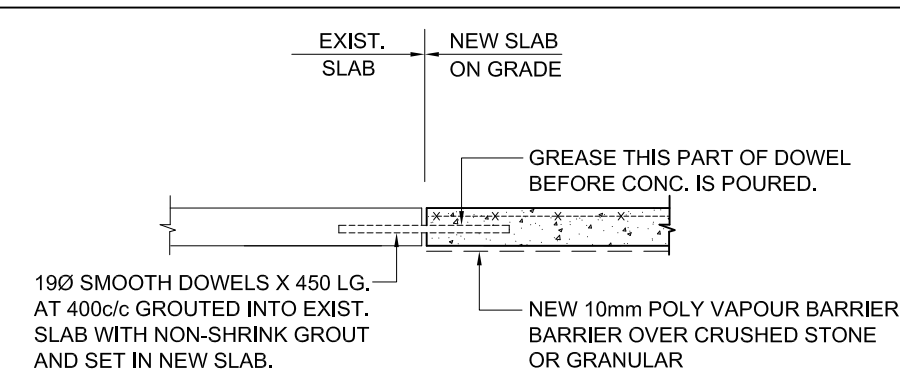


1 PART SLAB ON GRADE PLAN
S1 1:50

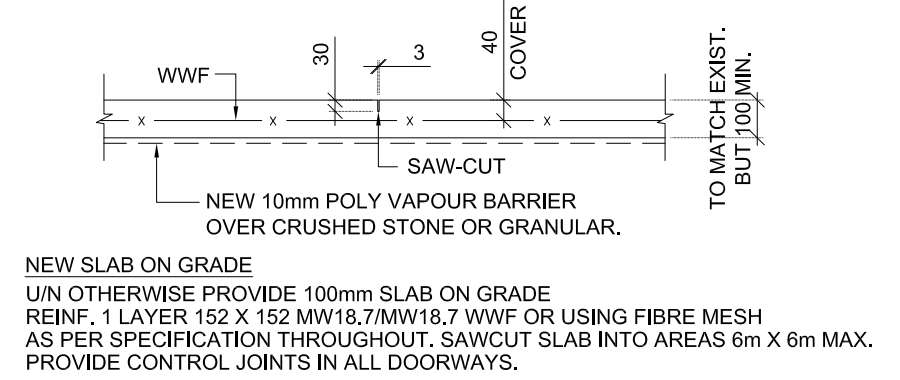
LEGEND

- EXISTING WALL
- EXISTING WALL TO BE DEMOLISHED SHORE AS REQUIRED
- NEW SLAB ON GRADE
- NEW MASONRY WALL

- SLAB ON GRADE PLAN**
- SLAB ON GRADE IS EXISTING UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL DRAWINGS FOR SLOPES AND DEPRESSIONS.
 - ALL NEW SLAB ON GRADE TO BE PLACED OVER 200MM COMPACTED EXISTING OR NEW CRUSHED STONE OR GRANULAR.
 - SEE ALSO TYPICAL DETAILS AND GENERAL NOTES ON THESE DRAWINGS.
 - REFER TO OTHER CONSULTANTS DRAWINGS FOR ALL EXISTING UNDERGROUND SERVICES, LOWER NEW FOOTINGS AS REQUIRED TO ACCOMMODATE THE NEW OR EXISTING UNDERGROUND SERVICES OR THE EXCAVATED DISTURBED SOILS.
 - UNLESS NOTED OTHERWISE PROVIDE NEW 100mm SLAB ON GRADE AS PER SPECIFICATION THROUGHOUT AND AS PER 2/S1 AND 3/S1. SAWCUT SLAB INTO AREAS 6m x 6m MAX. PROVIDE CONTROL JOINTS IN ALL DOORWAYS. REINF. 1 LAYER 152 X 152 MW18.7/MW18.7 WWF OR USING FIBRE MESH. REFER TO "NEW SLAB ON GRADE" DETAIL ON THIS DRAWING.
 - SHORE AS REQUIRED



2 TYPICAL DETAIL OF JUNCTION AT NEW AND EXISTING GRADE SLAB
S1 SCALE 1:20



3 TYPICAL DETAIL OF NEW SLAB ON GRADE AND CONTROL JOINT
S1 SCALE 1:20



2 PART ROOF FRAMING PLAN
S1 1:50

LEGEND

- EXISTING WALL
- EXISTING WALL TO BE DEMOLISHED SHORE AS REQUIRED
- NEW MASONRY WALL. BUILD TIGHT TO U/S OF EXISTING WALL

