

ABBREVIATIONS

⊕	- AT
&	- AND
C	- WASHROOM CURTAINS
A.C.	- ACOUSTIC
ALUM.	- ALUMINUM
APPROX.	- APPROXIMATE(LY)
AT	- ACOUSTIC TILE
BARR.	- BARRIER
BD.	- BOARD
C.J.	- CONTROL JOINT
C/W	- COMPLETE WITH
CAR.	- CARPET
CH	- CEILING HEIGHT
CL	- CENTRE LINE
DB	- DISPOSAL BAG UNITS
DN	- DOWN
ELEC.	- ELECTRICAL
FIN.	- FINISH(ED)
FL	- FLOOR
GL	- GLAZING
GR.	- GRADE
GY.	- GYPSIUM
HD	- ELECTRIC HAND DRYER
HDC.	- HOT DIPPED GALVANIZED
H.M.	- HOLLOW METAL
HSS	- HOLLOW STRUCTURAL SECTION
H.W.	- HOT WATER
MAX.	- MAXIMUM
MECH.	- MECHANICAL
MIN.	- MINIMUM
NBC	- NATIONAL BUILDING CODE
(N.I.C.)	- NOT IN CONTRACT
OBC	- ONTARIO BUILDING CODE
O.C.	- ON CENTRE
O.W.S.J.	- OPEN WEB STEEL JOISTS
PT	- PAPER TOWEL DISPENSER
P.V.C.	- POLY VINYL CHLORIDE
PLY.	- PLYWOOD
POLY.	- POLYETHYLENE
RBC	- RUBBER COVE BASE
R.D.	- ROOF DRAIN
R.W.L.	- RAIN WATER LEADER
REV.	- REVERSED
SD	- SOAP DISPENSER
SIM.	- SIMILAR
TYP.	- TYPICAL
U/S	- UNDERSIDE
VAT	- VINYL ASBESTOS TILE
VCT	- VINYL COMPOSITE TILE
VRT	- VINYL REINFORCED TILE

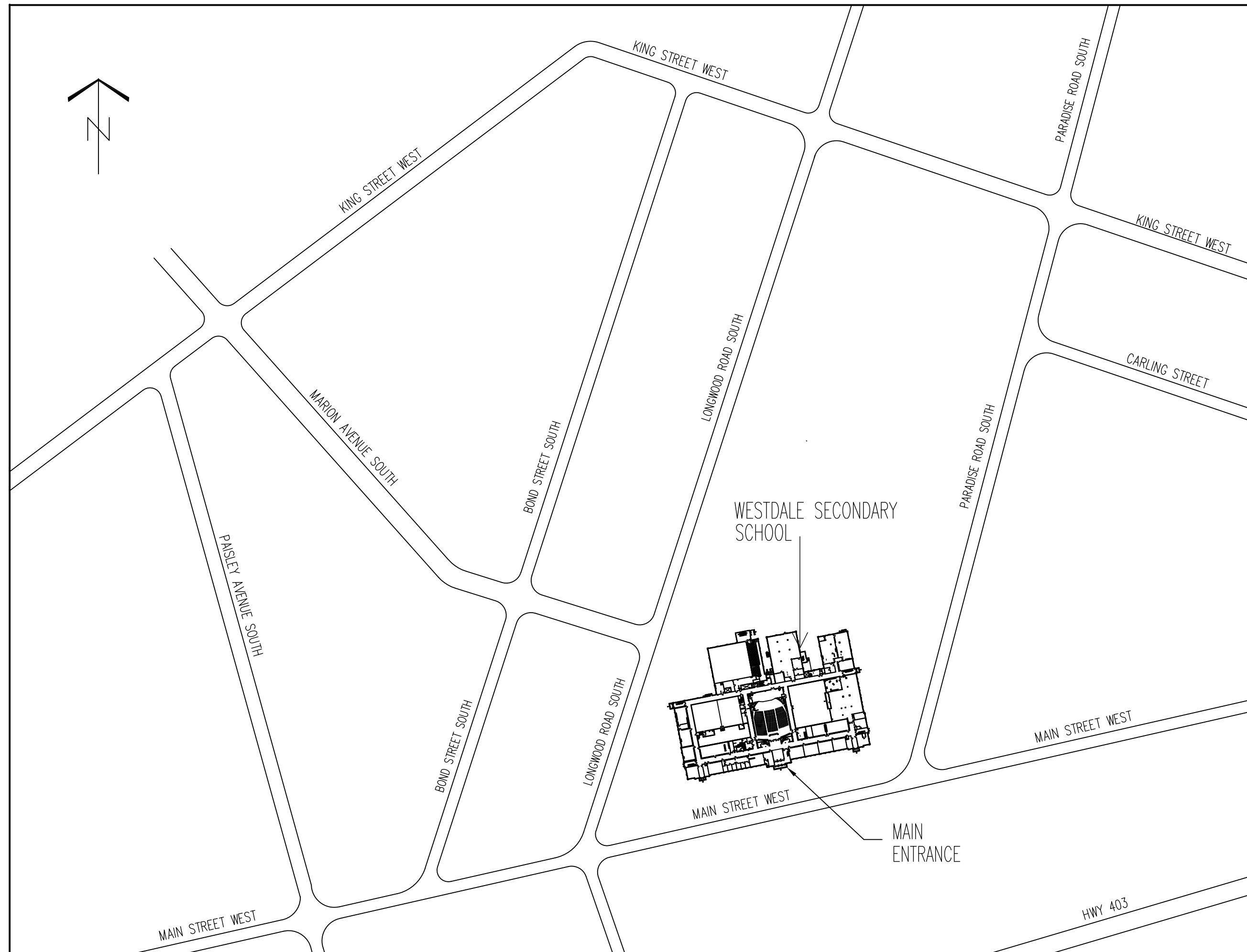
RICHARD G. BUTTERWORTH ARCHITECT INC.
127 JUDITH CRESCENT, ANCASTER, ONTARIO L9G 1L3
TEL: 905 304-0241

CERTIFICATE OF PRACTICE NUMBER: 1409
THE CERTIFICATE OF PRACTICE NUMBER
OF THE HOLDER IS THE HOLDER'S BCIN.

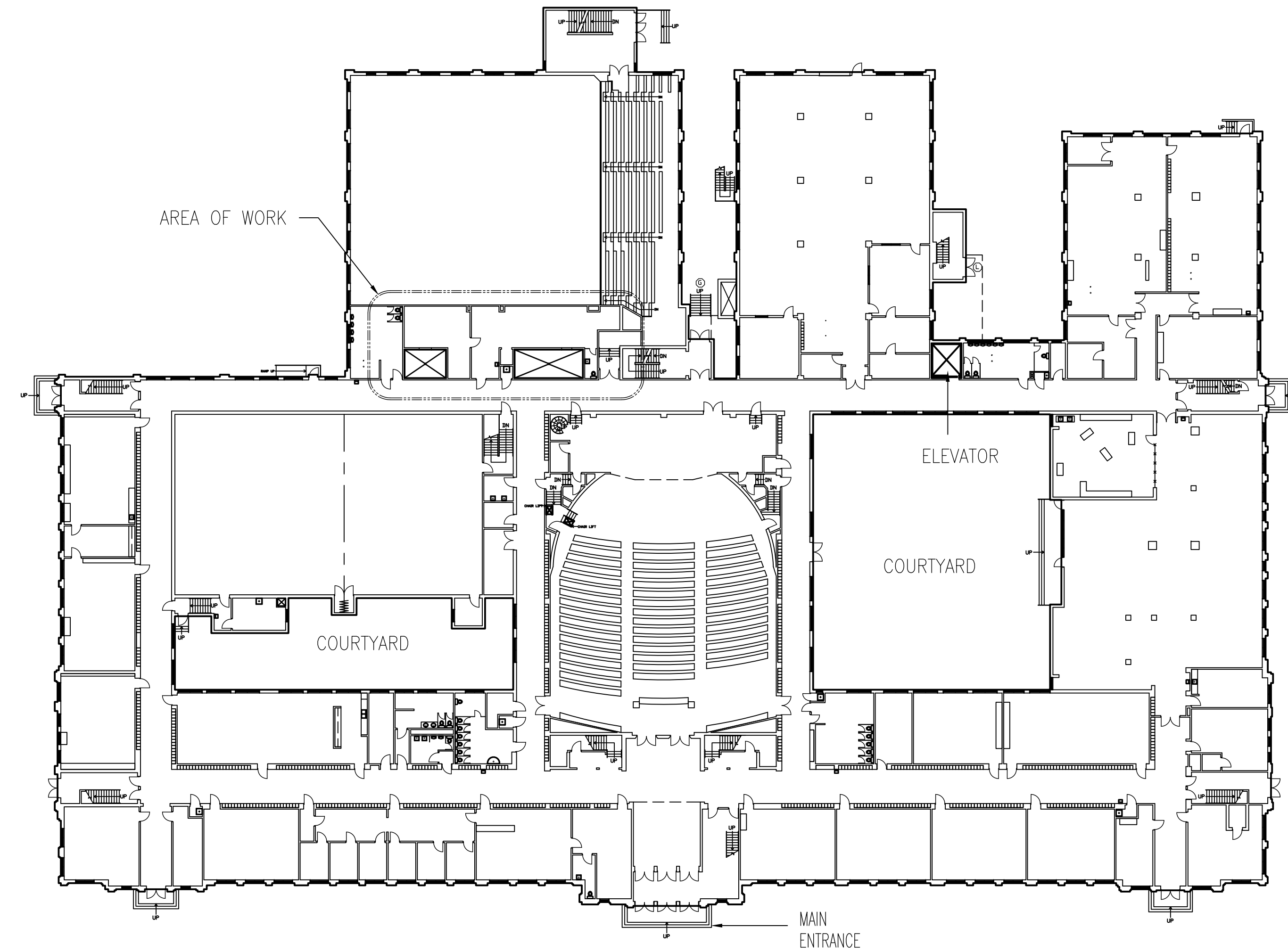
NAME OF PROJECT:
WESTDALE SECONDARY SCHOOL
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
LOCATION: 700 MAIN STREET WEST HAMILTON, ONTARIO

ONTARIO BUILDING CODE PART 11 REVIEW MATRIX

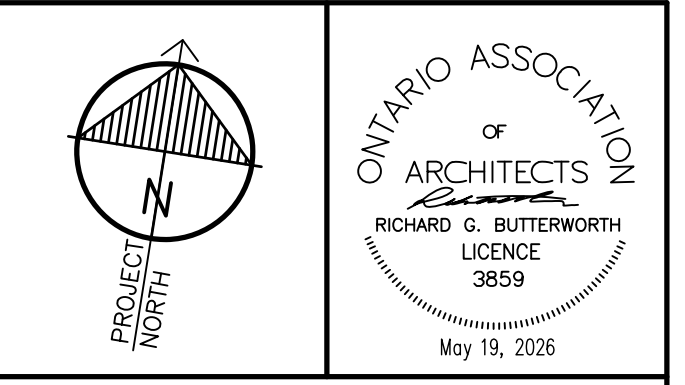
PROJECT DESCRIPTION: BASIC RENOVATION TO WESTDALE SECONDARY SCHOOL			
AGE OF BUILDING (YEARS):	93	ANY ADDITION:	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
AGE OF ADDITION (YEARS):	N/A	WILL ADDITION BE AFFECTED:	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
CONSTRUCTION INDEX: TABLE 11.2.1.1. A.	N/A	HAZARD INDEX (OLD): TABLE 11.2.1.1.	N/A
NUMBER OF STOREYS:	4	HAZARD INDEX (NEW): TABLE 11.2.1.1.	N/A
HEIGHT OF BUILDING (m):	20	HAZARD INDEX CREDIT APPLICABLE: TABLE 11.2.1.1. (2)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
NUMBER OF STREETS:	4	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"/> COMBUSTABLE <input checked="" type="checkbox"/> NON-COMBUSTABLE <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)		900	900
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.FT.):		1620 SQ.FT.	1620 SQ.FT.
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



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



2 FIRST FLOOR KEY PLAN
A0.01 N.T.S.



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Richard G. Butterworth, Architect

GENERAL NOTES

- BEFORE TENDERING AN EXAMINATIONS OF ALL CONDITIONS AFFECTING THE SITE AND WORK TO BE DONE THEREON AS RECOMMENDED.
- REPORT TO THE OWNER ALL DISCREPANCIES, OMISSIONS, ERRORS, DEPARTURES FROM ALL APPLICABLE CODES, BY-LAWS AND REGULATIONS, GOOD PRACTICE AND ANY POINTS CONSIDERED TO BE OF DUBIOUS INTENT PRIOR TO THE QUESTION PERIOD DEADLINE, SO THAT THE OWNER MAY IF CONSIDERED DESIRABLE, ISSUE INSTRUCTIONS BY ADDENDA. THE OWNER AND 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 SPECIAL COLOUR BLOCKING PRIMER FOR OIL BASED PAINT AND 2 FINISHED COATS (TYP.)
- DO NOT SCALE THE DRAWINGS.



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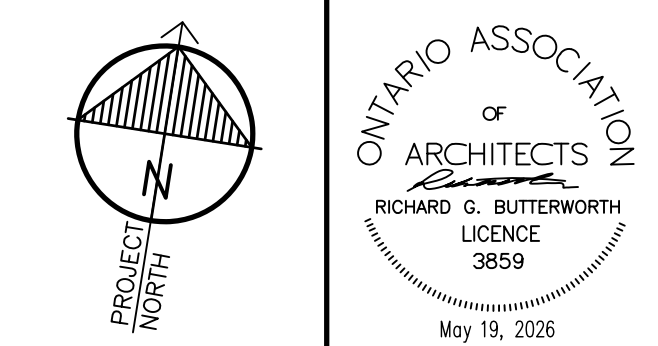
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Architecture
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Urban Planning
Ancaster Ontario

WESTDALE SECONDARY SCHOOL - PHASE 2
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
700 MAIN STREET WEST
HAMILTON, ONTARIO

FIRST FLOOR KEY PLAN
ONTARIO BUILDING CODE
MATRIX AND GENERAL NOTES

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DATE:	JOB No.:
MAY 2026	24-107a
SCALE:	SHEET No.:
N.T.S.	A0.01

PLAT SCALE: 1/4" = 1'



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DEMOLITION LEGEND

- EC - EXISTING TERRAZZO CURB 4 1/2" HIGH REMOVE
- EH - REMOVE EXISTING HOOK
- EUR - EXISTING URINAL REMOVE OR REMAIN (SEE MECH.)
- ES - REMOVE EXISTING SINK (SEE MECH.)
- ESD - REMOVE EXISTING SOAP DISPENSER
- EFD - REMOVE EXISTING FLOOR DRAIN
- EBS - EXISTING BENCH / SHELF REMOVE
- ST - EXISTING PLUMBING STACK TO REMAIN (SEE MECH.)
- EDS - EXISTING DESKTOP / SHELF REMOVE
- ESH - EXISTING SHELF REMOVE
- EM - EXISTING MIRROR REMOVE
- EL - EXISTING LOCKERS (QTY) REMOVE
- TP - EXISTING TOILET PARTITION REMOVE
- ERAD - EXISTING RADIATOR REMOVE (SEE MECH.)
- FHC - EXISTING FIRE HOSE CABINET TO REMAIN
- EDF - EXISTING DRINKING FOUNTAIN REMOVE
- EMS - EXISTING MOP SINK REMOVE (SEE MECH.)
- EW - EXISTING WINDOW TO REMAIN
- EML - REMOVE EXISTING METAL LOCKER (QTY)
- EGB - EXISTING GRAB BAR REMOVE
- EVB - REMOVE EXISTING SHOWER VALVE AND BOX (SEE MECH.)
- ESH - REMOVE FIBERGLAS SHOWER UNIT
- EMC - EXISTING MEDICINE CABINET REMOVE
- ED/M - EXISTING DESK AND MILLWORK REMOVE
- ETF - EXISTING TERRAZZO FLOOR REMOVE OR TO REMAIN
- ETRD - EXISTING TOILET ROLL DISPENSER REMOVE AND TURNOVER TO OWNER
- EPTD - EXISTING PAPER TOWEL DISPENSER REMOVE AND TURNOVER TO OWNER
- EFW - EXISTING WOOD FLOOR REMOVE OR TO REMAIN
- EWB - REMOVE EXISTING WALL BASE
- EWC - EXISTING WATER CLOSET REMOVE OR REMAIN (SEE MECH.)
- EWS - EXISTING WALL SIGN



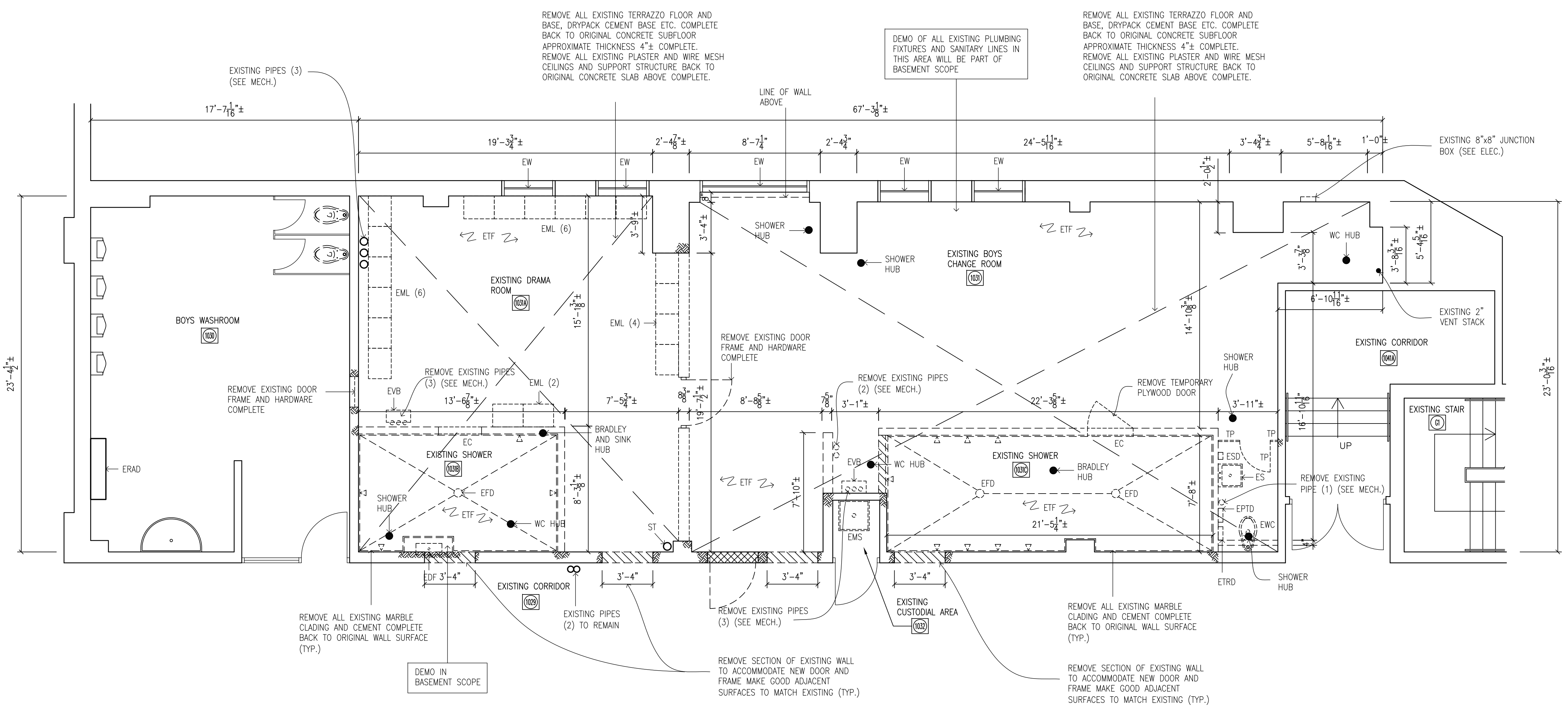
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No.	REVISIONS	DATE

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WESTDALE SECONDARY SCHOOL - PHASE 2
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
 700 MAIN STREET WEST
 HAMILTON, ONTARIO

PARTIAL FIRST FLOOR PLAN
EXISTING PLUMBING HUB
LOCATIONS

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MAY 2026	24-107a
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1/4"=1'-0"	A1.01



SPECIAL NOTE

USE QUALIFIED FIELD MASON TO REMOVE EXISTING GLAZED, BRICKS AND DOORS TO RECLAIM THESE MATERIALS FOR ALL INFILL AND PATCHING PURPOSES. TOOTH IN ALL MASONRY UNITS TO EXISTING COURSING (TYP.)

NOTE

THIS DRAWING IS INCLUDED ONLY FOR CORES AND STUB-UPS FOR FUTURE PLUMBING FIXTURES WORK. ALL EXISTING PLUMBING FIXTURES TO BE REMOVED (SEE MECH.)

PATCH EXISTING HOLES IN FLOOR FLUSH WITH CONCRETE THICKNESS TO MATCH EXISTING FLOOR CONDITION!

DEMOLITION LEGEND

- - NEW CORES AND CAPPED OFF STUB-UPS 8" MIN. SANITARY LINES FOR FUTURE CONNECTIONS WILL BE PART OF BASEMENT SCOPE.
- ◁ - REMOVE EXISTING SHOWER HEAD AND VALVE BOX (SEE MEH.)

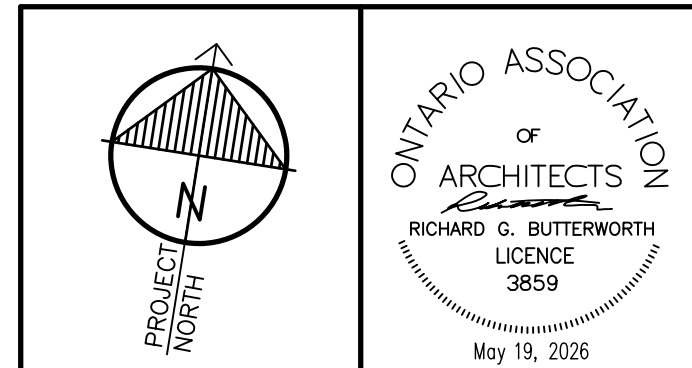
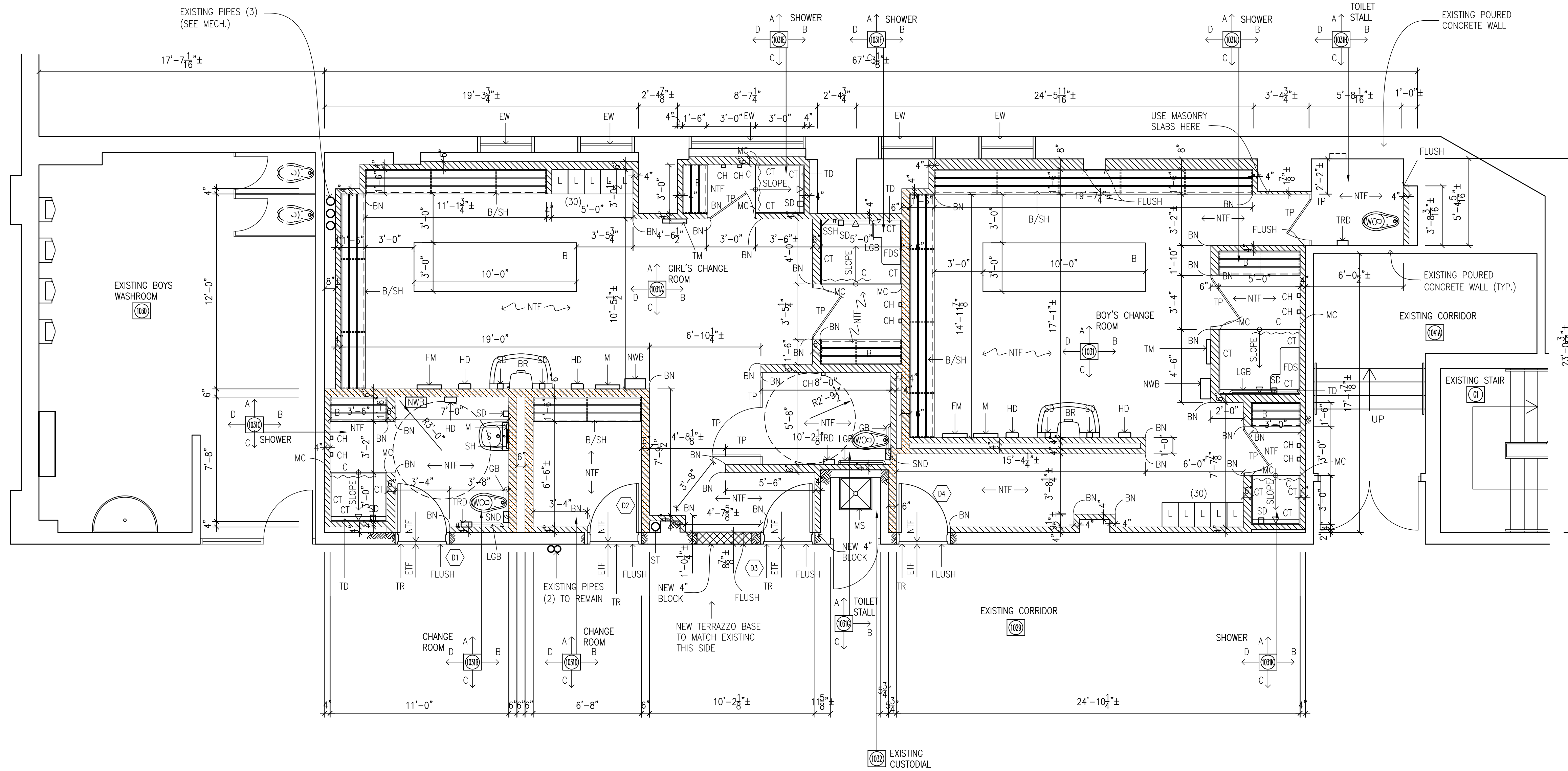
EXISTING ELEMENTS SHOWN DOTTED TO BE REMOVE MAKE GOOD ADJACENT SERVICES TO MATCH. RECLAIM EXISTING GLAZED CLAY TILE BLOCKS FOR PATCHING AND INFILL TO MATCH INTO EXISTING. WHERE EXISTING DOORS AND FRAMES ARE REMOVED, REMOVE BULLNOSED EXISTING BLOCKS AROUND OPENINGS AND PATCH FLUSH WITH RECLAIMED BLOCKS. ALL INFILL AND PATCHED WALLS GLAZED CLAY TILE MUST BE TOOTHED INTO EXISTING BLOCK COURSING (TYP.)

NOTE

THIS DRAWING IS ONLY INCLUDED FOR THE LOCATION OF THE NEW FIXTURES FOR CORES AND STUB-UP FOR FUTURE WORK!

PROPOSED LEGEND

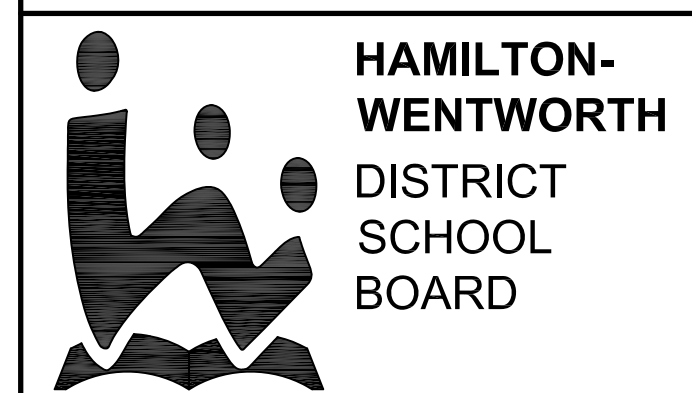
- AP - NEW ACCESS PANEL (SEE SPEC'S)
- B - BENCH (SEE SPEC'S)
- B/S - BENCH / SHELF WITH HOOKS (SEE SPEC'S)
- BN - BULLNOSE CORNER
- BR - NEW WASHFOUNTAIN TERREON MODEL MF2944 FLOOR MOUNT (SEE MECH.)
- DOB - NEW DOOR OPERATOR BUTTON MOUNT 3'-0" TO TOP (SEE SPEC'S AND ELEC.)
- ETF - EXISTING TERRAZZO FLOOR
- EFG - NEW EXHAUST FAN GRILLE (SEE MECH.)
- EL - NEW RECESSED EMERGENCY LIGHT (SEE ELEC.)
- HD - ELECTRIC HAND DRYER (SEE ELEC.)
- M - MIRROR (SEE SPEC'S)
- FM - FULL MIRROR (SEE SPEC'S)
- TM - TILT MIRROR (SEE SPEC'S)
- TR -
- L - LOCKER (30) AND QUANTITIES (SEE SPEC'S)
- S - NEW SINK / FAUCET (SEE MECH.)
- SH - SHOWER (SEE MECH.)
- SL - SLOPE TO DRAIN (SEE MECH.)
- CR - CURTAIN AND ROD (SEE SPEC'S)
- CH - BREAK AWAY COAT / TOWER HOOKS (SEE SPEC'S)
- CT - NEW CERAMIC WALL TILE FULL HEIGHT (SEE SPEC'S)
- WC - NEW TOILET FLUSH VALVE (SEE MECH.)
- NEG - NEW EXHAUST GRILLE (SEE MECH.)
- NWB - NEW WALL MOUNTED WASTE BIN (SEE SPEC'S)
- NSG - NEW SUPPLY AIR GRILLE (SEE MECH.)
- NRC - NEW RETURN AIR GRILLE (SEE MECH.)
- NVB - NEW VENTED GYMNASIUM FLOOR BASE (SEE SPEC'S)
- FDS - FOLD DOWN SEAT (SEE SPEC'S)
- FD - NEW FLOOR DRAIN (SEE SPEC'S AND MECH.)
- GB - 24" STRAIGHT GRAB BAR (SEE SPEC'S)
- LGB - 'L' SHAPE GRAB BAR (SEE SPEC'S)
- TRD - TOILET ROLL DISPENSER SUPPLY BY OWNER AND INSTALLED BY GENERAL CONTRACTOR
- TP - NEW TOILET PARTITION SOLID PHENOLIC IN SHOWERS / CHANGE ROOMS AND METAL IN WASHROOMS (SEE SPEC'S)
- TD - NEW TRENCH DRAIN (SEE MECH.)
- SSH - SHAMPOO SHELF (SEE SPEC'S)
- NOS - NEW OCCUPANCY SENSOR (SEE ELEC.)
- NSD - NEW SMOKE DETECTOR (SEE ELEC.)
- SD - SOAP DISPENSER SUPPLY BY OWNER AND INSTALLED BY GENERAL CONTRACTOR
- SH - STAINLESS STEEL SHELF (SEE SPEC'S)
- SND - SANITARY DISPOSAL SUPPLY BY OWNER AND INSTALLED BY GENERAL CONTRACTOR
- SK - NEW SPEAKER (SEE ELEC.)
- NAP - NEW CEILING ACCESS PANEL (SEE SPEC'S)
- NTF - NEW 3/8" THIN SET SEAMLESS TERRAZZO FLOOR ON DRY PACKED CEMENT BASE
- NCV - NEW CONVECTOR (SEE MECH.)
- LF-1 - NEW 2'x4' FLAT PANEL LED LIGHT FIXTURE (SEE ELEC.)
- LF-2 - NEW 1'x4' FLAT PANEL LED LIGHT FIXTURE (SEE ELEC.)
- LF-3 - NEW 1'x2' FLAT PANEL LED LIGHT FIXTURE (SEE ELEC.)
- MC - METAL CORNER MOLDING FULL HEIGHT (SEE SPEC'S)
- MS - NEW MOP SINK (SEE MECH.)
- LVT - NEW LUXURY VINYL TILE (SEE SPEC'S)
- WS(1) - NEW WALL SIGN (SEE SPEC'S)
- X - NEW EXIT SIGN (SEE ELEC.)
- V - SHOWER HEAD / VALVE (SEE MECH.)
- DENOTES: PATCH EXISTING WALLS FLUSH BOTH SIDES TO MATCH EXISTING WITH RECLAIMED MATERIALS
- DENOTES: MAKE GOOD EXISTING SURFACES FLUSH TO MATCH EXISTING (TYP.)
- DENOTES: NEW CONCRETE BLOCK WALL TO U/S OF EXISTING FLOOR STRUCTURE ABOVE



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LEGEND
12'-0" HIGH BLOCK WALLS TO UNDERSIDE OF CONCRETE SLAB. ALL OTHER BLOCK WALLS 9'-4" HIGH



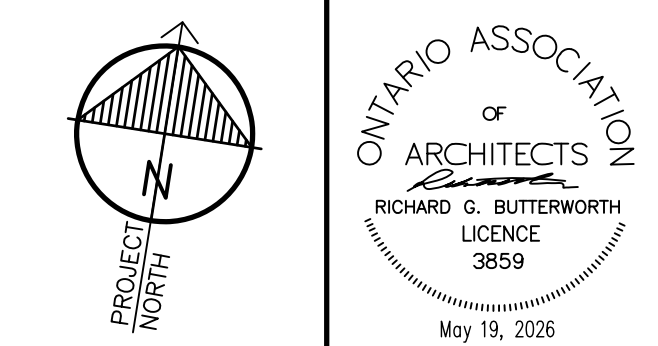
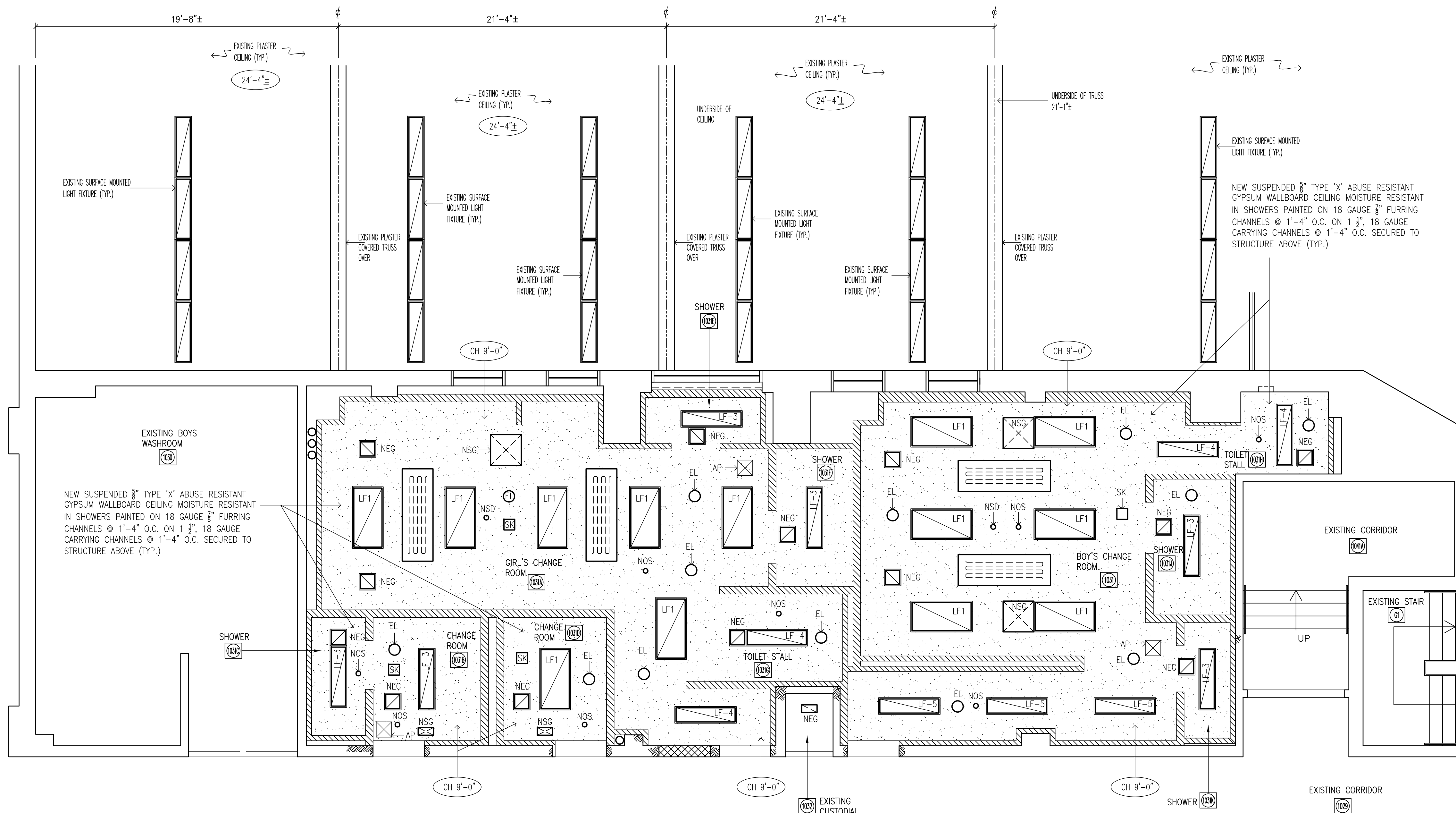
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HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
700 MAIN STREET WEST
HAMILTON, ONTARIO

PARTIAL FIRST FLOOR PLAN PROPOSED

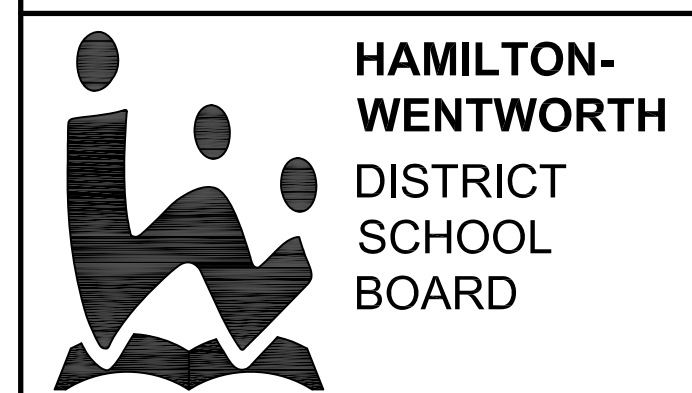
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1/4"=1'-0"	A2.01



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PROPOSED LEGEND

- EL - NEW EMERGENCY LIGHT FIXTURE (SEE ELEC.)
- NEG - NEW EXHAUST GRILLE (SEE MECH.)
- NSG - NEW SUPPLY AIR GRILLE (SEE MECH.)
- NRG - NEW RETURN AIR GRILLE (SEE MECH.)
- NOS - NEW OCCUPANCY SENSOR (SEE ELEC.)
- NSD - NEW SMOKE DETECTOR (SEE ELEC.)
- NHS - NEW HORN STROBE (SEE ELEC.)
- SK - NEW PUBLIC ADDRESS SPEAKER (SEE ELEC.)
- LF-1 - NEW 2'x4' LED LIGHT FIXTURE (SEE ELEC.)
- LF-2 - NEW 1'x4' LED LIGHT FIXTURE (SEE ELEC.)
- LF-3 - NEW 1'x4' LED LIGHT FIXTURE (SEE ELEC.)
- LF-4 - NEW 1'x4' LED LIGHT FIXTURE (SEE ELEC.)
- LF-5 - NEW 1'x4' LED LIGHT FIXTURE (SEE ELEC.)
- [Symbol] NEW SUSPENDED GYPSUM WALLBOARD CEILING PAINTED
- [Symbol] NEW GYPSUM WALLBOARD BULKHEAD 1-LAYER 5/8" MOISTURE RESISTANT GYPSUM WALLBOARD PAINTED ON 3 5/8" METAL STUDS @ 1'-4" O.C., 20 GAUGE
- [Symbol] NEW ACCESS PANEL (SEE MECH.)
- [Symbol] NEW CEILING RADIATION PANEL (SEE MECH.)



1.	ISSUED FOR TENDER	MAY 18, 2026
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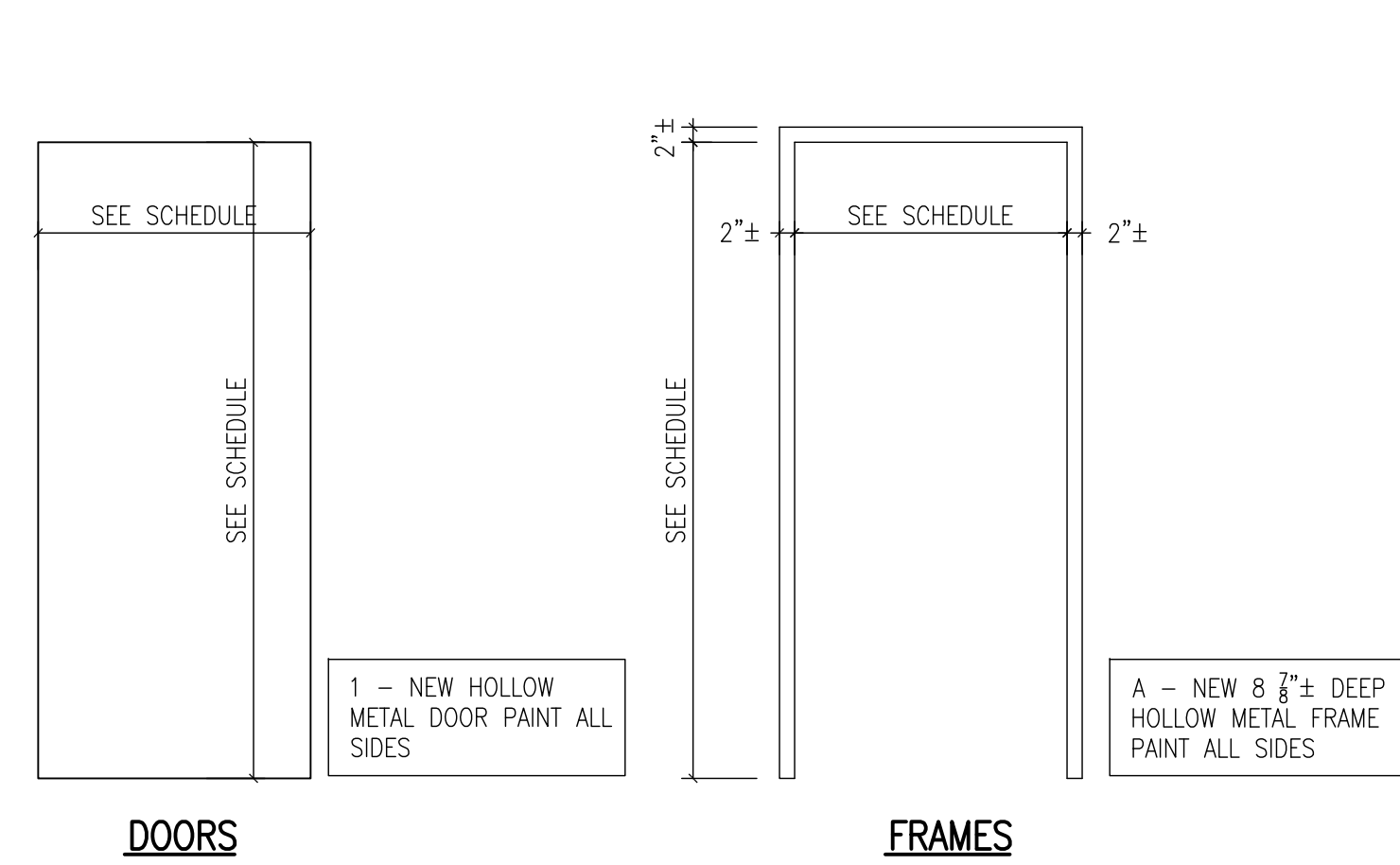
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WESTDALE SECONDARY SCHOOL - PHASE 2
 HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
 700 MAIN STREET WEST
 HAMILTON, ONTARIO

PARTIAL FIRST FLOOR REFLECTED CEILING PLAN PROPOSED

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1/4"=1'-0"	A3.01

DOOR									FRAME					REMARKS
No.	QUANTITY	WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	FINISH	GLASS	LABEL	TYPE	MATERIAL	FINISH	GLASS	
D1	1	3'-0"	7'-0"	1 1/2"	1	HM	PAINTED	-	1 HR	A	HM	PAINTED	-	1 HR
D2	1								1 HR					1 HR
D3	1								-					-
D4	1								-					-

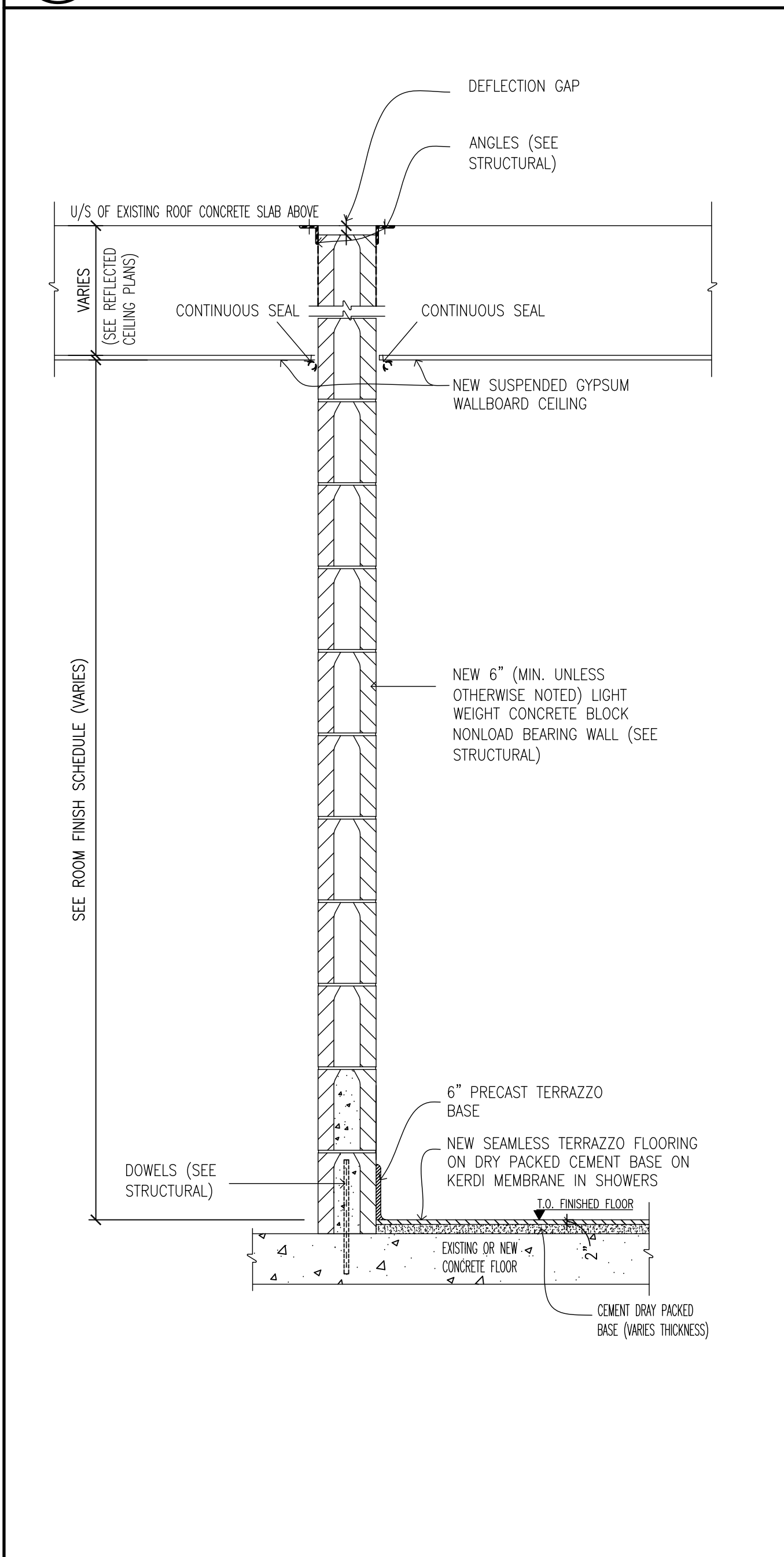
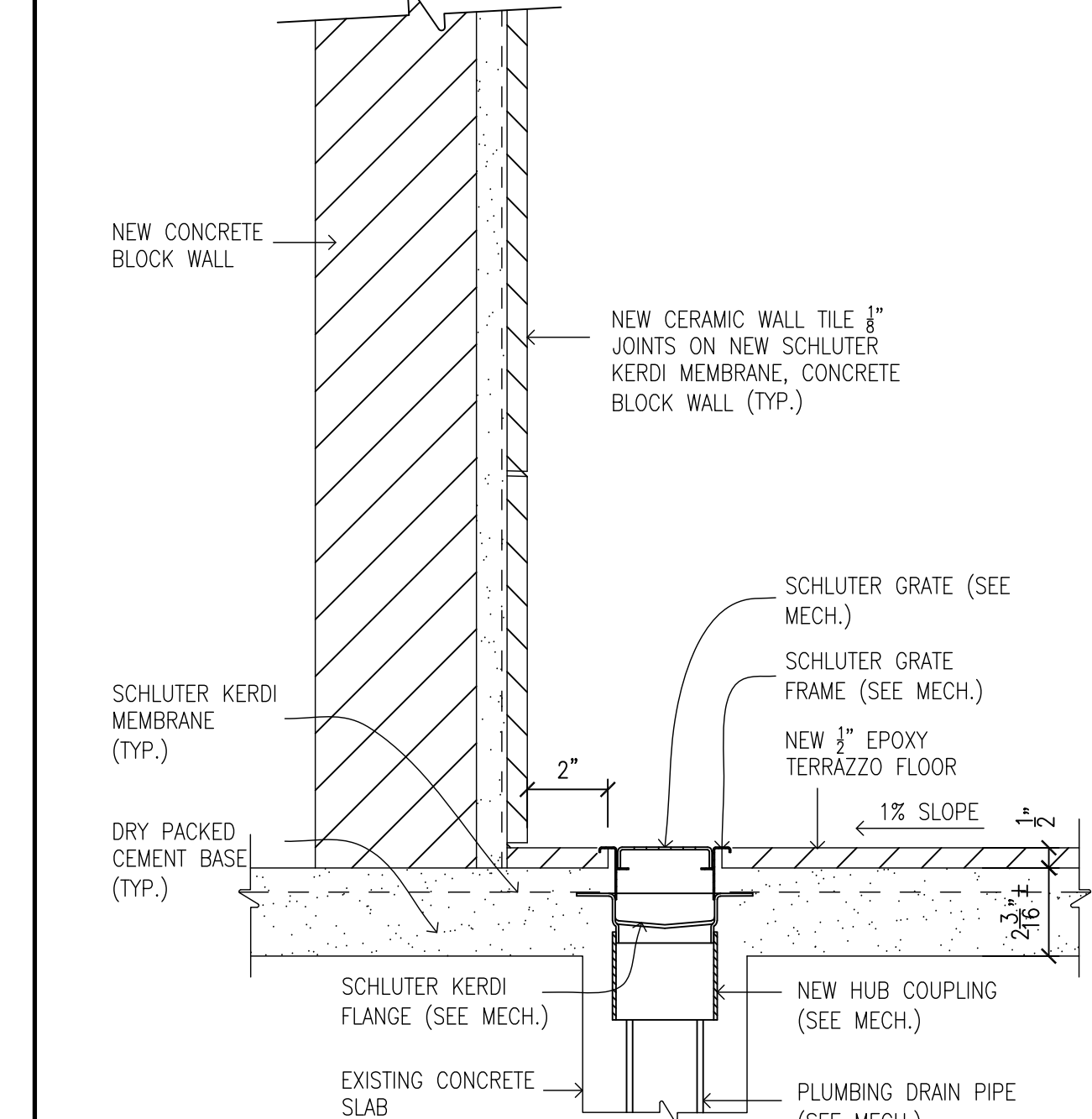
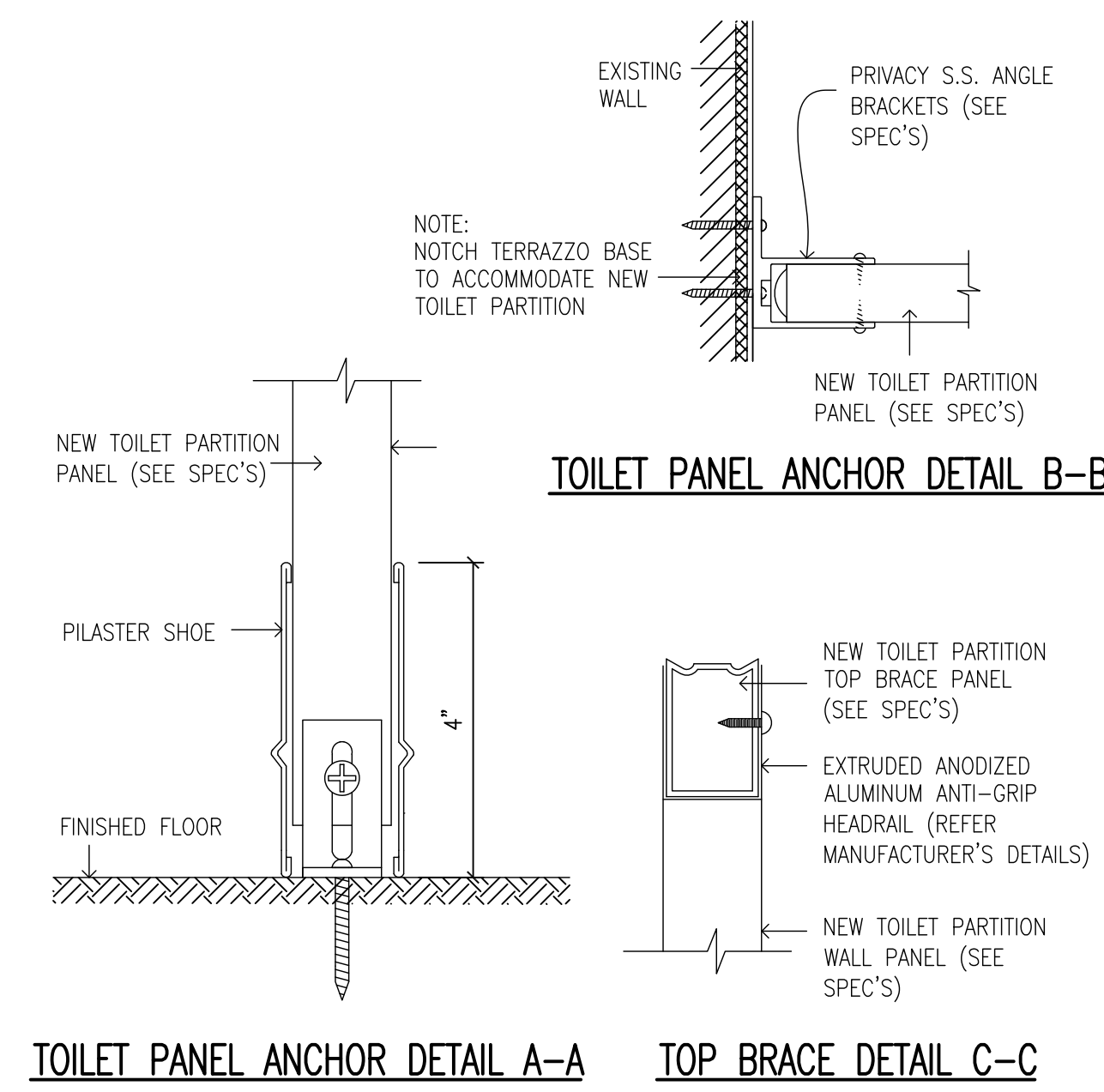


