



National  
Defence

Défense  
nationale

A-243 Solving  
Contamination Deficiencies

CFB BORDEN



Date: 2025-03-05

SET NO. - SÉRIE NO.
LIST OF DRAWINGS - LISTE DES DESSINS
STRUCTURAL - STRUCTURE
L-B147-9618-200 - GENERAL NOTES L-B147-9618-201 - TYPICAL DETAILS L-B147-9618-202 - TYPICAL & PROJECT DETAILS L-B147-9618-203 - FLOOR PLAN L-B147-9618-204 - MEZZANINE PLAN L-B147-9618-205 - ROOF PLAN L-B147-9618-206 - BUILDING SECTIONS
ARCHITECTURAL - ARCHITECTURE
L-B147-9618/12-300 - LEGEND, CONSTRUCTION ASSEMBLIES, FIRE, GENERAL NOTES & CODE MATRIX L-B147-9618/12-301 - FLOOR PLAN - DEMOLITION L-B147-9618/12-302 - GROUND FLOOR PLAN - NEW WORK & DETAILS L-B147-9618/12-303 - REFLECTED CEILING PLAN - DEMOLITION L-B147-9618/12-304 - REFLECTED CEILING PLAN - NEW WORK & DETAILS L-B147-9618/12-305 - FINISH FLOOR PLAN L-B147-9618/12-306 - ROOF PLAN - DEMOLITION L-B147-9618/12-307 - ROOF PLAN - NEW WORK & DETAILS L-B147-9618/12-308 - BUILDING SECTIONS & DETAILS L-B147-9618/12-309 - ENLARGED PLANS & INTERIOR ELEVATIONS L-B147-9618/12-310 - GENDER NEUTRAL WASHROOM PLAN AND INTERIOR ELEVATIONS L-B147-9618/12-311 - MILLWORK DETAILS L-B147-9618/12-312 - DOOR SCHEDULE, DOOR & FRAME ELEVATIONS & JAMB DETAILS
MECHANICAL - MÉCANIQUE
L-B147-9618/12-400 - LEGENDS, DRAWING LIST AND CODE SYNOPSIS L-B147-9618/12-410 - GROUND FLOOR PLAN FIRE PROTECTION - DEMOLITION L-B147-9618/12-411 - GROUND FLOOR PLAN FIRE PROTECTION - NEW WORK L-B147-9618/12-420 - GROUND FLOOR PLAN PLUMBING - DEMOLITION L-B147-9618/12-421 - GROUND FLOOR PLAN PLUMBING - NEW WORK L-B147-9618/12-422 - ENLARGE GROUND FLOOR PART PLAN - PLUMBING & UTILITIES - NEW WORK L-B147-9618/12-430 - GROUND FLOOR PLAN HVAC - DEMOLITION L-B147-9618/12-431 - GROUND FLOOR PLAN HVAC - NEW WORK L-B147-9618/12-440 - ROOF PLAN - DEMOLITION L-B147-9618/12-441 - ROOF PLAN - NEW L-B147-9618/12-450 - MECHANICAL SYSTEM CONTROL DIAGRAMS L-B147-9618/12-460 - MECHANICAL SCHEDULES - SHEET 1 L-B147-9618/12-461 - MECHANICAL SCHEDULES - SHEET 2 L-B147-9618/12-470 - MECHANICAL DETAILS - SHEET 1 L-B147-9618/12-471 - MECHANICAL DETAILS - SHEET 2
ELECTRICAL - ÉLECTRIQUE
L-B147-9618/12-500 - LEGENDS AND DRAWING LIST L-B147-9618/12-501 - GROUND FLOOR PLAN POWER AND FIRE ALARM - DEMOLITION L-B147-9618/12-502 - GROUND FLOOR PLAN LIGHTING - DEMOLITION L-B147-9618/12-503 - GROUND FLOOR PLAN POWER AND FIRE ALARM - NEW WORK L-B147-9618/12-504 - GROUND FLOOR PLAN LIGHTING - NEW WORK L-B147-9618/12-505 - SECOND FLOOR PLAN FIRE ALARM LAYOUT AND DIAGRAM L-B147-9618/12-540 - ROOF PLAN - DEMOLITION L-B147-9618/12-541 - ROOF PLAN - NEW WORK L-B147-9618/12-560 - SCHEDULES
DCC NO. - CDC NO. -
PROJECT NO. - PROJET NO. BN186586
JOB NO. L-B147-9618/12



1. THIS IS A METRIC PROJECT. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN MILLIMETERS AND ALL FORCES ARE IN METRIC UNITS.
2. PRIOR TO CONSTRUCTION, REVIEW STRUCTURAL DRAWINGS IN CONJUNCTION WITH ALL OTHER DRAWINGS PROVIDED BY DCC REPRESENTATIVE. CONFIRM ALL DIMENSIONS, ELEVATIONS AND HEADROOM CLEARANCES, AND COORDINATE ALL OPENINGS, SLEEVES AND EMBEDDED ITEMS.
3. REPORT ANY DISCREPANCIES OR CONFLICTS BEFORE PROCEEDING WITH THE WORK.
4. DO NOT CUT OR DRILL ANY OPENINGS IN STRUCTURAL MEMBERS WITHOUT WRITTEN PERMISSION FROM DCC REPRESENTATIVE.
5. EXISTING STRUCTURAL INFORMATION IS BASED UPON AS BUILT DRAWINGS PREPARED BY DND CONSTRUCTION ENGINEERING DATED JANUARY 15, 1984, DRAWINGS PREPARED BY F.J. REINHOLD, AND ASSOCIATES CANADA LIMITED DATED JANUARY 14, 1994, AND DRAWINGS PREPARED BY STANTEC CONSULTING LTD. DATED JANUARY 31, 2011.
6. VERIFY EXISTING DIMENSIONS AND CONDITIONS ON SITE PRIOR TO CONSTRUCTION.
7. USE THESE DRAWINGS ONLY FOR THE PURPOSE IDENTIFIED IN THE REVISIONS COLUMN. DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED "ISSUED FOR CONSTRUCTION".
8. DO NOT USE INFORMATION ON THESE DRAWINGS FOR ANY OTHER PROJECT OR WORKS.
9. DO NOT SCALE THESE DRAWINGS.
10. UNLESS OTHERWISE NOTED ON DRAWINGS, FOLLOW TYPICAL DETAILS SHOWN ON THIS SERIES OF DRAWINGS. TYPICAL DETAILS SHOW STRUCTURAL INTENT RATHER THAN ACTUAL CONDITIONS FOR THIS PROJECT. IF A TYPICAL DETAIL INCLUDES A CROSS REFERENCE TO ANOTHER TYPICAL DETAIL WHICH IS NOT INCLUDED IN THE DRAWING SET, THE CROSS-REFERENCED DETAIL IS NOT APPLICABLE ON THIS PROJECT.
11. ALL SECTIONS, DETAILS AND STATEMENTS NOTED AS "TYPICAL" APPLY TO LIKE /SIMILAR CONDITION IN THE STRUCTURE.
12. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR REQUIRED FIRE RATING, SPRAYED FIREPROOFING, INTUMESCENT PAINTING AND ALL OTHER MEASURES REQUIRED TO ACHIEVE IT.
13. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR WATERPROOFING, SEALERS, ETC.
14. DRAWINGS SHOW COMPLETED STRUCTURE ONLY. THEY DO NOT SHOW TEMPORARY WORKS FOR WHICH THE CONTRACTOR IS RESPONSIBLE AND WHICH MAY BE REQUIRED FOR EXECUTION OF THE PROJECT, INCLUDING TEMPORARY SHORING, BRACING, GUYS AND TIE DOWNS. THE CONTRACTOR TO ESTABLISH CONSTRUCTION PROCEDURE AND SEQUENCE TO ENSURE SAFETY OF THE WHOLE STRUCTURE AND ALL ITS COMPONENTS DURING ERECTION.
15. EXTENT OF ALL TEMPORARY SHORING FOR EXCAVATION WHICH MAY BE REQUIRED IS NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS, CONTRACTOR TO DETERMINE. REFER TO SPECIFICATIONS FOR TEMPORARY SHORING REQUIREMENTS.
16. DESIGN AND CONSTRUCTION REVIEW OF ALL TEMPORARY WORKS TO BE CARRIED OUT BY A PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR, LICENSED IN THE PLACE WHERE THE PROJECT IS LOCATED.
17. ANCHOR BOLTS AND OTHER EMBEDDED ITEMS ARE DESIGNED FOR LOADS ACTING ON THE COMPLETED STRUCTURE ONLY AND ARE NOT TO BE USED OR RELIED UPON FOR TEMPORARY SUPPORT OR BRACING DURING ERECTION UNLESS REVIEWED AND APPROVED BY THE CONTRACTOR'S ENGINEER RESPONSIBLE FOR THE ERECTION PROCEDURES.
18. CONSTRUCTION LOADS ON COMPLETED STRUCTURE NOT TO EXCEED DESIGN LOADS INDICATED ON DRAWINGS. FULL DESIGN LOADS MAY ONLY BE APPLIED AFTER THE CONCRETE REACHES ITS DESIGN STRENGTH.
19. MAINTAIN A QUALITY CONTROL PLAN FOR STRUCTURAL WORK, AND MAKE IT AVAILABLE TO THE DCC REPRESENTATIVE UPON REQUEST. AT A MINIMUM, THE PLAN TO INCLUDE:
  1. NAMES OF PERSONNEL RESPONDED FOR EXECUTION OF THE PLAN.
  2. MEANS AND METHODS FOR CONFIRMING MATERIAL COMPLIANCE WITH SPECIFICATIONS AND ASSOCIATED DOCUMENTATION PROCEDURES.
  3. PROGRAM FOR CONFIRMING AND DOCUMENTING COMPLIANCE WITH REQUIRED SUB-TRADE QUALIFICATIONS AND QUALIFICATIONS OF THEIR INDIVIDUAL EMPLOYEES AND SUB-CONTRACTORS.
  4. PROCEDURES FOR REVIEWING FIELD COMPLIANCE WITH CONSTRUCTION DOCUMENTS, INCLUDING DOCUMENTATION OF LOCATIONS REVIEWED, PHOTOGRAPHS TAKEN AND TIMING OF REVIEW. THE CONTRACTOR'S REVIEW TO BE COMPLETED PRIOR TO REVIEW BY THE DCC REPRESENTATIVE.
  5. PROCEDURES FOR RECTIFYING DEFICIENCIES NOTED BY THE CONTRACTOR, SUB-CONTRACTORS, DCC REPRESENTATIVE AND INDEPENDENT INSPECTION AGENCIES.
20. FOR INSPECTION AND TESTING REQUIREMENTS, REFER TO SPECIFICATIONS.
21. IN CASE OF DISCREPANCY BETWEEN GENERAL NOTES, DRAWINGS AND SPECIFICATIONS, COMPLY WITH THE MOST STRINGENT REQUIREMENTS.

1. STRUCTURAL UPGRADING OF THE EXISTING BUILDING IS TO THE GENERAL INTENT OF THE NATIONAL BUILDING CODE (NBC) 2020 SUPPLEMENTED BY THE USER'S GUIDE - NBC 2015 STRUCTURAL COMMENTARIES. THE UPGRADING IS LIMITED TO THE AREA(S) SHOWN ON THESE DRAWINGS. FOR THE REMAINDER OF THE EXISTING BUILDING, THE CURRENT PERFORMANCE LEVEL IS MAINTAINED AND SEISMIC OR OTHER STRUCTURAL EVALUATION AND UPGRADING (INCLUDING UPGRADING TO CARRY GRAVITY LOADS) IS NOT INCLUDED IN THE SCOPE OF THE PROJECT. WE ACCEPT NO RESPONSIBILITY FOR THE STRUCTURAL ADEQUACY OF THE REMAINDER OF THE EXISTING BUILDING (WHICH REMAINS THE RESPONSIBILITY OF THE ORIGINAL DESIGNERS), NOR FOR POSSIBLE DETRIMENTAL SEISMIC OR OTHER EFFECTS THE REMAINDER OF THE BUILDING MAY HAVE ON THE RENOVATED AREA(S).

2. CONCRETE ELEMENTS ARE DESIGNED PER CSA A23.3-19 - DESIGN OF CONCRETE STRUCTURES.

3. STEEL ELEMENTS ARE DESIGNED PER CSA S16-19 - LIMIT STATE DESIGN OF STEEL STRUCTURES.

4. MASONRY STRUCTURAL ELEMENTS ARE DESIGNED PER CSA S304 (R2019) - DESIGN OF MASONRY STRUCTURES.

5. THE VALUES FOR CLIMATIC DATA USED IN THE DETERMINATION OF DESIGN LOADS HAVE BEEN OBTAINED FROM THE 2015 NBC FOR THE SPECIFIC LOCATION OF BORDEN.

6. BASED ON THE USE AND OCCUPANCY, THE BUILDING IS DESIGNED TO THE REQUIREMENTS OF A NORMAL IMPORTANCE CATEGORY.

7. SUPERIMPOSED DEAD LOADS (SDL) ARE NON-STRUCTURAL DEAD LOADS DUE TO NON-STRUCTURAL TOP FINISHES, FINISHES, PARTITIONS, ROOFING MATERIALS, SUSPENDED EQUIPMENT, PAVERS, STOL, ETC.

8. DEAD LOAD (DL) IS THE SELF WEIGHT OF THE STRUCTURE PLUS THE SUPERIMPOSED DEAD LOAD.

9. LIVE LOAD (LL) REDUCTION HAS NOT BEEN USED.

10. UNLESS OTHERWISE NOTED, DESIGN LOADS SHOWN ON DRAWINGS ARE SPECIFIED (UNFACTORED) LOADS, TO BE USED FOR ULS DESIGN. FOR SLS DESIGN, THESE LOADS CAN BE REDUCED BY MULTIPLYING WITH THE RATIO OF APPROPRIATE IMPORTANCE FACTORS  $w(SLS) / w(ULS)$  GIVEN BELOW.

11. IF ONLY ONE VALUE IS GIVEN FOR A LOAD, CONSIDER IT LIVE LOAD.

12. FOR CONNECTION LOADS, "+" SIGN INDICATES TENSION AND "-" SIGN INDICATES COMPRESSION, EXCEPT FOR COLUMN LOADS WHERE "+" SIGN INDICATES COMPRESSION AND "-" SIGN INDICATES TENSION.

13. SNOW:

$S_e = 2.2 \text{ kPa}$	$S_r = 0.4 \text{ kPa}$	$I_s (ULS) = 1.0$	$I_s (SLS) = 0.9$
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14. MINIMUM UNFACTORED SNOW LOAD =  $2.16 \text{ kPa} \times I_s$

14. RAIN:

24 HOUR RAINFALL = 109 mm

15. LATERAL LOADS IN THIS STRUCTURE ARE RESISTED BY SHEAR WALLS, AND BRACED FRAMES, AND ARE DETERMINED BASED ON THE WIND AND SEISMIC DATA BELOW.