- EXISTING ROOF FRAMING PLAN SCALE 1:50**
- FOR ROOF SLOPES AND ELEVATIONS SEE ARCHITECTURAL DRAWINGS.
 - EXISTING ROOF IS DESIGNED FOR SPECIFIED SNOW LOAD OF 43 PSF (2.08 kN/m²). SPECIFIED SNOW LOAD PER CURRENT CODE IS 1.68 kN/m². MULTIPLY SNOW LOAD BY IMPORTANCE FACTOR I_w=1.15.
 - UNLESS NOTED OTHERWISE PROVIDE L8x8x6.4 FRAMING U/S NEW ROOF MECHANICAL UNITS AND L75 X 75 X 6.4 ANGLE REINFORCING AROUND ALL OPENINGS IN ROOF DECK THAT ARE BIGGER THAN 150mm x 150mm. PROVIDE REINFORCING AROUND NEW ROOF OPENINGS DUE TO NEW ROOF MECHANICAL DOUGHUSES.
 - SEE ALSO TYPICAL DETAILS AND GENERAL NOTES ON THESE DRAWINGS.
 - UNLESS NOTED OTHERWISE PROVIDE 170 X 12 X 200 BEARING PLATES EACH END OF ALL STEEL BEAMS/LINTELS. ALL BEARING PLATES SHALL BE WITH 2-190 WELDED ANCHORS X 250 LG. WELD BEAM TO BEARING PLATES TYPICAL.
 - REFER TO OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS FOR ROOF MOUNTED OR SUSPENDED UNITS. SHOW THE UNITS ON THE STEEL FABRICATORS SHOP DRAWINGS AND OBTAIN ARCHITECTS, MECHANICAL AND OR ELECTRICAL ENGINEERS APPROVAL OF WEIGHTS AND LOCATIONS BEFORE FABRICATION IS STARTED.
 - UNLESS NOTED OTHERWISE FOR LINTELS OVER MECHANICAL WALL OPENINGS REFER TO "LINTELS FOR DUCTS AND SERVICES" ON TYPICAL DETAIL SHEET. FOR ALL NEW LINTELS IN EXISTING WALLS CONFIRM WALL THICKNESS BEFORE LINTELS ARE FABRICATED. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR EXACT LOCATION.
 - FOR PARTITION LATERAL SUPPORT REFER TO DETAILS R1/S4 AND R2/S4.
 - SHORE AS REQUIRED.

ROOF LINTEL SCHEDULE

MARK	MATERIAL	TYPE	REMARKS
NEW RL-1	2 - L65x65x6.4 BACK TO BACK		EXTEND 150mm INTO WALL EACH END
NEW RL-2	W200 x 27 + 180x8 PLATE BOT.		STOP BOT. PLATE SHORT OF OPENING & PROVIDE TYPICAL B.P.L. EE.

LINTEL NOTES:

- GENERAL CONTRACTOR SHALL PROVIDE 38 X 5 X 150 MASONRY TIES WELDED TO BM AT 600 c/c TYP. FOR ALL BEAM LINTELS AND BMS IN MASONRY BETWEEN OPENINGS, WHERE APPLICABLE.
- UNLESS NOTED OTHERWISE BOTT. PLATE OF BEAM LINTELS SHALL STOP SHORT OF OPENINGS AND BEAM BEARING PLATE SHALL BE PROVIDED.
- FIRST BLOCK COURSE ABOVE STEEL LINTEL SHALL BE FILLED SOLID WITH 20MPa CONCRETE. TYP.

NOTE: THIS DRAWING IS NOT TO BE SCALED. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION OF ALL SITE DIMENSIONS AND FOR NOTIFYING THE ARCHITECT OF ANY SITE CONDITIONS AND SITE MEASUREMENTS THAT ARE NOT CONSISTENT WITH THE DRAWINGS.

PROFESSIONAL ENGINEER
V.X.OXA
100062276
PROVINCE OF ONTARIO

no.	revision	date

PROJECT NORTH

no.	issue	date
1	Issued for Owner Review	April 16, 2021
2	Issued for Permit and Tender	May 3, 2021
3	Issued for Permit and Tender	Jan 31, 2022

PROJECT
WRDSB CHALMERS STREET PUBLIC SCHOOL RENOVATIONS:
HVAC UPGRADE AND UNIVERSAL WASHROOM

WATERLOO REGION DISTRICT SCHOOL BOARD
35 CHALMERS ST. SOUTH, CAMBRIDGE N1R 5B4

Drawing: PART SLAB ON GRADE PLAN AND PART ROOF FRAMING PLAN

drawing scale: AS SHOWN

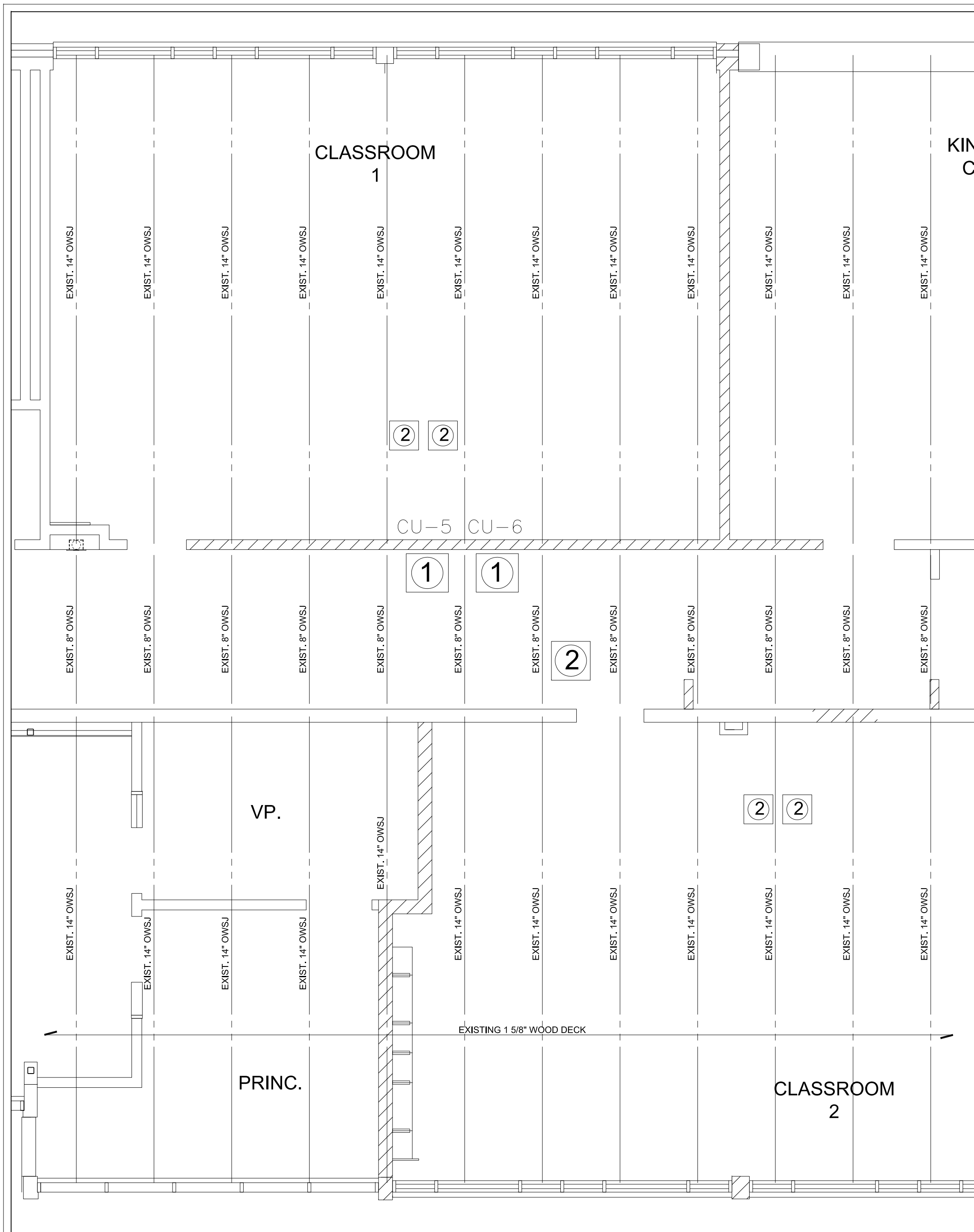
ward99 project number: 21007 - CHALMERS PS
VX Engineering Inc project number: 2110 - CHALMERS PS