1 DOOR SCHEDULE
A4.01 N.T.S.

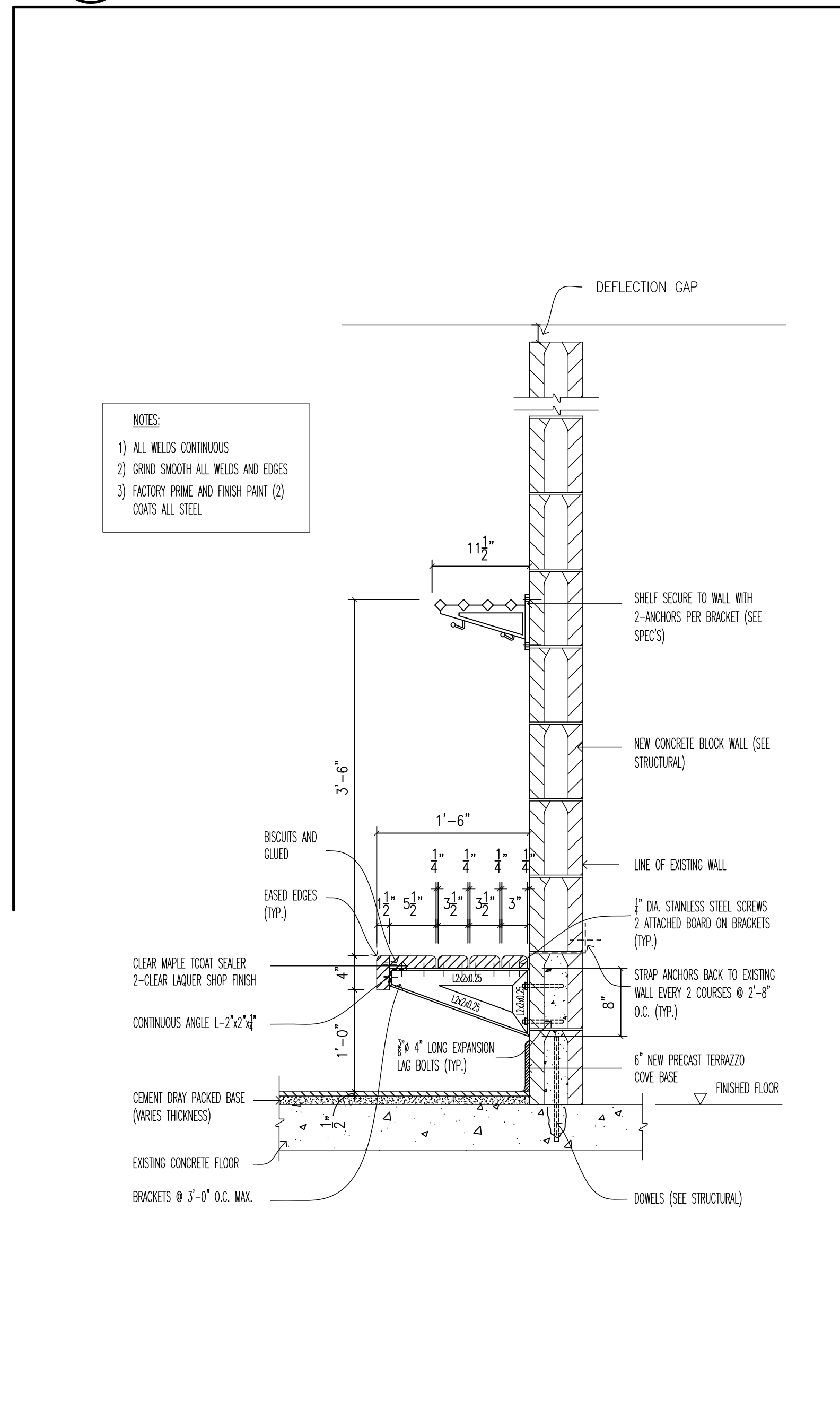
2 DOORS AND FRAMES DETAIL
A4.01 N.T.S.

6 TOILET PARTITION DETAILS
A4.01 N.T.S.

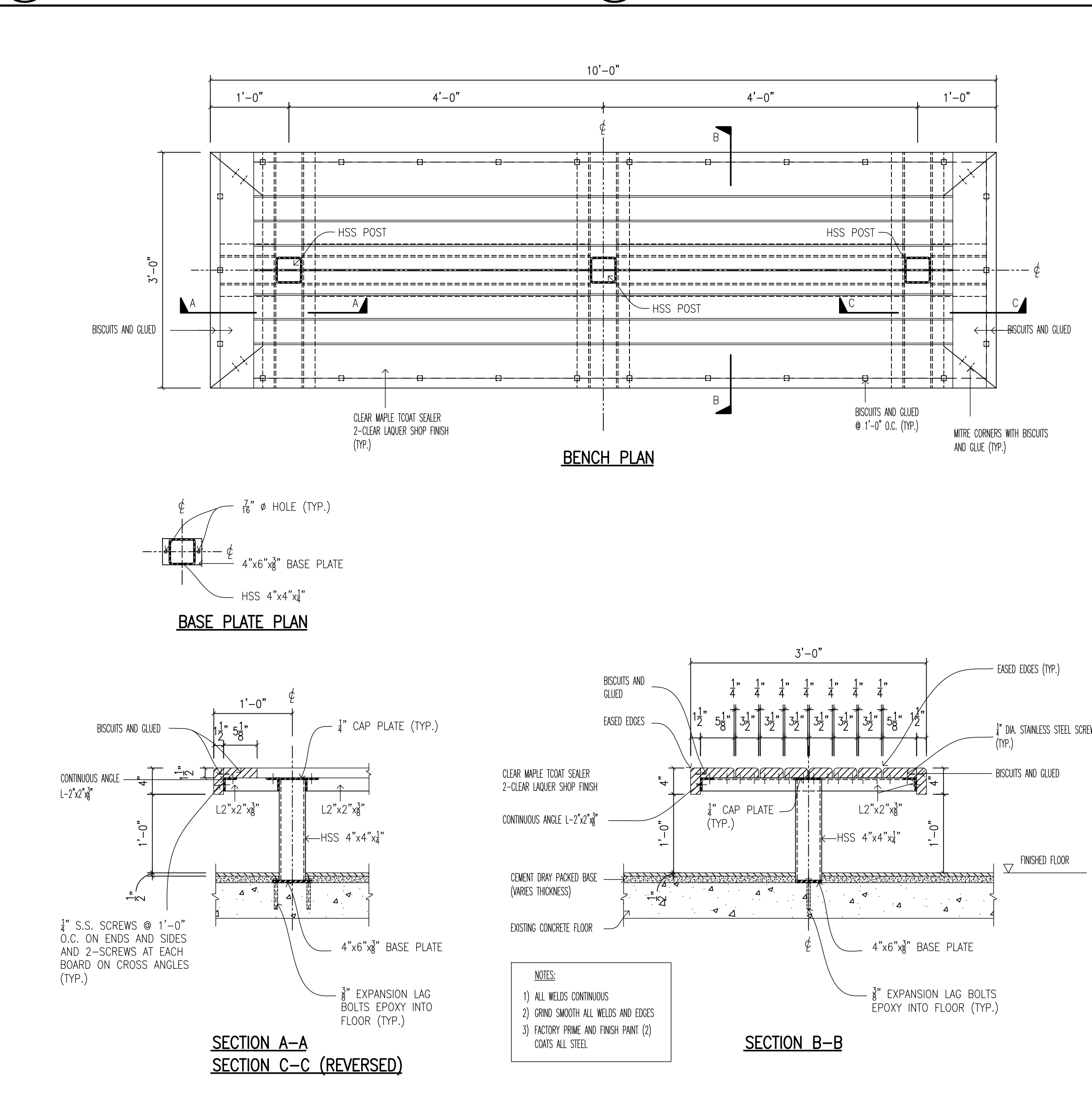
7 SHOWER LINEAR DRAIN DETAIL
A4.01 3/4"=1'-0"



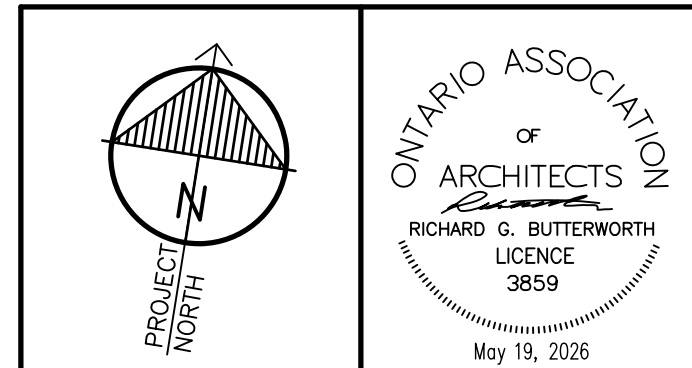
3 NEW CONCRETE BLOCK PARTITION WALL SECTION
A4.01 N.T.S.



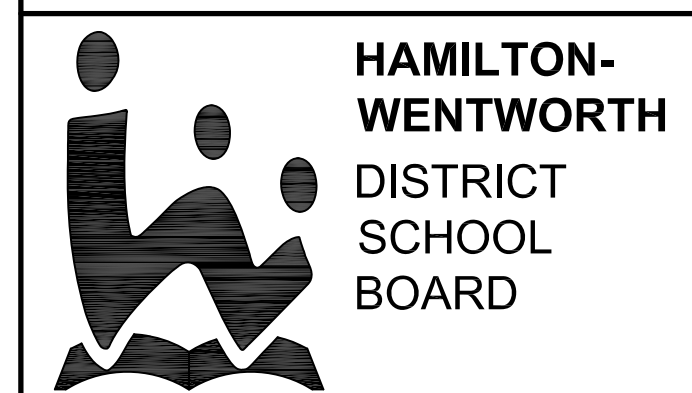
4 WALL BENCH / SHELF DETAIL
A4.01 1/2"=1'-0"



5 FREE STANDING BENCH DETAIL
A4.01 1/2"=1'-0"



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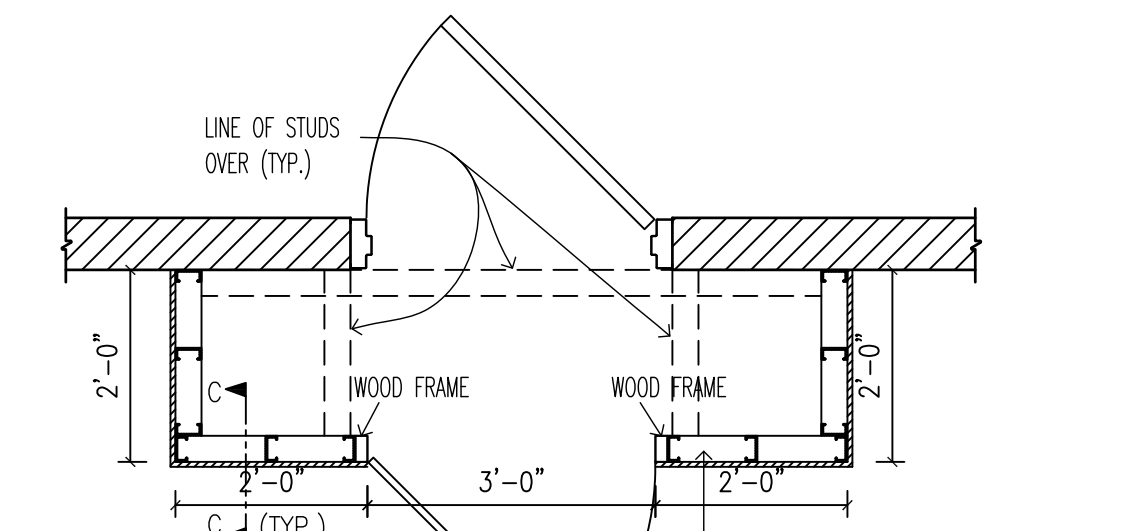
DOORS AND FRAMES SCHEDULE AND DETAILS BENCH DETAILS

DRAWN BY: MS	CHECKED BY: RGB
DATE: MAY 2026	JOB No.: 24-107a
SCALE: AS SHOWN	SHEET No.: A4.01

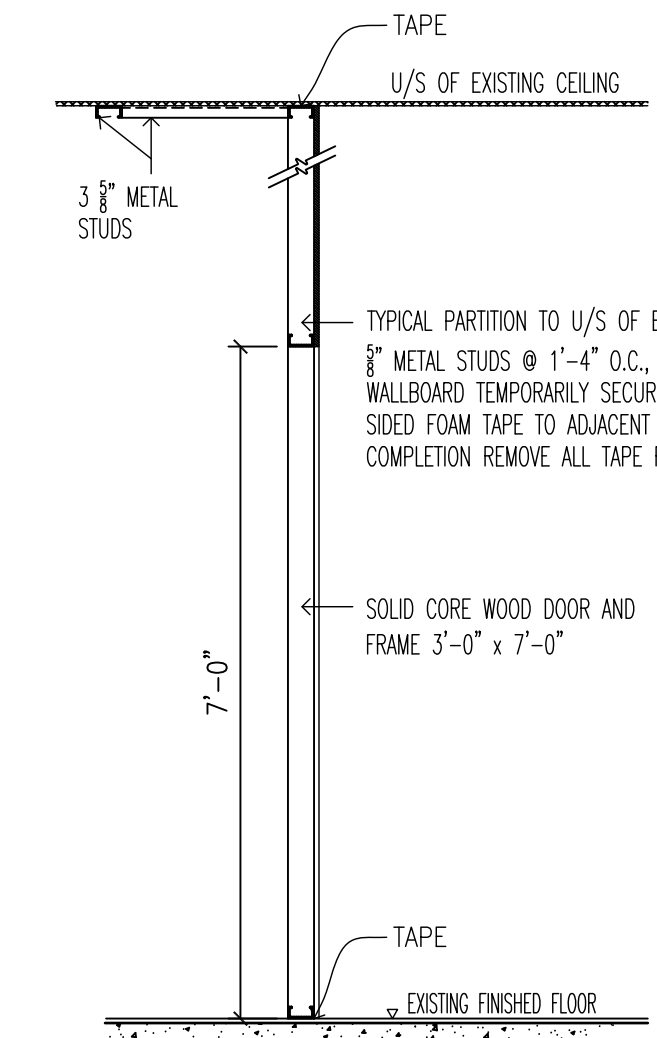
ROOM FINISH SCHEDULE										
No.	ROOM NAME	FLOOR FINISH	BASE	WALLS				CEILING		REMARKS
				NORTH	EAST	SOUTH	WEST	FINISH	HEIGHT	
0003	GIRL'S CHANGE ROOM	SEAMLESS TERRAZZO	6" PRECAST TERRAZZO	CONCRETE BLOCK PAINTED				GYPSON WALLBOARD PAINTED	9'-0"	
0003A	VESTIBULE								8'-0"	
0004H	WASHROOM								9'-0"	
0005	BOY'S CHANGE ROOM								9'-0"	
0004E	NEW GYMNASIUM OFFICE	LVL	6" RCB		EXISTING BRICK PAINTED	CONCRETE BLOCK PAINTED	EXISTING BRICK PAINTED	SUSPENDED ACOUSTIC TILE AND GRID	8'-0"	
0004F	WASHROOM	SEAMLESS TERRAZZO	6" PRECAST TERRAZZO					GYPSON WALLBOARD PAINTED	8'-0"	
0004G	WASHROOM	SEAMLESS TERRAZZO	6" PRECAST TERRAZZO					GYPSON WALLBOARD PAINTED	8'-0"	MOISTURE RESISTANCE GYPSON WALLBOARD
0007A	NEW STORAGE ROOM	LVL	6" RCB	CONCRETE BLOCK PAINTED	EXISTING BRICK PAINTED	EXISTING BRICK PAINTED	EXISTING BRICK PAINTED	EXISTING CONCRETE PAINTED / GYPSON WALLBOARD PAINTED	7'-4"	
0007B	EXISTING VESTIBULE	LVL	6" RCB	EXISTING BRICK PAINTED	EXISTING BRICK PAINTED	EXISTING BRICK PAINTED / CONCRETE BLOCK PAINTED	EXISTING BRICK PAINTED	EXISTING CONCRETE PAINTED	EXISTING	
1031	BOY'S CHANGE ROOM	SEAMLESS TERRAZZO	6" PRECAST TERRAZZO	CONCRETE BLOCK PAINTED				GYPSON WALLBOARD PAINTED	9'-0"	
1031A	GIRL'S CHANGE ROOM									
1031B	CHANGE ROOM									
1031C	SHOWER		CERAMIC TILE / 6" PRECAST TERRAZZO		CERAMIC TILE / CONCRETE BLOCK PAINTED	CERAMIC TILE	CERAMIC TILE / CONCRETE BLOCK PAINTED			PAIN EXISTING SITE WING
1031D	CHANGE ROOM		6" PRECAST TERRAZZO							
1031E	SHOWER		CERAMIC TILE / 6" PRECAST TERRAZZO	CERAMIC TILE / CONCRETE BLOCK PAINTED	CERAMIC TILE / CONCRETE BLOCK PAINTED	CONCRETE BLOCK PAINTED	CERAMIC TILE / CONCRETE BLOCK PAINTED			
1031F	SHOWER		CERAMIC TILE / 6" PRECAST TERRAZZO	CERAMIC TILE / CONCRETE BLOCK PAINTED	-	-	-			
1031G	TOILET STALL		6" PRECAST TERRAZZO	CONCRETE BLOCK PAINTED						CLEAN EXISTING CEILING GRID
1031H	TOILET STALL		6" PRECAST TERRAZZO	EXISTING CONCRETE PAINTED	EXISTING CONCRETE PAINTED / CONCRETE BLOCK PAINTED	EXISTING CONCRETE PAINTED	EXISTING CONCRETE PAINTED / CONCRETE BLOCK PAINTED			REGROUT ALL CERAMIC TILE
1031J	SHOWER		CERAMIC TILE / 6" PRECAST TERRAZZO	CONCRETE BLOCK PAINTED	CERAMIC TILE / CONCRETE BLOCK PAINTED					
1031K	SHOWER		CERAMIC TILE / 6" PRECAST TERRAZZO	CERAMIC TILE / CONCRETE BLOCK PAINTED	CERAMIC TILE / CONCRETE BLOCK PAINTED	CONCRETE BLOCK PAINTED	CERAMIC TILE / CONCRETE BLOCK PAINTED			
2021	EXISTING CORRIDOR		PATCH EXISTING TERRAZZO BASE TO MATCH							
2022	EXISTING GYMNASIUM STORAGE		NEW TERRAZZO BASE TO MATCH							
2022A	EXISTING VESTIBULE	SEAMLESS TERRAZZO	NEW TERRAZZO BASE TO MATCH	EXISTING BRICK PAINTED	EXISTING BRICK PAINTED / CONCRETE BLOCK PAINTED		PATCH EXISTING BRICK TO MATCH	GYPSON WALLBOARD PAINTED	EXISTING FLUSH	
2023	VESTIBULE	SEAMLESS TERRAZZO	6" PRECAST TERRAZZO BASE	CONCRETE BLOCK PAINTED				GYPSON WALLBOARD PAINTED	8'-0"	
2024	EXISTING GYMNASIUM		NEW VENTED VINYL BASE ON SOUTH WALL			PATCH EXISTING BRICK TO MATCH				
2024A	GYMNASIUM OFFICE	LVL	6" RCB	CONCRETE BLOCK PAINTED				SUSPENDED ACOUSTIC TILE AND GRID	9'-0"	
2024B	WASHROOM	SEAMLESS TERRAZZO	6" PRECAST TERRAZZO		CONCRETE BLOCK PAINTED			GYPSON WALLBOARD PAINTED	9'-0"	
2024C	CORRIDOR		6" PRECAST TERRAZZO		CONCRETE BLOCK PAINTED					
2024D	WASHROOM		6" PRECAST TERRAZZO		CONCRETE BLOCK PAINTED					
2024E	SHOWER		CERAMIC TILE	CERAMIC TILE						
2024F	SHOWER		CERAMIC TILE	CERAMIC TILE			CERAMIC TILE			
2024G	WASHROOM		6" PRECAST TERRAZZO	CONCRETE BLOCK PAINTED						
2025	BOY'S CHANGE ROOM		6" PRECAST TERRAZZO	CONCRETE BLOCK PAINTED						
2025A	SHOWER		CERAMIC TILE	CERAMIC TILE / CONCRETE BLOCK PAINTED	CONCRETE BLOCK PAINTED	CERAMIC TILE / CONCRETE BLOCK PAINTED	CERAMIC TILE			SHOWER WALLS CERAMIC TILE
2025B	SHOWER		CERAMIC TILE	CERAMIC TILE / CONCRETE BLOCK PAINTED	CERAMIC TILE	CERAMIC TILE / CONCRETE BLOCK PAINTED	CONCRETE BLOCK PAINTED			MOISTURE RESISTANCE GYPSON WALLBOARD
2025C	TOILET STALL		6" PRECAST TERRAZZO		CONCRETE BLOCK PAINTED					MOISTURE RESISTANCE GYPSON WALLBOARD
2026A	GIRL'S CHANGE ROOM		6" PRECAST TERRAZZO	CONCRETE BLOCK PAINTED						
2026B	SHOWER		CERAMIC TILE	CERAMIC TILE / CONCRETE BLOCK PAINTED	CONCRETE BLOCK PAINTED	CERAMIC TILE / CONCRETE BLOCK PAINTED	CERAMIC TILE			
2026C	SHOWER		CERAMIC TILE	CERAMIC TILE / CONCRETE BLOCK PAINTED	CONCRETE BLOCK PAINTED	CERAMIC TILE / CONCRETE BLOCK PAINTED	CERAMIC TILE			MOISTURE RESISTANCE GYPSON WALLBOARD
2026D	TOILET STALL		6" PRECAST TERRAZZO	CONCRETE BLOCK PAINTED			CONCRETE BLOCK PAINTED			MOISTURE RESISTANCE GYPSON WALLBOARD
2026E	CORRIDOR		6" PRECAST TERRAZZO	CERAMIC TILE / CONCRETE BLOCK PAINTED	EXISTING BRICK PAINTED	CONCRETE BLOCK PAINTED	CONCRETE BLOCK PAINTED		12'-0"	

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.
- EXISTING BULKHEAD WALLS & CEILINGS, REMOVE ALL LOOSE FINISHES AND PATCH ALL HOLES, CRACKS, ETC. FLUSH TO MATCH WITH EXISTING BEFORE APPLYING NEW FINISHES.
- REMOVE CLEAN AND REINSTALL ALL MECHANICAL GRILLS. PAINT ALL GRILLS, RADS, 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 IF REQUIRED.
- PAINT ALL EXISTING OR NEW MECHANICAL AND ELECTRICAL ITEMS ON WALLS AND CEILINGS, BOXES, CONDUITS ETC. INCLUDING ALL PREVIOUSLY PAINTED ITEMS.
- SCAN ALL FLOORS FOR UNDERGROUND SERVICES BEFORE CORING OR CUTTING.
- PATCH ALL HOLES IN WALLS AND PLASTER CEILINGS FLUSH TO MATCH EXISTING.
- 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 AND GRILLES AT CEILINGS AND WALLS.
- REMOVE AND REINSTALL ALL ITEMS SUCH AS FIRE EXTINGUISHERS, WIRE GUARD CAGES, NOTICE PLAQUES, SIGNS, WALL MATTS, ETC. ALL OTHER ITEMS TO BE FULLY MASKED OFF BEFORE PAINTING.
- 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.

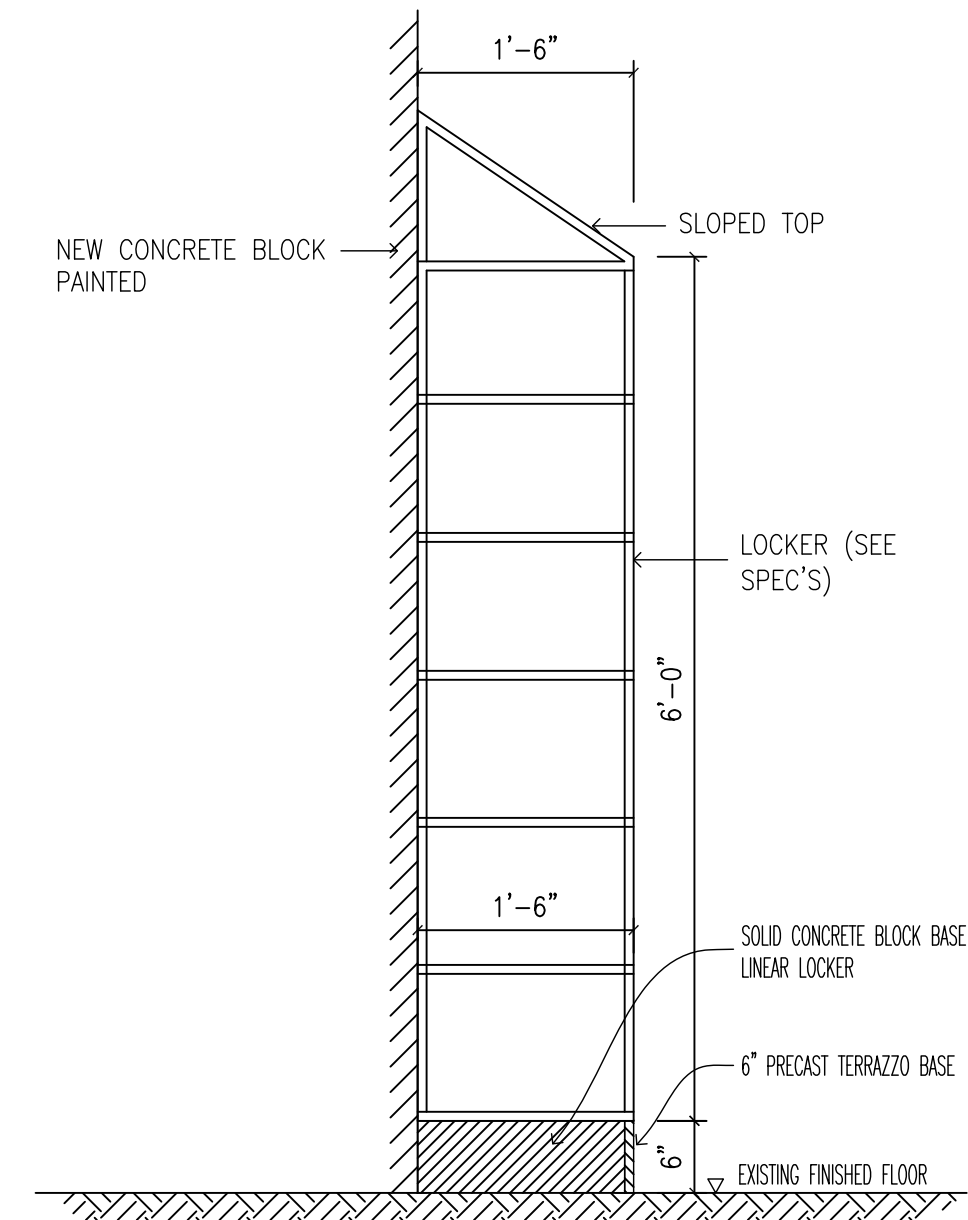


PLAN

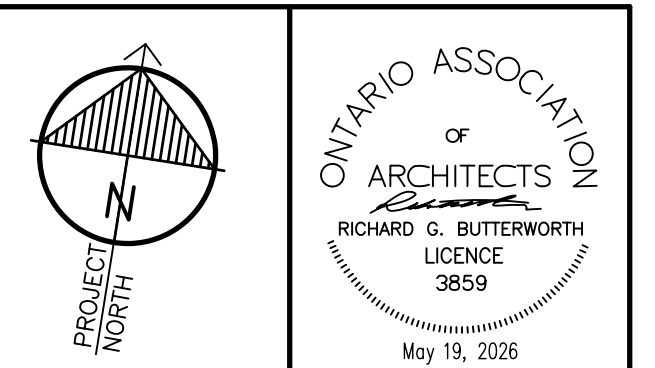


SECTION C-C

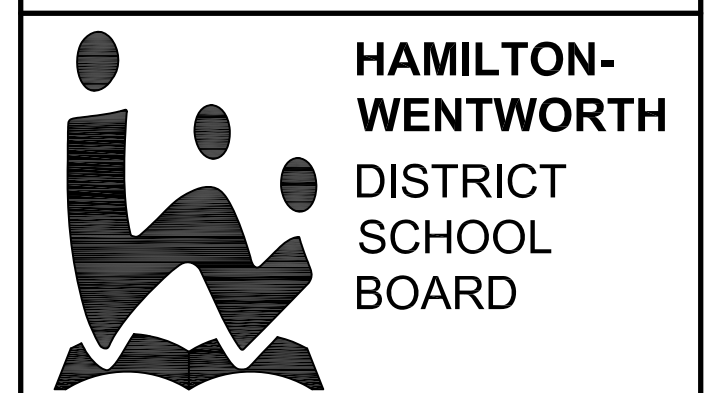
2 TYPICAL TEMPORARY CONSTRUCTION HOARDING DETAIL
A4.02 1/2"=1'-0"



3 LOCKER SECTION
A4.02 3/4"=1'-0"



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No.	REVISIONS	DATE

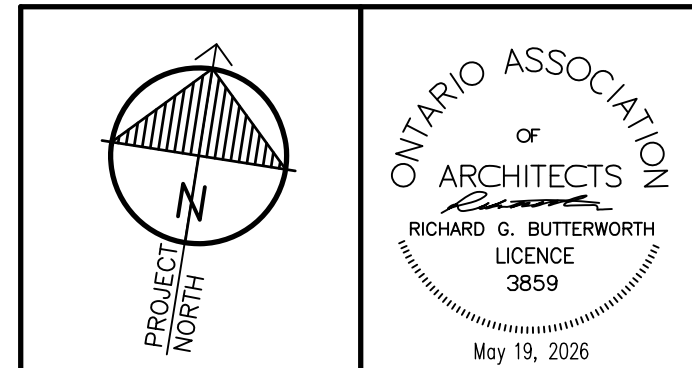
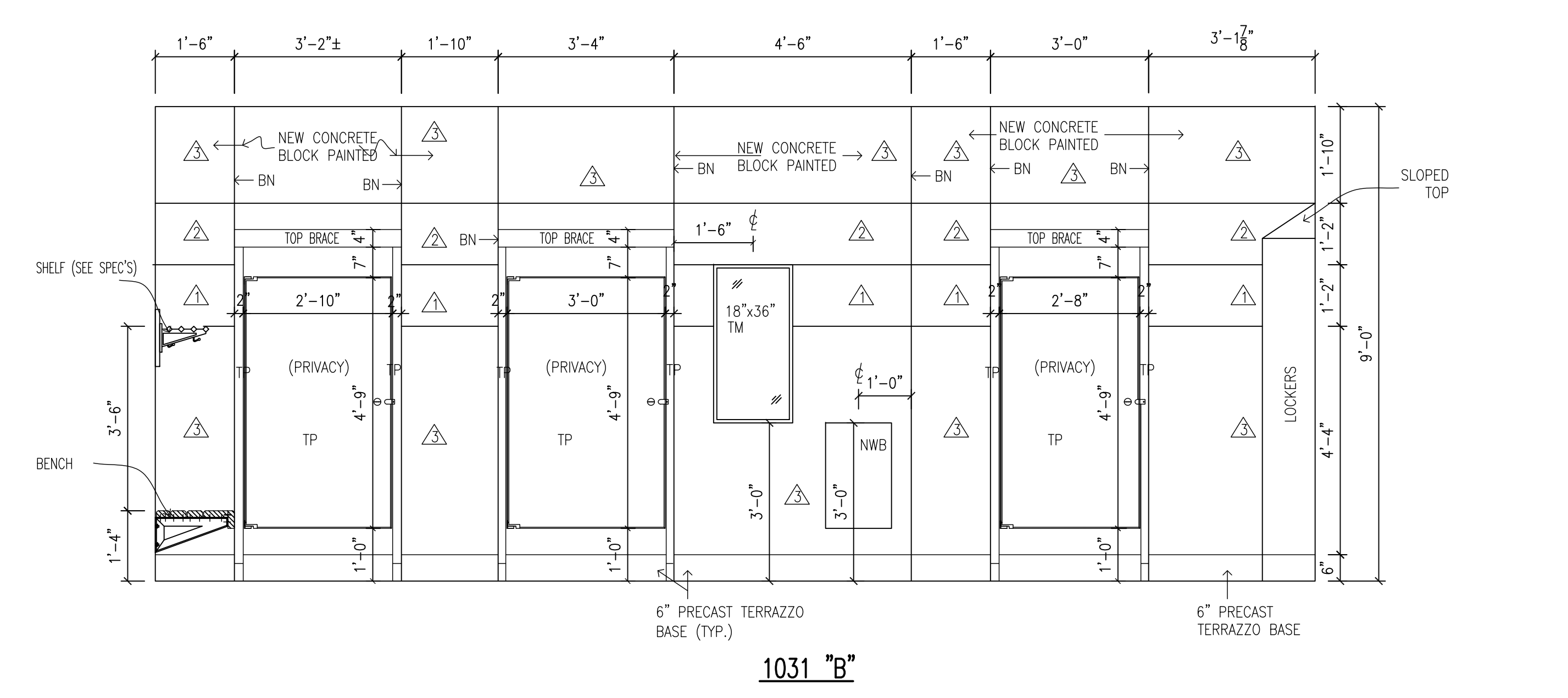
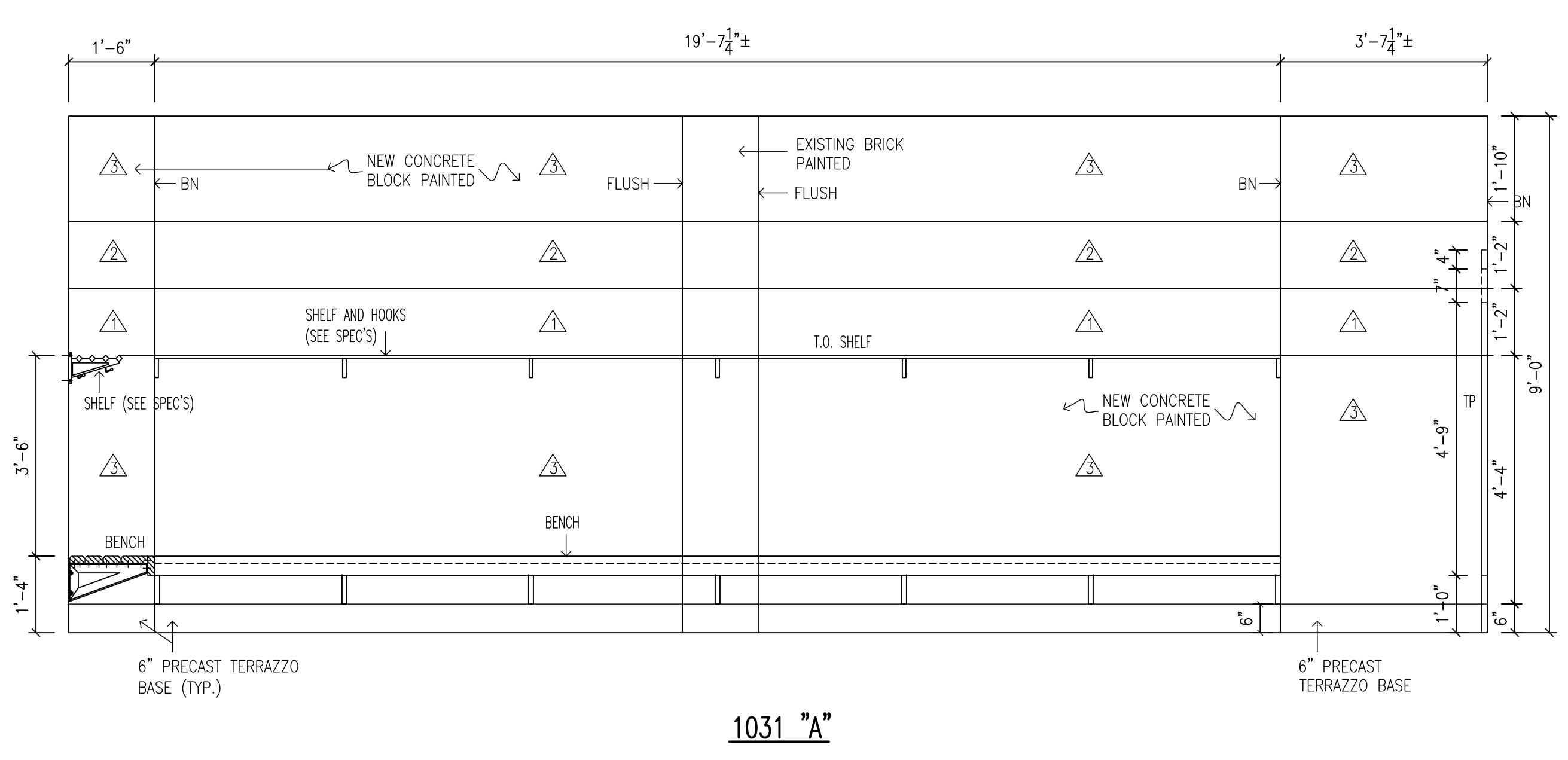
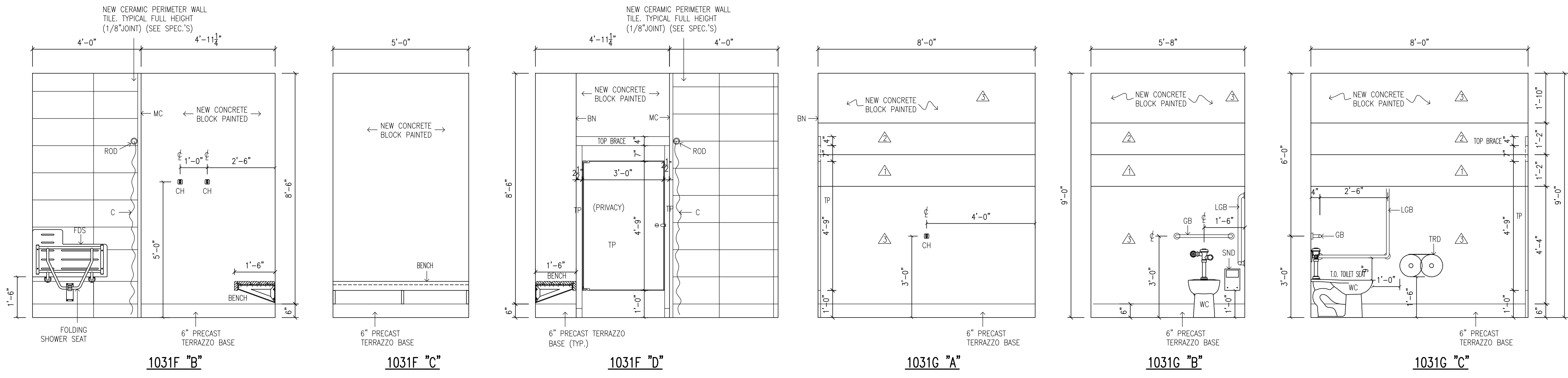
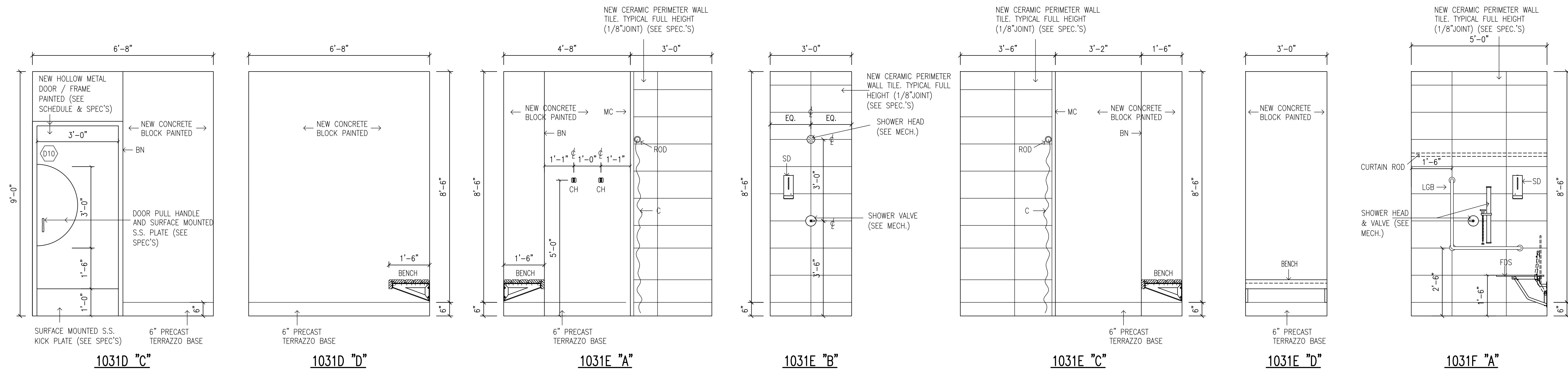
RICHARD G. BUTTERWORTH
ARCHITECT
Architecture
Interior
Urban Planning
Ancaster Ontario

WESTDALE SECONDARY SCHOOL - PHASE 2
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
700 MAIN STREET WEST
HAMILTON, ONTARIO

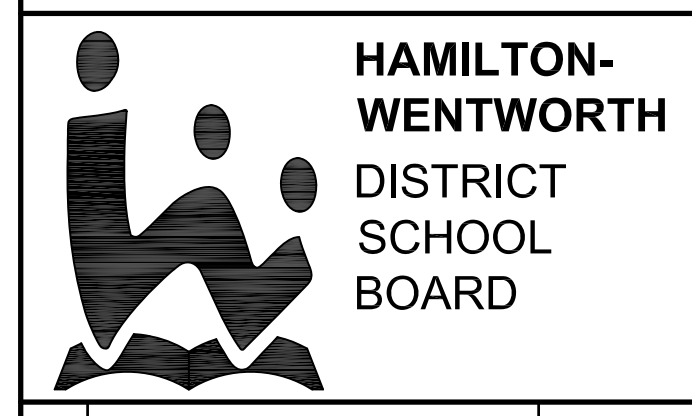
ROOM FINISH SCHEDULE AND DETAILS

DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
MAY 2026	24-107a
SCALE:	SHEET No.:
AS SHOWN	A4.02

1 ROOM FINISH SCHEDULE
A4.02 N.T.S.



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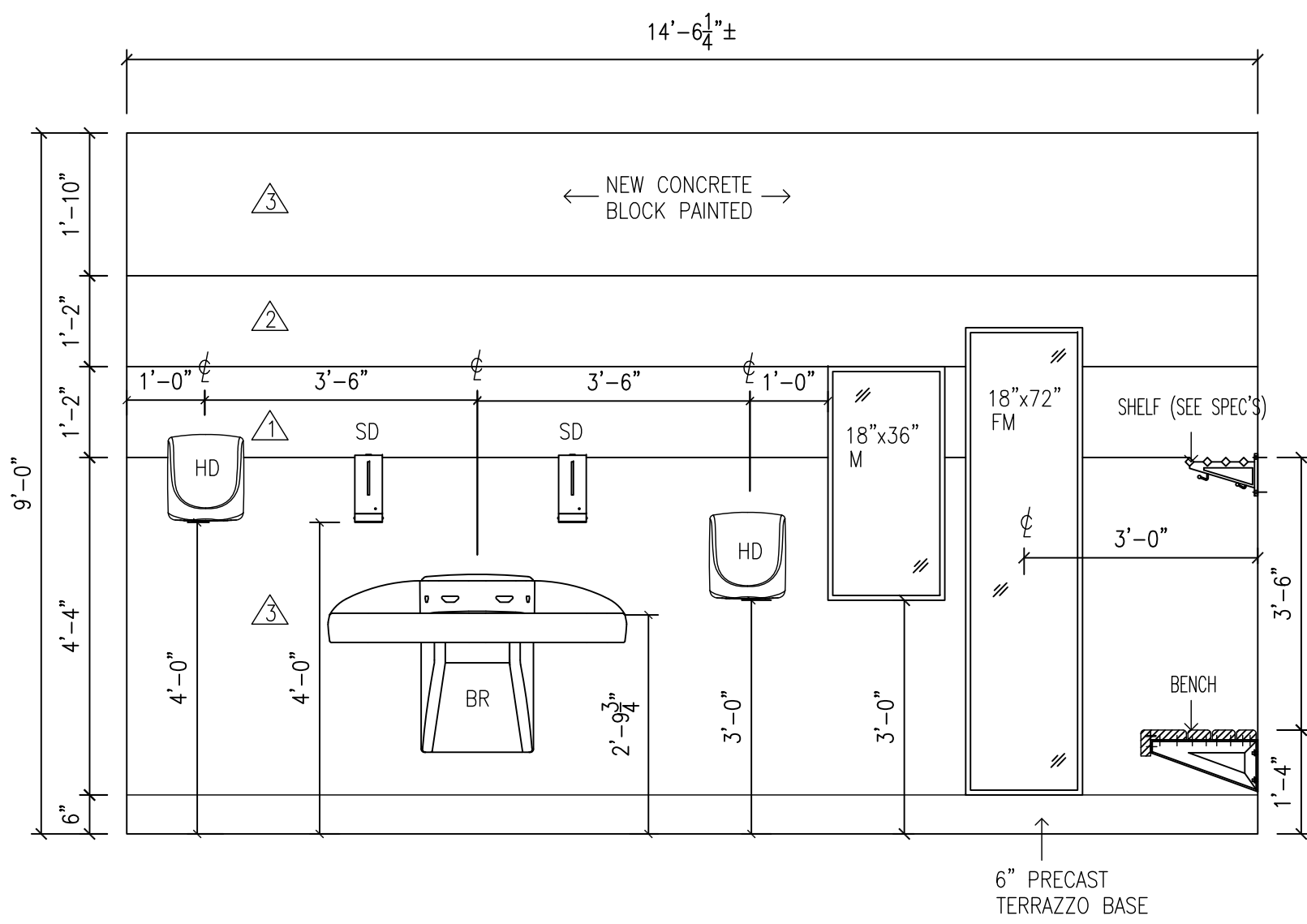


1. ISSUED FOR TENDER		MAY 19, 2026
No. REVISIONS		DATE
RICHARD G. BUTTERWORTH ARCHITECT INC. <small>Architecture Interiors UrbanPlanning Ancaster Ontario</small>		