16. WIND:

$q_{50} = 0.36 \text{ kPa}$	$I_w (ULS) = 1.0$	$I_w (SLS) = 0.75$
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BUILDING IS: LOW RISE  
TERRAIN TYPE: OPEN  
INTERNAL PRESSURE CATEGORY: 2

$C_e = 0.9$

17. SEISMIC:

$S_a(0.2, XD) = 0.251$	$PGA (XD) = 0.139$	$I_e FaS_a(0.2) = 0.139$
$S_a(0.5, XD) = 0.262$	$R_d = 1.5$	
$S_a(1.0, XD) = 0.160$	$R_o = 1.3$	SITE CLASSIFICATION = D
$S_a(2.0, XD) = 0.0773$	$I_e = 1.0$	
$S_a(5.0, XD) = 0.0205$		
$S_a(10.0, XD) = 0.00649$		

SEISMIC FORCE RESISTING SYSTEM (SFRS): SHEAR WALL AND BRACED FRAMES

- STRUCTURAL MOVEMENTS

UNLESS NOTED OTHERWISE, MAXIMUM EXPECTED MOVEMENT OF THE BUILDING STRUCTURE (AFTER INSTALLATION OF FINISHES) WILL BE AS FOLLOWS ("L" IS THE CLEAR SPAN OF THE SUPPORTING STRUCTURAL ELEMENT, "H" IS THE STOREY HEIGHT):

- VERTICAL DEFLECTION OF STEEL FRAMED FLOORS AND ROOFS:	L/360 u/h
- VERTICAL DEFLECTION OF CONCRETE FRAMED FLOORS AND ROOFS:	L/480 u/h
- VERTICAL DEFLECTIONS OF MEMBERS SUPPORTING CURTAINWALL:	12 mm

## EXISTING STRUCTURES

  - EXISTING CONDITIONS ARE ASSUMED. SURVEY THE EXISTING STRUCTURE AFTER REMOVING FINISHES AND REPORT ANY VARIATIONS TO DCC REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK.
  - DESIGN OF STRUCTURAL WORKS RELATED TO THE EXISTING BUILDING HAS BEEN CARRIED OUT AS FAR AS PRACTICAL, GIVEN LIMITED AVAILABILITY OF THE EXISTING DRAWINGS AND LIMITED RESOURCES. STRUCTURAL MODIFICATIONS LIKELY TO HAVE BEEN MADE THROUGH THE LIFE OF THE BUILDING, MODIFICATIONS TO THE PROPOSED STRUCTURAL FRAMING AND / OR DETAILS MAY BE REQUIRED IF EXISTING CONDITIONS ARE FOUND TO BE DIFFERENT FROM THOSE ASSUMED AND SHOWN ON DRAWINGS.
  - TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING STRUCTURES DURING DEMOLITION AND NEW CONSTRUCTION.
  - DISCONNECT ALL SERVICES IN THE AREAS AFFECTED BY DEMOLITION AND NEW CONSTRUCTION. REROUTE SERVICES AS REQUIRED TO KEEP THE REMAINDER OF THE BUILDING OPERATIONAL.
  - SAFELY STORE ALL STRUCTURAL ELEMENTS AND OTHER PRODUCTS WHICH ARE TO BE RE-USED.
  - REMOVE FROM SITE ALL OTHER STRUCTURAL ELEMENTS AND PRODUCTS WHICH ARE NOT INDICATED TO BE HANDED OVER TO THE OWNER.
  - SCHEDULE WORK TO MINIMIZE EFFECT ON THE EXISTING BUILDING OPERATION. USE EQUIPMENT AND PROCEDURES TO MINIMIZE NOISE, DUST AND VIBRATIONS. SUBMIT PROPOSED SCHEDULE FOR REVIEW BY THE CONSULTANT AND THE OWNER.
  - ALL DEMOLITION, SHORING AND OTHER TEMPORARY WORKS TO BE DESIGNED BY A PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR, LICENSED IN THE PLACE WHERE THE PROJECT IS LOCATED. PREPARE DRAWINGS SIGNED AND SEALED BY THAT ENGINEER SHOWING DEMOLITION PROCEDURE AND SEQUENCE AND ALL THE NECESSARY SHORING. PROVIDE THESE DRAWINGS TO THE DCC REPRESENTATIVE FOR REVIEW.
  - INSTALL AND AFTERWARDS REMOVE ALL TEMPORARY SHORING AND BRACING REQUIRED TO ENSURE THE INTEGRITY OF THE EXISTING STRUCTURE DURING CONSTRUCTION.
  - REFER TO TYPICAL DETAIL FOR CONCRETE SAWCUTTING PROCEDURE.
  - DO NOT ALTER MATERIAL PROPERTIES OF THE STRUCTURAL STEEL WHICH IS TO REMAIN BY CUTTING AND DEMOLITION PROCEDURE.
  - ASSESS CAPACITY OF THE EXISTING STRUCTURE AND CONSTRUCTION LOADS APPLIED TO IT. PROVIDE ADEQUATE SHORING IF THE LOADS EXCEED THE EXISTING STRUCTURAL CAPACITY.
  - MAKE GOOD ALL EXISTING WORK DISTURBED BY THE SHORING OPERATIONS, DEMOLITION, EXCAVATION AND OTHER CONSTRUCTION PROCEDURES.

1. EXISTING CONDITIONS ARE ASSUMED. SURVEY THE EXISTING STRUCTURE AFTER REMOVING FINISHES AND REPORT ANY VARIATIONS TO DCC REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK.
2. DESIGN OF STRUCTURAL WORKS RELATED TO THE EXISTING BUILDING HAS BEEN CARRIED OUT AS FAR AS PRACTICAL. GIVEN LIMITED AVAILABILITY OF THE EXISTING DRAWINGS AND LIMITED RECORDS OF THE STRUCTURAL MODIFICATIONS LIKELY TO HAVE BEEN MADE THROUGH THE LIFE OF THE BUILDING, MODIFICATIONS TO THE PROPOSED STRUCTURAL FRAMING AND / OR DETAILS MAY BE REQUIRED IF EXISTING CONDITIONS ARE FOUND TO BE DIFFERENT FROM THOSE ASSUMED AND SHOWN ON DRAWINGS.
3. TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING STRUCTURES DURING DEMOLITION AND NEW CONSTRUCTION.
4. DISCONNECT ALL SERVICES IN THE AREAS AFFECTED BY DEMOLITION AND NEW CONSTRUCTION. REROUTE SERVICES AS REQUIRED TO KEEP THE REMAINDER OF THE BUILDING OPERATIONAL.
5. SAFELY STORE ALL STRUCTURAL ELEMENTS AND OTHER PRODUCTS WHICH ARE TO BE RE-USED.
6. REMOVE FROM SITE ALL OTHER STRUCTURAL ELEMENTS AND PRODUCTS WHICH ARE NOT INDICATED TO BE HANDED OVER TO THE OWNER.
7. SCHEDULE WORK TO MINIMIZE EFFECT ON THE EXISTING BUILDING OPERATION. USE EQUIPMENT AND PROCEDURES TO MINIMIZE NOISE, DUST AND VIBRATIONS. SUBMIT PROPOSED SCHEDULE FOR REVIEW BY THE CONSULTANT AND THE OWNER.
8. ALL DEMOLITION, SHORING AND OTHER TEMPORARY WORKS TO BE DESIGNED BY A PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR, LICENSED IN THE PLACE WHERE THE PROJECT IS LOCATED. PREPARE DRAWINGS SIGNED AND SEALED BY THAT ENGINEER SHOWING DEMOLITION PROCEDURE AND SEQUENCE AND ALL THE NECESSARY SHORING. PROVIDE THESE DRAWINGS TO THE DCC REPRESENTATIVE FOR REVIEW.
9. INSTALL AND AFTERWARDS REMOVE ALL TEMPORARY SHORING AND BRACING REQUIRED TO ENSURE THE INTEGRITY OF THE EXISTING STRUCTURE DURING CONSTRUCTION.
10. REFER TO TYPICAL DETAIL FOR CONCRETE SAWCUTTING PROCEDURE.
11. DO NOT ALTER MATERIAL PROPERTIES OF THE STRUCTURAL STEEL WHICH IS TO REMAIN BY CUTTING AND DEMOLITION PROCEDURE.
12. ASSESS CAPACITY OF THE EXISTING STRUCTURE AND CONSTRUCTION LOADS APPLIED TO IT. PROVIDE ADEQUATE SHORING IF THE LOADS EXCEED THE EXISTING STRUCTURAL CAPACITY.
13. MAKE GOOD ALL EXISTING WORK DISTURBED BY THE SHORING OPERATIONS, DEMOLITION, EXCAVATION AND OTHER CONSTRUCTION PROCEDURES.

1. VERIFY GEOTECHNICAL CONDITIONS ON SITE.
2. PROVIDE BEARING CAPACITY OF SOIL AND CONFIRM SITE CLASSIFICATION PRIOR TO CONSTRUCTION AND ALSO PROVIDE COMPACTION TEST DURING CONSTRUCTION.
3. PRIOR TO COMMENCING EXCAVATION, LOCATE AND IDENTIFY ALL EXISTING UNDERGROUND STRUCTURES AND SERVICES.
4. ESTABLISH LINES OF EXCAVATION AS REQUIRED FOR CONSTRUCTION SAFETY, BUT DO NOT EXCEED 1:1 SLOPE. DO NOT UNDERMINE ADJACENT FOUNDATIONS, AND START SLOPE MINIMUM 300 FROM FACE OF FOUNDATION, REFER TO TYPICAL DETAIL, TC-FDN-41.
5. DESIGN AND PROVIDE SHORING AND BRACING FOR EXCAVATION WHERE NECESSARY. PROVIDE SHORING DESIGN FOR REVIEW AND APPROVAL PRIOR TO EXCAVATION.
6. DIG TRENCHES FOR MECHANICAL AND ELECTRICAL SERVICES TO PROVIDE UNIFORM CONTINUOUS BEARING AND SUPPORT BEDDING MATERIAL ON UNDISTURBED SOIL. REFER TO MECHANICAL, ELECTRICAL, AND CIVIL DRAWINGS FOR TRENCH CONSTRUCTION DETAILS. AT A MINIMUM, FILL TRENCHES WITH SAND TO 300 ABOVE PIPES OR CONDUITS.
7. LEGALLY DISPOSE OF ALL EXCAVATED MATERIALS, OR STORE ON SITE FOR BACKFILLING IF REQUIRED.
8. PROTECT BOTTOM OF EXCAVATION FROM EXCESSIVE MOVEMENT BY GRANULAR FILL OR LEAN CONCRETE (MUD SLAB). SLOPE FOR DRAINAGE. PROVIDE DRAINAGE TRENCHES AND PITS AND PUMP OUT WATER AS REQUIRED.
9. BACKFILLING MATERIALS OTHER THAN LEAN CONCRETE, (IF REQUIRED) TO BE AS FOLLOWS:

3. ESTABLISH LINES OF EXCAVATION AS REQUIRED FOR CONSTRUCTION SAFETY. BUT DO NOT EXCEED 1:1 SLOPE. DO NOT UNDERMINE ADJACENT FOUNDATIONS, AND START SLOPE MINIMUM 300 FROM FACE OF FOUNDATION, REFER TO TYPICAL DETAIL TC-FDN-41.
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6. DIG TRENCHES FOR MECHANICAL AND ELECTRICAL SERVICES TO PROVIDE UNIFORM CONTINUOUS BEARING AND SUPPORT BEDDING MATERIAL ON UNDISTURBED SOIL. REFER TO MECHANICAL, ELECTRICAL, AND CIVIL DRAWINGS FOR TRENCH CONSTRUCTION DETAILS. AT A MINIMUM, FILL TRENCHES WITH SAND TO 300 ABOVE PIPES OR CONDUITS.
7. LEGALLY DISPOSE OF ALL EXCAVATED MATERIALS, OR STORE ON SITE FOR BACKFILLING IF REQUIRED.
8. PROTECT BOTTOM OF EXCAVATION FROM EXCESSIVE MOISTURE BY GRANULAR FILL OR LEAN CONCRETE (MUD SLAB), SLOPE FOR DRAINAGE, PROVIDE DRAINAGE TRENCHES AND PITS AND PUMP OUT WATER AS REQUIRED.
9. BACKFILL MATERIALS OTHER THAN LEAN CONCRETE, (IF REQUIRED) TO BE AS FOLLOWS:
  - GRANULAR 'A' AS PER OPSS PROV 1010.
  - GRANULAR 'B' TYPE II AS PER OPSS PROV 1010.
10. ALL BACKFILLING MATERIALS TO BE SOUND AND CLEAN, FREE FROM DEBRIS, ORGANIC AND FROZEN MATTER, WITH NO REACTIVE MINERALS NOR FRAGILE MATERIALS WITH SWELLING POTENTIAL.
11. PLACE BACKFILLING MATERIALS AS FOLLOWS:
  - INFRASTRUCTURE (GRANULAR BASE): GRANULAR 'A' BACKFILL; MINIMUM THICKNESS: UNDER EXTERIOR SLAB ON GRADE - 300.
12. BACKFILL TO GRADES INDICATED IN LISTS NOT EXCEEDING 300, EXCEPT THAT LIFTS FOR INFRASTRUCTURE (GRANULAR BASE) SHOULD NOT EXCEED 200, USE MECHANICAL COMPACTION EQUIPMENT. DO NOT PLACE BACKFILL OVER FROZEN SOIL.
13. USE ONLY LIGHT, HAND-OPERATED EQUIPMENT FOR COMPACTION ADJACENT TO BASEMENT WALLS AND RETAINING WALLS.
14. MAINTAIN MOISTURE CONTENT IN BACKFILLING MATERIAL (IF USED) AS REQUIRED TO ACHIEVE THE SPECIFIED COMPACTION. PROTECT FROM EXCESSIVE MOISTURE DURING AND AFTER THE BACKFILLING OPERATION.
15. COMPACT BACKFILL (IF USED) TO ACHIEVE THE FOLLOWING STANDARD PROCTOR MAXIMUM DRY DENSITIES:
  - BELOW SLAB ON GRADE: MIN. 100%
  - BELOW PAVEMENT AND SIDEWALKS: MIN. 98%
  - BELOW LANDSCAPED AREAS: 95%
16. INDEPENDENT INSPECTION AND TESTING AGENCY TO MONITOR COMPACTION AND CONDUCT DENSITY TESTING DURING INSTALLATION OF ALL GRANULAR MATERIALS, AND TO VERIFY THE ASSUMED SOIL BEARING CAPACITY. THE CONTRACTOR WILL RETAIN AND PAY THE TESTING AGENCY FOR THIS WORK.