drawing no.:

VX
VX ENGINEERING INC
STRUCTURAL ENGINEERS

S1

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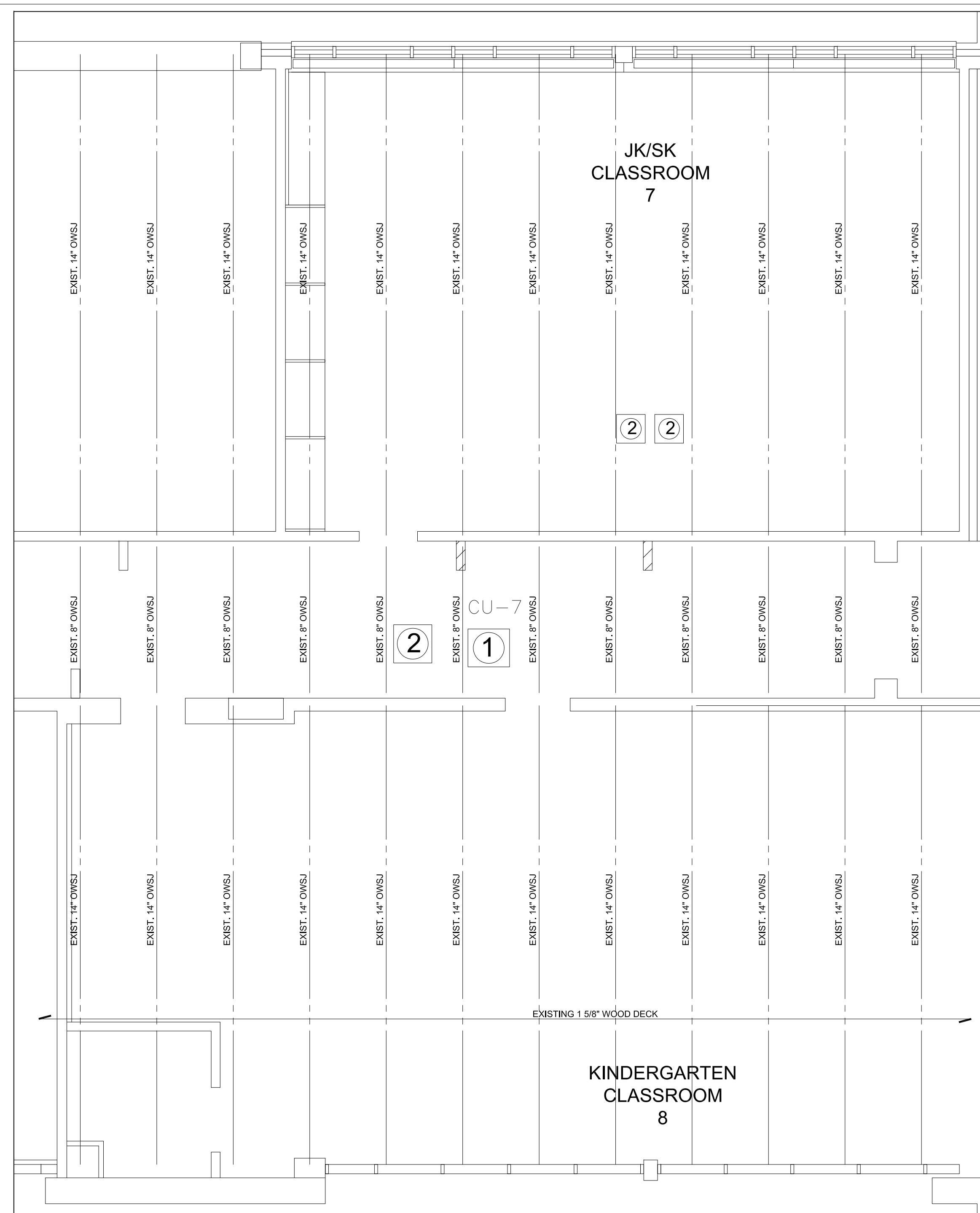