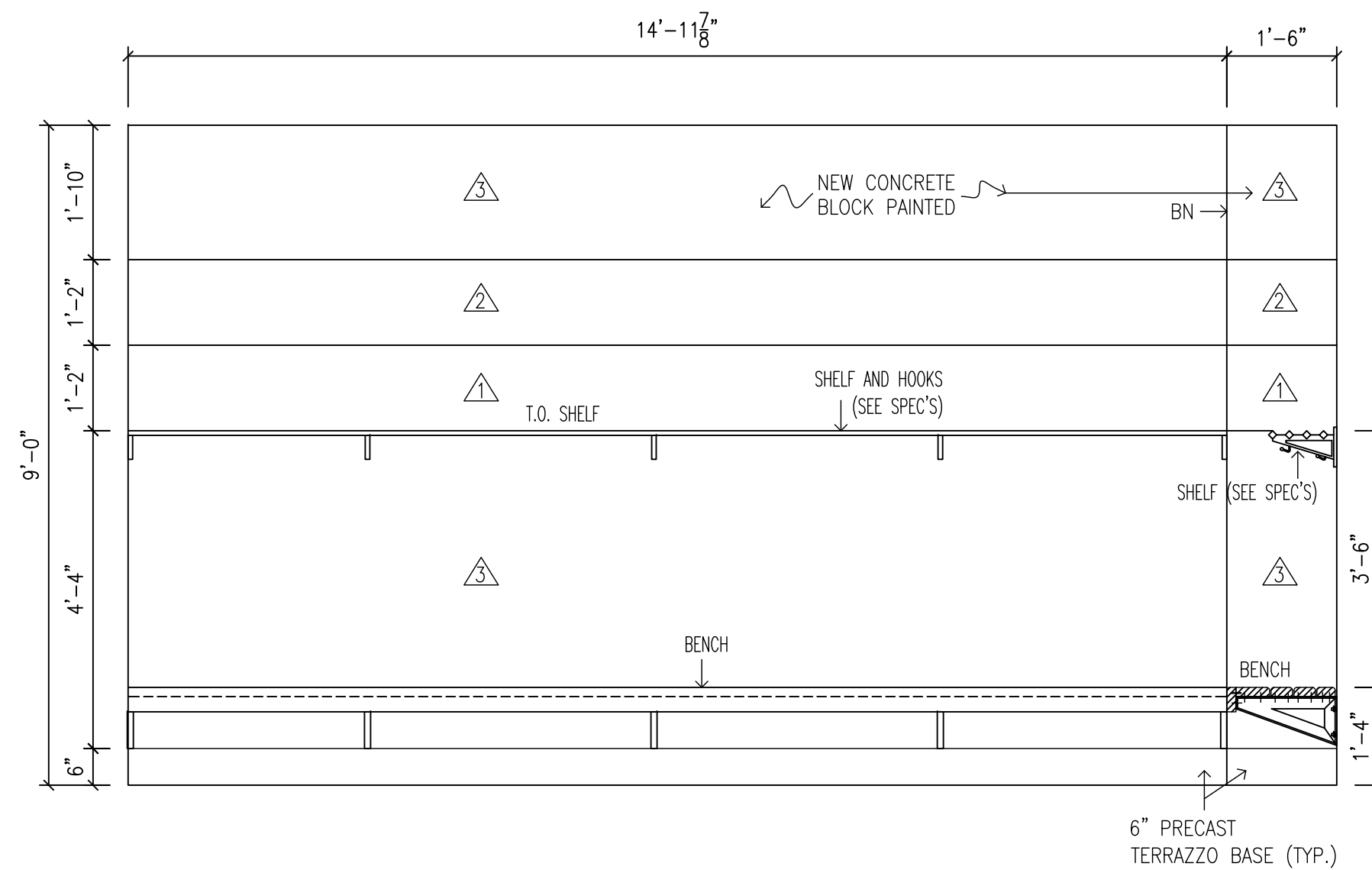
WESTDALE SECONDARY SCHOOL - PHASE 2
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
 700 MAIN STREET WEST
 HAMILTON, ONTARIO

ROOM ELEVATIONS
FIRST FLOOR

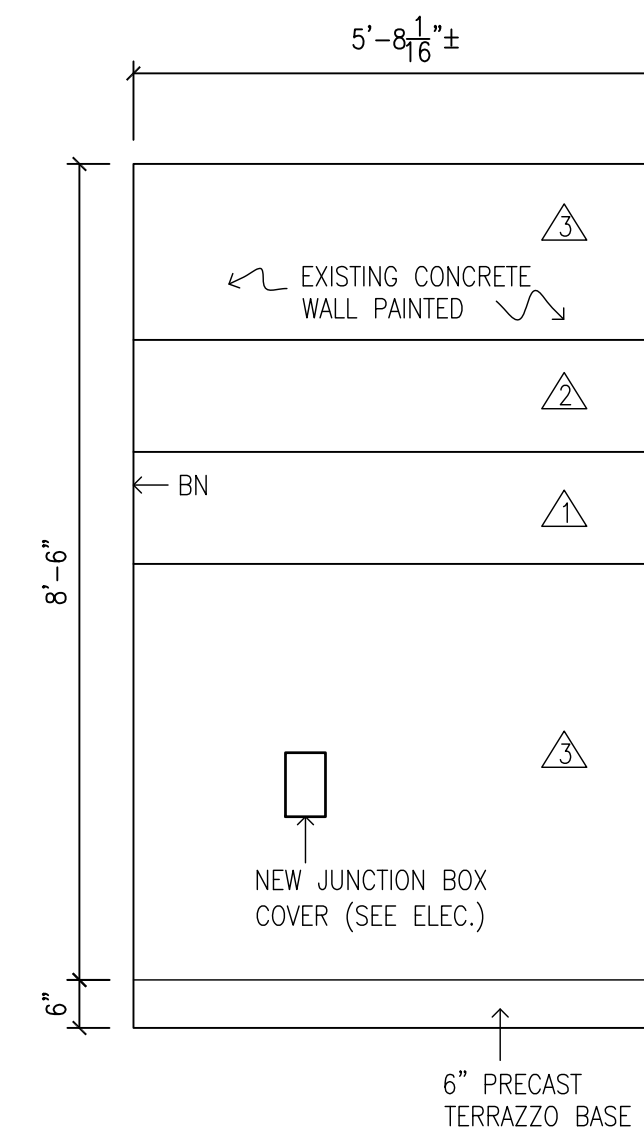
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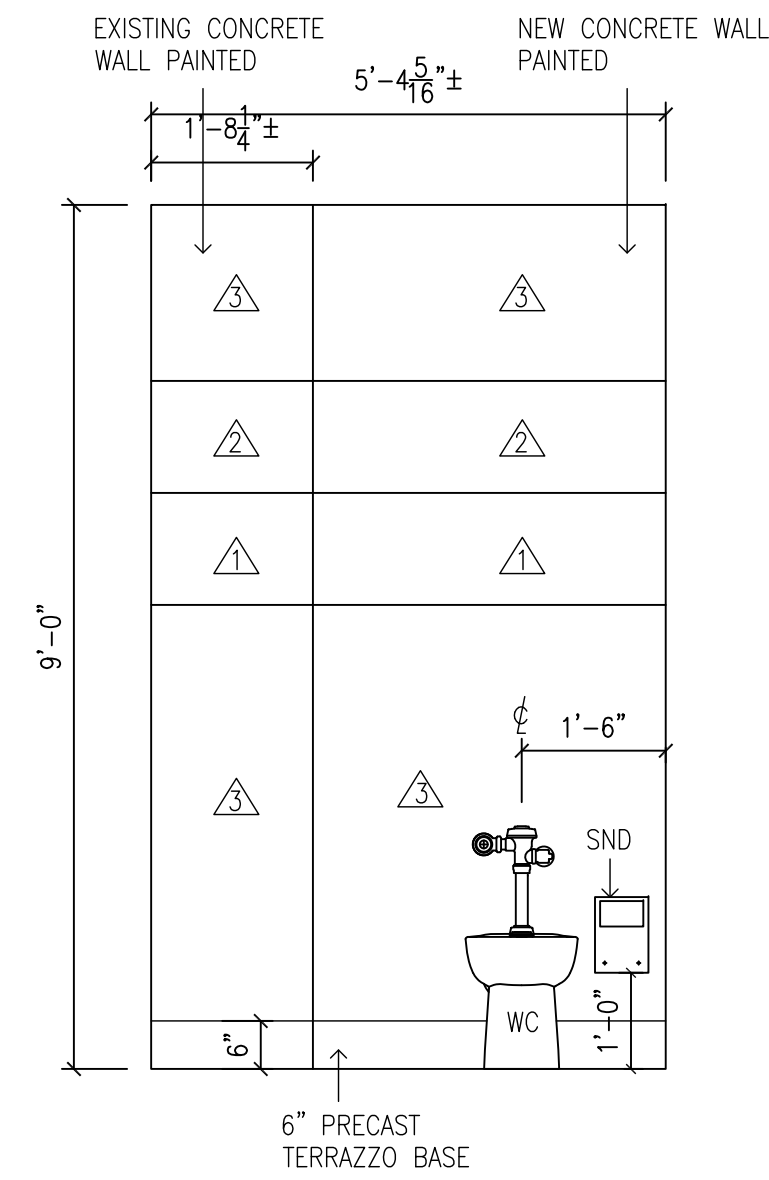
1031 "C"



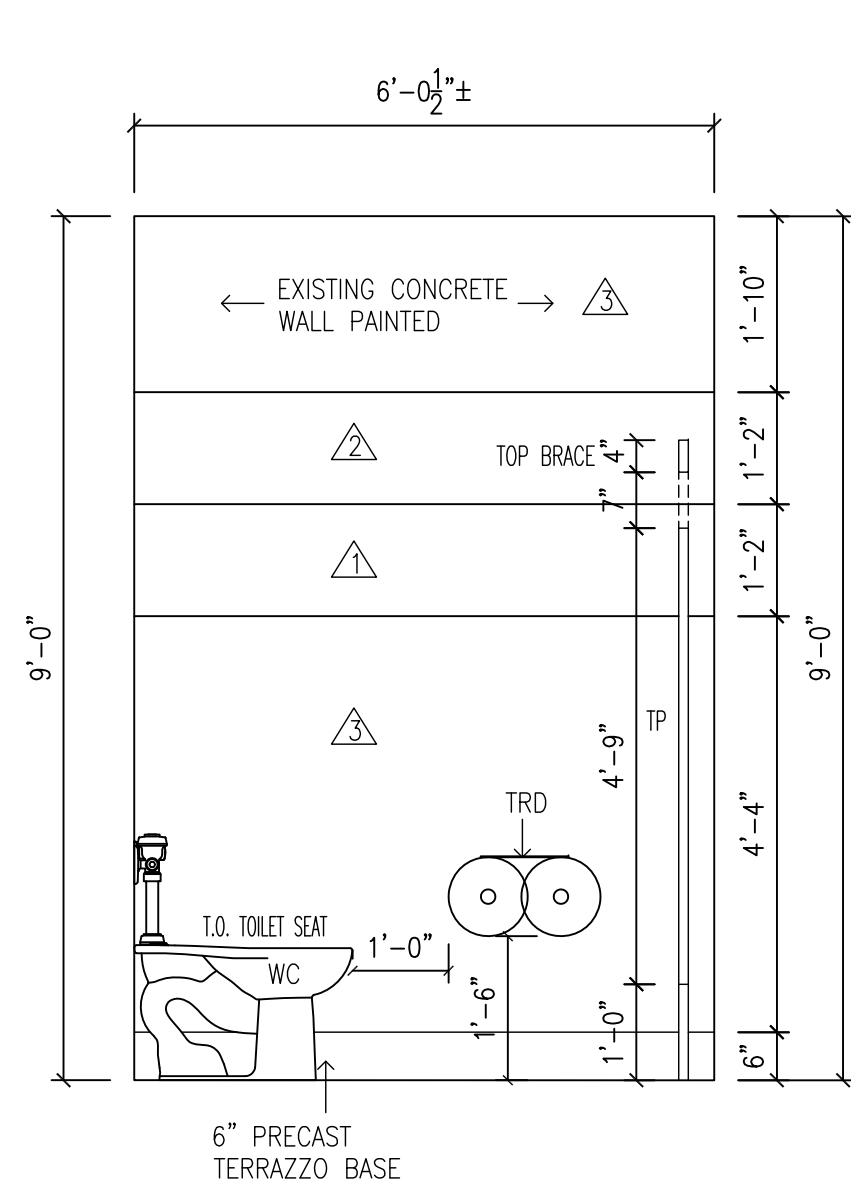
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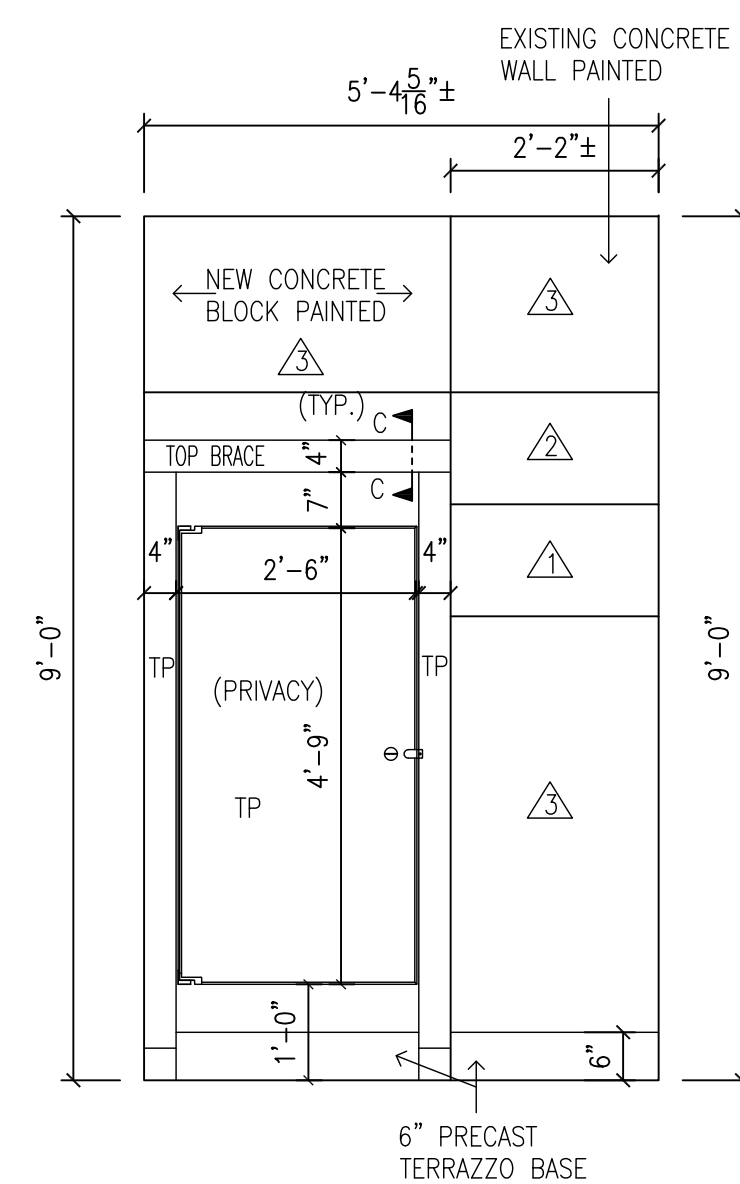
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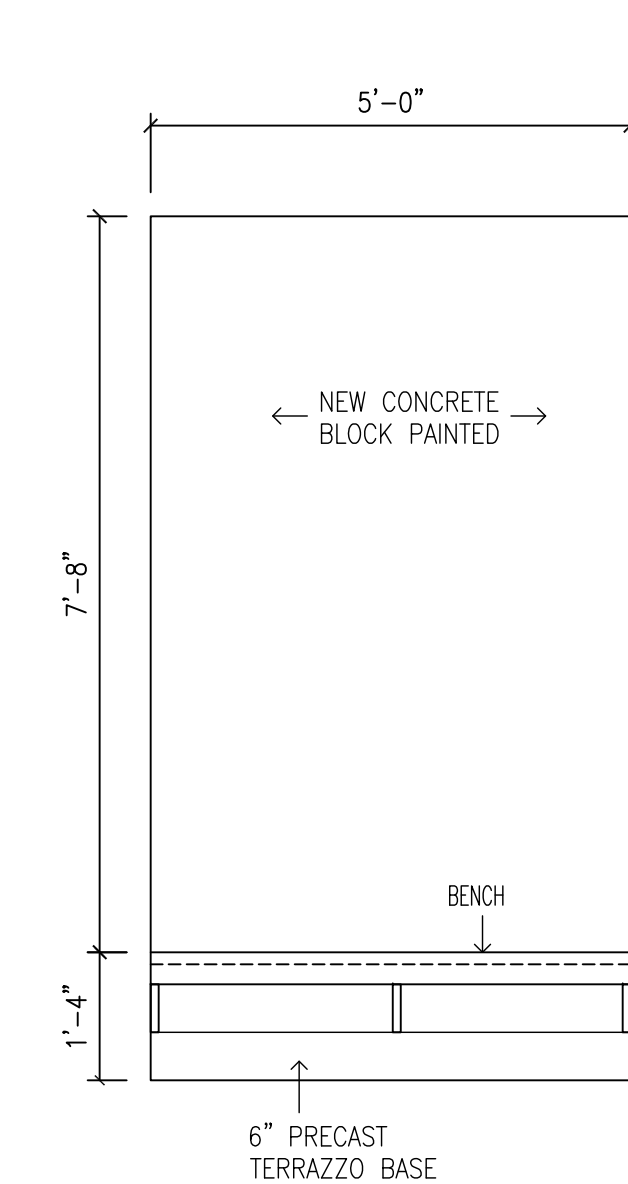
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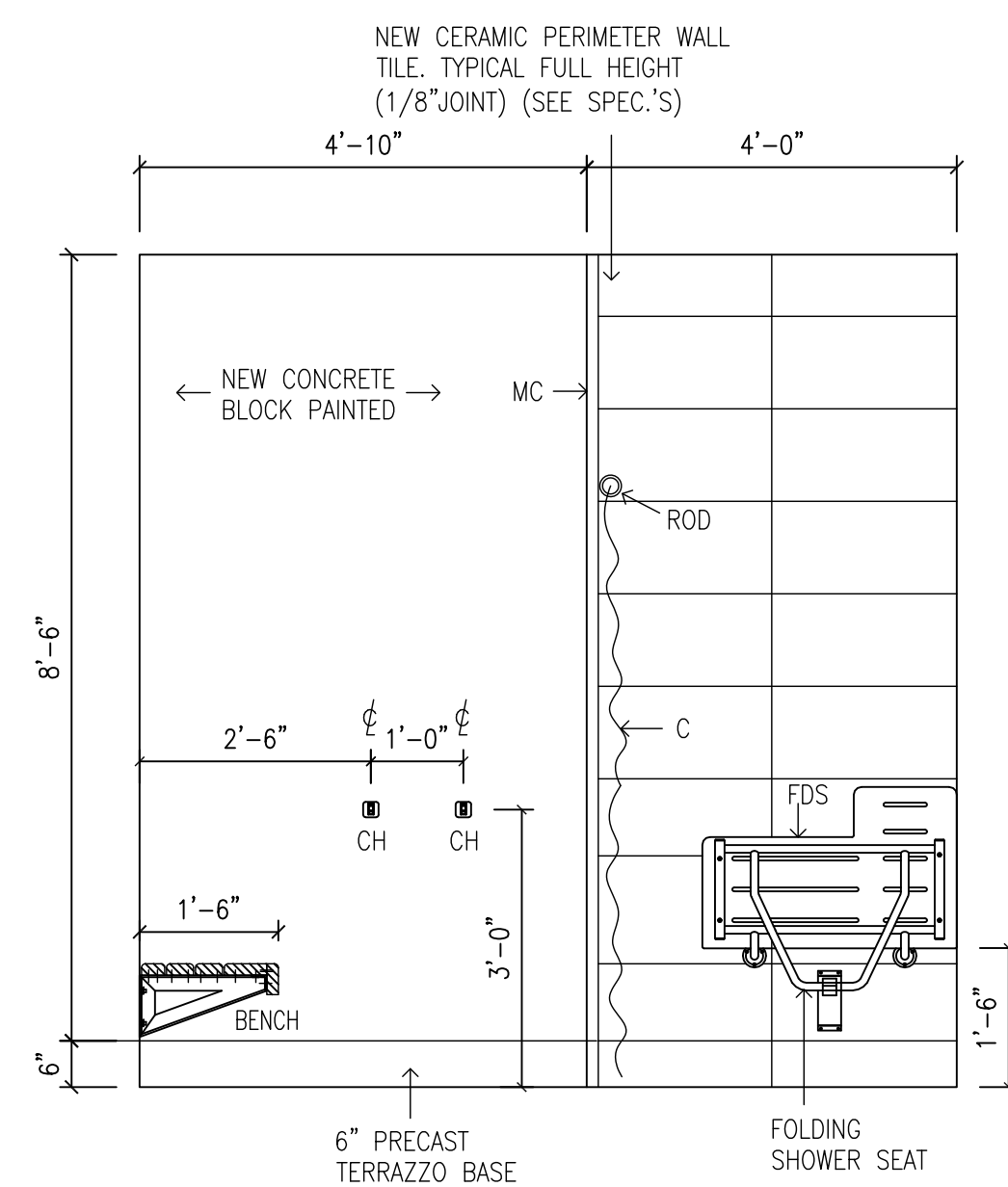
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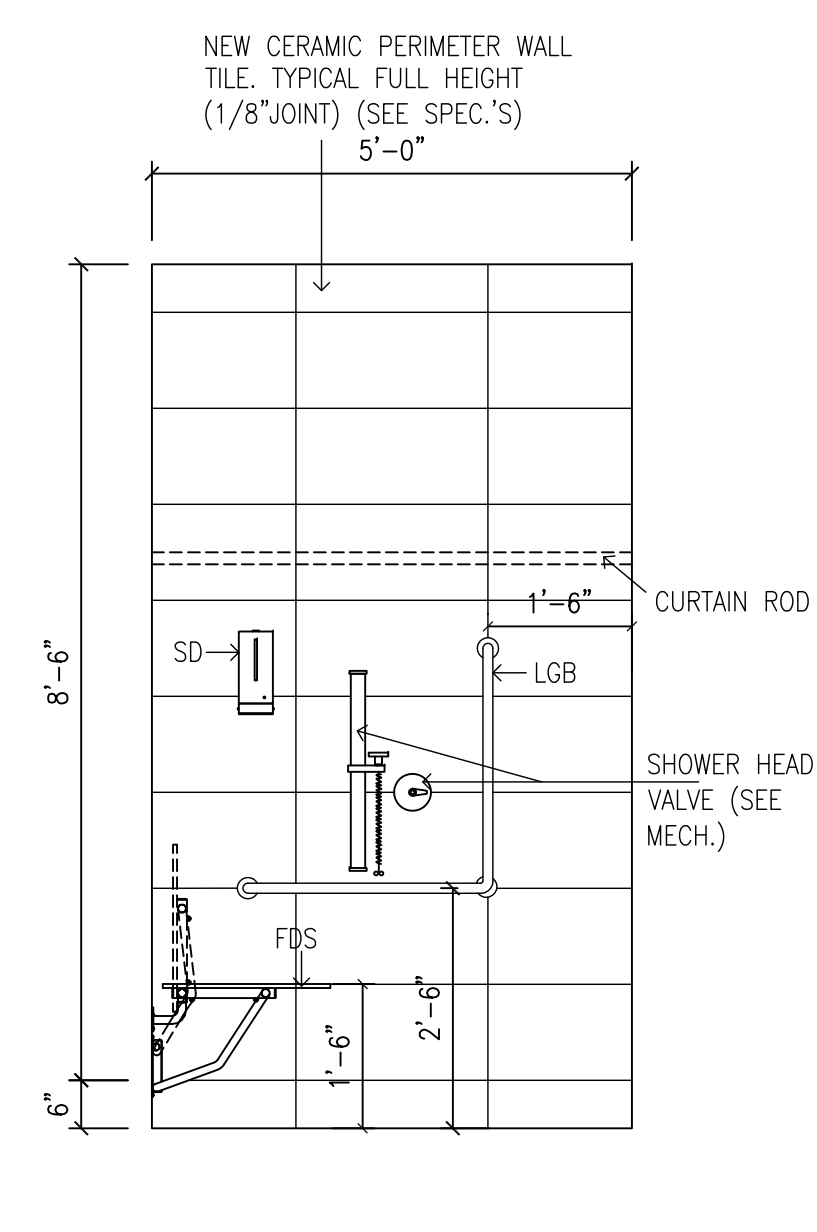
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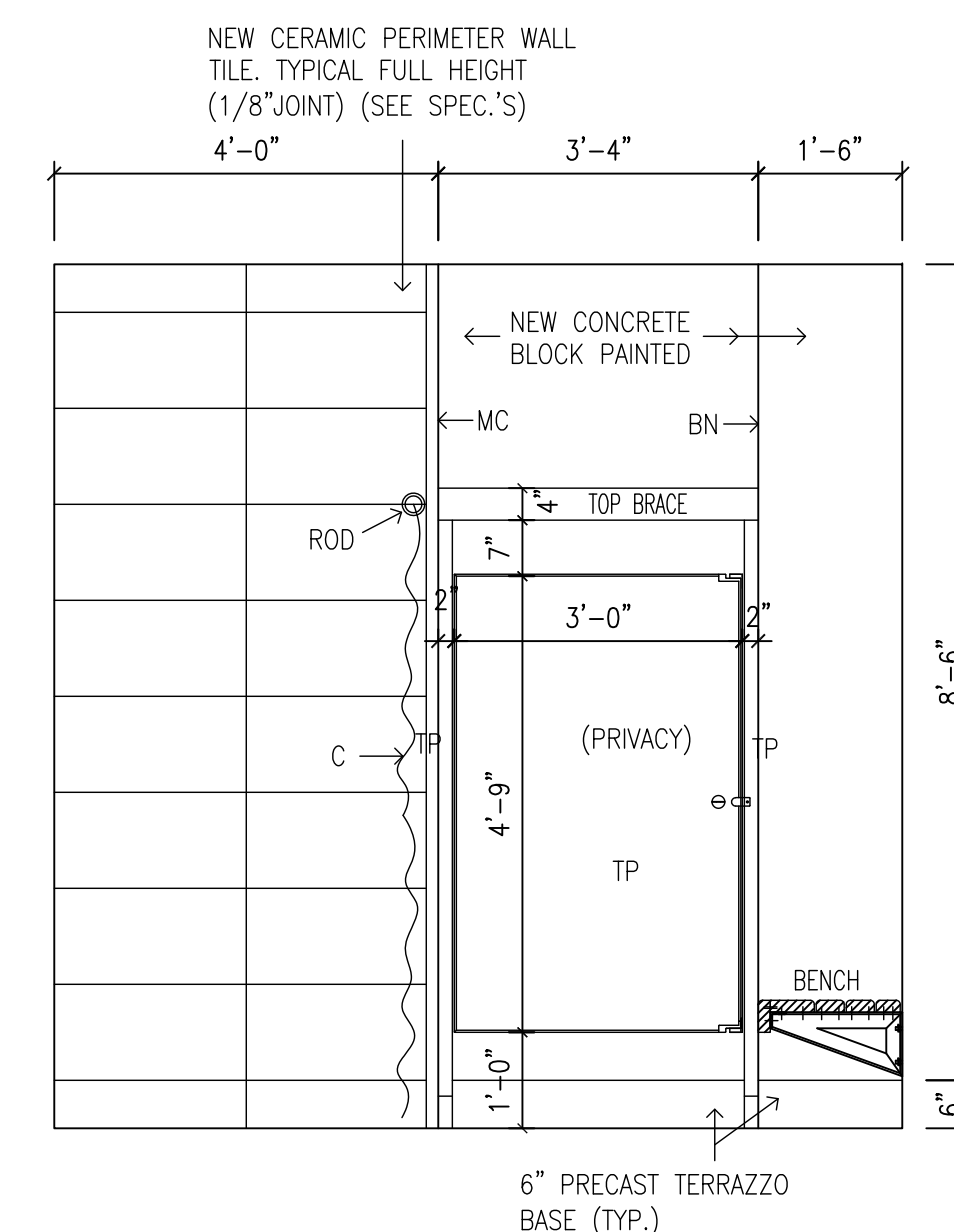
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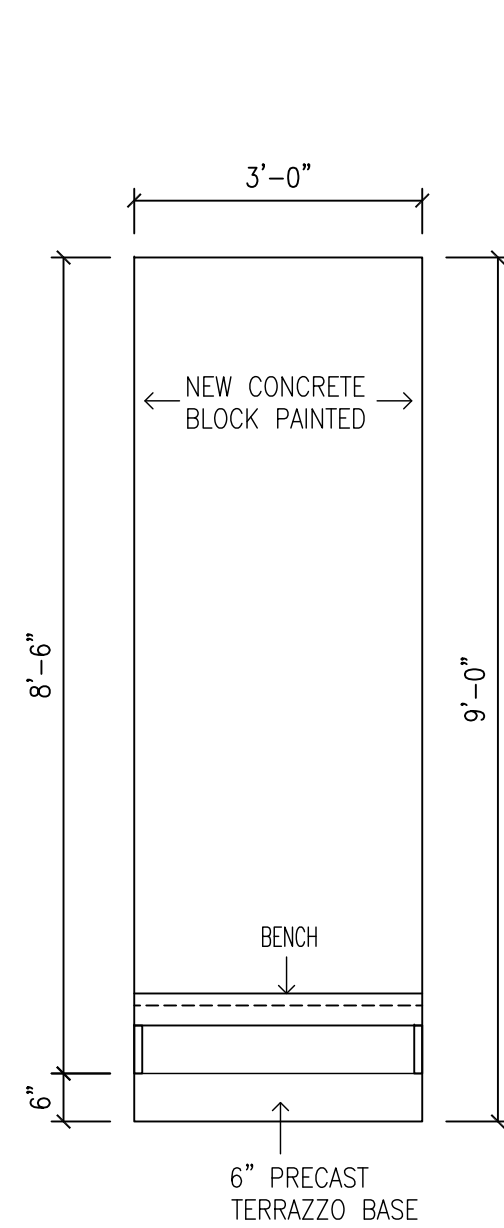
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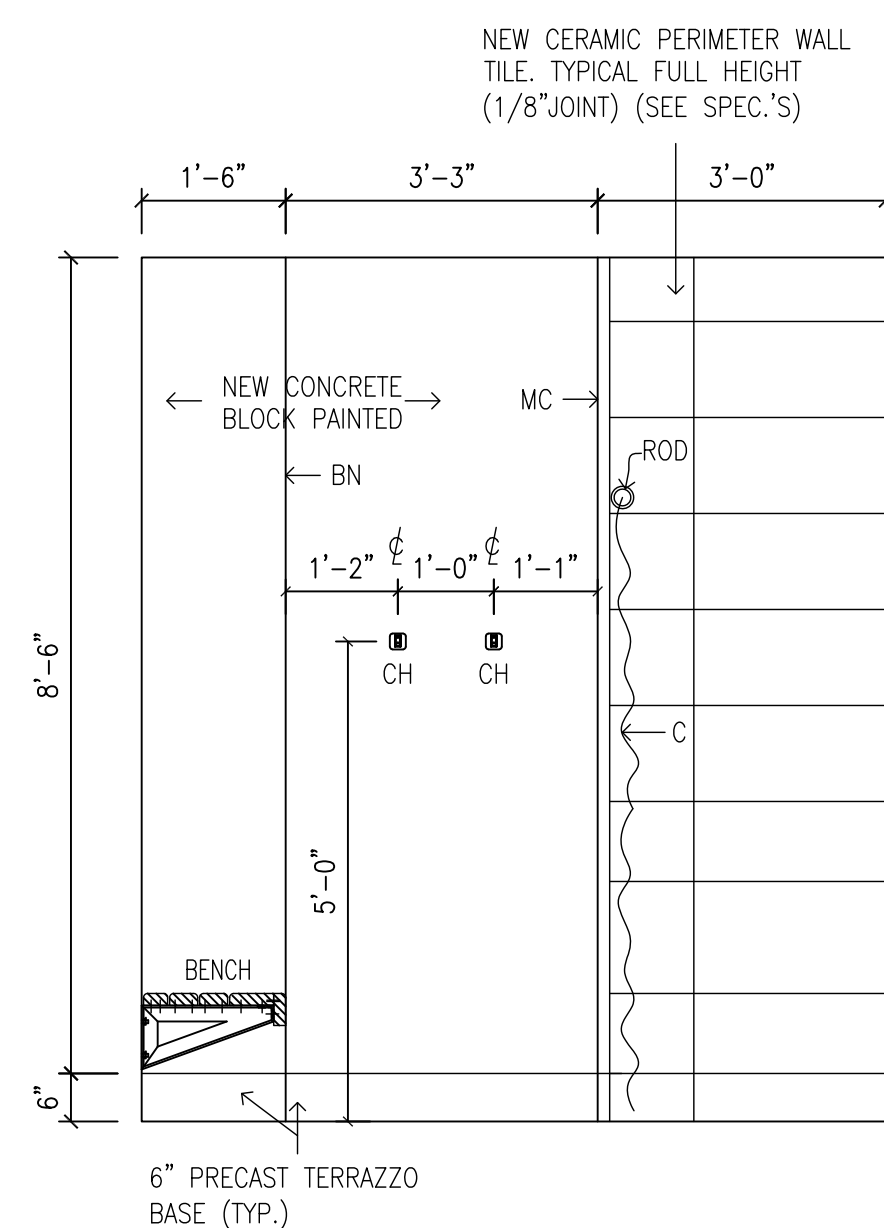
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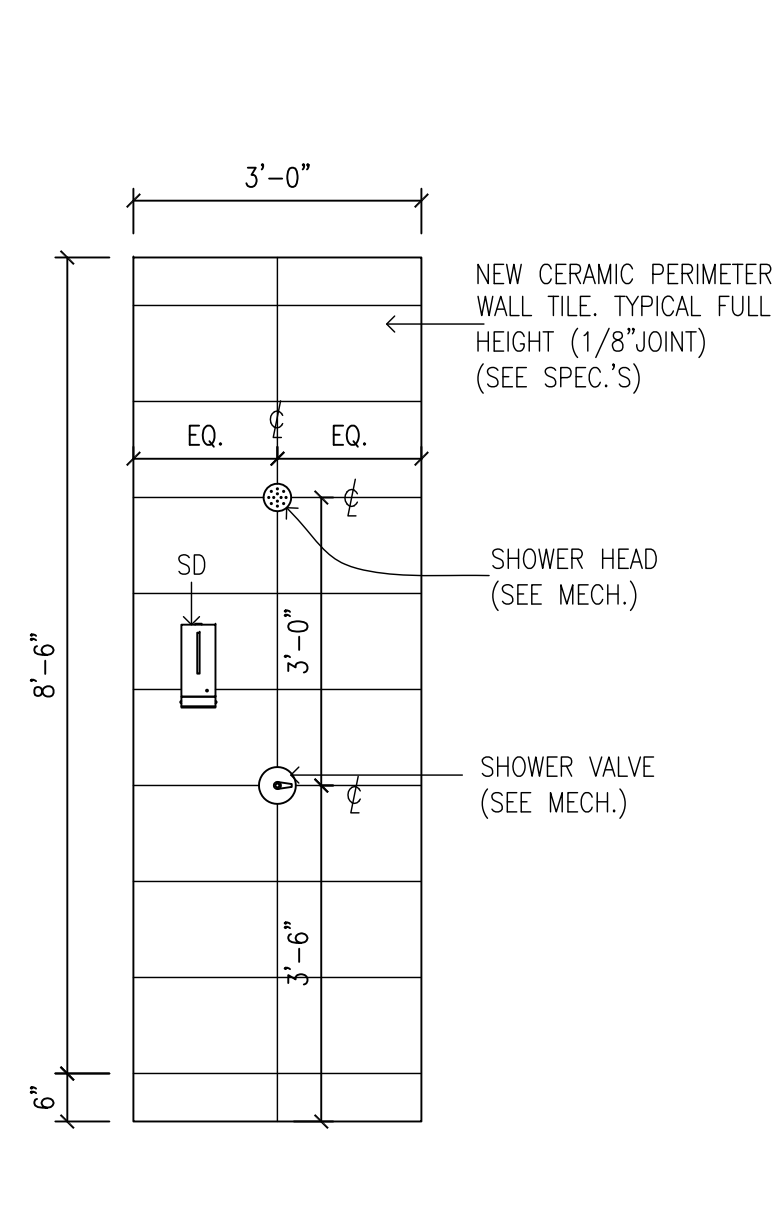
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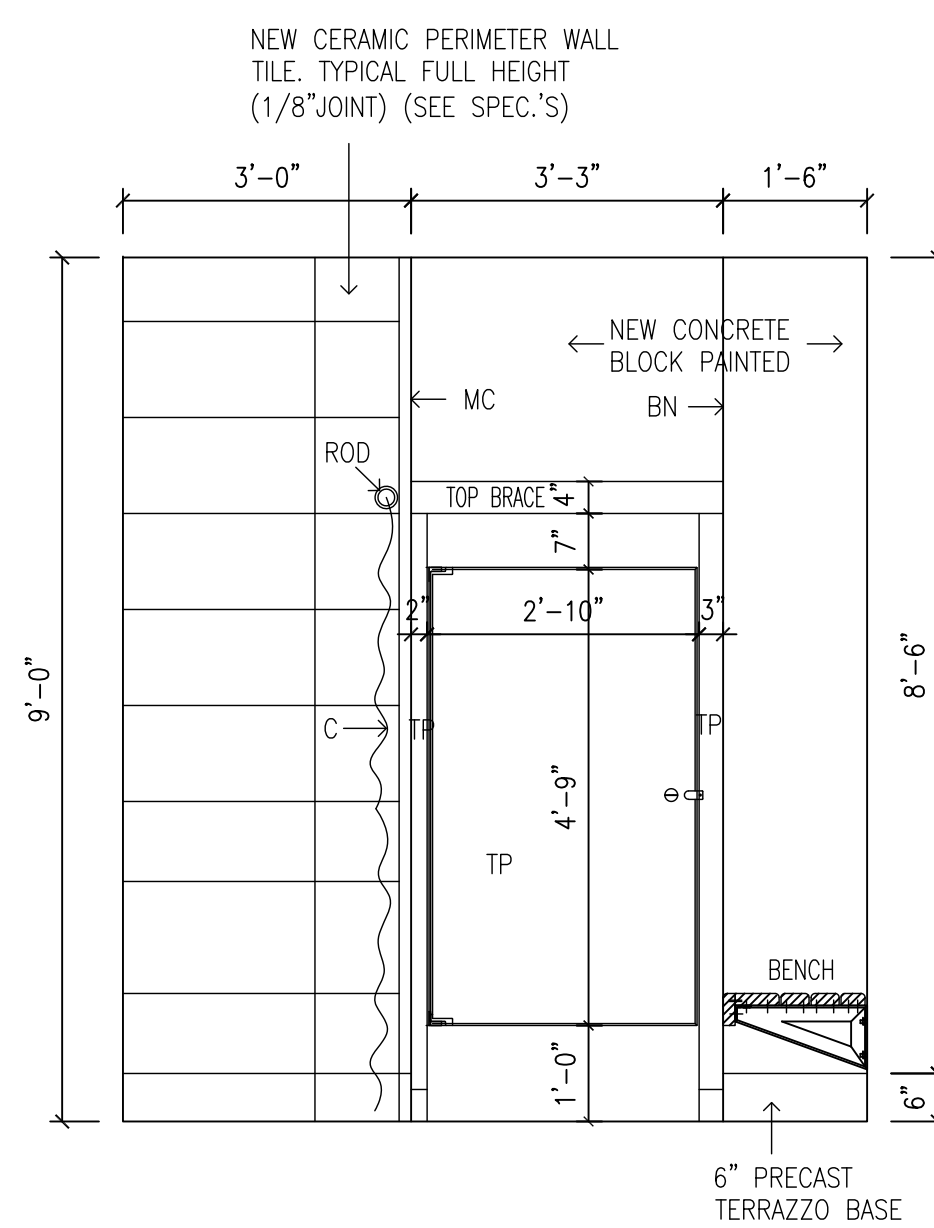
1031K "A"



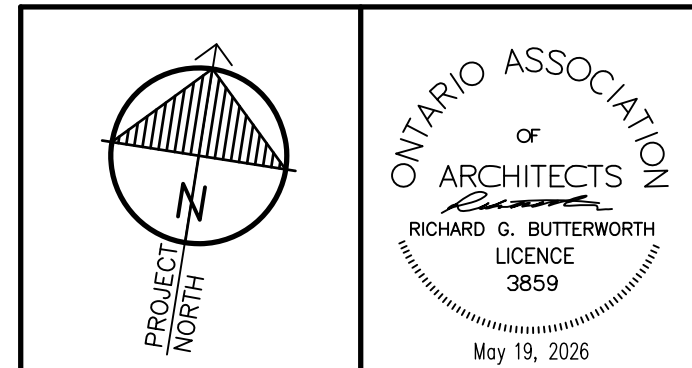
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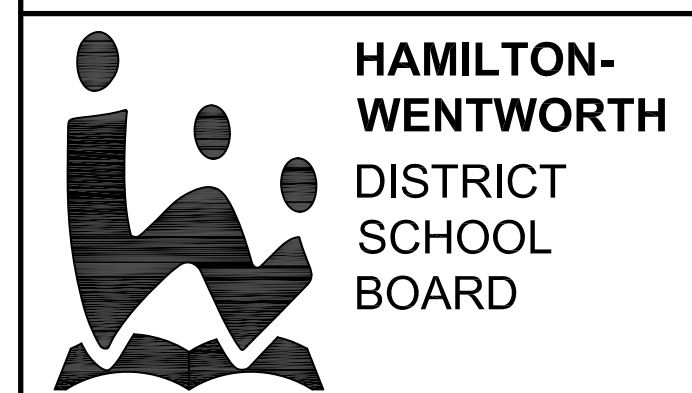
1031K "C"



1031K "D"



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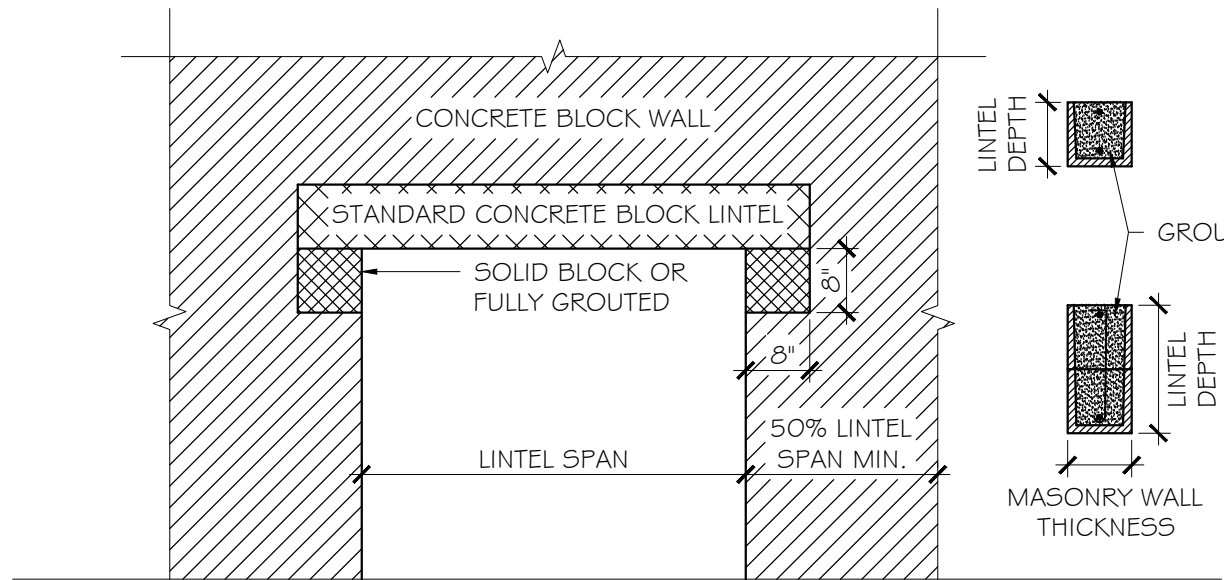
RICHARD G. BUTTERWORTH
ARCHITECT
ARCHITECTURE
INTERIORS
URBAN PLANNING
Ancaster Ontario

WESTDALE SECONDARY SCHOOL - PHASE 2
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
700 MAIN STREET WEST
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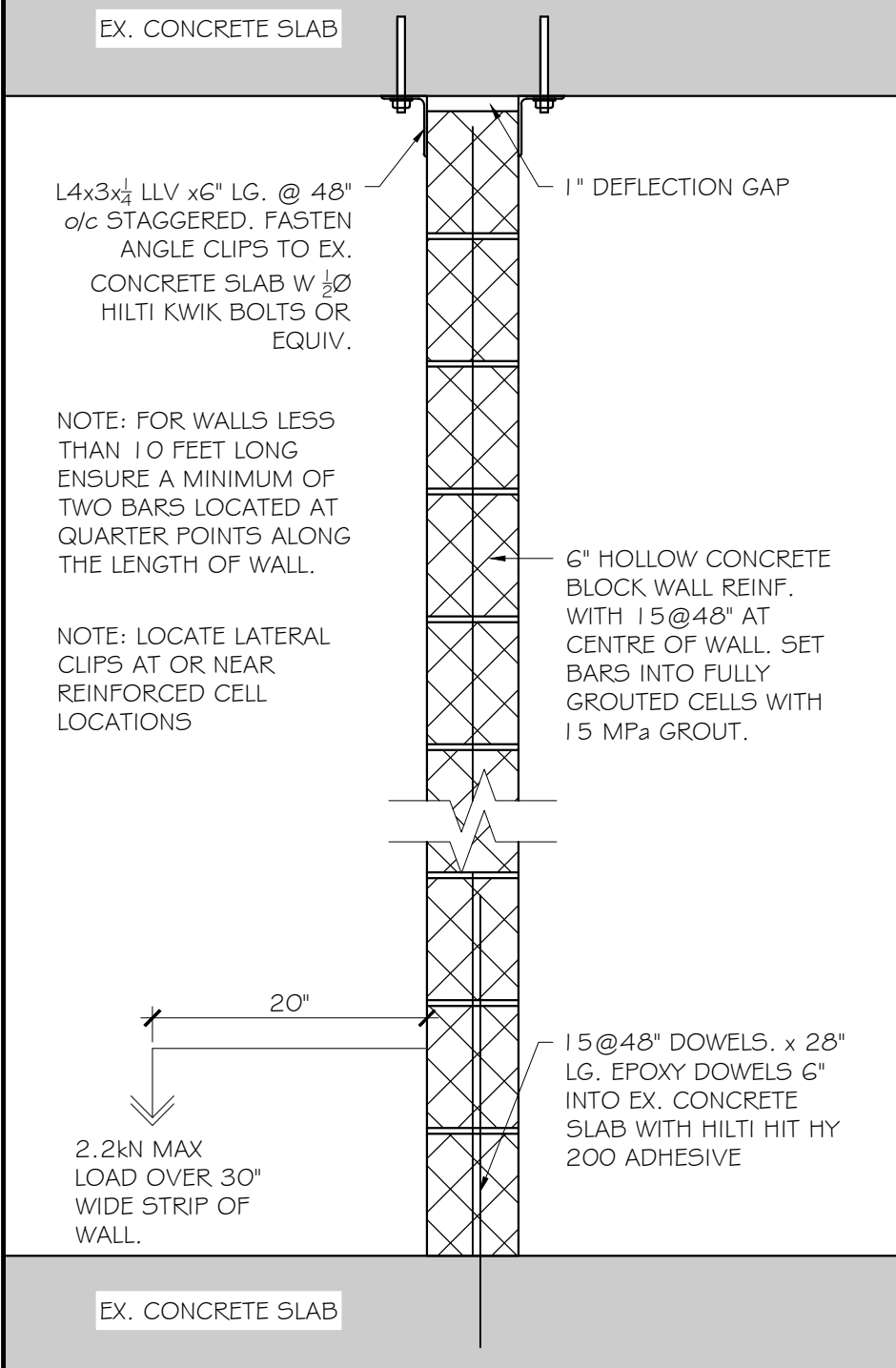
ROOM ELEVATIONS
FIRST FLOOR

DRAWN BY:	CHECKED BY:
MS	RGB
DATE:	JOB No.:
MAY 2026	24-107a
SCALE:	SHEET No.:
1/2"=1'-0"	A4.05

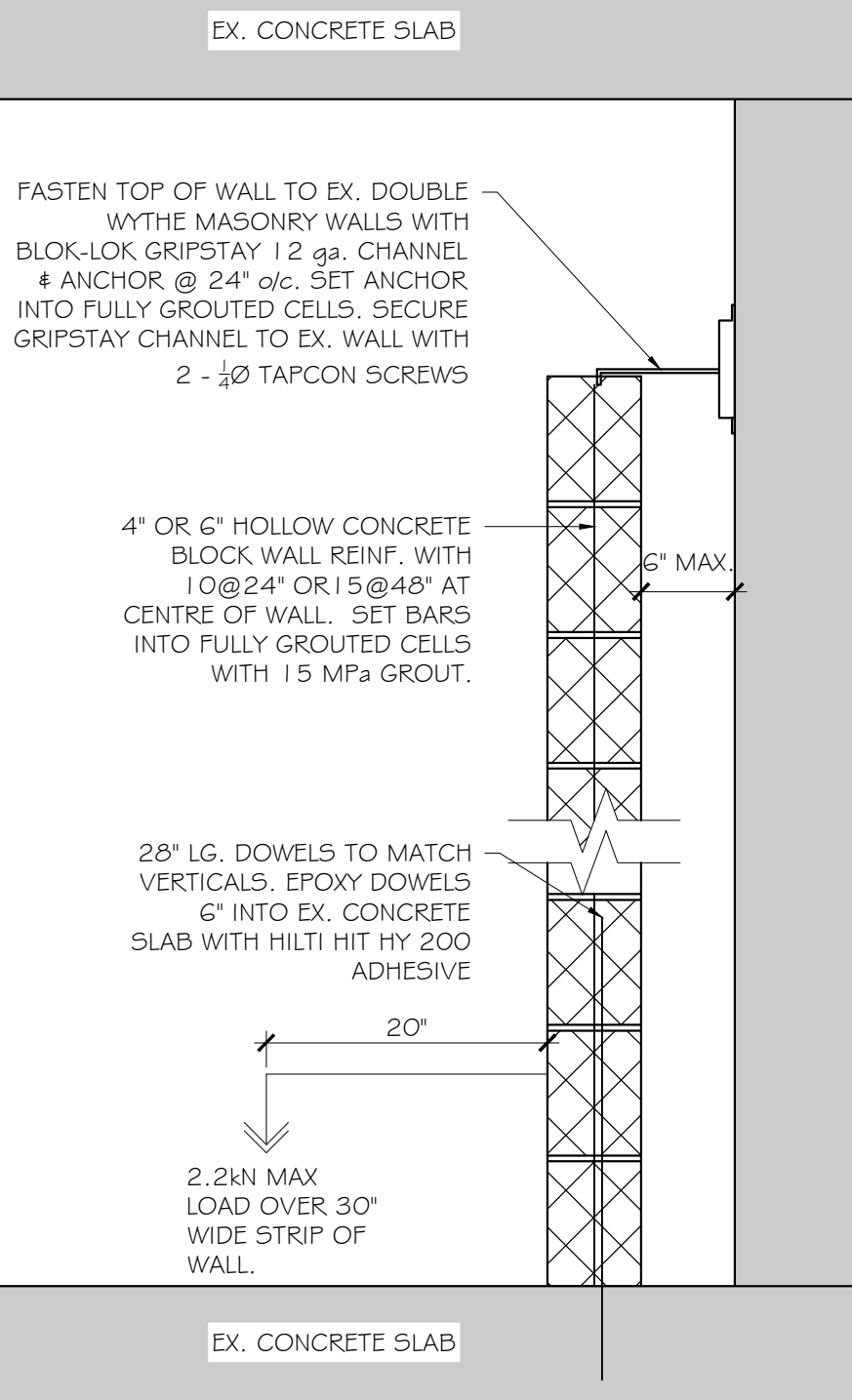
MASONRY WALL THICKNESS	LINTEL SPAN	LINTEL DEPTH	REINFORCEMENT [TOP & BOTTOM]
4" BLOCK	LESS THAN 48"	8"	1 - 10M
	48" TO 70"	N/A	N/A
	70" TO 90"	N/A	N/A
6" BLOCK	LESS THAN 48"	8"	1 - 10M
	48" TO 70"	8"	1 - 10M
	70" TO 90"	16"	1 - 10M + 1 - 10M @ 8" J



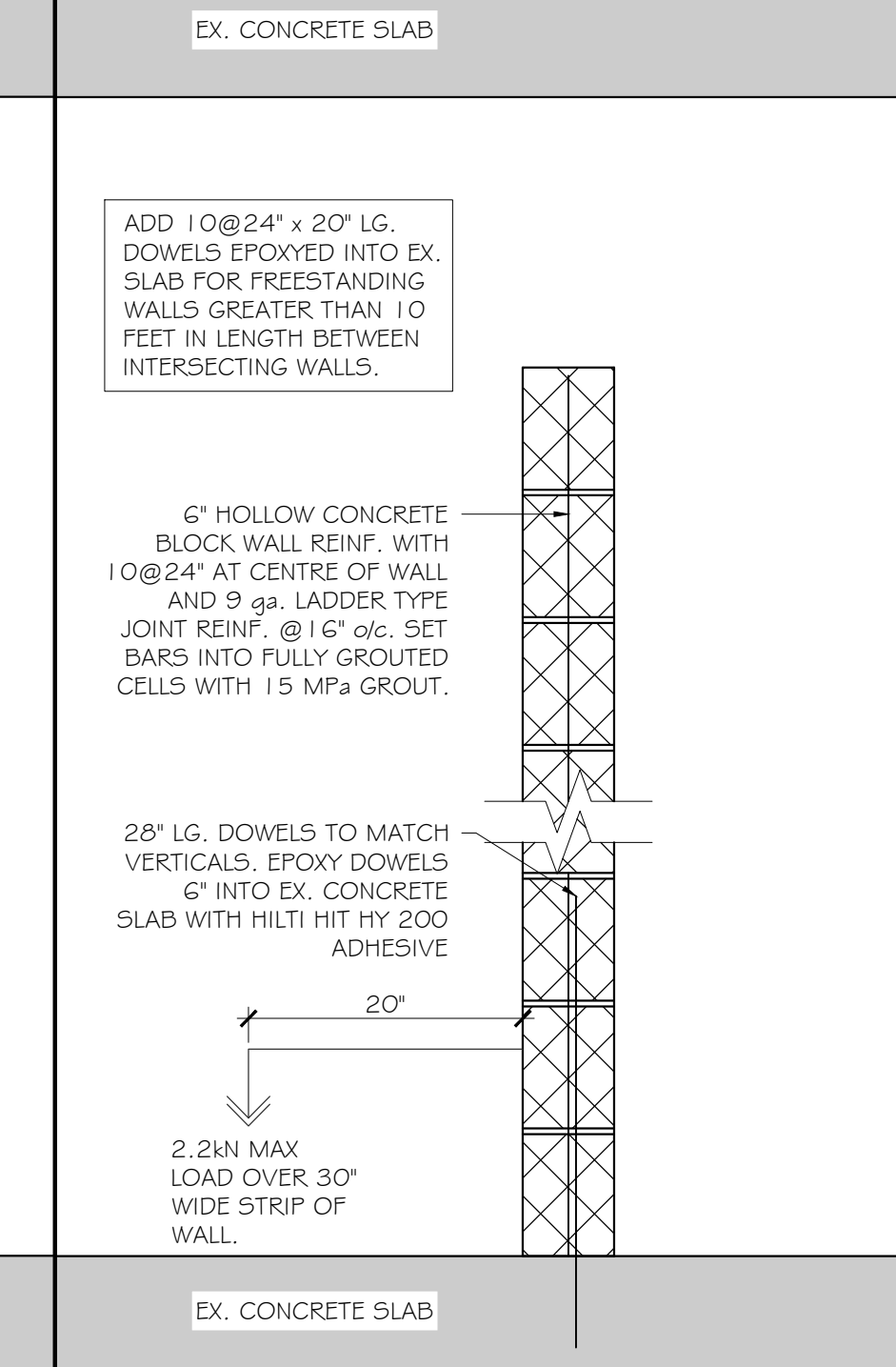
- NOTES:
- STANDARD LINTELS ARE NOT APPLICABLE WHERE WALL END, CORNER, OR MOVEMENT JOINT IS LOCATED CLOSER THAN 50% OF LINTEL SPAN TO THE FACE OF THE OPENING.
 - LINTEL BLOCKS MUST BE FILLED WITH 20 MPa GROUT. FILLING LINTELS WITH MORTAR IS NOT PERMITTED.