1. CONCRETE IS SPECIFIED PER ALTERNATIVE 1 - PERFORMANCE SPECIFICATION, AS OUTLINED IN CSA A23.1. THE CONTRACTOR AND THE CONCRETE SUPPLIER TO MEET ALL CERTIFICATION, DOCUMENTATION, AND QUALITY CONTROL REQUIREMENTS.
2. CONTRACTOR AND CONCRETE SUPPLIER TO ENSURE THAT PLASTIC AND HARDENED MIX PROPERTIES MEET SITE REQUIREMENTS FOR PLACING, FINISHING AND THE SPECIFIED PERFORMANCE REQUIREMENTS.
3. CONCRETE SUPPLIER TO BE CERTIFIED BY THE READY MIXED CONCRETE ASSOCIATION OF ONTARIO.
4. CEMENT TO BE PORTLAND CEMENT TYPE GU UNLESS NOTED OTHERWISE OR REQUIRED BY EXPOSURE CLASS.
5. CONCRETE TO BE NORMAL DENSITY (MIN. 2300 kg/m<sup>3</sup>) UNLESS NOTED OTHERWISE.
6. PROVIDE SUPPLEMENTARY CEMENTITIOUS MATERIALS AND PRODUCTS THAT CONTRIBUTE TO A 20% REDUCTION IN GLOBAL WARMING POTENTIAL (GWP) AGAINST THE LISTED INDUSTRY AVERAGE BENCHMARK GWP IDENTIFIED IN THE INDUSTRY WIDE ENVIRONMENTAL PRODUCTION DECLARATION (EPD). REFER TO THE SPECIFICATIONS FOR DETAILS.
7. NOMINAL MAXIMUM SIZE OF COARSE AGGREGATE TO BE 20 UNLESS NOTED OTHERWISE.
8. UNLESS NOTED OTHERWISE, CONCRETE TO BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

**NOTES:**

1. WHERE EXPOSURE CLASS IS NOTED "N1/F2," USE "F-2" EXPOSURE CLASS FOR PERIMETER AND EXTERIOR NON-INSULATED ELEMENTS ABOVE THE FROST LINE, AND FOR ELEMENTS IN INTERIOR UNHEATED SPACES, WHICH ARE SUSCEPTIBLE TO FREEZING. USE "N" EXPOSURE CLASS FOR ALL ELEMENTS PROTECTED FROM FREEZING.
2. LIMIT NOMINAL MAXIMUM AGGREGATE SIZE TO 10 FOR COLUMNS WITH SMALLEST DIMENSION LESS THAN 300 AND FOR WALLS LESS THAN 200 THICK.
3. WHERE HYSCM (AS DEFINED IN CSA A23.1) OR ANY CLASS "S" EXPOSURE CONCRETE IS USED, SPECIFIED CONCRETE STRENGTH TO BE ATTAINED AT 56 DAYS, RATHER THAN AT 28 DAYS.
4. MINIMUM DOSAGE OF CORROSION INHIBITOR IS 10L/m<sup>3</sup> OF 30% SOLUTION OF CALCIUM NITRATE, AS PER CSA-S413.

9. REFER TO CSA A23.1 FOR THE MAXIMUM WATER/CEMENT RATIO, MINIMUM COMPRESSIVE STRENGTH, AIR CONTENT, CURING REQUIREMENTS, CHLORIDE ION PENETRABILITY AND ALTERNATE CEMENT TYPES TO MEET THE REQUIREMENTS FOR THE NOTED EXPOSURE CLASS.

10. WHERE REQUIRED BY SPECIFICATIONS, PROVIDE MINIMUM AMOUNT OF SUPPLEMENTAL CEMENTING MATERIALS SPECIFIED FOR THE OVERALL PROJECT.

11. DO NOT ADD WATER TO CONCRETE ON SITE.

12. CONVEY CONCRETE FROM TRUCK TO FINAL LOCATION BY METHODS WHICH WILL PREVENT SEPARATION OR LOSS OF MATERIAL. MAXIMUM FREE FALL NOT TO EXCEED 1.5m. CONSOLIDATE CONCRETE USING MECHANICAL VIBRATORS.

13. PLACE CONCRETE AS CLOSE AS POSSIBLE TO FINAL LOCATION TO AVOID SEGREGATION. VIBRATE ALL CONCRETE.

14. PROTECT CONCRETE FROM FREEZING. DO NOT PLACE CONCRETE AGAINST FROZEN GROUND. USE COLD WEATHER CONCRETING METHODS IN ACCORDANCE WITH CSA-A23.1.

15. PROTECT CONCRETE FROM EXCESSIVE HEAT AND DRYING. USE HOT WEATHER CONCRETING.

1. REINFORCEMENT TO CONFORM TO THE FOLLOWING STANDARDS:  
DEFORMED BARS - CSA G30.18, GRADE 400R,  
STAINLESS STEEL BARS - ASTM A565/A565M, GRADE 60 (420 MPa),  
WELDED WIRE FABRIC - ASTM A1064/A1064M, YIELD STRENGTH 450 MPa, SUPPLIED IN FLAT SHEETS ONLY
2. ALL REINFORCING BAR SIZES ARE METRIC, "M" IS NOT NECESSARILY MARKED AFTER A BAR SIZE, FOR EXAMPLE, 10-15E NOTED ON PLAN INDICATES 10 BARS OF 15M DIAMETER, PLACED AT BOTTOM
3. WHERE TWO BARS OF DIFFERENT SIZE ARE LAPPED IN TENSION, SPLICE LENGTH TO BE EQUAL TO THE SMALLER BARS TENSION LAP SPLICE, OR TO THE LARGER BARS TENSION DEVELOPMENT LENGTH, WHICHEVER IS LONGER.
4. WHERE TWO BARS OF DIFFERENT SIZE ARE LAPPED IN COMPRESSION, SPLICE LENGTH TO BE EQUAL TO THE SMALLER BARS COMPRESSION LAP SPLICE, OR TO THE LARGER BARS COMPRESSION DEVELOPMENT LENGTH, WHICHEVER IS LONGER.
5. LAP WELDED WIRE FABRIC SHEETS BY ONE SPACING OF CROSS WIRES + 50, MEASURED BETWEEN THE OUTERMOST CROSS WIRES IN EACH SHEET.
6. PROVIDE ADDITIONAL SUPPORT BARS AS REQUIRED TO ADEQUATELY SUPPORT AND SECURE ALL REINFORCEMENT AND PREVENT MOVEMENT WHEN PLACING CONCRETE.
7. PROVIDE SUFFICIENT CHAIRS TO REINFORCING TO MAINTAIN SPECIFIED CONCRETE COVER.
8. PLACE WELDED WIRE FABRIC IN SLABS ON GRADE AT 1/3 SLAB THICKNESS BELOW TOP OF SLAB. PROVIDE ADEQUATE CHAIRS TO KEEP IN SPECIFIED POSITION. LIFTING WWF AFTER CONCRETE IS POURED TO BRING IT IN POSITION IS NOT ACCEPTABLE.
9. ALL REINFORCING TO BE CLEAN, FREE OF LOOSE SCALE, OIL, DIRT, RUST, AND ANY OTHER FOREIGN COATING THAT AFFECT BONDING CAPACITY.
10. MINIMUM CLEAR SPACING BETWEEN ADJACENT BARS TO BE AT LEAST 1.4 TIMES THE BAR DIAMETER OR 1.4 TIMES THE NOMINAL MAXIMUM SIZE OF THE COARSE AGGREGATE, WHICHEVER IS MORE.

NOTES:

1. "PROTECTED" MEANS IN INTERIOR, CONDITIONED SPACE.
2. "EXPOSED" MEANS IN UNHEATED SPACE AND/OR EXPOSED TO WATER, WEATHER OR SULPHATES (BUT NOT VEHICLE TRAFFIC).
3. "EXPOSED TO VEHICLE TRAFFIC" MEANS LOCATED WITHIN 1200 FROM VEHICLE ACCESSIBLE AREAS.
4. COVERS SHOWN ABOVE MEET 2H FIRE RATING REQUIREMENTS, SEE ARCHITECTURAL DRAWINGS FOR AREAS WHICH REQUIRE 3 OR 4 HOUR FIRE RATING AND PROVIDE INCREASED COVER AS INDICATED ON DRAWINGS.
5. COVERS SHOWN ABOVE MEET 2H 20 MAXIMUM NOMINAL SIZE OF CONCRETE AGGREGATE. REFER TO CONCRETE MIX DESIGN TABLE IN CAST-IN-PLACE CONCRETE NOTES FOR CONCRETE WITH LARGER AGGREGATE SIZE, AND INCREASE COVER TO REINFORCING CLOSEST TO THE SURFACE AS INDICATED.

1.	CONFORM TO CSA S16.	
2.	MATERIALS: TO CSA G40.21 UNLESS OTHERWISE NOTED, WITH THE FOLLOWING GRADES:  W, WMF AND S SECTIONS, CHANNELS AND ANGLES:	350W, OR ASTM A992, GRADE 50 (345MPa). USE ONLY ASTM A992 WHERE SPECIFICALLY INDICATED ON DRAWINGS.
	PLATES, BARS:	300W
	HOLLOW STRUCTURAL SECTIONS:	350W (CLASS "C" OR "H")
	PIPE:	ASTM A53, 240W
	BOLTS:	ASTM F3125 GRADE A325M, UNLESS NOTED
	ANCHOR RODS:	ASTM F1554 GRADE 36
3.	DETAILS ON STRUCTURAL DRAWINGS SHOW DESIGN INTENT. REFER TO SPECIFICATIONS FOR CONNECTION DESIGN, DETAILING, FABRICATION, AND ERECTION REQUIREMENTS.	

1. CONFORM TO CAN/CSA A371 AND CSA S304.1.
2. UNLESS OTHERWISE NOTED ON PLANS, MATERIALS TO BE:
  - HOLLOW BLOCK: CSA A165.1 - H15/A1M
  - MORTAR: CAN/CSA-A179 - TYPE S, PROPORTIONED BY VOLUME.
  - MASONRY GROUT: CAN/CSA-A179, PROPORTIONED BY VOLUME - COARSE GROUT, 1:3:2 - CEMENT: SAND: MAX 9.5 AGGREGATE, OR FINE GROUT, OR APPROVED PRE-BAGGED MATERIAL
  - MASONRY TIES: HOT DIP GALVANIZED
3. REFER TO DRAWINGS (STRUCTURAL AND ARCHITECTURAL) FOR BLOCK SIZES.
4. NON LOAD-BEARING MASONRY WALLS ARE NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS, SEE ARCHITECTURAL DRAWINGS.
5. UNLESS NOTED OTHERWISE, LAY UNITS IN RUNNING BOND. ALL FACE SHELLS TO BE FULLY BEDDED.
6. DO NOT USE MORTAR WHERE GROUT IS SPECIFIED.
7. PROVIDE HOT, COLD AND WET WEATHER PROTECTION AS REQUIRED BY CAN/CSA-A371.
8. UNLESS OTHERWISE NOTED, PROVIDE DEFORMED, LADDER TYPE HORIZONTAL JOINT REINFORCING (TO SUIT THE WALL THICKNESS) PER ARCHITECTURAL SPECIFICATIONS. STAGGER LAPS MIN. 750 FROM COURSE TO COURSE. CLIP OFF CROSS RODS AT LAPS TO KEEP WIRES IN ONE PLANE. FOR UNREINFORCED WALLS, IT IS ACCEPTABLE TO USE TRUSS TYPE INSTEAD OF LADDER TYPE JOINT REINFORCING.
9. PROVIDE HORIZONTAL JOINT REINFORCING IN THE FIRST TWO BED JOINTS ABOVE AND BELOW EACH WALL OPENING AND EXTEND 600 BEYOND EACH SIDE OF OPENING.
10. UNLESS OTHERWISE NOTED, USE CORNER TYPE LADDER REINFORCING AT MASONRY WALL CORNERS AND INTERSECTIONS.
11. UNLESS OTHERWISE NOTED, INTERLOCK MASONRY COURSES AT WALL CORNERS.
12. TOOL JOINTS IN ALL WALLS SHOWN ON STRUCTURAL DRAWINGS (WHETHER EXPOSED OR NOT IN THE FINISHED BUILDING) TO PROVIDE HARD, DENSE JOINTS.
13. PROVIDE LATERAL SUPPORT AT TOPS OF ALL WALLS WHICH EXTEND TO UNDERSIDE OF ROOF STRUCTURE. REFER TO SPECIAL DETAILS TM-LATS-11, TM-LATS-12, AND ARCHITECTURAL SPECIFICATIONS. LOCATE MAX 300 FROM WALL ENDS AND MOVEMENT JOINTS.
14. UNLESS OTHERWISE NOTED, PROVIDE MINIMUM 25 DEFLECTION GAP AT TOP OF ALL NON LOAD BEARING MASONRY WALLS.
15. PROVIDE TEMPORARY BRACING FOR LOAD BEARING MASONRY WALLS UNTIL THE SUPPORTED STRUCTURE, WHICH PROVIDES PERMANENT BRACING, IS COMPLETED.
16. MOVEMENT JOINTS

1. PROVIDE VERTICAL MOVEMENT JOINTS (MJ) IN LOAD BEARING WALLS AT LOCATIONS INDICATED ON PLANS. CARRY HORIZONTAL REINFORCING IN BOND BEAMS LOCATED IMMEDIATELY BELOW FLOOR OR ROOF LEVELS CONTINUOUSLY THROUGH MOVEMENT JOINTS (WHERE APPLICABLE). DO NOT CARRY ANY OTHER WALL REINFORCING (INCLUDING HORIZONTAL JOINT REINFORCING) THROUGH MJ.
2. PROVIDE VERTICAL MOVEMENT JOINTS (MJ) IN NON-LOAD BEARING MASONRY WALLS AS FOLLOWS:
  - WHERE INDICATED ON ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
  - BETWEEN MASONRY WALLS AND ABUTTING COLUMNS OR CONCRETE WALLS.
  - AT MAX 6000 O/C
3. PROVIDE VERTICAL MOVEMENT JOINTS BETWEEN ALL LOAD BEARING AND NON-LOAD BEARING WALLS.
4. UNLESS OTHERWISE NOTED ON PLANS, MOVEMENT JOINTS TO BE 12mm WIDE.
5. FILL ALL MOVEMENT JOINTS WITH COMPRESSIBLE MATERIAL: SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRE STOPPING REQUIREMENTS.
17. PROVIDE STANDARD LINTELS OVER ALL OPENINGS IN NON-LOAD BEARING MASONRY WALLS. REFER TO ARCHITECTURAL DRAWINGS AND TYPICAL DETAILS TM-WALL-11, TM-WALL-12 AND TM-WALL-14. THE OPENINGS ARE NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. USE ONLY FINE GROUT TO FILL MASONRY LINTELS.