1
PART ROOF FRAMING PLAN
1:50

- EXISTING ROOF FRAMING PLAN SCALE 1:50
1. FOR ROOF SLOPES AND ELEVATIONS SEE ARCHITECTURAL DRAWINGS.
 2. EXISTING ROOF IS DESIGNED FOR SPECIFIED DEAD PLUS SNOW LOAD OF 75 PSF (3.6kN/m²). SPECIFIED SNOW LOAD PER CURRENT CODE IS 1.88 kN/m². MULTIPLY SNOW LOAD BY IMPORTANCE FACTOR I_s=1.15.
 3. UNLESS NOTED OTHERWISE PROVIDE L89x69x6.4 FRAMING US NEW ROOF MECHANICAL UNITS AND L75 X 75 X 6.4 ANGLE REINFORCING AROUND ALL OPENINGS IN ROOF DECK THAT ARE BIGGER THAN 150mm x 150mm. PROVIDE REINFORCING AROUND NEW ROOF OPENINGS DUE TO NEW ROOF MECHANICAL DOGHOUSES.
 4. SEE ALSO TYPICAL DETAILS AND GENERAL NOTES ON THESE DRAWINGS.
 5. UNLESS NOTED OTHERWISE PROVIDE 170 X 12 X 200 BEARING PLATES EACH END OF ALL STEEL BEAMS/LINTELS. ALL BEARING PLATES SHALL BE WITH 2-190 WELDED ANCHORS X 250 LG. WELD BEAM TO BEARING PLATES TYPICAL.
 6. REFER TO OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS FOR ROOF MOUNTED OR SUSPENDED UNITS. SHOW THE UNITS ON THE STEEL FABRICATORS SHOP DRAWINGS AND OBTAIN ARCHITECTS, MECHANICAL AND/OR ELECTRICAL ENGINEERS APPROVAL OF WEIGHTS AND LOCATIONS BEFORE FABRICATION IS STARTED.
 7. UNLESS NOTED OTHERWISE FOR LINTELS OVER MECHANICAL WALL OPENINGS REFER TO "LINTELS FOR DUCTS AND SERVICES" ON TYPICAL DETAIL SHEET. FOR ALL NEW LINTELS IN EXISTING WALLS CONFIRM WALL THICKNESS BEFORE LINTELS ARE FABRICATED. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR EXACT LOCATION.
 8. FOR PARTITION LATERAL SUPPORT REFER TO DETAILS R1/S4 AND R2/S4.
 9. SHORE AS REQUIRED.

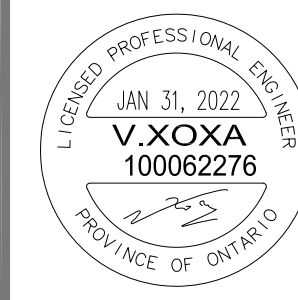
- LEGEND
- 1** NEW ROOF OPENINGS. SEE S3.
 - 2** NEW ROOF MECH. UNIT. MAX. WEIGHT 220LBS. SEE S3.

- LEGEND
- EXISTING WALL
 - - - EXISTING WALL TO BE DEMOLISHED SHORE AS REQUIRED
 - ▨ NEW MASONRY WALL, BUILD TIGHT TO U/S OF EXISTING WALL

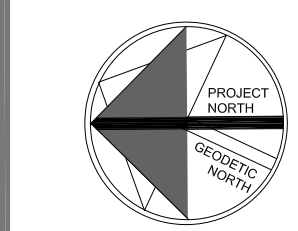


2
PART ROOF FRAMING PLAN
1:50

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no.	revision	date



no.	issue	date
1	Issued for Owner Review	April 16, 2021
2	Issued for Permit and Tender	May 3, 2021
3	Issued for Permit and Tender	Jan 31, 2022