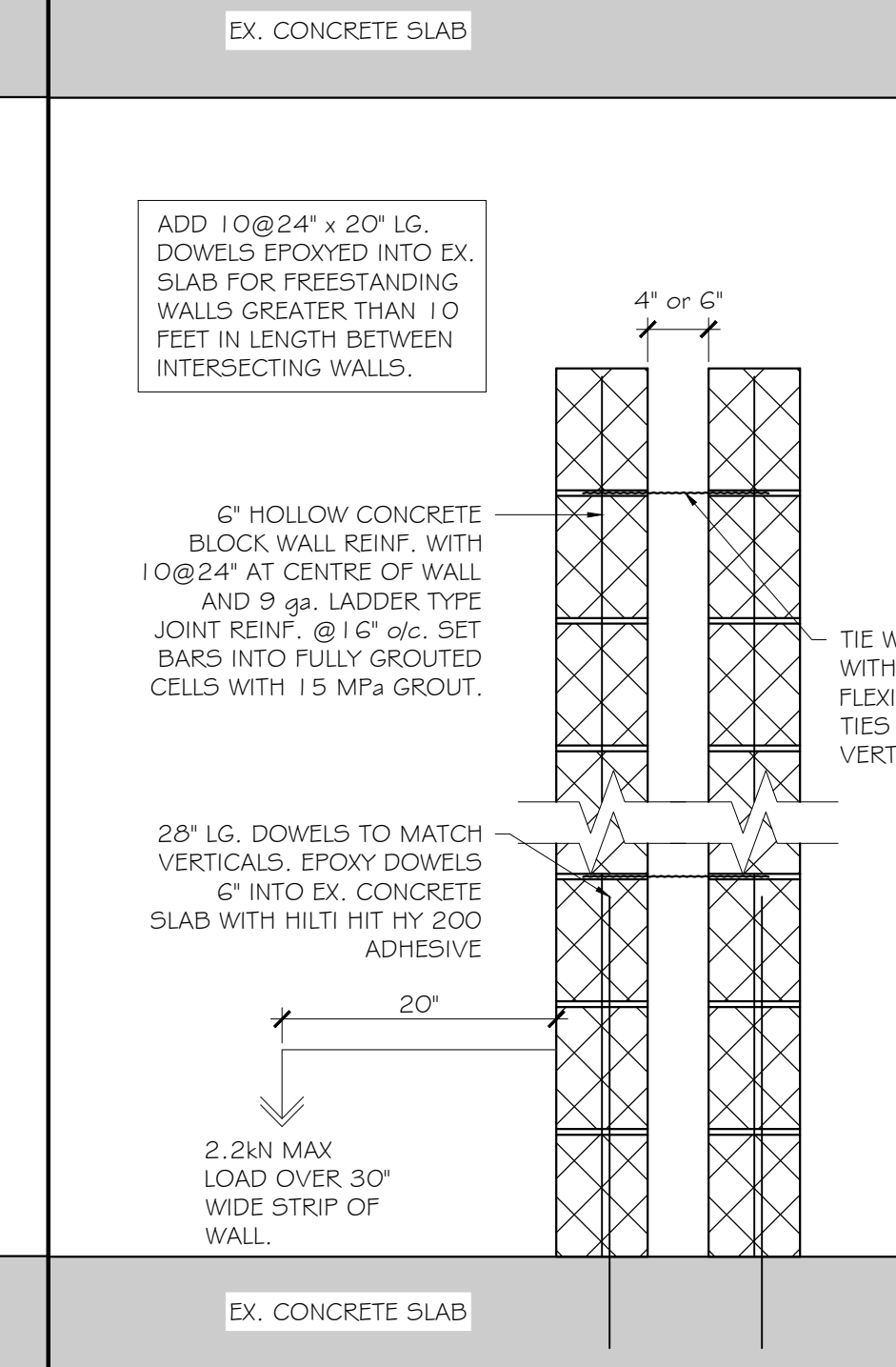
2 SECTION @ 12" WALLS
S1.01 1/2"=1'-0"



3 SECTION @ TIED BACK WALLS
S1.01 1/2"=1'-0"



4 SECTION @ 6" FREESTANDING WALL
S1.01 1/2"=1'-0"



5 SECTION @ BACK-TO-BACK FREESTANDING WALLS
S1.01 1/2"=1'-0"

1 STANDARD MASONRY LINTELS
S1.01 1/2"=1'-0"

GENERAL NOTES:

- ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ONTARIO BUILDING CODE 2024 EDITION, ALL APPLICABLE REGULATIONS, REFERENCE STANDARDS, AND GOOD CONSTRUCTION PRACTICE.
- ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE.
- DO NOT SCALE THE DRAWINGS.
- LOCATIONS OF ALL STRUCTURAL ELEMENTS TO BE SITE VERIFIED BY THE CONTRACTOR. REPORT ANY INCONSISTENCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- DESIGN BASED ON ARCHITECTURAL DRAWINGS PREPARED BY RICHARD G. BUTTERWORTH ARCHITECT INC. STRUCTURAL DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS. REPORT ANY INCONSISTENCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- CONTRACTOR TO PROVIDE TEMPORARY SUPPORT (SHORING) OF ANY STRUCTURE SUPPORTED ON WALLS TO BE REMOVED. ALL TEMPORARY BRACING AND SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL ENSURE THAT THE EXISTING STRUCTURE IS NOT OVERLOADED IN ANY WAY DURING CONSTRUCTION OR DEMOLITION WORK. CONSTRUCTION LOADING SHALL NOT EXCEED DESIGN LOADING.
- THE CONTRACTOR SHALL KEEP THE SITE CLEAN AND FREE OF ALL DEBRIS DURING AND AFTER COMPLETION OF THE WORK.
- THE STEEL FABRICATOR SHALL BE CERTIFIED TO CSA W47.1 DIV. 1 OR 2.
- ALL STRUCTURAL STEEL SHALL BE CLEANED OF ALL LOOSE MILL SCALE, LOOSE RUST, WELD SLAG AND FLUX DEPOSITS, OIL, GREASE, DIRT, OTHER FOREIGN MATTER, AND EXCESSIVE WELD SPATTER PRIOR TO APPLICATION OF THE COATING. STRUCTURAL STEEL TO BE SHOP PRIMED WITH ONE COAT IN CONFORMANCE WITH CISCC/FMA STANDARD 1-73a.
- MASONRY SHALL CONFORM TO CANCSA S304.1 'DESIGN OF MASONRY STRUCTURES' AND CANCSA A37.1 'MASONRY CONSTRUCTION FOR BUILDINGS'.
- PROVIDE STANDARD LINTELS OVER ALL OPENINGS IN MASONRY WALL PARTITIONS AS SHOWN ON TYPICAL DETAILS. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR OPENINGS THROUGH NEW OR EXISTING WALLS THAT ARE NOT NECESSARILY CALLED OUT ON THE STRUCTURAL DRAWINGS.
- UNLESS NOTED OTHERWISE, MASONRY WALLS SHALL BE INTERLOCKED IN RUNNING BOND AT INTERSECTIONS AND CORNERS.

GENERAL DESIGN AND MATERIAL DATA:

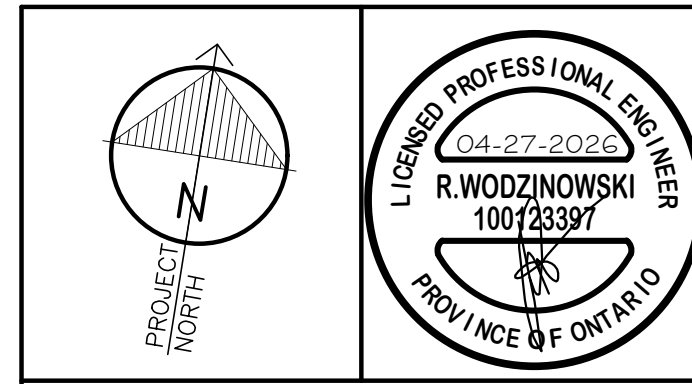
- STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH CANCSA G40.2 1M WIDE FLANGE SECTIONS 350W. HSS SECTIONS ARE ASTM A500 GRADE C ($f_y=345\text{MPa}$). ALL OTHER STEEL 300W.
- ANCHOR RODS IN ACCORDANCE WITH ASTM F1554 GRADE 36 ($f_y=248\text{MPa}$).
- ALL STEEL CONNECTIONS SHALL BE WELDED UNLESS NOTED OTHERWISE. ALL WELDING IN ACCORDANCE WITH CSA W59. ELECTRODE CLASSIFICATION E49xx.
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH LATEST EDITIONS OF STANDARDS CSA A23.1 AND CSA A23.3.
- MINIMUM CONCRETE SPECIFIED COMPRESSIVE STRENGTH $f_c = 25\text{MPa}$.
- STRUCTURAL MASONRY:
 - HOLLOW BLOCK: CSA A165.1 - H/15/x
 - SOLID BLOCK: CSA A165.1 - S/15/x
 - GROUT: CSA A179 - COURSE GROUT FOR WALLS 6" AND THICKER - FINE GROUT FOR ALL 4" BLOCK WALLS
 - MORTAR: CSA A179 TYPE 'S' MORTAR
 - MASONRY COMPRESSIVE STRENGTH f_m , IS AS FOLLOWS:
 - HOLLOW BLOCK - 9.8 MPa
 - GROUTED HOLLOW BLOCK - 7.5 MPa
 - FLEXURAL TENSILE BOND STRENGTH AT MORTAR JOINTS IS AS FOLLOWS:
 - CONCRETE BLOCK - 0.45 MPa
 - GROUTED HOLLOW BLOCK - 0.70 MPa
- REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CANCSA G30.1 8M GRADE 400R/400W.

DRAWING ABBREVIATIONS:

AF	FACTORED AXIAL LOAD IN kN POSITIVE VALUES INDICATE TENSION FORCE AND NEGATIVE VALUES INDICATE COMPRESSION FORCE	ldc	COMPRESSION DEVELOPMENT LENGTH
ALT. ARCH.	ALTERNATE ARCHITECTURAL	ldt	TENSION DEVELOPMENT LENGTH
BOTT. BEW. BM. BP	BOTTOM BOTTOM EACH WAY BEAM BASEPLATE	L	STEEL ANGLE
CANT. c/c	CANTILEVER CENTRE-TO-CENTRE	LG	LONG
CL.	CLEAR	LL	LIVE LOAD
COL.	COLUMN	LLH	LONG LEG HORIZONTAL
CONC.	CONCRETE	LLV	LONG LEG VERTICAL
CONT.	CONTINUOUS	MAX.	MAXIMUM
DIA.	DIAMETER	Mf	FACTORED MOMENT IN kN-m
DIM.	DIMENSION	MIN.	MINIMUM
DL	DEAD LOAD	NTS	NOT TO SCALE
DN	DOWN	OBC	ONTARIO BUILDING CODE
DO	DITTO	c/c	ON CENTRE
DP	DEEP	OPNG	OPENING
DWG	DRAWING	Pf	FACTORED POINT LOAD IN kN PLATE
EA	EACH	REINF.	REINFORCEMENT
EF	EACH FACE	REM.	REMOVE
EL.	ELEVATION	SC	SLIP CRITICAL
EMBED.	EMBEDMENT	SDF	STEP DOWN FOOTING
EQ.	EQUAL	SDL	SUPERIMPOSED DEAD LOAD
EX.	EXISTING	SIM.	SIMILAR
FIN.	FINISHED	SLS	SERVICEABILITY LIMIT STATE
FL.	FLOOR	SOG	SLAB ON GRADE
FTG	FOOTING	SPF	SPRUCE PINE FIR
f _c	CONCRETE COMPRESSIVE STRENGTH	STR.	STIRRUP
f _y	TENSILE YIELD STRENGTH	STIFF.	STIFFENER
GALV.	GALVANIZED	t	THICKNESS
GL	GRIDLINE	TEW	TOP EACH WAY
h	HEIGHT	TJ	TIE JOIST
HOR.	HORIZONTAL	TOP	TOP OF FOOTING
HDG	HOT DIPPEP GALVANIZED	TYP.	TYPICAL
HEF	HORIZONTAL EACH FACE	ULS	ULTIMATE LIMIT STATE
HSS	HOLLOW STRUCTURAL SECTION	U/S	UNDERSIDE
		UN	UNLESS NOTED
		VB	VERTICAL BRACE
		VEF	VERTICAL EACH FACE
		VERT.	VERTICAL
		VxB	VERTICAL X BRACE
		Vf	FACTORED SHEAR IN kN

SHOP DRAWINGS REVIEW

REVIEW OF SHOP DRAWINGS IS FOR GENERAL CONFORMITY WITH STRUCTURAL CONTRACT DOCUMENTS AND SPECIFICATIONS ONLY. ANY COMMENTS MADE ON THE SUBMITTED SHOP DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE STRUCTURAL CONTRACT DOCUMENTS AND SPECIFICATIONS NOR DO THEY AUTHORIZE CHANGES TO THE CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL QUANTITIES, FIELD MEASUREMENTS, DETAIL DIMENSIONS, COORDINATION WITH ALL TRADES, FABRICATION PROCESSES AND PROCEDURES, METHODS, MEANS, AND SEQUENCE OF CONSTRUCTION, AND THE PERFORMANCE OF ALL WORK IN ACCORDANCE WITH STANDARD INDUSTRY PRACTICE IN A SAFE MANNER. THE REVIEW OF SHOP DRAWINGS DOES NOT IMPLY ANY CHANGE TO NOR DIMINISH THE RESPONSIBILITIES OF OTHER CONSULTANTS IN THE CARRYING OUT OF THEIR WORK.



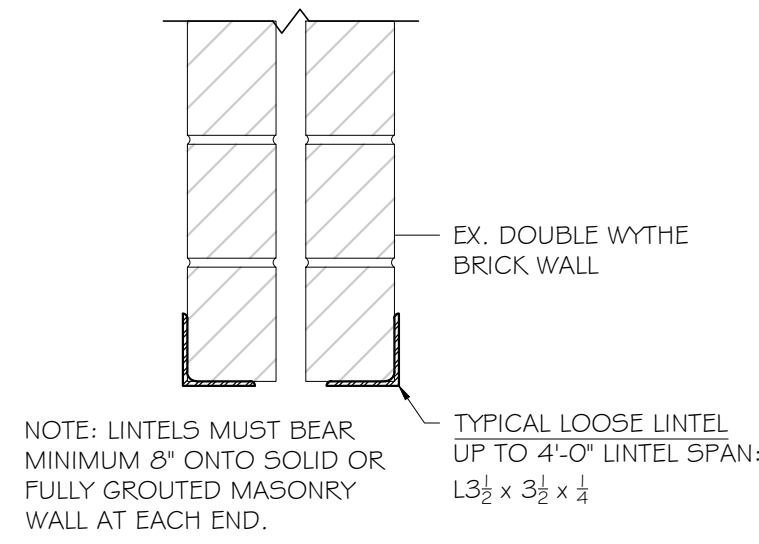
1.	ISSUED FOR TENDER	APR. 27, 2026
No.	REVISIONS	DATE

WESTDALE SECONDARY SCHOOL PHASE 2
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
700 MAIN STREET WEST
HAMILTON, ONTARIO

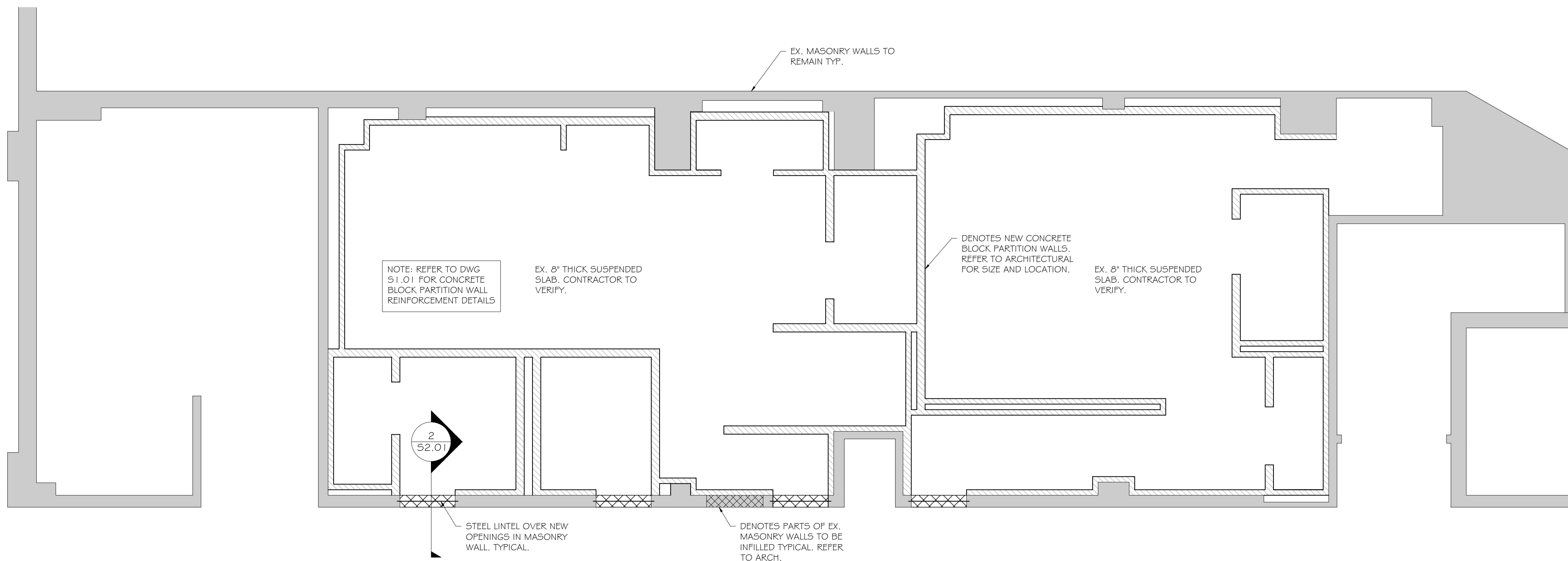
GENERAL NOTES AND PROJECT DETAILS

DRAWN BY:	CHECKED BY:
RW	RW
DATE:	JOB No.:
APRIL 2026	S24062
SCALE:	SHEET No.:
AS NOTED	S1.01

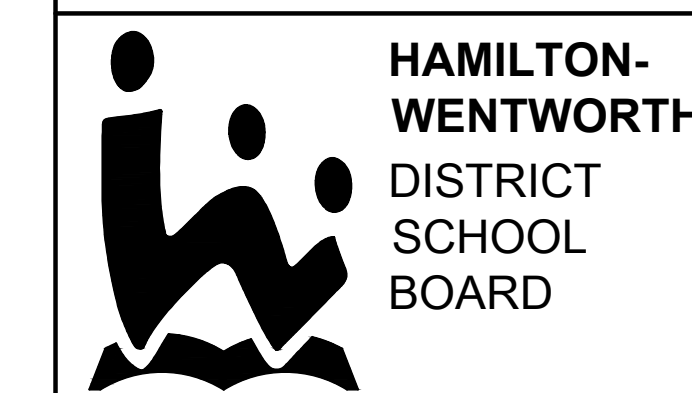
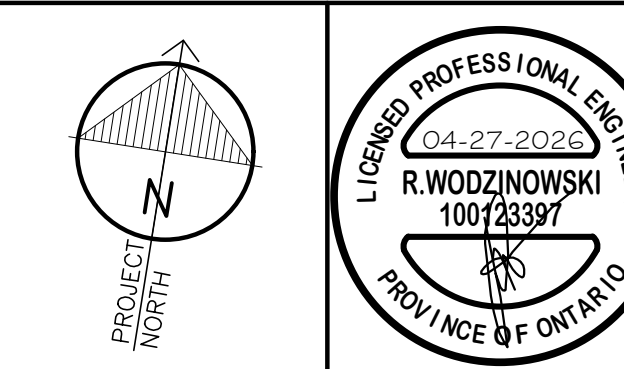
NOT SCALE



2 LINTEL @ DOUBLE WYTHE BRICK WALL
1-1/2"=1'-0"



1 PARTIAL FIRST FLOOR PLAN
1/4"=1'-0"



1.	ISSUED FOR TENDER	APR. 27, 2026
No.	REVISIONS	DATE

WESTDALE SECONDARY SCHOOL PHASE 2
HAMILTON – WENTWORTH DISTRICT SCHOOL BOARD
 700 MAIN STREET WEST
 HAMILTON, ONTARIO

PARTIAL FIRST FLOOR PLAN – STRUCTURAL

DRAWN BY:	CHECKED BY:
RW	RW
DATE:	JOB No.:
APRIL 2026	S24062
SCALE:	SHEET No.:
1/4"=1'-0"	S2.01

ELECTRICAL NOTES AND SPECIFICATIONS

CODES AND STANDARDS

1. THE ELECTRICAL AND FIRE ALARM WORK SHALL COMPLY WITH THE LATEST EDITIONS OF THE ELECTRICAL SAFETY AUTHORITY, CANADIAN ELECTRICAL CODE, ONTARIO BUILDING CODE, CSA STANDARDS, ULC, NFPA, AND OTHER APPLICABLE CODES AS REQUIRED. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT (OHSA).

CONTRACT DOCUMENTS

1. THE DRAWINGS ARE DIAGRAMMATIC PERFORMANCE DRAWINGS ONLY, INTENDED TO CONVEY THE SCOPE OF WORK AND INDICATE THE GENERAL ARRANGEMENT AND APPROXIMATE LOCATION OF ELECTRICAL EQUIPMENT, SENSORS, SWITCHES, DEVICES AND FIXTURES. THE DRAWINGS DO NOT INTEND TO SHOW ARCHITECTURAL, INTERIOR DESIGN, MECHANICAL, STRUCTURAL OR BASE BUILDING DETAILS. BE RESPONSIBLE FOR A THOROUGH KNOWLEDGE OF SAME BEFORE PROCEEDING WITH THE WORK.
2. COOPERATE AND COORDINATE WITH OTHER TRADES IN LAYING OUT OF WORK SO AS NOT TO CONFLICT WITH THE WORK OF OTHER TRADES. CARRY OUT WORK PROMPTLY AS PER CONSTRUCTION SCHEDULE AND COORDINATE WITH WORK OF OTHER TRADES.
3. MAKE, AT NO ADDITIONAL COST, ANY CHANGES OR ADDITIONS TO MATERIALS AND EQUIPMENT NECESSARY TO ACCOMMODATE STRUCTURAL CONDITIONS (OFFSETS AROUND BEAMS, COLUMN, ETC.)

MATERIALS AND EQUIPMENT

1. ALL SUPPLIED EQUIPMENT AND MATERIALS SHALL BE NEW, UNUSED, AND FREE FROM DEFECTS, CONFORMING TO ALL REQUIRED QUALITY APPROVALS. THIS INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, CERTIFICATIONS FROM CSA, ULC, AND COMPLIANCE WITH ALL APPLICABLE STANDARDS AND REGULATIONS. ANY ALTERNATE EQUIPMENT OR MATERIALS PROPOSED MUST ALSO MEET THE SAME STANDARDS AND CERTIFICATIONS.

LOCATION OF OUTLETS

1. REFER TO ARCHITECTURAL ELEVATIONS AND PLANS FOR THE EXACT LOCATIONS OF LIGHTING, MILLWORK, FURNITURE, ETC. REVISE THE LOCATION OF OUTLETS TO SUIT THE ARCHITECTURAL PLANS AND EXISTING CONDITIONS. THE MINIMUM ELEVATION OF RECEPTACLES FROM THE FINISHED FLOOR SHALL BE 16 INCHES, UNLESS INSTALLED OVER COUNTERTOPS OR OTHERWISE NOTED.

WORK IN RENOVATED AREAS

1. WHEN DELETING AND/OR MAKING SAFE EXISTING ELECTRICAL WORK, ENSURE THAT IT INCLUDES REMOVAL OF ALL DISCONNECTED WIRING BACK TO THE ASSOCIATED PANELBOARD.
2. DISCONNECT AND REMOVE ALL EXISTING LUMINAIRES, DEVICES, OUTLETS, AND RELATED COMPONENTS THAT ARE NOT DESIGNATED FOR REUSE. REMOVED ITEMS SHALL BE DISPOSED OF OFF-SITE IN A SAFE AND ENVIRONMENTALLY APPROVED METHOD. CUT BACK AND CAP UNUSED RACEWAY THAT ARE CONCEALED AND CANNOT BE REMOVED AND REMOVE UNUSED WIRING BACK TO PANELBOARD. REMOVE ALL REDUNDANT COMMUNICATIONS CABLES WHERE FOUND.
3. ENSURE THAT ALL EXISTING EQUIPMENT WHICH IS TO BE REUSED AND/OR RELOCATED IS THOROUGHLY INSPECTED AND REFURBISHED TO ENSURE CORRECT OPERATION WHEN PUT BACK INTO SERVICE AND TO MEET ELECTRICAL SAFETY AUTHORITY AND CANADIAN ELECTRICAL CODE (CEC).
4. ALL EXISTING ELECTRICAL EQUIPMENT WHICH IS NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF, OFF SITE.
5. WHERE EXISTING OUTLET BOXES OR CONDUITS CANNOT BE REMOVED FROM THE FLOOR, PLUG AND CAP EXISTING HOLES FLUSH WITH FLOOR USING APPROVED FITTINGS.
6. BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BASE BUILDING INCURRED BY WORK OF THIS DIVISION, OR REPAIR TO THE SATISFACTION OF THE CONSULTANT.
7. CARRY OUT THE WORK WITH A MINIMUM OF NOISE, DUST AND DISTURBANCE.
8. PROVIDE ALL REQUIRED TOOLS TO COMPLETE THE WORK. OBTAIN PERMISSION FOR THE USE OF EXISTING ELECTRICAL OUTLETS, ELEVATOR, WASHROOMS OR EXISTING SYSTEMS.
9. PERFORM DAILY CLEANUP AND DISPOSE OF DEBRIS PROPERLY. UPON COMPLETION, REMOVE ALL TOOLS, SURPLUS, AND WASTE MATERIALS, LEAVING THE PREMISES CLEAN.

WIRING FOR OTHER TRADES

1. ALL STARTERS AND LOW VOLTAGE CONTROL WIRING WILL BE SUPPLIED BY OTHER TRADES. THIS ELECTRICAL DIVISION SHALL RECEIVE, INSTALL AND WIRE ALL STARTERS. REVIEW SHOP DRAWINGS BEFORE COMMENCING WORK AND VERIFY POWER, VOLTAGE AND BREAKERS REQUIREMENTS.
2. SUPPLY, INSTALL AND WIRE ALL REQUIRED DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT. CONFIRM ELECTRICAL REQUIREMENTS AND EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT AND DEVICES WITH OTHER DIVISIONS PRIOR TO INSTALLATION. COORDINATE WITH MECHANICAL AND ARCHITECTURAL DRAWINGS, AS REQUIRED.

FIRE SEAL

1. MAINTAIN THE INTEGRITY OF ALL FIRE SEPARATIONS. PROVIDE ALL NECESSARY CSA AND ULC LISTED PRODUCTS WHICH ARE REQUIRED TO GO AROUND AND IN CABLE TROUGH FIRE RATED ASSEMBLIES, TO RETAIN THE FIRE RATING OF THESE ASSEMBLIES.
2. WHERE CABLES OR CONDUITS PASS THROUGH FLOORS AND FIRE RATED WALLS, PACK SPACE BETWEEN WIRING AND SLEEVE FULL WITH FIREPROOFING, AND SEAL WITH CANSTRUT ELASTA-SEAL OR APPROVED CAULKING COMPOUND WITH FIRE RESISTANCE RATING EQUAL TO THE WALL/FLOOR BEING PENETRATED.
3. PACK ALL SLEEVES, CONDUITS AND AROUND THE CONDUITS 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.

EMERGENCY LIGHTING AND TESTING NOTE

1. ELECTRICAL CONTRACTOR SHALL PROVIDE DEDICATED CIRCUIT BREAKERS IN POWER PANELS FOR THE EMERGENCY LIGHTS AND EXIT SIGNS. TEST ALL EMERGENCY LIGHTS AND PROVIDE A SIGNED LETTER CERTIFYING THAT 10 LUX IS MAINTAINED AND ALL EMERGENCY LAMPS WERE ON 100% FOR A DURATION OF 30 MINUTES TIMED AFTER EACH CIRCUIT BREAKER IS TURNED OFF.

ALTERATIONS AND RELOCATIONS

1. THE ARCHITECT AND/OR ENGINEER RESERVES THE RIGHT TO ALTER THE LOCATION OF ANY EQUIPMENT, DEVICES, CONDUITS, OR WIRING DURING CONSTRUCTION AT NO EXTRA COST, PROVIDED THAT THE REQUEST IS MADE BEFORE THE COMMENCEMENT OF ROUGH-IN WORK AND THE REQUESTED CHANGES ARE WITHIN A 3-METER RADIUS. THE REQUESTED REVISIONS AND ADJUSTMENTS SHALL BE INTEGRATED INTO THE CONSTRUCTION PROCESS WITHOUT IMPACTING THE OVERALL PROJECT TIMELINE OR BUDGET. ANY REQUEST FOR ALTERATION OR RELOCATION WILL BE COMMUNICATED IN WRITING TO THE CONSTRUCTION TEAM SUPERVISOR.
2. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES TO AVOID ANY INTERFERENCES, CONFLICTS OR DISRUPTIONS IN THE CONSTRUCTION SCHEDULE.

GENERAL ELECTRICAL SPECIFICATIONS

1. OBTAIN AND PAY FOR PERMIT REQUIRED BY ESA AND LOCAL AUTHORITIES FOR THIS WORK. SUBMIT FINAL INSPECTION CERTIFICATES.
2. CARRY OUT ALL WORK IN ACCORDANCE WITH OEC (ONTARIO ELECTRICAL CODE) REGULATIONS AND ESA INSPECTION REQUIREMENTS.
3. SUBMIT SHOP DRAWINGS FOR LIGHTING FIXTURES, EXIT LIGHTS, EMERGENCY LIGHTS, AND BATTERY UNITS AND NEW PANELS TO CONSULTANT FOR REVIEW.
4. MATERIALS DISCONNECTED AND REMOVED UNDER THIS CONTRACT THAT ARE NOT SCHEDULED FOR REUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COORDINATION WITH THE GENERAL CONTRACTOR BEFORE COMPLETION OF THE WORK.
5. PROVIDE LAMACOID LABELS (3-PLY) WHITE LETTERED ON BLACK BACKGROUND – 1/4" HIGH LETTERING ON ELECTRICAL EQUIPMENTS SUPPLIED, MOUNTED AND/OR CONNECTED BY THIS CONTRACT. PROVIDE STICKER AT EACH RECEPTACLE INDICATING POWER PANEL NAME AND CIRCUIT BREAKER NUMBER.
6. THOROUGHLY CLEAN ALL ELECTRICAL EQUIPMENT, INCLUDING LUMINAIRES, WIRING DEVICES, PANELBOARDS, DISTRIBUTION ASSEMBLIES, AND ASSOCIATED COMPONENTS, THROUGHOUT CONSTRUCTION AND AT COMPLETION OF THE WORK.
7. COORDINATE WITH ALL TRADES TO ENSURE THAT ALL EQUIPMENT IS LOCATED AND INSTALLED IN PROPER RELATION TO ADJACENT APPARATUS, DUCTWORK, PIPING, STRUCTURAL ELEMENTS, AND ARCHITECTURAL FINISHES. REVIEW AND CONFIRM CLEARANCES, ACCESS REQUIREMENTS, AND SPATIAL COMPATIBILITY PRIOR TO INSTALLATION.
8. GUARANTEE ALL MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER/CONSULTANT. PROVIDE WRITTEN GUARANTEE. BOXES FOR OUTDOOR USE SHALL BE GALVANIZED CAST FERROUS AND EQUIPPED WITH NEOPRENE GASKET.
9. WIRING SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS UNLESS OTHERWISE APPROVED.
10. DEFINITIONS: THE FOLLOWING ARE DEFINITIONS OF WORDS FOUND IN THIS SPECIFICATIONS AND ON ASSOCIATED DRAWINGS.
 - A. "CONCEALED" – HIDDEN FROM NORMAL SIGHT IN FURRED SPACES, SHAFTS, CEILING SPACES, WALLS, UNDER FLOOR AND PARTITIONS.
 - B. "EXPOSED" – ALL ELECTRICAL WORK VISIBLE TO BUILDING OCCUPANTS.
 - C. "PROVIDE" – (AND ALL TENSES OF PROVIDE) SUPPLY, INSTALL, WIRE AND CONNECT COMPLETE.
 - D. "INSTALL" – (AND ALL TENSES OF INSTALL) INSTALL WIRE AND CONNECT COMPLETE, PRODUCTS AND SERVICES SPECIFIED.
 - E. "SUPPLY" – SUPPLY ONLY.
 - F. "OR APPROVED EQUAL" – MATERIAL OR EQUIPMENT PROPOSED BY CONTRACTOR, IN LIEU OF THAT SPECIFIED, AS APPROVED BY CONSULTANT.
 - G. "AS INDICATED" – AS SHOWN ON DRAWINGS AND/OR NOTED IN SPECIFICATIONS.
11. ALL WIRING SHALL BE COLOUR CODED AS PER OHESC AND BE IDENTIFIED WITH BRADY OR EQUIVALENT SELF STICKING PERMACODE WIRE MARKERS. ALL JUNCTION BOXES IN CONCEALED CEILING SPACES SHALL BE LABELED WITH PEN MARKER TO CIRCUITS CONTAINED THEREIN.
12. SUPPLY, INSTALL WIRE AND CONNECT ALL EQUIPMENT SHOWN SPECIFIED OR MENTIONED.
13. WIRE AND CONNECT MOTORS SUPPLIED BY OTHERS, AS INDICATED.
14. DISCONNECT SWITCHES: FUSED AND NON-FUSED, HEAVY DUTY, QUICK-MAKE, QUICK-BREAK MECHANISM, LOAD BREAK TYPE WITH DOOR, HANDLE AND SWITCHING MECHANISM INTERLOCK, ARC EXTINGUISHERS, SILVER PLATED WIPE ACTION CONTACTS, AND SPRING REINFORCED FUSE CLIPS, OF SIZES INDICATED, CSA APPROVED AND CERTIFIED, PROVIDE DISCONNECT SWITCHES AHEAD OF EACH PIECE OF EQUIPMENT WHERE NECESSARY TO MEET CODE REQUIREMENTS.
15. POWER PANELS SHALL BE NDP, CDP OR QMB, QMQB TYPE WITH BOLT-ON BREAKERS OR FUSES, BREAKERS: MINIMUM 22,000-AC SYMMETRICAL AT 240V.
16. BOXES FOR INDOOR USE: CODE GAUGE ELECTRO GALVANIZED STEEL FOR CONCEAL MOUNTING AND GALVANIZED CAST FERROUS OR CAST BRUSHED ALUMINUM FOR EXPOSED USE, UNLESS OTHERWISE NOTED.
17. FIXTURE BOXES: ELECTRO GALVANIZED STEEL. 100mm (4") OCTAGON COMPLETE WITH 10mm (3/8") FIXTURE STUD WHERE NECESSARY.
18. WHERE OUTLET BOXES ARE INSTALLED IN EXTERIOR WALLS AND / OR INSULATED CEILING HAVING ASSOCIATED VAPOUR BARRIERS ON THE WARM SIDE OF THE INSULATION AND WHERE OUTLET BOXES PERFORATE THE VAPOUR BARRIER, PROVIDE ELECTRICAL BOX VAPOUR BARRIERS BEHIND AND AROUND OUTLET BOXES.
19. SWITCHES AND RECEPTACLE BOXES SHALL BE 1104 TYPE FOR RECESSED MOUNTING.
20. ALL CONDUCTORS: COPPER WITH OR R-90 INSULATION, MINIMUM #12AWG, UNLESS OTHERWISE NOTED. EMT SHALL BE USED FOR WIRING AND CONCEALED WHEREVER POSSIBLE. EMT COUPLINGS AND CONNECTORS SHALL BE STEEL SETSCREW CONCRETE TIGHT OR STEEL COMPRESSION RAIN TIGHT.
21. ALL SWITCHES RECEPTACLES AND COMMUNICATION OUTLETS SHALL BE WHITE. TO BE LEVITON COMMERCIAL GRADE DECORA SERIES.
22. ALL COVER PLATES SHALL BE BRUSHED STAINLESS STEEL.
23. USB RECEPTACLE: NEW 14A, 125V COMMERCIAL DECORA TAMPER RESISTANT COMBINATION USB CHARGER / DUPEX RECEPTACLE UNDER STAINLESS STEEL COVER PLATE, LEVITON T5632-W OR APPROVED EQUAL.
24. NEW 15A, 125V COMMERCIAL DECORA SERIES SWITCH UNDER STAINLESS STEEL COVER PLATE, DIMMER SWITCH TO BE "MAESTRO" LED, MULTI LOCATION DIGITAL FADE DIMMER BY LUTRON. CONSULT WITH MANUFACTURERS FOR COMPATIBILITY WITH ACTUAL LIGHT FIXTURE SELECTION PRIOR TO ORDERING.
25. RECEPTACLES: WHITE FINISH WITH STAINLESS STEEL COVER PLATES.
26. RECEPTACLES: LEVITON COMMERCIAL GRADE DECORA SERIES.
27. MOUNT SWITCHES AND ALL OPERABLE DEVICES AT HEIGHTS THAT COMPLY WITH THE ONTARIO BUILDING CODE AND APPLICABLE BARRIER-FREE ACCESSIBILITY REQUIREMENTS.
28. PROVIDE, RELOCATE, INSTALL, WIRE AND CONNECT EMERGENCY LIGHTING AND EXIT LIGHTING SHOWN. PROVIDE NEW LAMPS FOR ALL RELOCATED EMERGENCY AND EXIT LIGHTS.
29. IF ASBESTOS MATERIAL IS ENCOUNTERED, STOP WORK IN THE AFFECTED AREA IMMEDIATELY AND NOTIFY THE CONSULTANT AND PROJECT MANAGER. ALL PANEL BOARDS TO HAVE LOCKING HINGED DOOR C/W TYPED PLASTIC DIRECTORY AND NOTIFY THE CONSULTANT.
30. FOR RENOVATIONS: PROVIDE ALL CUTTING AND PATCHING REQUIRED TO CARRY OUT ELECTRICAL WORK UNDER THIS CONTRACT.
31. MINIMUM WIRE SIZE SHALL BE #14 AWG.

GROUNDING

1. GROUND ALL EQUIPMENT IN ACCORDANCE WITH LATEST EDITION OF THE ELECTRICAL SAFETY CODE. PROVIDE SEPARATE GREEN INSULATED GROUND CONDUCTOR IN EVERY CONDUIT TO ALL DEVICES, LUMINAIRES AND FEEDERS (PANELBOARDS, SPLITTERS, DISCONNECT SWITCHES, ETC.).

PUBLIC ADDRESS SYSTEM

1. ALL DEVICES SHALL BE COMPATIBLE WITH EXISTING PUBLIC ADDRESS SYSTEM. PROVIDE ALL REQUIRED DEVICES AND WIRING. WIRING SHALL BE IN EMT CONDUITS.
2. PROVIDE PUBLIC ADDRESS SPEAKER UNITS RECESSED AT CEILING WHERE SHOWN. COORDINATE WITH REFLECTED CEILING PLAN. EACH SPEAKER SHALL BE JBL MODEL CSS8008 OR APPROVED EQUAL, 15-WATTS, 8" ROUND, 120 DEGREE CONICAL COVERAGE, RECESSED IN CEILING. REVIEW EXISTING SYSTEM FOR COMPATIBILITY BEFORE ORDERING THE UNITS. PROVIDE EACH UNIT COMPLETE WITH ALL REQUIRED SUPPORT BRACKETS, BACK BOX, WIRES AND ACCESSORIES (PARTS) TO COMPLETE INSTALLATION. WIRE TO EXISTING PUBLIC ANNUNCIATION SYSTEM.
3. PROVIDE ALL REQUIRED WIRES, JUNCTION BOXES, DEVICES AND ACCESSORIES TO COMPLETE SYSTEM INSTALLATION. CONNECT TO EXISTING SYSTEM. ALL WIRES SHALL BE IN EMT CONDUITS.

COMPLETION OF CONTRACT

1. ALL EQUIPMENT MUST BE CLEANED AND TESTED BEFORE FINAL ACCEPTANCE BY THE CONSULTANT. PRIOR TO CONTACTING THE CONSULTANT FOR FINAL INSPECTION, THE CONTRACTOR MUST CORRECT ALL DEFICIENCIES AS SPECIFIED ON THE DEFICIENCY LIST.
2. AFTER COMPLETION OF WORK PROVIDE A COPY OF ESA INSPECTION CERTIFICATE. FIRE ALARM VERIFICATION CERTIFICATE (AS PER STANDARD ULC 537) MUST BE PROVIDED WHEN THE FIRE ALARM SYSTEM WAS MODIFIED UNDER THE CONTRACT.
3. PROVIDE A WRITTEN GUARANTEE FOR ONE YEAR COVERING ALL EQUIPMENT, MATERIALS AND WORKMANSHIP FROM THE DATE OF ACCEPTANCE OF THE INSTALLATION BY THE CONSULTANT.
4. ANY DEFECTS OR DEFICIENCIES WHICH ORIGINATE OR BECOME EVIDENT DURING THE WARRANTY PERIOD MUST BE REPAIRED OR CORRECTED AT NO EXTRA COST TO THE OWNER.
5. IF, DURING THE WARRANTY PERIOD, TRANSFORMERS, DEVICES, BALLASTS OR OTHER NOISE AND VIBRATION PRODUCING EQUIPMENT ARE CONSIDERED BY THE CONSULTANT TO EXCEED ACCEPTABLE STANDARDS, THEN THESE MUST BE REPLACED WITHOUT DELAY OR ADDITIONAL COST TO THE OWNER. ALL WORK RELATING TO THE REPLACEMENT OF DEFECTIVE ITEMS, MUST BE CARRIED OUT AFTER NORMAL WORKING HOURS AND AT A TIME WHICH IS ACCEPTABLE TO THE OWNER.

AS-BUILT DRAWINGS

1. REFER TO THE FRONT-END SPECIFICATIONS FOR THIS PROJECT FOR REQUIREMENTS RELATED TO AS-BUILT DRAWING PREPARATION AND SUBMITTAL. PREPARE, MAINTAIN, AND SUBMIT COMPLETE AS-BUILT DRAWINGS IN ACCORDANCE WITH ALL NOTES AND SPECIFIED PROCEDURES. THE ELECTRICAL AS-BUILT DRAWINGS SHALL CLEARLY SHOW THE ROUTING AND FINAL LOCATIONS OF ALL BURIED CONDUITS, TEK CABLES, UNDERGROUND FEEDERS, RISERS, AND ANY OTHER ELECTRICAL EQUIPMENT, DEVICES AND INSTALLATIONS.

OCCUPANCY SENSORS

1. THIS SECTION APPLIES WHEN OCCUPANCY SENSORS ARE SHOWN AND/OR NOTED ON THE FLOOR PLAN(S).
2. CEILING SENSORS TO BE WATTSTOPPER DT-355 SERIES OR BY HUBBELL OR LEVITON. THE SENSORS SHALL CARRY A FIVE (5) YEAR WARRANTY.
3. SENSORS SHALL SENSE A PERSON OF AVERAGE SIZE MOVING DISTANCE OF 2" (50mm) AND RETAIN LIGHTS IN "ON" STATE.
4. SENSORS SHALL HAVE AN INTEGRAL BYPASS SHUNT SWITCH FOR SERVICE OR MANUAL OPERATION.
5. MULTIPLE SENSORS SHALL BE WIRED IN PARALLEL TO OBTAIN COVERAGE NOTED ON DRAWINGS.
6. THE DELAY TO "OFF" SHALL BE ADJUSTED FROM 5 TO 30 MINUTES AND THE SENSOR SHALL BE COMPLETE WITH WALK THROUGH AND TEST MODE.
7. SENSORS SHALL INTERFACE WITH POWER / RELAY PACKS AS REQUIRED BY THE SAME MANUFACTURER TO CONTROL THE LOADS NOTED ON THE DRAWINGS.

WORKING HOURS AND SYSTEMS OPERATING NOTES

1. ALL EXISTING MECHANICAL SYSTEMS SERVING THE RENOVATION AREA AND EXISTING BUILDING SHALL REMAIN FULLY OPERATIONAL DURING CONSTRUCTION. ALL NEW AND EXISTING SYSTEMS SHALL BE TESTED AND COMMISSIONED.
2. REVIEW EXISTING CONDITIONS BEFORE COMMENCING WORK AND COORDINATE WITH OTHER TRADES FOR POWER WIRING REQUIREMENTS. PROVIDE ALL REQUIRED TEMPORARY CONNECTIONS AS NEEDED TO MAINTAIN SYSTEMS OPERATIONAL.
3. COVER DURING CONSTRUCTION EXISTING ELECTRICAL EQUIPMENT AND LIGHT FIXTURES THAT WILL BE AFFECTED BY THE CONSTRUCTION ACTIVITIES AND SUBJECT TO DUST.
4. REFER TO INSTRUCTIONS PROVIDED BY THE BOARD REGARDING THE FIRE ALARM SYSTEM AND BY-PASS INSTRUCTIONS.
5. 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. CONTRACTS 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:
 - BUILDING POWER SHUT DOWN
 - DRILLING AND ANY NOISY/VIBRATION WORK IN EXCESS OF 60db

VERIFICATION OF EXISTING CONDITIONS

1. CONTRACTOR SHALL REVIEW EXISTING SITE CONDITIONS AFFECTING THE PROPOSED WORK AND COORDINATE WITH ALL TRADES BEFORE COMMENCING WORK. PREPARE INTERFERENCE SKETCHES IF NEEDED AND SUBMIT FOR REVIEW.
2. REFER TO RECORD DRAWINGS, ARCHITECTURAL DRAWINGS, AND SPECIFICATIONS WHERE AVAILABLE FOR ADDITIONAL INFORMATION REGARDING EXISTING AND PROPOSED ELECTRICAL AND LIFE-SAFETY SYSTEMS. ALL WORK SHALL BE COORDINATED AND EXECUTED IN ACCORDANCE WITH THE ONTARIO BUILDING CODE (OBC), THE ONTARIO ELECTRICAL SAFETY CODE (OESC), AND ALL RELEVANT CAN/ULC AND CSA STANDARDS.
3. BEFORE COMMENCING WORK VISIT SITE AND CHECK EXISTING CONDITIONS AFFECTING THE WORK INCLUDING DETAILED REVIEW OF EXISTING DEVICES, POWER PANELS, DISCONNECTS, STARTERS, CONDUITS, CABLES, WIRING, PIPES, DUCTS, EQUIPMENT, 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 DESIGN ENGINEER IS 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.

