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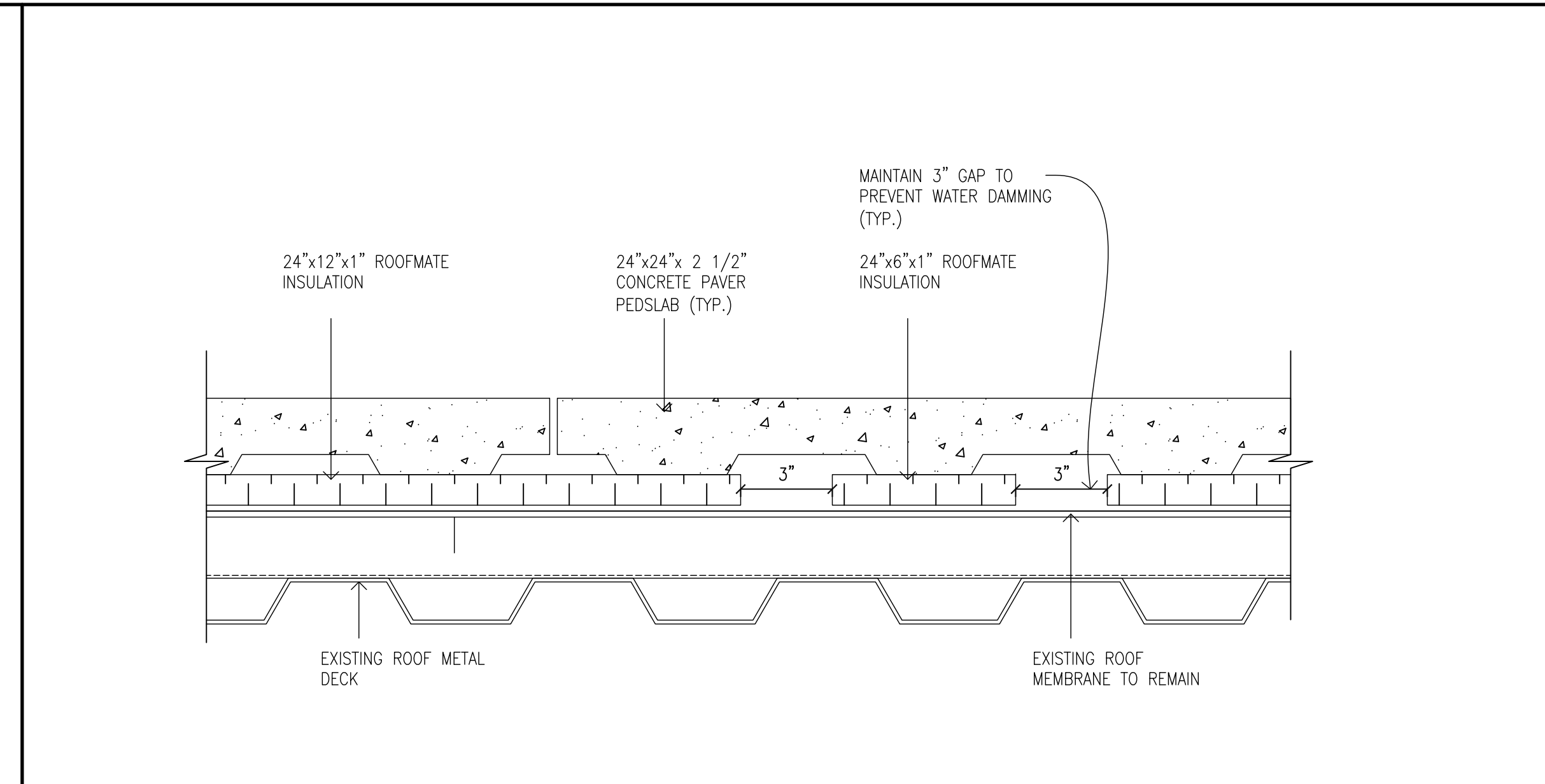
\* PARTIAL REFLECTED CEILING PLAN AND STRUCTURAL FRAMING PROPOSED GYMNASIUM 118

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MS	RGB
DATE:	JOB No.:
FEBRUARY 2023	22-110
SCALE:	SHEET No.:
AS SHOWN	A2.06

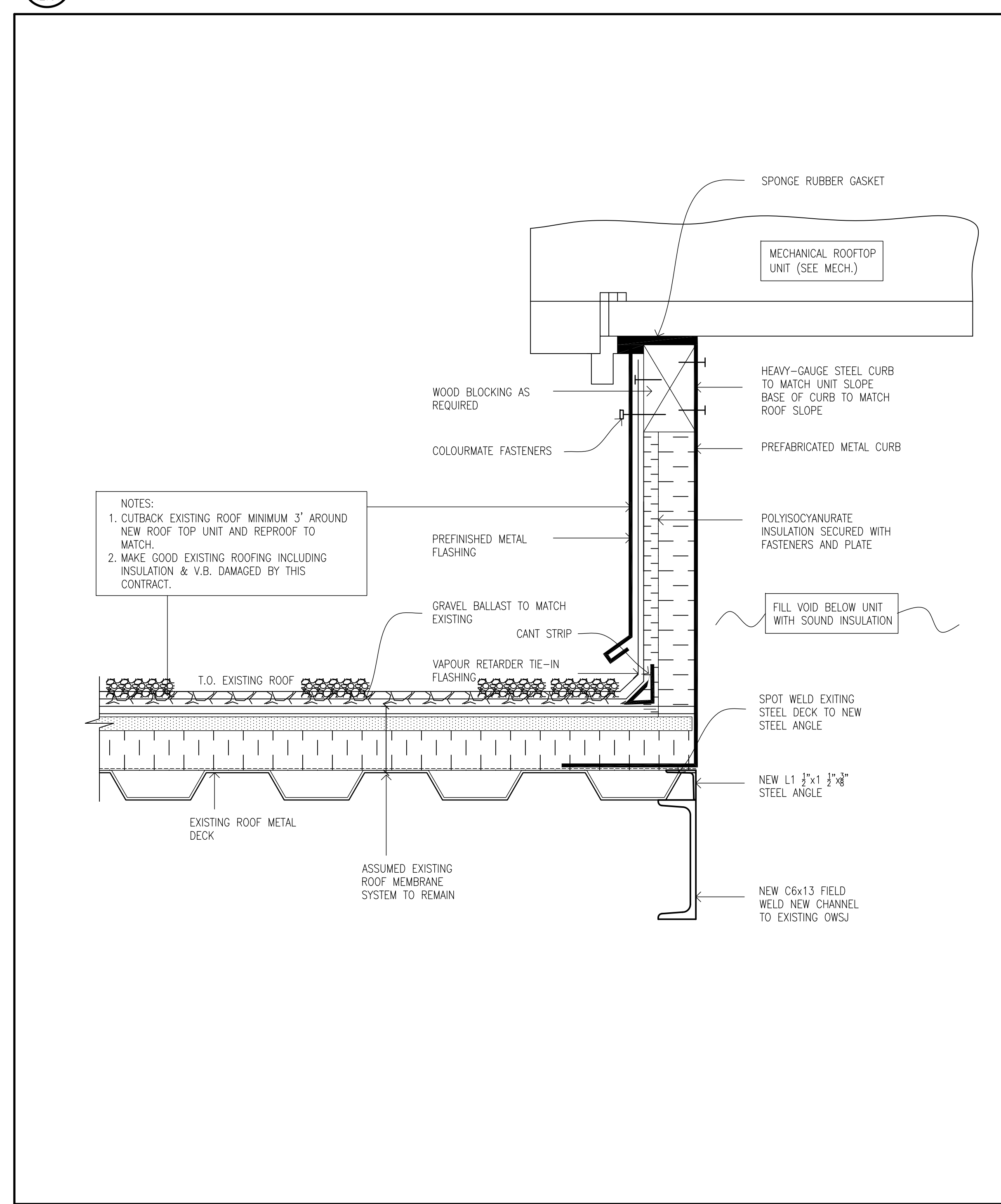
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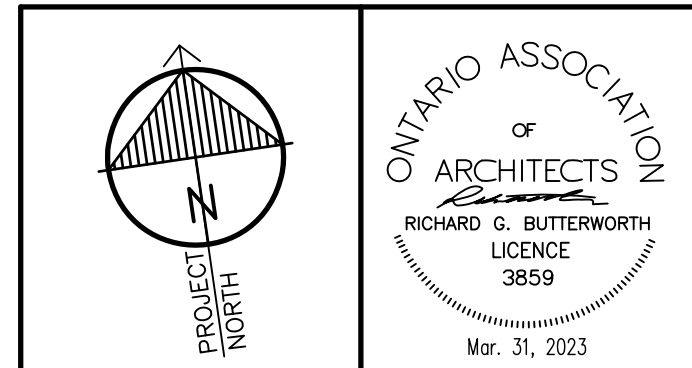
1 ROOF PLAN  
A2.07 N.T.S.



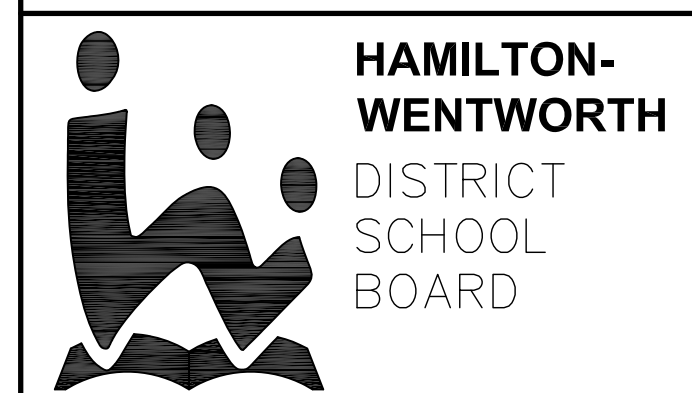
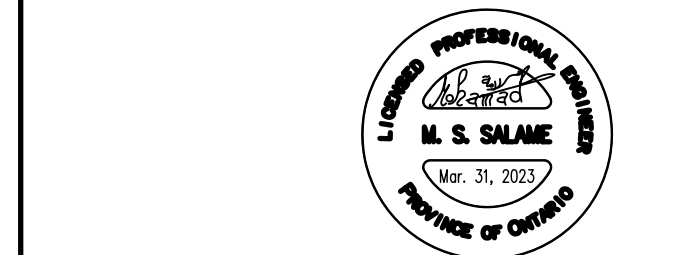
2 PAVER WALKWAY DETAIL  
A2.07 3"=1'-0"



3 PREFABRICATED ROOF CURB DETAIL  
A2.07 3"=1'-0"



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Richard G. Butterworth, Architect



3.	ISSUED FOR CONSTRUCTION	MAR. 31, 2023
2.	ISSUED FOR BUILDING PERMIT	FEB. 21, 2023
1.	ISSUED FOR REVIEW	DEC. 25, 2022
No.	REVISIONS	DATE

RICHARD G. BUTTERWORTH ARCHITECT INC.  
Architecture Interiors Urban Planning  
Ancaster Ontario

VISCOUNT MONTGOMERY PUBLIC SCHOOL  
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD  
1525 LUCERNE AVENUE  
HAMILTON, ONTARIO

\* ROOF PLAN AND DETAILS ARCHITECTURAL

DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
FEBRUARY 2023	22-110
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AS SHOWN	A2.07

PLAT SCALE: 1/4"=1'-0"

DOOR											FRAME					THRES.	REMARKS
No.	LEGEND	QUANTITY	WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	FINISH	GLASS	LABEL	TYPE	MATERIAL	FINISH	GLASS	LABEL		
D1	①	1	3'-4"±	7'-0"±	1 3/4"	1	WOOD	PTD	GWG	-	A	WOOD	PTD	-	-	-	
D2	①	1	3'-4"±			3	WOOD				A	WOOD					
D3	①	1	2'-8"±			2	WOOD				A	WOOD					
D4	①	1	2'-8"±			2	WOOD				A	WOOD					
D5	①	2	2'-8"±			3	WOOD				A	WOOD					
D6		2	3'-0"	7'-0"		4	HM				A	WOOD					
D7	①	1	2'-6"±	7'-0"±		2	WOOD				B	HM					UNTEL 2-L5 1/2" x 5 1/2" x 5/16"
D8		2	2'-8"±			2	HM				A	HM					EXISTING
D9		1	2'-8"±			2	WOOD				A	WOOD					FIXED NO HARDWARE
D10		1	2'-8"±			2	WOOD				A	WOOD					FIXED NO HARDWARE

**NOTES AND LEGEND**

- ① - PREVIOUSLY STAINED AND VARNISHED DOOR, PAINT DOOR AND FRAME ON GYM SIDE, PAINT OR STAIN TO MATCH EXISTING ON OPPOSITE SIDE
- GWG = EXISTING GEORGIAN WIRED GLASS

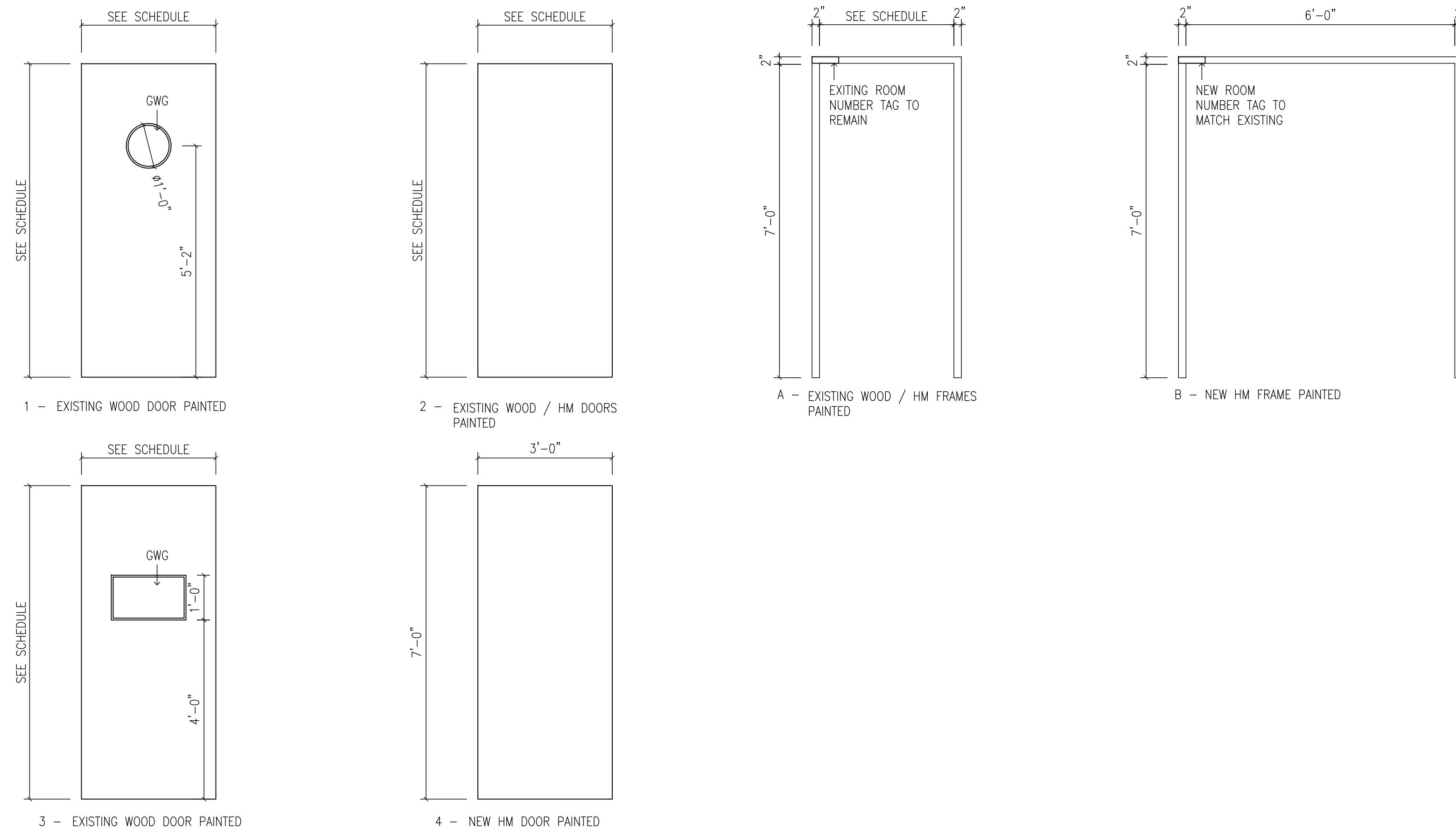
**ROOM FINISH SCHEDULE**

No.	ROOM NAME	FLOOR FINISH	BASE	WALLS				CEILING		REMARKS
				NORTH	EAST	SOUTH	WEST	FINISH	HEIGHT	
118	EXISTING GYMNASIUM	NEW SPORTS FLOORING	NEW 6" RCB	EXISTING CONCRETE BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED	EXISTING CONCRETE BLOCK PATCHED AND PAINTED	EXISTING DECK AND STRUCTURE PAINTED	VARIES	
118A	EXISTING BOYS WASHROOM	EXISTING TERRAZZO PATCHED TO MATCH	PATCH TERRAZZO TO MATCH					NEW GYPSUM WALLBOARD PAINTED	9'-2"±	
118B	EXISTING VESTIBULE	EXISTING TERRAZZO PATCHED TO MATCH	PATCH TERRAZZO TO MATCH					NEW GYPSUM WALLBOARD PAINTED	9'-2"±	
118C	EXISTING STORAGE	NEW VRT	NEW 6" RCB					EXISTING DECK AND STRUCTURE PAINTED	VARIES	
118D	EXISTING STORAGE	NEW VRT	NEW 6" RCB						VARIES	
118G	EXISTING GIRLS WASHROOM	EXISTING TERRAZZO PATCHED TO MATCH	PATCH TERRAZZO TO MATCH						9'-2"±	
117	EXISTING OFFICE	EXISTING VAT	-					NEW GYPSUM WALLBOARD PAINTED	9'-2"±	

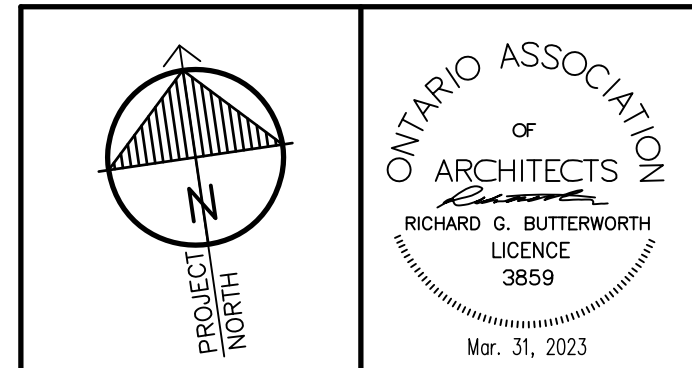
**NOTES AND LEGEND**

- WHERE ALL EXISTING ELEMENTS TO BE REMOVED. PATCH ALL ADJACENT SURFACES FLUSH TO MATCH EXISTING.
- EXISTING FLOORING AND BASE TO BE REMOVED. PATCH AND LEVEL CONCRETE SUB-FLOORING WHERE REQUIRED AND CLEAN BEFORE APPLYING NEW FLOORING AND BASE.
- REMOVE, CLEAN AND REINSTALL ALL MECHANICAL GRILLES. PAINT ALL GRILLES, RADS, CONVECTORS, ETC. PREVIOUSLY PAINTED.
- WHERE NEW FLOORING & BASE TO BE INSTALLED, REMOVE ALL EXISTING FINISHED FLOOR & BASE MATERIALS PATCH & LEVEL EXISTING SUB FLOOR, PROVIDE NEW TRANSITION THRESHOLDS TO EXISTING FLOORING (SEE SPEC'S).
- ALL NEW RCB TO MATCH EXISTING HEIGHTS 6" MINIMUM.
- PAINT ALL EXISTING OR NEW MECHANICAL AND ELECTRICAL ITEMS ON WALLS AND CEILINGS, BOXES, CONDUITS ETC. INCLUDING ALL PREVIOUSLY PAINTED ITEMS.
- PATCH ALL HOLES IN WALLS FLUSH TO MATCH EXISTING.
- SCAN ALL GYMNASIUM FLOORS FOR UNDERGROUND SERVICES BEFORE CORING FOR NEW FLOOR SOCKETS.
- WHERE EXISTING MILLWORK IS REMOVED PATCH ALL SURFACES FLUSH TO MATCH EXISTING.
- REMOVE ALL EXISTING FLOORING AND BASE WHERE NEW FLOORING AND BASE IS TO BE INSTALLED (ALSO REFER TO ABATEMENT SPEC'S).
- GENERAL CONTRACTOR TO SITE VERIFY ALL DIMENSIONS.
- ALL WALLS TO HAVE 2-FINISHED COATS AND 1-COAT COLOUR BLOCK PRIMER.
- ON EXISTING SURFACES USE SPECIAL PRIMER FOR EXISTING OIL BASED PAINT TO NEW PAINTED SURFACES.
- PAINT ALL EXPOSED PIPING, DUCTWORK, GRILLES, RADS, ELECTRICAL BOXES, CONDUITS, ETC.
- REMOVE AND REINSTALL ALL ITEMS SUCH AS FIRE EXTINGUISHERS, WIRE GUARD CAGES, BOARDS, NOTICE PLAQUES, SIGNS ETC. ALL OTHER ITEMS TO BE FULLY MASKED OFF BEFORE PAINTING.
- REMOVE ALL PROTECTIVE WALL AND DOOR MATTS FROM SITE AND ANY VELCRO STRIPS. PATCH WALLS FLUSH TO MATCH EXISTING.
- ALL EXISTING WALL GRAPHICS, LETTERING OR LOGOS TO BE PAINTED OVER USE COLOUR BLOCKING PRIMER.
- DO NOT PAINT ANY RED FIRE EXTINGUISHER CABINETS OR GRILLES.
- REMOVAL ALL EXISTING VINYL ASBESTOS TILE FLOORING IN GYM 118, STORAGE ROOMS 118C, 118D, AND 118E.
- REMOVAL ALL EXISTING LOOSE PLASTER, ANY EXISTING ELECTRICAL AND MECHANICAL ITEMS, DRILLING OF EXISTING BLOCK WALL FOR ALL NEW ANCHOR POINTS FOR ALL NEW ELECTRICAL, MECHANICAL ITEMS BY GENERAL CONTRACTOR FOLLOWING LEAD AND SILICA PROCEDURES.

**1 DOOR SCHEDULE**  
A3.01 N.T.S.



**2 DOOR AND FRAME TYPES**  
A3.01 1/2"=1'-0"



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ARCHITECT  
ARCHITECTURE  
INTERIORS  
URBAN PLANNING  
Ancaster Ontario

**VISCOUNT MONTGOMERY PUBLIC SCHOOL**  
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD  
1525 LUCERNE AVENUE  
HAMILTON, ONTARIO

**DOOR SCHEDULE AND ROOM FINISH SCHEDULE AND DOOR, FRAME TYPES**

DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
FEBRUARY 2023	22-110
SCALE:	SHEET No.:
AS SHOWN	A3.01

PLOT SCALE: 1/4"







### LEGEND AND NOTES

**LF-3** LED LIGHT FIXTURE SIZE 1'x4' FLAT PANEL RECESSED IN LAY-IN TILE CEILING. FIXTURE SHALL BE LITHONIA MODEL CPY-114-AL07-SW7-M4, 3583 LUMENS, 27 W, 4000K, 80 CRI, 120V/1/60, DRIVER, 10K SURGE PROTECTION, IC/NON/C RATED, TESTED TO TM21 STANDARDS, T-BAR MOUNTING, CSA AND UL APPROVED. EACH FIXTURE SHALL BE COMPLETE WITH 0-10VDC DIMMING DRIVER (MINIMUM DIMMING 1%) AND AIRCRAFT SAFETY CABLE HANGING KIT. LIGHT FIXTURES SHALL BE DLC AND HAVE 10 YEAR WARRANTY.

**LF-4** HIGH BAY LED LIGHT FIXTURE SIZE 16'x6'. FIXTURE SHALL BE ILP LIGHTING MODEL RB3-19L-U-50-AD22, WIRE CAGE, 18616 LUMENS, 148W, 126 LM/W, 4000K, 80 CRI, 120V/1/60, DRIVER, 10K SURGE PROTECTION, IC/NON/C RATED, TESTED TO TM21 STANDARDS, T-BAR MOUNTING, CSA AND UL APPROVED. EACH FIXTURE SHALL BE COMPLETE WITH 0-10VDC DIMMING DRIVER (MINIMUM DIMMING 1%) AND AIRCRAFT SAFETY CABLE HANGING KIT. PROVIDE WIRE GUARD FOR EACH LIGHT FIXTURE. LIGHT FIXTURES SHALL BE DLC AND HAVE 10 YEAR WARRANTY.

**LF-5** LED LIGHT FIXTURE SIZE 1'x4' FLAT PANEL RECESSED IN DRYWALL CEILING. FIXTURE SHALL BE LITHONIA MODEL CPY-114-AL07-SW7-M4, 3583 LUMENS, 27 W, 4000K, 80 CRI, 120V/1/60, DRIVER, 10K SURGE PROTECTION, IC/NON/C RATED, TESTED TO TM21 STANDARDS, DRYWALL CEILING RECESSED MOUNTING, CSA AND UL APPROVED. EACH FIXTURE SHALL BE COMPLETE WITH 0-10VDC DIMMING DRIVER (MINIMUM DIMMING 1%) AND AIRCRAFT SAFETY CABLE HANGING KIT. LIGHT FIXTURES SHALL BE DLC AND HAVE 10 YEAR WARRANTY.

**LF-6** HIGH BAY EMERGENCY LIGHT FIXTURE LITETRONICS MODEL HEM30 OR APPROVED EQUAL LED EMERGENCY LIGHT FIXTURE FOR HIGH BAY APPLICATION. THE FIXTURE SHALL HAVE 50,000 HOURS LIFE, 5 YEARS WARRANTY, 30W, 4000 LUMENS, 120V/1/60, POLYCARBONATE FROSTED LENS, WIRE GUARD, BUILT IN EMERGENCY BATTERY UNIT, 90 MINUTES EMERGENCY TIME, AUTOMATIC SELF TESTING, REMOTE CONTROL DEVICE WITH EACH FIXTURE FOR TESTING AND 10KV SURGE PROTECTOR. INSTALL EACH FIXTURE BETWEEN OPEN WEB STEEL JOISTS COMPLETE WITH SAFETY CHAIN. THE FIXTURES SHALL BE CSA AND UL APPROVED. PROVIDE WIRE GUARD FOR EACH LIGHT FIXTURE. WIRE EMERGENCY LIGHT FIXTURES LIGHTS TO A DEDICATED CIRCUIT BREAKER COMPLETE WITH BREAKER LOCK OUT CLIP. LIGHT FIXTURES SHALL BE DLC AND HAVE 10 YEAR WARRANTY.

**OS** CEILING MOUNTED OCCUPANCY SENSOR SWITCH. LUTRON OR EQUAL DUAL TECHNOLOGY WITH XCT AND POWER PACKS. THE OCCUPANCY SENSOR SHALL REDUCE THE LIGHTING POWER BY A MINIMUM OF 50% WHEN NO ACTIVITY IS DETECTED FOR NOT LONGER THAN 15 MINUTES. REFER TO LIGHTING CONTROLS. WIRE TO LIGHT FIXTURES AS SHOWN. PROVIDE BACK BOX AND SUPPORT BRIDGE. USE EXISTING POWER CIRCUIT WHERE APPLICABLE. ALL WIRES SHALL BE IN EMT.

**OS** WALL MOUNTED OCCUPANCY SENSOR SWITCH. LUTRON OR EQUAL DUAL TECHNOLOGY WITH XCT AND POWER PACKS. WIRE TO LIGHT FIXTURES AS SHOWN. PROVIDE BACK BOX AND SUPPORT BRIDGE. USE EXISTING POWER CIRCUIT. ALL WIRES SHALL BE IN EMT.