PROJECT
WROSB CHALMERS STREET PUBLIC SCHOOL RENOVATIONS:
HVAC UPGRADE AND UNIVERSAL WASHROOM

WATERLOO REGION DISTRICT SCHOOL BOARD
35 CHALMERS ST., SOUTH, CAMBRIDGE N1R 5B4

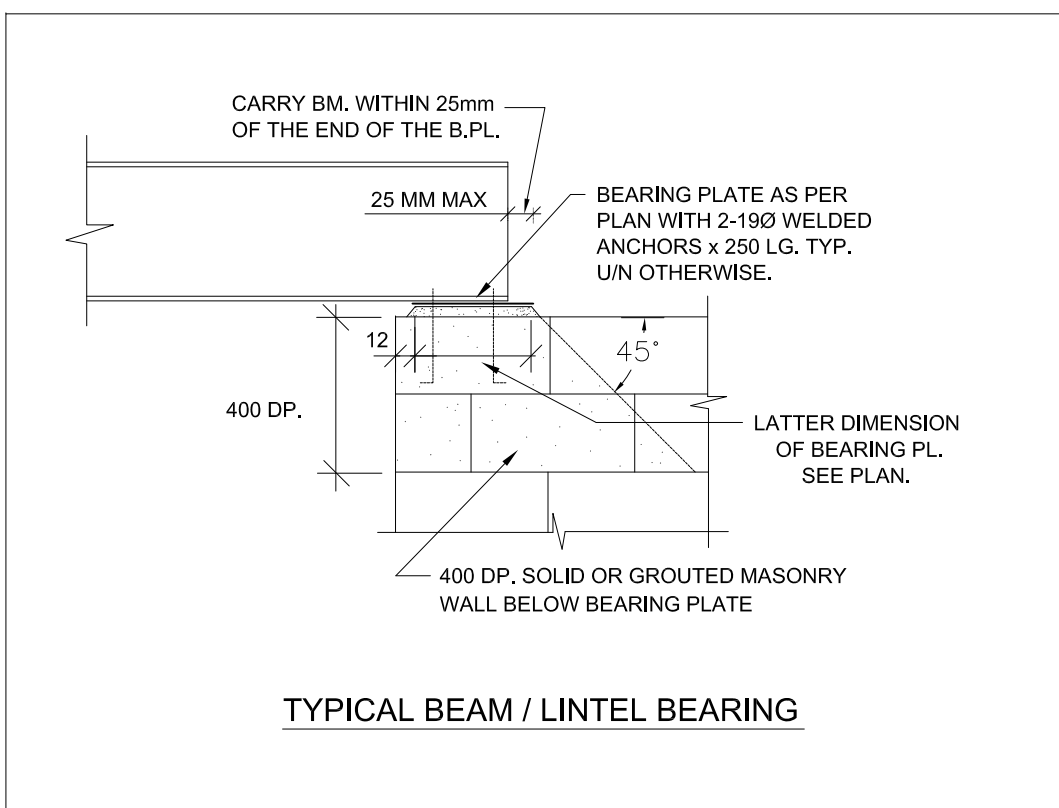