ELECTRICAL DEMOLITION NOTES

1. DISCONNECT AND REMOVE ALL EXISTING EQUIPMENT, DEVICES, WIRES, CONDUITS AND CABLES AS SHOWN AND NOTED ON THE ELECTRICAL AND ARCHITECTURAL DRAWINGS. EXISTING WIRING AND CONDUITS THAT ARE IN GOOD CONDITION AND MEETING THE STANDARDS CAN BE REUSED.
2. DISCONNECT AND REMOVE EXISTING WIRING AND CONDUITS THAT ARE ASSOCIATED WITH LIGHT FIXTURES AND ELECTRICAL EQUIPMENT NOTED TO BE REMOVED. REMOVE CONDUITS AND WIRES BACK TO THE SOURCE UNLESS OTHERWISE NOTED. ALL DISCONNECT ELECTRICAL EQUIPMENT, DEVICES, CONDUITS AND WIRES SHALL BE REMOVED FROM SITE ON DAILY BASIS. EQUIPMENT THAT ARE NOTED TO BE RE-USED SHALL BE STORED ON SITE IN A SECURE PLACE. COORDINATE WITH GENERAL CONTRACTOR.
3. ALL WORK SHALL BE DONE IN ACCORDANCE TO ESA STANDARDS AND ALL WIRING/SYSTEMS SHALL BE PROTECTED SAFELY AFTER EACH SHIFT ON A DAILY BASIS.
4. THE DEMOLITION DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON EXISTING RECORD DRAWINGS, VISUAL SITE REVIEW AND INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE DESIGN ENGINEER CANNOT ASSURE ITS ACCURACY, AND THUS THE CONTRACTOR SHALL REVIEW SITE CONDITIONS BEFORE COMMENCING WORK.
5. BEFORE COMMENCING WORK ON ANY SYSTEM, THE CONTRACTOR SHALL PERFORM SITE REVIEWS TO CHECK AND CONFIRM ALL EXISTING ELECTRICAL SYSTEMS INCLUDING POWER PANELS, DISCONNECTS, STARTERS, CIRCUITS, WIRING, JUNCTION BOXES, DEVICES, SWITCHES, LIGHT FIXTURES, HVAC UNITS, FANS AND CONTROLS.

FIRE ALARM SPECIFICATIONS AND NOTES

1. THE FIRE ALARM WORK SHALL BE PERFORMED BY LICENSED AND QUALIFIED FIRE ALARM TECHNICIANS EXPERIENCED IN THE INSTALLATION, VERIFICATION, TESTING, AND SERVICING OF FIRE ALARM SYSTEMS IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS, INCLUDING THE ONTARIO BUILDING CODE, CSA, AND ULC STANDARDS.
2. SUPPLY AND INSTALL ALL REQUIRED DEVICES, CONDUITS, WIRING, CONTROLLERS TO COMPLETE INSTALLATION OF FIRE ALARM SYSTEM. COMPLY WITH CAN/CSA – S524 (INSTALLATION OF FIRE ALARM SYSTEMS), CAN/CSA – S537 (VERIFICATION OF FIRE ALARM SYSTEM), NFPA 72 AND THE ONTARIO BUILDING CODE. ALL DEVICES SHALL BE COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM.
3. THE SYSTEM SHALL INCLUDE, BUT NOT NECESSARILY LIMITED TO, THE FOLLOWING: INPUT DEVICES, OUTPUT DEVICES, RELAYS, CONDUITS, JUNCTION BOXES, WIRING, MANUAL PULL STATIONS, TONE ALARM (SPEAKERS) TYPE SIGNAL, ALARM INITIATING AND INDICATING PERIPHERAL DEVICES AND ALL ACCESSORIES REQUIRED TO FURNISH A COMPLETE OPERATIONAL SYSTEM.
4. THE EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE CURRENT PROVISIONS OF THE FOLLOWING STANDARDS:

- CANADIAN ELECTRICAL CODE
- NFPA 72 NATIONAL FIRE ALARM CODE
- NFPA 70 NATIONAL ELECTRIC CODE
- NFPA 101 LIFE SAFETY CODE
- ONTARIO BUILDING CODE
- LOCAL AUTHORITIES HAVING JURISDICTION.
- UNDERWRITERS LABORATORIES CANADA INC. (ULC)
- THE FOLLOWING LATEST STANDARDS AS APPLICABLE:
 - CAN/ULC-S524 DESIGN AND INSTALLATION OF FIRE ALARM SYSTEM
 - CAN/ULC-S537 FIRE ALARM VERIFICATION
 - CAN/ULC-S527 CONTROL UNITS FOR FIRE PROTECTIVE SIGNALING SYSTEMS.
 - CAN/ULC-S529 SMOKE DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS.
 - CAN/ULC-S529 SMOKE DETECTORS FOR DUCT APPLICATIONS.
 - CAN/ULC-S531 SMOKE ALARMS.
 - CAN/ULC-S530 HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS.
 - CAN/ULC-S525 AUDIBLE SIGNALING APPLIANCES.
 - CAN/ULC-S526 VISUAL SIGNALING APPLIANCES.
 - CAN/ULC-S528 MANUALLY ACTIVATED SIGNALING BOXES.
 - CAN/ULC-S548 WATER FLOW INDICATORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS.
 - CAN/ULC-S541 SPEAKERS FOR FIRE PROTECTIVE SIGNALING SYSTEMS

5. THE AUDIBILITY LEVEL OF THE ALARMS SHALL BE MAINTAINED IN ALL AREAS OF THE BUILDING. INTERIOR FINISHES AND FURNISHINGS MAY HAVE AN EFFECT ON THE DECIBEL LEVEL OF THE FIRE ALARM SYSTEM. NEW FIRE ALARM COMPONENTS SHALL BE COMPATIBLE WITH REMAINING DEVICES. UPON COMPLETION OF WORK, ALL EXISTING ANCILLARY SYSTEMS, DEVICES, SMOKE CONTROL SYSTEMS, AND EXHAUST SYSTEMS SHALL BE RECONNECTED AND SHALL FUNCTION AND OPERATE AS ORIGINALLY DESIGNED. FIRE ALARM VISUAL SIGNAL DEVICES SHALL BE INSTALLED IN ADDITION TO AUDIBLE SIGNAL DEVICES IN CORRIDORS USED BY THE PUBLIC.

6. THE CONTRACTOR SHALL SUBMIT DIGITAL SET OF SHOP DRAWINGS. THE DOCUMENTATION SHALL INDICATE THE TYPE, SIZE, RATING, STYLE, CATALOG NUMBER, MANUFACTURERS NAMES, PHOTOS, AND/OR CATALOG DATA SHEETS FOR ALL ITEMS TO ENSURE COMPLIANCE WITH THESE SPECIFICATIONS.

7. UPON COMPLETE OF SYSTEM INSTALLATION, PERFORM TESTING AND VERIFICATION OF THE SYSTEM. SUBMIT TESTING AND VERIFICATION REPORT INCLUDING THE FOLLOWING:
 - A. INSTALLATION AND PROGRAMMING MANUALS COVERING THE INSTALLED SYSTEM.
 - B. POINT-TO-POINT DIAGRAMS OF THE ENTIRE SYSTEM AS INSTALLED. NUMBER ALL CONDUCTORS AND SHOW ALL TERMINATION'S AND SPLICES.
 - C. THE APPLICATION PROGRAM LISTING FOR THE SYSTEM AS INSTALLED AT THE TIME OF ACCEPTANCE.
 - D. NAME, ADDRESS AND TELEPHONE OF THE AUTHORIZED FACTORY TRAINED REPRESENTATIVE.
 - E. PROOF OF LIABILITY INSURANCE FOR INSPECTION

8. AUTOMATIC THERMAL DETECTORS: CONSTRUCTED AS PER CAN/ULC-S530-E) 1778. EDWARDS 281A RATED AT 58° C (135° F) FIXED TEMPERATURE NON-RESTORABLE AND 8° C DEGREE PER MINUTE RATE-OF-RISE. USE WHERE NORMAL TEMPERATURES DO NOT EXCEED 38° C (100° F).
9. FIRE ALARM HORN/STROBE DEVICES: SIMPLEX OR EQUAL AS PER ULC-S525.

10. IONIZATION TYPE SMOKE DETECTORS: SIMPLEX DETECTOR AND 6250C-001 BASE OR 6250-002 RELAY BASE.

11. INSTALLATION OF FIRE ALARM DEVICES SHALL BE PER NFPA 72 AND MANUFACTURER WRITTEN INSTRUCTIONS. MAINTAIN MINIMUM 914 mm SPACING BETWEEN SMOKE/HEAT DETECTOR AND ANY SUPPLY AIR/RETURN AIR GRILLE.
12. ALL WIRES SHALL BE ON COLOUR CODED CONDUITS. COMPLETE WITH COLOUR CODED JUNCTION BOXES. PROVIDE ALL REQUIRED LABELS.

13. TEST AND VERIFY ALL NEW AND EXISTING INPUT/OUTPUT DEVICES IN THE RENOVATION AREAS, INCLUDING DEVICES OUTSIDE THE RENOVATION AREAS THAT ARE CONNECTED TO THE SAME FIRE ALARM ZONES. SUBMIT A DETAILED TESTING AND VERIFICATION REPORT.

14. FIRE ALARM CONTRACTOR: HAMILTON FIRE CONTROL, 445 WENTWORTH STREET NORTH, HAMILTON, TEL: 905-527-7042



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No.	DESCRIPTION	DATE

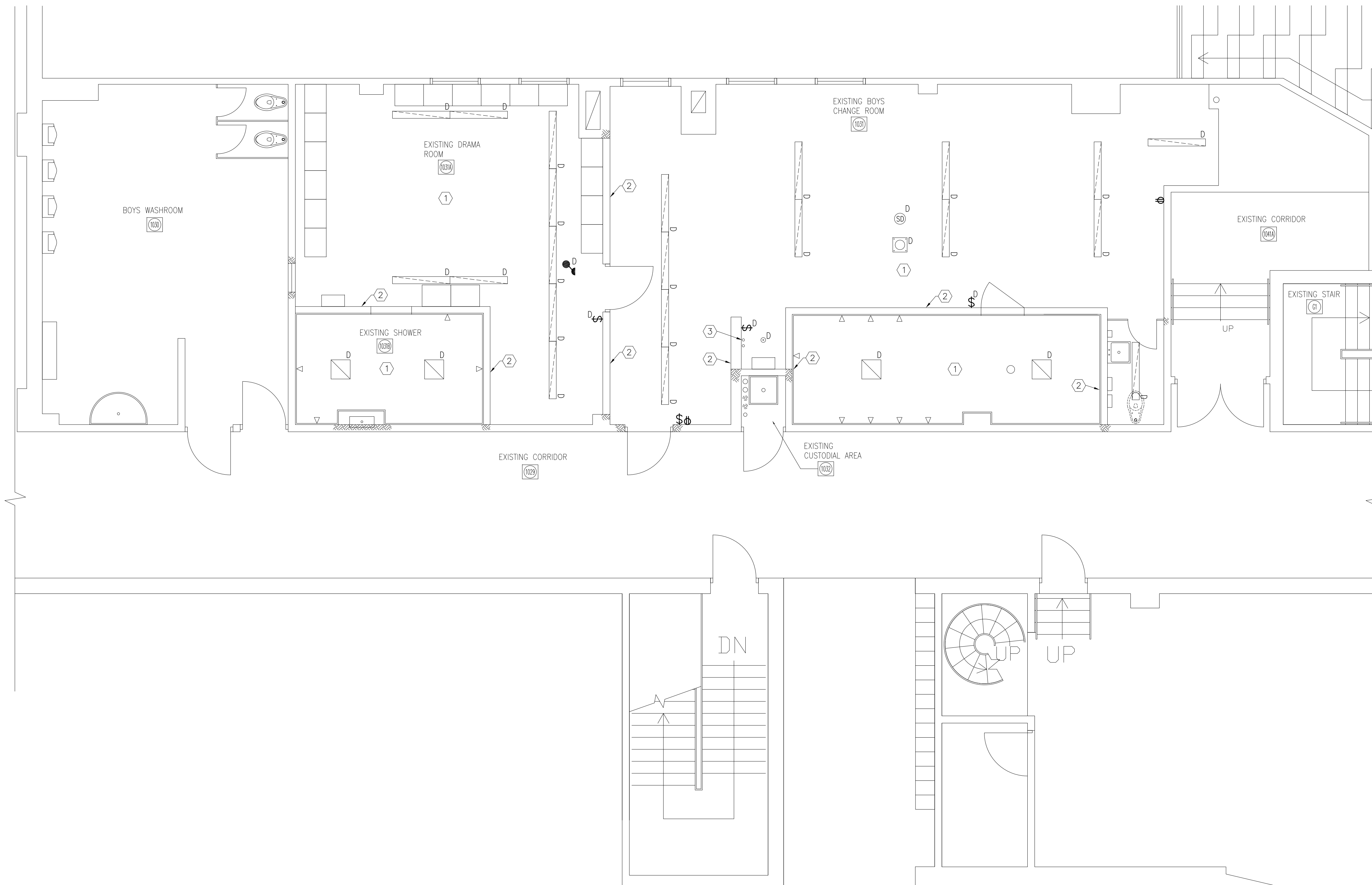
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1684 SHELLARD SIDE ROAD
CAMBRIDGE, ONTARIO
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shellard@consultant.com
226 606 6542

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HAMILTON – WENTWORTH DISTRICT SCHOOL BOARD
700 MAIN STREET WEST
HAMILTON, ONTARIO

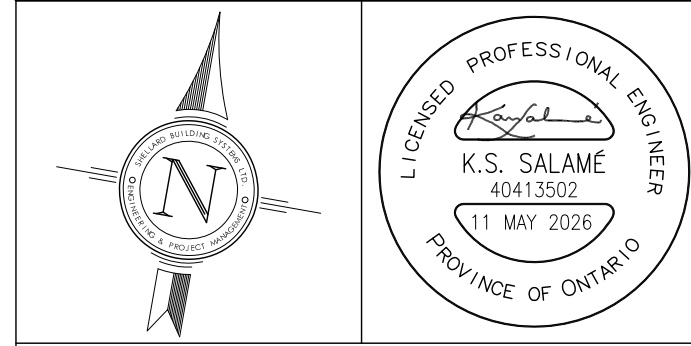
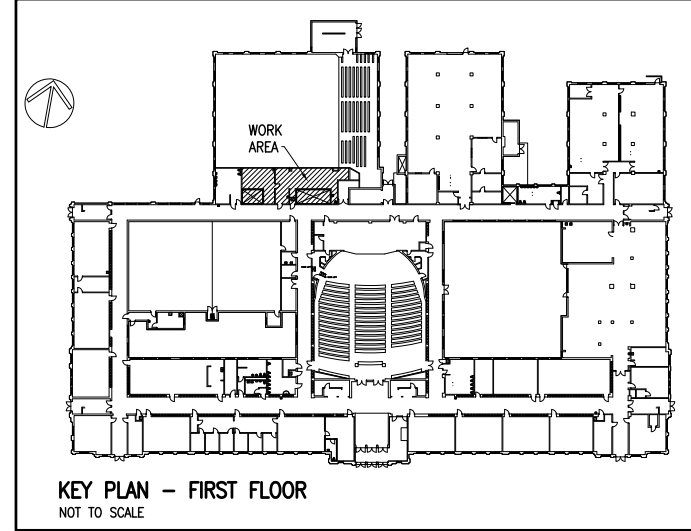
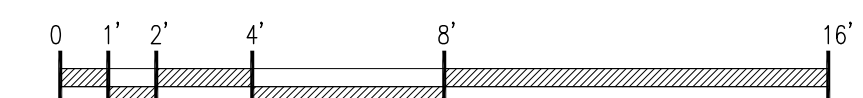
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DRAWN BY: D.A.	CHECKED BY: N.S.
DATE: NOVEMBER 2024	JOB No.: 24-107
SCALE: NOT TO SCALE	SHEET No.: E0.01

DRAWING NOTES:

- ① DISCONNECT AND REMOVE EXISTING light fixtures and devices. the demolition work shall include, but not necessarily limited to, the following:
 - A. LIGHT FIXTURES, LIGHT SWITCHES, EMERGENCY LIGHTING, EXIT LIGHTS, HAND DRYERS, CIRCUIT BREAKERS, SPEAKERS, SMOKE DETECTORS, AND HEAT DETECTORS, COMPLETE WITH ASSOCIATED WIRING, CONDUITS, CONTROLS, AND SWITCHES. REMOVE CONDUITS AND WIRES BACK TO THE SOURCE. RE-USE OF EXISTING CIRCUITS AND WIRES WILL BE ACCEPTABLE, PROVIDED IT COMPLIES WITH ESA STANDARDS.
 - B. REMOVED LIGHTS AND BALLASTS SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE ENVIRONMENTAL STANDARDS. PROVIDE A DISPOSAL REPORT FOR OWNER RECORDS. THE NUMBER OF EXISTING LIGHT FIXTURES, RECEPTACLES AND SWITCHES MAY VARY FROM WHAT IS SHOWN.
 - C. REMOVE DATA OUTLETS COMPLETE WITH ASSOCIATED DATA WIRES (DISCONNECTION IN IT ROOM BY OWNER).
 - D. SURVEY ALL EXISTING CONDITIONS TO IDENTIFY EVERY LIGHT FIXTURE, SWITCH, RECEPTACLE, AND DEVICE TO BE REMOVED. NOT ALL EXISTING ITEMS REQUIRING REMOVAL ARE NECESSARILY SHOWN ON THE DRAWING. THE CONTRACTOR SHALL ACCOUNT FOR ALL SUCH ITEMS TO BE REMOVED IN THE RENOVATION AREAS.
 - E. ARRANGE THROUGH THE GENERAL CONTRACTOR FOR FIRE ALARM BY-PASS AND FIRE WATCH.
 - F. REMOVE CONSTRUCTION DEBRIS FROM SITE ON DAILY BASIS. POWER CIRCUITS THAT ARE FEEDING ADJACENT ROOMS SHALL REMAIN ACTIVE.
 - G. PROVIDE REQUIRED WIRING AND CIRCUITING TO MAINTAIN ADJACENT ROOMS AND CORRIDOR OPERATIONAL.
 - H. PROVIDE TEMPORARY LIGHTING FOR CONSTRUCTION WORK. COORDINATE WITH THE GENERAL CONTRACTOR.
- ② DISCONNECT AND REMOVE EXISTING RECEPTACLES, SWITCHES, AND DEVICES FROM WALLS NOTED TO BE DEMOLISHED (SHOWN WITH DASHED LINES). REMOVE POWER CIRCUITS BACK TO THE SOURCE, INCLUDING WIRES, CONDUITS, JUNCTION BOXES, AND SUPPORTS. COORDINATE WITH GENERAL CONTRACTOR BEFORE COMMENCING WORK. EXISTING POWER CIRCUITS THAT ARE FEEDING ADJACENT ROOMS OUTSIDE THE RENOVATION AREA SHALL REMAIN ACTIVE. PROVIDE REQUIRED WIRING AND CIRCUITING TO MAINTAIN ADJACENT ROOMS AND CORRIDOR OPERATIONAL.
- ③ RE-ROUTE EXISTING ELECTRICAL CONDUIT AND ASSOCIATED WIRES TO THE NEW WASHROOM WALL PARTITION. THE NEW CONDUIT SHALL BE INSTALLED THROUGH A NEW FLOOR OPENING AND RE-JOIN EXISTING CONDUITS IN THE CEILING SPACE. THE NEW CONDUIT RISER SHALL BE RECESSED IN THE NEW WALL PARTITION. PROVIDE ALL REQUIRED JUNCTION BOXES, WIRES, AND CONDUITS TO COMPLETE THE RELOCATION. PROVIDE FIRE SEAL AROUND THE NEW CONDUIT AT THE FLOOR. FILL AND SEAL THE EXISTING ABANDONED FLOOR OPENING TO APPROVAL.



PARTIAL FIRST FLOOR PLAN – DEMOLITION
SCALE: 1/4" = 1' - 0"



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No.	DESCRIPTION	DATE

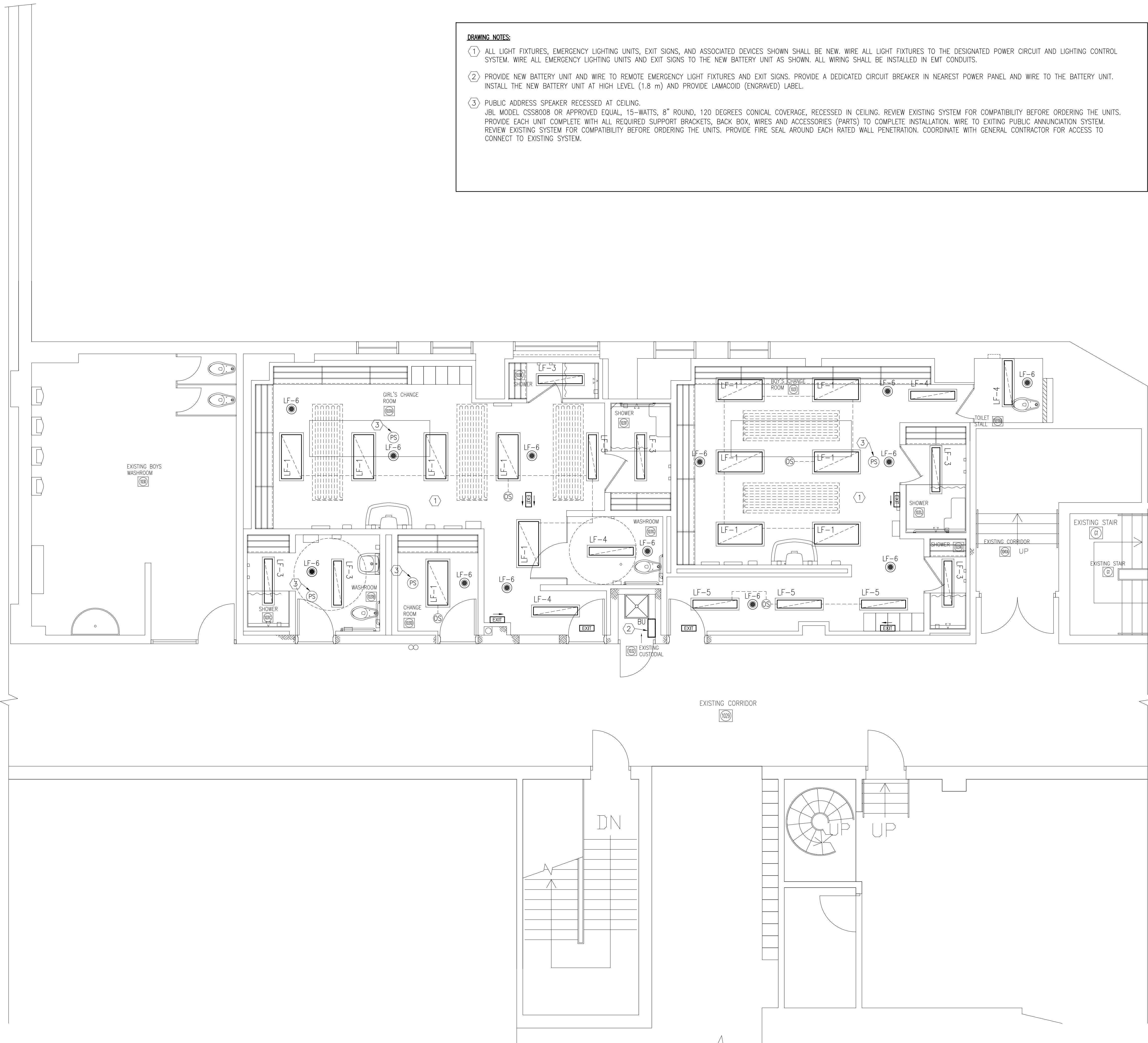
SHELLARD BUILDING SYSTEMS LTD.
1684 SHELLARD SIDE ROAD
CAMBRIDGE, ONTARIO
N1R 5S7
shellard@consultant.com
226 606 6542

WESTDALE SECONDARY SCHOOL – PHASE II
HAMILTON – WENTWORTH DISTRICT SCHOOL BOARD
700 MAIN STREET WEST
HAMILTON, ONTARIO

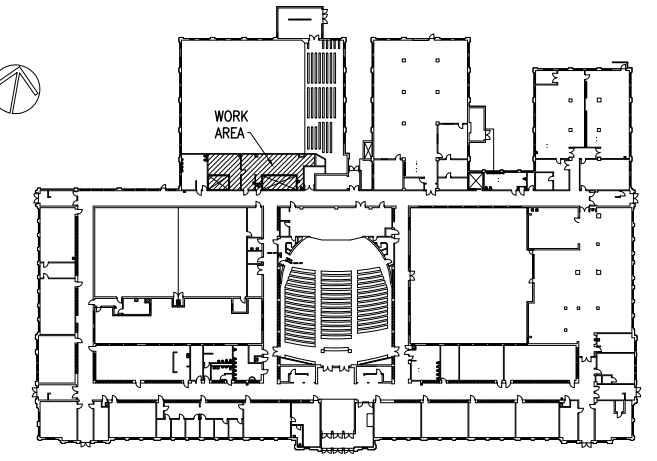
DRAWN NAME: PARTIAL FIRST FLOOR PLAN ELECTRICAL – DEMOLITION	
DRAWN BY: D.A.	CHECKED BY: N.S.
DATE: NOVEMBER 2024	JOB No.: 24-107
SCALE: 1 / 4" = 1' - 0"	SHEET No.: E1.01

DRAWING NOTES:

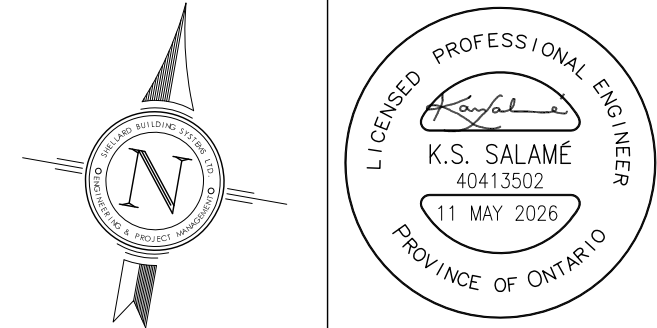
- ① ALL LIGHT FIXTURES, EMERGENCY LIGHTING UNITS, EXIT SIGNS, AND ASSOCIATED DEVICES SHOWN SHALL BE NEW. WIRE ALL LIGHT FIXTURES TO THE DESIGNATED POWER CIRCUIT AND LIGHTING CONTROL SYSTEM. WIRE ALL EMERGENCY LIGHTING UNITS AND EXIT SIGNS TO THE NEW BATTERY UNIT AS SHOWN. ALL WIRING SHALL BE INSTALLED IN EMT CONDUITS.
- ② PROVIDE NEW BATTERY UNIT AND WIRE TO REMOTE EMERGENCY LIGHT FIXTURES AND EXIT SIGNS. PROVIDE A DEDICATED CIRCUIT BREAKER IN NEAREST POWER PANEL AND WIRE TO THE BATTERY UNIT. INSTALL THE NEW BATTERY UNIT AT HIGH LEVEL (1.8 m) AND PROVIDE LAMACOID (ENGRAVED) LABEL.
- ③ PUBLIC ADDRESS SPEAKER RECESSED AT CEILING. JBL MODEL CSS8008 OR APPROVED EQUAL, 15-WATTS, 8" ROUND, 120 DEGREES CONICAL COVERAGE, RECESSED IN CEILING. REVIEW EXISTING SYSTEM FOR COMPATIBILITY BEFORE ORDERING THE UNITS. PROVIDE EACH UNIT COMPLETE WITH ALL REQUIRED SUPPORT BRACKETS, BACK BOX, WIRES AND ACCESSORIES (PARTS) TO COMPLETE INSTALLATION. WIRE TO EXISTING PUBLIC ANNUNCIATION SYSTEM. REVIEW EXISTING SYSTEM FOR COMPATIBILITY BEFORE ORDERING THE UNITS. PROVIDE FIRE SEAL AROUND EACH RATED WALL PENETRATION. COORDINATE WITH GENERAL CONTRACTOR FOR ACCESS TO CONNECT TO EXISTING SYSTEM.



PARTIAL FIRST FLOOR PLAN - ELECTRICAL
SCALE: 1/4" = 1' - 0"



KEY PLAN - FIRST FLOOR
NOT TO SCALE



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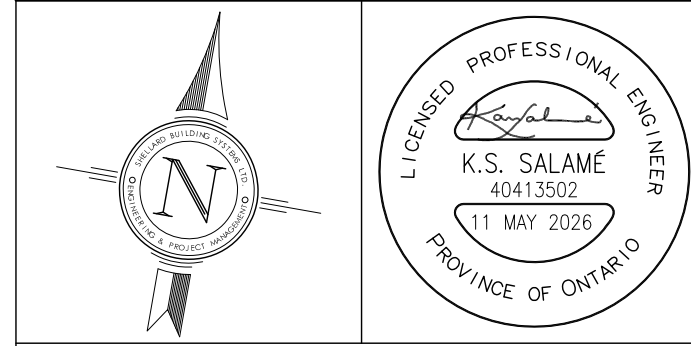
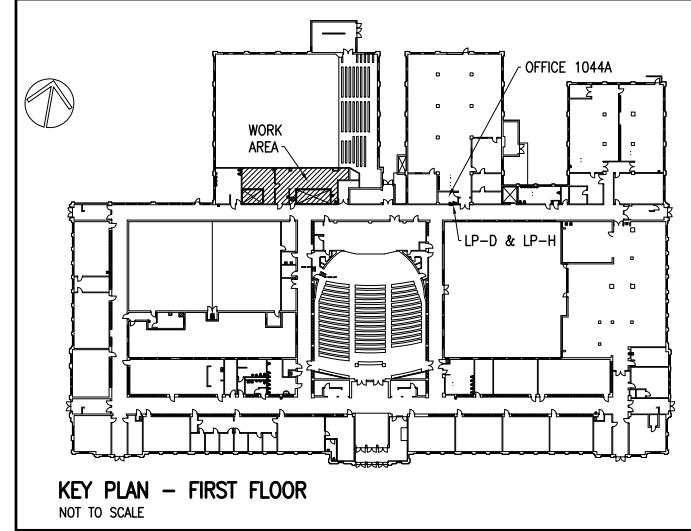
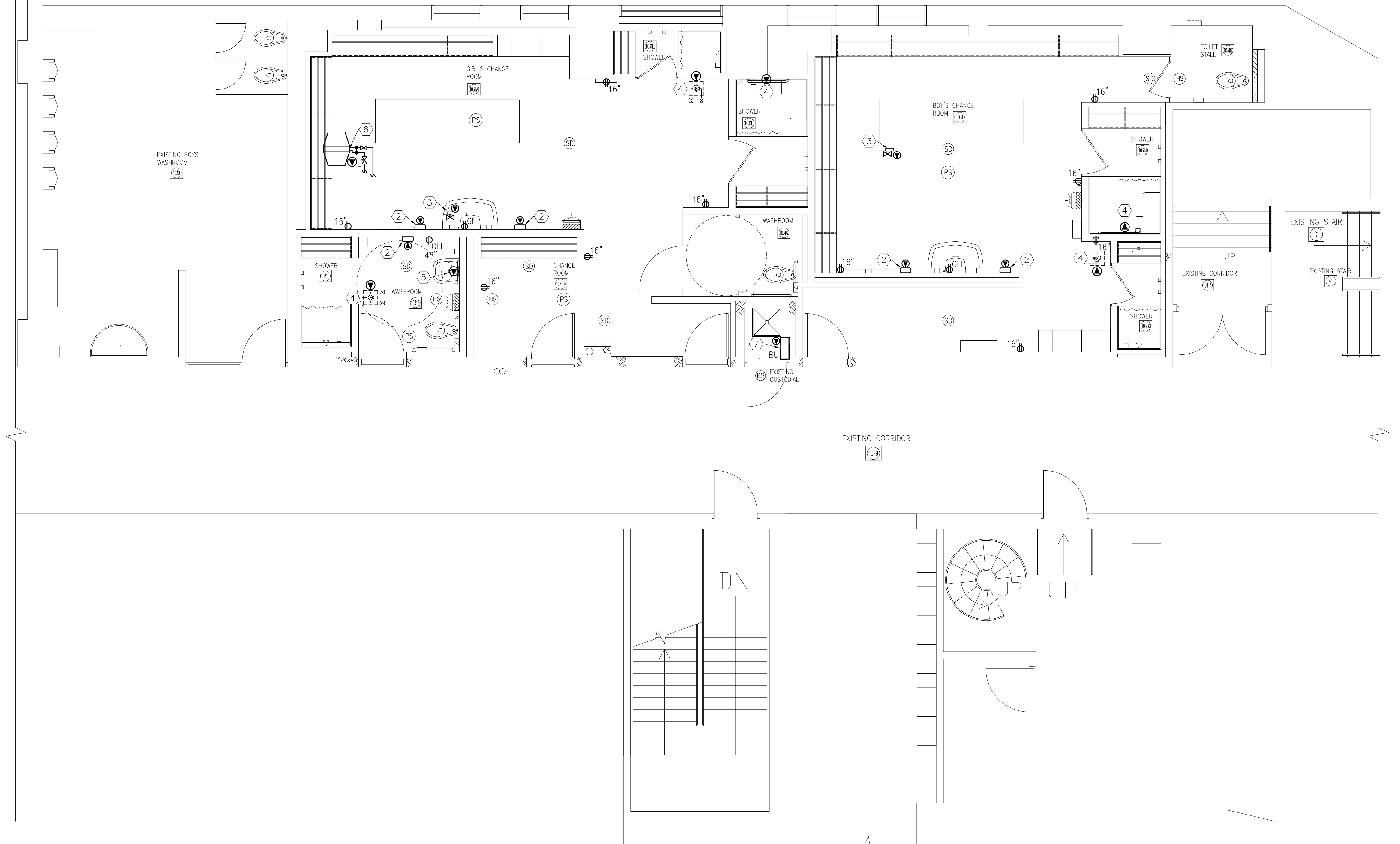
DRAWN NAME: PARTIAL FIRST FLOOR PLAN ELECTRICAL	
DRAWN BY: D.A.	CHECKED BY: N.S.
DATE: NOVEMBER 2024	JOB No.: 24-107
SCALE: 1/4" = 1'-0"	SHEET No.: E1.02

DRAWING NOTES:

- ① WIRE FROM NEAREST POWER CIRCUIT TO GFI RECEPTACLE BELOW THE WASH FOUNTAIN UNIT. ALL WIRES SHALL BE IN EMT AND RECESSED IN WALL PARTITIONS. COORDINATE WITH GENERAL CONTRACTOR AND THE MECHANICAL TRADE.
- ② PROVIDE ELECTRIC HAND DRYER: WORLD DRYER SLMDRI 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 EACH UNIT SECURED TO WALL AT ELEVATION AS DETAILED ON THE LATEST ARCHITECTURAL DRAWINGS. WIRE FROM POWER PANEL IN OFFICE 1044A USING DEDICATED CIRCUIT FOR EACH HAND DRYER. ALL WIRING SHALL BE IN CONDUITS AND RECESSED IN WALLS.
- ③ PROVIDE 120V/1/60 POWER FROM NEAREST CIRCUIT TO RADIATION HEATING UNITS CONTROLS. COORDINATE ON SITE LOCATION OF REQUIRED POWER CONNECTION WITH THE CONTROL CONTRACTOR.
- ④ PROVIDE 120V/1/60 POWER FROM NEAREST CIRCUIT TO SHOWER MIXING VALVE UNIT. COORDINATE ON SITE LOCATION OF THE REQUIRED POWER CONNECTION WITH THE MECHANICAL CONTRACTOR.
- ⑤ WIRE FROM NEAREST POWER CIRCUIT TO FAUCET CONTROLLER BELOW THE LAVATORY. COORDINATE WITH MECHANICAL TRADE.
- ⑥ PROVIDE 120V/1/60 POWER FROM NEAREST POWER CIRCUIT TO HOT WATER REHEATING COIL CONTROLS. COORDINATE WITH MECHANICAL TRADE.
- ⑦ PROVIDE DEDICATED 15A 120V/1/60 POWER CIRCUIT IN NEAREST EXISTING POWER PANEL AND WIRE TO LINE SIDE OF THE EMERGENCY POWER BATTERY UNIT. TEST THE EMERGENCY LIGHTING AND EXIST LIGHTS AND PROVIDE CERTIFICATION LETTER.

EXISTING POWER PANELS

THERE ARE TWO EXISTING POWER PANELS IN OFFICE 1044A: LP-D AND LP-H (SEE KEY PLAN ON THIS DRAWING). PROVIDE ALL REQUIRED BREAKERS, CONDUITS, WIRING, AND DEVICES IN THE EXISTING POWER PANELS AND EXTEND AS REQUIRED TO COMPLETE EACH POWER CIRCUIT IN THE RENOVATION AREAS. UPDATE PANEL LABEL CHARTS ACCORDINGLY.



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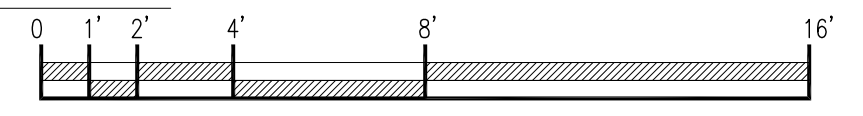
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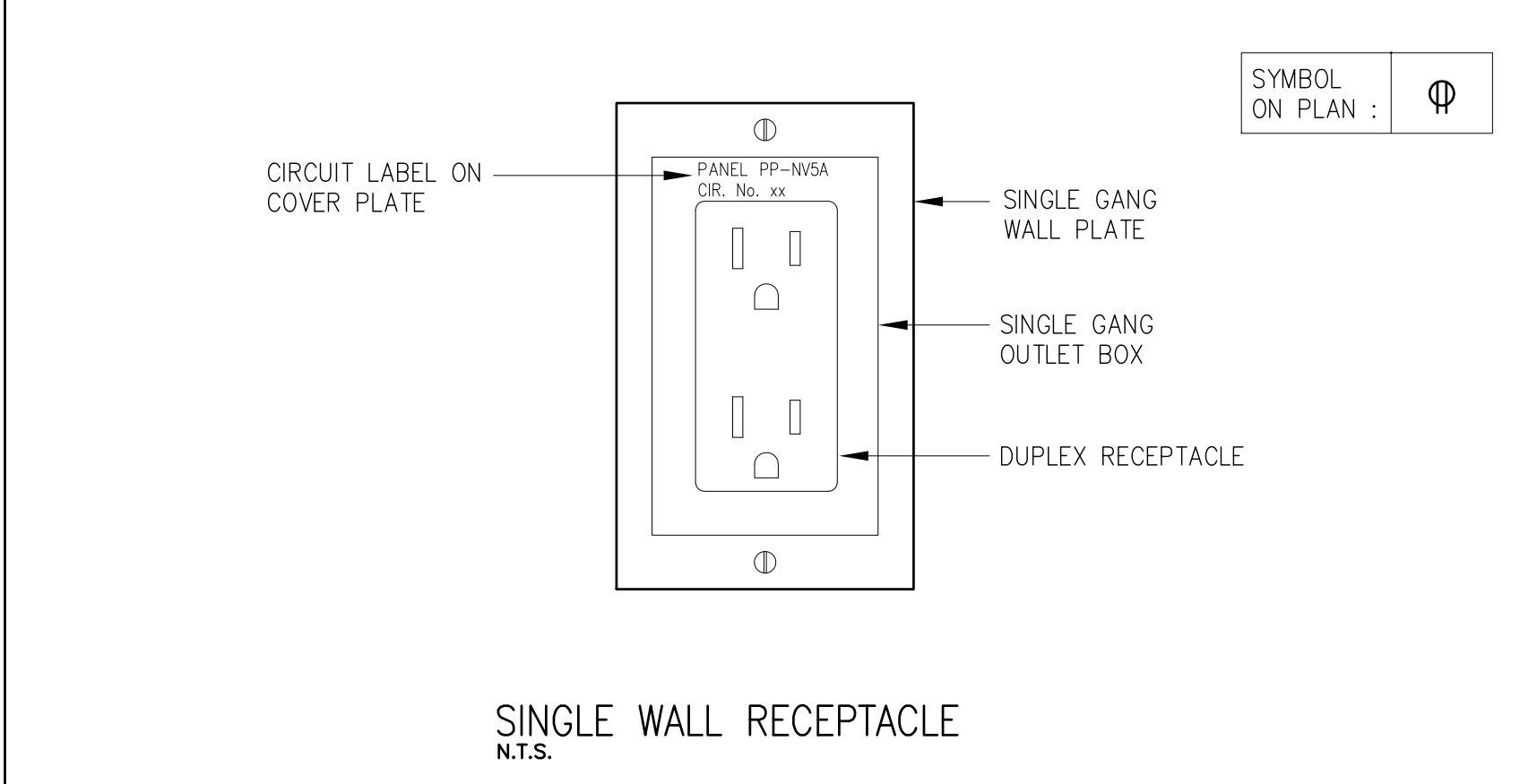
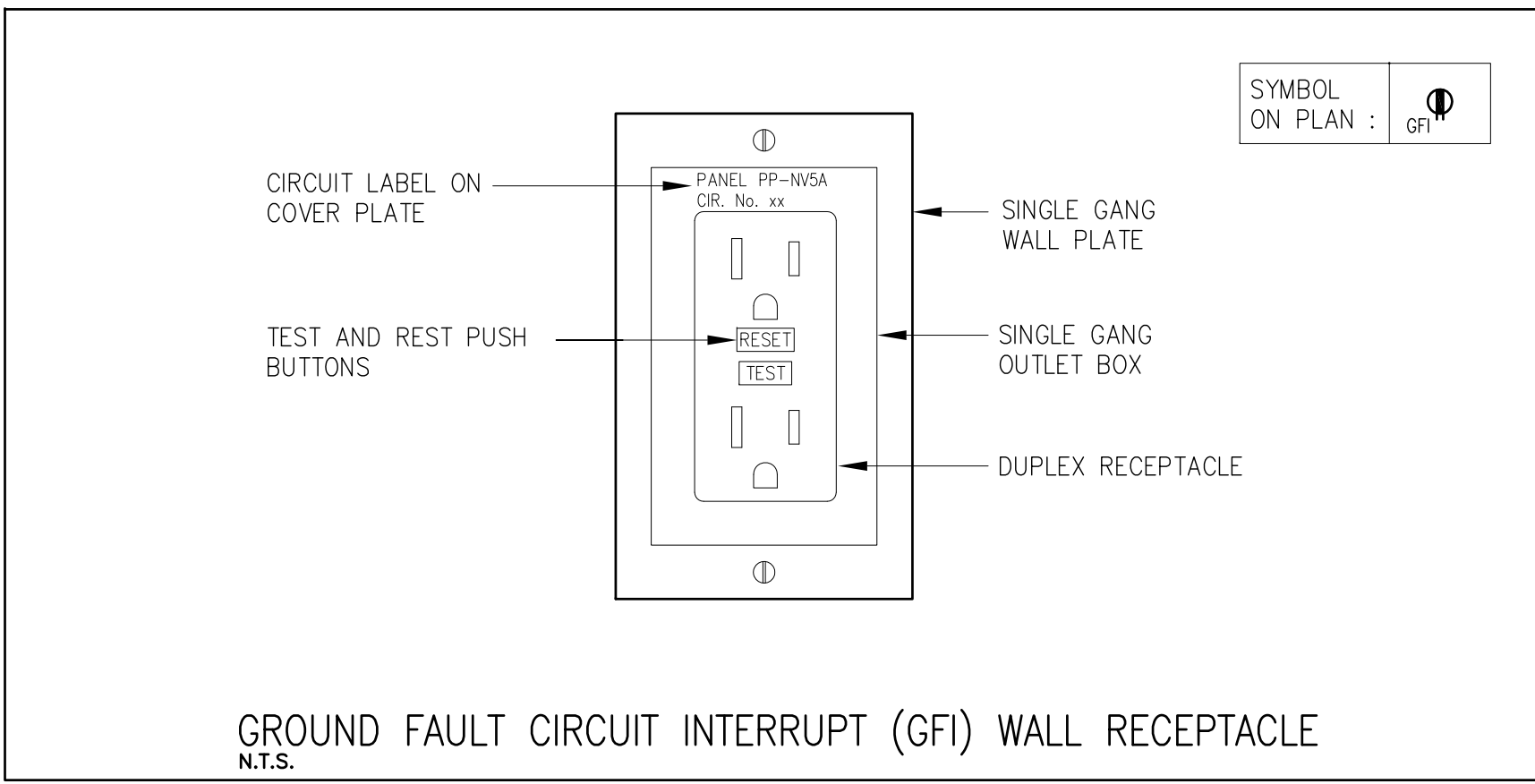
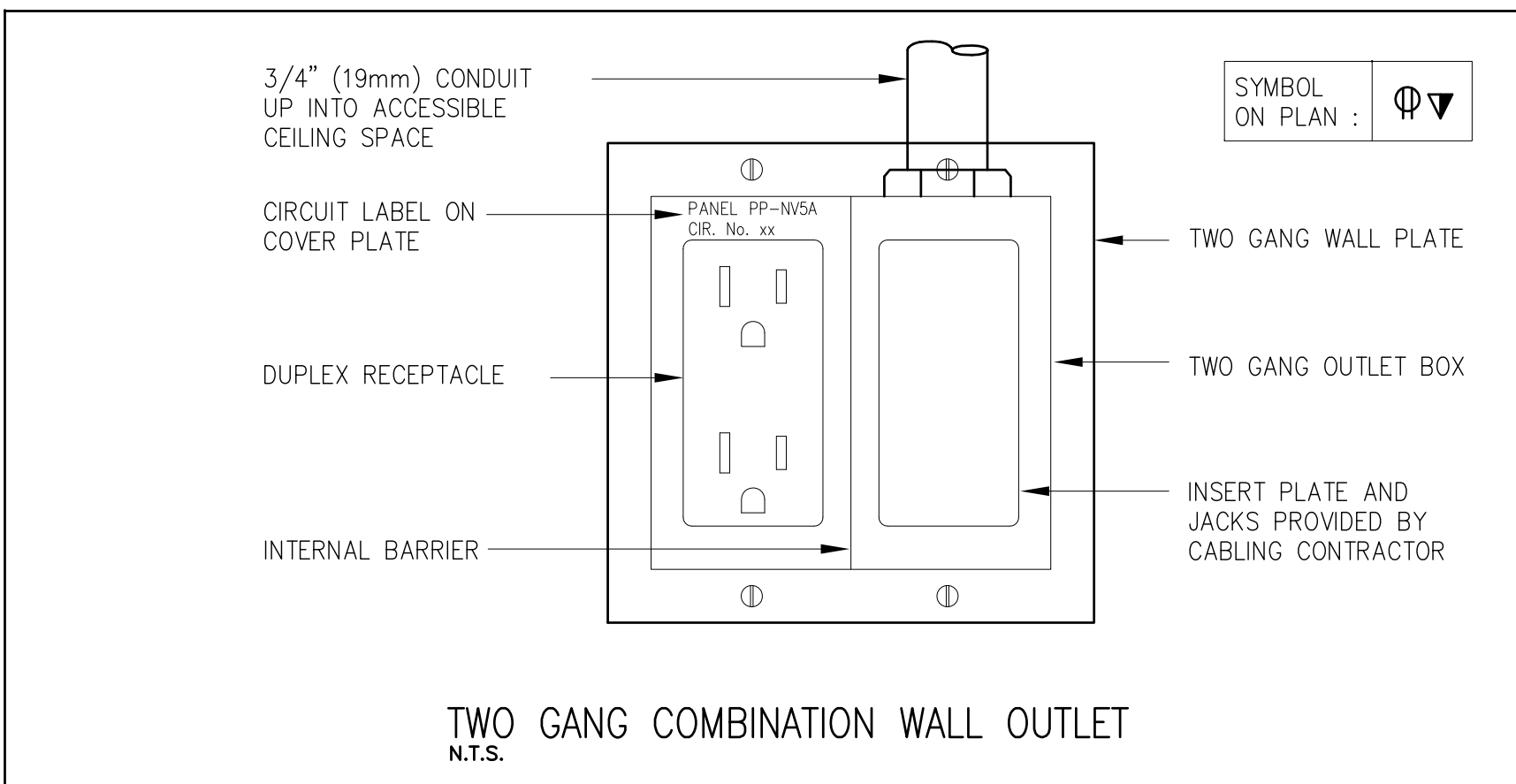
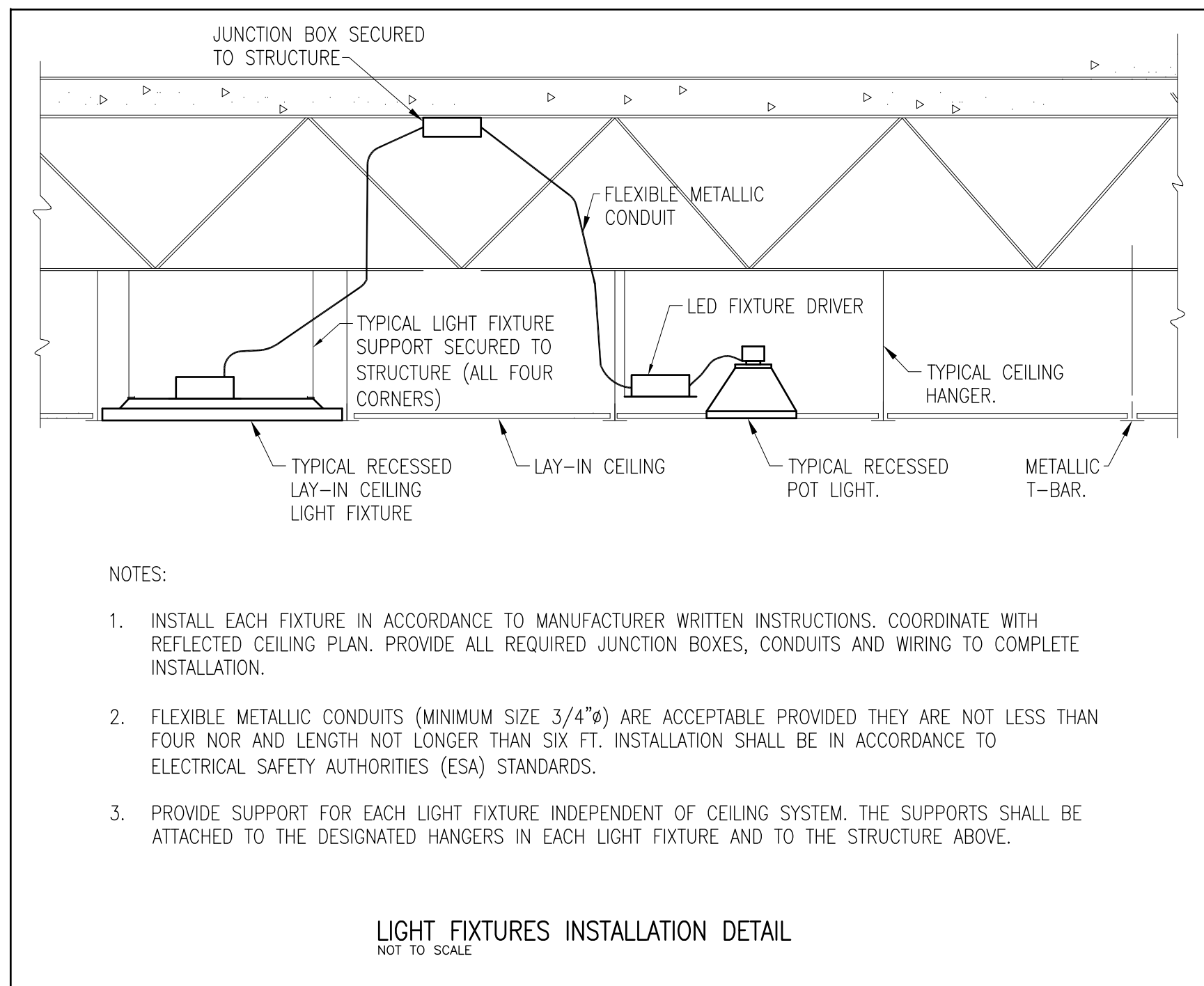
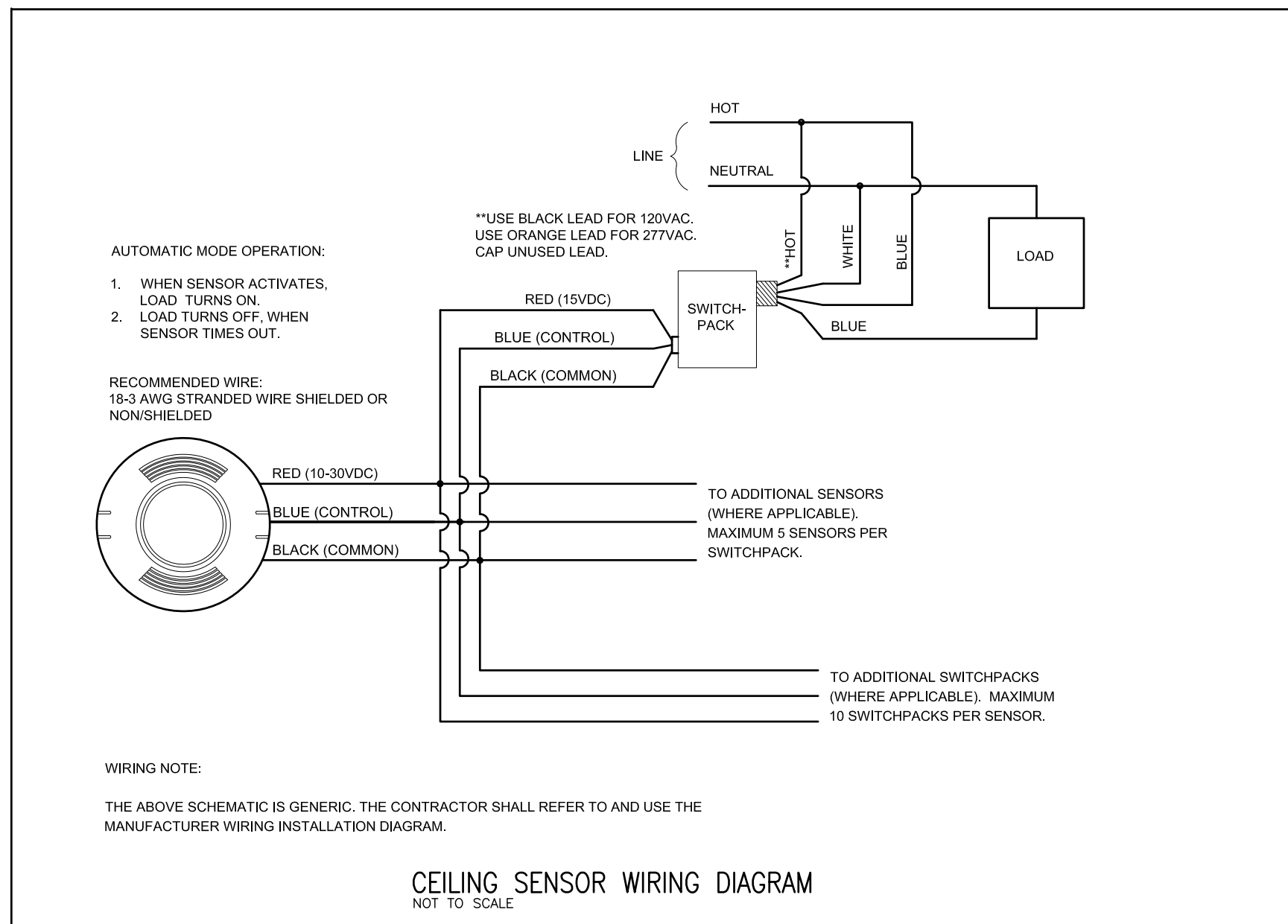
WESTDALE SECONDARY SCHOOL – PHASE II
HAMILTON – WENTWORTH DISTRICT SCHOOL BOARD
700 MAIN STREET WEST
HAMILTON, ONTARIO