**GYM OCCUPANCY SENSORS:**

- INSTALL SENSORS AT 3.8 FT (1200 mm) ABOVE FINISHED FLOOR LEVEL OR AS RECOMMENDED BY MANUFACTURER WRITTEN INSTRUCTIONS.
- PROVIDE FOR EACH OCCUPANCY SENSOR HEAVY DUTY CHROME PLATED WIRE GUARD.
- THE OCCUPANCY SENSORS SHALL BE CONTROLLED FROM ON/OFF OVERRIDE SWITCH IN THE OFFICE. THE OCCUPANCY SENSORS SHALL REDUCE THE LIGHTING POWER BY A MINIMUM OF 50% WHEN NO ACTIVITY IS DETECTED FOR NOT LONGER THAN 15 MINUTES.

**OS** LVERTON OR EQUAL DECORA IN-WALL OCCUPANCY SENSOR WITH ON/OFF OVERRIDE SELECTOR SWITCH AND DIMMER. 120 VOLT, LVERTON OR EQUAL. PROVIDE BACKBOX AND STAINLESS STEEL COVERPLATE. 'D' DENOTES WITH DIMMER, '3' DENOTES 3-WAY SWITCH AND 'OS' DENOTES OCCUPANCY SENSOR.

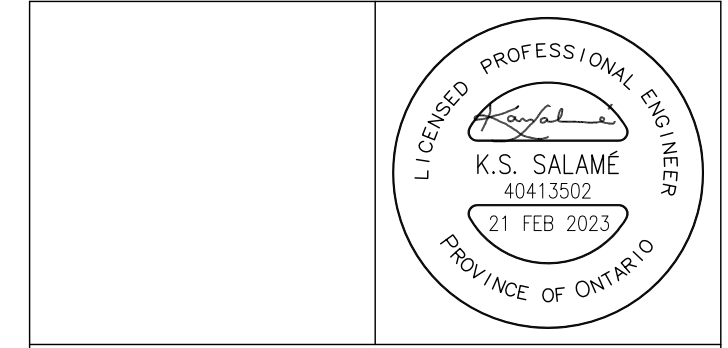
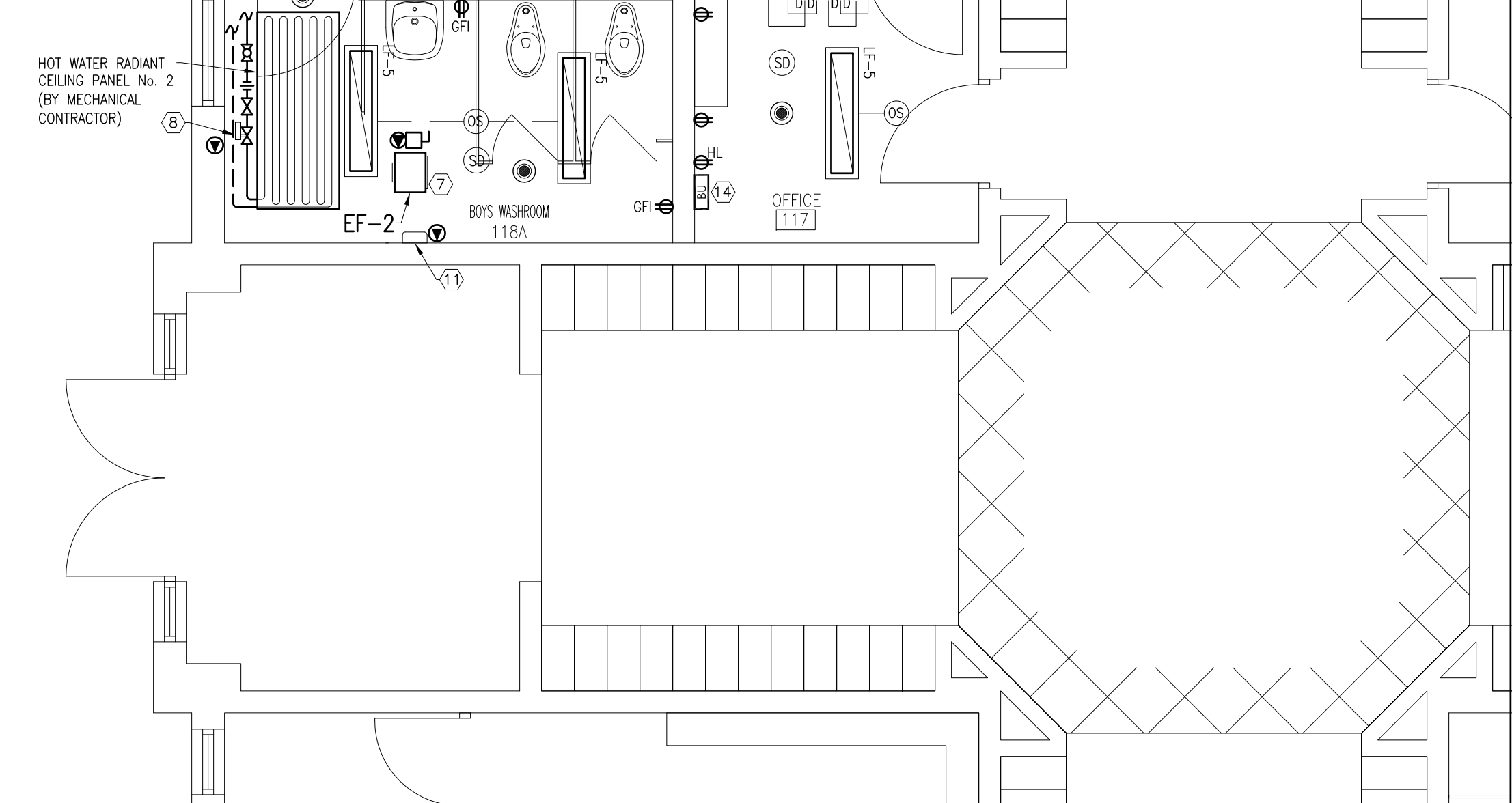
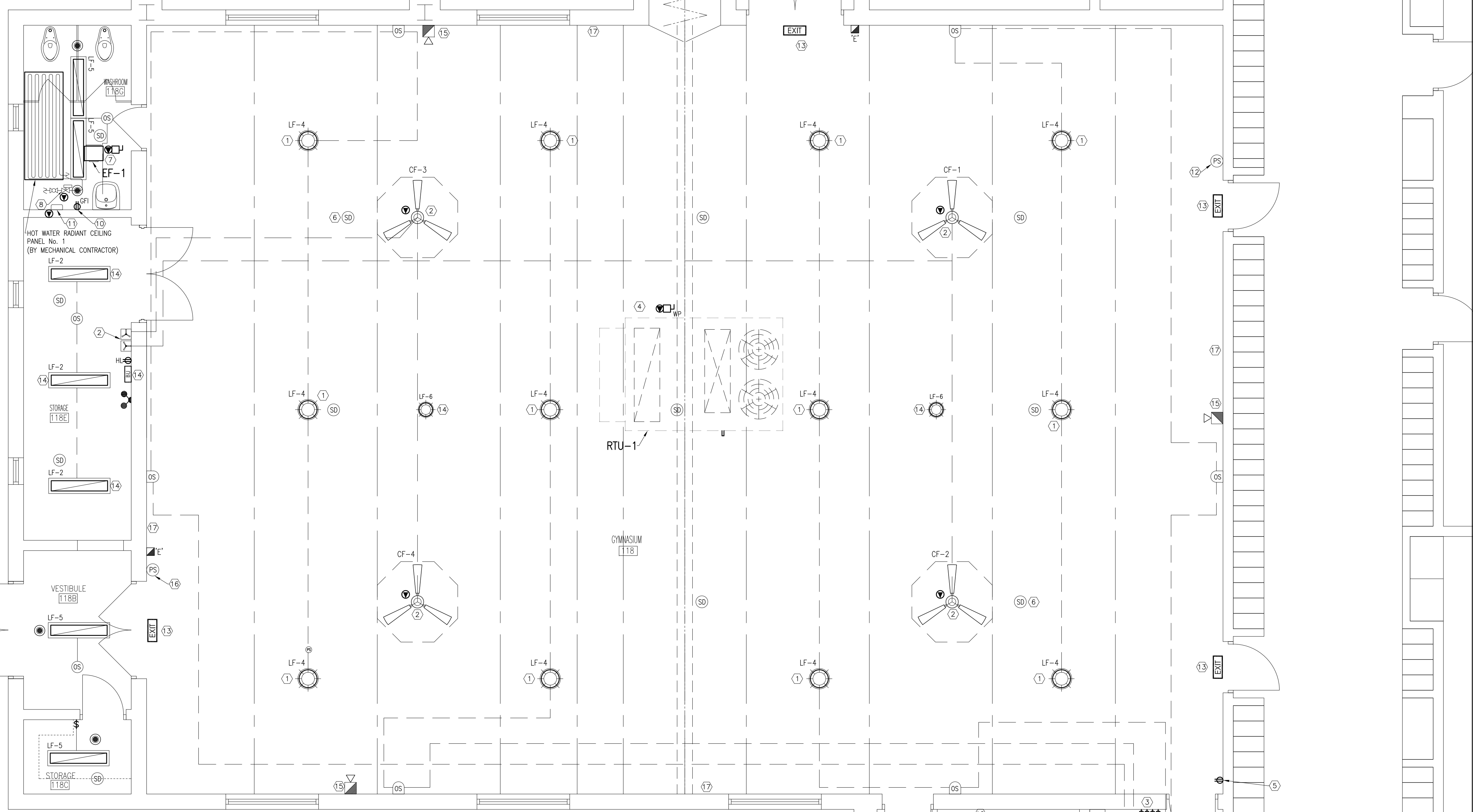
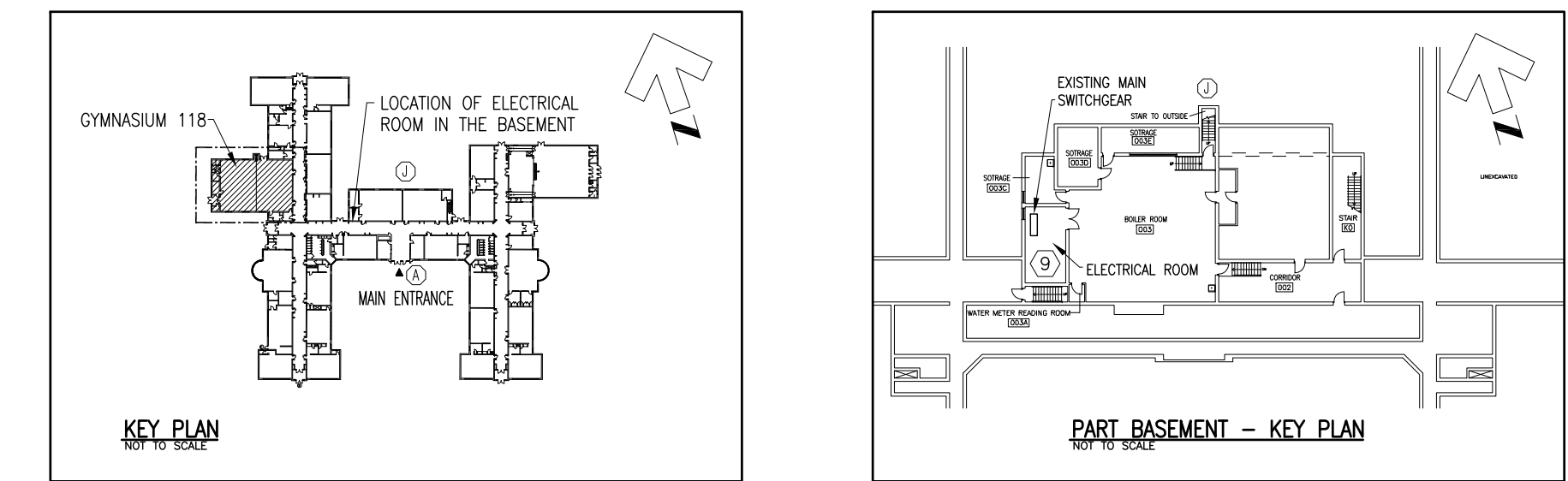
PROVIDE METAL GUARD OVER EACH LIGHT TOGGLE SWITCH IN THE GYM.

### RECEPTACLES AND DEVICES NOTES:

- RECEPTACLES, DEVICES, LIGHT FIXTURE, EMERGENCY LIGHTING, EXIT SIGNS, BATTERY UNITS AND ALL ASSOCIATED WIRES THAT ARE SHOWN ON DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
- ALL THE RECEPTACLES AND ELECTRICAL DEVICES SHOWN SHALL BE NEW UNLESS OTHERWISE NOTED. REVIEW OWNER SUPPLIED EQUIPMENT/APPLIANCES SCHEDULE, ARCHITECTURAL FLOOR PLAN AND MECHANICAL EQUIPMENT SHOP DRAWINGS BEFORE COMMENCING ROUGH-IN.
- COORDINATE LOCATION OF EACH RECEPTACLE. REVIEW ARCHITECTURAL DRAWINGS FOR FURNITURE LAYOUT.
- PROVIDE LABEL FOR EACH RECEPTACLE INDICATING THE PANEL NAME AND BREAKER NUMBER.

### DRAWING NOTES:

- COORDINATE LOCATION OF LIGHT FIXTURES WITH EXISTING STRUCTURAL STEEL JOISTS AND DUCTWORK. INSTALL EACH FIXTURE SUCH THAT IT DOES NOT EXTEND BELOW LOWER LEVEL OF JOISTS. PROVIDE SAFETY CABLES AND SECURE EACH CABLE TO BUILDING STRUCTURE. WIRE TO OCCUPANCY SENSORS AND OVERRIDE SWITCHES.
- FANS WILL BE SUPPLIED AND INSTALLED BY MECHANICAL DIVISION. SPEED CONTROLLERS WILL BE SUPPLIED BY MECHANICAL DIVISION AND INSTALLATION BY THIS CONTRACTOR. PROVIDE HAND/OFF/AUTO STARTERS. PROVIDE RECESSED BACK BOXES AND WIRE CIRCULATING FANS TO SPEED CONTROLLERS. WIRE EACH CONTROLLER TO A GROUP OF TWO FANS AS SHOWN. COORDINATE ON SITE THE LOCATION OF THE FAN SPEED CONTROLLERS BEFORE COMMENCING WORK AND RELOCATE TO AS DIRECTED BY OWNER OR ARCHITECT. PROVIDE HEAVY DUTY LOCKABLE CLEAR POLYCARBONATE GUARDS IF SENSORS ARE INSTALLED INSIDE GYM. ALL WIRES SHALL BE CONCEALED IN WALLS USING EMT CONDUITS. REVIEW CONDUITS ROUTING AND LOCATIONS AND OBTAIN APPROVAL IF CANNOT BE INSTALLED CONCEALED IN EXISTING WALLS. POWER WIRING FROM POWER PANEL 'C'. PROVIDE ALL REQUIRED CIRCUIT BREAKERS. THE CIRCULATING FANS SHALL BE ENABLED (ON/OFF) BY THE BAS WHEN THE STARTERS ARE IN AUTO POSITION.
- COORDINATE ON SITE THE LOCATION OF THE OVERRIDE LIGHT SWITCHES BEFORE COMMENCING WORK AND ROUGH IN. RELOCATE TO AS DIRECTED BY OWNER OR ARCHITECT. ALL WIRING SHALL BE IN CONDUITS AND CONCEALED WHERE POSSIBLE (DRYWALLS AND CEILING PLENUMS).
- PROVIDE WEATHER PROOF DISCONNECT AND WIRE FROM POWER PANEL IN THE MAIN ELECTRICAL ROOM TO HAND/OFF/AUTO STARTER AND TO THE ROOFTOP UNIT (600V/3/60, 23 MCA, 30 MOC). INSTALL STARTER IN STORAGE ROOM 118E COMPLETE WITH LAMACOID LABEL. COORDINATE WITH MECHANICAL DIVISION AND REVIEW SHOP DRAWINGS BEFORE COMMENCING ROUGH-IN. PROVIDE 20A, 120V/1/60 WEATHER PROOF RECEPTACLE AT UNIT AND WIRE TO A DEDICATED CIRCUIT. REFER TO KEY PLAN ON THIS DRAWING FOR LOCATION OF THE ELECTRICAL ROOM IN THE BASEMENT.
- PROVIDE 4x4 JUNCTION BOX AT HIGH LEVEL AND RECEPTACLE AND WIRE FROM POWER PANEL 'C' (15 A BREAKER, 120V/1/60) TO THE NEW SCORE BOARD. COORDINATE WITH WITH THE GENERAL CONTRACT LOCATION OF UNIT AND POWER REQUIREMENT. ALL WIRING SHALL BE IN EMT CONDUITS.
- PROVIDE WIRE GUARD FOR EACH SMOKE DETECTOR IN THE GYMNASIUM. TYPICAL OF NINE.
- PROVIDE HAND/OFF/AUTO STARTER FOR EACH FAN COMPLETE WITH LAMACOID LABEL AND WIRE FROM EXISTING POWER PANEL 'C'. PROVIDE ALL REQUIRED CIRCUIT BREAKERS. INTERLOCK EACH FAN TO OPERATE FROM OCCUPANCY SENSOR ION THE WASHROOM. START/STOP OVERRIDE BY BUILDING AUTOMATION SYSTEM. ALL WIRES SHALL BE IN EMT CONDUITS.
- WIRE FROM NEAREST CIRCUIT TO LINESIDE OF CONTROL VALVE. COORDINATE WITH MECHANICAL CONTRACTOR.
- PROVIDE CIRCUIT BREAKER IN EXISTING SWITCHGEAR UNIT (ELECTRICAL ROOM IN THE BASEMENT) AND WIRE TO ROOFTOP UNIT. COORDINATE ROUTING OF CONDUITS ON SITE AND INSTALL CONCEALED WHERE POSSIBLE. MARK LOCATIONS OF FLOOR AND WALL CORE OPENINGS FOR THE CONDUITS AND OBTAIN APPROVAL BEFORE PROCEEDING. CORE DRILLING BY THIS CONTRACTOR. SEAL AROUND CONDUITS AT FLOOR AND CORRIDOR WALLS. PROVIDE LAMACOID NAMEPLATE AT NEW BREAKER.
- PROVIDE TAMPER RESISTANT DUPLEX RECEPTACLE LEVITON OR EQUAL MODEL TC115-W, 115V/1PH COMPLETE WITH RECESSED BACK BOX, STAINLESS STEEL COVER PLATE, EMT CONDUITS AND WIRING TO POWER PANE OR NEAREST AVAILABLE CIRCUIT. LABEL EACH RECEPTACLE (BLACK ON TRANSPARENT LABEL TAPE) INDICATING POWER PANEL NAME AND CIRCUIT BREAKER NUMBER.
- PROVIDE ELECTRIC HAND DRYER: WORLD DRYER SLM20R SURFACE MOUNTED MODEL L-972, POLISHED STAINLESS STEEL, BARRIER FREE COMPLIANCE, AUTOMATIC SENSOR, BUILT IN ON/OFF HEATING CONTROL SWITCH, 8.3 AMPS, 950 WATTS AND 120V/1/60. INSTALL WALL MOUNTED POSITION AS DETAILED ON ARCHITECTURAL DRAWINGS. WIRE FROM POWER PANEL 'C' USING DEDICATED CIRCUIT FOR EACH DRYER. ALL WIRING SHALL BE IN CONDUITS.
- PROVIDE SPEAKER IN PLACE OF REMOVED EXISTING UNIT COMPLETE WITH TWO WAY TALK BACK/ CALL BACK DEVICE AT 1200 mm (48") ABOVE FINISHED FLOOR LEVEL. WIRE TO EXISTING PUBLIC ADDRESS SYSTEM. PROVIDE CHROME PLATED WIRE GUARD.
- PROVIDE RUNNING MAN EXIT SIGN AND WIRE TO NEAREST BATTERY UNIT. PROVIDE CHROME PLATED WIRE GUARD.
- INSTALL EACH LIGHT FIXTURE BETWEEN OPEN STEEL WEB JOISTS LEVEL WITH THE UNDERSIDE OF THE JOISTS COMPLETE WITH WIRE GUARD. WIRE EMERGENCY LIGHT FIXTURES TO A DEDICATED CIRCUIT BREAKER IN EXISTING POWER PANEL 'C'. TEST THE EMERGENCY LIGHT FIXTURES FOR A MINIMUM OF 60 MINUTES AND PROVIDE CERTIFICATION LETTER.
- PROVIDE NEW COMBINATION HORN / STROBE DEVICE AT HIGH LEVEL (APPROXIMATELY 11'-6" ABOVE FINISHED FLOOR) AND CONNECT TO EXISTING FIRE ALARM SYSTEM. PROVIDE HEAVY DUTY WIRE GUARD. TEST DEVICES AND SUBMIT FIRE ALARM CERTIFICATION REPORT.
- PROVIDE NEW SPEAKER AND CONNECT TO EXISTING PUBLIC ADDRESS SYSTEM. PROVIDE HEAVY DUTY WIRE GUARD.
- REPLACE ALL EXISTING RECEPTACLES IN THE GYMNASIUM COMPLETE WITH NEW STAINLESS STEEL COVER PLATES. PROVIDE LABEL AT EACH COVER PLATE INDICATING CIRCUIT NUMBER.



**NOTES:**

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DO NOT SCALE DRAWINGS, DIMENSIONS TO TAKE PRECEDENCE OVER SCALE.

CONTRACTOR TO CHECK AND VERIFY ALL LEVELS AND DIMENSIONS ON DRAWINGS AND ON SITE AND REPORT ANY DISCREPANCIES TO THE DESIGNER AND OBTAIN CLARIFICATION PRIOR TO COMMENCING WITH THE WORK.

THE CONTRACTOR ACCEPTS ALL RESPONSIBILITY FOR WORKING WITH DRAWINGS, NOT MARKED "ISSUED FOR CONSTRUCTION" AND FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE EXPRESS APPROVAL OF SHELLARD BUILDING SYSTEMS LTD.

ALL WORK TO CONFORM TO ALL GOVERNING CODES AND BY-LAWS.

**NOTE BEFORE COMMENCING WORK:**

THE CONTRACTOR SHALL CHECK AND VERIFY LOCATION OF ALL PIPES, DUCTS, UTILITIES, CONDUITS, LIGHT FIXTURES, STRUCTURAL AND EQUIPMENT AND COORDINATE WITH OTHER TRADES ON SITE TO PREVENT INTERFERENCE. THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE WRITTEN APPROVAL OF THE DESIGNER.

**HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD**

3. FOR TENDER	14 MAR 2023	
2. FOR PERMIT	21 FEB 2023	
1. FOR COORDINATION	15 JAN 2023	
No.	DESCRIPTION	DATE

REVISIONS:  
ISSUED: FOR TENDER

**SHELLARD BUILDING SYSTEMS LTD.**

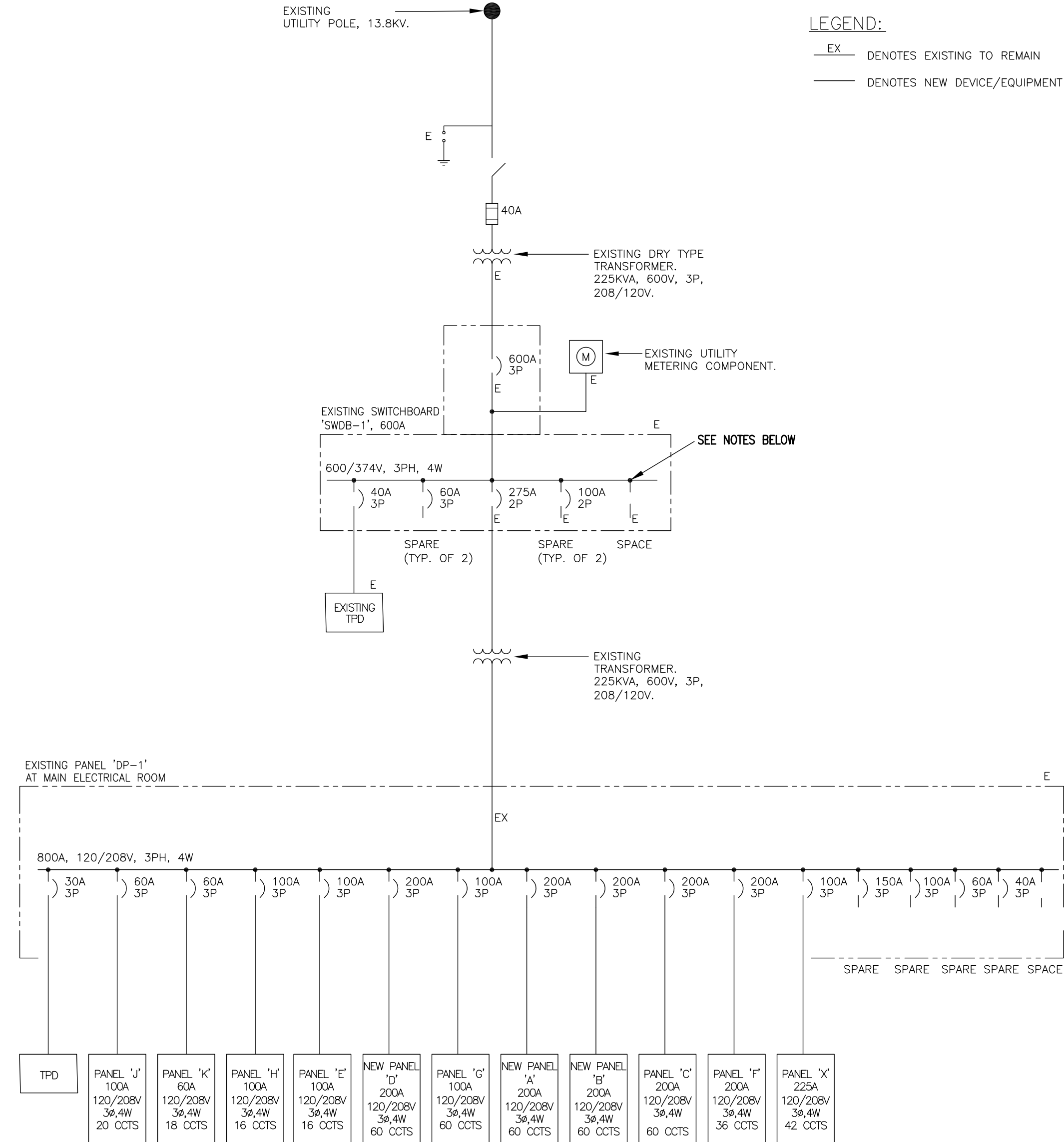
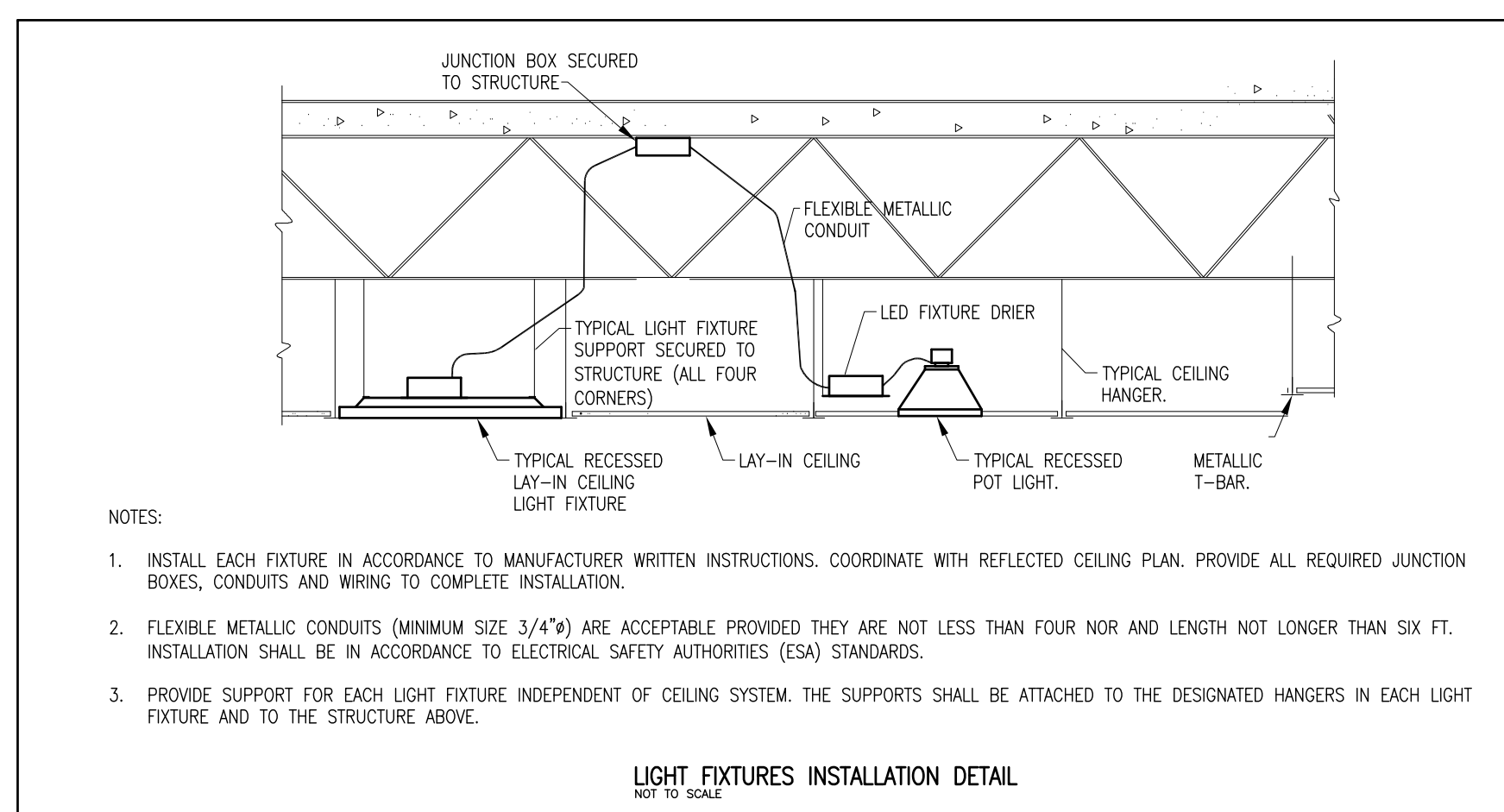
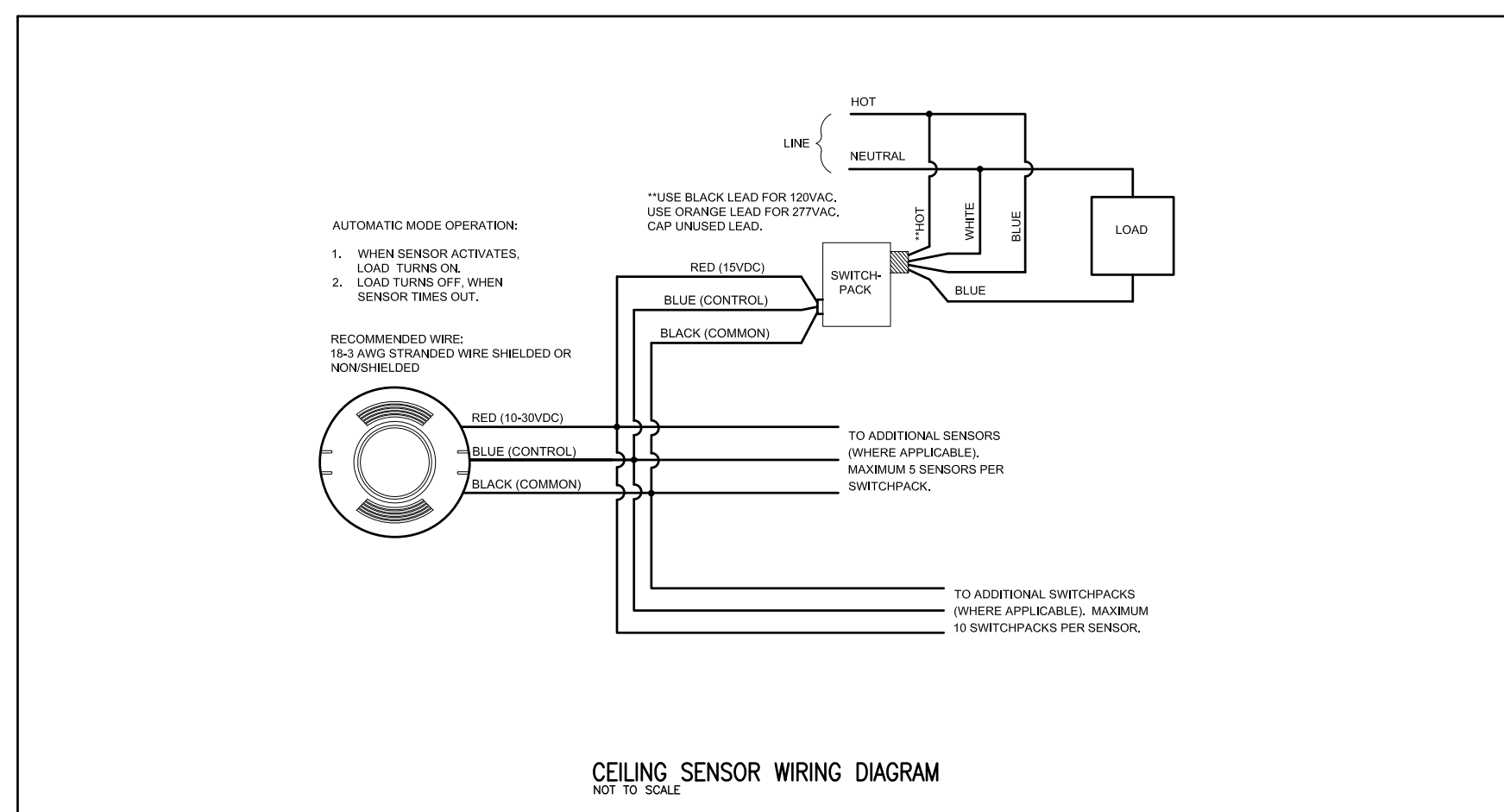
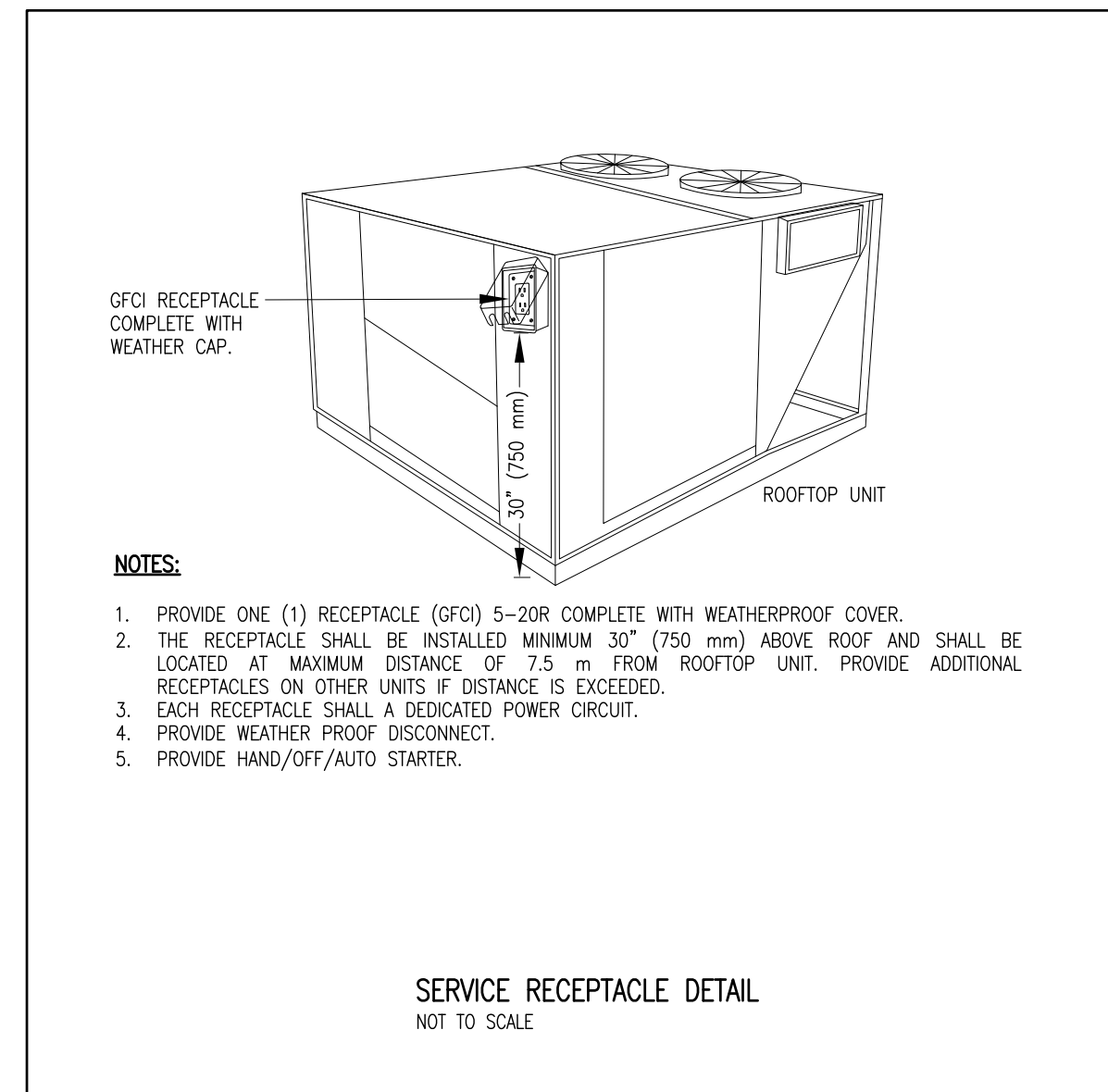
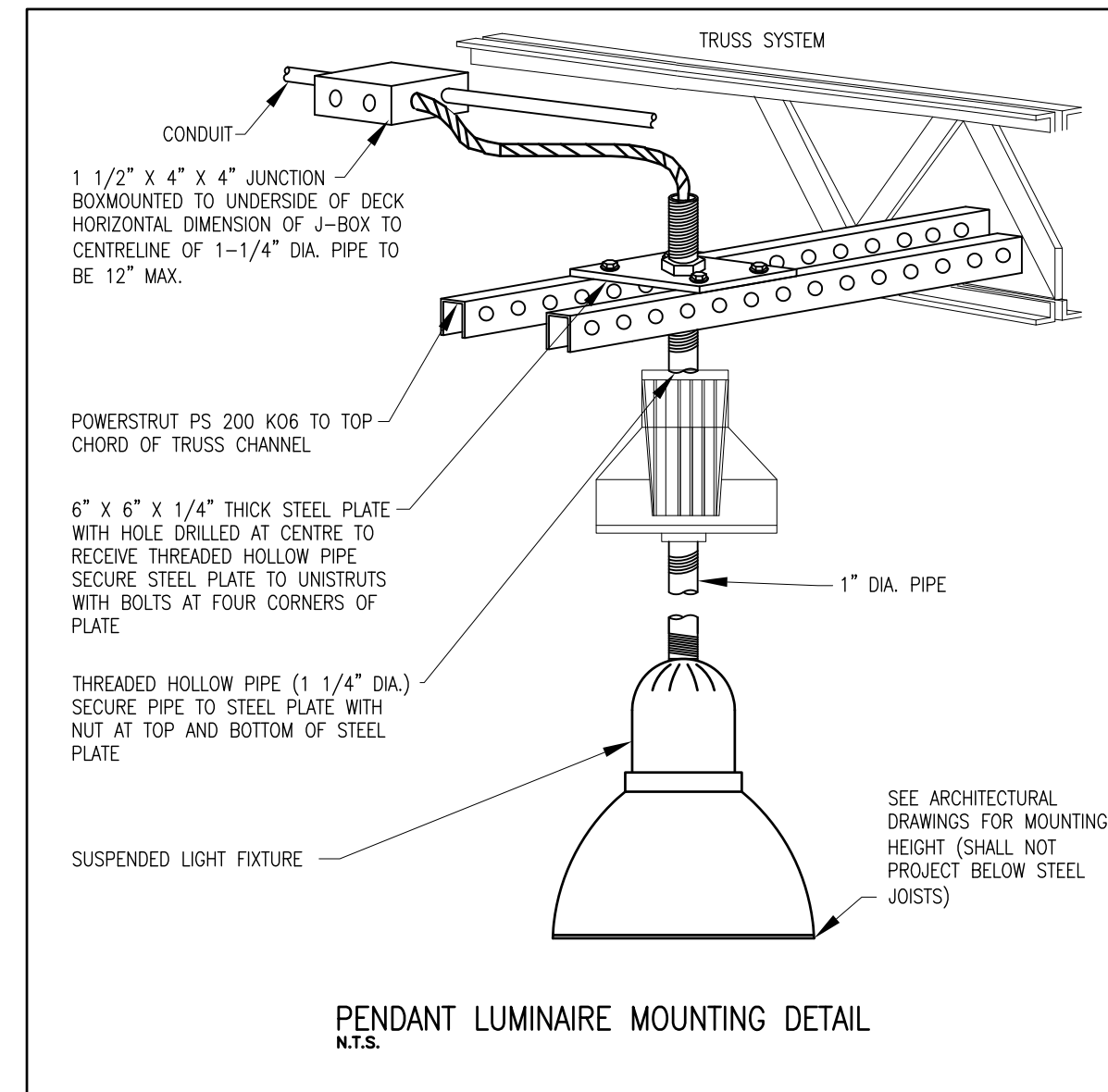
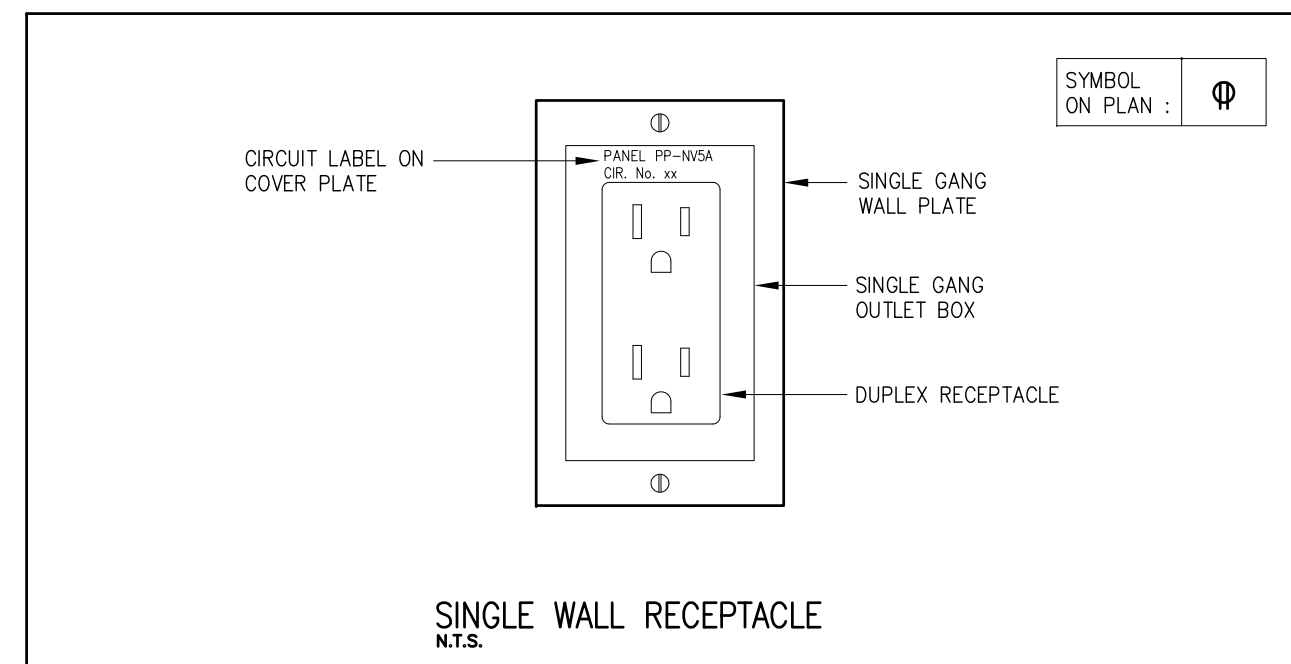
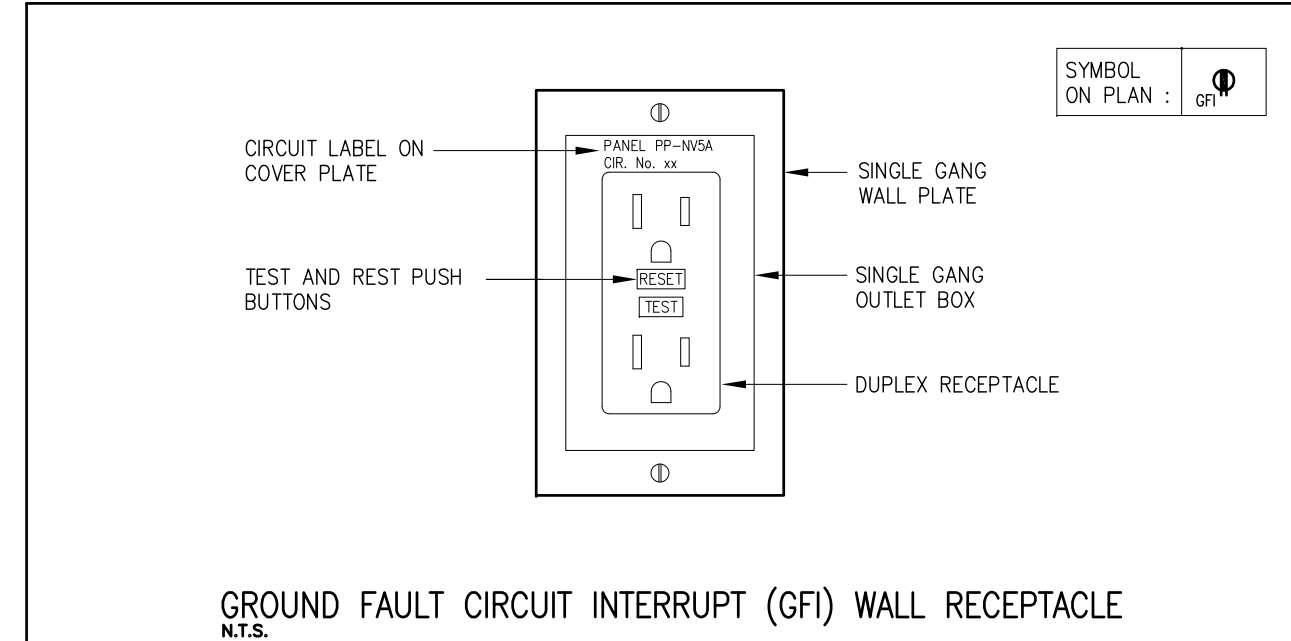
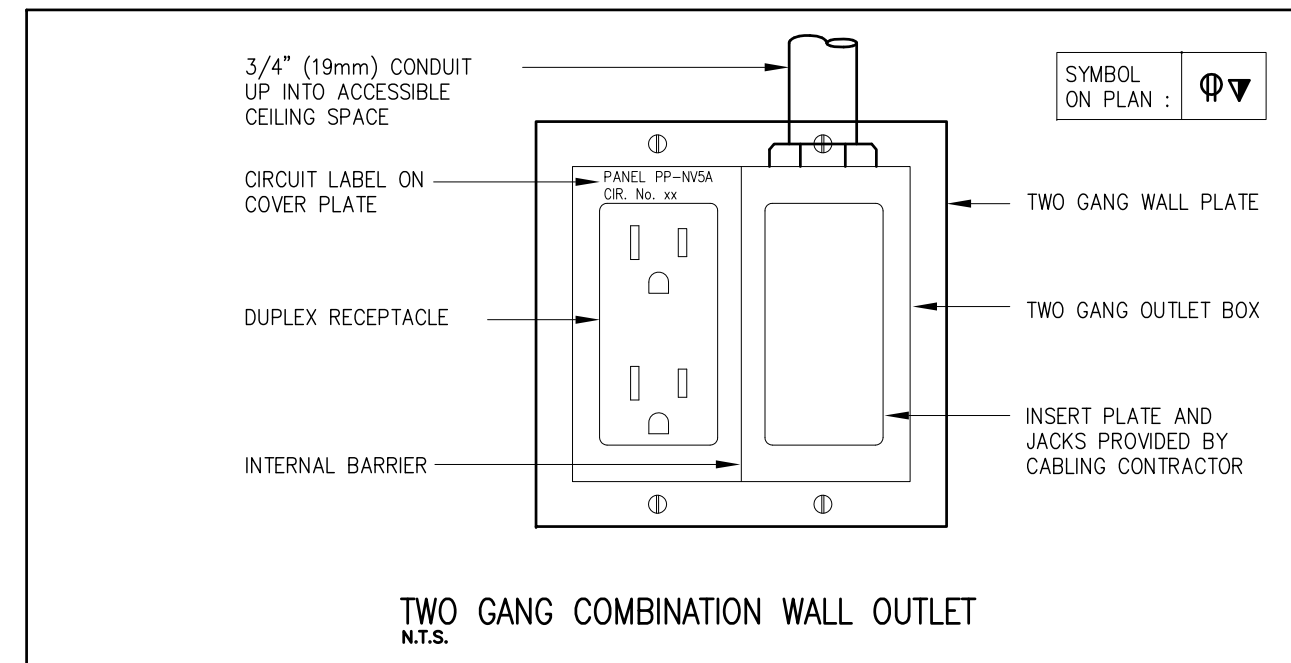
1684 SHELLARD SIDE ROAD  
CAMBRIDGE, ONTARIO  
N1R 5S7

shellard@consultant.com  
226 606 6542

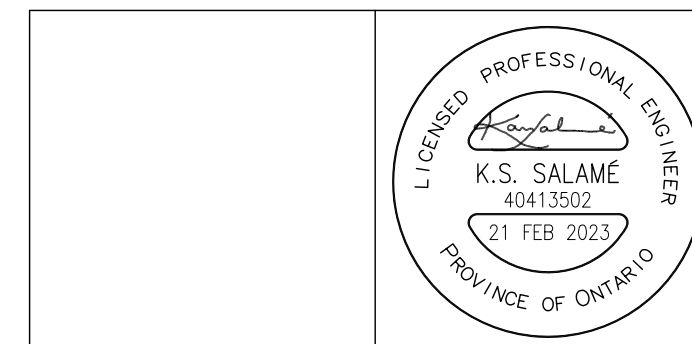
**VISCOUNT MONTGOMERY PUBLIC SCHOOL**  
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD  
1525 LUCERNE AVENUE  
HAMILTON, ONTARIO

DRAWN NAME:  
**GROUND FLOOR PLAN ELECTRICAL**

DRAWN BY:	CHECKED BY:
N.S.	K.S.
DATE:	JOB No.:
JANUARY 2023	22-110
SCALE:	SHEET No.:
AS NOTED	E1.03



- NOTES:**
1. THE SINGLE LINE DIAGRAM IS OBTAINED FROM EXISTING RECORD DRAWINGS. CONTRACTOR SHALL REVIEW EXISTING CONDITIONS BEFORE COMMENCING WORK.
  2. PROVIDE NEW BREAKER (40A, 600V/3PH/60) IN EXISTING SWITCHBOARD AND WIRE (4C#8 AWG CU + GND IN 1" CONDUIT) TO ROOFTOP UNIT HAND/OFF/AUTO STARTER IN STORAGE 118E AND TO ROOFTOP UNIT. COORDINATE ROUTING OF CONDUITS ON SITE. PROVIDE FIRE SEAL AROUND CONDUITS AT EACH RATED FLOOR AND WALL PENETRATION.
  3. PROVIDE HAND/OFF/AUTO STARTER AND WEATHER PROOF DISCONNECT.
  4. REVIEW ROOFTOP UNIT SHOP DRAWINGS BEFORE STARTING ROUGH-IN.
  5. ALL WIRING SHALL BE IN CONDUITS.



**NOTES:**

ALL DRAWINGS AND SPECIFICATIONS IS AN INSTRUMENT OF SERVICE AND REMAIN THE EXCLUSIVE PROPERTY OF DESIGNER AND ARE PROTECTED UNDER THE COPYRIGHT ACT. THEY MAY NOT BE REPRODUCED, DISTRIBUTED, ALTERED FOR ANY OTHER PROJECT WITHOUT WRITTEN PERMISSION OF THE DESIGNER.

DO NOT SCALE DRAWINGS, DIMENSIONS TO TAKE PRECEDENCE OVER SCALE.

CONTRACTOR TO CHECK AND VERIFY ALL LEVELS AND DIMENSIONS ON DRAWINGS AND ON SITE AND REPORT ANY DISCREPANCIES TO THE DESIGNER AND OBTAIN CLARIFICATION PRIOR TO COMMENCING WITH THE WORK.

THE CONTRACTOR ACCEPTS ALL RESPONSIBILITY FOR WORKING WITH DRAWINGS, NOT MARKED "ISSUED FOR CONSTRUCTION" AND FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE EXPRESS APPROVAL OF SHELLARD BUILDING SYSTEMS LTD.

ALL WORK TO CONFORM TO ALL GOVERNING CODES AND BY-LAWS.

**NOTE BEFORE COMMENCING WORK:**

THE CONTRACTOR SHALL CHECK AND VERIFY LOCATION OF ALL PIPES, DUCTS, DIFFUSERS, CONDUITS, LIGHT FIXTURES, STRUCTURAL AND EQUIPMENT AND COORDINATE WITH OTHER TRADES ON SITE TO PREVENT INTERFERENCE. THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE WRITTEN APPROVAL OF THE DESIGNER.



3. FOR TENDER	14 MAR 2023
2. FOR PERMIT	21 FEB 2023
1. FOR COORDINATION	15 JAN 2023

REVISIONS:  
ISSUED: FOR TENDER

**SHELLARD BUILDING SYSTEMS LTD.**  
1684 SHELLARD SIDE ROAD  
CAMBRIDGE, ONTARIO  
N1R 5S7  
shellard@consultant.com  
226 606 6542

**VISCONSIT MONTGOMERY PUBLIC SCHOOL**  
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD  
1525 LUCERNE AVENUE  
HAMILTON, ONTARIO

**SINGLE LINE DIAGRAM AND DETAILS - ELECTRICAL**

DRAWN BY: N.S.	CHECKED BY: K.S.
DATE: JANUARY 2023	JOB No.: 22-110
SCALE: NOT TO SCALE	SHEET No.: E3.01

**GENERAL CONDITIONS**

- SUPPLY AND INSTALL A COMPLETE MECHANICAL SYSTEM AS SHOWN AND/OR SPECIFIED HEREIN.
- VISIT JOB SITE AND EXAMINE ALL EXISTING CONDITIONS WHICH AFFECT THE WORK.
- PAY AND OBTAIN ALL REQUIRED PERMITS, FEES, LICENSES, CERTIFICATE OF INSPECTIONS, ETC. PROVIDE AND SUBMIT DRAWINGS TO THE AUTHORITIES IF REQUIRED.
- CONFORM WITH BUILDING CODE AND STANDARDS, LOCAL BY-LAWS AND AUTHORITIES HAVING JURISDICTION.
- COORDINATE WITH OTHER TRADES REGARDING LOCATION OF EQUIPMENT, DEVICES, DISTRIBUTION SYSTEM, ETC.
- PROVIDE SHOP DRAWINGS TO ALL NEW EQUIPMENTS.
- SUPPLY WIRING DIAGRAMS TO ELECTRICAL CONTRACTOR FOR THEIR CONNECTION.
- CLEAN ALL EQUIPMENT AND OTHER INSTALLATIONS. FOLLOW WRITTEN MAINTENANCE INSTRUCTION FROM MANUFACTURER.
- PROVIDE GUARANTEE IN WRITING FOR THE MATERIAL AND WORKMANSHIP INCLUDING THE MANUFACTURER'S GUARANTEE FOR THE PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE.
- THE CONTRACTOR IS TO LOCATE THE EXACT DIMENSIONS AND POSITIONS OF OPENINGS AND HOLES WHERE CUTTING MAY BE REQUIRED IN ROOFS, CEILINGS AND/OR WALLS FOR PASSAGE OF PIPES, DUCTS, ETC. CUTTING AND PATCHING SHALL BE DONE BY THIS CONTRACTOR. REFER TO STRUCTURAL DRAWINGS FOR COORDINATION AND DETAILS.
- ALL MATERIALS AND EQUIPMENT TO BE NEW AND FREE OF DEFECTS, AND SHALL BE C.S.A. APPROVED.
- INSULATE EXHAUST AIR DUCT MINIMUM 6" FROM EXTERIOR WALLS AND ROOF.
- COORDINATE ON SITE EXACT LOCATION OF EACH EQUIPMENT TO ENSURE ADEQUATE SPACE AND SERVICE ACCESS INCLUDING DIMENSIONS, LOCATIONS AND POSITIONS.
- COORDINATE LOCATION OF OPENINGS AND CORE DRILLING WHERE REQUIRED IN FLOORS, ROOFS, CEILINGS AND/OR WALLS FOR PASSAGE OF DUCTS, PIPES, WIRES, ETC. MARK EACH LOCATION AND OBTAIN APPROVAL BEFORE PROCEEDING. ALL OPENINGS REQUIRED TO COMPLETE SYSTEMS INSTALLATION SHALL BE CARRIED BY THIS DIVISION.