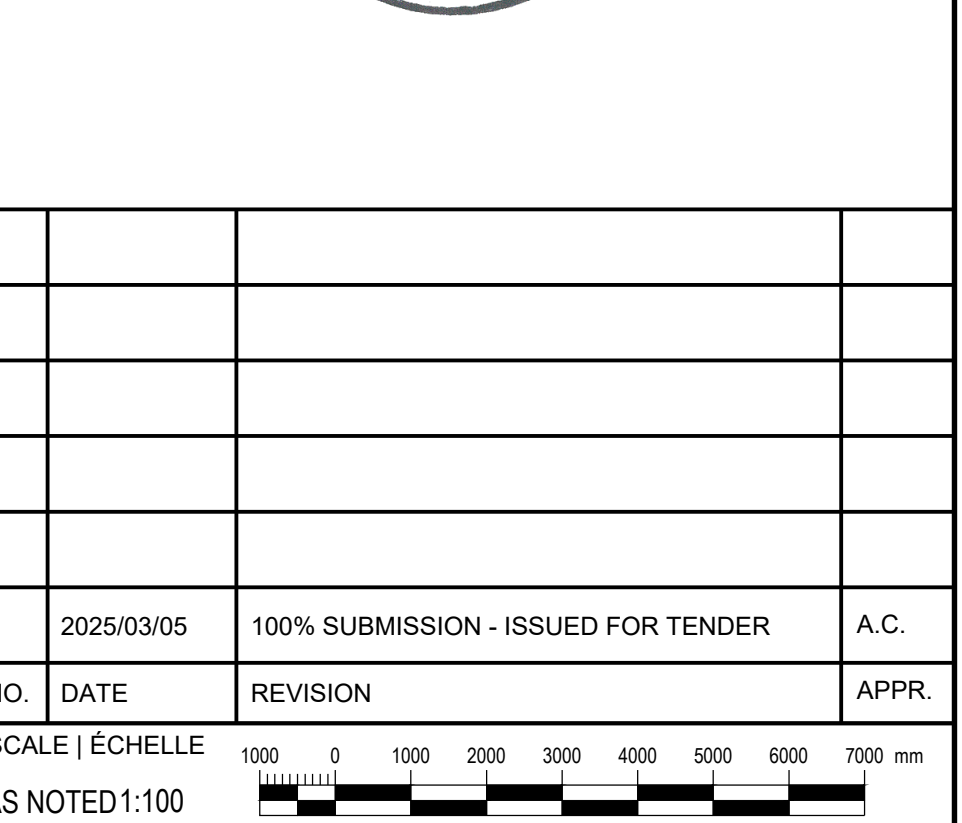
18. REINFORCED MASONRY:
1. SEE PLANS AND DETAILS FOR STRUCTURAL MASONRY REINFORCING.
  2. FOR NON-LOAD BEARING MASONRY, SEE TYPICAL DETAIL TM-WALL-01 FOR MINIMUM SEISMIC MASONRY REINFORCING.
    - WHERE 75% SOLID MASONRY WALLS ARE SHOWN ON ARCHITECTURAL DRAWINGS, USE FULLY GROUTED HOLLOW MASONRY AS REQUIRED TO ACCOMMODATE REBAR.
    - WHERE ACCOUTIC BLOCK WALLS ARE SHOWN ON ARCHITECTURAL DRAWINGS, USE SOUND BLOCKS WHICH CAN ACCOMMODATE REBAR; INCREASE THE SPECIFIED WALL THICKNESS IF REQUIRED.
  3. DO NOT PLACE CONDUITS IN, NOR ALLOW OVER-HANGING MORTAR OR DEBRIS INSIDE, MASONRY CELLS TO BE REINFORCED.
  4. SPLICES FOR MASONRY WALL REINFORCING TO BE:

WIRE REINFORCING	300
10# BARS	450
15# BARS	650
20# BARS	900
  5. LOCATE VERTICAL BARS ACCURATELY WITHIN CELLS AS INDICATED ON DRAWINGS. HOLD IN POSITION TOP AND BOTTOM. USE REBAR POSITIONERS AS REQUIRED.
  6. LOCATE TOP / BOTTOM HORIZONTAL BARS IN MASONRY BEAMS AND LINTELS 90 CLEAR FROM TOP / UNDERSIDE OF BEAM.
  7. EXTEND ALL VERTICAL REINFORCING TO WITHIN 50 FROM TOP OF WALL.
  8. CARRY ALL VERTICAL REINFORCING CONTINUOUSLY THROUGH BOND BEAMS AND MASONRY LINTELS.
  9. PROVIDE VERTICAL DOWELS AT BASE OF WALLS TO MATCH VERTICAL REINFORCING. UNLESS OTHERWISE NOTED ON DRAWINGS, EMBED INTO SLAB 100 MIN.
  10. REINFORCE SIDES OF ALL WALL OPENINGS EXCEEDING 1000 IN WIDTH WITH ADDITIONAL 1-15 VERTICAL. CARRY FULL HEIGHT OF WALL, WHERE STEEL OR PRECAST CONCRETE LINTELS ARE USED, OFFSET VERTICALS TO CLEAR LINTEL BEARING.
  11. UNLESS OTHERWISE NOTED, ADD 1-15 VERTICAL AT WALL ENDS, AND AT EACH SIDE OF MOVEMENT JOINTS.
  12. THE ADDITIONAL REINFORCING SPECIFIED IN THE CLAUSES ABOVE IS NOT NOTED ON PLANS.
    - UNLESS OTHERWISE NOTED, PROVIDE MIN. 190 DEEP BOND BEAMS AT TOPS OF ALL WALLS AND AT MAX. VERTICAL SPACING OF 2400. CONSTRUCT BOND BEAMS WITH LOW WEB MASONRY UNITS. REINFORCE WITH MIN. 1-15 TOP AND BOTTOM CONTINUOUS AND GROUT SOLID. BEND AND LAP REINFORCING AT MASONRY CORNERS AND INTERSECTIONS.
  14. UNLESS OTHERWISE NOTED, REINFORCE ALL 190 MASONRY WITH 1-15 @ 1200 VERTICAL. 2-4.8 DIAMETER WIRES LADDER-TYPE HORIZONTAL REINFORCING AT 400 CENTRES.
19. GROUTED MASONRY:
1. UNLESS MASONRY WALLS ARE NOTED AS "FULLY GROUTED" OR "GROUTED SOLID", GROUT ONLY CELLS CONTAINING VERTICAL OR HORIZONTAL REINFORCEMENT AND ANCHOR RODS OR STRAPS, AND OTHER AREAS SPECIFICALLY INDICATED ON DRAWINGS.
  2. USE 15 MPa MIX TO GROUT IN REINFORCED BLOCK CORES. USE 5 mm AGGREGATE AND A SLUMP OF 250mm.
  3. USE ONLY FINE GROUT TO FILL BOND BEAMS.
  4. USE LOW LIFT GROUTING PROCEDURE UNLESS OTHERWISE APPROVED IN WRITING BY THE DEPARTMENTAL REPRESENTATIVE. PLACE GROUT IN LIFTS NOT EXCEEDING 1500 HEIGHT. TERMINATE EACH LIFT 40 BELOW TOP OF MASONRY UNIT.

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| 20. | INSPECTION AND TESTING:  |
| 1.  | CONTRACTOR SHALL RETAIN AN INDEPENDENT INSPECTION AND TESTING AGENCY TO INSPECT MASONRY WORKS AND TO TEST MASONRY MATERIALS TO DETERMINE COMPRESSIVE STRENGTH OF GROUT AND MASONRY UNITS IN ACCORDANCE WITH CANCSA-A179. |
| 2.  | THE AGENCY WILL REVIEW MORTAR BATCHING PROCEDURE TO VERIFY ACCURATE VOLUME PROPORTION.   |
| 3.  | THE AGENCY WILL REVIEW REINFORCING AND GROUTING PROCEDURE, INCLUDING LIFT HEIGHTS, POSITIONING AND LAPPING OF REINFORCEMENT.   |
| 4.  | AT LEAST THREE CYLINDERS WILL BE TESTED FOR EACH 20 CUBIC METERS OF PLACED MASONRY GROUT. ONE AT 7 DAYS AND 20 AT 28 DAYS. AT LEAST ONE SET OF CYLINDERS WILL BE MADE EACH DAY THE GROUT IS PLACED.                      |
| 5.  | FOR WALLS WITH SPECIFIED COMPRESSIVE STRENGTH OF MASONRY UNITS LARGER THAN 15 MPa, AT LEAST THREE MASONRY UNITS WILL BE TESTED FOR EACH 500 SQUARE METERS OF WALL.   |

1. CONFORM TO CSA S136 FOR STEEL DECKING.
2. STEEL DECK MATERIAL: TO ASTM A653/653M OR ASTM A792/792M, GRADE 230.
3. REQUIRED DECK DEPTH AND CORE NOMINAL THICKNESS TO MATCH EXISTING; PROVIDE DECK PROFILE TO MATCH EXISTING.
4. USE ONLY MECHANICAL ROOF DECK FASTENERS. DO NOT USE WELDING OR CLINCHING, EXCEPT IN PROTECTED ZONES WHERE ONLY 19 PUDDLE WELDS CAN BE USED.