DRAWN NAME: PARTIAL FIRST FLOOR PLAN ELECTRICAL	
DRAWN BY: D.A.	CHECKED BY: N.S.
DATE: NOVEMBER 2024	JOB No.: 24-107
SCALE: 1/4" = 1'-0"	SHEET No.: E1.03

PARTIAL FIRST FLOOR PLAN – ELECTRICAL
SCALE: 1/4" = 1' - 0"



PLOT SCALE 1=1



LIGHT FIXTURES SCHEDULE													
TAG	MAKE, MODEL AND DESCRIPTION	ELECTRICAL			SPECIFICATION FEATURES				MOUNTING			CEILING TYPE	
		VOLTS	PH	HZ	CCT	CRI	WATTS	LM/W	DIMMING	SURFACE	SUSPENDED	RECESSED	T-BAR
LF-1	LED LIGHT FIXTURE SIZE 2'x4', FLAT PANEL, RECESSED IN GYPSUM WALL BOARD CEILING. LITHONIA MODEL CPX-2X4-AL08-SW7, DRIVER, 10KV SURGE PROTECTION, IC/NON/C RATED, TESTED TO TM21 STANDARDS, MOUNTING KIT, FRAME BOX, DLC, CSA AND ULC APPROVED. EACH FIXTURE SHALL BE COMPLETE WITH 0-10VDC DIMMING DRIVER (MINIMUM DIMMING 1%) AND ALL REQUIRED ACCESSORIES TO INSTALL IN PLACE. REFER TO NOTES BELOW.	120	1	60	4000K	80	49	●			●		●
LF-2	LED LIGHT FIXTURE SIZE 2'x4', FLAT PANEL, RECESSED IN LAY-IN TILE CEILING. LITHONIA MODEL CPY-2X4-AL08-SW7, DRIVER, 10KV SURGE PROTECTION, IC/NON/C RATED, TESTED TO TM21 STANDARDS, CEILING MOUNTING KIT, FRAME BOX, DLC, CSA AND ULC APPROVED. EACH FIXTURE SHALL BE COMPLETE WITH 0-10VDC DIMMING DRIVER (MINIMUM DIMMING 1%) AND ALL REQUIRED ACCESSORIES TO INSTALL IN PLACE. REFER TO NOTES BELOW.	120	1	60	4000K	80	49	●			●	●	●
LF-3	LED LIGHT FIXTURE SIZE 1'x4' FLAT PANEL, RECESSED IN GYPSUM WALL BOARD CEILING. LITHONIA CPX LED FIXTURE, DAMP LOCATION LISTED, BUILT-IN (INTEGRAL) DUAL TECHNOLOGY OCCUPANCY SENSOR, MOUNTING KIT, FRAME BOX, 583 LUMENS, DRIVER, 10KV SURGE PROTECTION, IC/NON/C RATED, TESTED TO TM21 STANDARDS, CSA AND ULC APPROVED. EACH FIXTURE SHALL BE COMPLETE WITH 0-10VDC DIMMING DRIVER (MINIMUM DIMMING 1%) AND AIRCRAFT SAFETY CABLE HANGING KIT.	120	1	60	4000K	80	36	●			●		●
LF-4	LED LIGHT FIXTURE SIZE 1'x4' FLAT PANEL, RECESSED IN DRYWALL CEILING. LITHONIA MODEL CPX-1X4-AL07-SW7, DAMP LOCATION LISTED, BUILT-IN (INTEGRAL PIR) OCCUPANCY SENSOR, MOUNTING KIT, FRAME BOX, 583 LUMENS, DRIVER, 10KV SURGE PROTECTION, IC/NON/C RATED, TESTED TO TM21 STANDARDS, SURFACE MOUNT KIT, CSA AND ULC APPROVED. EACH FIXTURE SHALL BE COMPLETE WITH 0-10VDC DIMMING DRIVER (MINIMUM DIMMING 1%) AND AIRCRAFT SAFETY CABLE HANGING KIT.	120	1	60	4000K	80	36	●			●		●
LF-5	LED LIGHT FIXTURE SIZE 1'x4' FLAT PANEL, RECESSED IN GYPSUM WALL BOARD CEILING. LITHONIA MODEL CPX-1X4-AL07-SW7, DAMP LOCATION LISTED, 583 LUMENS, DRIVER, 10KV SURGE PROTECTION, IC/NON/C RATED, TESTED TO TM21 STANDARDS, MOUNTING KIT, FRAME BOX, CSA AND ULC APPROVED. EACH FIXTURE SHALL BE COMPLETE WITH 0-10VDC DIMMING DRIVER (MINIMUM DIMMING 1%) AND AIRCRAFT SAFETY CABLE HANGING KIT.	120	1	60	4000K	80	36	●			●		●
LF-6	EMERGENCY LED LIGHT FIXTURE: STANPRO MODEL SRC1-12-24V6LA-WH/SO, 6W LED REMOTE HEAD, 507 LUMENS, SQUARE TRIM, WHITE FINISH, 12-24 VDC OPERATION, IP20 DAMP LOCATION RATED, COMPLETE WITH MOUNTING PLATE AND CSA APPROVAL. FIXTURE SHALL BE COMPATIBLE WITH THE AIMLITE EMERGENCY BATTERY UNIT AND OPERATE AS A REMOTE EMERGENCY HEAD. WIRE EACH REMOTE HEAD TO THE NEAREST EMERGENCY BATTERY UNIT AS SHOWN.	120	1	6	4000K	80	34				●		●
LF-7	LED LIGHT FIXTURE SIZE 1'x4' FLAT PANEL, SURFACE MOUNTED AT CEILING. LITHONIA MODEL CPX-1X4-AL07-SW7, 583 LUMENS, DRIVER, 10KV SURGE PROTECTION, IC/NON/C RATED, TESTED TO TM21 STANDARDS, SURFACE MOUNT KIT, FRAM BOX, SURFACE MOUNT FRAME, CSA AND ULC APPROVED. EACH FIXTURE SHALL BE COMPLETE WITH 0-10VDC DIMMING DRIVER (MINIMUM DIMMING 1%) AND AIRCRAFT SAFETY CABLE HANGING KIT.	120	1	60	4000K	80	34	●	●				●

LIGHT FIXTURES NOTES:

- REFER TO REFLECTED CEILING PLANS FOR LAYOUT AND NUMBER OF FIXTURES.
- ALL LIGHT FIXTURES SHALL BE CSA, ULC AND DLC APPROVED.
- PROVIDE 0-10VDC DIMMER DRIVER (MINIMUM DIMMING 1%) FOR EACH FIXTURE NOTED TO HAVE DIMMING FEATURE.
- REFER TO LATEST ARCHITECTURAL REFLECTED CEILING PLAN FOR COORDINATION OF LIGHTING LAYOUT AND CEILING TYPES.
- PROVIDE SAFETY CHAINS OR APPROVED SAFETY CABLES FOR EACH CEILING MOUNTED LIGHT FIXTURE.
- WIRE LIGHT FIXTURES TO POWER CIRCUITS AND CONTROLS.
- LIGHT FIXTURES SHALL HAVE 10 YEAR WARRANTY.
- THE LIGHT FIXTURES SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE TYPE, SIZE, DESCRIPTIONS, ACCESSORIES AND RATINGS IN THE LIGHT FIXTURE SCHEDULE, AS SOME MODEL NUMBERS MAY HAVE BEEN UPDATED BY THE MANUFACTURER.
- THE CONTRACTOR SHALL REVIEW THE LATEST ARCHITECTURAL REFLECTED CEILING PLAN TO DETERMINE THE TYPE OF DROP CEILING AND ANY REQUIRED FIXTURE FRAMING PRIOR TO INSTALLATION OF ALL FIXTURES.
- THE LIGHT FIXTURE SCHEDULE INCLUDES FIXTURES FOR THE FULL PROJECT. FIXTURES NOT USED IN THIS PHASE ARE SHOWN FOR REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY ALL FIXTURE LOCATIONS AND INSTALL ONLY THOSE IDENTIFIED ON THE DRAWINGS FOR THIS PHASE.

LEGEND AND DEVICES SPECIFICATIONS

- EMERGENCY LIGHTING WALL MOUNTED TWO LED LAMPHEADS, 12V. AIMLITE OR EQUAL.**
- EMERGENCY LIGHTING WALL MOUNTED SINGLE LED LAMPHEAD, 12V. AIMLITE OR EQUAL.**
- EMERGENCY LIGHTING CEILING MOUNTED DOUBLE LED LAMPHEAD, 12V. AIMLITE OR EQUAL.**
- EXIT SIGN AT CEILING WITH DIRECTIONAL ARROW. AIMLITE OR APPROVED EQUAL (RUNNING MAN) MODEL RPT EDELIT**
- COMBINATION EXIT SIGN (RUNNING MAN) AND EMERGENCY LIGHTS. AIMLITE OR EQUAL, DURABLE 18 GAUGE STEEL, COMBINATION BATTERY UNIT, EXIT SIGN AND TWO 6W LED EMERGENCY LIGHTS, 12V, SLIM PROFILE, STEEL BOX, 144 W. MOMENTARY PUSH BUTTON TEST SWITCH, PILOT LED, CURRENT LIMITED CHARGER AND SEALED LEAD ACID BATTERY. UNIT SHALL BE CSA APPROVED. 'BU' DENOTES BATTERY UNIT.**
- COMBINATION EXIT SIGN (RUNNING MAN) AND BATTERY UNIT. AIMLITE OR EQUAL BATTERY UNIT, DURABLE 18 GAUGE STEEL, 120V, 144W, 12 VDC SLIM PROFILE, MOMENTARY PUSH BUTTON TEST SWITCH, PILOT LED, CURRENT LIMITED CHARGER AND SEALED LEAD ACID BATTERY. UNIT SHALL BE CSA APPROVED. WIRE EACH UNIT TO DEDICATED BREAKER IN NEAREST POWER PANEL.**
- BATTERY UNIT: AIMLITE OR EQUAL BATTERY UNIT, DURABLE 18 GAUGE STEEL, 120V, 144W, 12 VDC SLIM PROFILE, MOMENTARY PUSH BUTTON TEST SWITCH, PILOT LED, CURRENT LIMITED CHARGER AND SEALED LEAD ACID BATTERY. UNIT SHALL BE CSA APPROVED. WIRE EACH UNIT TO DEDICATED BREAKER IN NEAREST POWER PANEL. PROVIDE LOW VOLTAGE WIRING TO EACH REMOTE EMERGENCY LIGHT.**
- RECESSED REMOTE EMERGENCY LIGHT FIXTURE. REFER TO LIGHT FIXTURES SCHEDULE.**
- PROVIDE SPECIFICATION GRADE RECEPTACLE LEVITON DUPLEX 120V, 15A. PROVIDE BACK BOX RECESSED IN WALL, STAINLESS STEEL COVER PLATE, CONDUITS AND WIRING TO POWER PANEL. LABEL EACH RECEPTACLE (BLACK ON TRANSPARENT LABEL TAPE) INDICATING POWER PANEL AND CIRCUIT BREAKER NUMBER. ALL WIRING SHALL BE IN 3/4" EMT CONDUITS.**
- 'HL' DENOTES RECEPTACLE AT HIGH LEVEL FOR EMERGENCY LIGHTING UNIT // TV // MONITOR.**
- 'AC' DENOTES ABOVE COUNTER (COORDINATE WITH ARCHITECTURAL AND INTERIOR DESIGN DRAWINGS.)**
- 'GFI' GROUND FAULT CIRCUIT INTERRUPT RECEPTACLE.**
- 120 VOLT, 15A SPECIFICATION GRADE SINGLE SWITCH COMPLETE WITH RECESSED BACKBOX AND STAINLESS STEEL COVER PLATE. WIRE TO LIGHT FIXTURES AS SHOWN. ALL WIRING SHALL BE IN EMT CONDUITS.**
- '3' DENOTES THREE WAY LIGHT SWITCH**
- 'D' DENOTES DIMMER SWITCH**
- 'OS' DENOTES SWITCH WITH OCCUPANCY SENSOR**
- SPECIFICATION GRADE RECEPTACLE, SPUT CIRCUIT, LEVITON DUPLEX 120V, 15A. PROVIDE BACK BOX RECESSED IN WALL, STAINLESS STEEL COVER PLATE, CONDUITS AND WIRING TO POWER PANEL. LABEL EACH RECEPTACLE (BLACK ON TRANSPARENT LABEL TAPE) INDICATING POWER PANEL AND CIRCUIT BREAKER NUMBER. ALL WIRING SHALL BE IN 3/4" EMT CONDUITS.**
- DATA OUTLET. PROVIDE BACK BOX WITH 3/4" EMT CONDUIT AND PULL STRING UP TO CEILING SPACE. WIRING BY THE INFORMATION TECHNOLOGY (IT) TEAM UNLESS OTHERWISE NOTED.**
- TELEPHONE OUTLET. PROVIDE BACK BOX WITH 3/4" EMT CONDUIT WITH PULL STRING UP TO CEILING SPACE.**
- PUBLIC ANNUNCIATOR**
- SPEAKER - PUBLIC ANNUNCIATOR**
- EXHAUST FAN, FRACTIONAL HORSE POWER, SUPPLIED BY MECHANICAL, POWER WIRING TO PANEL AND TOGGLE ON/OFF SWITCH (IF REQUIRED) SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR.**
- HARD WIRED POWER CONNECTION TO EQUIPMENT COMPLETE WITH MANUAL DISCONNECT SWITCH RATED PER EQUIPMENT SPECIFICATION. WP - DENOTES WEATHER PROOF HARDWARE**
- HARD WIRED POWER CONNECTION TO EQUIPMENT. REVIEW SHOP DRAWINGS AND COORDINATE WITH OTHER TRADES FOR EQUIPMENT SPECIFICATION.**
- WALL MOUNTED HORN / STROBE COMBINATION UNIT. SPECTRALERT ADVANCE AUDIBLE VISIBLE NOTIFICATION MODEL HWA, WHITE, 85 dBA AT 10 FT (ULC REVERBERANT) AND COMPLETE WITH MOUNTING FRAME AND JUNCTION BOX. PROVIDE BACK BOX AND ALL REQUIRED WIRING.**
- WALL MOUNTED HORN UNIT. SPECTRALERT ADVANCE AUDIBLE VISIBLE NOTIFICATION HORN, 85 dBA AT 10 FT (ULC REVERBERANT) AND COMPLETE WITH MOUNTING FRAME AND JUNCTION BOX. PROVIDE BACK BOX AND ALL REQUIRED WIRING.**
- WALL MOUNTED FIRE ALARM PULL STATION (MANUAL INITIATION DEVICE)**
- HIGH BAY CEILING 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 BRACKETS TO SECURE EACH SENSOR IN PLACE.**
- CEILING MOUNTED SMOKE ALERT DETECTOR, SIMPLEX IONIZATION TYPE BASE SMOKE DETECTOR SERIES 4098 AND/OR RELAY BASE (PHOTO ELECTRIC). PROVIDE BACK BOX AND SUPPORT BRIDGE.**
- CEILING MOUNTED HEAT DETECTOR, SIMPLEX COMBINATION 135°F (57°C) FIXED TEMPERATURE AND 15°F (8°C) PER MINUTE RATE-OF-RISE HEAT DETECTOR. PROVIDE BACK BOX AND SUPPORT BRIDGE.**
- CEILING MOUNTED MOTION SENSOR SWITCH, DUAL TECHNOLOGY, ULTRASONIC AND INFRARED TYPE FOR LIGHTING CONTROL. WATSTOPPER OR EQUAL MODEL LMD CATALOGUE No. LMDC-100, 24VDC/VAC COMPLETE WITH LEGRAND 87-250 POWER PACK. WIRE TO LIGHT FIXTURES AS SHOWN. PROVIDE FOR EACH SENSOR BACK BOX. PROVIDE FOR EACH SENSOR SUPPORT BRIDGE FOR LAY-IN TILE CEILING INSTALLATION.**
- CEILING MOUNTED HORN / STROBE COMBINATION UNIT. SPECTRALERT ADVANCE MODEL SPC-LENS RC, WHITE, 85 dBA AT 10 FT (ULC REVERBERANT), THREE POSITION SWITCH, AND COMPLETE WITH MOUNTING FRAME AND JUNCTION BOX. PROVIDE BACK BOX AND ALL REQUIRED WIRING.**
- CEILING MOUNTED FIRE ALARM HORN UNIT, SIMPLEX OR APPROVED EQUAL WHITE, 85 dBA AT 10 FT (ULC REVERBERANT) AND COMPLETE WITH MOUNTING FRAME. PROVIDE JUNCTION BOX AND ALL REQUIRED WIRING. CONNECT TO EXISTING FIRE ALARM SYSTEM.**
- PUBLIC ADDRESS SPEAKER RECESSED AT CEILING. JBL MODEL CSS8008 OR APPROVED EQUAL, 15-WATTS, 8" ROUND, 120 DEGREES CONICAL COVERAGE, RECESSED IN CEILING. REVIEW EXISTING SYSTEM FOR COMPATIBILITY BEFORE ORDERING THE UNITS. PROVIDE EACH UNIT COMPLETE WITH ALL REQUIRED SUPPORT BRACKETS, BACK BOX, WIRES AND ACCESSORIES (PARTS) TO COMPLETE INSTALLATION. WIRE TO EXITING PUBLIC ANNUNCIATION SYSTEM.**
- HUBBELL DAY LIGHT PHOTOCELL SENSOR CEILING MOUNTED. WIRE TO LIGHT FIXTURES AS SHOWN AND TO OVERRIDE MANUAL SWITCHES.**

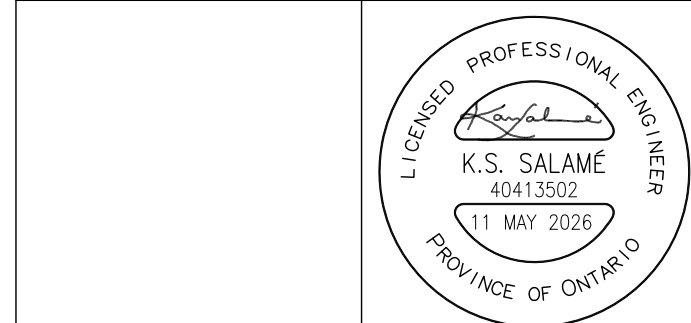
EMERGENCY LIGHTING POWER AND TESTING NOTE:

ELECTRICAL CONTRACTOR SHALL PROVIDE A DEDICATED CIRCUIT BREAKER FOR THE EMERGENCY LIGHTS AND EXIST SIGNS. TEST ALL EMERGENCY LIGHTS AND PROVIDE A LETTER CERTIFYING THAT ALL EMERGENCY LAMPS WERE ON 100% FOR A DURATION OF 30 MINUTES TIMED AFTER CIRCUIT BREAKER IS TURNED OFF. PROVIDE TEST CERTIFICATE.

ABBREVIATIONS

E	EXISTING TO REMAIN.	R	RELOCATE EXISTING UNIT/DEVICE.
N	PROVIDE NEW UNIT/DEVICE.	CTE	CONNECT TO EXISTING
D	DISCONNECT AND REMOVE.	RE	REPLACE EXISTING UNIT/DEVICE

- GENERAL DEMOLITION NOTES**
- DISCONNECT AND RELOCATE EXISTING EQUIPMENT, DISCONNECTS, POWER PANEL, SWITCHES, CONDUITS, JUNCTION BOXES, DEVICES AND SYSTEMS AS NOTED AND REQUIRED. REMOVE ALL REDUNDANT CONDUITS AND WIRING BACK TO SOURCE. MAKE SAFE ALL EXISTING POWER CIRCUITS.
 - ALL MATERIALS 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.
 - ELECTRICAL DEMOLITION SHALL BE DONE SUCH THAT NO DAMAGE TO EXISTING WALLS AND/OR FLOORS.
 - EXISTING SYSTEMS AND FACILITIES SHALL NOT BE USED UNLESS ARRANGED FOR AND APPROVED BY OWNER.
 - SEAL ALL FLOOR AND WALL OPENINGS RESULTED FROM REMOVAL OF CONDUITS USING APPROVAL FIRE RESISTANT RATING SEALANT.
 - PROVIDE ALL REQUIRED CORE DRILLING AND OPENINGS FOR NEW CONDUITS AND WIRES. COORDINATE ON SITE AND OBTAIN APPROVAL BEFORE COMMENCING WORK.



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 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, DRIVERS, 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.

THE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS NOTED ON THE TITLE BLOCKS AS 'ISSUED FOR CONSTRUCTION'

THE INFORMATION CONTAINED WITHIN THE DRAWINGS IS INTENDED TO PROVIDE DESIGN AND BASIC CONSTRUCTION DETAILING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO APPLY DETAILS AND PRACTICES WHICH WILL RESULT IN A QUALITY ASSURANCE AND FULLY FUNCTIONING SYSTEMS.

HWDSB

5.		
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1.	FOR TENDER	11 MAY 2026
No.	DESCRIPTION	DATE

SHELLARD BUILDING SYSTEMS LTD.

1684 SHELLARD SIDE ROAD
CAMBRIDGE, ONTARIO
N1R 5S7

shellard@consultant.com
226 606 6542

WESTLAD SECONDARY SCHOOL - PHASE II HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD

700 MAIN STREET WEST
HAMILTON, ONTARIO

DRAWN NAME: **DETAILS ELECTRICAL**

DRAWN BY: D.A.	CHECKED BY: N.S.
DATE: NOVEMBER 2024	JOB No.: 24-107
SCALE: NOT TO SCALE	SHEET No.: E3.01

MECHANICAL NOTES AND SPECIFICATIONS

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
- THE SPECIFIED ITEMS OUTLINED IN THIS DOCUMENT ARE INTENDED TO COVER A BROAD RANGE OF MECHANICAL EQUIPMENT, DEVICES AND SYSTEMS. SOME SPECIFICATION ITEMS MAY NOT BE APPLICABLE AND THE CONTRACTOR SHALL IDENTIFY AND APPLY ONLY THE RELEVANT SPECIFICATIONS.
- PAY AND OBTAIN ALL REQUIRED PERMITS, FEES, LICENSES, CERTIFICATE OF INSPECTIONS, ETC. PROVIDE AND SUBMIT DRAWINGS TO THE AUTHORITIES IF REQUIRED.
- DESIGN DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH APPLICABLE BUILDING CODES, STANDARDS, AND LOCAL BY-LAWS. HOWEVER, THE DRAWINGS MAY NOT NECESSARILY ILLUSTRATE ALL REQUIRED ACCESSORIES, FITTINGS, DEVICES, OR INSTALLATION DETAILS NEEDED TO FULLY CONFORM TO GOVERNING STANDARDS. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPLETE COMPLIANCE WITH THE INTENT AND DETAILED REQUIREMENTS OF ALL APPLICABLE CODES, STANDARDS, 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.
- WHERE THE TERM "PROVIDE" IS USED, IT MEANS SUPPLY AND INSTALL.

HVAC 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.

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 CANSTRUT 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.

ALTERATIONS AND RELOCATIONS

- THE OWNER AND/OR ENGINEER RESERVES THE RIGHT TO ALTER THE LOCATION OF ANY MECHANICAL UNIT, EQUIPMENT, DEVICES, DUCTS, PIPES, OR GRILLE/DIFFUSER DURING CONSTRUCTION AT NO EXTRA COST, PROVIDED THAT THE REQUEST IS MADE BEFORE THE COMMENCEMENT OF ROUGH-IN WORK AND THE REQUESTED CHANGES ARE WITHIN A 3-METER RADIUS. THE REQUESTED REVISIONS AND ADJUSTMENTS SHALL BE INTEGRATED INTO THE CONSTRUCTION PROCESS WITHOUT IMPACTING THE OVERALL PROJECT TIMELINE OR BUDGET. ANY REQUEST FOR ALTERATION OR RELOCATION WILL BE COMMUNICATED IN WRITING TO THE CONSTRUCTION TEAM SUPERVISOR.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES TO AVOID ANY INTERFERENCES, CONFLICTS OR DISRUPTIONS IN THE CONSTRUCTION SCHEDULE.

UNITS AND EQUIPMENT

- SUPPLY AND INSTALL MECHANICAL UNITS, EQUIPMENT AND SYSTEM AS SHOWN AND NOTED.
- FAN EQUIPMENT (WHERE APPLICABLE):
 - PROVIDE FANS WHERE SHOWN AND NOTED ON DRAWINGS.
 - REFER TO SCHEDULE ON DRAWINGS FOR DETAILS.
 - EACH FAN SHALL BE CSA 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 A.S.H.R.A.E. GUIDE AND SMACNA STANDARDS UNLESS NOTED OTHERWISE HEREIN. APPLY CROSS-BREAKING TO SHEET METAL BETWEEN THE STANDING SEAMS OR REINFORCING ANGLES. CENTRE OF CROSSBREAK 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 100 PA. CONSTRUCT ALL CURB CAPS, ETC., OF GALVANIZED STEEL SHEETS WHICH ARE FREE FROM BLISTERS, SLIVERS, PITS, IMPERFECTLY 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 KERR HUNT SLIDE GATE TYPE 'B'. DAMPERS, HOUSINGS, AND METHOD OF INSTALLATION SHALL HAVE 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-PAINTED AND COMPLETE WITH INTEGRAL BALANCING DAMPER. GRILLES AND REGISTERS SHALL BE OF ALUMINUM CONSTRUCTION (EXCEPT WHERE NOTED) WITH BAKED WHITE ENAMEL FINISH, EXCEPT IN WALLS WHERE PRIME COATED FINISH SHALL BE SUPPLIED. CHECK LATEST ROOM FINISH SCHEDULES PRIOR TO SUBMITTING SHOP DRAWINGS. CEILING DIFFUSERS SHALL BE COMPLETE WITH VOLUME CONTROL DAMPER. ALL DIFFUSERS, REGISTERS AND GRILLES SHALL HAVE GENERATED NOISE LEVELS EQUAL TO OR LOWER THAN UNITS SHOWN ON SCHEDULE, AND SHALL HAVE STANDARD FINISH WITH COLOURS AS SELECTED BY THE ARCHITECT. PROVIDE EACH EXHAUST AND RETURN AIR GRILLE C/W BALANCING DAMPER. COORDINATE EXACT LOCATION OF EACH GRILLE, REGISTER AND DIFFUSER ON SITE WITH LIGHTING AND REFLECTED CEILING PLAN. CUTTING AND PATCHING FOR GRILLES AND REGISTERS SHALL BE DONE BY THIS DIVISION.
- PROVIDE FLEXIBLE AIR DUCT (FC) 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 LINKAGE. MOTORIZED DAMPERS SHALL BE AS MANUFACTURED BY NAYLOR HART INDUSTRIES (OR EQUAL).
- PROVIDE LOUVRES WHERE SHOWN AND NOTED. COORDINATE WITH GENERAL CONTRACTOR FOR OPENINGS IN WALLS. LOUVRES SHALL BE E.H. PRICE LIMITED OR APPROVED EQUAL, 16 GAUGE GALVANIZED STEEL CONSTRUCTION, PRE-PAINTED TO COLOUR AS SELECTED BY ARCHITECT, COMPLETE WITH INSECT SCREENS, STORM VANES, DRAIN CHANNELS, AND MOUNTING FRAMES.

PIPE FREEZING REQUIREMENTS

- THE CONTRACTOR SHALL INCLUDE ALL THE COSTS REQUIRED TO PERFORM LOCALIZED PIPE FREEZING ON THE EXISTING PIPE MAINS AND BRANCHES AS NEEDED TO FACILITATE THE DEMOLITION AND THE MAKING OF NEW CONNECTIONS. THE WORK MUST BE CARRIED OUT SAFELY AND EFFICIENTLY, ENSURING MINIMAL DISRUPTION TO THE EXISTING SYSTEM.
- THE LOCATION OF EACH PIPE FREEZING AND QUANTITIES SHALL BE DETERMINE ON SITE AND APPLIED AS NECESSARY. THE CONTRACTOR SHALL PLAN TO INSTALL STUBS WITH VALVES FOR THE NEW CONNECTIONS DURING THE DEMOLITION PERIOD.
- PIPE FREEZING METHOD: USE LIQUID NITROGEN OR AN APPROVED DRY ICE METHOD. THE FREEZING METHOD SHALL BE SUITABLE FOR THE PIPE MATERIAL AND DIAMETER.
- SAFETY: PIPE FREEZING SHALL BE APPLIED USING APPROPRIATE PROTECTIVE GEAR. ENSURE THE WORK AREA IS PROPERLY VENTILATED. THE CONTRACTOR SHALL ADHERE TO SAFETY GUIDELINES AND THE WRITTEN SAFETY AND APPLICATION INSTRUCTIONS OF THE FREEZING EQUIPMENT.

INSULATION AND LABELS

- INSULATE ALL EXPOSED SUPPLY AIR AND RETURN AIR DUCTS USING MINIMUM 1" THICK FIBERGLASS, FOIL-FACED DUCT INSULATION. INSULATE ALL DUCTS AS NOTED ON THE DRAWINGS. SECURE ALL INSULATION JOINTS USING APPROVED INSULATION TAPES AND STRAPS. PROVIDE PVC JACKETING OVER INSULATION WHERE NOTED ON THE DRAWINGS.
- INSULATE DOMESTIC HOT AND COLD WATER PIPES USING 1" THICK FIBERGLASS PIPE INSULATION. TAPE ALL JOINTS USING MINIMUM 2" WIDE APPROVED INSULATION TAPE.
- INSULATE HOT WATER HEATING PIPES USING 2" THICK FIBERGLASS PIPE INSULATION. TAPE ALL JOINTS USING MINIMUM 2" WIDE APPROVED INSULATION TAPE.
- PROVIDE OVER EXPOSED PIPE INSULATION WHITE PVC JACKETING AND SEAL JOINTS TO APPROVAL. OVERLAP THE PVC JACKETING AND PROVIDE 2" PVC TAPE AT EACH JOINT. SEAL ALL JOINTS TO APPROVAL.
- VALVES AND FITTINGS SHALL HAVE MOLDED INSULATION AND PVC JACKETING.
- PROVIDE GALVANIZED SADDLES FOR EACH PIPE HANGER.
- LABEL ALL DUCTS AND PIPES AND PROVIDE ARROWS INDICATING FLOW DIRECTION.

RECORD DRAWINGS

- REFER TO THE FRONT END SPECIFICATIONS FOR THIS PROJECT FOR DETAILS ABOUT AS-BUILT DRAWINGS PREPARATION AND SUBMITTAL. PREPARE AND SUBMIT AS-BUILT DRAWINGS AS NOTED AND SPECIFIED.

FLOOR DRAIN (FD)

- SUPPLY AND INSTALL WATTS#FD-102-L, 6x6, FLOOR DRAIN - EPOXY COATED, CAST IRON BODY, REVERSIBLE FLASHING CLAMP WITH PRIMARY AND SECONDARY PEEPHOLES, TRAP PRIMER CONNECTION WITH PLUG, VANDAL PROOF, 3" (76 MM), NO HUB OUTLET. WATTS 6"x6" (150 mm x 150 mm) POLISHED BRONZE, HEAVY DUTY, SQUARE STRAINER.
- COORDINATE WITH GENERAL CONTRACTOR THE LOCATION AND ELEVATION OF EACH FLOOR DRAIN

CLEANOUT (CO)

- SUPPLY AND INSTALL WATTS CO-204-RX-4, 4" DIAMETER, ADJUSTABLE DUCTILE IRON TOP, EPOXY COATED, CAST IRON BODY, REMOVABLE TOP, GAS TIGHT, GASKETED BRASS CLEANOUT PLUG, 4" DIAMETER OUTLET, EXTRA HEAVY DUTY AND CASKETED BRASS PLUG.
- COORDINATE WITH GENERAL CONTRACTOR THE LOCATION AND ELEVATION OF EACH FLOOR CLEANOUT AND INSTALL FLUSH WITH FINISHED FLOOR. CORE DRILLING IN FLOOR BY THIS CONTRACTOR. PROVIDE FIRE RATED SEAL AT FLOOR.

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, FITTURES, 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.
 - PLUMBING FITTURES AND ALL REQUIRED PIPES, VALVES, FITTINGS...ETC.
 - FIRE SEAL AT RATED WALLS AND FLOORS.
 - INSULATION.
 - ALL REQUIRED CUTTING, CORE DRILLING AND PATCHING.
 - PIPE FREEZING AS REQUIRED FOR DEMOLITION AND NEW CONNECTIONS.
 - BUILDING AUTOMATION SYSTEM AND ALL REQUIRED CONTROL WIRING.
 - ARRANGING FOR INSPECTION BY LOCAL AUTHORITIES HAVING JURISDICTION.
 - TESTING, BALANCING 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, LOUVRES 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. CONTRACTS 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.

TESTING AND BALANCING

- TEST AND BALANCE SUPPLY AIRFLOW INCLUDING THE FOLLOWING:
 - EXISTING SUPPLY AIR SYSTEM IN THE BASEMENT MECHANICAL ROOM SERVING THE THREE FLOOR LEVELS AND THE BASEMENT LEVEL.
 - HOT WATER HEATING UNITS INCLUDING RADIATION PANELS.
 - EXISTING EXHAUST AIR FANS SERVING THE CHANGE ROOMS.
 - HOT WATER HEATING SYSTEM, INCLUDING THE ENTIRE ZONE SERVING THE CHANGE ROOMS AND EACH HEATING UNIT.
- THE TESTING AND BALANCING SHALL BE DONE FOR EACH SYSTEM SERVING THE RENOVATION AREAS AS A WHOLE AND NOT JUST THE RENOVATED ZONES. THE SYSTEM VOLUMES SHALL BE WITHIN 5% OF REQUIREMENTS SHOWN. ADJUST AND SET CIRCUIT BALANCING VALVES, DUCT BALANCING DAMPERS, FANS AND DRIVES TO GIVE THE SPECIFIED VOLUME FLOW RATES. THE BALANCING OF AIR AND WATER SYSTEMS SHALL BE DONE BY A BALANCING FIRM SPECIALIZING IN THIS WORK. CLEAN ALL EXISTING DUCT SYSTEMS AND REPLACE FILTERS 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 QUESTION PERIOD DEADLINE.
- 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 AND HEATING 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, 3.1.5.16 AND CSA B181.2. EXPOSED ABS PIPES ARE NOT PERMITTED. PROVIDE NON-COMBUSTIBLE PIPING WHERE PIPING IS EXPOSED.
- PLASTIC PIPES INSTALLED IN CEILING PLENUM SHALL BE SYSTEM XFR DW CERTIFIED TO CSA B181.2 AND ULC S102.2
- HOT WATER HEATING SUPPLY AND RETURN PIPES 2" DIAMETER AND UNDER SHALL BE COPPER TYPE "L".
- HOT WATER HEATING PIPES SHALL BE BLACK STEEL SCHEDULE 40. PIPE SIZES UP TO 2 1/2" SHALL HAVE HAVE THREADED FITTINGS. PIPES 3" AND LARGER SHALL HAVE FLANGED FITTINGS OR WELDED. TEST PIPING SYSTEM AT MINIMUM 150 PSI FOR 48 HOURS AND PROVIDE REPORT. THE TESTING SHALL BE WITNESSED BY THE OWNER'S REPRESENTATIVE. FLUSH AND CLEAN PIPING SYSTEM TO APPROVAL. PROVIDE TESTING AND FLUSHING REPORT.
- FLUSH AND PRESSURE TEST EACH PIPING SYSTEM BEFORE INSULATION IS APPLIED. SUBMIT TEST REPORTS.

MECHANICAL DEMOLITION SCOPE AND REQUIREMENTS

- DISCONNECT AND REMOVE ALL NOTED EQUIPMENT, PLUMBING FIXTURES, PIPES, DUCTS, HANGERS, SUPPORT BRACKETS, CONTROLS, WIRING, AND ALL ASSOCIATED ACCESSORIES AS REQUIRED TO FACILITATE INSTALLATION OF NEW MECHANICAL SYSTEMS.
- REVISE EXISTING PIPES AND DUCTS AS REQUIRED TO ACCOMMODATE NEW EQUIPMENT, FITTURES, AND LAYOUTS. REMOVE ASSOCIATED ACCESSORIES AND PIPING AS NECESSARY TO COMPLETE SYSTEM REVISIONS.
- REMOVE FROM SITE ALL DEMOLITION DEBRIS, OBSOLETE EQUIPMENT, AND ITEMS NOT BEING REUSED ON A DAILY BASIS. COORDINATE USE OF WASTE BINS WITH THE GENERAL CONTRACTOR.
- REVIEW THE CONSTRUCTION SCHEDULE AND COORDINATE ALL SHUTDOWNS AND REMOVALS. DO NOT DISCONNECT EQUIPMENT OR SHUT DOWN SYSTEMS WITHOUT PRIOR APPROVAL.
- PROTECT ALL EXISTING FIXTURES, EQUIPMENT, AND SYSTEMS THAT ARE TO REMAIN FROM DAMAGE DURING CONSTRUCTION.
- PERFORM ALL DEMOLITION WORK WITHOUT DAMAGING EXISTING WALLS, FLOORS, OR BUILDING FINISHES.
- EXISTING SYSTEMS AND FACILITIES SHALL NOT BE USED DURING CONSTRUCTION EXCEPT WHERE SPECIFICALLY APPROVED BY THE OWNER.
- MAINTAIN OPERATION OF EXISTING MECHANICAL, SANITARY, AND DOMESTIC WATER SYSTEMS. PROVIDE TEMPORARY ARRANGEMENTS AS REQUIRED TO KEEP SYSTEMS OPERATIONAL.
- INSULATE EXISTING DUCTS, PIPES, AND VALVES WHERE INSULATION IS DAMAGED OR REMOVED. INSULATE ALL NEW DOMESTIC WATER PIPING AND VALVES.

NAMEPLATES

- PROVIDE FOR EACH MECHANICAL UNIT LAMACOID NAMEPLATE SECURED MECHANICALLY TO THE UNIT CASING.
- LAMACOID NAMEPLATES SHALL BE CONSTRUCTED FROM 3-PLY PLASTIC ENGRAVING MATERIAL, BLACK WITH WHITE ENGRAVING, 3 MM THICK AND MINIMUM 10 MM HIGH LETTERING. THE NAMEPLATES SHOULD BE SUITABLE FOR BOTH INDOOR AND OUTDOOR USE.



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 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.

THE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS NOTED ON THE TITLE BLOCKS AS "ISSUED FOR CONSTRUCTION"

THE INFORMATION CONTAINED WITHIN THE DRAWINGS IS INTENDED TO PROVIDE DESIGN AND BASIC CONSTRUCTION DETAILS. IF IS THE CONTRACTOR'S RESPONSIBILITY TO APPLY DETAILS AND PRACTICES WHICH WILL RESULT IN A QUALITY ASSURANCE AND FULLY FUNCTIONING SYSTEMS.

HWDSB

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1.	FOR TENDER	11 MAY 2026
No.	DESCRIPTION	DATE

SHELLARD BUILDING SYSTEMS LTD.

1684 SHELLARD SIDE ROAD
 CAMBRIDGE, ONTARIO
 N1R 5S7

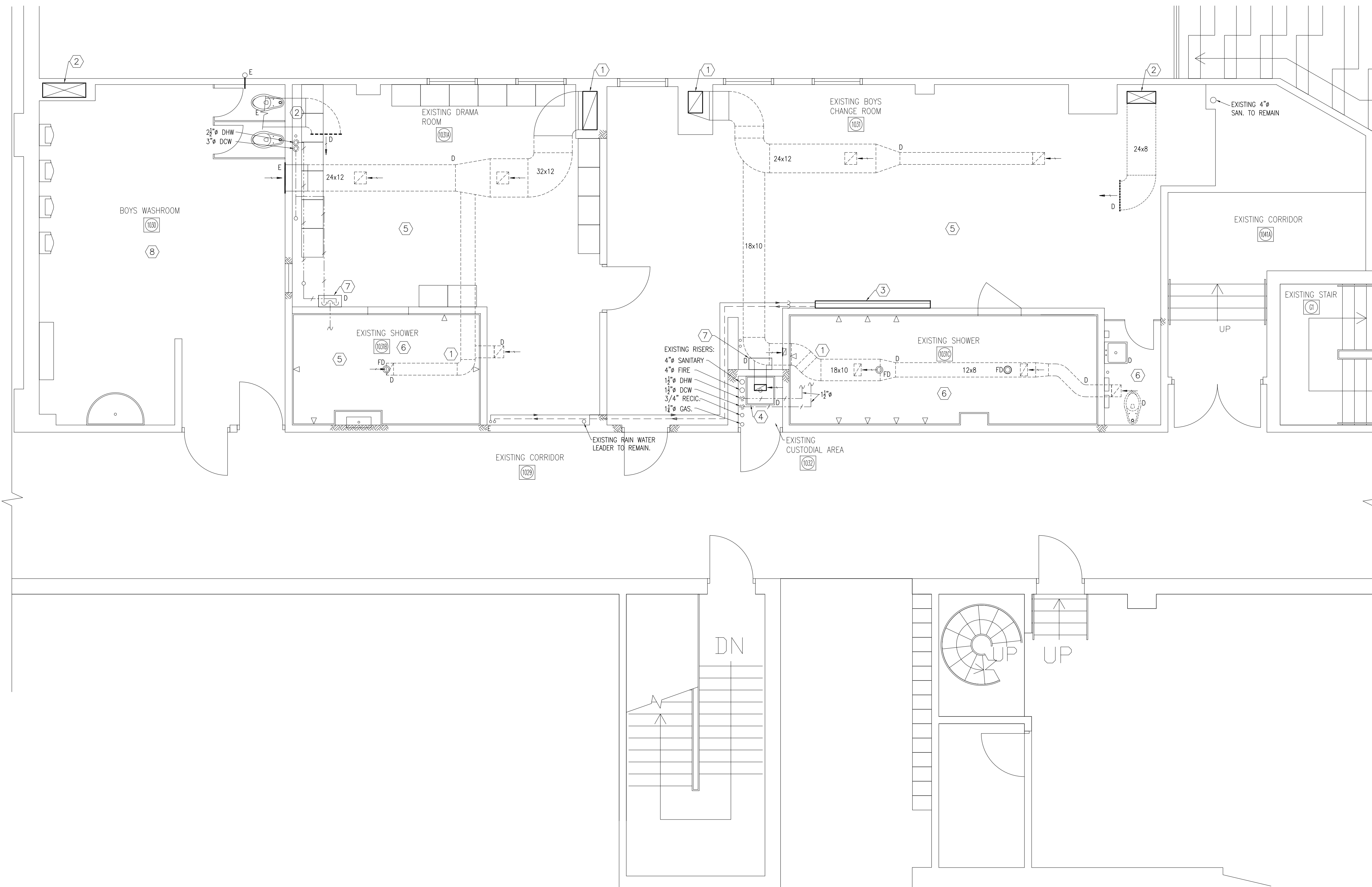
shellard@consultant.com
 226 606 6542

WESTDALE SECONDARY SCHOOL – PHASE II
 HAMILTON – WENTWORTH DISTRICT SCHOOL BOARD
 700 MAIN STREET WEST
 HAMILTON, ONTARIO

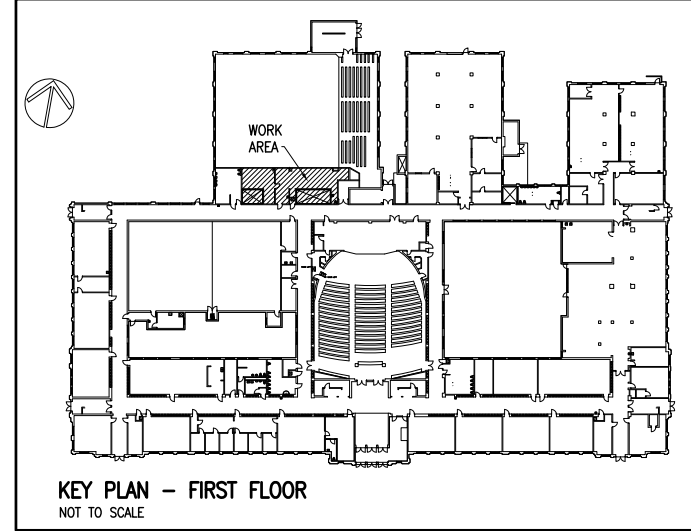
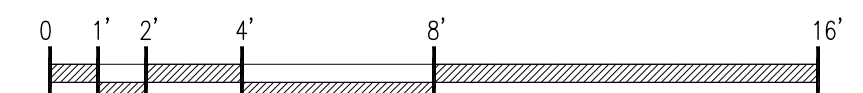
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DRAWN BY: D.A.	CHECKED BY: N.S.
DATE: NOVEMBER 2024	JOB No.: 24-107
SCALE: NOT TO SCALE	SHEET No.: MO.01

DRAWING NOTES:

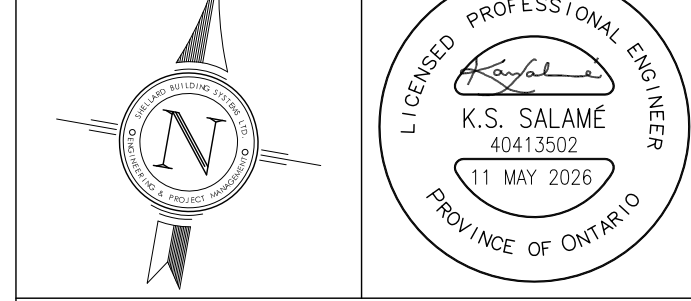
- ① EXISTING EXHAUST AIR DUCT RISER TO REMAIN. REMOVE ALL EXISTING HORIZONTAL DUCT RUNS COMPLETE, INCLUDING ASSOCIATED GRILLES, BRANCH DUCTS, FITTINGS, HANGERS, AND SUPPORTS BACK TO THE RISER CONNECTION. CLEAN THE EXISTING EXHAUST DUCT RISER USING A PROFESSIONAL DUCT CLEANING COMPANY. CLEANING SHALL INCLUDE ALL ACCESSIBLE SURFACES FROM THE LOWEST ACCESS POINT TO THE TOP OF THE RISER. UPON COMPLETION, SUBMIT A WRITTEN CLEANING REPORT SUMMARIZING METHODS USED, LOCATIONS CLEANED, BEFORE/AFTER CONDITIONS, PHOTOGRAPHS, AND ANY DEFICIENCIES REQUIRING CORRECTION.
- ② EXISTING SUPPLY AIR DUCT RISER TO REMAIN. REMOVE ALL EXISTING HORIZONTAL SUPPLY AIR DUCT RUNS COMPLETE, INCLUDING ASSOCIATED GRILLES/DIFFUSERS, BRANCH DUCTS, FITTINGS, HANGERS, AND SUPPORTS BACK TO THE RISER CONNECTION. CLEAN THE EXISTING SUPPLY AIR DUCT RISER USING A PROFESSIONAL DUCT CLEANING COMPANY. CLEANING SHALL INCLUDE ALL ACCESSIBLE SURFACES FROM THE LOWEST ACCESS POINT TO THE TOP OF THE RISER. UPON COMPLETION, SUBMIT A WRITTEN CLEANING REPORT SUMMARIZING METHODS USED, LOCATIONS CLEANED, BEFORE/AFTER CONDITIONS, PHOTOGRAPHS, AND ANY DEFICIENCIES REQUIRING CORRECTION.
- ③ DISCONNECT AND REMOVE THE EXISTING WALL MOUNTED HOT WATER HEATING UNIT, INCLUDING ALL ASSOCIATED PIPING, ENCLOSURES, BRACKETS, FITTINGS, VALVES, CONTROL WIRING AND CONTROL DEVICES. REMOVE ALL ABANDONED MATERIALS FROM SITE. CAP AND SECURE ALL EXISTING HOT WATER SUPPLY AND RETURN PIPE RISERS. THE MECHANICAL CONTRACTOR SHALL INCLUDE ALL REQUIRED WORK TO SHUT DOWN THE HEATING SYSTEM TO FACILITATE THE WORK AND RE-COMMISSION IT AT THE END OF EACH WORK PHASE (DEMOLITION/NEW CONNECTIONS). HEATING SYSTEM SHUTDOWN AND RE-COMMISSIONING SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND THE SCHEDULE APPROVED BEFORE COMMENCING WORK.
- ④ DISCONNECT AND REMOVE THE EXISTING MOP SINKS (IN JANITOR CLOSETS 1032 AND 1048) COMPLETE, INCLUDING THE FAUCET, TRAP, DOMESTIC COLD AND HOT WATER PIPING, DRAINAGE PIPING, AND ALL ASSOCIATED FITTINGS, SUPPORTS, AND ACCESSORIES BACK TO THE NEAREST CONNECTION POINT. REVISE AND EXTEND DOMESTIC WATER AND SANITARY DRAIN PIPING IN EACH CLOSET AS REQUIRED TO SUIT THE NEW MOP SINK LOCATION AND CONFIGURATION. PROVIDE ALL NEW VALVES, FITTINGS, TRAPS, SUPPORTS, AND TRANSITION COUPLINGS AS REQUIRED FOR A COMPLETE AND CODE-COMPLIANT INSTALLATION. REFER TO PIPE FREEZING REQUIREMENTS ON M0.01.
- ⑤ IDENTIFY THE RECENTLY INSTALLED SANITARY PIPING ROUGH-IN THROUGH THE FLOOR AND PROVIDE ALL REQUIRED TEMPORARY PROTECTION TO PREVENT DAMAGE DURING ONGOING CONSTRUCTION. PROTECTION SHALL INCLUDE, AS APPLICABLE, FRAMED GUARDS, PLYWOOD COVERS, HIGH VISIBILITY BARRIERS, AND ANY OTHER MEASURES NECESSARY TO MAINTAIN THE INTEGRITY OF THE ROUGH-IN. LABEL ALL EXPOSED PIPES, STUB-UPS, AND OPENINGS CLEARLY AND DURABLY SO THAT OTHER TRADES CAN IDENTIFY AND AVOID THE ROUGH-IN.
- ⑥ DISCONNECT AND REMOVE ALL EXISTING PLUMBING FIXTURES INCLUDING THE FOLLOWING:
 - WATER CLOSETS EACH COMPLETE WITH ASSOCIATED FLUSH VALVE, SANITARY AND WATER SUPPLY PIPES. CAP SANITARY DRAIN AT FLOOR LEVEL FLUSH WITH EXISTING FINISHED FLOOR USING BRONZE CLEANOUT CAP OR APPROVED EQUAL (SEE DETAIL ON THIS DRAWING).
 - LAVATORIES EACH COMPLETE WITH ASSOCIATED FAUCET, DOMESTIC HOT AND COLD WATER PIPES, SANITARY PIPES AND ALL ACCESSORIES. CAP SANITARY DRAIN AT FLOOR LEVEL FLUSH WITH EXISTING FINISHED FLOOR (SEE DETAIL ON THIS DRAWING).
 - ALL HOT AND COLD DOMESTIC WATER PIPES AND SANITARY PIPES BACK TO SOURCE AND CAP EXISTING TO REMAIN. DISCONNECT AND REMOVE ALL REDUNDANT AND ABSOLUTE HOT AND COLD DOMESTIC WATER PIPES AT SOURCE AND CAP EXISTING LIVE PIPE TO APPROVAL SUCH THAT NO STAGNANT WATER IN ANY PIPE (DEAD LEG PIPE SHALL NOT EXCEED 2 TIMES THE PIPE DIAMETER.) RE-INSULATE EXISTING DOMESTIC WATER PIPES WHERE INSULATION WAS REMOVED OR DAMAGED DURING DEMOLITION.
 - ALL EXISTING SHOWER UNITS COMPLETE WITH ALL ASSOCIATED SHOWER HEADS, PIPES, MIXING VALVE CABINET, VALVES, FITTINGS, PIPE INSULATION AND PIPE HANGERS. REMOVE PIPES BACK TO LIVE MAINS THAT ARE EXISTING TO REMAIN. CAP EACH PIPE AT MAIN TO APPROVAL. INSULATE ALL EXISTING PIPES IN THE RENOVATED AREA INCLUDING PIPE SECTIONS WHERE INSULATION WAS REMOVED OR DAMAGED.
 - EXISTING FLOOR DRAINS COMPLETE WITH ASSOCIATED SANITARY PIPES AND TRAP SEAL PRIMER PIPES.
- ⑦ DISCONNECT AND REMOVE EXISTING DOMESTIC HOT WATER MIXING VALVE CABINET COMPLETE WITH ALL ASSOCIATED VALVES, FITTINGS, PIPES, PIPE INSULATION AND PIPE HANGERS. REMOVE PIPES BACK TO LIVE MAINS THAT ARE TO REMAIN. CAP EACH PIPE AT MAIN TO APPROVAL. INSULATE ALL EXISTING PIPES IN THE RENOVATED AREA INCLUDING PIPE SECTIONS WHERE INSULATION WAS REMOVED OR DAMAGED. THE CONTRACTOR SHALL INCLUDE ALL THE COSTS REQUIRED TO PERFORM PIPE FREEZING ON THE EXISTING PIPE MAINS AND BRANCHES AS REQUIRED TO FACILITATE THE DEMOLITION AND THE MAKING NEW CONNECTIONS. REFER TO PIPE FREEZING REQUIREMENTS ON M0.01.
- ⑧ EXISTING HVAC AND PLUMBING SYSTEMS TO REMAIN.