**H.V.A.C. GENERAL REQUIREMENTS**

- SUPPLY AND INSTALL DUCTS IN ACCORDANCE TO SMACNA AND ASHRAE STANDARDS.
- ALL BRANCH DUCT TAKEOFFS TO BE COMPLETE WITH SPLITTER DAMPERS. ALL RETURN AIR BRANCH DUCTS SHALL BE COMPLETE WITH OPPOSED BLADE DAMPERS FOR AIR BALANCING. COORDINATE ON SITE LOCATION OF EACH DUCT AND ENSURE ADEQUATE SPACE TO FIT IN PLACE AS WELL AS FOR OTHER TRADES (FIRE PROTECTION, ELECTRICAL, FIRE PROTECTION DEVICES, ETC). FINAL LOCATION OF ALL REGISTERS, GRILLES AND DIFFUSERS TO BE COORDINATED WITH LATEST CEILING LAY-OUT ON SITE PRIOR TO INSTALLATION AND ANY INTERFERENCES PROBLEMS PROMPTLY REPORTED.
- CONTRACTOR TO CONFIRM CEILING TYPE (DRYWALL OR T-BAR) PRIOR TO ORDERING GRILLES AND DIFFUSERS. ALL DUCT SIZES SHOWN ARE FREE AREA REQUIREMENTS AND WHERE INTERNAL INSULATION IS SHOWN.
- THE DUCT SIZES MUST BE INCREASED ACCORDINGLY. U/C DESIGNATES THAT A 20 MM DOOR UNDERCUT IS REQUIRED.
- EACH ELECTRIC BASEBOARD HEATER SHALL BE COMPLETE WITH BUILT-IN THERMOSTAT. EACH ELECTRIC FORCE FLOW HEATER SHALL BE COMPLETE WITH ON/OFF SWITCH AND BUILT-IN THERMOSTAT UNLESS OTHERWISE NOTED.
- FIRE DAMPERS AND FIRE STOP FLAPS TO BE INSTALLED WHERE REQUIRED. FIRE DAMPERS SHALL BE HINGED FUSIBLE LINK TYPE WITH CHANNEL FRAMES, ETC., IN ACCORDANCE WITH REQUIREMENTS.
- ALL ELECTRIC HEATERS SHALL BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED ON MECHANICAL DRAWINGS. PROVIDE SURFACE MOUNTING BOXES AS REQUIRED. EACH THERMOSTAT AND SENSOR THAT CONTROL SPACE TEMPERATURE SHALL BE CONNECTED TO BUILDING AUTOMATION SYSTEM (BAS) OR AS NOTED. ALL THERMOSTATS TO BE MOUNTED AT 1.2 M A.F.F. (UNLESS NOTED OTHERWISE).
- ALL EXHAUST DUCTS TO BE KEPT AT LEAST 4.5 M AWAY FROM ANY FRESH AIR INTAKES.
- ALL HEATING, VENTILATING AND AIR CONDITIONING UNITS SHALL BE C.S.A. APPROVED AND THE INSTALLATION SHALL MEET C.S.A. STANDARDS.

**GAS PIPING**

- PROVIDE GAS PIPING AS REQUIRED FOR EACH MECHANICAL UNIT. THE PIPING SHALL BE BLACK STEEL PIPE, SCHEDULE #40, WITH 1034 KPA BLACK MALLEABLE IRON FITTINGS. INSTALL PIPING TO CONFORM TO CSA #149 AND PROVINCIAL GAS UTILIZATION CODE BOTH AMENDED TO DATE. PROVIDE PRV WHERE SHOWN.
- GAS VALVES SHALL BE CGA OR UL/C APPROVED SELF LUBRICATED BALLVALVE OR LUBRICATED PLUG WITH GREASING NIPPLE, EACH WITH MANUAL LEVER HANDLE. PROVIDE VALVE AT EACH UNIT CONNECTION INCLUDING EQUIPMENT SUPPLIED BY OWNER OR ANOTHER SECTION.
- GAS PIPES SHALL BE SUPPLIED, INSTALLED AND TESTED IN ACCORDANCE TO GAS CODE B62, LATEST AMENDMENT AND CGA 18-181.1 STANDARDS.
- DO NOT INSTALL FITTINGS IN CONCEALED SPACES THAT ARE NOT VENTED.
- PROVIDE EXPANSION LOOP FOR EACH STRAIGHT RUN IN EXCESS OF 30 METERS LONG.
- COORDINATE ON SITE ALL REQUIRED OPENINGS FOR GAS PIPES AND OBTAIN APPROVAL BEFORE ANY CORING OR DRILLING AND ROOF OPENING.
- GAS PIPES #38 AND LARGER SHALL BE WELDED.
- OFFSET GAS PIPES TO AVOID EXISTING STRUCTURE AND TO SUITE SITE CONDITIONS.
- CONNECT TO EACH MECHANICAL EQUIPMENT COMPLETE WITH ISOLATING VALVE.
- PRESSURE REDUCING VALVES (PRV) SHALL BE CGA AND UL/C APPROVED PRESSURE REDUCING VALVES EACH WITH PRE-SET PRESSURE SETTING TO DECREASE GAS PRESSURE FROM 15 PSI DOWN TO PRESSURE AS REQUIRED BY THE ROOF TOP UNITS.
- PROVIDE FLEXIBLE HOSE CONNECTOR ON NEW ROOF TOP HVAC UNIT BETWEEN EACH ROOF TOP UNIT AND ITS SHUTOFF VALVE. FLEXIBLE CONNECTIONS SHALL BE FLEXIBLE OR EQUAL #11, 200 SERIES C.S.A. APPROVED STAINLESS STEEL BRAIDED HOSE CONNECTOR RATED FOR OUTDOOR USE. MINIMUM LENGTH SHALL BE 450mm (18").
- INSTALL NEW GAS PIPES ON THE ROOF AS REQUIRED. PROVIDE PIPE SUPPORTS AT 2500 (8') INTERVALS. VERIFY EXACT ROUTING OF GAS PIPING ON SITE BEFORE PROCEEDING. OFFSET AND ROOF ROUTING TO SUIT CONSTRUCTION CONDITIONS.
- PRESSURE TEST GAS PIPE WITH NOT LESS THAN 345 KPA AIR FOR AT LEAST 24 HOURS WITHOUT DECREASE IN PRESSURE. CHECK EACH JOINT WITH SOAP AND WATER SOLUTION DURING TESTING PERIOD.
- DISCONNECT SYSTEM DURING TESTS. DO NOT USE OXYGEN FOR TESTING.
- CLEAN AND PRIME AND PAINT GAS PIPING (YELLOW COLOUR) WITH MINIMUM TWO COATS OF PAINT. LABEL ALL GAS PIPES INSIDE THE BUILDING.

**UNITS AND EQUIPMENT**

- SUPPLY AND INSTALL A COMPLETE PACKAGED TYPE SELF-CONTAINED GAS HEATING AND ELECTRIC COOLING UNIT FRAME MANUFACTURER, OR APPROVED EQUAL, WHERE SHOWN ON DRAWINGS.
- PACKAGED ROOFTOP HVAC UNIT SHALL CONSIST OF COMPRESSOR, CONDENSER, EVAPORATOR, GAS FRIED FURNACE WHERE INDICATED, ECONOMISER, POWER EXHAUST, ELECTRIC IGNITION, FILTERS, MOTOR, COMPRESSOR CONTROLLER AND FAN CONTRACTORS, THERMAL OVERLOADS AND VARIABLE FAN SPEEDS TO ONE FAN SPEED ADJUSTABLE FOR 10% INCREASE OR DECREASE IN SPEED FROM RATED. UNITS SHALL BE COMPLETELY WEATHERPROOFED FOR OUTDOOR INSTALLATION AND SHALL BE INTERNALLY INSULATED AT FACTORY. REFER TO EQUIPMENT SCHEDULE FOR SPRINGS AND ACCESSORIES.
- FOR UNIT SUPPLY AND INSTALL A CONDENSATE DRAIN WITH 75mm TRAP AND SPILL ON ROOF. UNITS SHALL BE MOUNTED ON ROOF CURBS.
- PROVIDE PROGRAMMABLE THERMOSTAT FOR UNIT AND INSTALL AS DIRECTED ON SITE. THE THERMOSTAT SHALL OPERATE THE HEATING AND COOLING MODES OF OPERATION, INCLUDING NIGHT SETBACK AND ECONOMIZER FUNCTIONS. REFER EQUIPMENT SCHEDULE FOR BALANCE OF UNIT DETAILS.
- FAN EQUIPMENT
  - PROVIDE FANS WHERE SHOWN AND NOTED ON DRAWINGS.
  - REFER TO SCHEDULE ON DRAWINGS FOR DETAILS.
  - EACH FAN SHALL BE C.S.A. APPROVED AND COMPLETE WITH ROOF CURB FOR ROOF MOUNTED UNITS, BACK DRAFT DAMPER, SCREEN, DISCONNECT, STARTER AND ACCESSORIES AS NOTED ON FAN SCHEDULE.
  - COORDINATE LOCATION OF EACH FAN ON SITE AND INSTALL IN ACCORDANCE TO MANUFACTURER WRITTEN INSTRUCTIONS.
  - INSTALL CEILING SUSPENDED FANS USING VIBRATION ISOLATION SPRINGS AND DUCT FLEXIBLE CONNECTORS.
  - MAINTAIN REQUIRED SERVICE ACCESS CLEARANCES.
- ALL DUCTWORK CONSTRUCTION, SUPPORT AND INSTALLATION SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF CURRENT ASHRAE GUIDE AND SHOWING STANDARDS UNLESS NOTED OTHERWISE HEREIN. APPLY CROSS-BREAKING TO SHEET METAL BETWEEN THE STANDING SEAMS OR REINFORCING ANGLES. CENTER OF CROSS-BREAK TO BE OF REQUIRED HEIGHT TO ASSURE SURFACE BEING RIGID. ALL DUCTWORK SHALL BE MEDIUM PRESSURE AND SEALED TO PREVENT LEAKAGE IN EXCESS OF 1% AT 120 PA. CONSTRUCT ALL CURB CAPS, ETC. OF GALVANIZED STEEL SHEETS WHICH ARE FREE FROM BUSTERS, SLIVERS, PITS, IMPROPERLY COATED SPOTS, ETC. MAKE WITHOUT ADDITIONAL CHARGE. ANY NECESSARY CHANGES OR ADDITIONS TO LAYOUT OF SHEET METAL TO ACCOMMODATE STRUCTURAL, ETC.
- PROVIDE FIRE DAMPERS WHERE SHOWN AND AS REQUIRED BY ORDINANCES OR CODES. THE FIRE DAMPERS SHALL BE MADE TO CANADIAN UNDERWRITERS ASSOCIATION STANDARDS. DAMPERS SHALL BE KEPT HUNT SUBE GATE TYPE 'B' DAMPERS, HINGES, AND METHOD OF INSTALLATION SHALL MEET C.S.A. OR U.L. CANADA APPROVAL. CONFIRM ALL FIRE DAMPER CONSTRUCTION AND LOCATION WITH ALL AUTHORITIES HAVING JURISDICTION.
- PROVIDE E.H. PRICE LIMITED OR APPROVED EQUAL GRILLES, REGISTERS AND DIFFUSERS PROVIDE WHERE SHOWN AND NOTED. EACH UNIT SHALL BE FACTORY PRE-FINISHED AND COMPLETE WITH INTERNAL BALANCING DAMPER. GRILLES AND REGISTERS SHALL BE OF ALUMINUM CONSTRUCTION (EXCEPT WHERE NOTED) WITH BAKED WHITE ENAMEL FINISH, EXCEPT IN WALLS WHERE FRAMED COATED FINISH SHALL BE SUPPLIED. CHECK LATEST ROOM FRESH SCHEDULES PRIOR TO SUBMITTING SHOP DRAWINGS. CEILING DIFFUSERS SHALL BE COMPLETE WITH VOLUME CONTROL DAMPER. ALL DIFFUSERS, REGISTERS AND GRILLES SHALL HAVE COLOURS AS SELECTED BY ARCHITECT. PROVIDE EACH DAMPER AND RETURN AIR GRILLE C/W BALANCING DAMPER. COORDINATE EXACT LOCATION OF EACH GRILLE, REGISTER AND DIFFUSER ON SITE WITH LIGHTING AND REGISTERED CEILING PLAN. CUTTING AND PATCHING FOR GRILLES AND REGISTERS SHALL BE DONE BY THIS DIVISION.
- PROVIDE FLEXIBLE AIR DUCT AT EACH CONNECTION TO MECHANICAL UNIT.
- MOTORIZED DAMPERS SHALL BE "LOW LEAKAGE" TYPE, HEAVY DUTY AND SHALL BE PROVIDED COMPLETE WITH FLEXIBLE BLADE SEALS, 16 GAUGE STEEL BLADES AND FRAME (MAXIMUM LEAKAGE 5% 120V ELECTRIC MOTOR AND DAMPER LINER. MOTORIZED DAMPERS SHALL BE AS MANUFACTURED BY NAFOR HART INDUSTRIES (OR EQUAL).
- PROVIDE LOUVERES WHERE SHOWN AND NOTED. COORDINATE WITH GENERAL CONTRACTOR FOR OPENINGS IN WALLS. LOUVERES SHALL BE E.H. PRICE LIMITED OR APPROVED EQUAL, 16 GAUGE GALVANIZED STEEL CONSTRUCTION, PRE-PANDED TO COLOUR SELECTED BY ARCHITECT, COMPLETE WITH INSET SCREENS, STORM VANES, DRAIN CHANNELS, AND MOUNTING FRAMES.

**GENERAL DEMOLITION NOTES:**

- REMOVE EXISTING EQUIPMENT, UNITS, DEVICES, WIRING, PLUMBING PIPES, DUCTS, HANGERS, VENTS, ETC. AS NOTED OR REQUIRED TO FACILITATE INSTALLATION OF NEW MECHANICAL SYSTEMS. REMOVE ALL ASSOCIATED ACCESSORIES AND PIPES AS NECESSARY TO PREPARE OF PLUMBING SYSTEM.
- ALL EQUIPMENT AND ITEMS THAT ARE NOT BEING RE-USED SHALL BE REMOVED FROM SITE.
- CONTRACTOR SHALL REVIEW THE CONSTRUCTION SCHEDULE AND COORDINATE REMOVAL OF ITEMS ACCORDINGLY. DO NOT DISCONNECT EQUIPMENT NOTED TO BE REMOVED OR SHUT DOWN SYSTEMS WITHOUT PRIOR SCHEDULING AND APPROVAL.
- ALL FIXTURES, EQUIPMENT, SYSTEMS THAT ARE EXISTING TO REMAIN SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
- CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE WORK AREA ON DAILY BASIS. COORDINATE WITH GENERAL CONTRACTOR FOR USE OF WASTE BINS.
- PLUMBING DEMOLITION SHALL BE DONE SUCH THAT NO DAMAGE TO EXISTING WALLS AND/OR FLOORS.
- NEW PLUMBING SYSTEM SHALL NOT BE USED DURING CONSTRUCTION EXCEPT FOR TESTING.

**INSULATION**

- INSULATE ALL EXPOSED SUPPLY AIR AND RETURN AIR DUCTS USING MINIMUM 1" THICK FIBRE GLASS FOIL FACED INSULATION. SECURE JOINTS USING APPROVED INSULATION TAPES AND STRAPS. COVER INSULATION WITH PVC JACKETING WHERE NOTED ON DRAWINGS.
- INSULATE DOMESTIC HOT AND COLD WATER PIPES USING 1" THICK FIBERGLASS PIPE INSULATION. TAPE ALL JOINTS USING MINIMUM 2" WIDE APPROVED INSULATION TAPE. PROVIDE PVC COVER INSULATION WITH PVC JACKETING OVER PIPE. INSULATION WHERE NOTED ON DRAWINGS.

**RECORD DRAWINGS**

- MARK ON CLEAN SET OF DRAWINGS LOCATION OF PIPES AND DUCTS INSTALLED IF DIFFERENT THAN OR NOT SHOWN ON DRAWINGS. UPON COMPLETION OF WORK, OBTAIN CAD FILE AND PRODUCE AS-BUILT CAD DRAWINGS. SUBMIT AS-BUILT DRAWINGS ON ONE CD C/W THE ORIGINAL MARK UP DRAWINGS AND TWO SETS OF PRINTS.

**ELECTRICAL**

- COORDINATE WITH THE ELECTRICAL CONTRACTOR TO PROVIDE POWER WIRING FOR MECHANICAL EQUIPMENT. SUBMIT EQUIPMENT SHOP DRAWINGS INCLUDING WIRING DIAGRAMS.

**SCOPE OF WORK**

- WORK SHALL INCLUDE SUPPLY AND INSTALLATION OF ALL LABOUR AND MATERIALS NECESSARY FOR THE VARIOUS SYSTEMS SHOWN, NOTED AND REQUIRED TO COMPLETE SYSTEMS INSTALLATION. TEST AND COMMISSION EACH SYSTEM TO APPROVAL.
- THE DRAWINGS INDICATE GENERAL LOCATION EQUIPMENT, ROUTING OF DUCTS, PIPES, FIXTURES, CONTROLS, ETC. WHERE REQUIRED WORK IS NOT SHOWN OR ONLY SHOWN DIAGRAMMATICALLY, INSTALL SAME TO CONSERVE HEAD ROOM AND INTERFERE AS LITTLE AS POSSIBLE WITH FREE USE OF SPACE THROUGH WHICH THEY PASS.
- THE WORK SHALL INCLUDE, BUT NOT NECESSARILY LIMITED TO, THE SUPPLY AND INSTALLATION OF THE FOLLOWING:
  - VISIT PROJECT SITE AND REVIEW EXISTING CONDITIONS.
  - COORDINATION WITH FACILITIES FOR ANY REQUIRED SHUT DOWN.
  - DEMOLITION AS NOTED AND REQUIRED TO COMPLETE SYSTEM INSTALLATION.
  - CONNECT TO EXISTING SERVICES.
  - SUBMITTAL OF SHOP DRAWINGS FOR REVIEW.
  - SUPPLY AND INSTALLATION OF MECHANICAL SYSTEMS AS SHOWN AND NOTED.
  - SUPPLY AND INSTALLATION OF DUCTS.
  - PLUMBING AND GAS PIPING.
  - BUILDING AUTOMATION SYSTEM (CONTROLS).
  - FIRE SEAL AROUND PIPES.
  - INSULATION.
  - ALL REQUIRED CUTTING, CORE DRILLING AND PATCHING.
  - ALL REQUIRED CONTROL WIRING.
  - ARRANGEMENTS FOR INSPECTION BY LOCAL AUTHORITIES HAVING JURISDICTION.
  - TESTING AND COMMISSIONING.
  - ALL REQUIRED WORK NOT NECESSARILY DETAILED BUT REQUIRED TO COMPLETE SYSTEMS INSTALLATION.

- CONTRACTOR AND SUB-TRADES SHALL EXAMINE THE SITE AS WELL AS ALL DRAWINGS AND SPECIFICATIONS RELATIVE TO THIS WORK. NO ALLOWANCE WILL BE MADE FOR FAILURE TO MAKE SUCH EXAMINATION AND TO TAKE INTO ACCOUNT ALL ASPECTS, WHICH MAY GOVERN THE EXECUTION AND COMPLETION OF THE WORK.
- TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING STRUCTURE FROM DAMAGE WHEN CARRYING OUT THE WORK. CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR ANY CLAIMS OR DAMAGES IN RELATION TO WORK OF THIS CONTRACT.
- CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED FOR ALL TRADES INCLUDING HOLES AND OPENINGS FOR EQUIPMENT ENTRY AND EXIT, CONDUITS, PIPING, VENTS, LOUVERES AND DUCT SYSTEMS.
- ABIDE BY ONTARIO BUILDING CODE, CSA STANDARDS, ASHRAE STANDARDS AND ALL LOCAL BY LAWS RELATING TO THIS INSTALLATION. OBTAIN AND PAY FOR PERMIT, FEES, INSPECTIONS AND DEPOSITS REQUIRED BY ALL AUTHORITIES. SUBMIT ALL REQUIRED PRINTS AND FORMS AS REQUIRED BY AUTHORITIES.
- ALL NOTES LISTED ON DRAWINGS SHALL FORM PART OF THE SPECIFICATIONS.
- CERTAIN WORK INCLUDING SYSTEMS SHUT DOWN WILL HAVE TO BE COMPLETED AFTER HOURS AND ON WEEKENDS SUCH THAT IT DOES NOT AFFECT USE OF BUILDING AND SYSTEMS. CONTRACTOR SHALL INCLUDE ALL PROVISIONS TO CARRY AFTER HOUR WORK IN BASE PRICE. AFTER HOUR WORK AND SHUT DOWN INCLUDE, BUT NOT NECESSARILY LIMITED TO THE FOLLOWING:
  - DOMESTIC WATER SUPPLY
  - DRILLING AND ANY NOISY/VIBRATION WORK IN EXCESS OF 50db
  - WELDING OR SOLDERING THAT MAY CAUSE FUMES
  - POWER SHUT DOWN

**VERIFICATION OF EXISTING CONDITIONS**

- CONTRACTOR SHALL REVIEW EXISTING SITE CONDITIONS AFFECTING THE PROPOSED WORK AND COORDINATE WITH ALL TRADES BEFORE COMMENCING WORK.
- CONTRACTOR SHALL REVIEW SITE CONDITIONS AND PREPARE INTERFERENCE SKETCHES IF NEEDED AND SUBMIT FOR REVIEW BEFORE COMMENCING WORK.
- REFER TO ARCHITECTURAL DRAWINGS, SPECIFICATIONS AND OWNER'S STANDARDS WHERE APPLICABLE FOR ADDITIONAL INFORMATION ABOUT EXISTING AND PROPOSED SYSTEMS.
- BEFORE COMMENCING WORK VISIT SITE AND CHECK EXISTING CONDITIONS AFFECTING THE WORK INCLUDING DETAIL REVIEW OF EXISTING STRUCTURE, DOMESTIC WATER PIPES, SANITARY PIPES, DUCTS, EQUIPMENT, CONDUITS, POWER WIRING, CONTROLS AND FIRE PROTECTION. EXISTING CONDITIONS MAY VARY FROM THAT SHOWN ON DRAWINGS AND NO EXTRA WILL BE CONSIDERED FOR ANY VARIATION WITHIN 3 METERS (10 FT). THE CONSULTANT AND ARCHITECT ARE NOT RESPONSIBLE FOR CONDITIONS DISCOVERED DURING CONSTRUCTION WHICH DIFFER FROM THOSE INDICATED ON THESE DRAWINGS. THE CONTRACTOR, UPON MAKING SUCH A DISCOVERY, SHALL NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY WITH DETAILS FOR DIRECTION OR SITE INSTRUCTION ON HOW TO PROCEED.
- THIS SET OF DESIGN DRAWINGS HAS BEEN PREPARED, IN PART, BASED UPON VISUAL INSPECTION OF SITE CONDITIONS AND INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER CANNOT ASSURE ITS ACCURACY, AND THIS IS NOT RESPONSIBLE FOR THE ACCURACY OF THE EXISTING SYSTEMS AS SHOWN OR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO IT AS A RESULT. CONTRACTOR SHALL INSPECT EXISTING CONDITIONS INCLUDING LOCATION OF DUCTS, PIPES, CONDUITS AND EQUIPMENT ABOVE CEILING AND IN CONCEALED SPACES BEFORE COMMENCING WORK.

**AIR TESTING AND BALANCING**

- TEST AND BALANCE NEW RTU-1 SYSTEM, EXHAUST FANS AND RADIANT CEILING PANELS WATER FLOOR. THE SYSTEM VOLUMES SHALL BE WITHIN 5% OF REQUIREMENTS SHOWN. ADJUST AND SET BALANCE DAMPERS, FANS AND DRIVES TO GIVE THE SPECIFIED VOLUMES AT ALL OUTLETS. THE BALANCING OF AIR SYSTEMS IS TO BE DONE BY A BALANCING FIRM SPECIALIZING IN THIS WORK. CLEAN DUCT SYSTEMS, FILTERS, ETC., BEFORE TESTING IS DONE.
- PROVIDE TWO BOUND COPIES OF THE AIR BALANCING REPORT. AIR BALANCING SHALL BE DONE BY A PROFESSIONAL BEFORE TESTING IS DONE. TESTING AND BALANCING FIRM AIR QUANTITIES AT EACH OUTLET SHALL BE AS INDICATED IN THE DRAWINGS. THIS REPORT SHALL SHOW THE QUANTITIES VELOCITIES AND AREA OF EACH OUTLET, TYPE AND MODEL NUMBER OF FANS AND MOTOR INSTALLED, ACTUAL AIR DELIVERED BY THE FAN WITH TOTAL STATIC PRESSURE AND VOLTAGE DRAWN BY THE MOTORS. ADJUST AND RETEST TO THE SATISFACTION OF THE PROJECT COORDINATOR PROVIDE ADDITIONAL COPY OF THE AIR BALANCE REPORT TO THE MECHANICAL CONSULTANT.
- UPON COMPLETION OF THE AIR BALANCE AND SUBMITTAL OF THE AIR BALANCE MAINTENANCE MANUAL REPORT TO THE OWNER, THIS CONTRACTOR SHALL PROVIDE, IF CALLED FOR, A SPOT CHECK ON THE SYSTEM WITH THE CONSULTANT. IF ACTUAL AIR QUANTITIES DO NOT AGREE WITH THE AIR BALANCE REPORT DATA, THIS CONTRACTOR MAY BE CALLED UPON TO COMPLETELY RE-BALANCE THE SYSTEM UNTIL SATISFACTORY IS ACHIEVED AND ACCEPTED BY THE CONSULTANT.