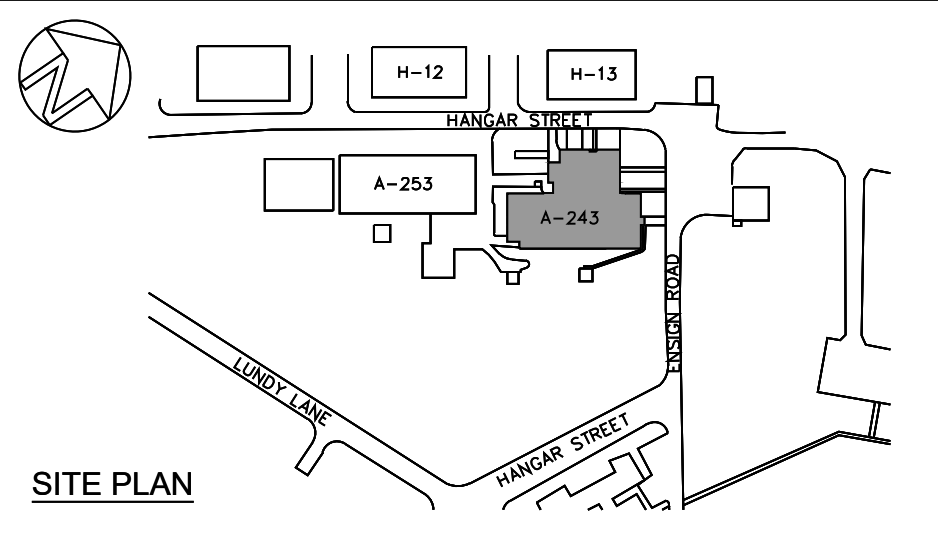
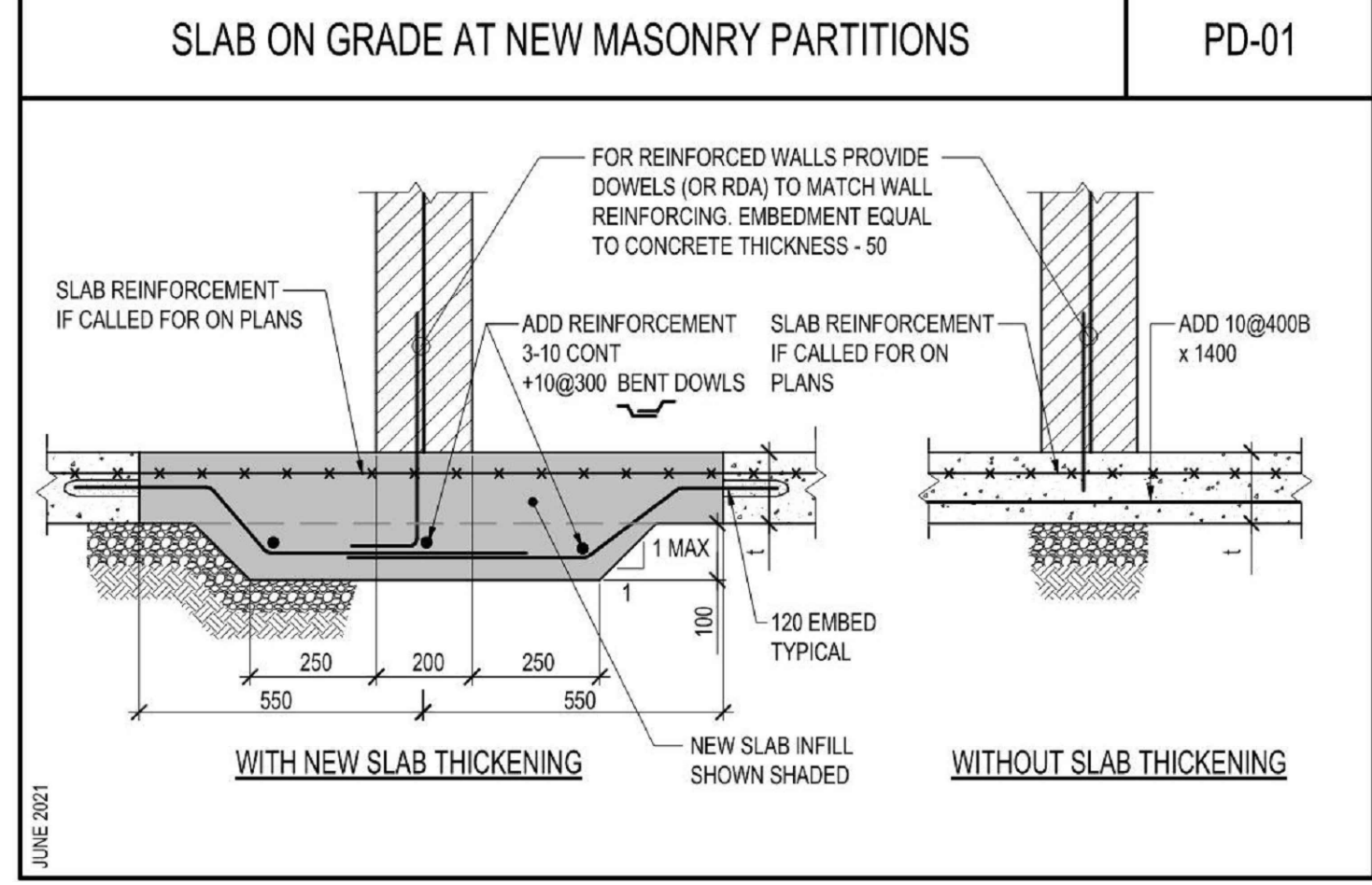
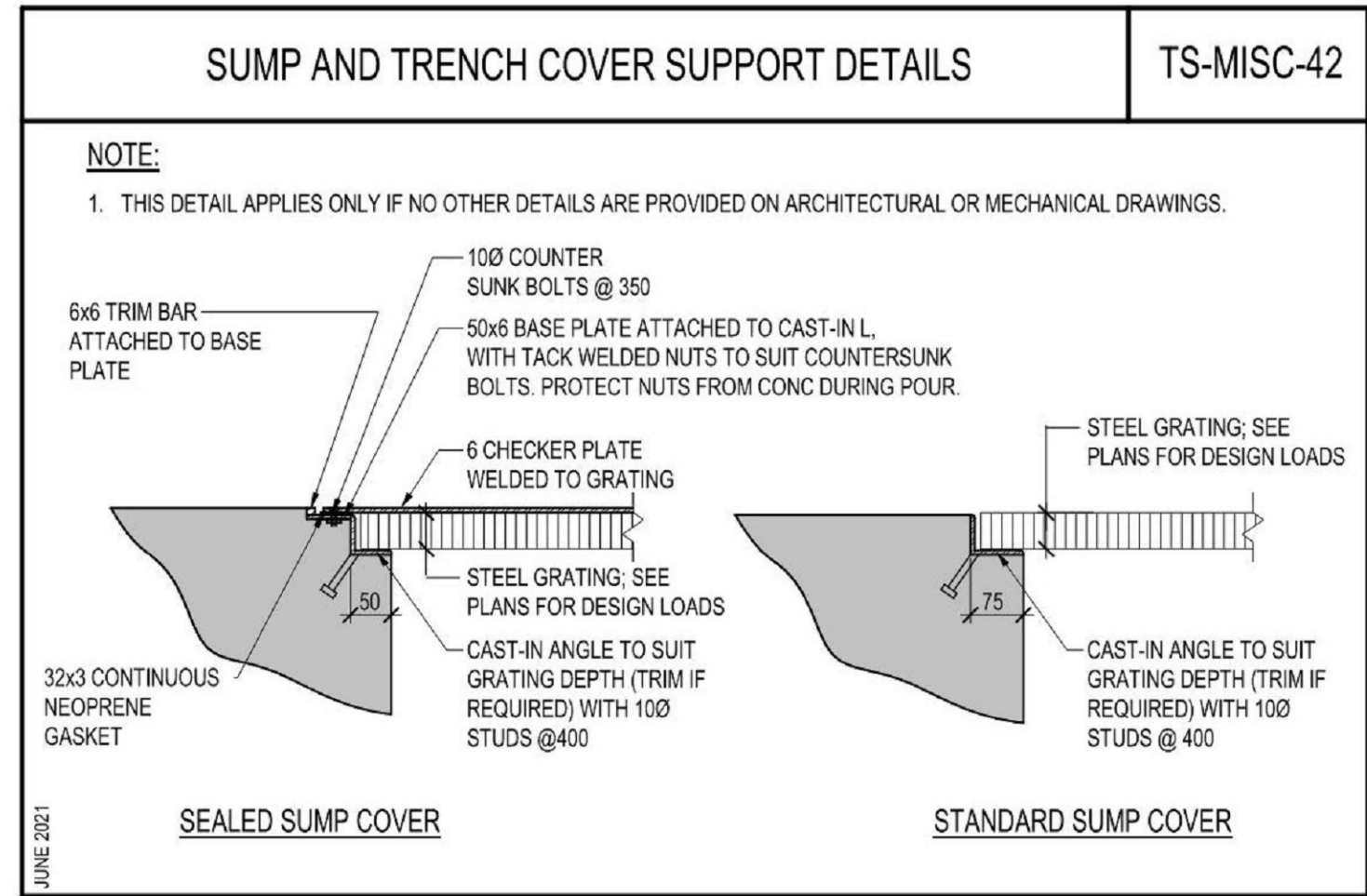
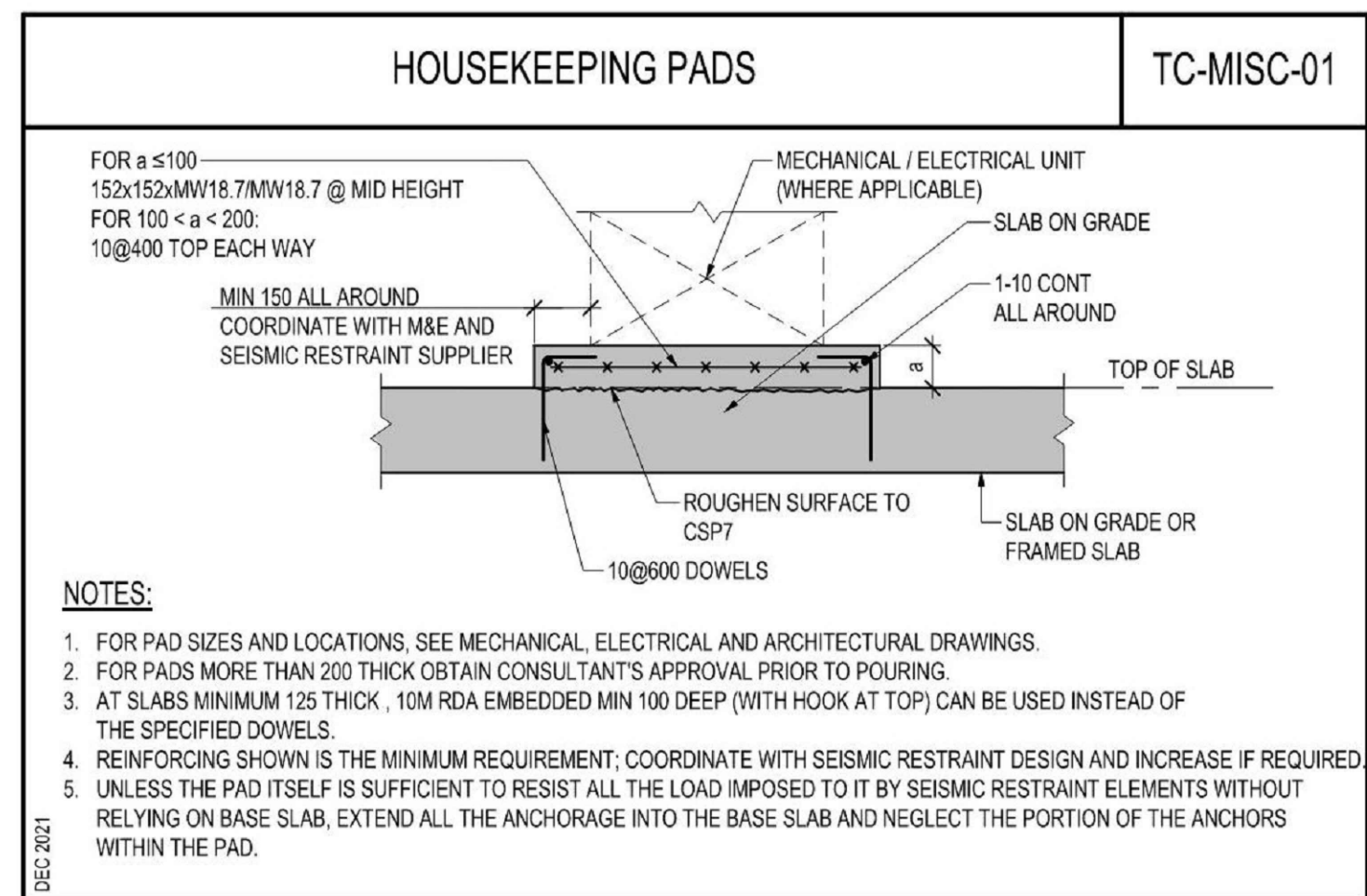
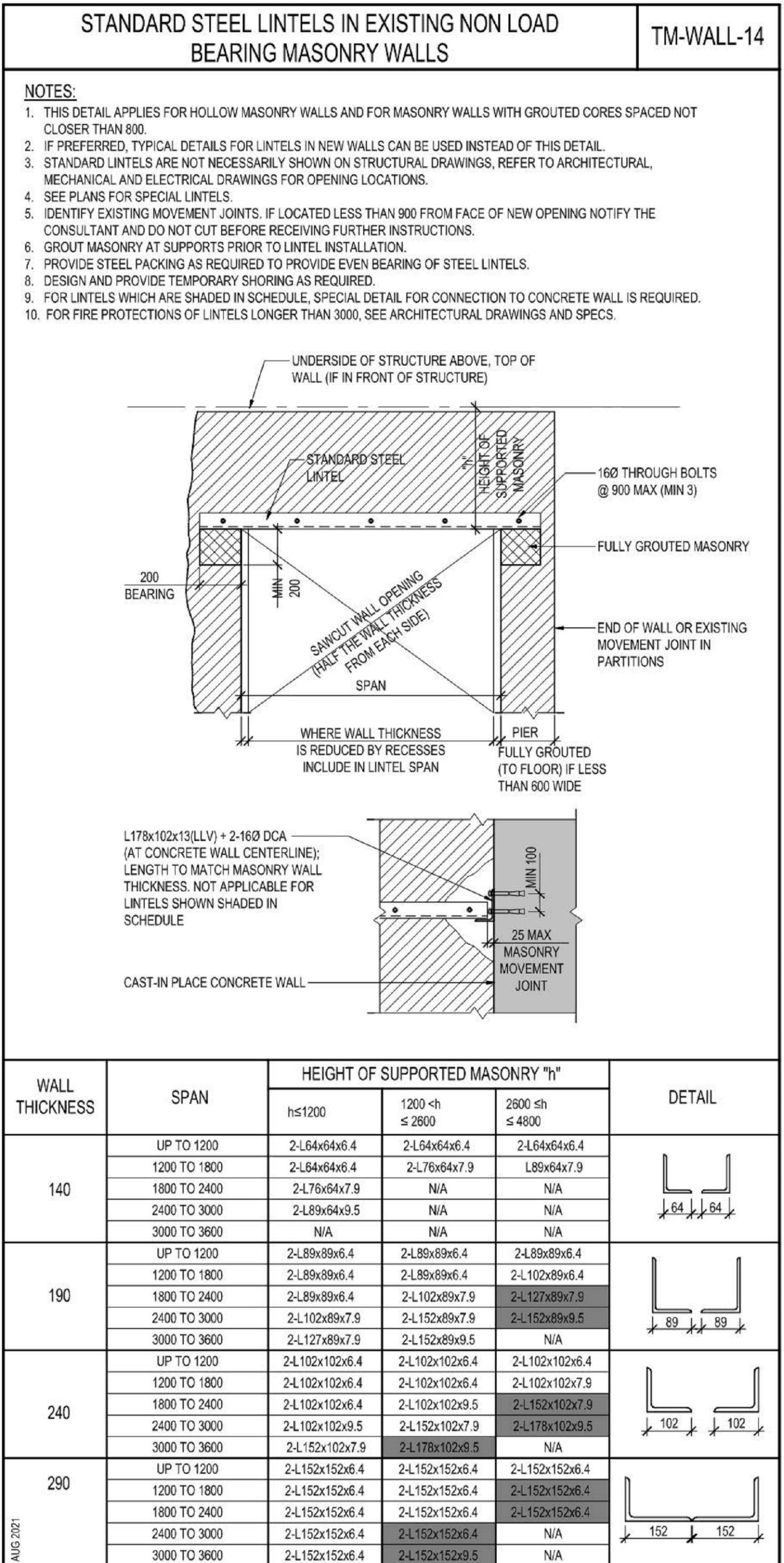
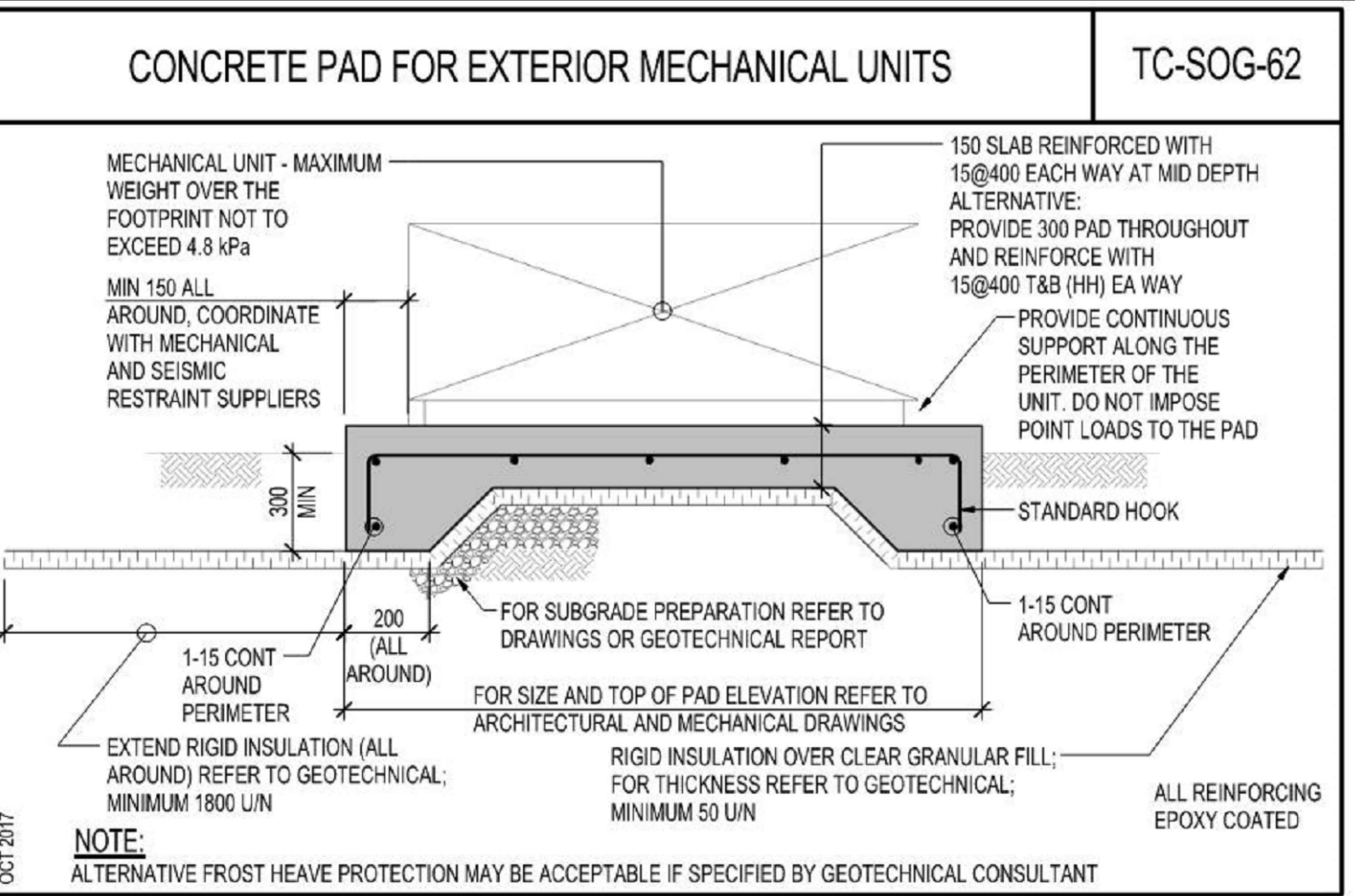
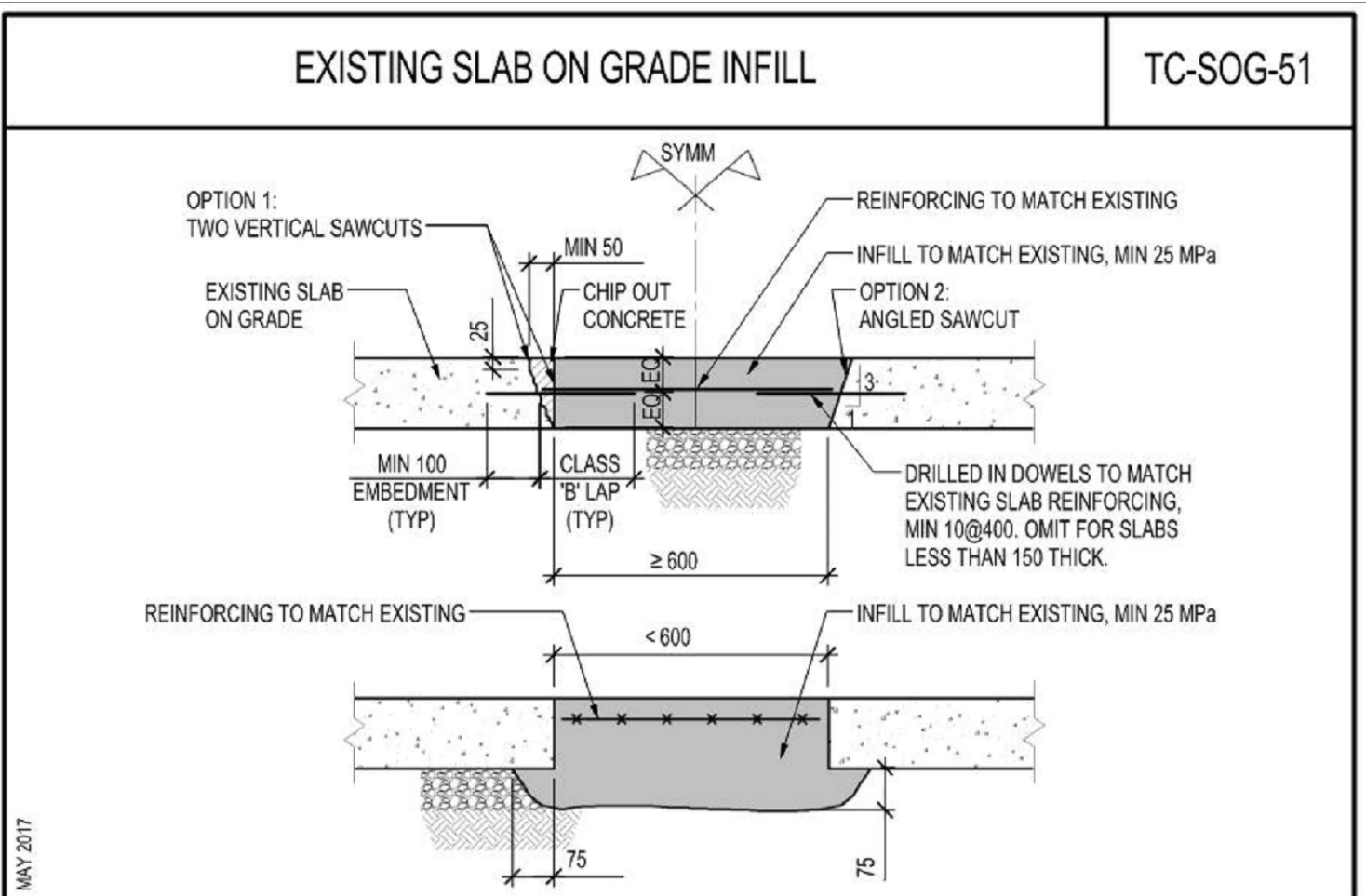
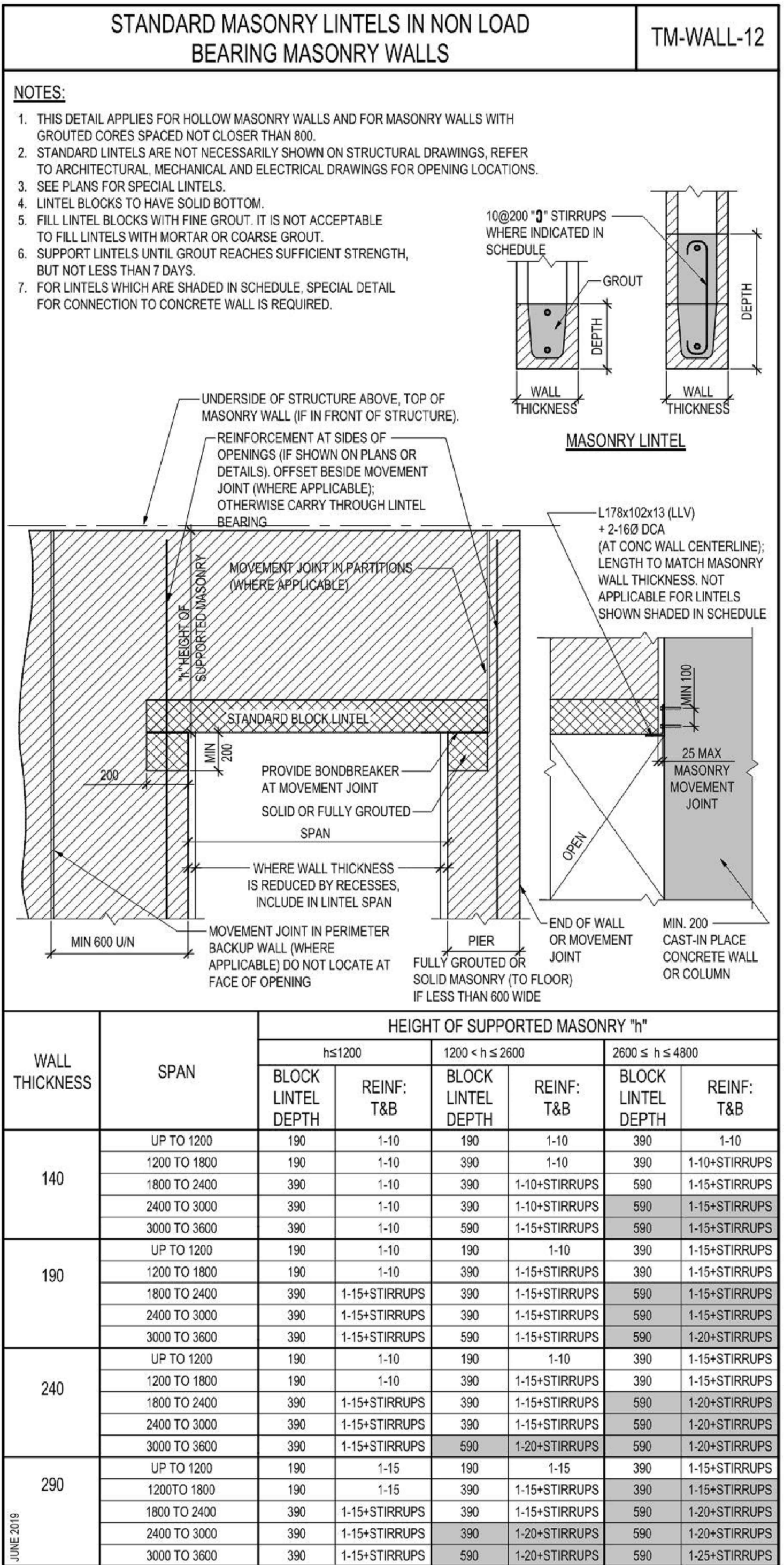
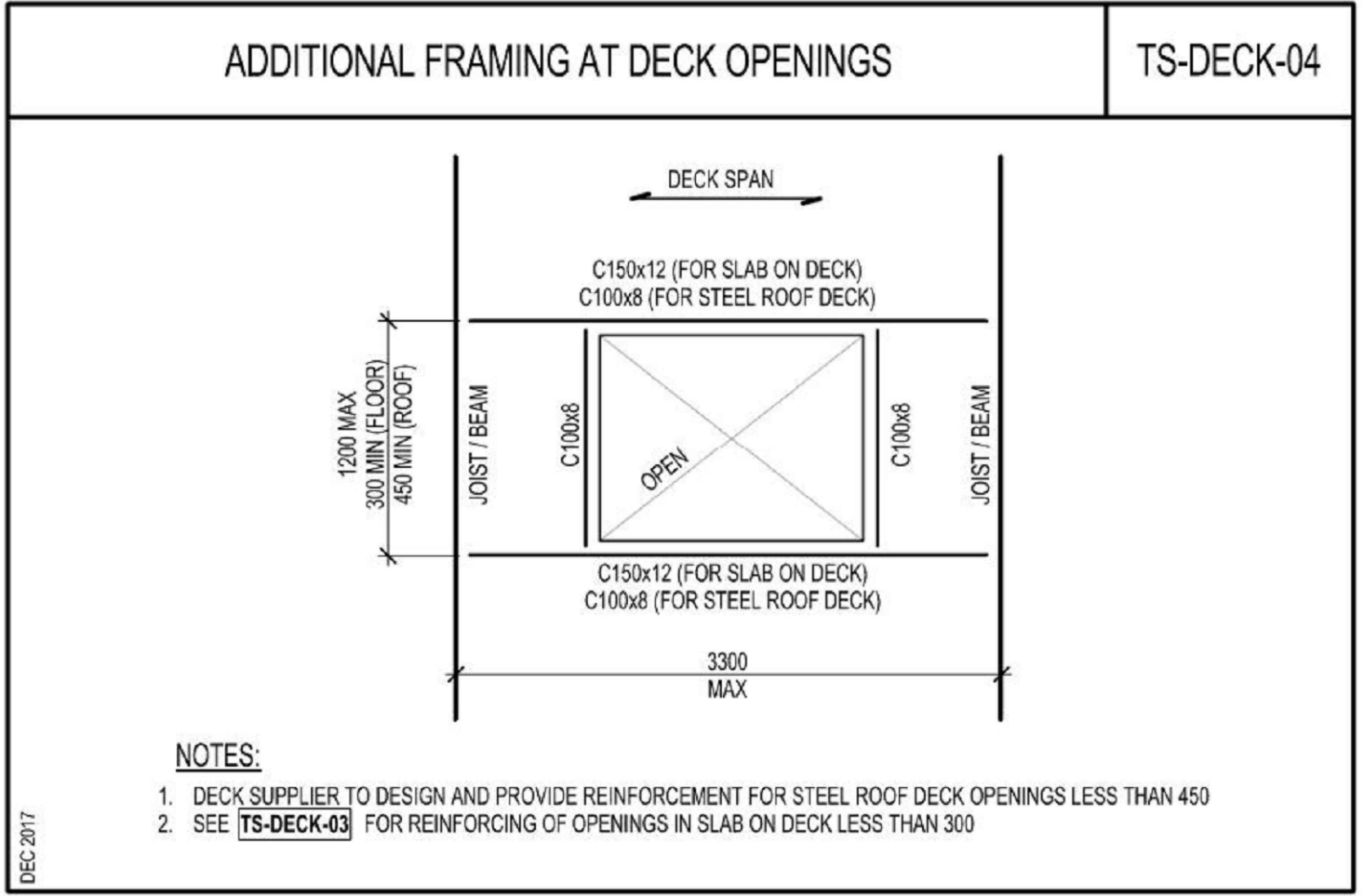