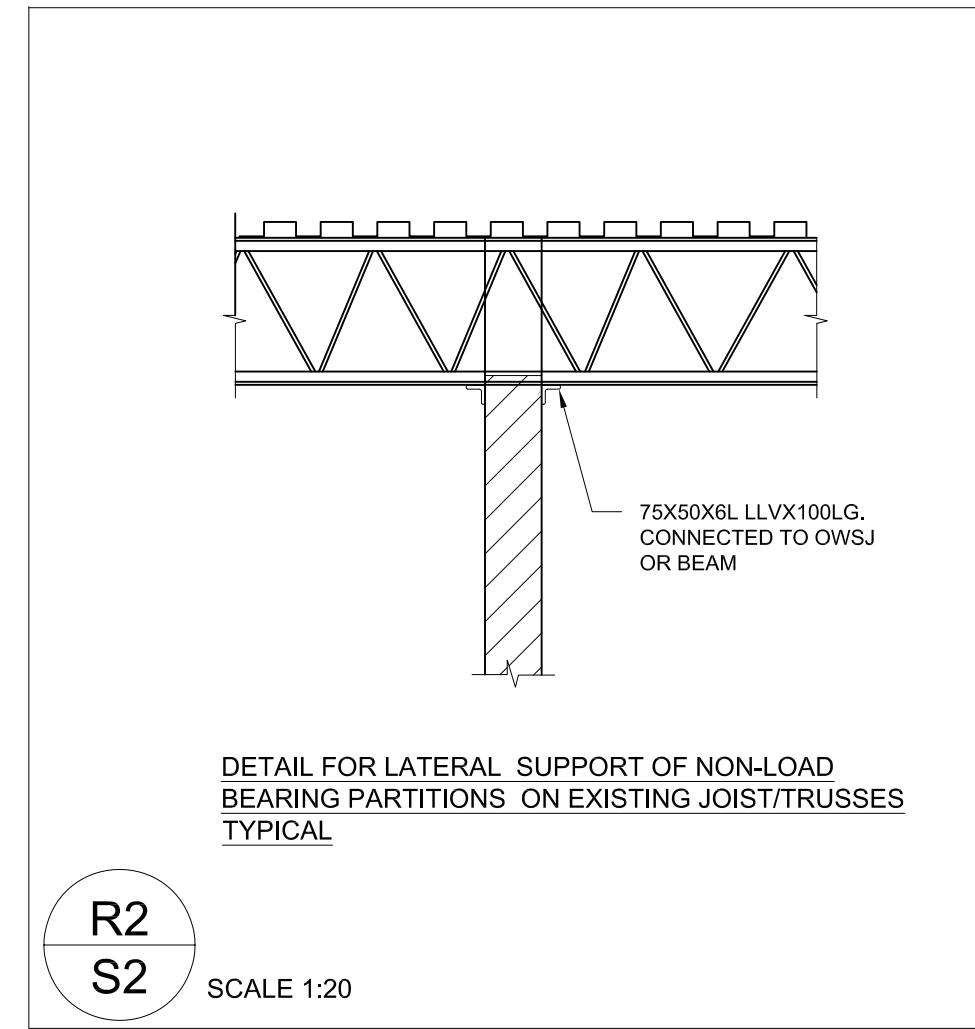
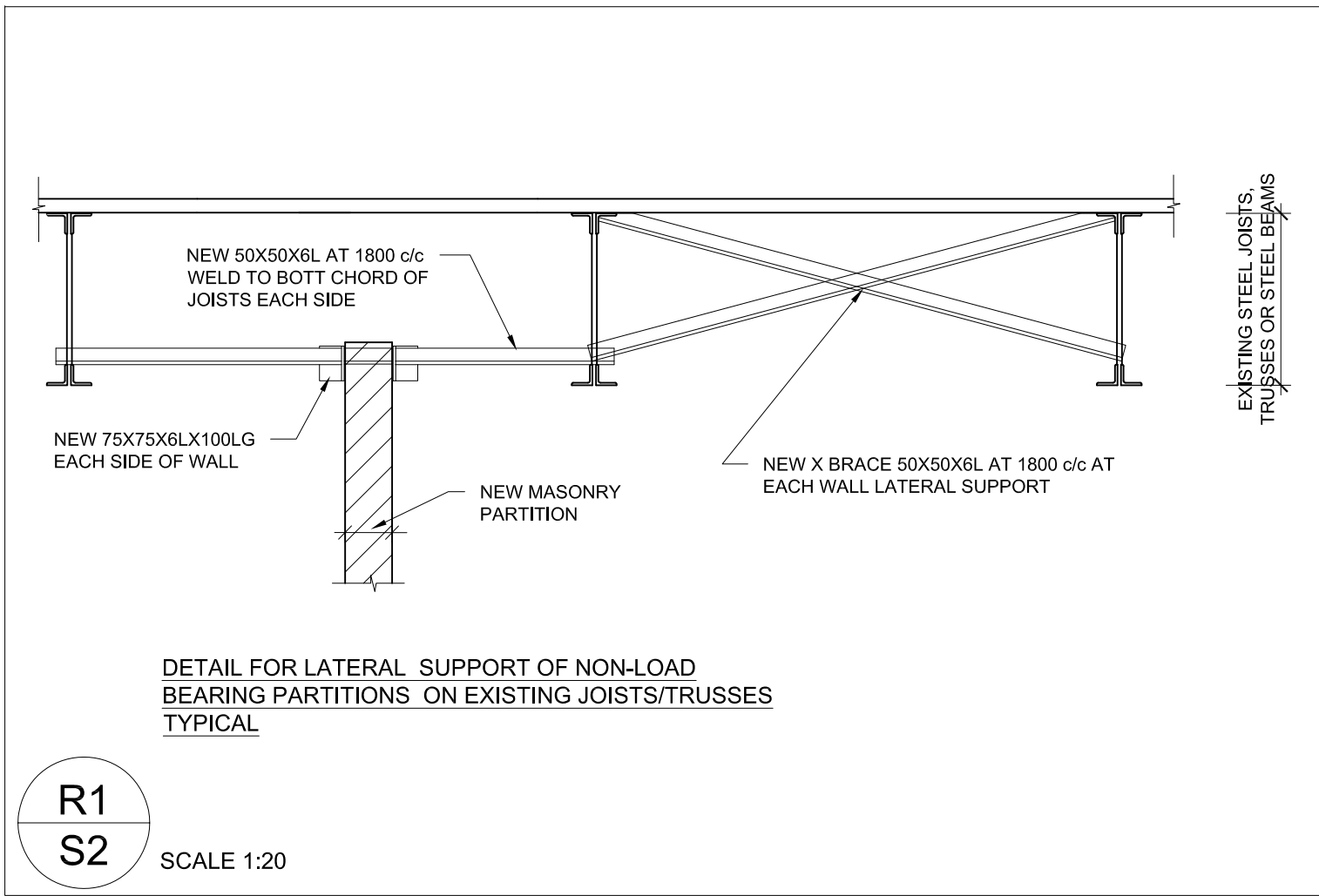
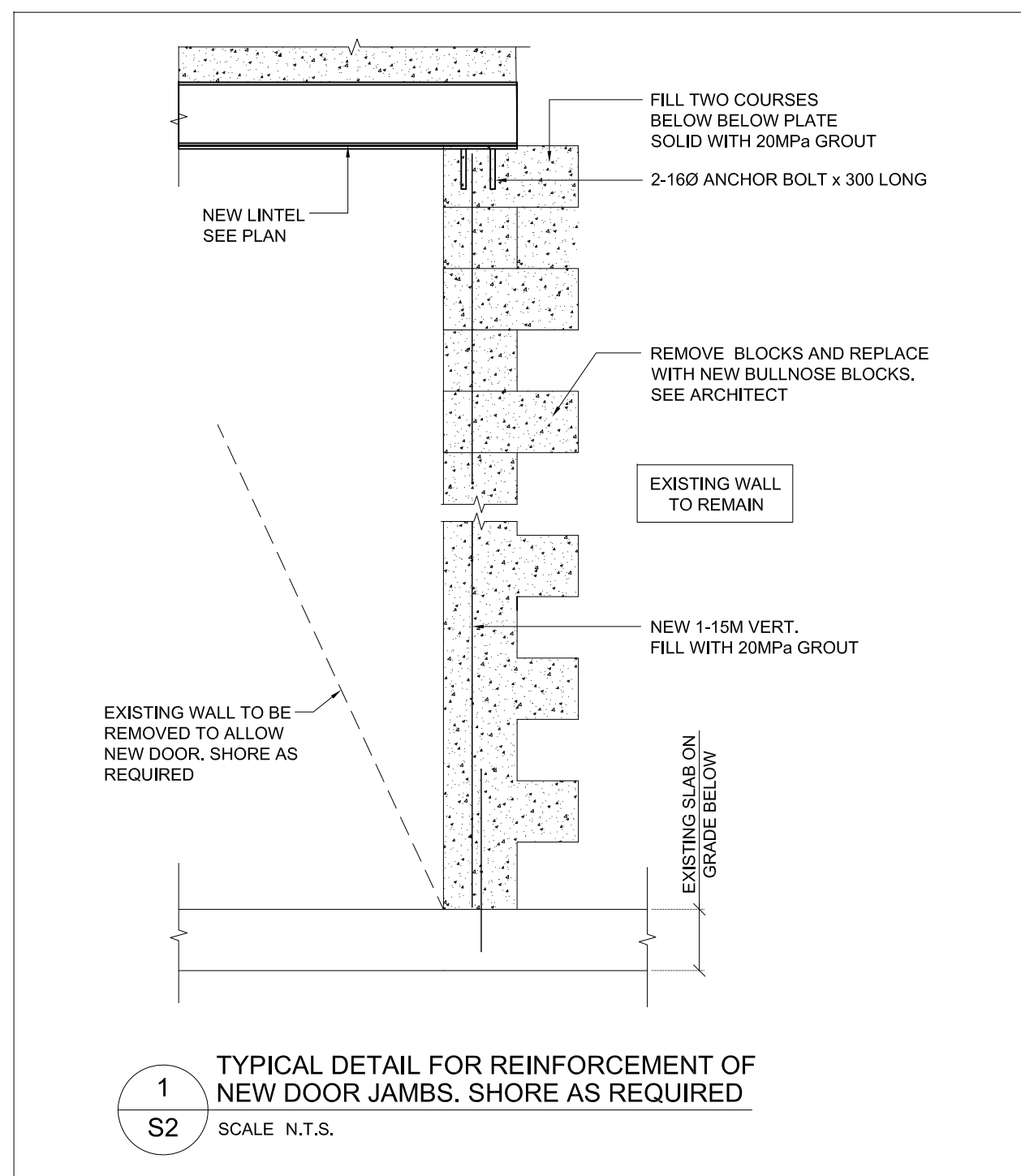
Drawing: **PART ROOF FRAMING PLAN**
drawing scale: **AS SHOWN**