**GENERAL NOTES:**

- REFER TO GENERAL NOTES AND SPECIFICATIONS ON LATEST ARCHITECTURAL DRAWINGS ISSUED OR CONSTRUCTION.
- REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF PLUMBING FIXTURES, HEIGHTS, AND DIMENSIONS.
- FOR ANY PROPOSED EQUIPMENT ALTERNATIVE OR SUBSTITUTION AND WHERE THE TERM 'APPROVED EQUAL' IS NOTED, THE CONTRACTOR AND SUB-CONTRACTORS SHALL SUBMIT PROPOSED ALTERNATE EQUIPMENT FOR REVIEW AND APPROVAL PRIOR TO TENDER CLOSING DATE.
- WHERE THE TERM 'PROVIDE' IS NOTED ON DRAWINGS, IT MEANS SUPPLY AND INSTALL.
- CONTRACTOR TO FIELD VERIFY WORK SITE CONDITIONS.
- CONTRACTOR TO COORDINATE INSTALLATION WITH EXISTING CONDITIONS INCLUDING DUCTS, PIPES, ELECTRICAL LIGHTING & BUILDING STRUCTURE.
- INSTALL ACCESS DOOR FOR EACH CONCEALED VALVE, CLEANOUT AND WHERE SERVICE IS REQUIRED.
- CONNECTIONS TO EXISTING BURIED SANITARY WILL HAVE TO BE DONE WITHOUT AFFECTING OPERATION IN ADJACENT UNITS. WORK WILL HAVE TO BE DONE AFTER HOURS UNLESS LOCAL SHUT DOWN WILL NOT AFFECT ANY FUNCTION IN THE BUILDING AND APPROVAL IS OBTAINED.
- CONTRACTOR SHALL INCLUDE PRICE TO LOCATE EXISTING BURIED SANITARY PIPES USING DIGITAL TRACK CAMERA.
- COORDINATE WITH OTHER TRADES AND REVIEW ARCHITECTURAL DRAWINGS BEFORE COMMENCING WORK.
- ALL EQUIPMENT SHALL BE CSA AND ULC APPROVED. PROVIDE ALL REQUIRED FITTINGS, TRAPS, VALVES, FAUCETS AND ESCUTCHEONS TO COMPLETE EACH EQUIPMENT AND FIXTURE INSTALLATION. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BEFORE ORDERING ANY FIXTURE.
- BEFORE COMMENCING WORK VISIT SITE AND CHECK EXISTING CONDITIONS AFFECTING THE WORK INCLUDING DETAIL REVIEW OF EXISTING SYSTEMS. EXISTING CONDITIONS MAY VARY FROM THAT SHOWN ON DRAWINGS AND NO EXTRA WILL BE CONSIDERED FOR ANY VARIATION WITHIN 3 METERS. THE CONSULTANTS ARE NOT RESPONSIBLE FOR CONDITIONS DISCOVERED DURING CONSTRUCTION WHICH DIFFER FROM THOSE INDICATED ON THESE DRAWINGS. THE CONTRACTOR, UPON MAKING SUCH A DISCOVERY, SHALL NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY FOR GUIDANCE ON HOW TO PROCEED.

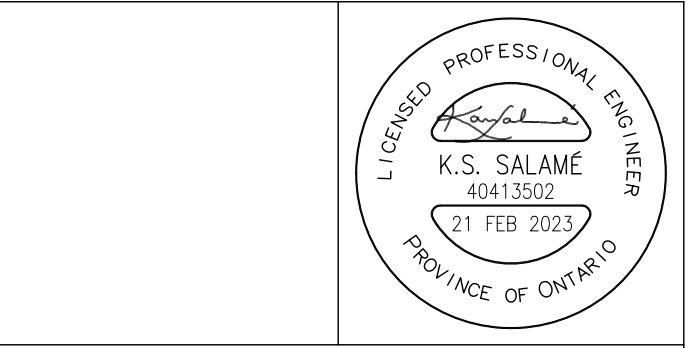
**PLUMBING SYSTEM PIPES**

- DOMESTIC HOT AND COLD WATER PIPES SHALL BE COPPER TYPE 'L' OR APPROVED EQUAL.
- UNDERGROUND SANITARY AND VENT PIPES SHALL COMPLY WITH ONTARIO BUILDING CODE SECTION 7.2.5.10:
  - CAN/CSA-B 182.1, Plastic Drain and Sewer Pipe and Pipe Fittings;
  - CAN/CSA-B 182.2, PVC Sewer Pipe and Fittings (PSM Type);
  - CAN/CSA-B 182.4, Profile (Ribbed) PVC Sewer Pipe and Fittings;
  - CAN/CSA-B 182.6, Profile Polyethylene Sewer Pipe and Fittings; or
  - CAN/CSA B 182.7, Multi-layer PVC Sewer Pipe (PSM Type) having Reprocessed-Recycled Content.
- ABS SANITARY AND VENT PIPES MATERIAL SHALL BE PER ONTARIO BUILDING CODE 7.2.5.12 AND CSA B181.2
- PLASTIC PIPES INSTALLED IN CEILING PLENUM SHALL BE SYSTEM XFR DOW CERTIFIED TO CSA B181.2 AND ULC S102.2

**FIRE SEAL**

- MAINTAIN THE INTEGRITY OF ALL FIRE SEPARATIONS. PROVIDE ALL NECESSARY CSA AND ULC LISTED PRODUCTS WHICH ARE REQUIRED TO SEAL AROUND EACH PIPE, DUCT, CONDUITS AND WIRES. APPLY THE FIRE RATED SEALANT AT FLOORS AND RATED WALLS TO RETAIN THE FIRE RATING CONTINUITY OF THESE ASSEMBLIES.
- WHERE DUCTS AND PIPES PASS THROUGH FLOORS AND FIRE RATED WALLS, PACK SPACE BETWEEN WIRING AND SLEEVE FULL WITH FIREPROOFING, AND SEAL WITH CONSRUIT ELASTA-SEAL OR APPROVED CAULKING COMPOUND WITH FIRE RESISTANCE RATING EQUAL TO THE WALL/FLOOR BEING PENETRATED.
- PACK ALL SLEEVES AND AROUND THE DUCTS FOR A COMPLETE TIGHT SEAL. ACCEPTED FIRE SEAL LIQUID OR PUTTY TYPE SHALL ONLY BE PROVIDED BY DOW CORNING OR 3M. MINERAL WOOL FIBRE SHALL NOT BE USED.

HVAC LEGEND AND NOTES	
	EXISTING SANITARY TO REMAIN
	SANITARY DRAIN
	PIPES TURNING DOWN
	PIPES TURNING UP
	GAS LINE
	PRESSURE REDUCING VALVE
	DOMESTIC COLD WATER LINE
	DOMESTIC HOT WATER LINE
	BALL VALVE
	UNION
	FLOOR DRAIN
	FLEXIBLE CONNECTION
	FUNNEL FLOOR DRAIN
	CLEAN OUT
	ROOF DRAIN
	CONTROL VALVE
	THERMOSTAT
	DIRECTION OF AIR FLOW
	SUPPLY AIR DUCT SECTION
	RETURN AIR DUCT SECTION
	DUCT BALANCING DAMPER
	DUCT SPLITTER DAMPER
	DOOR UNDER CUT (3/4")
	DOMESTIC HOT WATER
	DOMESTIC COLD WATER
	SUPPLY AIR GRILLE.
	RETURN AIR GRILLE.
	GRILLE NOMINAL SIZE (INCH) AIRFLOW (CFM)
	DIFFUSER INLET SIZE (INCH) DIFFUSER TYPE AIRFLOW (CFM)
	TYPE 'A' DIFFUSER: E.H. PRICE LTD ROUND DIFFUSERS SERIES RCDA, 4 CONES, ADJUSTABLE AND COMPLETE WITH SAFETY CHAIN AND WIRE GUARD.
	DRY CHEMICAL (FE) FIRE EXTINGUISHER 10 LB (ULC APPROVED)
	'E' DENOTES EXISTING TO REMAIN. SERVICE AS REQUIRED.
	'D' DENOTES DISCONNECT AND REMOVE ENTIRELY COMPLETE WITH ASSOCIATED ELEMENTS.
	'R' DENOTES RELOCATE TO WHERE SHOWN AND RECONNECT TO APPROVAL.
	'N' DENOTES PROVIDE NEW WHERE SHOWN COMPLETE WITH ASSOCIATED ELEMENTS.
	'C/E' DENOTES CONNECT TO EXISTING.



NOTES:  
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 DO NOT SCALE DRAWINGS, DIMENSIONS TO TAKE PRECEDENCE OVER SCALE.  
 CONTRACTOR TO CHECK AND VERIFY ALL LEVELS AND DIMENSIONS ON DRAWINGS AND ON SITE AND REPORT ANY DISCREPANCIES TO THE DESIGNER AND OBTAIN CLARIFICATION PRIOR TO COMMENCING WITH THE WORK.  
 THE CONTRACTOR ACCEPTS ALL RESPONSIBILITY FOR WORKING WITH DRAWINGS, NOT MARKED "ISSUED FOR CONSTRUCTION" AND FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE EXPRESS APPROVAL OF SHELLARD BUILDING SYSTEMS LTD.  
 ALL WORK TO CONFORM TO ALL GOVERNING CODES AND BY-LAWS.

NOTE BEFORE COMMENCING WORK:  
 THE CONTRACTOR SHALL CHECK AND VERIFY LOCATION OF ALL PIPES, DUCTS, DIFFUSERS, CONDUITS, LIGHT FIXTURES, STRUCTURAL AND EQUIPMENT AND COORDINATE WITH OTHER TRADES ON SITE TO PREVENT INTERFERENCE. THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE WRITTEN APPROVAL OF THE DESIGNER.



3. FOR TENDER	14 MAR 2023
2. FOR PERMIT	21 FEB 2023
1. FOR COORDINATION	15 JAN 2023

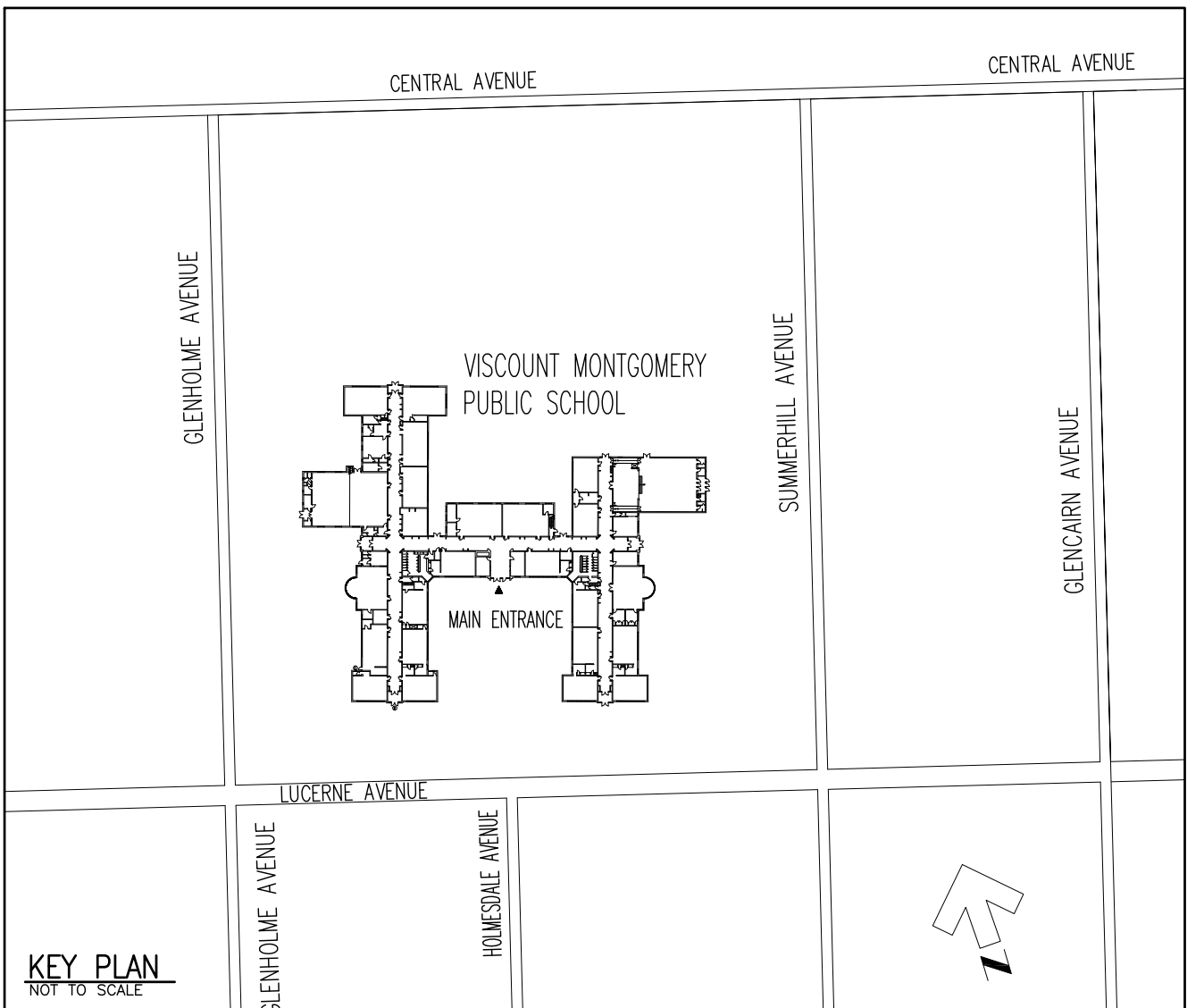
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ISSUED: FOR TENDER		

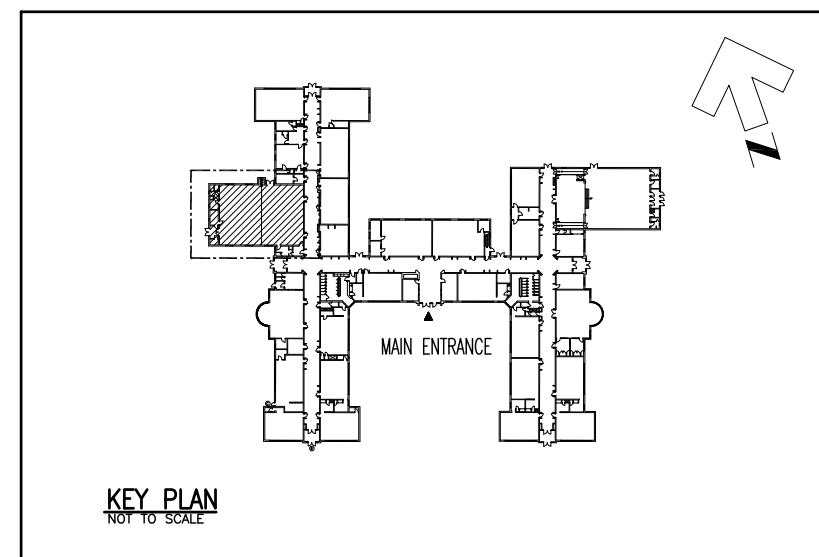
**SHELLARD BUILDING SYSTEMS LTD.**  
 1684 SHELLARD SIDE ROAD  
 CAMBRIDGE, ONTARIO  
 N1R 5S7  
 shellard@consultant.com  
 226 606 6542

VISCOUNT MONTGOMERY PUBLIC SCHOOL  
 HAMILTON – WENTWORTH DISTRICT SCHOOL BOARD  
 1525 LUCERNE AVENUE  
 HAMILTON, ONTARIO

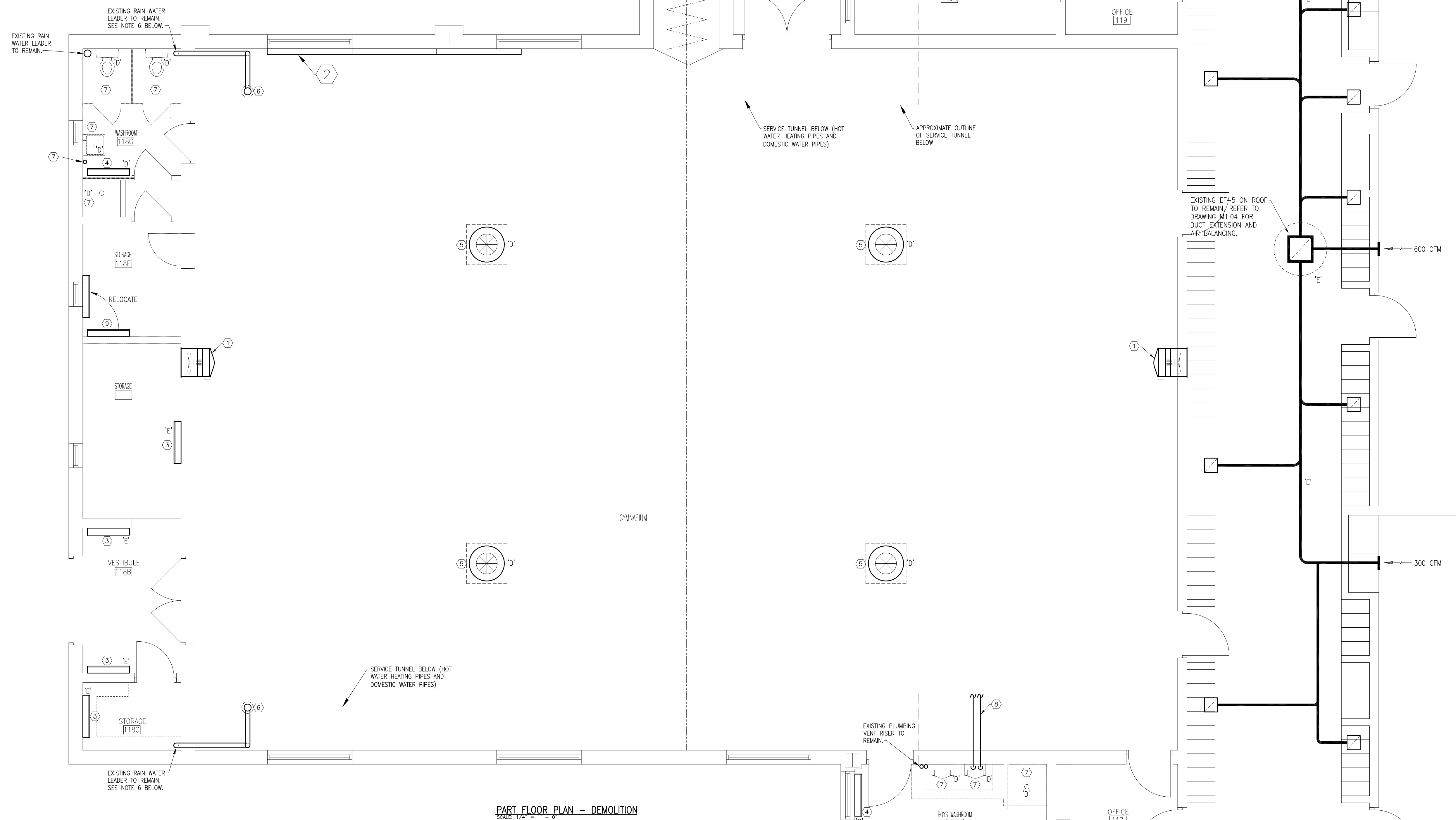
**NOTES AND SPECIFICATIONS MECHANICAL**

DRAWN BY:	CHECKED BY:
N.S.	K.S.
DATE:	JOB No.:
JANUARY 2023	22-110
SCALE:	SHEET No.:
NOT TO SCALE	M0.01





0 4' 8' 16'



PART FLOOR PLAN - DEMOLITION  
SCALE: 1/4" = 1' - 0"

**DRAWING NOTES:**

- 1 DISCONNECT AND REMOVE EXISTING EXHAUST FAN COMPLETE WITH LOUVER AND CONTROLS. COORDINATE WITH GENERAL CONTRACTOR TO SECURE WALL OPENING, PATCHING AND WALL FINISHES BY GENERAL CONTRACTOR.
- 2 DISCONNECT AND REMOVE EXISTING WALL FIN HOT WATER HEATING UNIT COMPLETE WITH ASSOCIATED ENCLOSURE, PIPES AND CONTROLS. REMOVE PIPES DOWN TO MAINS IN THE SERVICE TUNNEL BELOW AND CAP TO APPROVAL. RE-INSULATE PIPES IN THE TUNNEL WHERE INSULATION WAS DAMAGED OR REMOVED.
- 3 EXISTING HOT WATER HEATING CONVECTOR UNIT TO REMAIN. SERVICE THE UNIT INCLUDING CLEANING OF THE HEATING ELEMENT.
- 4 DISCONNECT AND REMOVE EXISTING HOT WATER HEATING CONVECTOR COMPLETE WITH ASSOCIATED PIPES AND CONTROLS. REMOVE PIPES BACK TO MAINS AND CAP TO APPROVAL. RE-INSULATE EXISTING PIPES WHERE INSULATION WAS DAMAGED OR REMOVED.
- 5 DISCONNECT AND REMOVE EXISTING HOT WATER HEATING UNITS IN CEILING SPACE COMPLETE WITH ASSOCIATED PIPES AND CONTROLS. REMOVE PIPES BACK TO MAINS IN THE SERVICE TUNNEL CAP TO APPROVAL. RE-INSULATE EXISTING PIPES WHERE INSULATION WAS DAMAGED OR REMOVED.
- 6 EXISTING ROOF DRAIN TO REMAIN. INSULATE ALL PIPES USING 1" THICK FIBERGLASS PIPE INSULATE AND RE-COVER WITH WHITE PVC JACKETING. OVERLAP THE JACKETING AND SEAL ALL JOINTS WITH APPROVED 2" WIDE MATCHING COLOUR PVC TAPE.
- 7 DISCONNECT AND REMOVE ALL EXISTING PLUMBING FIXTURES SHOWER UNITS AND SHOWER DRAINS IN THE WASHROOMS COMPLETE WITH ASSOCIATED DOMESTIC WATER PIPES, SANITARY PIPES, WATER FLUSH TANKS AND ACCESSORIES. REMOVE PIPES BACK TO SOURCE. RE-USE SANITARY PIPE CONNECTIONS IN THE SERVICE TUNNEL FOR NEW FIXTURES WHERE POSSIBLE. RE-INSULATE EXISTING DOMESTIC WATER PIPES WHERE INSULATION WAS DAMAGED OR REMOVED DURING CONSTRUCTION. RE-PIPE VENT LINE AS SHOWN AND NOTED ON DRAWING M1.02.
- 8 DISCONNECT AND REMOVE EXISTING HOT WATER HEATING SUPPLY AND RETURN PIPES SERVING UNITS HEATERS COMPLETE WITH ASSOCIATED INSULATION, FITTINGS, HANGERS AND VALVES. CAP PIPES AT MAIN SERVICE TUNNEL. RE-INSULATE EXISTING PIPES WHERE INSULATION WAS REMOVED OR DAMAGED DURING CONSTRUCTION.
- 9 DISCONNECT AND RELOCATE THE EXISTING HOT WATER HEATING CONVECTOR COMPLETE WITH ASSOCIATED PIPES. PROVIDE NEW CONTROL VALVE AND ROOM TEMPERATURE SENSOR. SERVICE THE UNIT INCLUDING CLEANING OF THE HEATING ELEMENT. COORDINATE EXACT LOCATION ON SITE TO SUITE EXISTING CONDITIONS. RE-INSULATE NEW AND EXISTING PIPES WHERE INSULATION WAS DAMAGED OR REMOVED.
- 10 DISCONNECT AND REMOVE VENT PIPE FROM THE WASHROOM. REROUTE VENT LINE IN THE SERVICE SPACE BELOW AND PIPE UP THRU FLOOR IN STORAGE ROOM 118E TO CEILING SPACE AND RECONNECT TO EXISTING VENT RISER BELOW ROOF DECK. PROVIDE FIRE SEAL AROUND PIPE AT FLOOR (REFER TO DRAWING M1.02).



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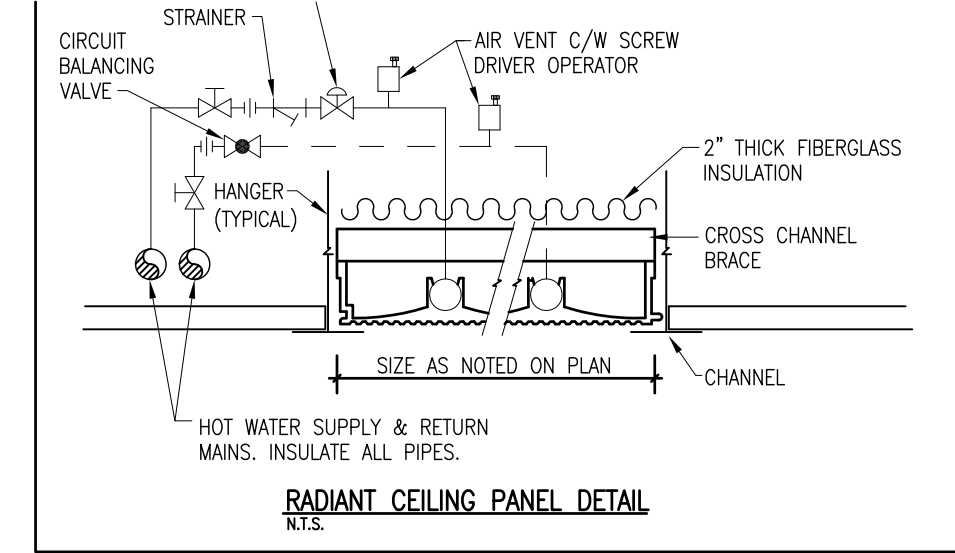
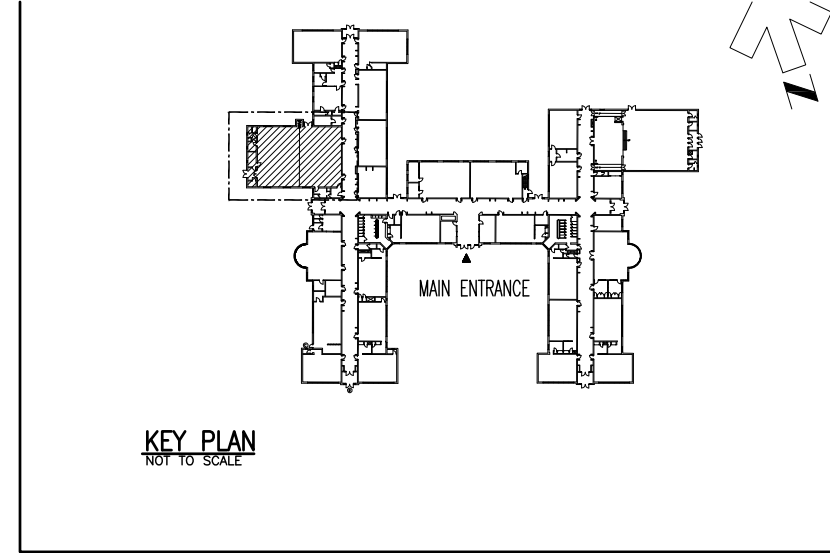
3.	FOR TENDER	14 MAR 2023
2.	FOR PERMIT	21 FEB 2023
1.	FOR COORDINATION	15 JAN 2023
No.	DESCRIPTION	DATE

REVISIONS:  
ISSUED: FOR TENDER

**SHELLARD BUILDING SYSTEMS LTD.**  
1684 SHELLARD SIDE ROAD  
CAMBRIDGE, ONTARIO  
N1R 5S7  
shellard@consultant.com  
226 606 6542

VISCOUNT MONTGOMERY PUBLIC SCHOOL  
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD  
1525 LUCERNE AVENUE  
HAMILTON, ONTARIO

DRAWN NAME: <b>PART FLOOR PLAN DEMOLITION - MECHANICAL</b>	
DRAWN BY: N.S.	CHECKED BY: K.S.
DATE: JANUARY 2023	JOB No.: 22-110
SCALE: AS NOTED	SHEET No.: M1.01



ROOM	TYPE	SIZE	LOCATION
FD	-	3/8" 3"	PRIME FLOOR & FUNNEL FLOOR DRAINS
WC-1	-	1" 3"	WATER CLOSET - FLUSH VALVE
LAV-1	1/2" 1/2"	1/2"	LAVATORY

FLOOR DRAIN, HUB DRAIN AND FUNNEL FLOOR DRAINS SHALL BE PRIMED, TRAPPED AND VENTED. FLOOR DRAIN SHALL BE FLUSH WITH FLOOR LEVEL. COORDINATE/VERIFY TYPE AND LOCATION OF EACH PLUMBING FIXTURE WITH LATEST ARCHITECTURAL DRAWINGS. PROVIDE TRAP SEAL PRIMER FOR EACH FLOOR DRAIN. INSTALL EACH PLUMBING FIXTURE COMPLETE WITH ISOLATING VALVES. REFER TO ARCHITECTURAL DRAWINGS AND SCHEDULE FOR KITCHEN SINKS, HAND SINKS AND APPLIANCES THAT REQUIRE WATER CONNECTION. EACH CONNECTION TO EACH FIXTURE OR APPLIANCE SHALL BE COMPLETE WITH SHUT OFF VALVE AT BOTH HOT AND COLD WATER PIPES.