PARTIAL FIRST FLOOR PLAN - MECHANICAL DEMOLITION
SCALE: 1/4" = 1' - 0"



KEY PLAN - FIRST FLOOR
NOT TO SCALE



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1.	FOR TENDER	11 MAY 2026
No.	DESCRIPTION	DATE

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

WESTDALE SECONDARY SCHOOL - PHASE II
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
700 MAIN STREET WEST
HAMILTON, ONTARIO

DRAWN NAME: PARTIAL FIRST FLOOR PLAN MECHANICAL - DEMOLITION	
DRAWN BY: D.A.	CHECKED BY: N.S.
DATE: NOVEMBER 2024	JOB No.: 24-107
SCALE: 1/4" = 1'-0"	SHEET No.: M1.01

DRAWING NOTES:

① SANITARY PIPES IN CEILING SPACE BELOW:

THE SANITARY PIPING IN THE CEILING SPACE BELOW IS EXISTING, NOT ACCESSIBLE, AND SHOWN FOR REFERENCE ONLY. AS-BUILT ROUTING MAY VARY FROM THE DIAGRAMMATIC LAYOUT SHOWN. SANITARY STUB-UPS THROUGH THE FLOOR ARE PROVIDED FOR CONNECTION TO NEW FIXTURES. THE CONTRACTOR SHALL USE THE EXISTING STUBS AND SHALL PROVIDE ALL REQUIRED FITTINGS, OFFSETS, AND TRANSITIONS AS NEEDED TO SUIT CONNECTION TO EACH PLUMBING FIXTURE. PROVIDE FIRESTOPPING AT ALL FLOOR PENETRATIONS IN ACCORDANCE WITH APPROVED FIRESTOP SYSTEMS. CONNECT NEW VENTS TO EXISTING VENT RISER.

② PROVIDE DELTA ELECTRONIC SHOWER CONTROL BOX (861108/861111 SERIES) INSTALLED IN THE CEILING SPACE AND PIPE TO THE RESPECTIVE SHOWER HEAD. THE CONTROL BOX SHALL INCLUDE THE THERMOSTATIC PRESSURE BALANCING MIXING VALVE, SLOW-CLOSING SOLENOID VALVE, BUILT-IN STOPS, HARD-WIRED CONTROLLER WITH FIELD-ADJUSTABLE TIMER, CONVERTER, AND STAINLESS STEEL MOUNTING BOX WITH COVER, COMPLETE WITH 1/2" HOT WATER INLET, 1/2" COLD WATER INLET, AND 1/2" TEMPERED WATER OUTLET. ALL COMPONENTS SHALL BE CSA APPROVED. PROVIDE REMOTE HARD-WIRED PUSH BUTTON DELTA 8601 FOR SHOWER ACTIVATION. REFER TO PLUMBING FIXTURE SCHEDULE ON M3.01. INSTALL THE CONTROL BOX IN THE CEILING SPACE WITH PROPER SERVICE ACCESS AND PROVIDE A 12"x12" LOCKABLE ACCESS PANEL IN THE CEILING BELOW. PROVIDE DOMESTIC HOT AND COLD WATER PIPING TO THE CONTROL BOX COMPLETE WITH ISOLATING VALVES. PIPE FROM THE CONTROL BOX TO THE SHOWER HEAD AND INSULATE ALL PIPING.

③ PROVIDE DELTA SHOWER TECK SH-3 FACTORY-ASSEMBLED ELECTRONIC SHOWER CONTROL BOX (DELTA 861107) INSTALLED RECESSED IN THE WALL. THE CONTROL BOX SHALL INCLUDE THE THERMOSTATIC PRESSURE BALANCING MIXING VALVE, SLOW-CLOSING SOLENOID VALVE, BUILT-IN STOPS, HARD-WIRED CONTROLLER WITH FIELD-ADJUSTABLE TIMER, CONVERTER, AND STAINLESS STEEL MOUNTING BOX WITH COVER, COMPLETE WITH 1/2" HOT WATER INLET, 1/2" COLD WATER INLET, AND 1/2" TEMPERED WATER OUTLET. ALL COMPONENTS SHALL BE CSA APPROVED. PROVIDE HARD-WIRED PUSH-BUTTON ELECTRONIC SHOWER CONTROL WITH ADJUSTABLE TEMPERATURE HANDLE (DELTA 860157) INSTALLED RECESSED IN THE WALL WITH STAINLESS STEEL COVER AND VANDAL-RESISTANT SCREWS. REFER TO PLUMBING FIXTURE SCHEDULE ON M3.01. PROVIDE DOMESTIC HOT AND COLD WATER PIPING TO THE CONTROL BOX COMPLETE WITH ISOLATING VALVES. PIPE FROM THE CONTROL BOX TO THE SHOWER HEAD AND INSULATE ALL PIPING. MAINTAIN PROPER SERVICE ACCESS TO THE CONTROL BOX AS REQUIRED BY THE MANUFACTURER. INSTALL ALL SH-3 COMPONENTS IN FULL COMPLIANCE WITH BARRIER FREE ACCESSIBILITY REQUIREMENTS (OBC 3.8 AND ICC/ANSI A117.1), INCLUDING CONTROL HEIGHT, REACH RANGE AND OPERATING FORCE.

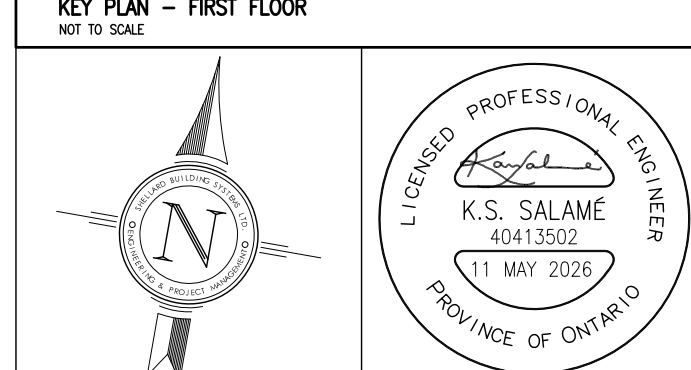
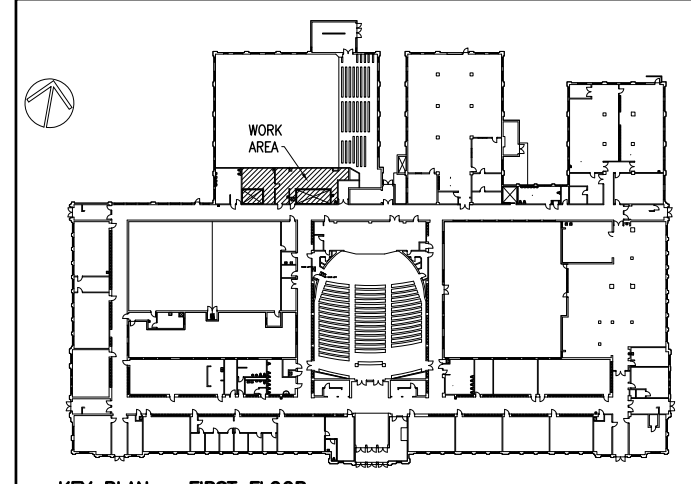
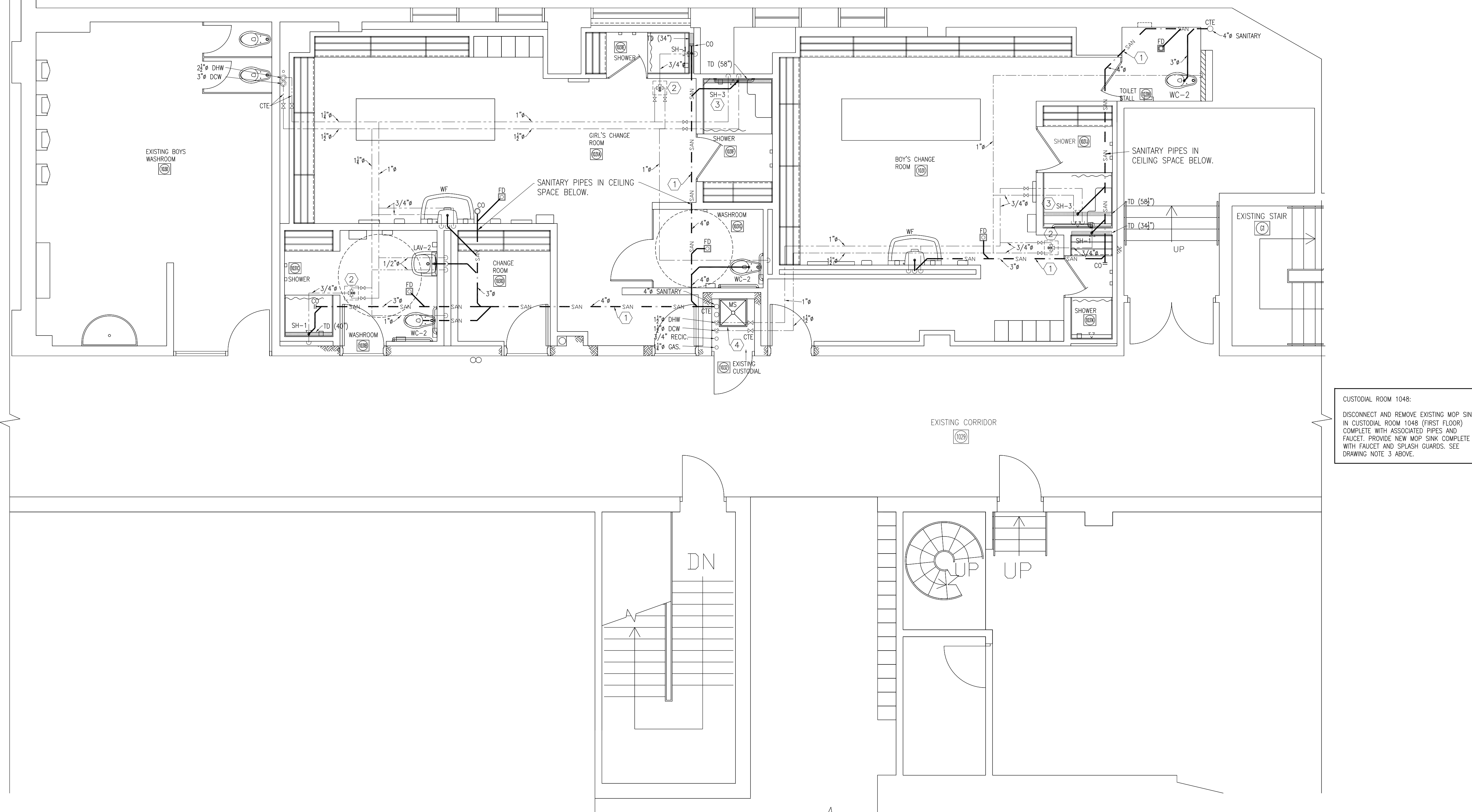
④ PROVIDE MOP SINK (MS) IN 1032 AND 1048 AND CONNECT EACH SINK TO EXISTING SANITARY, HOT AND COLD WATER PIPES. PROVIDE FAUCET AND MOP HANGER.

PLYWOOD BACKING:

- PROVIDE 3/4" RATE PLYWOOD ON THREE SIDES AROUND THE SINK.
- ENSURE THE PLYWOOD IS AT LEAST 24" HIGH ABOVE SINK.

STAINLESS STEEL SPLASH GUARDS:

- COVER THE PLYWOOD (INCLUDING EDGES) ON ALL THREE SIDES WITH 18-GAUGE STAINLESS STEEL SHEETS .
- SECURE THE STAINLESS STEEL SHEETS IN PLACE TO APPROVAL.
- SEAL WATERTIGHT BASE OF SINK AND AROUND EDGES.



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No.	DESCRIPTION	DATE

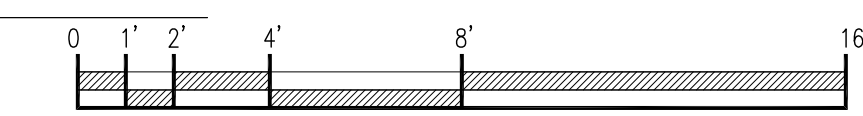
SHELLARD BUILDING SYSTEMS LTD.
 1684 SHELLARD SIDE ROAD
 CAMBRIDGE, ONTARIO
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 226 606 6542

WESTDALE SECONDARY SCHOOL - PHASE II
 HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
 700 MAIN STREET WEST
 HAMILTON, ONTARIO

DRAWN NAME:
**PARTIAL FIRST FLOOR PLAN
 MECHANICAL - PLUMBING**

DRAWN BY: D.A.	CHECKED BY: N.S.
DATE: NOVEMBER 2024	JOB No.: 24-107
SCALE: 1/4" = 1'-0"	SHEET No.: M1.02

PARTIAL FIRST FLOOR PLAN - PLUMBING
 SCALE: 1/4" = 1'-0"



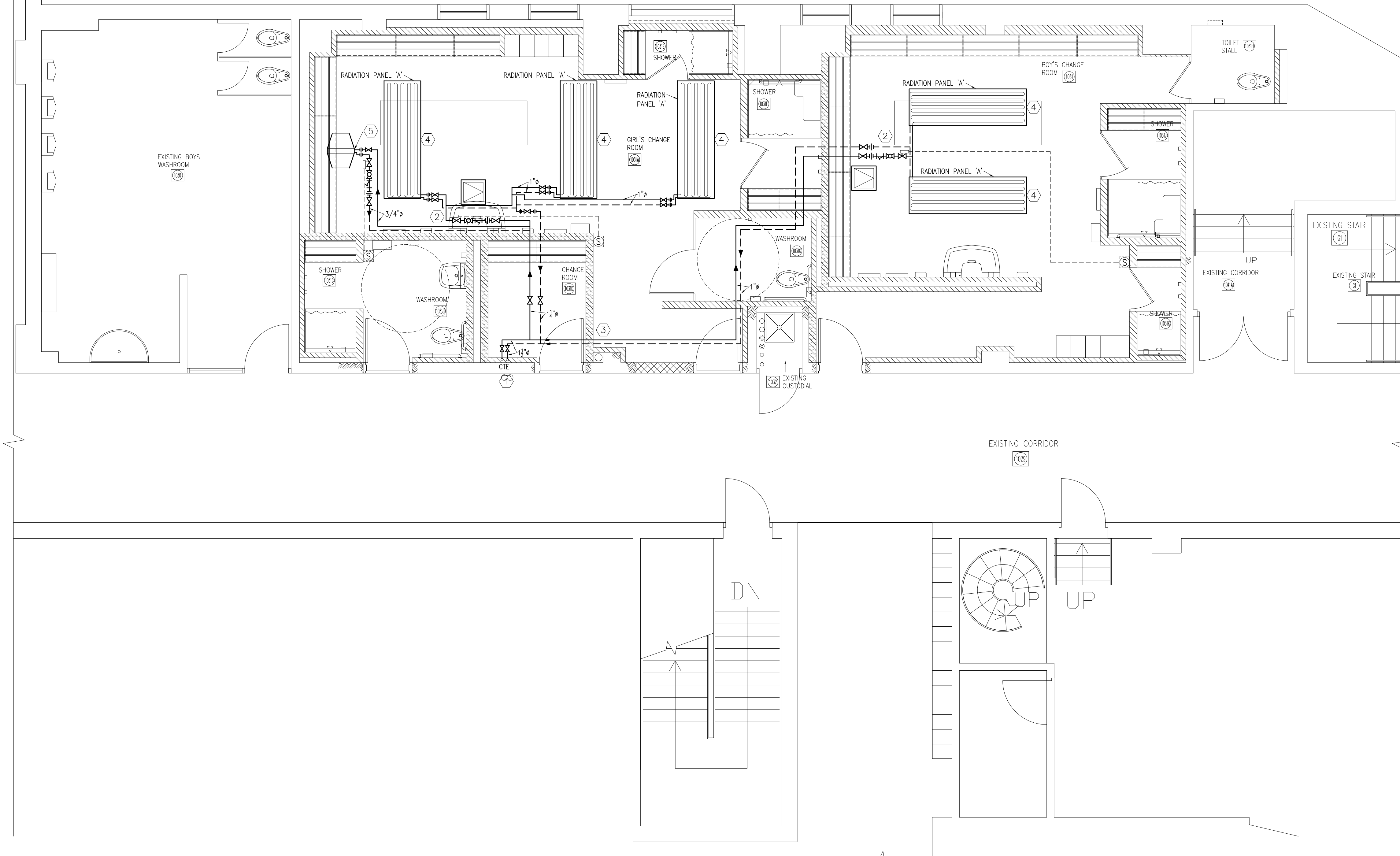
PLOT SCALE: 1"=1'

HEATING PIPING SYSTEM TREATMENT

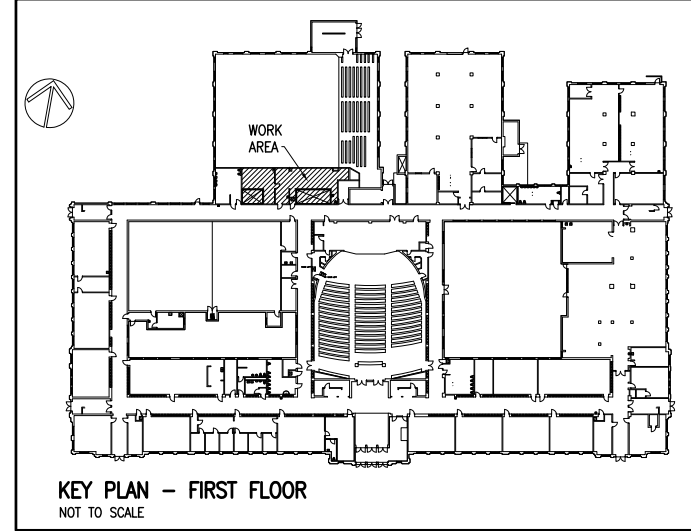
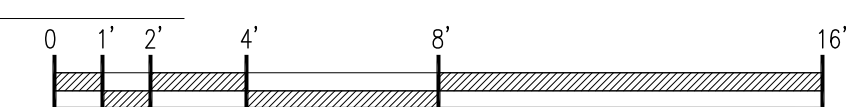
1. DRAIN AND REFILL THE HOT WATER HEATING SYSTEM AS REQUIRED TO COMPLETE THE WORK. FLUSH THE EXISTING HOT WATER HEATING SYSTEM USING INDUSTRY-STANDARD HYDRONIC CLEANING PRACTICES (CSA B214 AND ASHRAE GUIDELINE 12) TO REMOVE SEDIMENT, SCALE, SLUDGE, AND ACCUMULATED DEBRIS. PROVIDE AND INJECT ALL REQUIRED RUST INHIBITORS, CORROSION-CONTROL CHEMICALS, AND WATER TREATMENT ADDITIVES AS RECOMMENDED FOR CLOSED LOOP HEATING SYSTEMS.
2. ALL FLUSHING, CHEMICAL TREATMENT, AND FINAL WATER QUALITY ADJUSTMENTS SHALL BE PERFORMED BY AQUARIAN CHEMICALS UPON COMPLETION OF WORK ON THE EXISTING HEATING SYSTEM. SUBMIT A FINAL WATER TREATMENT REPORT CONFIRMING SYSTEM CONDITION, CHEMICAL LEVELS, AND COMPLIANCE WITH MANUFACTURER AND INDUSTRY REQUIREMENTS

DRAWING NOTES:

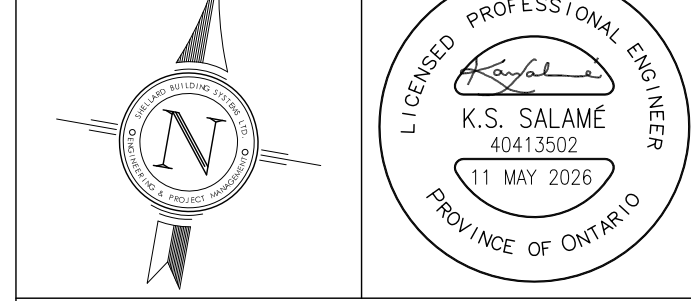
- 1 PROVIDE HOT WATER SUPPLY AND RETURN PIPES FROM EXISTING MAINS COMPLETE WITH ISOLATING VALVES. COORDINATE EXACT CONNECTION POINT AND ROUTING ON SITE. INSULATE PIPES USING 2" THICK FIBERGLASS PIPE INSULATION AND COVER EXPOSED SECTIONS WITH WHITE PVC COVERING. SEAL ALL PVC JOINTS AND APPLY 2" WIDE PVC TAPE. CORE DRILLING AND FIRE SEAL AT FLOORS AND WALL WALLS SHALL BE DONE BY THIS DIVISION. MARK LOCATION OF EACH CORE DRILL AND COORDINATE WITH GENERAL CONTRACTOR BEFORE PROCEEDING. ARRANGE WITH THE GENERAL CONTRACTOR TO SHUT DOWN HEATING SYSTEM WHEN REQUIRED TO MAKE NEW CONNECTIONS. SYSTEM SHUT DOWN AND RE-COMMISSIONING SHALL BE DONE BY THIS CONTRACTOR. APPROVAL FOR SCHEDULED SHUT DOWN SHALL BE IN PLACE BEFORE PROCEEDING. PROVIDE PIPE LABELS AND FLOW DIRECTION ARROWS.
- 2 COORDINATE LOCATION OF EACH CEILING RADIATION PANEL WITH OTHER TRADES INCLUDING LIGHTING. PROVIDE PIPES FLEXIBLE CONNECTIONS FOR EACH CEILING PANEL SUCH THAT IT CAN BE LIFTED TO ACCESS VALVES. INSTALL THE VALVES SUCH THAT THEY CAN BE ACCESSIBLE FOR SERVICE AND MAINTENANCE WHEN THE PANEL IS LIFTED AND POSITIONED INTO THE CEILING SPACE.
- 3 COORDINATE ON SITE ROUTING OF HEATING PIPES AND OFFSET/REVISE TO SUITE EXISTING SITE CONDITIONS. CORE DRILLING AND FIRE SEAL AT FLOORS AND WALL WALLS SHALL BE DONE BY THIS DIVISION. INSULATE PIPES USING 2" THICK FIBERGLASS PIPE INSULATION AND COVER EXPOSED SECTIONS OF PIPES WITH WHITE PVC COVERING. SEAL ALL PVC JOINTS AND APPLY 2" WIDE PVC TAPE. PROVIDE PIPE LABELS AND FLOW DIRECTION ARROWS.
- 4 COORDINATE ON-SITE WITH THE GENERAL CONTRACTOR TO PROVIDE THE REQUIRED OPENING IN THE SUSPENDED DRYWALL CEILING, SUITABLE FOR THE SIZE OF THE RADIATION PANEL AND COMPLETE WITH ADDITIONAL CEILING SUPPORT HANGERS. PROVIDE THE PANEL, COMPLETE WITH A FRAME FOR DRYWALL CEILING INSTALLATION. INSTALL VALVES IN THE CEILING SPACE SUCH THAT THEY ARE ACCESSIBLE AND REACHABLE FOR INSPECTION AND MAINTENANCE WHEN THE PANEL IS LIFTED FROM PLACE. REFER TO THE PIPING DETAIL AND SPECIFICATIONS ON DRAWING M3.02.
- 5 CONNECT HOT WATER HEATING SUPPLY AND RETURN TO THE REHEAT COIL. PROVIDE 2-WAY MODULATING CONTROL VALVE, CIRCUIT BALANCING VALVE, UNIONS, ISOLATION VALVES, Y-STRAINER WITH BLOWDOWN, DRAIN-DOWN VALVE, AND MANUAL AIR VENT WITH SHUTOFF. PROVIDE ALL REQUIRED FITTINGS, TRANSITIONS, AND SUPPORTS FOR A COMPLETE INSTALLATION. REFER TO DRAWING M1.05 AND DETAIL ON DRAWING 3.02. PROVIDE A SPACE TEMPERATURE SENSOR AND WIRE IT TO CONTROL THE MODULATING VALVE. INTEGRATE ALL NEW CONTROLS WITH THE BUILDING AUTOMATION SYSTEM (BAS) AND VERIFY PROPER SEQUENCING AND OPERATION. INSULATE ALL NEW AND EXISTING HOT WATER PIPING TO MATCH SPECIFICATION. INSULATE ALL SUPPLY AIR DUCTWORK DOWNSTREAM OF THE COIL.



PARTIAL FIRST FLOOR PLAN - HEATING
SCALE: 1/4" = 1' - 0"



KEY PLAN - FIRST FLOOR
NOT TO SCALE



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No.	DESCRIPTION	DATE

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HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
700 MAIN STREET WEST
HAMILTON, ONTARIO

DRAWN NAME: PARTIAL FIRST FLOOR PLAN MECHANICAL - HEATING	
DRAWN BY: D.A.	CHECKED BY: N.S.
DATE: NOVEMBER 2024	JOB No.: 24-107
SCALE: 1/4" = 1'-0"	SHEET No.: M1.03

DRAWING NOTES:

1. CONNECT NEW DUCT TO EXISTING MAIN DUCT AS SHOWN. PROVIDE ALL REQUIRED TRANSITIONS, COLLARS, SEALANT, FASTENERS, AND SUPPORTS FOR A COMPLETE AND AIRTIGHT CONNECTION. SEAL ALL NEW AND EXISTING DUCT JOINTS, SEAMS, AND CONNECTIONS USING APPROVED DUCT SEALANT TO SMACNA STANDARDS. ENSURE ALL JOINTS ARE CONTINUOUSLY SEALED ON ALL SIDES.

INSTALL EACH NEW BALANCING DAMPER IN THE LOCATION SHOWN AND ORIENT IT SUCH THAT THE ADJUSTMENT HANDLE OR OPERATOR CAN BE ACCESSED FROM THE LIGHT FIXTURE OPENING, GRILLE, AND/OR DIFFUSER WITHOUT REMOVING DUCT OR DRYWALL CEILING SECTIONS.

VERIFY DAMPER OPERATION AFTER INSTALLATION AND LABEL EACH DAMPER FOR IDENTIFICATION AND FUTURE BALANCING.

INSULATE ALL SUPPLY AIR DUCTS PER SPECIFICATIONS.
2. PROVIDE FOR EACH DIFFUSER A STEEL WELDED-LINK SECURITY SUPPORT CHAIN OR STAINLESS STEEL SAFETY CABLE, INSTALLED SUCH THAT THE DIFFUSER CANNOT FALL IF REMOVED FROM THE CEILING OPENING. ANCHOR EACH SECURITY SUPPORT TO STRUCTURE ABOVE USING APPROVED FASTENERS AND HARDWARE. DO NOT FASTEN TO CEILING GRID, T-BARS, OR NON-STRUCTURAL ELEMENTS. ADJUST LENGTH OF CHAIN OR CABLE TO LIMIT DROP DISTANCE TO A SAFE AMOUNT AND PREVENT CONTACT WITH OCCUPANTS OR FINISHED SURFACES.
3. PROVIDE A DUCT-MOUNTED HOT WATER HEATING COIL. THE COIL SHALL BE SIZED TO PROVIDE A MINIMUM HEATING OUTPUT OF 2.0 kW AT 160°F ENTERING WATER TEMPERATURE AND 140°F LEAVING WATER TEMPERATURE, WITH A MAXIMUM WATER PRESSURE DROP OF 2 FT AND A MAXIMUM AIR PRESSURE DROP OF 0.15" W.G. (275 CFM).

COIL CONSTRUCTION SHALL INCLUDE COPPER TUBES, ALUMINUM FINS, TWO (2) ROWS, AND FACTORY-FABRICATED HEADERS. THE COIL SHALL BE FACTORY PRESSURE TESTED TO A MINIMUM OF 150 PSI. INSTALL THE COIL IN THE 12x6 SUPPLY AIR DUCT AS SHOWN, COMPLETE WITH UPSTREAM AND DOWNSTREAM ACCESS PANELS FOR CLEANING, INSPECTION, AND SERVICING.

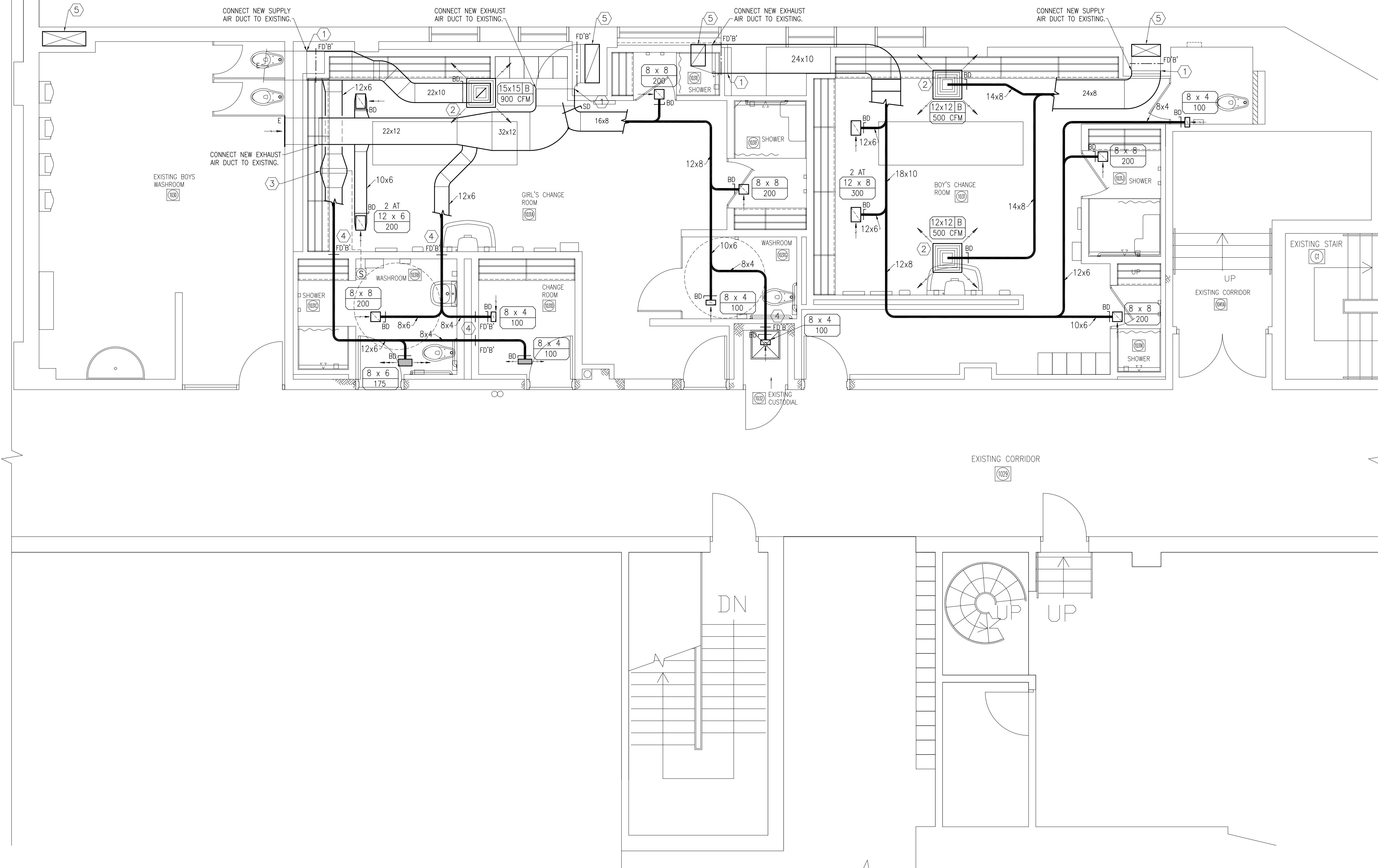
CONNECT THE COIL TO THE HOT WATER HEATING SYSTEM USING A 2-WAY MODULATING CONTROL VALVE, CIRCUIT BALANCING VALVE, UNIONS, ISOLATION VALVES, Y-STRAINER WITH BLOWDOWN, DRAIN-DOWN VALVE, AND MANUAL AIR VENT WITH SHUTOFF. PROVIDE ALL REQUIRED FITTINGS, TRANSITIONS, AND SUPPORTS FOR A COMPLETE INSTALLATION. REFER TO DRAWING M1.05 AND DETAIL ON DRAWING 3.02.

PROVIDE A SPACE TEMPERATURE SENSOR AND WIRE IT TO CONTROL THE MODULATING VALVE. INTEGRATE ALL NEW CONTROLS WITH THE BUILDING AUTOMATION SYSTEM (BAS) AND VERIFY PROPER SEQUENCING AND OPERATION.

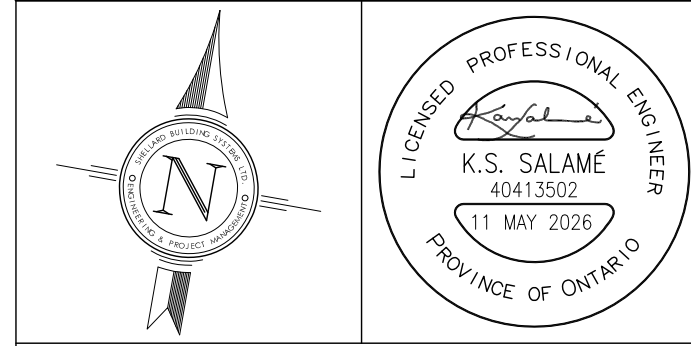
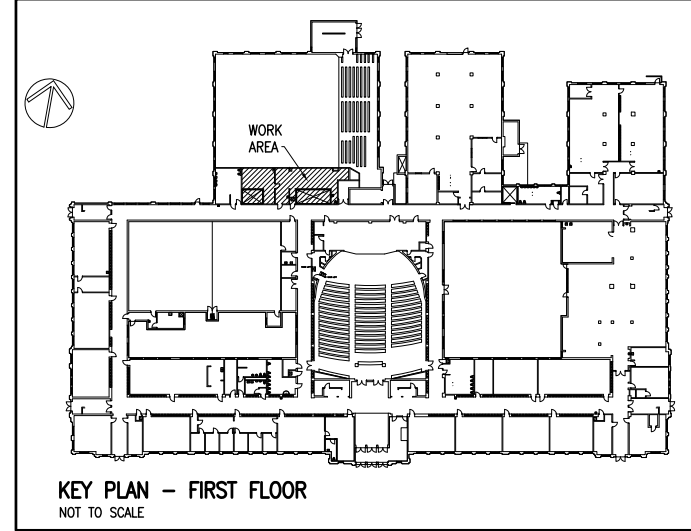
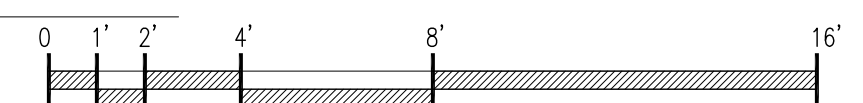
INSULATE ALL NEW AND EXISTING HOT WATER PIPING TO MATCH SPECIFICATION. INSULATE ALL SUPPLY AIR DUCTWORK DOWNSTREAM OF THE COIL.

4. PROVIDE ULC APPROVED TYPE 'B' RECESSED CURTAIN-STYLE FIRE DAMPER (SHUTTER RECESSED) WHERE SHOWN AND NOTED ON THE DRAWINGS. INSTALL COMPLETE WITH SLEEVE, ANGLES, BREAKAWAY CONNECTIONS, AND ALL REQUIRED ACCESSORIES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPLICABLE CODES. PROVIDE SERVICE ACCESS PANELS IN DUCTS AT EACH FIRE DAMPER LOCATION TO ALLOW FOR INSPECTION, TESTING, AND MAINTENANCE.
5. EXISTING DUCT RISER TO REMAIN. CLEAN EACH EXISTING DUCT RISER USING A PROFESSIONAL DUCT CLEANING COMPANY. CLEANING SHALL INCLUDE ALL ACCESSIBLE SURFACES FROM THE LOWEST ACCESS POINT TO THE TOP OF THE RISER. UPON COMPLETION, SUBMIT A WRITTEN CLEANING REPORT SUMMARIZING METHODS USED, LOCATIONS CLEANED, BEFORE/AFTER CONDITIONS, PHOTOGRAPHS, AND ANY DEFICIENCIES REQUIRING CORRECTION.

PROVIDE FIRE DAMPERS WHERE SHOWN AND NOTED. COMPLETE WITH ACCESS PANELS. CONNECT EACH NEW DUCT TO THE EXISTING RESPECTIVE RISER AND SEAL ALL NEW AND EXISTING JOINTS AIRTIGHT USING APPROVED DUCT SEALANT. SEAL OPENINGS AROUND BRICK/BLOCK SHAFTS USING FIRE RATED SEALANT.



PARTIAL FIRST FLOOR PLAN - VENTILATION
SCALE: 1/4" = 1' - 0"



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 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.

THE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS NOTED ON THE TITLE BLOCKS AS "ISSUED FOR CONSTRUCTION".

THE INFORMATION CONTAINED WITHIN THE DRAWINGS IS INTENDED TO PROVIDE DESIGN AND BASIC CONSTRUCTION DETAILING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO APPLY DETAILS AND PRACTICES WHICH WILL RESULT IN A QUALITY ASSURANCE AND FULLY FUNCTIONING SYSTEMS.

HWDSB

5.		
4.		
3.		
2.		
1.	FOR TENDER	11 MAY 2026
No.	DESCRIPTION	DATE

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

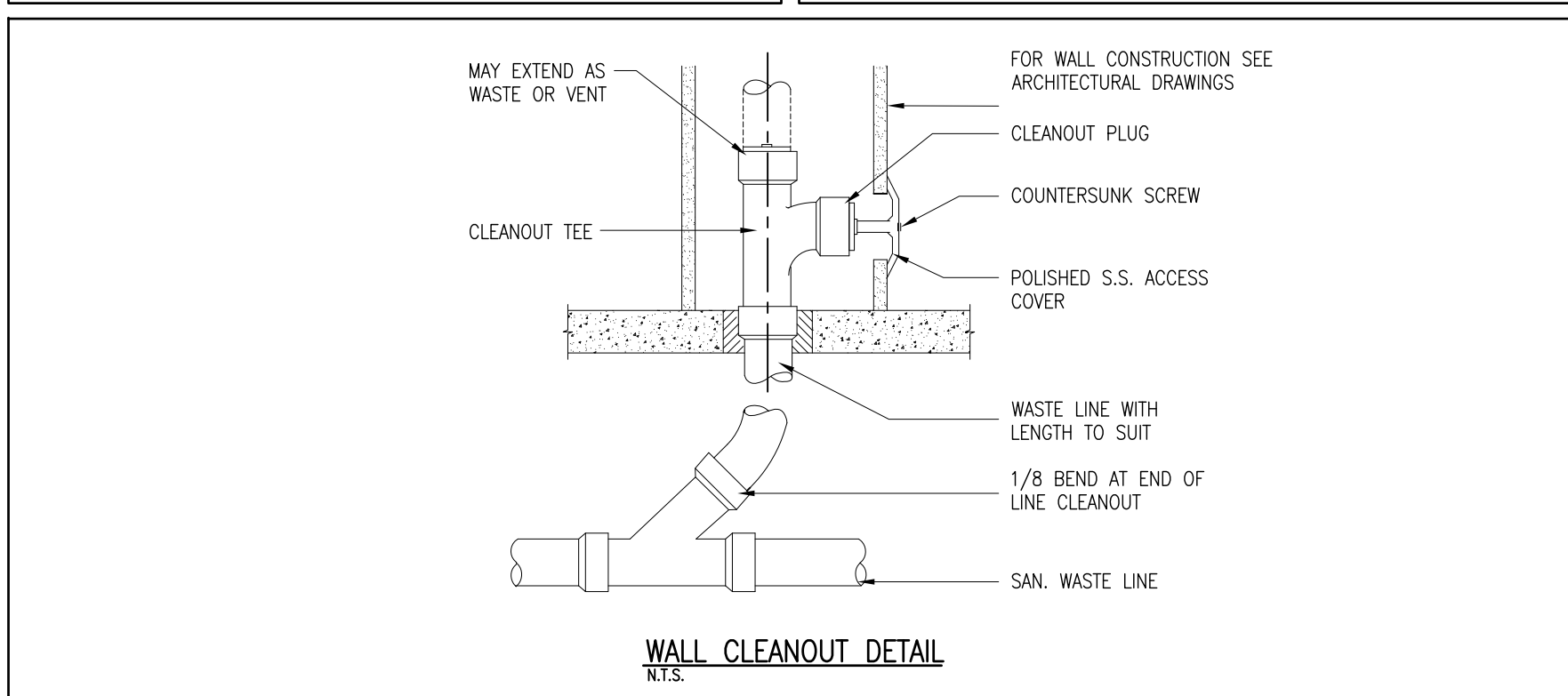
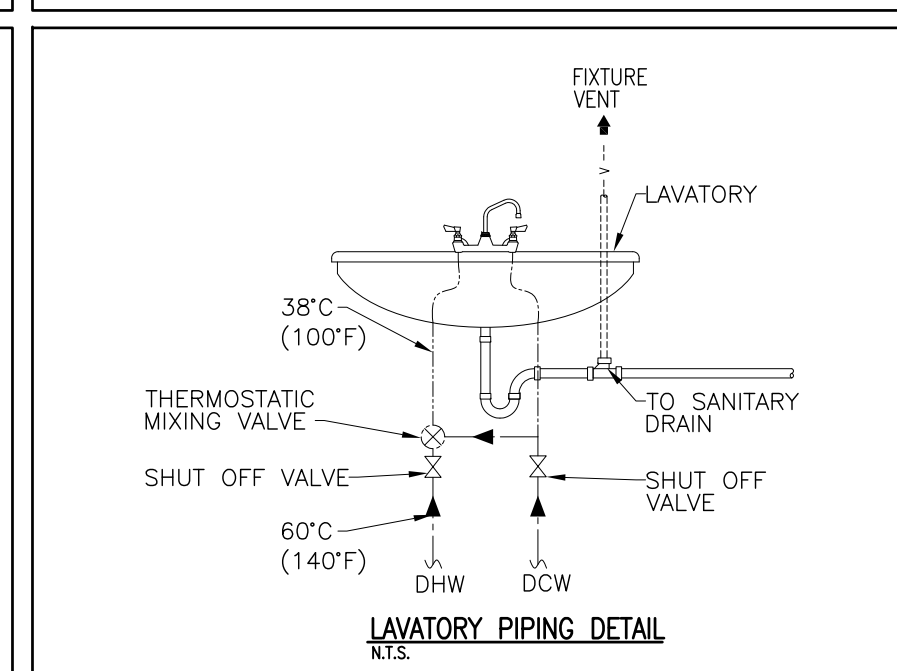
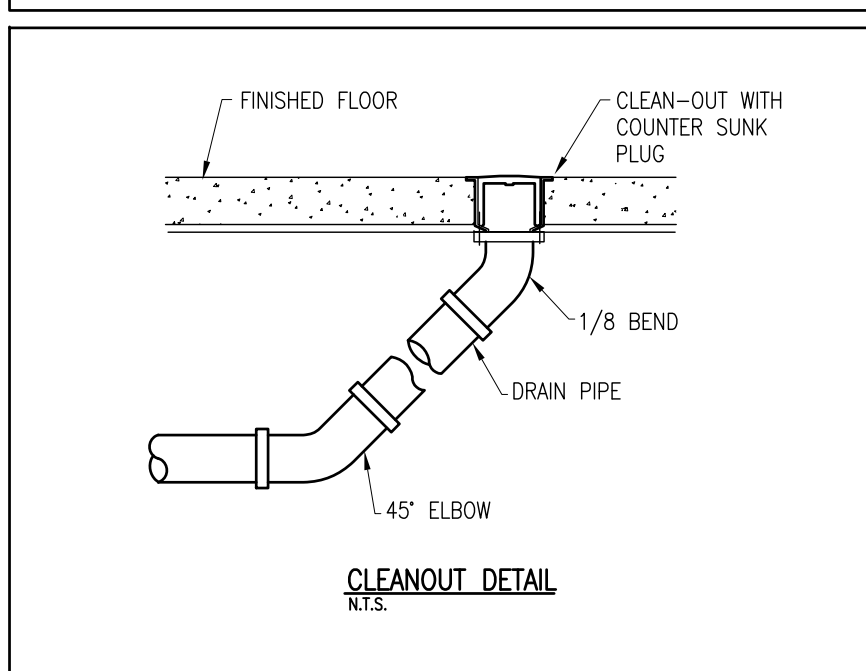
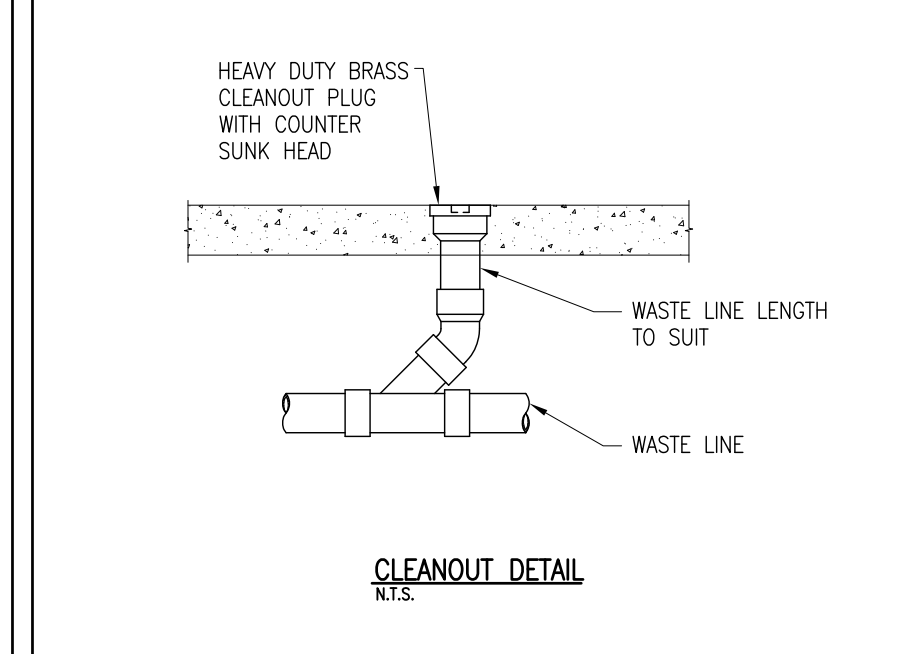
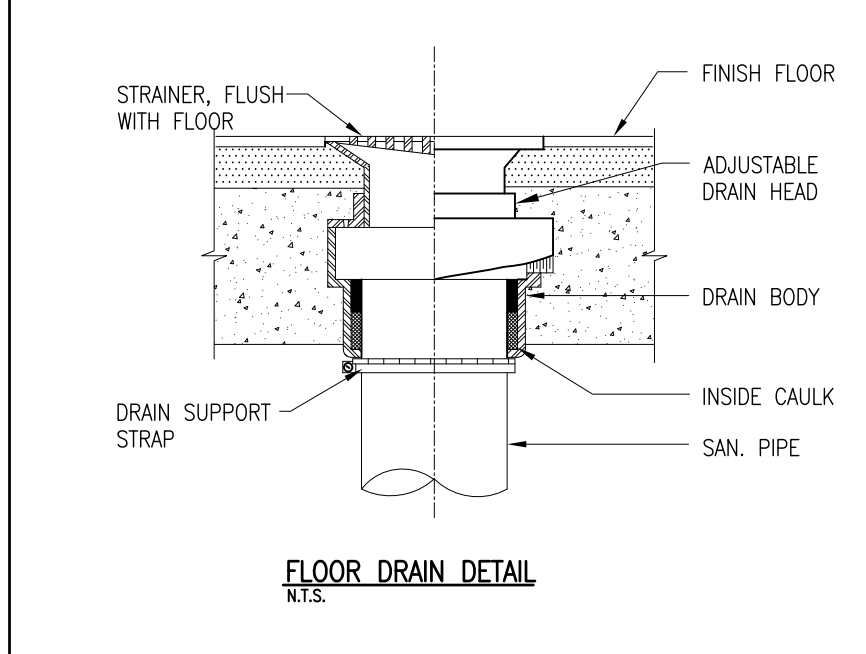
WESTDALE SECONDARY SCHOOL - PHASE II
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
700 MAIN STREET WEST
HAMILTON, ONTARIO

DRAWN NAME: PARTIAL FIRST FLOOR PLAN MECHANICAL - VENTILATION	
DRAWN BY: D.A.	CHECKED BY: N.S.
DATE: NOVEMBER 2024	JOB No.: 24-107
SCALE: 1/4" = 1'-0"	SHEET No.: M1.04

PLUMBING FIXTURES PIPES CONNECTION SCHEDULE					
MARK	HW	CW	WASTE	REMARKS	
HS / CS	1/2"	1/2"	1 1/4"	HAND SINK / COUNTER SINK	
S-1	1/2"	1/2"	1-1/2"	SINK	
S-2	1/2"	1/2"	1-1/2"	SINK	
DW	3/4"	-	1-1/2"	DISHWASHER	
FD, FFD	-	3/8"	3"	FLOOR & FUNNEL FLOOR DRAINS	
SH	3/4"	3/4"	2"	SHOWER	
WC-1	-	1"	3"	FLUSH VALVE	
LAV-1	1/2"	1/2"	1 1/2"	LAVATORY	
WC-2	-	1"	3"	FLUSH VALVE - BARRIER FREE	
LAV-2	1/2"	1/2"	1 1/2"	LAVATORY	
WF	3/4"	3/4"	2"	WASH FOUNTAIN	
MS	3/4"	3/4"	3"	MOP SINK	
UR	-	3/4"	2"	URINAL	

NOTES:

- 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.
- EACH VENT PIPE SIZE SHALL BE IN ACCORDANCE TO PART 7 OF THE ONTARIO BUILDING CODE.
- EACH CONNECTION TO EACH FIXTURE OR APPLIANCE SHALL BE COMPLETE WITH SHUT OFF VALVE AT BOTH HOT AND COLD WATER PIPES.
- THE MECHANICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL THE PLUMBING FIXTURES, ALONG WITH ASSOCIATED FAUCETS AND ACCESSORIES. EACH FIXTURE MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- TRAP SEAL PRIMERS: PROVIDE MIFAB M1-500-NPB OR SYSTEM MONITORING SENSOR MODEL PRO1-500 PPP PRIME-PRO TRAP SEAL PRIMER VALVE OR APPROVED EQUAL, LEAD-FREE BRASS BODY, SERVING INDIVIDUAL OR REMOTE AREA DRAINS (PRIMER AUTOMATICALLY ACTIVATED WHEN THERE IS A PRESSURE DROP IN THE SYSTEM) WITH 1/2" (12.7MM) NPT CONNECTIONS WITH STAINLESS STEEL SCREEN AND INTEGRAL NEOPERL CHECK VALVE. (FOR 2, 3 OR 4 DRAINS PROVIDE PRIMER UNIT WITH DISTRIBUTION UNIT ASSEMBLY #DU-U).