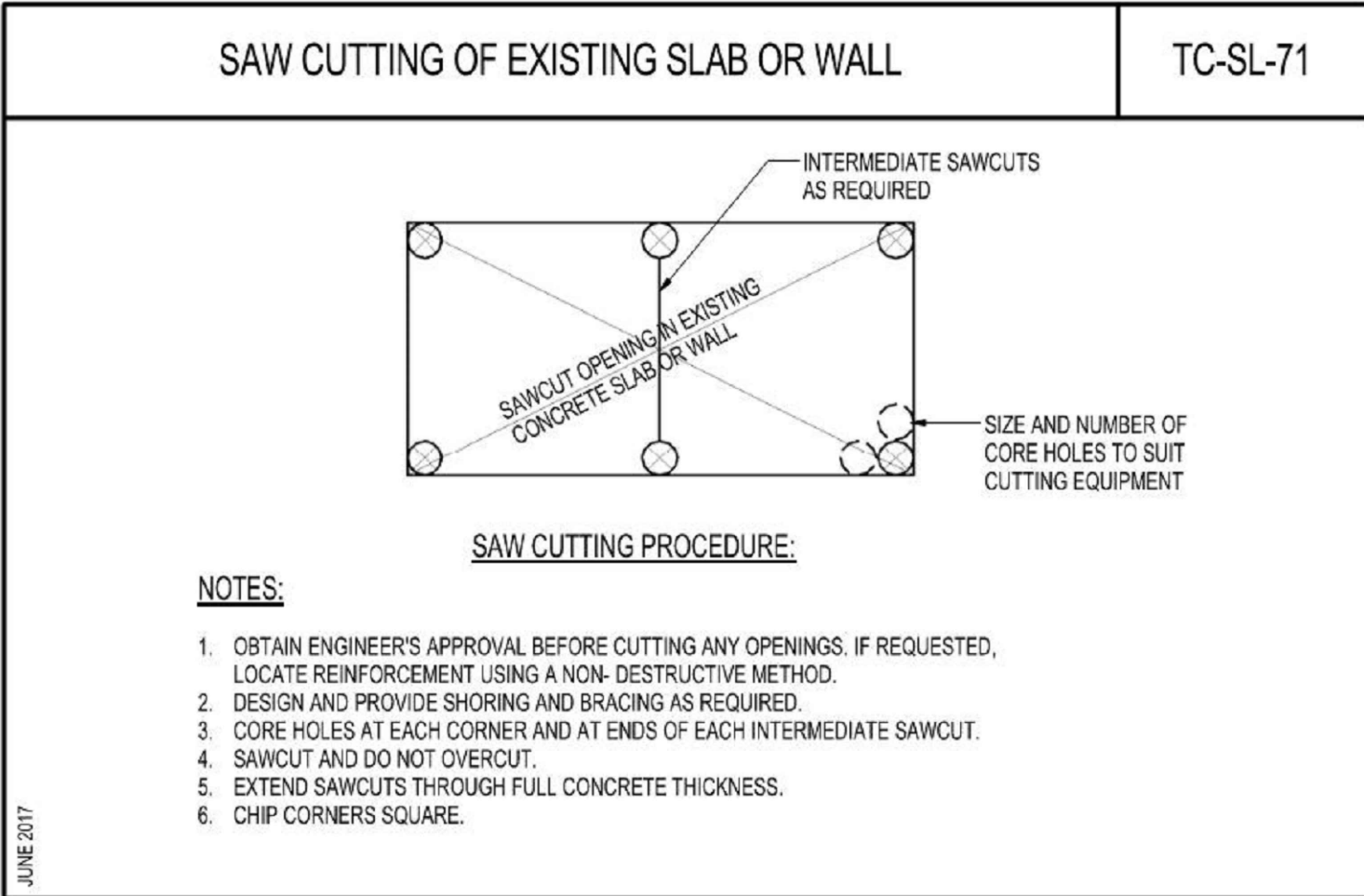
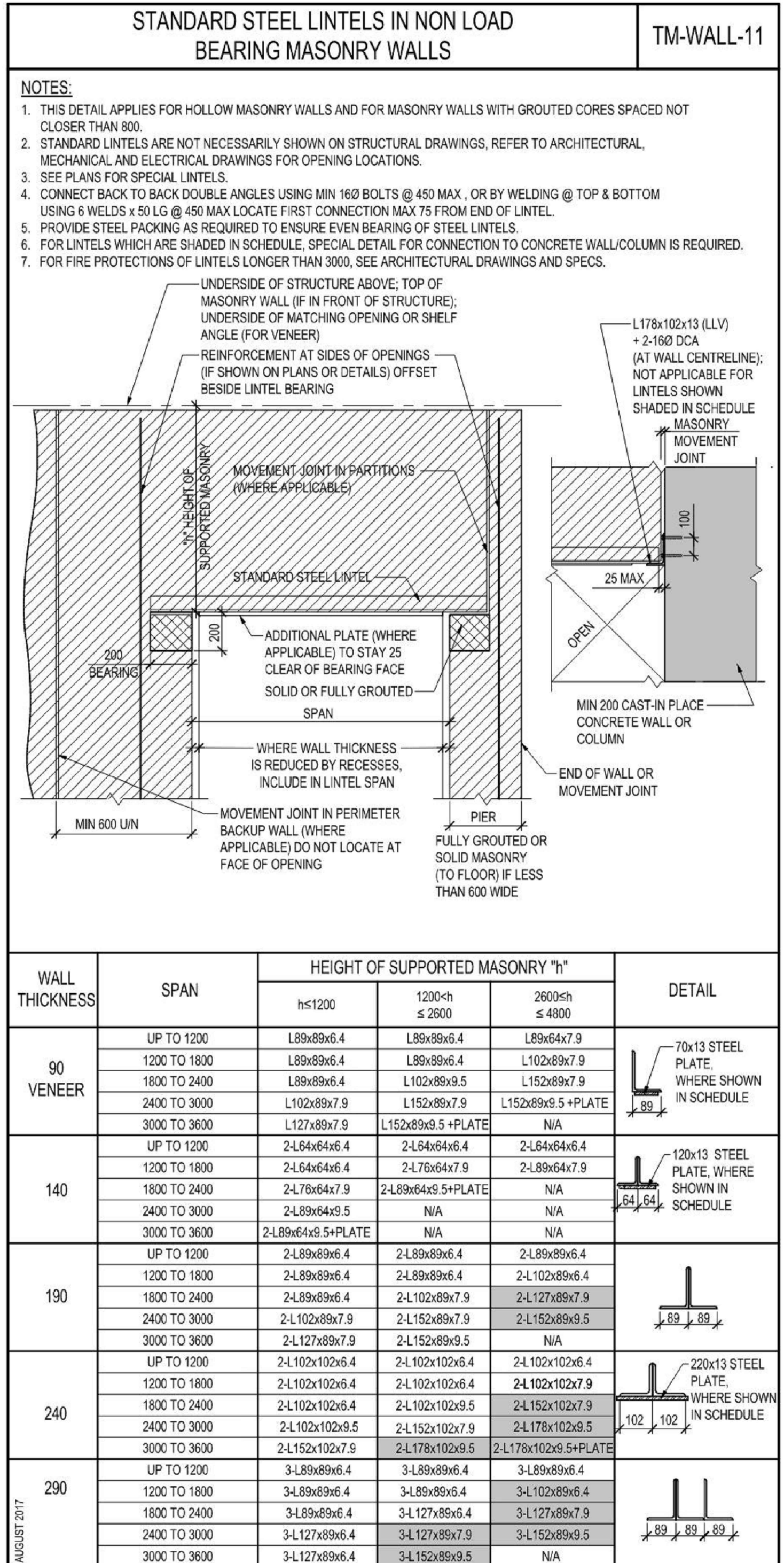
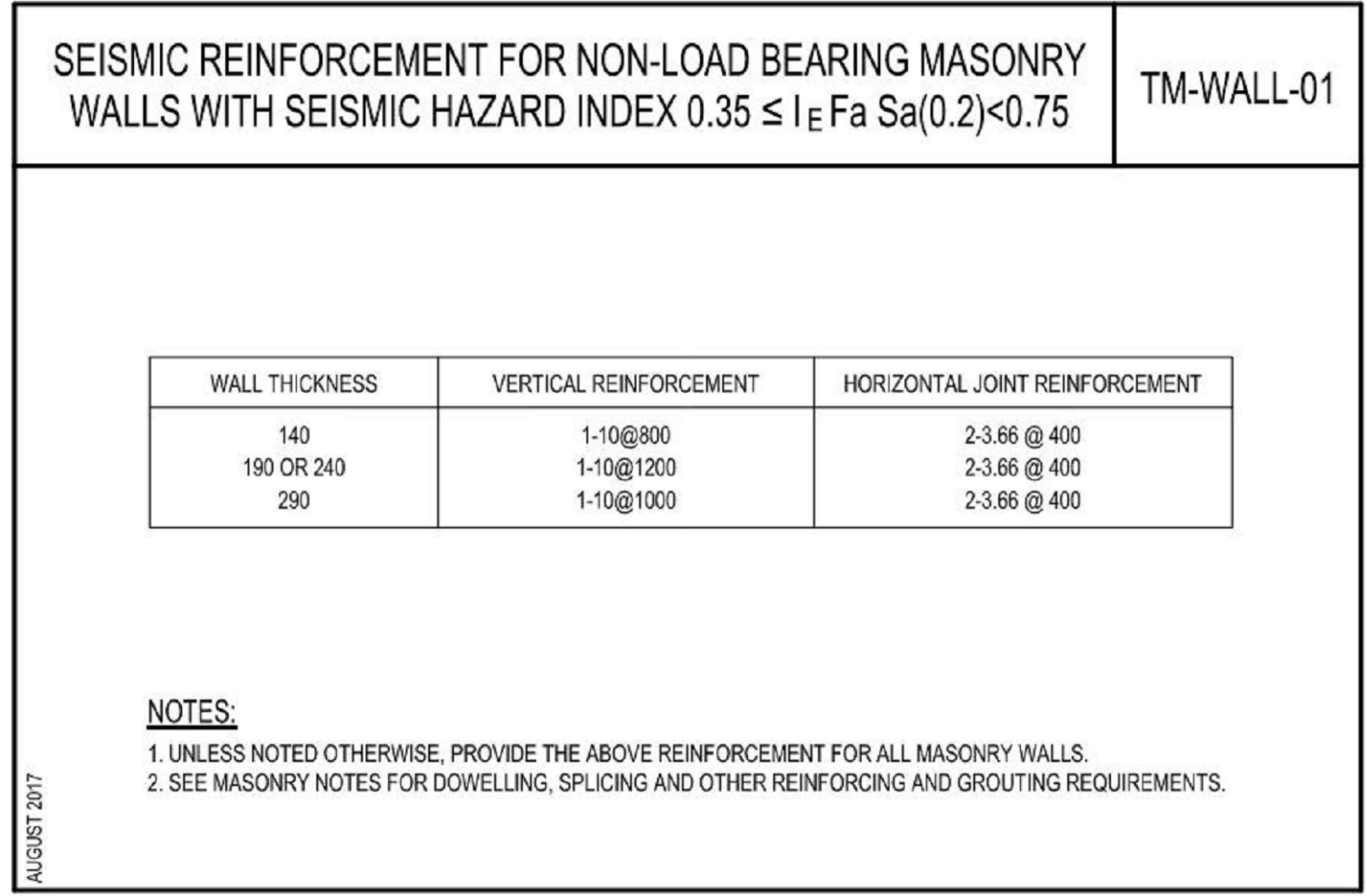
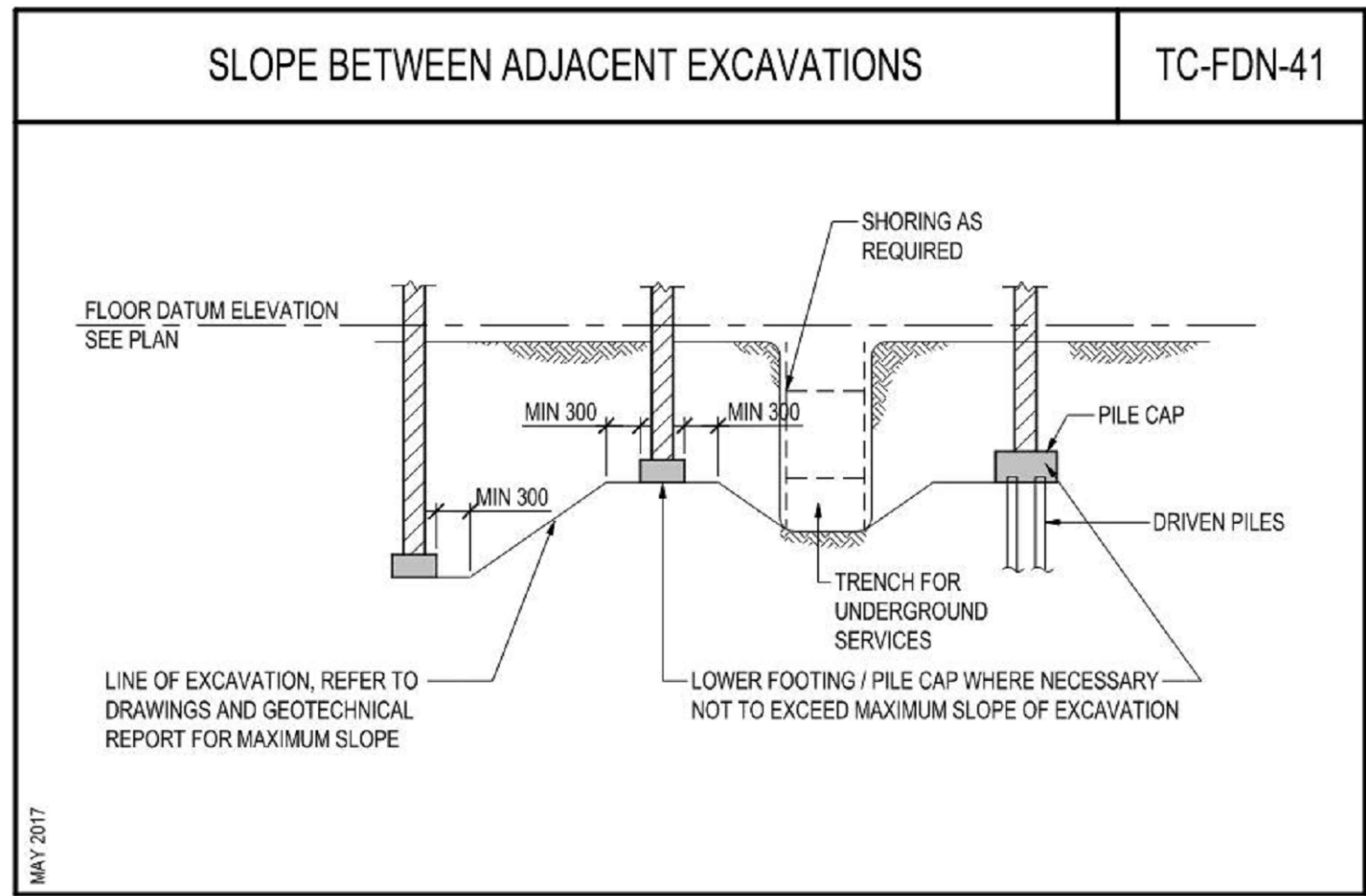
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4. USE ONLY MECHANICAL ROOF DECK FASTENERS. DO NOT USE WELDING OR CLINCHING, EXCEPT IN PROTECTED ZONES WHERE ONLY 19 PUDDLE WELDS CAN BE USED.



# SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243

PRODUCTION	REVIEWED   REVU	
DESIGNÉ   ETUDIÉ	XX   XX	DES O   AGENT CONC
C.C./C.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
C./M.K.		XX
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
E.F.		X.X.
COORDINATION		FIRE   INCENDIE
C.C./S.E.F.		X.X.
VBS NO.   NO. OTP	PF NO.   NO. DP	
N.700113.18.05	BN186586	





1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	A.C.		
NO.	DATE	REVISION		APPR.	
SCALE / ÉCHELLE		1000 0 1000 2000 3000 4000 5000 6000 7000 mm			
AS NOTED 1:100					

LOCATION / EMPLACEMENT  
17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

**SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243**

TRADE / MÉTIER STRUCTURAL		DATE 2023-02-24	
SUBJECT / SUJET			
TYPICAL DETAILS			
PRODUCTION		REVIEWED / REVU	
DESIGNED / ÉTUDIÉ	XX   XX	DES O   AGENT CONC	
A.K.C.	X.X.	X.X.	
DRAWN / DESSINÉ		PROJ MGR   GEST PROJ	
N.C./M.K.		XX	
CHECKED / VÉRIFIÉ		DES MGR   GEST CONC	
S.E.F.		X.X.	
COORDINATION		FIRE   INCENDIE	
A.K.C./S.E.F.		X.X.	
WBS NO.   NO. OTP N.700113.18.05		PF NO.   NO. DP BN186586	
DWG. NO.   NO. DESSIN		L-B147-9618/12-201	



LOCATION | EMPLACEMENT

17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

## TYPICAL & PROJECT DETAILS

WBS NO.   NO. OTP N.700113.18.05	PF NO.   NO. DP BN186586
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MASONRY LINTEL SCHEDULE		PD-04
MARK	SIZE	REINFORCING DETAIL
BL-1	190x190 DP OPENINGS UP TO 1500mm	
BL-2	190x390 DP OPENINGS 1500mm TO 2400mm	
BL-3	190x390 DP OPENINGS 2400mm TO 3000mm	

**NOTES:**

1. GROUT ALL LINTELS SOLID FOR DEPTH INDICATED, USE MIN. 15 MPa CONCRETE.
2. AT EACH END OF LINTELS (BEARING AREA) REINFORCE CORE AND GROUT SOLID. USE TYP. VERTICAL MASONRY REINFORCING FOR WALL THICKNESS.
3. LINTELS TO HAVE MIN. 200mm BEARING AT EACH END.
4. ALL VERTICAL MASONRY REINFORCING TO PASS THRU ALL LINTELS U/N.