**HOT WATER RADIANT CEILING PANELS:**

PROVIDE SIGMA OR APPROVED EQUAL RADIANT CEILING PANELS WHERE SHOWN AND AS NOTED. EACH PANEL SHALL BE MANUFACTURED TO SUITE THE NOTED DIMENSIONS AND PIPES PASSES. PROVIDE EACH PANEL COMPLETE WITH ALL REQUIRED ACCESSORIES, VALVES, SUPPORTS AND CONTROLS.

RADIANT CEILING PANE No. 1: THE UNIT SHALL BE 30" x 96", 10 PASSES, 1.63 KW HEATING OUTPUT AT 82.2°C EWT, EXTRUDED ALUMINUM, INTEGRAL PIPE SADDLES AND WHITE FINISH. PROVIDE UNIT COMPLETE DIRECT DIGITAL MODULATING CONTROL VALVE, ALL REQUIRED BRACES, ALUMINUM EXTRUDED FRAME FOR LAY-IN TILE CEILING, 1" THICK FOIL FACED INSULATION AND SUSPENSION CHAINS FOR EMERGENCY SUPPORT.

RADIANT CEILING PANE No. 2: THE UNIT SHALL BE 30" x 72", 10 PASSES, 1.22 KW HEATING OUTPUT AT 82.2°C EWT, EXTRUDED ALUMINUM, INTEGRAL PIPE SADDLES AND WHITE FINISH. PROVIDE UNIT COMPLETE DIRECT DIGITAL MODULATING CONTROL VALVE, ALL REQUIRED BRACES, ALUMINUM EXTRUDED FRAME FOR LAY-IN TILE CEILING, 1" THICK FOIL FACED INSULATION AND SUSPENSION CHAINS FOR EMERGENCY SUPPORT.

INSTALL UNIT WHERE SHOWN COMPLETE WITH ISOLATING VALVES, CIRCUIT BALANCING VALVE AND CONTROL VALVE WITH DIRECT DIGITAL ACTUATOR. INSULATE ALL NEW AND EXISTING PIPES. WIRE CONTROL VALVE TO A REMOTE TEMPERATURE SENSOR AND EXISTING BUILDING AUTOMATION SYSTEM. COORDINATE WITH OWNER CONNECTION TO EXISTING BUILDING AUTOMATION SYSTEM. TEMPERATURE SENSOR SHALL HAVE HEAVY DUTY VANDAL PROOF LOCKABLE ENCLOSURE. SECURE RADIANT PANEL TO EXISTING STRUCTURE USING WELDED CHAINS FOR EMERGENCY SUPPORT SUCH THAT IT IS SUPPORTED WITHOUT THE T-BAR CEILING (CHAINS SHALL HOLD PANEL IN PLACE AND SHALL NOT FALL THRU THE T-BAR CEILING).

PROVIDE 1" HOT WATER HEATING SUPPLY AND RETURN PIPES TO EACH RADIANT CEILING PANEL COMPLETE WITH UNIONS, CIRCUIT BALANCING VALVE, ISOLATING VALVES, CONTROL VALVE AND STRAINER. COORDINATE WITH OWNER FOR ZONE PIPING SHUT DOWN BEFORE COMMENCING WORK. INSULATE ALL NEW AND EXISTING PIPES. LABEL PIPES AND FLOW DIRECTION OVER NEW INSULATION.

**CONTROLS (BUILDING AUTOMATION SYSTEM):**

CONNECT NEW MECHANICAL UNITS TO EXISTING BUILDING AUTOMATION SYSTEM (BAS). THE EXISTING BAS IS BY CONVERGENT. THE CONTROLS WORK SHALL BE DONE BY CONVERGENT.

PROVIDE ALL REQUIRED DEVICES, CONTROLLERS, RELAYS, SENSORS, SWITCHES, CONDUITS, WIRING, CONTROL TRANSFORMERS, GRAPHICS AND SOFTWARE TO COMPLETE SYSTEMS INSTALLATION. ALL WIRES SHALL BE IN EMT CONDUITS.

UPDATE SYSTEM GRAPHICS AND ALARMS. THE CONTROLS SHALL BE COMMISSIONED AND VERIFIED BY CONVERGENT. PROVIDE TESTING AND VERIFICATION REPORT. PROVIDE TRAINING TO FACILITIES. THE TRAINING SHALL BE ARRANGED AT END OF CONSTRUCTION AND SHALL INCLUDE MINIMUM TWO SESSIONS 2 HOURS EACH.

**RADIANT CEILING PANELS**

- PROVIDE GREYSTONE T2000 STYLE OR EQUAL TEMPERATURE SENSOR AND TWO WAY MODULATING CONTROL VALVE (0-10V) FOR EACH RADIANT PANEL AND INSTALL WHERE SHOWN TO MONITOR ZONE TEMPERATURE SENSOR AND CONTROL RADIANT PANEL MODULATING CONTROL VALVE.
- PROVIDE HEAVY DUTY TRANSPARENT AND LOCKABLE GUARD FOR EACH SENSOR.
- THE CONTROLS VIA EXISTING BUILDING AUTOMATION SYSTEM (BAS) SHALL INCLUDE THREE (3) MODES OF OPERATION FOR CONTROL OF RADIANT HEATING:
  - OCCUPIED MODE = IF TIME-OF-DAY SCHEDULE IS IN 'OCCUPIED MODE' AND LOCAL OCCUPANCY IS SENSED, ZONE WILL BE CONTROLLED TO 'OCCUPIED HEATING SETPOINT', SET TO 21°C
  - STANDBY MODE = IF (TIME-OF-DAY SCHEDULE IS IN 'OCCUPIED MODE' AND OCCUPANCY IS NOT SENSED) OR (TIME-OF-DAY SCHEDULE IS IN 'UNOCCUPIED MODE' AND OCCUPANCY IS SENSED), ZONE WILL BE CONTROLLED TO 'STANDBY HEATING SETPOINT', SET TO 19°C
  - UNOCCUPIED MODE = IF TIME-OF-DAY SCHEDULE IS IN 'UNOCCUPIED MODE' AND OCCUPANCY IS NOT SENSED, ZONE WILL BE CONTROLLED TO 'UNOCCUPIED HEATING SETPOINT', SET TO 17°C.

**ROOFTOP UNIT**

- PROVIDE CONTROLLER, SENSORS, ACTUATORS, RELAYS AND ALL REQUIRED WIRING TO CONTROL ROOF TOP HEATING AND COOLING UNIT.
- THE BAS SHALL ENABLE UNIT ON/OFF, CONTROL HEATING, COOLING AND EVAPORATOR FAN.
- PROVIDE SPACE SENSOR COMPLETE WITH HEAVY DUTY TRANSPARENT LOCKABLE GUARD AND WIRE TO ROOFTOP AND BAS SYSTEM.
- THE BAS SHALL CONTROL HEATING IN TWO STAGES, TWO STAGE COOLING, EVAPORATOR FAN AND ECONOMIZER INCLUDING POWER EXHAUST FAN.
- PROVIDE CO<sub>2</sub> SENSOR AND WIRE TO CONTROL MINIMUM OUTSIDE AIR BY CONTROLLING THE ECONOMIZER DAMPER AND POWER EXHAUST FAN (ECONOMIZER SHALL CLOSE WHEN CO<sub>2</sub> IS LOWER THAN 400 PPM).
- THE BAS SHALL CONTROL ROOFTOP UNIT ECONOMIZER AND POWER EXHAUST TO PROVIDE FREE COOLING USING ENTHALPY CONTROLLER, OUTSIDE AIR TEMPERATURE AND SPACE TEMPERATURE.
- PROGRAM THE ROOFTOP FOR NIGHT SET BACK.
- PROVIDE SUPPLY AIR TEMPERATURE, RETURN AIR TEMPERATURE, HEATING STATUS, COOLING STATUS, DIRTY FILTER, UNIT START/STOP, AIR PROOFING SWITCH AND ALARMS.
- UPDATE EXISTING BAS INTERFACE GRAPHICS.
- PROVIDE THE FOLLOWING INPUT/OUTPUT AT THE INTERFACE:
  - UNIT STATUS
  - HEATING ENABLE/DISABLE STATUS
  - COOLING ENABLE/DISABLE STATUS
  - DIRTY FILTER INDICATOR
  - SUPPLY AIR TEMPERATURE AND SET-POINT
  - RETURN AIR TEMPERATURE
  - UNIT FAN STATUS (PROVIDE AIR FLOW SWITCH)
  - BURNER ON/OFF STATUS
  - COMPRESSORS ON/OFF STATUS
  - ECONOMIZER STATUS (PERCENT OF OUTSIDE AIR) AND ENTHALPY CONTROLLER
  - UNIT SHUTDOWN AT SUPPLY AIR TEMPERATURE BELOW 3°C (ADJUSTABLE)
  - ALARMS

**WASHROOM EXHAUST FANS (TWO FANS)**

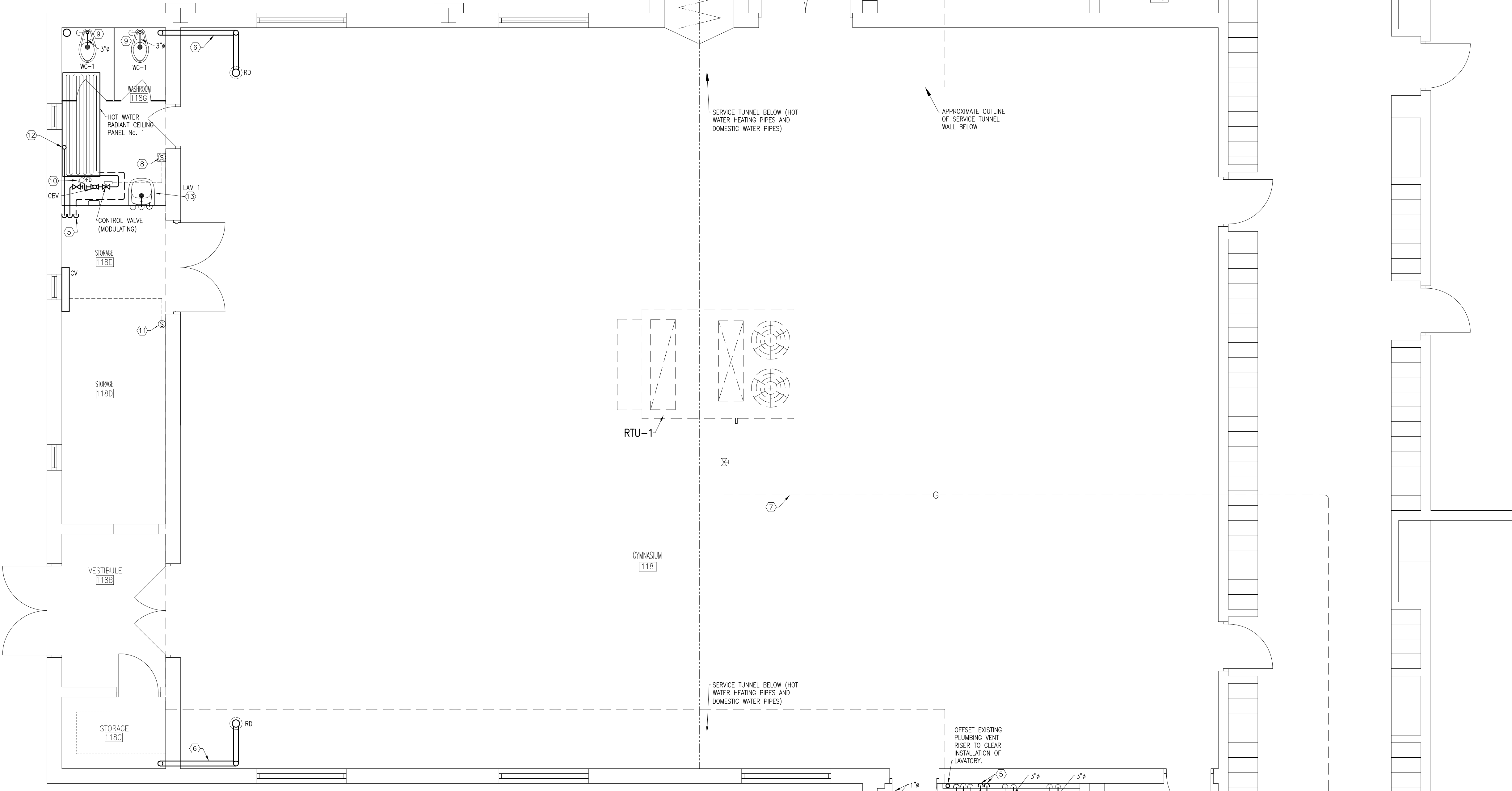
CONNECT EACH FAN TO THE BAS FOR START/STOP, STATUS AND ALARM. UPDATE BAS INTERFACE GRAPHICS.

**HOT WATER CONNECTOR**

PROVIDE TEMPERATURE SENSOR FOR THE RELOCATED HOT WATER HEATING CONNECTOR AND CONTROL VALVE. WIRE ROOM SENSOR TO CONTROL CONTROL CONNECTOR MODULATING CONTROL VALVE. REFER TO RADIANT PANEL CONTROLS NOTED ABOVE AND APPLY SAME SEQUENCE.

**CIRCULATING FANS CF-1, 2, 3 & 4**

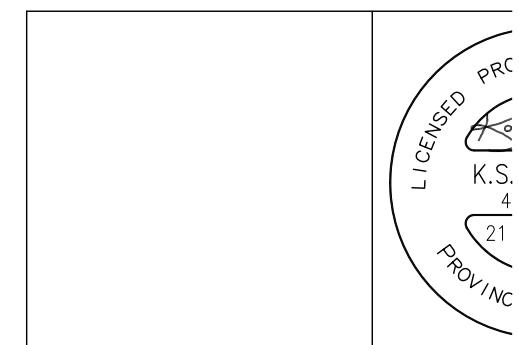
CONNECT EACH FAN TO THE BUILDING AUTOMATION FOR START/STOP, STATUS AND ALARM. UPDATE THE EXISTING BAS INTERFACE GRAPHICS.



**PART FLOOR PLAN - MECHANICAL (PROPOSED)**  
SCALE: 1/4" = 1'-0"

**DRAWING NOTES:**

- PROVIDE E.H. PRICE LTD ROUND DIFFUSERS R04A SERIES, ADJUSTABLE, 4 CONES. EACH DIFFUSERS SHALL BE COMPLETE WITH TWO SAFETY CHAINS. DIFFUSERS COLOUR SHALL BE SELECTED BY THE ARCHITECT. INSTALL DUCTS AND DIFFUSERS SUCH THAT THE DIFFUSERS ARE LEVEL WITH THE LOWER SIDE OF THE STRUCTURAL STEEL JOISTS.
- ALL DUCTS SHALL BE INTERNALLY INSULATION USING 1" THICK INSULATION. THE INSULATION SHALL BE SECURED TO DUCT USING APPROVED PINS. INSTALL DUCTS THRU EXISTING OPEN WEB STEEL JOISTS. COORDINATE ROUTING ON SITE AND REVERSE ROUTING TO SUIT EXISTING STRUCTURAL STEEL JOISTS AND NEW LIGHT FIXTURES. SEAL ALL DUCT JOINTS USING APPROVED DUCT SEALANT.
- CEILING FANS (CF-1 TO CF-4): PROVIDE CANARM OR EQUAL CIRCULATING FANS EACH MODEL CP60-HPW, UP/DOWN DRAFT, 1500 MM DIAMETER, 0.84 AMPS, 101 WATTS AND 115/1/60. PROVIDE EACH FAN COMPLETE WITH CHROME PLATED INDUSTRIAL GRADE FAN GUARD AND SPEED CONTROLLER (TYPICAL OF FOUR FANS). COORDINATE WITH ELECTRICAL DIVISION TO GROUP EACH TWO FANS TO ONE SPEED CONTROLLER. LOCATE CONTROLLERS AS DIRECTED ON SITE AND PROVIDE LOCKABLE GUARDS. WIRE FROM NEAREST POWER PANEL TO EACH FAN. ALL WIRES SHALL BE IN CONDUITS AND CONCEALED IN WALLS. INSTALL EACH FAN IN ACCORDANCE TO MANUFACTURER WRITTEN INSTRUCTIONS COMPLETE WITH SAFETY CABLES.
- THE RETURN AIR DUCT SHALL BE INTERNALLY SOUND-LINED. TERMINATE RETURN AIR DUCT WITH 42x24 (OR EQUIVALENT) OPEN END COMPLETE WITH MESH SCREEN.
- 1" HOT WATER SUPPLY AND RETURN FROM EXISTING MAINS IN SERVICE TUNNEL UP TO HEATING PANEL. COORDINATE EXACT CONNECTION POINT AND ROUTING ON SITE. INSULATE PIPES USING 2" THICK FIBERGLASS PIPE INSULATION AND COVER EXPOSED SECTIONS BELOW CEILING WITH WHITE PVC COVERING. SEAL ALL PVC JOINTS AND APPLY 2" WIDE PVC TAPE. CORE DRILLING AND FIRE SEAL AT FLOOR BY THIS DIVISION. INSTALL PIPE RISERS TIGHT AGAINST EXISTING WALL.
- RE-INSULATE ALL EXISTING STORM DRAIN PIPES USING 2" THICK FIBERGLASS PIPE INSULATE AND RE-COVER WITH WHITE PVC JACKETING. OVERLAP THE JACKETING AND SEAL ALL JOINTS WITH APPROVED 2" WIDE MATCHING COLOUR PVC TAPE.
- 2" GAS PIPE ON ROOF. REFER TO DRAWING M1.03 AND DETAILS ON DRAWING M3.01.
- INSTALL TEMPERATURE SENSOR AT 1200 mm (48") ABOVE FINISHED FLOOR COMPLETE WITH HEAVY DUTY TRANSPARENT LOCKABLE GUARD. REFER TO CONTROLS NOTES ON THIS DRAWING.
- PROVIDE 1/2" DOMESTIC HOT AND COLD WATER PIPES FROM MAINS IN SERVICE TUNNEL AND CONNECT TO LAVATORY COMPLETE WITH ISOLATING VALVES. PROVIDE 1" DOMESTIC COLD WATER FROM MAIN IN SERVICE TUNNEL AND CONNECT TO EACH WATER CLOSET FLUSH VALVE COMPLETE WITH ISOLATING VALVE. INSTALL STEEL CARRIER AND PIPES CONCEALED IN WALL FOR LAV-1. INSULATE NEW AND EXISTING PIPES. PROVIDE SANITARY PIPE FROM EACH PLUMBING FIXTURE AND CONNECT TO SANITARY MAIN IN SERVICE TUNNEL. MARK FLOOR FOR CUTTING AND EXCAVATION BEYOND THE SERVICE TUNNEL. COORDINATE WITH GENERAL CONTRACTOR. EXPOSED PIPES IN THE WASHROOM SHALL BE CHROME PLATED.
- PROVIDE FLOOR DRAIN COMPLETE WITH TRAP AND PIPE TO EXISTING SANITARY MAIN IN THE SERVICE TUNNEL BELOW. PROVIDE TRAP SEAL PRIMER AND CONNECT TO FLOOR DRAIN TRAP COMPLETE WITH WATER TRICKLING VALVE. MARK FLOOR FOR CORE DRILLING AND COORDINATE WITH GENERAL CONTRACTOR FOR APPROVAL BEFORE DRILLING.
- PROVIDE NEW MODULATING CONTROL VALVE AND TEMPERATURE SENSOR. WIRE SENSOR TO BUILDING AUTOMATION SYSTEM AND THE CONTROL VALVE.
- REROUTE VENT LINE IN THE SERVICE SPACE BELOW AND PIPE UP THRU FLOOR TO CEILING SPACE AND RECONNECT TO EXISTING VENT RISER BELOW ROOF DECK. PROVIDE FIRE SEAL AROUND PIPE AT FLOOR.
- PROVIDE 1/2" DOMESTIC HOT AND COLD WATER PIPES FROM MAINS IN SERVICE TUNNEL AND CONNECT TO LAVATORY COMPLETE WITH ISOLATING VALVES. PROVIDE SANITARY PIPE FROM THE LAVATORY TO EXISTING SANITARY MAIN IN THE SERVICE TUNNEL. INSTALL ALL PIPES AND LAVATORY STEEL CARRIER RECESSED IN BLOCK WALL. COORDINATE WITH GENERAL CONTRACTOR FOR INSTALLATION OF PIPES IN BLOCK WALL. MARK LOCATION OF CORE DRILLING THRU FLOOR AND OBTAIN APPROVAL BEFORE PROCEEDING. INSULATE NEW AND EXISTING PIPES.



NOTES:  
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 DO NOT SCALE DRAWINGS, DIMENSIONS TAKE PRECEDENCE OVER SCALE.  
 CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON DRAWINGS AND ON SITE. ANY DISCREPANCIES TO THE DESIGNER A CLARIFICATION PRIOR TO COMMENCING WORK.  
 THE CONTRACTOR ACCEPTS ALL RESPONSIBILITY WORKING WITH DRAWINGS, NOT MARKED 'CONSTRUCTION' AND FOR ANY CHANGES DRAWINGS WITHOUT THE EXPRESS APPROVAL SHELLARD BUILDING SYSTEMS LTD.  
 ALL WORK TO CONFORM TO ALL GOVERNMENT AND BY-LAWS.

NOTE BEFORE COMMENCING WORK:  
 THE CONTRACTOR SHALL CHECK AND VERIFY LOCATION OF DIFFUSERS, CONDUITS, LIGHT FIXTURES, STRUCTURAL AND E-COORDINATE WITH OTHER TRADES ON SITE TO PREVENT THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE WRITTEN APPROVAL OF THE DESIGNER.

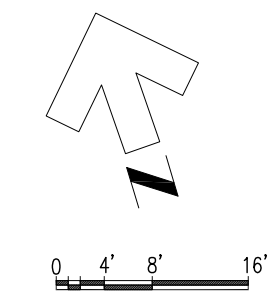


3.	FOR TENDER
2.	FOR PERMIT
1.	FOR COORDINATION
No.	DESCRIPTION

**SHELLARD BUILDING SYSTEMS**  
 1684 SHELLARD SIDE ROAD  
 CAMBRIDGE, ONTARIO  
 N1R 5S7  
 shellardbc@consultant.com  
 226.606.6542

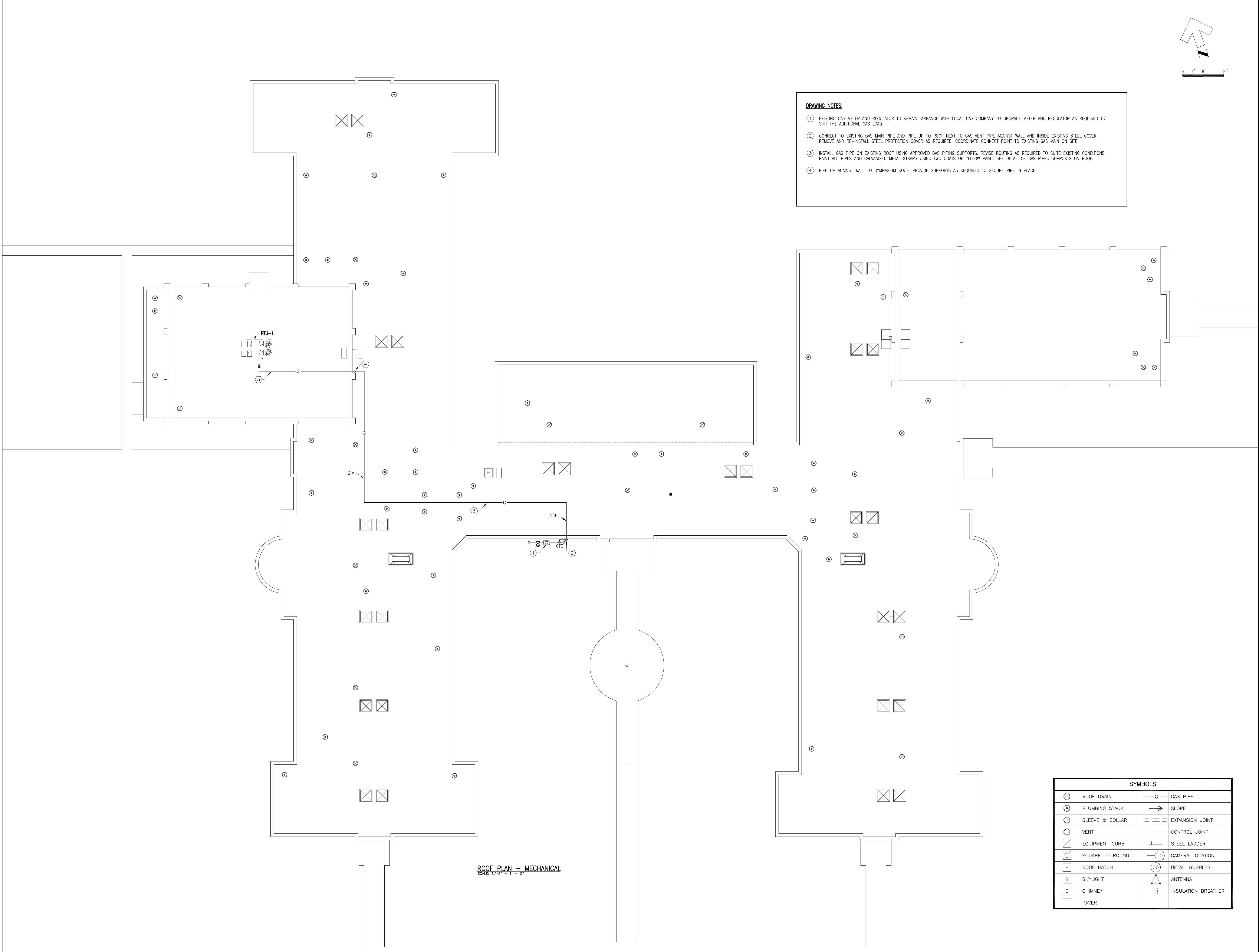
VISCOUNT MONTGOMERY PUBLIC SCHOOL  
 HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD  
 1525 LUCERNE AVENUE  
 HAMILTON, ONTARIO

DRAWN NAME: PART FLOOR PLAN MECHANICAL	
DRAWN BY: N.S.	CHECKED BY: K.S.
DATE: JANUARY 2023	JOB No.: 22-111
SCALE: AS NOTED	SHEET No.: M1

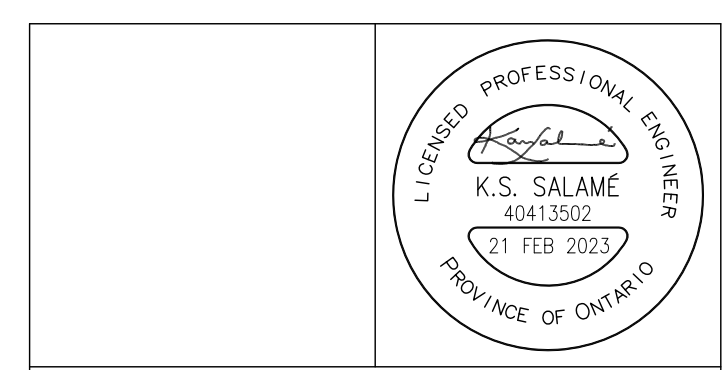


**DRAWING NOTES:**

- ① EXISTING GAS METER AND REGULATOR TO REMAIN. ARRANGE WITH LOCAL GAS COMPANY TO UPGRADE METER AND REGULATOR AS REQUIRED TO SUIT THE ADDITIONAL GAS LOAD.
- ② CONNECT TO EXISTING GAS MAIN PIPE AND PIPE UP TO ROOF NEXT TO GAS VENT PIPE AGAINST WALL AND INSIDE EXISTING STEEL COVER. REMOVE AND RE-INSTALL STEEL PROTECTION COVER AS REQUIRED. COORDINATE CONNECT POINT TO EXISTING GAS MAIN ON SITE.
- ③ INSTALL GAS PIPE ON EXISTING ROOF USING APPROVED GAS PIPING SUPPORTS. REVISE ROUTING AS REQUIRED TO SUITE EXISTING CONDITIONS. PAINT ALL PIPES AND GALVANIZED METAL STRAPS USING TWO COATS OF YELLOW PAINT. SEE DETAIL OF GAS PIPES SUPPORTS ON ROOF.
- ④ PIPE UP AGAINST WALL TO GYMNASIUM ROOF. PROVIDE SUPPORTS AS REQUIRED TO SECURE PIPE IN PLACE.