GRILLES AND DIFFUSERS SCHEDULE					
TAG	MANUFACTURER	MODEL	SERVICE	FINISH	REMARKS
A	E.H. PRICE LTD.	SPDAS	CEILING SUPPLY AIR DIFFUSER	B12	PANEL SIZE : 24"x24"
B	E.H. PRICE LTD.	AMDA	LOUVERED FACE CEILING S.A. DIFFUSER	B12	PANEL SIZE : 24"x24"
C	E.H. PRICE LTD.	535D	LOUVERED EXHAUST AIR REGISTER	B12	DUCTED EXHAUST AIR GRILLE
D	E.H. PRICE LTD.	80-FR	GRILLE EGGCRATE CORE 1/2"x1/2"	B12	PROVIDE EACH UNIT C/W MOUNTING FRAME.
E	E.H. PRICE LTD.	520D	DOUBLE DEFLECTION SUPPLY AIR GRILLE	B12	PROVIDE EACH UNIT C/W MOUNTING FRAME AND DAMPER.
F	E.H. PRICE LTD.	96	HEAVY DUTY SUPPLY AIR GRILLE	B12	EXTRUDED ALUMINUM, ANGLED LOUVERED BLADES AND FRAME. COLOUR SELECTION BY ARCHITECT.
DOOR GRILLE	E.H. PRICE LTD.	ATGH	DOOR TRANSFER AIR GRILLE	B12	16" x 8" EXTRUDED ALUMINUM, ANGLED LOUVERED BLADES AND DOOR FRAME. COLOUR SELECTION BY ARCHITECT.

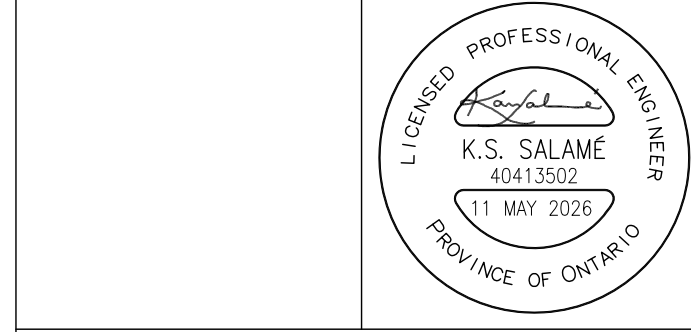
NOTES:

- PROVIDE ALUMINUM DAMPER FOR EACH ALUMINUM GRILLE AND DIFFUSER.
- DIFFUSERS NECK SIZES CRITERIA: UP TO 100 CFM = 6" NECK; 101 CFM TO 250 CFM = 8"; 251 CFM TO 380 CFM = 10" NECK; 381 CFM TO 550 CFM = 12" NECK. ALL DIFFUSERS AND GRILLES RATED AT NC30 OR LESS. PROVIDE WELDED LINKS SAFETY CHAIN AS NOTED.
- EACH GRILLE AND DIFFUSER SHALL HAVE BALANCING DAMPER AND MOUNTING FRAME PER CEILING CONSTRUCTION TYPE.
- GRILLES AND DIFFUSERS COLOURS SHALL BE REVIEWED AND APPROVED BY THE DESIGN CONSULTANT OR OWNER.

PLUMBING FIXTURES SCHEDULE									
TYPE	SPECIFICATION	TRIM, FAUCET AND ACCESSORIES	DCW	DHW	WASTE	VENT	REMARKS		
WC-1	WATER CLOSET - FLUSH VALVE AMERICAN STANDARD MADERA FLOWISE 15" HEIGHT, 1.28 GPF, FLUSHMETER TOILET SYSTEM WITH EVERCLEAN, MODEL 3451.001, VITREOUS CHINA, FLOOR MOUNT ELONGATED BOWL, FLUSHMETER VALVE. EACH TOILET SHALL HAVE EVERCLEAN ANTIMICROBIAL SURFACE, (4.2-6.0L) PER FLUSH, 1 1/2" TOP SPUD.	PROVIDE EACH UNIT COMPLETE WITH ELONGATED, WHITE HEAVY DUTY, TOILET SEAT WITH ANTIMICROBIAL EVERCLEAN PROTECTION AND LID COVER. SUPPLY AND INSTALL FOR EACH UNIT FLUSH VALVE, DELTA MODEL 811201, 1.5" TOP SPUD, DIAPHRAGM RETAINER, RENEWABLE SEAT, VACUUM BREAKER, COPPER SWEAT INLET ADAPTOR, PROTECTING CAP, ADJUSTABLE INLET/VALVE OUTLET CENTERS, STAINLESS STEEL WALL FLANGE, 6 LPF, (FILED ADJUSTABLE TO 4.8 LPF), APPROVED FOR MINIMUM 125 Psa (20 PSI) WATER SUPPLY PRESSURE, ASME AND CSA APPROVED.	25 (1")	-	75 (3")	50 (2")	PROVIDE EACH UNIT COMPLETE WITH ELONGATED, WHITE HEAVY DUTY TOILET SEAT WITH ANTIMICROBIAL PROTECTION AND TOILET LID COVER.		
WC-2	WATER CLOSET - FLUSH VALVE, BARRIER FREE AMERICAN STANDARD MADERA FLOWISE BARRIER FREE, 3043.001, 16 1/2" HEIGHT, 1.28 GPF, FLUSHMETER TOILET SYSTEM WITH EVERCLEAN, MODEL 3043.001, VITREOUS CHINA, FLOOR MOUNT ELONGATED BOWL, FLUSHMETER VALVE. EACH TOILET SHALL HAVE EVERCLEAN ANTIMICROBIAL SURFACE, (4.2-6.0L) PER FLUSH, 1 1/2" TOP SPUD.	PROVIDE EACH UNIT COMPLETE WITH ELONGATED, WHITE HEAVY DUTY TOILET OPEN FRONT SEAT #5901 110 WITH ANTIMICROBIAL EVERCLEAN PROTECTION AND LID COVER. SUPPLY AND INSTALL FOR EACH UNIT FLUSH VALVE, DELTA MODEL 811201, 1.5" TOP SPUD, DIAPHRAGM RETAINER, RENEWABLE SEAT, VACUUM BREAKER, COPPER SWEAT INLET ADAPTOR, PROTECTING CAP, ADJUSTABLE INLET/VALVE OUTLET CENTERS, STAINLESS STEEL WALL FLANGE, 6 LPF, (FILED ADJUSTABLE TO 4.8 LPF), APPROVED FOR MINIMUM 125 Psa (20 PSI) WATER SUPPLY PRESSURE, ASME AND CSA APPROVED.	25 (1")	-	75 (3")	50 (2")	PROVIDE EACH UNIT COMPLETE WITH ELONGATED, WHITE HEAVY DUTY, OPEN FRONT TOILET SEAT #5901 110 WITH ANTIMICROBIAL PROTECTION AND TOILET LID COVER.		
LAV-1	LAVATORY AMERICAN STANDARD MODEL MURRO UNIVERSAL DESIGN, 0955.001EC, 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 0059.020EC, CONCEALED IN WALL STEEL CARRIER, WHITE AND RECESSED STEEL CARRIER.	PROVIDE MOEN SINGLE-HANDLE METERING LAVATORY FAUCET MODEL 8884 (CHROME), SINGLE HOLE (7/8" DIAMETER), CHROME PLATED SOLID BRASS CONSTRUCTION, VANDAL RESISTANT, 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 0.20GPO (0.76 L/CYCLE) AT 24 SECONDS CARTRIDGE 52100 BRASS SHELL CARTRIDGE, SELF CONTAINED METERING MECHANISM, ASME A112.18.1/CSA B125.1 APPROVED.	13 (1/2")	13 (1/2")	38 (1 1/2")	38 (1 1/2")	PROVIDE WATTS OR EQUAL HYDROGUARD SERIES LFE480, LEAD FREE THERMOSTATIC TEMPERING VALVE UNDER EACH LAVATORY. THE TEMPERING VALVE SHALL BE CSA AND ULC APPROVED. PROVIDE C-1065 WITH OPEN STRAINER, 32 TAIL PIECE CH-8053 AND 32 mm OFFSET WASTE. PROVIDE DRAIN TRAP AND ISOLATING VALVES BELOW EACH LAVATORY. INSTALL STEEL CARRIER RECESSED IN WALL. COORDINATE WITH GENERAL CONTRACTOR.		
LAV-2	LAVATORY AMERICAN STANDARD MODEL MURRO UNIVERSAL DESIGN, 0955.001EC, 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 0059.020EC, CONCEALED IN WALL STEEL CARRIER, WHITE AND RECESSED STEEL CARRIER.	PROVIDE DELTA ELECTRONIC LAVATORY FAUCET 591-TF HOF SERIES, SINGLE HOLE, HARD WIRED, HANDS FREE ON/OFF ACTIVATION, ALL METAL FAUCET CONSTRUCTION, FAUCET HOSE, 1.9 L/MIN (0.5 GPM), SERVICEABLE FILTER SCREEN, MAXIMUM 125 PSI WATER STATIC PRESSURE, BRUSHED NICKEL FINISH, AERATOR, VANDAL RESISTANT, ASME A112.18.1/CSA B125.1 APPROVED.	13 (1/2")	13 (1/2")	38 (1 1/2")	38 (1 1/2")	PROVIDE WATTS OR EQUAL HYDROGUARD SERIES LFE480, LEAD FREE THERMOSTATIC TEMPERING VALVE UNDER EACH LAVATORY. THE TEMPERING VALVE SHALL BE CSA AND ULC APPROVED. PROVIDE C-1065 WITH OPEN STRAINER, 32 TAIL PIECE CH-8053 AND 32 mm OFFSET WASTE. PROVIDE DRAIN TRAP AND ISOLATING VALVES BELOW EACH LAVATORY. INSTALL STEEL CARRIER RECESSED IN WALL. COORDINATE WITH GENERAL CONTRACTOR.		
WF	WASH FOUNTAIN PROVIDE BRADLEY TERREON WALL-HUNG QUADRA-FOUNT WASH FOUNTAIN, MODEL MF2949, WITH TERREON SOLID SURFACE CONSTRUCTION AND FACTORY-INSTALLED COMPONENTS AS REQUIRED FOR A COMPLETE INSTALLATION. EACH UNIT SHALL BE INSTALLED AT HEIGHTS COMPLYING WITH THE ONTARIO BUILDING CODE AND ALL APPLICABLE ACCESSIBILITY REQUIREMENTS (ADA / ICC A117.1 EQUIVALENT). THE WASH FOUNTAIN SHALL BE HIGHLY VANDAL RESISTANT AND SUITABLE FOR INSTITUTIONAL USE. PROVIDE ALL ASSOCIATED PARTS, MOUNTING HARDWARE, PIPING CONNECTIONS, AND ACCESSORIES REQUIRED FOR A COMPLETE AND FUNCTIONAL INSTALLATION. THE UNIT SHALL BE CSA, ULC, ASME, AND ADA COMPLIANT.	PROVIDE INFRARED ACTIVATION TYPE, HARD-WIRED, 120V/1/60 POWER SUPPLY WITH TRANSFORMER, NEMA-15P CONNECTION, SOLENOID VALVE, AND WIRED INFRARED SENSOR AS SPECIFIED BY THE MANUFACTURER. PROVIDE LEAD-FREE THERMOSTATIC MIXING VALVE (NAVIGATOR ASSEMBLY) AND ALL REQUIRED TEMPERED WATER PIPING CONNECTIONS. UNIT SHALL INCLUDE VANDAL-RESISTANT SPRAY HEADS, ULTRA-HIGH-EFFICIENCY FLOW RATE OF 1.9 L/MIN PER STATION, AND SHALL ACCOMMODATE UP TO FOUR USERS SIMULTANEOUSLY. PROVIDE EACH UNIT COMPLETE WITH LEAD FREE THERMOSTATIC MIXING VALVE ASSEMBLY, CONTROL SENSORS, CONTROLLER, TRANSFORMER, PIPES COVER SHROUD, RECESSED IN WALL STEEL CARRIER AND TEMPLATE FOR PIPING ROUGH-IN.	19 (3/4")	19 (3/4")	38 (1 1/2")	50 (2")	ALL PIPING AND WIRING SHALL BE INSTALLED TO FIT COMPLETELY BEHIND THE UNIT SHROUD WITH NO EXPOSED PIPES BELOW THE SHROUD. THE WASH FOUNTAIN SHALL BE PROVIDED WITH A STAINLESS STEEL SHROUD AS REQUIRED FOR A CLEAN, VANDAL-RESISTANT INSTALLATION. INSTALL STEEL CARRIER RECESSED IN THE WALL AND SECURE IN PLACE. INSULATE ALL PIPING BELOW THE WASH FOUNTAIN USING PRE-FORMED PIPE INSULATION FITTINGS.		
SH-1	SHOWER PROVIDE DELTA SHOWER TECK COMMERCIAL ELECTRONIC SHOWER SYSTEM CONSISTING OF ELECTRONIC SHOWER CONTROL BOX (DELTA 861108/861111) INSTALLED IN THE CEILING SPACE WITH ACCESS PANEL. THE CONTROL BOX SHALL INCLUDE SLOW-CLOSING SOLENOID VALVE, INTEGRAL STOP, THERMOSTATIC/PRESSURE-BALANCING MIXING VALVE, AND ALL REQUIRED INTERNAL COMPONENTS. THE SYSTEM SHALL BE COMPLETE WITH ALL REQUIRED MOUNTING BOXES, COVERS, WIRING, AND ACCESSORIES FOR A FULLY FUNCTIONAL INSTALLATION. PROVIDE ALL REQUIRED ELECTRONIC ACCESSORIES INCLUDING HARDWIRED TRANSFORMER, AC FILTER, CONTROLLER, FIELD ADJUSTABLE TIMER, SOLENOID VALVE AND SENSORS.	PROVIDE HARD WIRED REMOTE PUSH BUTTON SHOWER VALVE. INSTALL EACH PUSH BUTTON DEVICE BELOW SHOWER HEAD FLUSH WITH FINISHED WALL. THE SHOWER SHALL HAVE TWO CHECK VALVES FOR BACKFLOW PROTECTION SYSTEM TESTED WITH ASME A112.18.3, ASME A112.18.1 AND CSA B125.1 STANDARDS. SUPPLY 300x300 mm (12x12) METAL SERVICE ACCESS PANEL WITH MOUNTING FRAME FOR INSTALLATION AT CEILING BELOW MIXING VALVE BOX. INSTALLATION AND PAINTING BY GENERAL CONTRACTOR. PROVIDE REMOTE HARD WIRED PUSH BUTTON (DELTA 86011) AND INSTALL RECESSED IN THE WALL WITH STAINLESS STEEL COVER AND VANDAL RESISTANT SCREWS. HARDWIRE TO THE CONTROL BOX AND PROVIDE FIELD ADJUSTABLE RUN TIMER. PROVIDE WALL MOUNTED VANDAL RESISTANT SHOWER HEAD (5.7 L/MIN) MOEN MODEL B290EP15 WITH ADJUSTABLE SPRAY ANGLE. PIPE RECESSED IN WALL TEMPERED WATER FROM THE CEILING MOUNTED CONTROL BOX TO THE WALL SHOWER HEAD.	19 (3/4")	19 (3/4")	50 (2")	38 (1 1/2")	LOCATE SHOWER PUSH BUTTON AS SHOWN ON THE ARCHITECTURAL ELEVATION DRAWINGS, COMPLETE WITH RECESSED BACK BOX AND STAINLESS STEEL COVER PLATE. PROVIDE ALL REQUIRED CONTROL WIRING, CONTROLLER, AND ASSOCIATED COMPONENTS. PROVIDE ALL REQUIRED PIPING, WIRING, AND ACCESSORIES TO COMPLETE THE INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. ALL PIPES SHALL BE CONCEALED AND INSULATED. COORDINATE WITH ELECTRICAL TRADE FOR POWER WIRING.		
SH-2	SHOWER PROVIDE DELTA SHOWER TECK COMMERCIAL 10" PRESSURE-BALANCING MIXING VALVE ASSEMBLED CONTROL BOX MODEL 86011, HARDWIRED, RECESSED METAL MOUNTING BOX WITH STAINLESS STEEL COVER FOR INSTALLATION RECESSED IN WALL, SLOW CLOSING SOLENOID VALVE, INTEGRAL STOP, THERMOSTATIC/PRESSURE-BALANCING MIXING VALVE, CONTROLLER, AND ALL REQUIRED INTERNAL COMPONENTS AS SUPPLIED BY THE MANUFACTURER. THE SHOWER SHALL HAVE TWO CHECK VALVES FOR BACKFLOW PROTECTION SYSTEM TESTED WITH ASME A112.18.3, ASME A112.18.1 AND CSA B125.1 STANDARDS.	INSTALL EACH SHOWER VALVE BOX RECESSED IN WALL AT 1.2 m FROM FINISHED FLOOR LEVEL. THE SHOWER SHALL HAVE TWO CHECK VALVES FOR BACKFLOW PROTECTION SYSTEM TESTED WITH ASME A112.18.3, ASME A112.18.1 AND CSA B125.1 STANDARDS.	19 (3/4")	19 (3/4")	50 (2")	38 (1 1/2")	LOCATE SHOWER VALVE BOX AT ELEVATION AS SHOWN ON ARCHITECTURAL ELEVATION DRAWINGS COMPLETE WITH STAINLESS STEEL COVER PLATE. PROVIDE ALL REQUIRED CONTROL WIRING AND CONTROLLER. PROVIDE ALL REQUIRED PIPING, WIRES AND ACCESSORIES TO COMPLETE INSTALLATION.		
SH-3	SHOWER - BARRIER FREE PROVIDE DELTA SHOWER TECK COMMERCIAL ELECTRONIC SHOWER SYSTEM (SH-3) WITH THE COMPLETE FACTORY ASSEMBLED ELECTRONIC SHOWER CONTROL BOX (DELTA 8611107) INSTALLED RECESSED IN THE WALL. THE CONTROL BOX SHALL INCLUDE THE SLOW-CLOSING SOLENOID VALVE, INTEGRAL STOP, PRESSURE-BALANCING / THERMOSTATIC MIXING VALVE, CONTROLLER, AND ALL REQUIRED INTERNAL COMPONENTS AS SUPPLIED BY THE MANUFACTURER. PROVIDE THE ELECTRONIC SHOWER CONTROL WITH ADJUSTABLE TEMPERATURE HANDLE (DELTA 8601157) INSTALLED RECESSED IN THE WALL WITH STAINLESS STEEL COVER AND VANDAL RESISTANT SCREWS. THIS WALL CONTROL SHALL BE HARDWIRED TO THE INTERNAL CONTROL BOX. THE COMPLETE SYSTEM SHALL BE INSTALLED TO MEET ALL APPLICABLE HANDICAP / ACCESSIBILITY REQUIREMENTS (ICC/ANSI A117.1), INCLUDING CONTROL HEIGHT, OPERATING FORCE, AND CLEARANCES.	PROVIDE HAND SHOWER WITH GRAB BAR AND ADJUSTABLE SLIDE (DELTA RPW324HDF-1.5C), INCLUDING 24" GRAB BAR, 60" STAINLESS STEEL HOSE, AND 1.5 GPM HAND SHOWER. INSTALL IN ACCORDANCE WITH ACCESSIBILITY REQUIREMENTS AND MANUFACTURER'S INSTRUCTIONS. THE COMPLETE SYSTEM, INCLUDING CONTROL HEIGHT, GRAB BAR INSTALLATION, AND OPERATING CLEARANCES, SHALL BE INSTALLED TO MEET ALL APPLICABLE HANDICAP / ACCESSIBILITY REQUIREMENTS (ICC/ANSI A117.1). THE SHOWER SHALL HAVE TWO CHECK VALVES FOR BACKFLOW PROTECTION SYSTEM TESTED WITH ASME A112.18.3, ASME A112.18.1 AND CSA B125.1 STANDARDS. PROVIDE ALL REQUIRED ELECTRONIC ACCESSORIES INCLUDING HARDWIRED TRANSFORMER, AC FILTER, FIELD-ADJUSTABLE TIMER, AND ALL REQUIRED SENSORS. SYSTEM SHALL BE COMPLETE WITH ALL REQUIRED MOUNTING BOXES, COVERS, WIRING, AND ACCESSORIES FOR A FULLY FUNCTIONAL INSTALLATION.	19 (3/4")	19 (3/4")	50 (2")	38 (1 1/2")	LOCATE THE SHOWER CONTROL HANDLE AS SHOWN ON THE ARCHITECTURAL ELEVATION DRAWINGS, COMPLETE WITH RECESSED BACK BOX AND STAINLESS STEEL COVER PLATE. PROVIDE ALL REQUIRED CONTROL WIRING, CONTROLLER, AND ASSOCIATED COMPONENTS. PROVIDE ALL REQUIRED PIPING, WIRING, AND ACCESSORIES TO COMPLETE THE INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. ALL PIPES SHALL BE CONCEALED AND INSULATED. COORDINATE WITH ELECTRICAL TRADE FOR POWER WIRING.		
FD	WATTS MODEL WATTS-FD-102-L, 6x6, 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 PIPES AND WATER FLOOR 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 STRAINER FLUSH WITH FINISHED FLOOR LEVEL.		
TD	TRENCH DRAIN PROVIDE SCHLUTER - KERDI LINE SHOWER TRENCH DRAIN INTEGRATED FOR CERAMIC/TILED SHOWER FLOORS. REFER TO FLOOR PLAN FOR NOMINAL LENGTH OF EACH DRAIN. EXACT LENGTHS SHALL BE MEASURED ON SITE. EACH UNIT SHALL BE WATER TIGHT, BONDED WATER PROOF MEMBRANE BONDED TO MORTAR BED, PREFABRICATED SEALS, 3/4" FRAME HEIGHT, TAMPER RESISTANT, BRUSHED STAINLESS STEEL LINER DRAIN MODEL KLUB19EB, CENTER OUTLET, SQUARE GRATE C/W LOCKING MECHANISM.	PROVIDE KLIVZIF HAIR CATCHER STRAINER AND SANITARY DRAIN TRAP COMPLETE WITH ALL REQUIRED COMPONENTS FOR A FULLY FUNCTIONAL INSTALLATION.	-	-	50 (2")	38 (1 1/2")	EACH TRENCH DRAIN LENGTH SHALL BE VERIFIED ON SITE BY THE MECHANICAL CONTRACTOR PRIOR TO PLACING THE ORDER FOR THE UNITS. SET EACH DRAIN LEVEL IN ACCORDANCE TO MANUFACTURER WRITTEN INSTRUCTIONS. COORDINATE WITH FLOORING CONTRACTOR. PROVIDE FROM EACH SHOWER DRAIN A SANITARY DRAIN TRAP AND TRAP SEAL PRIMER. INSTALL EACH UNIT COMPLETE WITH ALL REQUIRED COMPONENTS AND ACCESSORIES.		
MS	FIAT MODEL TS9100, 24"x24"x12H, TERRAZZO MOP SERVICE BASIN, STAINLESS STEEL CAPS ON CURBS, BRASS DRAIN, HOSE BRACKET, SILICON SEALANT AND STAINLESS STEEL WALL GUARDS (MSG)	PROVIDE SERVICE FAUCET: FIAT CHROME PLATED WITH VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAUL HOOK, 3/4" HOSE THREAD AND SPOUT. FAUCET SHALL BE 8" (203 mm) CENTER-SET.	13 (1/2")	13 (1/2")	75 (3")	50 (2")	PROVIDE MOP HANGER.		

NOTES:

- THE PLUMBING FIXTURE SCHEDULE INCLUDES FIXTURES FOR THE FULL PROJECT. FIXTURES NOT USED IN THIS PHASE ARE SHOWN FOR REFERENCE ONLY.
- EACH PLUMBING FIXTURE SHALL BE LOW WATER CONSUMPTION IN ACCORDANCE WITH THE 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 FIXTURE OR ACCESSORIES.
- EACH FLOOR DRAIN SHALL BE INSTALLED COMPLETE WITH TRAP, TRAP SEAL PRIMER, VENT, AND STRAINER FLUSH WITH FINISHED FLOOR LEVEL.
- SUBMIT SHOP DRAWINGS FOR REVIEW BEFORE ORDERING THE FIXTURES.
- COORDINATE AND VERIFY THE TYPE AND LOCATION OF EACH PLUMBING FIXTURE WITH THE LATEST ARCHITECTURAL DRAWINGS.
- EACH TRAP SEAL PRIMER SHALL BE MIFAB M1-500-NPB OR EQUAL PRESSURE-DROP-ACTIVATED TRAP SEAL PRIMER. PIPE TO NEAREST LAVATORY DOMESTIC COLD WATER SUPPLY.



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- 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.

THE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS NOTED ON THE TITLE BLOCKS AS "ISSUED FOR CONSTRUCTION"

THE INFORMATION CONTAINED WITHIN THE DRAWINGS IS INTENDED TO PROVIDE DESIGN AND BASIC CONSTRUCTION DETAILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO APPLY DETAILS AND PRACTICES WHICH WILL RESULT IN A QUALITY ASSURANCE AND FULLY FUNCTIONING SYSTEMS.

HWDSB

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1.	FOR TENDER	11 MAY 2026
No.	DESCRIPTION	DATE

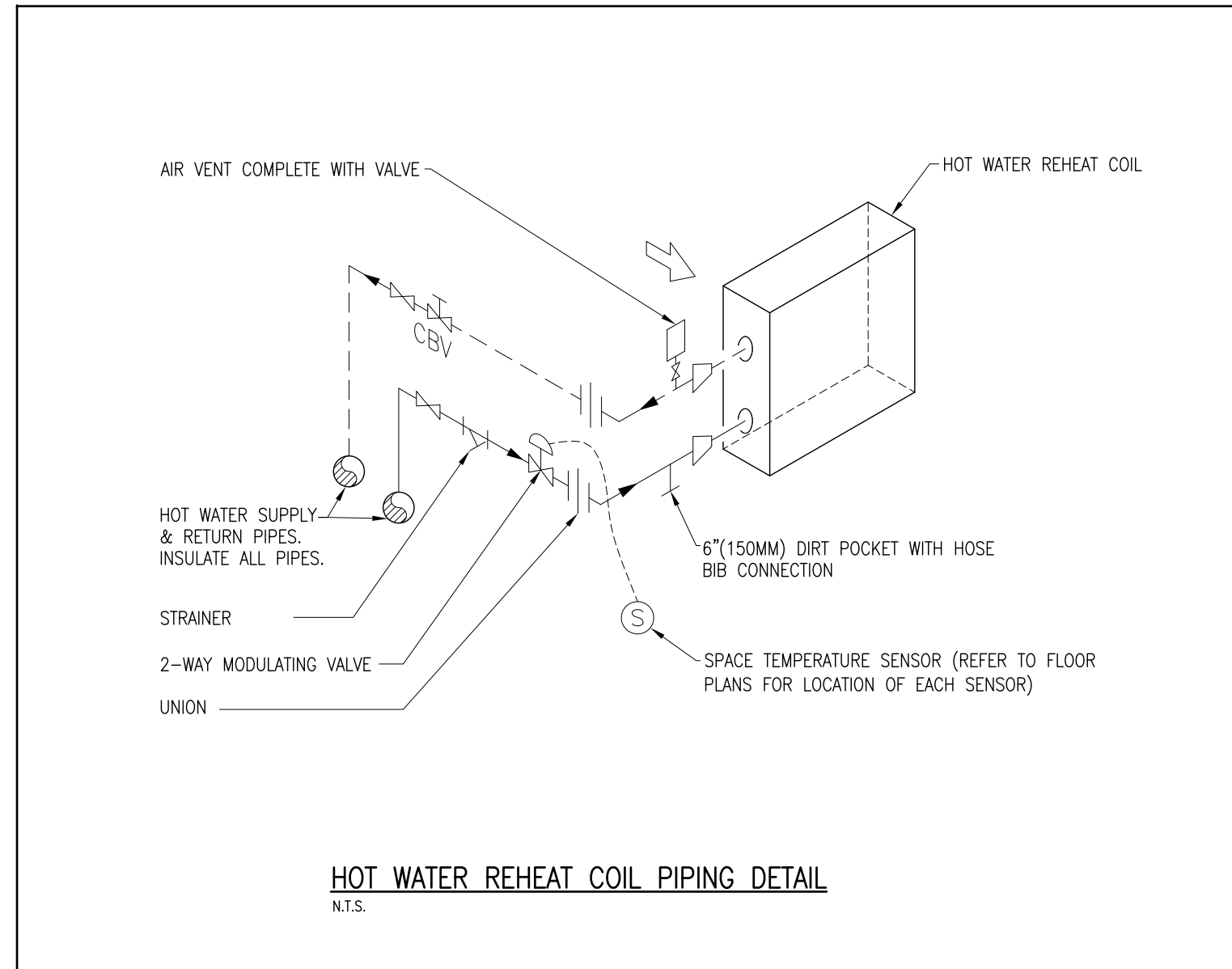
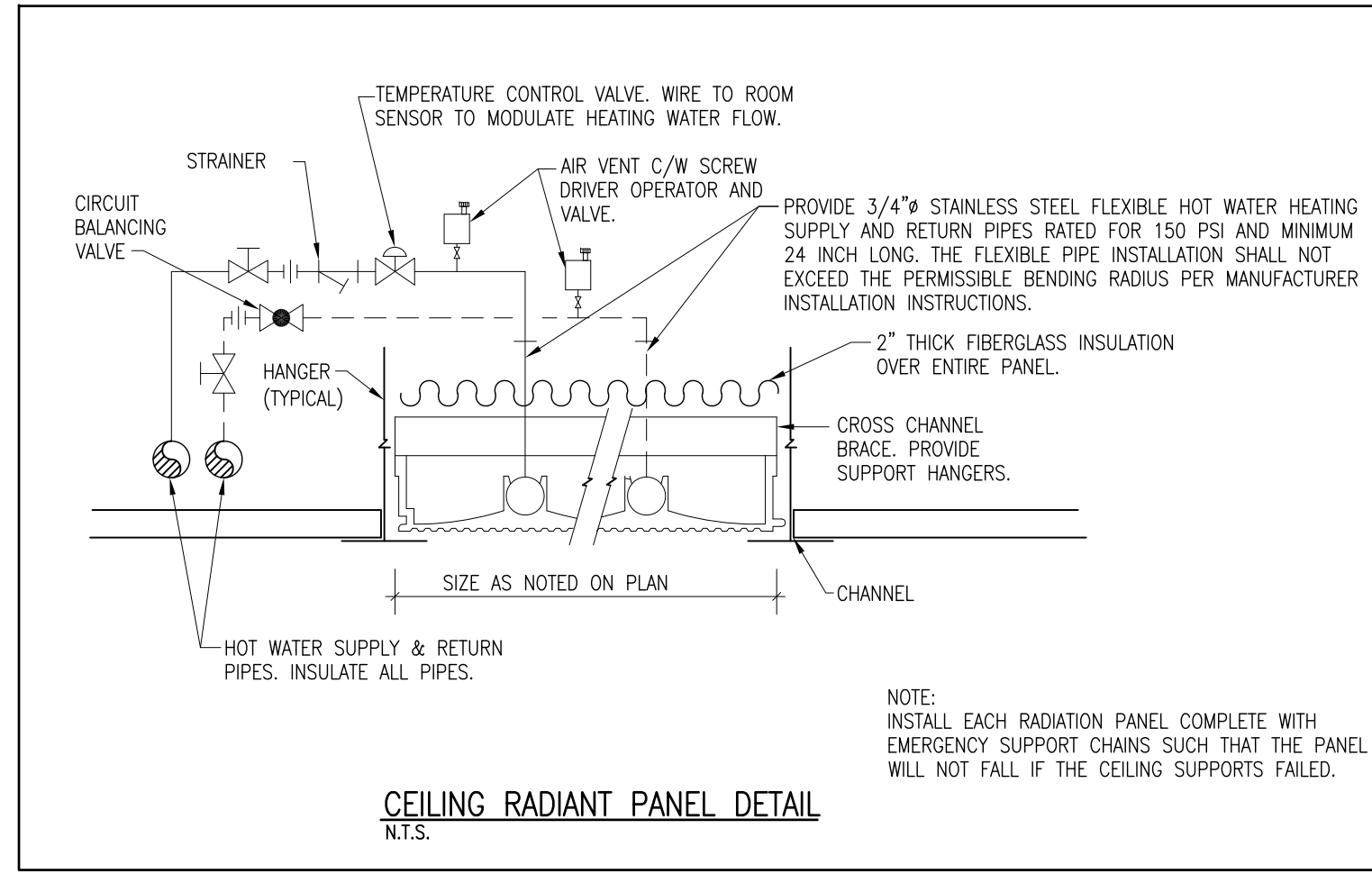
SHELLARD BUILDING SYSTEMS LTD.
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 226 606 6542

WESTDALE SECONDARY SCHOOL - PHASE II
 HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
 700 MAIN STREET WEST
 HAMILTON, ONTARIO

DRAWN NAME:
SCHEDULES AND DETAILS MECHANICAL

DRAWN BY:	CHECKED BY:
D.A.	N.S.
DATE:	JOB No.:
NOVEMBER 2024	24-107
SCALE:	SHEET No.:
NOT TO SCALE	M3.01

MECHANICAL LEGEND AND NOTES	
	EXISTING SANITARY TO REMAIN
	SANITARY DRAIN
	REMOVE EXISTING PIPE
	PIPES TURNING DOWN
	PIPES TURNING UP
	GAS LINE
	PRESSURE REDUCING VALVE
	DOMESTIC COLD WATER LINE
	DOMESTIC HOT WATER LINE
	BALL VALVE
	CLEAN OUT FLUSH WITH FLOOR UNION
	FLOOR DRAIN
	FLEXIBLE CONNECTION
	FUNNEL FLOOR DRAIN
	CLEAN OUT
	ROOF DRAIN
	CONTROL VALVE
	TIMER
	THERMOSTAT
	DIGITAL THERMOSTAT WITH LOCKABLE GUARD
	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) AIRFLOW (CFM)
	24" x 24" SUPPLY AIR DIFFUSER
	12" x 12" SUPPLY AIR DIFFUSER
	DRY CHEMICAL (FE) FIRE EXTINGUISHER 10 LB (ULC APPROVED)
	20x20 CEILING ACCESS PANEL WITH HINGED DOOR TO PROVIDE SERVICE ACCESS TO VALVES AND PLUMBING.
<p>'E' EXISTING TO REMAIN, SERVICE AS REQUIRED.</p> <p>'D' DISCONNECT AND REMOVE ENTIRELY COMPLETE WITH ASSOCIATED ELEMENTS.</p> <p>'R' RELOCATE TO WHERE SHOWN AND RECONNECT TO APPROVAL.</p> <p>'RE' REMOVE EXISTING AND REPLACE WITH NEW</p> <p>'N' PROVIDE NEW WHERE SHOWN COMPLETE WITH ASSOCIATED ELEMENTS.</p> <p>'C'E' CONNECT TO EXISTING.</p>	



MECHANICAL SYSTEMS AND BAS CONTROLS SPECIFICATIONS

HOT WATER CEILING RADIANT 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.
- EACH RADIATION PANEL SHALL BE COMPLETE WITH ISOLATING VALVES, CIRCUIT BALANCING VALVE, UNIONS, MODULATING CONTROL VALVE, ACTUATOR, REMOTE ROOM THERMOSTAT, ALL REQUIRED BRACES, ALUMINUM EXTRUDED FRAME FOR SUSPENDED CEILING, INTEGRAL PIPE SADDLES, WHITE FINISH, 1" THICK FOIL FACED INSULATION ON TOP OF PANEL, AND SECONDARY WELDED LINKS CHAINS FOR EMERGENCY SUPPORT. THE PANELS SIZES SHALL BE AS FOLLOWS:
 - RADIANT CEILING PANEL (RCP-A): EACH UNIT SHALL BE 30" x 96", 10 PASSES, 1.57 KW HEATING OUTPUT AT 71°C EWT, 0.05 L/S WATER FLOW, ALUMINUM FRAME FOR DRYWALL SUSPENDED CEILING.
 - RADIANT CEILING PANEL (RCP-B): EACH UNIT SHALL BE 24" x 96", 8 PASSES, 1.23 KW HEATING OUTPUT AT 71°C EWT, 0.04 L/S WATER FLOW, ALUMINUM FRAME FOR T-BAR SUSPENDED CEILING.
- INSTALL EACH PANEL WHERE SHOWN AND CONNECT TO HEATING PIPING SYSTEM COMPLETE WITH AIR VENTS AND ALL REQUIRED FITTINGS. INSULATE ALL PIPES. CONNECT THERMOSTAT AND MODULATING VALVE TO EXISTING BUILDING AUTOMATION SYSTEM. INSULATE ALL NEW AND EXISTING PIPES. WIRE CONTROL VALVE TO A REMOTE TEMPERATURE SENSOR AND EXISTING BUILDING AUTOMATION SYSTEM. COORDINATE WITH SCHOOL BOARD FACILITIES (THRU GENERAL CONTRACTOR) TO COMPLETE THE CONNECTION TO EXISTING BUILDING AUTOMATION SYSTEM. PROVIDE FOR EACH TEMPERATURE SENSOR A HEAVY DUTY VANDAL PROOF LOCKABLE ENCLOSURE.
- SECURE EACH RADIANT PANEL TO EXISTING STRUCTURE USING APPROVED SUPPORT FRAME AND ADDITIONAL WELDED CHAINS FOR EMERGENCY SUPPORT SUCH THAT IT IS SUPPORTED WITHOUT THE CEILING FRAME (THE WELDED LINKS CHAINS SHALL HOLD PANEL IN PLACE AND SHALL NOT FALL DOWN BELOW THE CEILING).
- PROVIDE 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 THE NEW INSULATION.

HOT WATER REHEAT COIL

- PROVIDE A DUCTMOUNTED HOT WATER REHEAT COIL, COILCRAFT, MODINE, OR APPROVED EQUAL. THE COIL SHALL BE COMPLETE WITH COPPER TUBES, ALUMINUM FINNS, FACTORY FABRICATED HEADERS, AND A CASING SUITABLE FOR INSTALLATION IN THE DUCT SIZE SHOWN. PROVIDE A 2-WAY MODULATING CONTROL VALVE, ACTUATOR, CIRCUIT BALANCING VALVE, ISOLATION VALVES, UNIONS, Y-STRAINER WITH BLOWDOWN, DRAIN VALVE, AND MANUAL AIR VENT WITH VALVE. COIL PERFORMANCE SHALL MEET THE HEATING OUTPUT INDICATED ON THE DRAWINGS AT THE SPECIFIED ENTERING/LEAVING WATER TEMPERATURES AND FLOW RATES.
- INSTALL THE REHEAT COIL IN THE DUCTWORK WHERE SHOWN, COMPLETE WITH UPSTREAM AND DOWNSTREAM ACCESS PANELS FOR CLEANING, INSPECTION, AND SERVICING. CONNECT THE COIL TO THE HOT WATER HEATING SYSTEM WITH ALL REQUIRED FITTINGS. INSULATE ALL NEW PIPING.
- CONNECT THE MODULATING VALVE AND TEMPERATURE SENSOR TO THE EXISTING BUILDING AUTOMATION SYSTEM (BAS). COORDINATE WITH THE SCHOOL BOARD FACILITIES (THROUGH THE GENERAL CONTRACTOR) FOR FINAL BAS CONNECTIONS AND INTEGRATION. PROVIDE A HEAVY-DUTY, VANDAL RESISTANT LOCKABLE ENCLOSURE FOR EACH REMOTE TEMPERATURE SENSOR WHERE APPLICABLE.
- COORDINATE WITH THE FACILITIES FOR ZONE SHUTDOWN PRIOR TO COMMENCING WORK. INSULATE ALL NEW AND EXISTING PIPES AND FITTING.

BUILDING AUTOMATION SYSTEM (BAS)

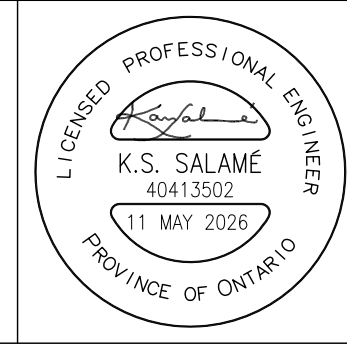
CONNECT NEW MECHANICAL UNITS TO EXISTING BUILDING AUTOMATION SYSTEM (BAS). THE EXISTING BAS IS BY SIEMENS. THE CONTROLS WORK SHALL BE DONE BY SIEMENS OR SIEMENS APPROVED AGENT IN HAMILTON. INCLUDE IN THIS CONTRACT COST FOR ALL REQUIRED BUILDING AUTOMATION SYSTEM BY SIEMENS.

- PROVIDE ALL REQUIRED DEVICES, CONTROLLERS, RELAYS, SENSORS, SWITCHES, CONDUITS, WIRING, CONTROL TRANSFORMERS, GRAPHICS AND SOFTWARE TO COMPLETE SYSTEMS INSTALLATION. THE BAS WORK SHALL BE COMMISSIONED AND TRAINING PROVIDED. ALL WIRES SHALL BE IN EMT CONDUITS. THE DEVICES SHALL INCLUDE, BUT NOT NECESSARILY LIMITED TO, THE FOLLOWING:
- DWR2 CONTROLLERS COMPLETE WITH ENCLOSURES
 - AUTOMATION STATION PXC7 SERIES
 - PRESENCE DETECTORS SERIES 258D61
 - MODULATING BALL VALVES 599 SERIES WITH 0-10V ACTUATORS
 - FLUSH MOUNT TEMPERATURE SENSORS WITH STAINLESS STEEL COVER PLATES
 - PX SERIES ENCLOSURES AND ALL ASSOCIATED ACCESSORIES.
 - TRANSFORMERS
 - HX00 SERIES ON/OFF CURRENT SWITCHES
 - PILOT CONTROL RELAYS
 - CAT6 CABLES OR APPROVED EQUAL

UPDATE THE EXISTING BAS SYSTEM GRAPHICS AND ALARMS. THE CONTROLS SHALL BE COMMISSIONED AND VERIFIED BY SIEMENS. PROVIDE BAS SYSTEM TESTING AND VERIFICATION REPORT AT THE SUBSTANTIAL COMPLETION OF THE PROJECT. PROVIDE TRAINING TO FACILITIES. THE TRAINING SHALL BE ARRANGED AT END OF CONSTRUCTION AND SHALL INCLUDE MINIMUM OF TWO SESSIONS, EACH OF TWO HOURS.

RADIANT CEILING PANELS AND REHEAT COIL

- PROVIDE IN EACH ROOM WHERE SHOWN WALL FLUSH MOUNTED TEMPERATURE SENSOR AND TWO WAY DIRECT DIGITAL MODULATING CONTROL VALVE (0-10V) FOR EACH RADIANT PANEL AND HOT WATER RE-HEAT COIL. INSTALL WHERE SHOWN TO MONITOR ZONE TEMPERATURE SENSOR AND CONTROL THE HEATING UNITS.
 - CONNECT EACH RADIANT PANEL AND CONVECTOR CONTROL VALVE TO EXISTING BUILDING AUTOMATION SYSTEM.
 - PROVIDE OCCUPANCY SENSOR (PRESENCE SENSOR) AT CEILING IN EACH ROOM AND WIRE CONVECTORS/RADIANT PANELS TO OVERRIDE NIGHT SET-BACK.
 - PROVIDE ALL REQUIRED WIRING, CONDUITS AND DEVICES TO COMPLETE INSTALLATION. PROVIDE FIRE SEAL AROUND EACH CONDUIT AT RATED WALLS AND FLOOR.
 - UPDATE EXISTING BAS GRAPHICS AND ALARMS.
 - COMMISSION SYSTEM AND PROVIDE REQUIRED TRAINING.
 - THE CONTROLS VIA EXISTING BUILDING AUTOMATION SYSTEM (BAS) SHALL INCLUDE THREE (3) MODES OF OPERATION FOR CONTROL OF THE CONVECTORS AND THE RADIANT HEATING PANELS:
 - 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.
- WASHROOM EXHAUST FANS (EXISTING)
- CONNECT EACH EXHAUST FAN TO THE BAS FOR START/STOP, STATUS AND ALARM. UPDATE BAS INTERFACE GRAPHICS. INTERLOCK EACH FAN TO START/STOP USING SCHEDULE.



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HWDSB

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1.	FOR TENDER	11 MAY 2026
No.	DESCRIPTION	DATE

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

WESTDALE SECONDARY SCHOOL - PHASE II
HAMILTON - WENTWORTH DISTRICT SCHOOL BOARD
700 MAIN STREET WEST
HAMILTON, ONTARIO

DRAWN NAME:
SPECIFICATIONS AND DETAILS MECHANICAL

DRAWN BY: D.A.	CHECKED BY: N.S.
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DATE: NOVEMBER 2024	JOB No.: 24-107
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SCALE: NOT TO SCALE	SHEET No.: M3.02
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