ward99 project number: **21007 - CHALMERS PS** Vx Engineering Inc project number: **2110 - CHALMERS PS**

VX
VX ENGINEERING INC
STRUCTURAL ENGINEERS

S2

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STRUCTURAL STEEL NOTES:
CENTRE BEARING PLATES UNDER BEAMS OR AS NOTED. BEARING PLATE DIMENSION GIVEN LAST INDICATES SIDE PARALLEL TO BEAM WEB.

CONCRETE NOTES:
THE ULTIMATE 28 DAY STRENGTH OF CONCRETE SHALL BE 25MPa. REINFORCING STEEL SHALL BE DEFORMED BARS OF 400MPa YIELD STRENGTH.

MASONRY NOTES:
ALL BLOCK WALLS SHALL BE CONSTRUCTED FROM CONCRETE BLOCK UNITS IN COMPLIANCE WITH CAN3/CSA-A165 SERIES. MINIMUM COMPRESSIVE STRENGTH 15MPa UNLESS NOTED OTHERWISE ON DRAWINGS.
ALL BLOCK VOIDS WITH REINFORCING BARS SHALL BE FILLED SOLID WITH 20MPa OR COURSE GROUT.

- MASONRY WALL REINFORCING-TYPICAL**
(UNLESS NOTED OTHERWISE ON PLANS OR SECTIONS)
(SEISMIC HAZARD INDEX = 0.609)
- EXTERIOR WALLS:
190 BACK UP WALL - 15M VERTICAL REINFORCING AT 600c/c SET IN MIDDLE OF 190 WALL.
EXTRA HEAVY DUTY TRUSS TYPE JOINT HOR. REINF. AT 400c/c BY BLOK-LOK OR EQUAL.
 - INTERIOR LOAD BEARING WALLS:
190 WALL - 15M VERTICAL REINFORCING AT 1200c/c SET IN MIDDLE OF 190 WALL.
EXTRA HEAVY DUTY TRUSS TYPE JOINT HOR. REINF. AT 400c/c BY BLOK-LOK OR EQUAL.
 - PARTITIONS:
140 WALL - 10M VERTICAL REINFORCING AT 900c/c SET IN MIDDLE OF WALL.
EXTRA HEAVY DUTY TRUSS TYPE JOINT HOR. REINF. AT 400c/c BY BLOK-LOK OR EQUAL.
190 WALL - 15M VERTICAL REINFORCING AT 1200c/c SET IN MIDDLE OF 190 WALL.
EXTRA HEAVY DUTY TRUSS TYPE JOINT HOR. REINF. AT 400c/c BY BLOK-LOK OR EQUAL.
 - PROVIDE 1-15M VERTICAL EACH FACE OF BLOCK AT EACH SIDE OF ALL WALL OPENINGS AND BEAM BEARINGS FOR SPANS LARGER THAN 1200mm. TYPICAL FOR ALL EXTERIOR AND INTERIOR WALLS UNLESS NOTED OTHERWISE. (NOT REQUIRED IF PIER REINFORCING IS SPECIFIED ON PLANS AT THIS LOCATION).
 - PROVIDE HORIZONTAL MASONRY REINFORCING UNLESS NOTED OTHERWISE ON PLANS OR SECTIONS.
 - ALL BLOCK VOIDS WITH REINFORCING SHALL BE FILLED SOLID WITH 20MPa COURSE GROUT OR 20MPa CONCRETE WITH PEA GRAVEL.
 - MASONRY INDICATED ON PLAN AS "FILLED SOLID" SHALL BE FULLY FILLED WITH 20MPa COURSE GROUT OR 20MPa CONCRETE WITH PEA GRAVEL.
 - PROVIDE MINIMUM SPLICE 600mm FOR ALL VERTICAL REINFORCING.
 - MASONRY REQUIRED TO BE "FILLED SOLID" SHALL BE FILLED IN LOW LIFTS UNLESS APPROVED BY THE CONSULTANT.
 - CO-ORDINATE MASONRY REINFORCING PLACEMENT WITH LINTEL AND BEAM BEARINGS.
 - PROVIDE CONTINUOUS LINTEL BLOCK BAND COURSE WITH 2-15M CONT. BARS AT GROUND FLOOR LEVEL AND EACH SUBSEQUENT FRAMED LEVEL ABOVE.