ROOF PLAN -- MECHANICAL  
SCALE: 1/16" = 1'-0"



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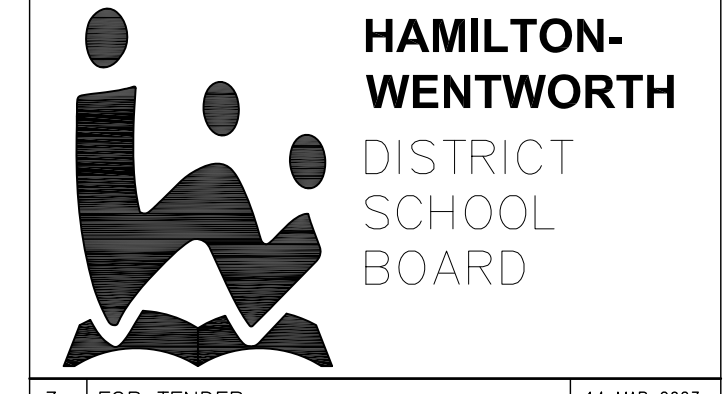
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3.	FOR TENDER	14 MAR 2023
2.	FOR PERMIT	21 FEB 2023
1.	FOR COORDINATION	15 JAN 2023
No.	DESCRIPTION	DATE

ISSUED: FOR TENDER

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1684 SHELLARD SIDE ROAD  
CAMBRIDGE, ONTARIO  
N1R 5S7  
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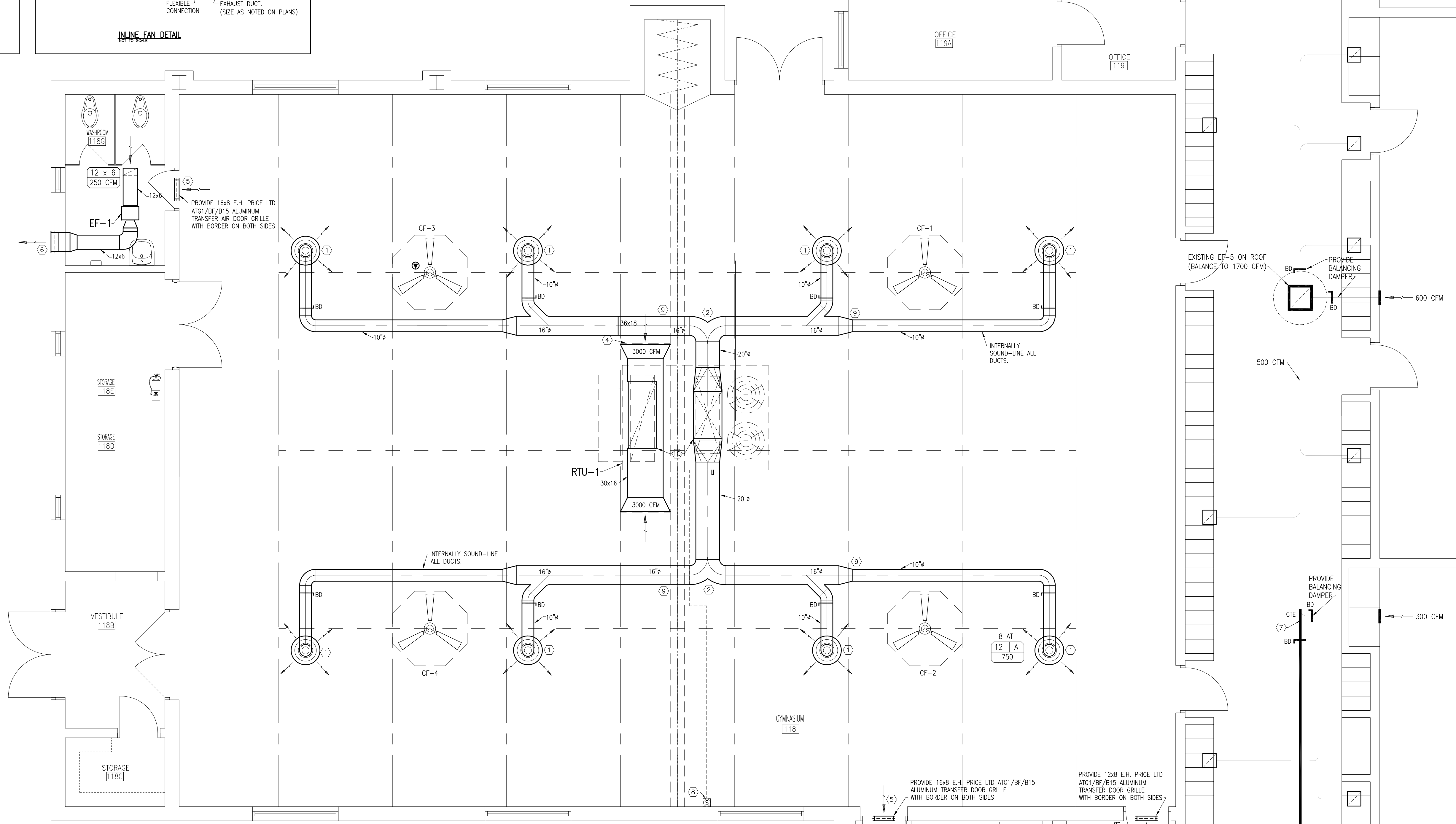
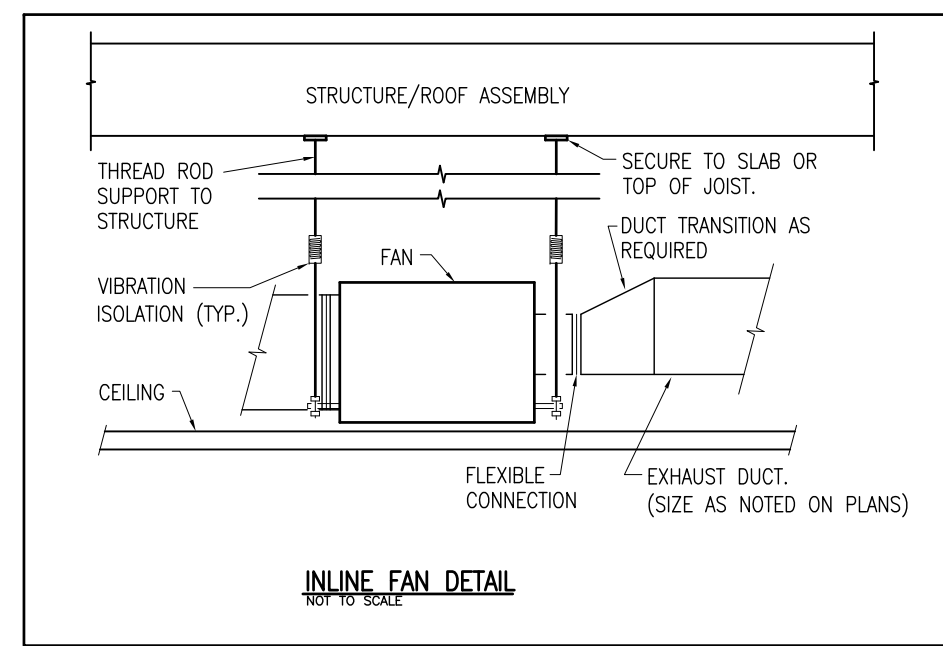
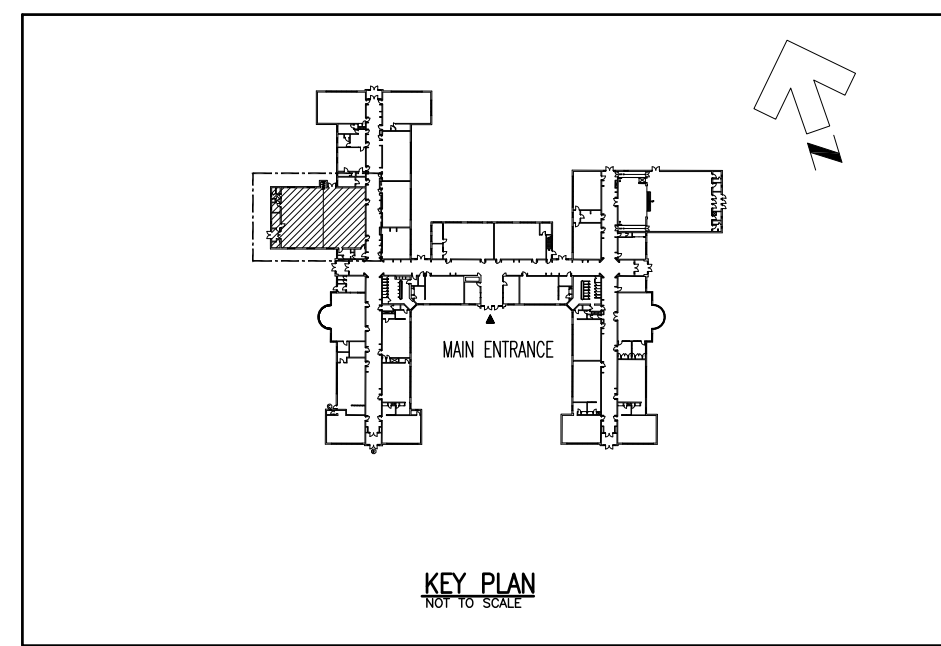
DRAWN NAME:  
**ROOF PLAN MECHANICAL**

DRAWN BY:	CHECKED BY:
N.S.	K.S.

DATE:	JOB No.:
JANUARY 2023	22-110

SCALE:	SHEET No.:
AS NOTED	M1.03

SYMBOLS			
⊗	ROOF DRAIN	— G —	GAS PIPE
⊙	PLUMBING STACK	→	SLOPE
⊖	SLEEVE & COLLAR	— — —	EXPANSION JOINT
○	VENT	- - -	CONTROL JOINT
⊠	EQUIPMENT CURB	—   —	STEEL LADDER
⊠	SQUARE TO ROUND	← (OO)	CAMERA LOCATION
H	ROOF HATCH	(OO)	DETAIL BUBBLES
S	SKYLIGHT	△	ANTENNA
C	CHIMNEY	B	INSULATION BREATHER
□	PAVER		



PART FLOOR PLAN - MECHANICAL (PROPOSED)  
SCALE: 1/4" = 1' - 0"

**DRAWING NOTES:**

1. PROVIDE E.H. PRICE LTD ROUND DIFFUSERS RCDA SERIES, ADJUSTABLE, 4 CONES ADJUSTABLE FOR VERTICAL AIR PATTERN. EACH DIFFUSERS SHALL BE COMPLETE WITH TWO SAFETY CHAINS AND WIRE GUARD. DIFFUSERS COLOUR SHALL BE SELECTED BY THE ARCHITECT. INSTALL DUCTS AND DIFFUSERS SUCH THAT THE DIFFUSERS ARE LEVEL WITH THE LOWER SIDE OF THE EXISTING STRUCTURAL STEEL JOISTS.
2. ALL DUCTS SHALL BE INTERNALLY INSULATION USING 1" THICK INSULATION. THE INSULATION SHALL BE SECURED TO DUCT USING APPROVED PINS. INSTALL DUCTS THRU EXISTING OPEN WEB STEEL JOISTS. COORDINATE ROUTING ON SITE AND REVERSE ROUTING TO SUIT EXISTING STRUCTURAL STEEL JOISTS AND NEW LIGHT FIXTURES. SEAL ALL DUCT JOINTS USING APPROVED DUCT SEALANT.
3. CEILING FANS (CF-1 TO CF-4). PROVIDE CANARM OR EQUAL CIRCULATING FANS EACH MODEL CP60-HPWP, UP/DOWN DRAFT, 1500 MM DIAMETER, 0.84 AMPS, 101 WATTS AND 115/1/60. PROVIDE EACH FAN COMPLETE WITH CHROME PLATED INDUSTRIAL GRADE FAN GUARD AND SPEED CONTROLLER (TYPICAL OF FOUR FANS). COORDINATE WITH ELECTRICAL DIVISION TO GROUP EACH TWO FANS TO ONE SPEED CONTROLLER. LOCATE CONTROLLERS AS DIRECTED ON SITE AND PROVIDE LOCKABLE GUARDS. WIRE FROM NEAREST POWER PANEL TO EACH FAN. ALL WIRES SHALL BE IN CONDUITS AND CONCEALED IN WALLS. INSTALL EACH FAN IN ACCORDANCE TO MANUFACTURER WRITTEN INSTRUCTIONS COMPLETE WITH SAFETY CABLES.
4. THE RETURN AIR DUCT SHALL BE INTERNALLY SOUND-LINED, TERMINATE EACH RETURN AIR DUCT OPENING WITH 36X16 (OR EQUIVALENT) OPEN END COMPLETE WITH MESH SCREEN. MAINTAIN MINIMUM 6 FT DISTANCE FROM RETURN AIR DUCT OPENING TO CLOSEST SIDE OF DUCT RISER.
5. PROVIDE DOOR TRANSFER AIR GRILLE COMPLETE WITH BORDER ON BOTH SIDES. EACH GRILLE SHALL BE E.H. PRICE LTD. OR APPROVED EQUAL MODEL ATG1/BF/B15 ALUMINUM TRANSFER AIR DOOR GRILLE WITH BORDER ON BOTH SIDES. GRILLES COLOUR SHALL BE AS SELECTED BY ARCHITECT. COORDINATE WITH GENERAL CONTRACTOR TO CUT DOOR OPENINGS.
6. 16x8 STORM LOUVRE COMPLETE WITH SCREEN. DUCT FROM LOUVRE TO FAN. EACH LOUVRE SHALL BE E.H. PRICE LTD 14 GAUGE EXTRUDED ALUMINUM, FIXED ARCHITECTURAL BLADES, PLATED STEEL SCREWS, 50% FREE AREA, INTEGRAL PERIMETER CAULKING, 1.5" FLANGE, BIRD SCREEN AND POWER COAT FINISH (COLOUR BY ARCHITECT). INSULATE DUCTS FROM WALL TO FAN. COORDINATE WITH GENERAL CONTRACTOR FOR WALL OPENING.
7. PROVIDE 12x6 EXHAUST AIR GRILLE AT NEW CEILING AND DUCT 10x4 TO EXISTING EXHAUST AIR DUCT IN THE CORRIDOR. SEAL ALL DUCT JOINTS AND BALANCE ENTIRE EF-5 SYSTEM. REFER TO EXISTING RECORD DRAWING FOR EXISTING FAN EF-5 AIR DISTRIBUTION.
8. PROVIDE TEMPERATURE SENSOR AT 48" (1200 mm) ABOVE FINISHED FLOOR COMPLETE WITH HEAVY DUTY TRANSPARENT LOCKABLE GUARD. CONNECT TO EXISTING BAS AND ROOFTOP UNIT. REFER TO CONTROLS NOTES ON DRAWING M1.02 AFTER REMOVAL OF GYM CEILING TO ALIGN MAIN RECTANGULAR DUCTS ROUTING THRU THE EXISTING OPEN WEB STEEL JOISTS.
9. ALL DUCTS SHALL BE ROUTED THRU (OR BETWEEN) EXISTING OPEN WEB STEEL JOISTS. SITE MEASURE ROUTING AND PROVIDE ALL REQUIRED FITTINGS AND OFFSETS. LOCATION OF ROOFTOP UNIT SHALL BE DETERMINED AFTER REMOVAL OF GYM CEILING TO ALIGN MAIN RECTANGULAR DUCTS ROUTING THRU THE EXISTING OPEN WEB STEEL JOISTS.
10. DUCT FROM ROOFTOP UNIT SUPPLY AIR OPENINGS COMPLETE WITH FLEXIBLE CONNECTION (40"x20" RISERS TAPERED TO SUITE UNIT OPENINGS). FIELD MEASURE RTU OPENINGS (SUPPLY AND RETURN) BEFORE FABRICATING DUCTS.



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3. FOR TENDER	14 MAR 2023
2. FOR PERMIT	21 FEB 2023
1. FOR COORDINATION	15 JAN 2023
No.	DESCRIPTION DATE

REVISIONS:  
ISSUED: FOR TENDER

**SHELLARD BUILDING SYSTEMS LTD.**

1684 SHELLARD SIDE ROAD  
CAMBRIDGE, ONTARIO  
N1R 5S7

shellard@consultant.com  
226 606 6542

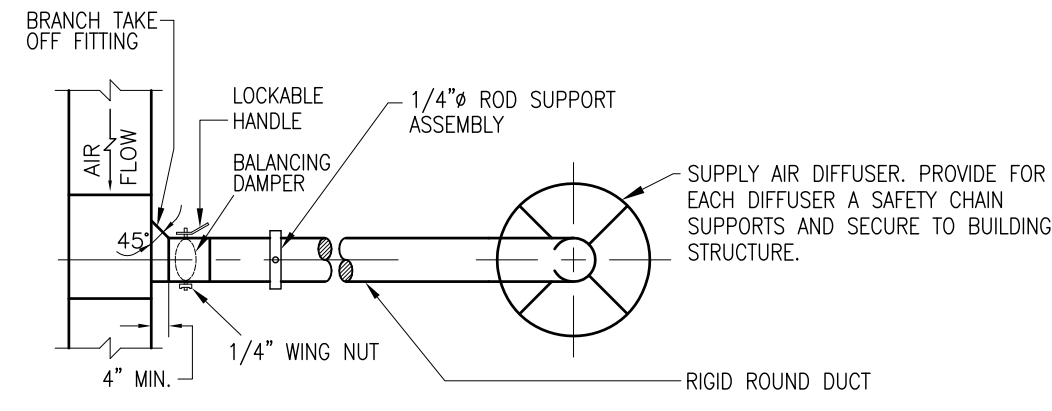
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PUBLIC SCHOOL  
HAMILTON - WENTWORTH  
DISTRICT SCHOOL BOARD  
1525 LUCERNE AVENUE  
HAMILTON, ONTARIO

DRAWN NAME:  
**PART FLOOR PLAN  
MECHANICAL**

DRAWN BY:	CHECKED BY:
N.S.	K.S.

DATE:	JOB No.:
JANUARY 2023	22-110

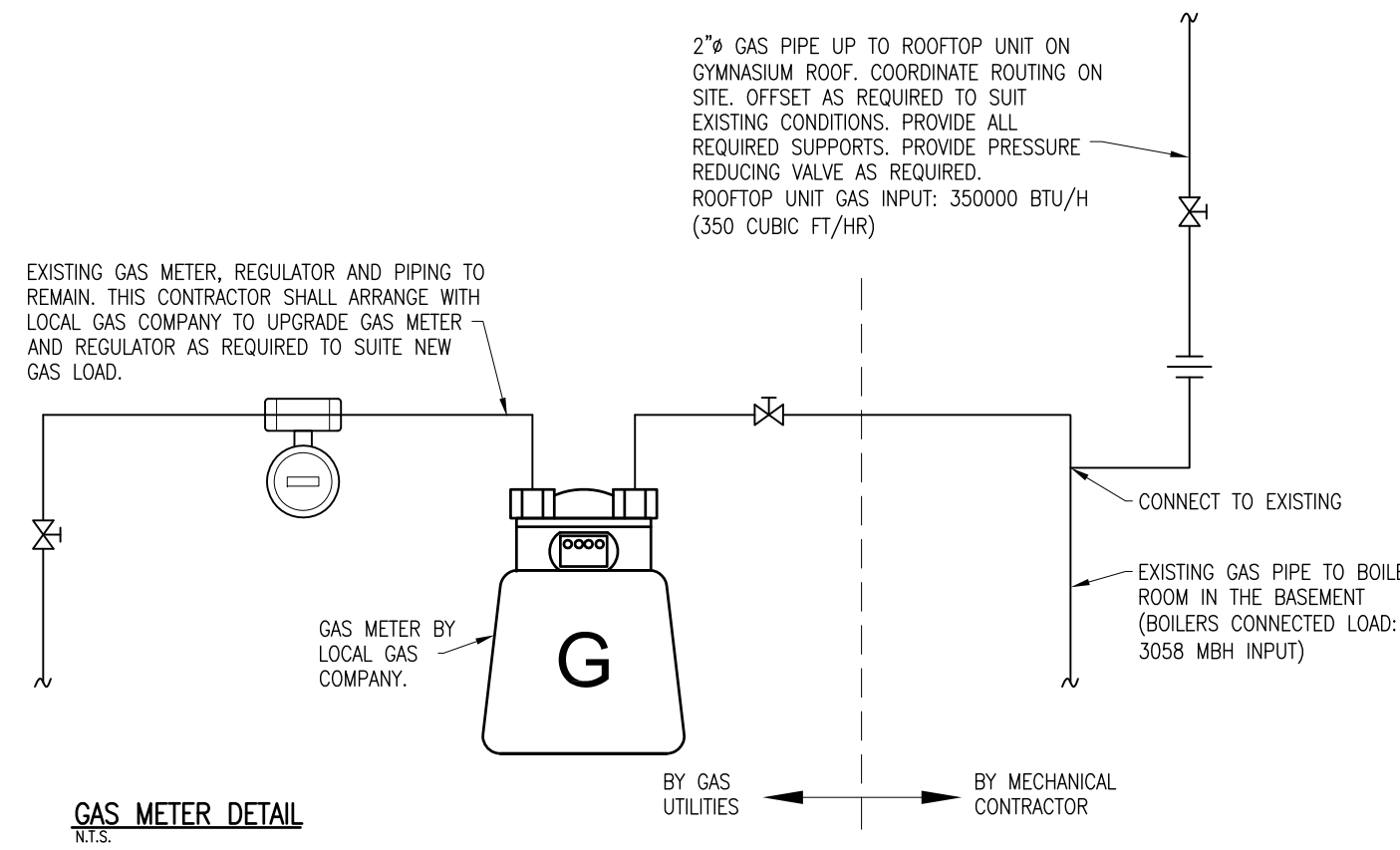
SCALE:	SHEET No.:
AS NOTED	M1.04



SUPPLY AIR DUCT TAKE-OFF DETAIL  
N.T.S.

**GAS PIPING NOTES:**

1. GAS PIPES SHALL BE SUPPLIED, INSTALLED AND TESTED IN ACCORDANCE TO CSA B149.1, LATEST AMENDMENT AND LOCAL GAS UTILITIES STANDARDS.
2. THIS CONTRACTOR SHALL ARRANGE WITH LOCAL GAS UTILITIES TO INSTALL THE GAS METER AND ASSOCIATED GAS SERVICE. PROVIDE REQUIRED GAS PRESSURE AND CONNECTED GAS LOAD.
3. GAS PIPES SHALL BE SCHED. 40 BLACK STEEL. ALL VALVES AND FITTINGS SHALL BE APPROVED FOR GAS PIPING SYSTEM.
4. DO NOT INSTALL FITTINGS IN CONCEALED SPACES THAT ARE NOT VENTED.
5. PROVIDE EXPANSION LOOP FOR EACH STRAIGHT PIPE RUN IN EXCESS OF 30 METERS LONG.
6. COORDINATE ON SITE ALL REQUIRED OPENINGS FOR GAS PIPES AND OBTAIN APPROVAL BEFORE ANY CORING OR DRILLING AND ROOF OPENING.
7. GAS PIPES 63# AND LARGER SHALL BE WELDED. PROVIDE ALL REQUIRED ROOF PROTECTION DURING WELDING ON ROOF.
8. INSTALL FIRE RATED DROP CEILING BELOW PIPES WHERE REQUIRED.
9. PROVIDE PRESSURE REDUCING VALVES (PRV) WHERE SHOWN AND AS REQUIRED TO COMPLETE SYSTEM INSTALLATION. EXTEND RELIEF VENT PIPE TO OUTSIDE WHERE THE PRV IS INSTALLED INDOOR.
10. CONNECT GAS PIPE TO ROOFTOP UNIT COMPLETE WITH ISOLATING VALVE. REVIEW SHOP DRAWINGS FOR EACH CONNECTED LOAD, CONNECTIONS SIZE AND CONNECTION LOCATION.
11. PAINT ALL GAS PIPES AND CLAMPS USING NON-CORROSIVE ANTI RUST YELLOW PAINT. APPLY TWO COATS OF PAINT.



GAS METER DETAIL  
N.T.S.

OVERALL CONNECTED GAS LOAD	
DESCRIPTION	FT <sup>3</sup> /HR (MBH)
EXISTING BOILERS:	3,058
DOMESTIC HOT WATER:	40
ROOFTOP UNIT:	350
<b>TOTAL:</b>	<b>3,448 FT<sup>3</sup>/HR (MBH)</b>

**ROOF TOP UNITS SCHEDULE**

UNIT No.	AREA SERVED	MAKE	MODEL	AIR FLOW			COOLING SECTION			GAS HEATING SECTION			ELECTRICAL			WEIGHT (LB)	OUTSIDE AIRFLOW (CFM)	DIMENSIONS L x W x H (N)	REMARKS					
				CFM	E.S.P. (IN)	FAN (HP)	FAN RPM	CFM	E.S.P. (IN)	MOTOR (HP)	TON	SENS. (MBH)	TOTAL (MBH)	GAS INPUT (BTU/H)	HEATING OUTPUT (BTU/H)					STAGE	TEMP. RISE (°F)	VOLTS/PH/Hz	MCA	MOCP
RTU-1	GYM.	TRANE	E/GBC180	5000	0.60	3	771	5000	0.20	POWER EXH.	15	141	180	350,000	280,000	2	25-55	600/3/60	32	40	2547	1892	123" x 87" x 59" (CURB HEIGHT NOT INCLUDED)	

PROVIDE UNIT COMPLETE WITH STAINLESS STEEL HEAT EXCHANGER, MERV 13 FILTERS, COMPLETE COAT MICROCHANNEL CONDENSER COIL, INSULATED 24" HIGH ROOF CURB, POWERED EXHAUST, STRIPS FOR BUILDING AUTOMATION SYSTEM AND COLORED AND NUMBERED WIRING.

THE ROOFTOP UNIT SHALL HAVE TERMINAL STRIPS FOR BAS CONTROL. REFER TO BUILDING AUTOMATION CONTROLS FOR THE REMOTE THERMOSTAT. PROVIDE HEAVY TRANSPARENT LOCKABLE GUARD AND WIRE TO EXISTING BUILDING AUTOMATION SYSTEM.

UNIT CONTROLLER SHALL HAVE TERMINAL STRIPS FOR CONNECTION TO EXISTING BUILDING AUTOMATION SYSTEM BY CONVERGINT. PROVIDE ALL DEVICES, WIRING AND PROGRAMMING TO INCLUDE THE FOLLOWING CONTROL POINTS:

- UNIT ENABLE, HEATING/COOLING ENABLE AND DISABLE.
- DIRTY FILTER INDICATOR
- SUPPLY AIR TEMPERATURE AND SET-POINT
- RETURN AIR TEMPERATURE
- UNIT FAN STATUS (PROVIDE AIR FLOW SWITCH)
- BURNER ON/OFF STATUS
- COMPRESSORS ON/OFF STATUS
- UNIT SHUTDOWN AT SUPPLY AIR TEMPERATURE BELOW 3°C (ADJUSTABLE)
- ALARMS
- OUTSIDE AIR INTAKE USING THE CO<sub>2</sub> SENSOR INPUT.

PROVIDE ALL REQUIRED SENSORS, WIRING, PROGRAMMING AND GRAPHICS TO COMPLETE INSTALLATION OF THE ROOFTOP UNIT SYSTEM.

COORDINATE WITH FACILITIES TO WIRE TO EXISTING BAS SYSTEM AND UPDATE GRAPHICS.

- PROVIDE UNIT COMPLETE WITH:
- STAINLESS STEEL HEAT EXCHANGER.
  - MERV 13 FILTERS.
  - COMPLETE COAT MICROCHANNEL CONDENSER COIL.
  - INSULATED 24" HIGH ROOF CURB.
  - POWERED EXHAUST.
  - TERMINAL STRIPS FOR BUILDING AUTOMATION SYSTEM CONTROLS.
  - COLORED AND NUMBERED WIRING.
  - DE-HUMIDIFICATION WITH HOT GAS BY-PASS
  - LOW LEAK ECONOMIZER WITH ENTHALPY SENSOR
  - POWER EXHAUST
  - WEATHER PROOF DISCONNECT
  - 20 AMP'S WEATHER PROOF SERVICE RECEPTACLE
  - 2 STAGE COOLING
  - WEATHER PROOF DISCONNECT
- UNIT CONTROLS BY CONVERGINT. PROVIDE TERMINAL STRIPS AND REFER TO SEQUENCE OF CONTROLS NOTED ON DRAWING M1.02

**VENTILATION SCHEDULE**

ITEM	ZONE / SPACE	AREA (m <sup>2</sup> )	OCCUPANCY (PERSONS)	OUTDOOR AIRFLOW (L/S PER PERSON)	REQUIRED OUTDOOR AIRFLOW (L/S)	REMARKS
1	GYMNASIUM	325.6	60	10	0.9	893 (EQUIVALENT TO 1892 CFM)

- NOTES:
1. THE VENTILATION AIRFLOW RATE IS CALCULATIONS BASED ON ASHRAE 62.1 STANDARDS TABLE 6.2.2.1 AND PART 6 OF ONTARIO BUILDING CODE.
  2. THE VENTILATION WILL BE PROVIDED BY THE ROOFTOP UNIT THRU THE ECONOMIZER SECTION.

**FANS SCHEDULE**

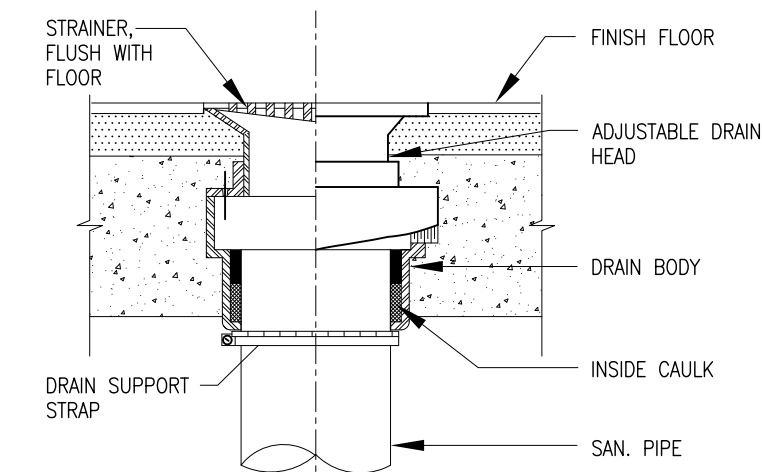
TAG	ZONE / SPACE	MAKE	MODEL	AIRFLOW	EXTERNAL STATIC PRESSURE	ELECTRICAL		REMARKS
						KW	V/PH/Hz	
CF-1, 2, 3 & 4	GYMNASIUM	CANARM	CP60-HPWP	-	-	0.12	120/1/60	SEE NOTES BELOW
EF-1	WASHROOM 118G	GREENHECK	CSPA-390	250	0.5 IN	0.15	120/1/60	SEE NOTES BELOW
EF-2	WASHROOM 118A	GREENHECK	CSPA-390	250	0.5 IN	0.15	120/1/60	SEE NOTES BELOW

- NOTES:
1. PROVIDE EACH CIRCULATING FAN (CF-1 TO CF-4) COMPLETE WITH CHROME PLATED INDUSTRIAL GRADE FAN GUARD AND SPEED CONTROLLER. COORDINATE WITH ELECTRICAL DIVISION TO INSTALL AND WIRE SPEED CONTROLLERS. LOCATE CONTROLLERS AS DIRECTED ON SITE AND PROVIDE LOCKABLE GUARDS. WIRE FROM NEAREST POWER PANEL TO EACH FAN. ALL WIRES SHALL BE IN CONDUITS AND CONCEALED IN WALLS. INSTALL EACH FAN IN ACCORDANCE TO MANUFACTURER WRITTEN INSTRUCTIONS COMPLETE WITH SAFETY CABLES.
  2. PROVIDE EACH EXHAUST FAN (EF-1 AND EF-2) COMPLETE WITH BACK DRAFT DAMPER, DISCONNECT AND SPEED CONTROLLER FOR AIR BALANCING. CONNECT EACH FAN TO DUCTS USING FLEXIBLE CONNECTIONS. WIRE FAN TO BUILDING AUTOMATION SYSTEM TO START/STOP AND ALARM. COORDINATE WITH ELECTRICAL TO INTERLOCK FAN TO START FROM OCCUPANCY SENSOR.

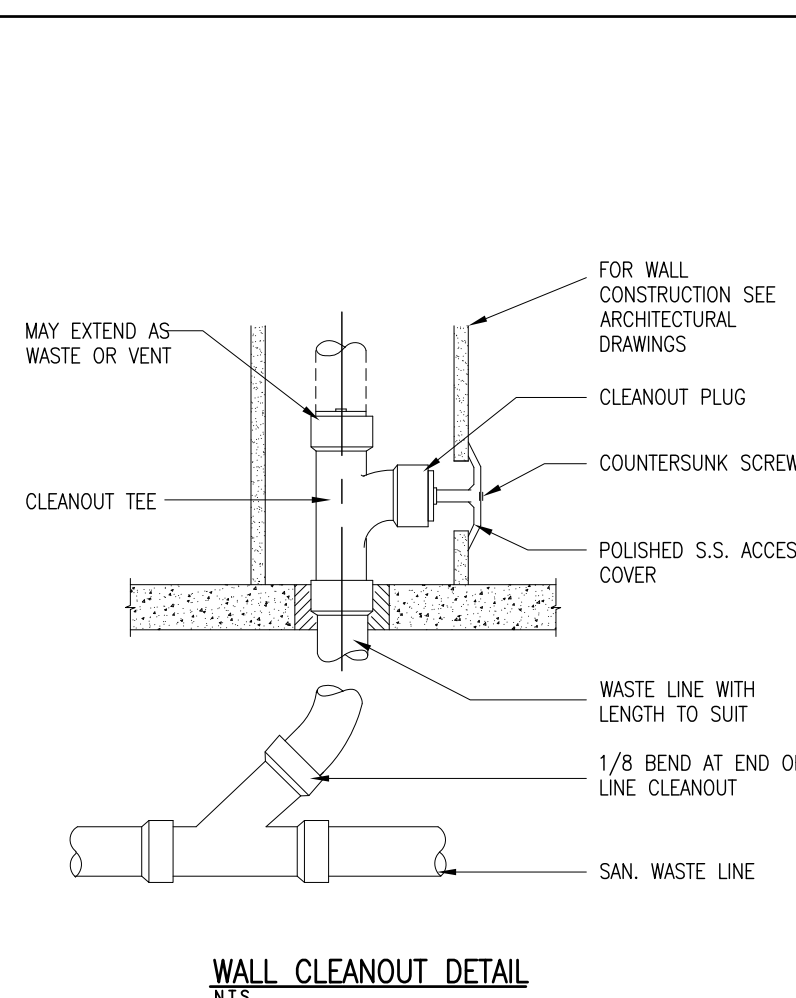
**PLUMBING FIXTURES SCHEDULE**

TYPE	SPECIFICATION	TRIM, FAUCET AND ACCESSORIES	DCW	DHW	WASTE	VENT	REMARKS
WC-1	WATER CLOSET AMERICAN STANDARD MADERA FLOWISE 2858.128, 15" HEIGHT, 1.28 GPF, MANUAL FLUSH VALVE TOILET SYSTEM WITH EVERCLEAN, VITREOUS CHINA FLOOR MOUNT ELONGATED BOWL. EACH TOILET SHALL HAVE EVERCLEAN ANTIMICROBIAL SURFACE, (4.2-6.0) PER FLUSH, 1/2" TOP SPUD.	PROVIDE EACH UNIT COMPLETE WITH ELONGATED, WHITE HEAVY DUTY, OPEN FRONT TOILET SEAT #5901 110 WITH ANTIMICROBIAL EVERCLEAN PROTECTION. SUPPLY AND INSTALL FOR EACH UNIT MANUAL FLUSH VALVE, WATER SAVER (4.8 LPF), DIRECT-FED SIPHON JET ACTION, VACUUM BREAKER AND 1/2" TOP SPUD.	25 (1")		75 (3")	50 (2")	
LAV-1	AMERICAN STANDARD MODEL MURRO UNIVERSAL DESIGN, OVERDIEC, WALL HUNG LAVATORY, 520, x 540 x 127 mm, BARRIER FREE, CENTER HOLE, VITREOUS CHINA, SELF RIMMING, OVERFLOW, TRAP, STRAINER, VITREOUS CHINA SHROUD/KNEE CONTACT GUARD 0059.0202C, CONCEALED IN WALL STEEL CARRIER, WHITE AND RECESSED STEEL CARRIER.	FAUCET: MOEN SINGLE-HANDLE ADA METERING LAVATORY FAUCET MODEL 8884 (CHROME), SINGLE HOLE (7/8" DIAMETER), CHROME PLATED SOLID BRASS CONSTRUCTION, VANDAL RESISTANT, 4" DECK PLATE AVAILABLE, ADA COMPLIANT LEVER STYLE HANDLE, ADJUSTABLE TIME FROM 5 TO 60 SECONDS INDEPENDENT FROM WATER PRESSURE, OPERATES WITH WATER SUPPLY LINE PRESSURES OF 20 TO 125 PSI, 0.5 GPM MAX (1.9 L/MIN) VANDAL-RESISTANT MULTI-STREAM, LAMINAR FLOW LIMITS WATER DISCHARGE TO A MAXIMUM OF 0.25 GPC (0.95 L/CYCLE) AT 30 SECONDS OR 0.20GPC (0.76 L/CYCLE) AT 24 SECONDS CARTRIDGE 52100 BRASS SHELL CARTRIDGE, SELF CONTAINED METERING MECHANISM, ASME A112.18.1/CSA B125.1 APPROVED. PROVIDE MIXING VALVE, "P" TRAP AND ESCUTCHEONS.	13 (1/2")	13 (1/2")	38 (1 1/2")	38 (1 1/2")	PROVIDE WATTS OR EQUAL HYDROGUARD SERIES LF480, LEAD FREE THERMOSTATIC TEMPERING VALVE UNDER EACH LAVATORY. THE TEMPERING VALVE SHALL BE CSA AND UL APPROVED. PROVIDE C-1065 WITH OPEN STRAINER, 32 TALL PIECE CH-4053 AND 32 mm OFFSET WASTE. PROVIDE DRAIN TRAP AND ISOLATING VALVES BELOW EACH SINK. INSTALL STEEL CARRIER RECESSED IN WALL. COORDINATE WITH GENERAL CONTRACTOR.
FD/FTD	WATTS MODEL FD-100-C-L 4 x 4, EPOXY COATED CAST IRON WITH ANCHOR FLANGE, REVERSIBLE MEMBRANE CLAMP WITH PRIMARY AND SECONDARY WEEP HOLES, 1/2" THICK REINFORCED SQUARE STAINLESS STEEL STRAINER, 1/2" TRAP PRIMER AND 3" PIPE OUTLET.	PROVIDE TRAP AND TRAP SEAL PRIMER COMPLETE WITH ALL REQUIRED BURIED PIPES AND CONTROLS. PROVIDE BRASS STRAINER/FUNNEL FOR FUNNEL FLOOR DRAIN.	10 (3/8")		75 (3")	50 (2")	COORDINATE WITH GENERAL CONTRACTOR TO DETERMINE EACH FLOOR DRAIN LOCATION BASED ON FLOOR SLOPE, FLOOR FINISH AND EXISTING CONDITIONS. INSTALL EACH DRAIN FLUSH WITH FINISHED FLOOR LEVEL.

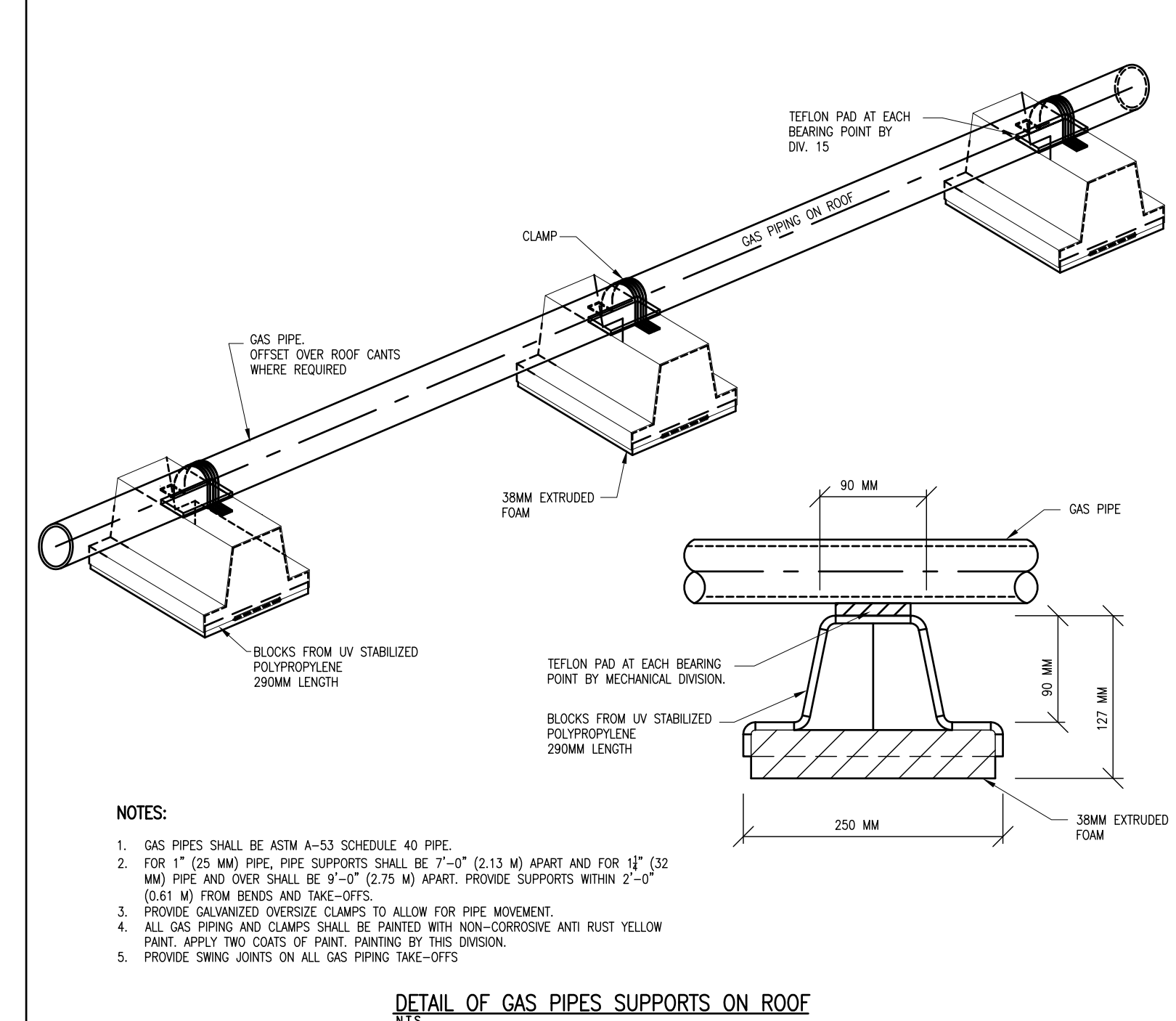
- PLUMBING FIXTURES NOTES:
- EACH PLUMBING FIXTURE SHALL BE LOW WATER CONSUMPTION IN ACCORDANCE TO ONTARIO BUILDING CODE.
  - PROVIDE ALL REQUIRED FITTINGS, TRAPS, VALVES, FAUCETS AND ESCUTCHEONS TO COMPLETE EACH FIXTURE INSTALLATION. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BEFORE ORDERING ANY UNIT OR ACCESSORIES.
  - EACH FLOOR DRAIN SHALL BE INSTALLED C/W TRAP SEAL PRIMER, VENT AND FLUSH WITH FLOOR LEVEL.
  - SUBMIT SHOP DRAWINGS FOR REVIEW BEFORE ORDERING THE FIXTURES.
  - COORDINATE AND VERIFY TYPE AND LOCATION OF EACH PLUMBING FIXTURE WITH LATEST ARCHITECTURAL DRAWINGS.



FLOOR DRAIN DETAIL  
N.T.S.



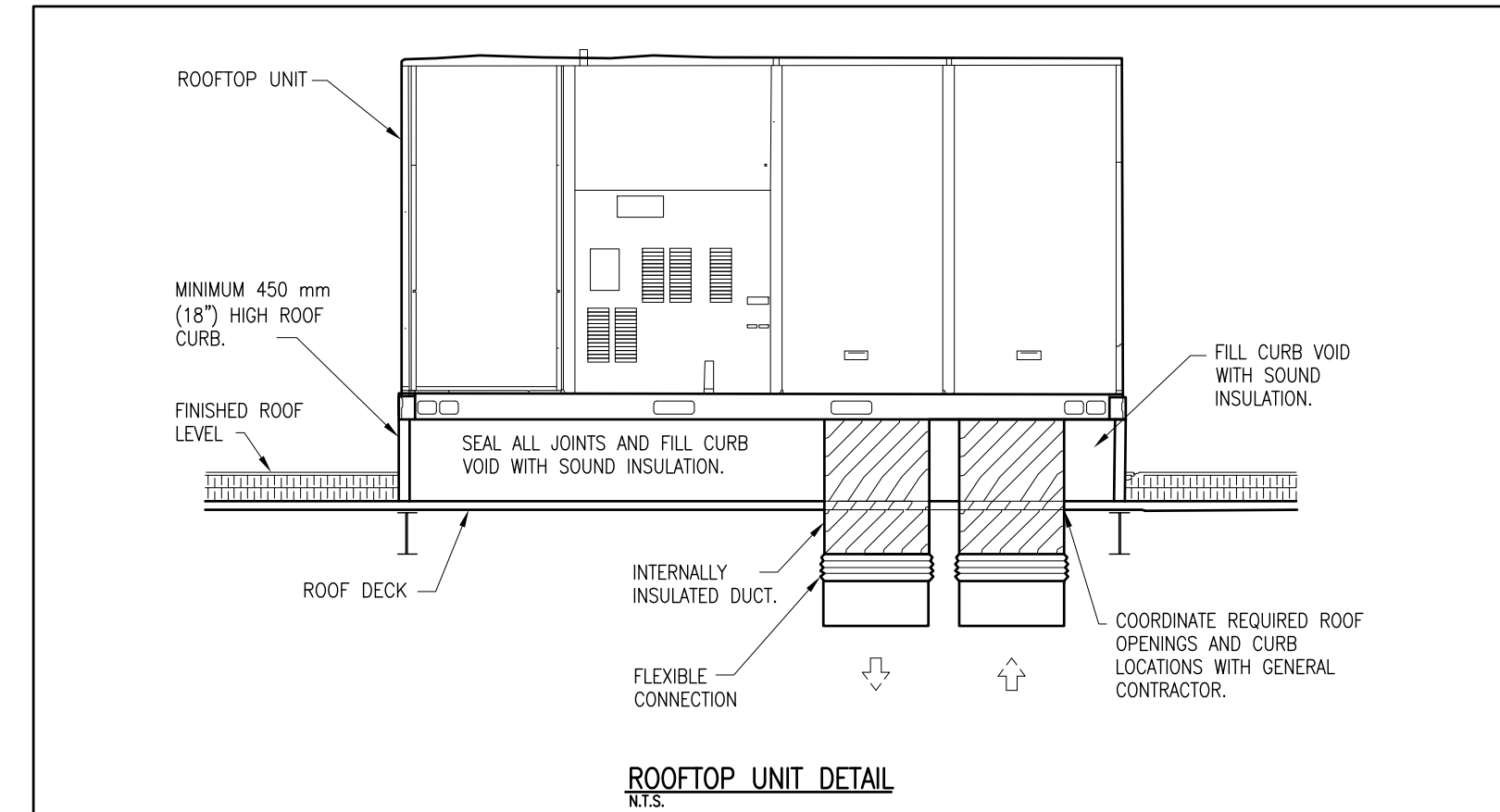
WALL CLEANOUT DETAIL  
N.T.S.



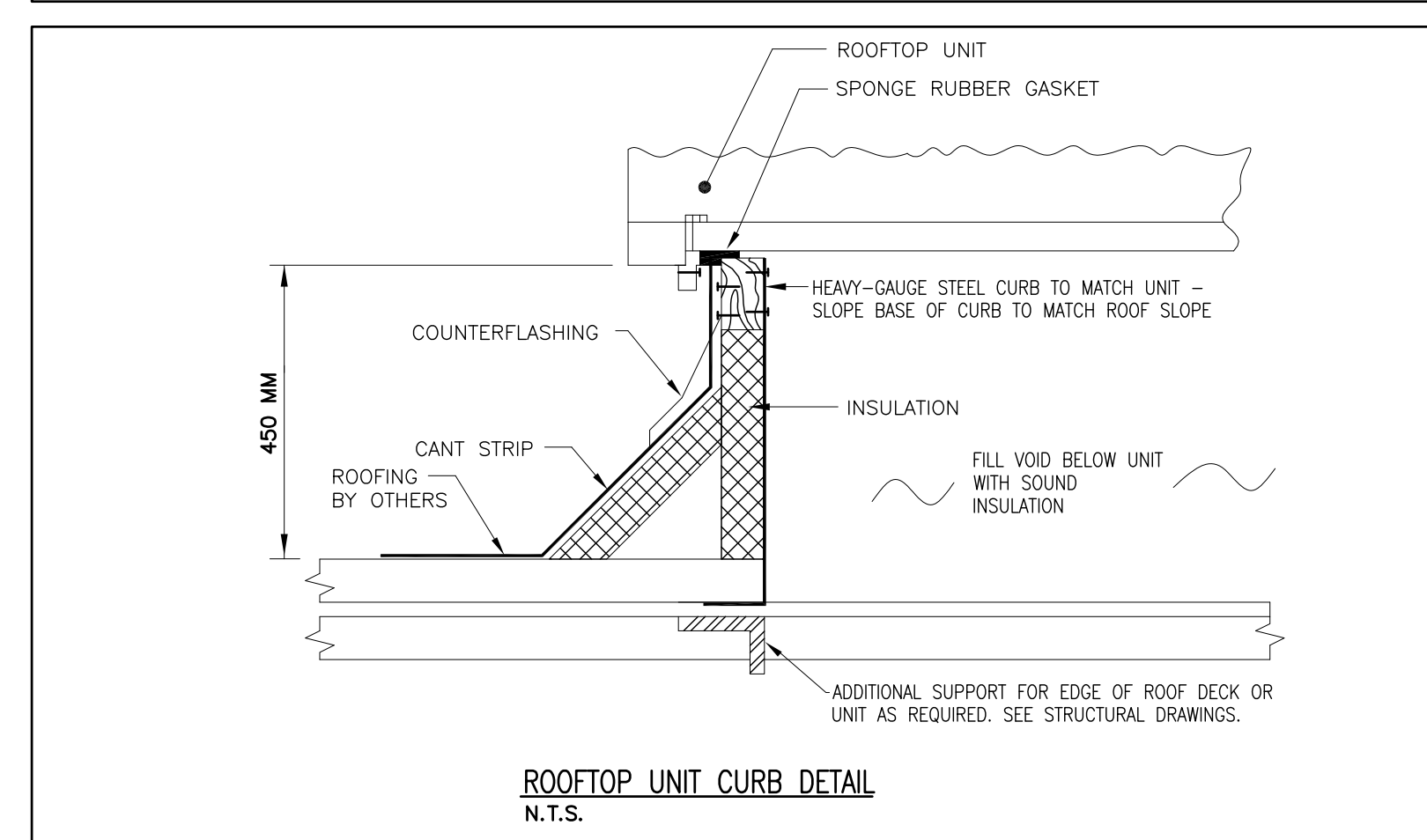
**NOTES:**

1. GAS PIPES SHALL BE ASTM A-53 SCHEDULE 40 PIPE.
2. FOR 1" (25 MM) PIPE, PIPE SUPPORTS SHALL BE 7"-0" (213 MM) APART AND FOR 1 1/2" (32 MM) PIPE AND OVER SHALL BE 9'-0" (2.73 M) APART. PROVIDE SUPPORTS WITHIN 2'-0" (0.61 M) FROM BENDS AND TAKE-OFFS.
3. PROVIDE GALVANIZED OVERSIZE CLAMPS TO ALLOW FOR PIPE MOVEMENT.
4. ALL GAS PIPING AND CLAMPS SHALL BE PAINTED WITH NON-CORROSIVE ANTI RUST YELLOW PAINT. APPLY TWO COATS OF PAINT. PAINTING BY THIS DIVISION.
5. PROVIDE SWING JOINTS ON ALL GAS PIPING TAKE-OFFS.

DETAIL OF GAS PIPES SUPPORTS ON ROOF  
N.T.S.



ROOFTOP UNIT DETAIL  
N.T.S.



ROOFTOP UNIT CURB DETAIL  
N.T.S.



NOTES:

ALL DRAWINGS AND SPECIFICATIONS IS AN INSTRUMENT OF SERVICE AND REMAIN THE EXCLUSIVE PROPERTY OF DESIGNER AND ARE PROTECTED UNDER THE COPYRIGHT ACT. THEY MAY NOT BE REPRODUCED, DISTRIBUTED, ALTERED FOR ANY OTHER PROJECT WITHOUT WRITTEN PERMISSION OF THE DESIGNER.

DO NOT SCALE DRAWINGS, DIMENSIONS TO TAKE PRECEDENT OVER SCALE.

CONTRACTOR TO CHECK AND VERIFY ALL LEVELS AND DIMENSIONS ON DRAWINGS AND ON SITE AND REPORT ANY DISCREPANCIES TO THE DESIGNER AND OBTAIN CLARIFICATION PRIOR TO COMMENCING THE WORK.

THE CONTRACTOR ACCEPTS ALL RESPONSIBILITY FOR WORKING WITH DRAWINGS, NOT MARKED "ISSUED FOR CONSTRUCTION" AND FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE EXPRESS APPROVAL OF SHELLARD BUILDING SYSTEMS LTD.

ALL WORK TO CONFORM TO ALL GOVERNING CODES AND BY-LAWS.

NOTE BEFORE COMMENCING WORK:

THE CONTRACTOR SHALL CHECK AND VERIFY LOCATION OF ALL PIPES, DUCTS, DIFFUSERS, CONDUITS, LIGHT FIXTURES, STRUCTURAL AND EQUIPMENT AND COORDINATE WITH OTHER TRADES ON SITE TO PREVENT INTERFERENCE. THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE WRITTEN APPROVAL OF THE DESIGNER.



3. FOR TENDER	14 MAR 2023
2. FOR PERMIT	21 FEB 2023
1. FOR COORDINATION	15 JAN 2023

REVISIONS:

No.	DESCRIPTION	DATE
1.		

ISSUED: FOR TENDER

**SHELLARD** BUILDING SYSTEMS LTD.

1684 SHELLARD SIDE ROAD  
CAMBRIDGE, ONTARIO  
N1R 5S7

shellard@consultant.com  
226 606 6542

VISCONSIT MONTGOMERY PUBLIC SCHOOL  
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD  
1525 LUCERNE AVENUE  
HAMILTON, ONTARIO

DRAWN NAME:  
**SCHEDULE AND DETAILS MECHANICAL**

DRAWN BY:	CHECKED BY:
N.S.	K.S.

DATE:	JOB No.:
JANUARY 2023	22-110

SCALE:	SHEET No.:
NOT TO SCALE	M3.01