NOTES FOR RCML:

- FOR LINTELS IN PARTITIONS AND BEARING WALLS, UP TO 1200mm CLEAR SPAN, PROVIDE 1-10M BAR TOP AND BOTTOM FOR EACH 100mm OF WALL THICKNESS OR PORTION THEREOF.
- FOR CLEAR SPANS FROM 1200mm TO 1800mm PROVIDE 1-15M HOOKED TOP AND BOTTOM AS CALLED FOR NOTE No.1.
- LINTEL BEAM UNITS SHALL BE FILLED WITH CONCRETE HAVING AN ULTIMATE COMPRESSIVE STRENGTH OF 20MPa AT 28 DAYS. LENGTH OF BEARING SHALL BE 200mm MIN.
- WHERE LINTELS FRAME INTO REINFORCED CONCRETE COLUMNS, REINFORCED CONCRETE WALLS OR STEEL COLUMNS, PROVIDE 90 X 90 X 10 SHELF ANGLE. FOR ANCHORAGE, USE WELDING OR 2-19Ø INSERT ANCHORS, EXCEPT AS OTHERWISE SPECIFIED ON DRAWINGS.

CLEAR SPAN	140mm WALL		190mm WALL	
	TYPE	MATERIAL	TYPE	MATERIAL
UP TO 1200mm	JL	2L'S 90 X 65 X 8 LLV	JL	2L'S 90 X 90 X 8
1200mm TO 2000mm	JL	2L'S 90 X 65 X 8 LLV	JL	2L'S 150 X 90 X 8 LLV

NOTES FOR STEEL LINTELS

- DOUBLE ANGLES SHALL BE PLACED BACK TO BACK AND BOLTED TOGETHER WITH BOLTS AT 600c/c OR EQUIVALENT STITCHWELD TOP AND BOTTOM 166 MIN.
- MINIMUM BEARING OF LINTELS SHALL BE 150mm SEE PLAN ABOVE.
- FOR WALLS THICKER THAN 290mm ADD 1 ANGLE OF SIZE SPECIFIED ABOVE FOR EVERY 100 OF MASONRY OR PORTION THEREOF.
- SEE NOTE No.4 ABOVE
- FOR LINTELS IN NON-LOAD BEARING 140 WALLS OVER 2000mm, PROVIDE W200 X 27 BEAM.
- PROVIDE SINGLE 90 X 90 X 8L FOR OPENINGS IN 90mm BLOCK ENCLOSURES FOR SPAN UP TO 1200mm. FOR LOCATIONS SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.

LINTELS FOR DUCT OPENINGS THRU WALLS SUPPORTING P.C. SLABS

- SMALL DUCT OPENINGS
- FOR DUCT OPENINGS LARGER THAN 500 mm CLEAR

CLEAR SPAN	WALL THICKNESS		
	190 WALL	240 WALL	290 WALL
UP TO 700 mm	2 L'S 90 X 90 X 8	1 L 125 X 90 X 8 LLH + 1 L 100 X 100 X 8	3 L' 90 X 90 X 8
UP TO 950 mm	2 L'S 125 X 90 X 8 LLV	2 L'S 150X100X8 LLV	3 L'S 125X90X8 LLV
UP TO 2400	W150 X 22 OR W150X22 + 170X8 PL. BOT. FOR MAS.	W150 X 22 OR W150X22 + 220X8 PL. BOT. FOR MAS.	W150 X 22 OR W150X22 + 270X8 PL. BOT. FOR MAS.

FOR 390 THICK WALLS PROVIDE LINTELS AS FOR 2-190 WALLS

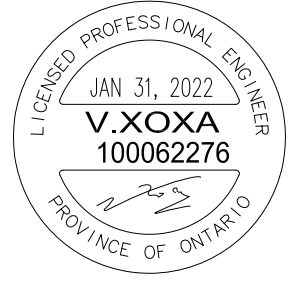
LINTELS FOR DUCT OPENINGS THRU WALLS SUPPORTING O.W.S.J.

-

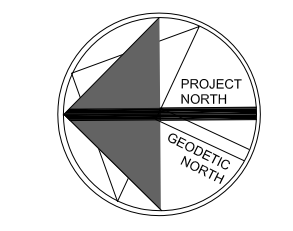
PROVIDE MINIMUM 400mm SOLID MASONRY BETWEEN MECHANICAL OPENINGS. TYPICAL.

UNLESS NOTED OTHERWISE, FOR OPENINGS IN EXTERIOR WALLS PROVIDE LINTEL AS NOTED ABOVE FOR BACK UP WALL + STEEL ANGLE FOR VENEER. PROVIDE 90 X 90 X 8L FOR SPAN UP TO 1200mm OR 150 X 90 X 8L LLV FOR SPAN UP TO 2000mm.

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WRDSB CHALMERS STREET PUBLIC SCHOOL RENOVATIONS:
HVAC UPGRADE AND UNIVERSAL WASHROOM

WATERLOO REGION DISTRICT SCHOOL BOARD
35 CHALMERS ST. SOUTH, CAMBRIDGE N1R 5B4
Drawing: **DETAILS AND GENERAL NOTES**

drawing scale: **AS SHOWN**

ward99 project number: **2107 - CHALMERS PS** VX Engineering Inc project number: **2110 - CHALMERS PS**