**LATERAL SUPPORT OF MASONRY PARTITION  
AT FORMED CONCRETE STRUCTURE**

**TMLATS-11**

10 Ø DCA

CLIP L102x76x6.4 (LLV)  
x 150 LG @ 1200 EACH SIDE  
(STAGGERED)

38

MASONRY DEFLECTION  
GAP 25 UNLESS  
OTHERWISE SHOWN ON  
PLANS + MAX 10

OR

10 Ø DCA

MASONRY DEFLECTION  
GAP 25 UNLESS  
OTHERWISE SHOWN ON  
PLANS + MAX 10 AT BOLT  
HEAD

5 BENT PLATE  
x 150LG AT 1200

100 MIN

BOND BEAM (IF SHOWN  
ON DRAWINGS) CAN  
BE LOWERED MAX 1  
COURSE BELOW TOP  
OF WALL FOR REINFORCED  
WALLS CARRY ALL VERTICALS  
TO TOP OF WALL

1.69x89x6.4 BRACE  
 • FOR JOIST FRAMING, PROVIDE AT EACH BENT PLATE  
 • FOR BEAM FRAMING, PROVIDE WHERE SHOWN ON PLAN

100

MASONRY DEFLECTION GAP 25' UNLESS OTHERWISE SHOWN ON PLANS  
 + MAX 10

5 BENT PLATE x 150 LG  
 AT 1200 MAX WELD TO STEEL.  
 AT JOISTS, LOCATE MAX 100 AWAY FROM PANEL POINT

WALL IN LINE WITH FLOOR / ROOF JOISTS OR BEAMS

**TRENCH/SUMP 100 DEEP AND OVER** PD-07

**CALLOUTS:**

- SUPPLY DOWELS STRAIGHT AND BEND INTO SLAB AFTER SOIL COMPACTION
- SLAB ON GRADE REINFORCEMENT IF CALLED FOR ON PLAN
- FOR CAST-IN ANGLES AND COVER SEE MECH & ARCH DWGS OR **ITS-MSC-42**
- FOR WATERPROOFING REQUIREMENTS REFER TO ARCH AND MECHANICAL DRAWINGS.
- SEE TC-SOG-43 (UN)
- 10@400V 15@250H
- 1-10 CONT
- 15@400 DOWELS ALL AROUND
- 10@400V 15@250H
- 10@400V 15@250H
- 15@400V 15@250H
- SEE PLAN
- GLASS BR LAP
- 250
- CONTINUOUS SWELLABLE WATERSTOP, REFER TO SPECIFICATIONS
- STANDARD HOOK
- 10@400 T&B EACH WAY
- 2500 MAX
- 225 TYP
- 150
- DOWELS TO MATCH WALL VERTICALS
- 450
- MIN 150
- 300

**NOTES:**

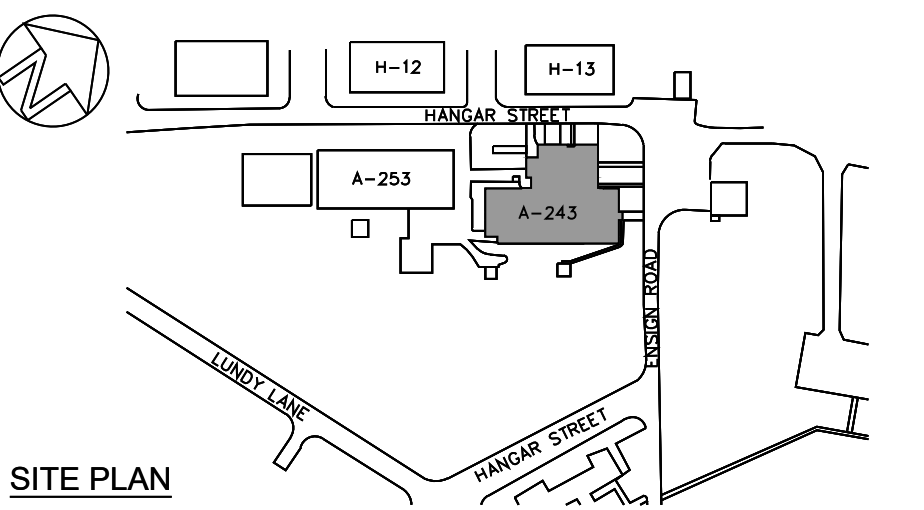
- IF SPECIFICALLY INDICATED ON PLAN, DETAIL **TC-SOG-31** FOR PITS MAXIMUM 1800 DEEP CAN BE USED FOR SOME PITS OVER 1800 DEEP.
- SEE **TC-SOG-41** FOR DIAGONAL SOG BARS ADDED AT PIT CORNERS.

3000 MAX

250



ARCHITECTURE | 49



1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	A.C.
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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE  
AS NOTED 1:100  
1000 0 1000 2000 3000 4000 5000 6000 7000 mm

LOCATION | EMPLACEMENT  
17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER	DATE
STRUCTURAL	2022-10-18

SUBJECT | SUJET

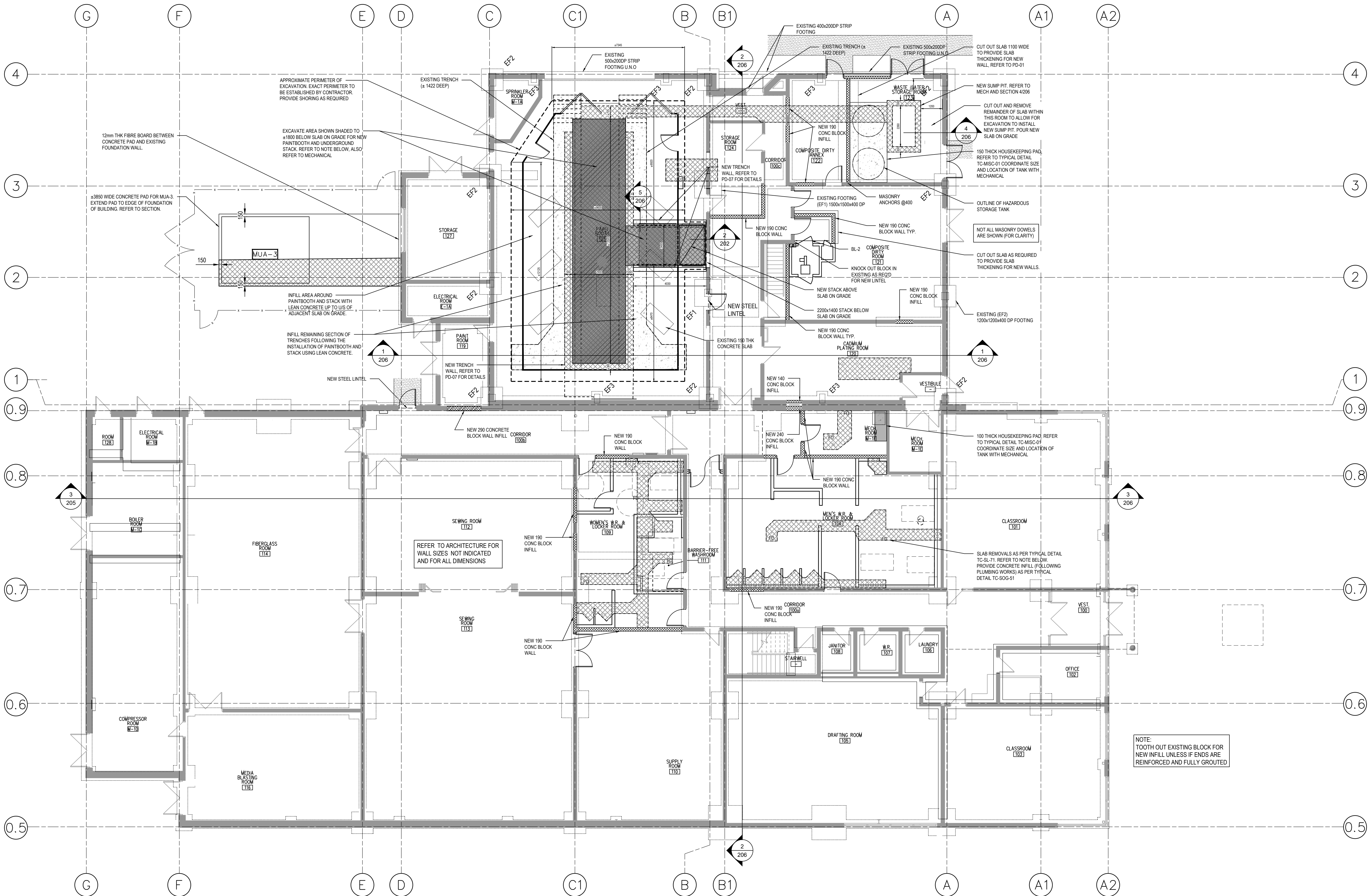
FLOOR PLAN

PRODUCTION	REVIEWED   REVU	DES O   AGENT CONC
DESIGNED   ÉTUDIÉ		X.X.
A.K.C.		PROJ MGR   GEST PROJ
DRAWN   DESSINÉ		XX
N.C./M.K.		DES MGR   GEST CONC
CHECKED   VÉRIFIÉ		X.X.
S.E.F.		FIRE   INCENDIE
COORDINATION		X.X.
A.K.C./S.E.F.		

WBS NO.   NO. OTP	PF NO.   NO. DP
N.700113.18.05	BN186586

DWG. NO. | NO. DESSIN  
L-B147-9618/12-203

Canada

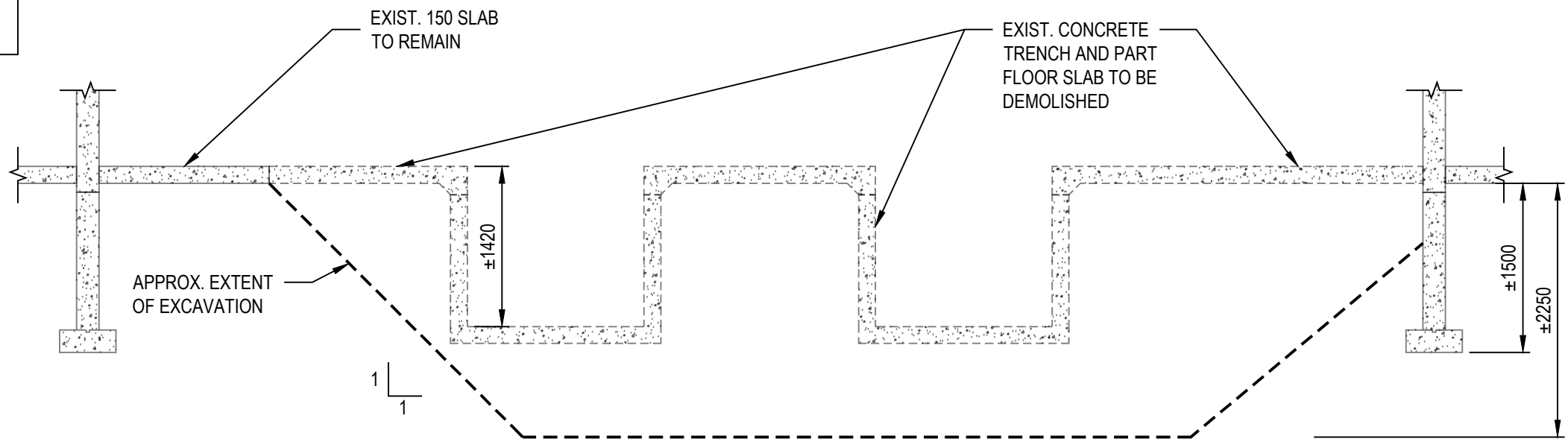


1 FLOOR PLAN  
SCALE: 1:100

NOTE:  
SLAB REMOVAL AND EXCAVATION IN ROOM 125 INVOLVES THE REMOVAL OF PARTS OF THE CONCRETE TRENCH AND ITS FOUNDATION. CONTRACTOR TO PROVIDE A SHORING DESIGN DRAWING FOR THIS WORK FOR REVIEW PRIOR TO IMPLEMENTATION OF THE WORK

NOTE:  
LOCATIONS FOR SLAB REMOVALS TO BE DETERMINED BY MECHANICAL AND ARCHITECTURAL STRUCTURAL TO DESIGN PROCEDURE FOR SLAB SAWCUTS AND SLAB INFILLS

NOTE:  
FOR LEAN CONCRETE INFILL, FILL IN 600 MAXIMUM LIFTS. ALLOW PREVIOUS POUR TO SET PRIOR TO POURING OF NEXT POUR.

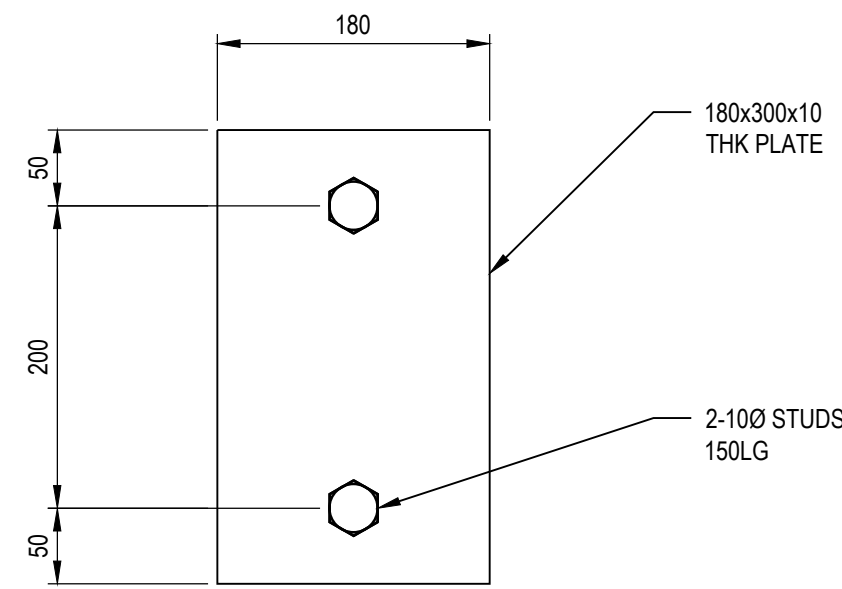


2 SECTION DETAIL (EXTENT OF EXCAVATION)  
SCALE: 1:50

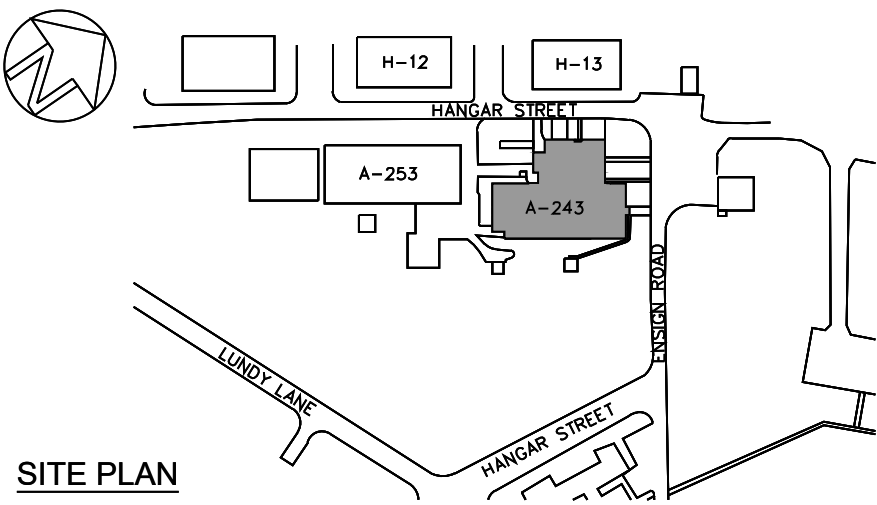
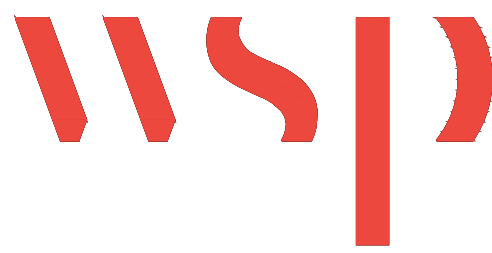




1 MEZZANINE PLAN  
204 SCALE: 1:100



2 BPLT1  
204 SCALE: 1:10



1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	A.C.
NO.	DATE	REVISION	APPR.
SCALE   ÉCHELLE			
AS NOTED 1:100			

LOCATION | EMPLACEMENT  
17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET  
SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
STRUCTURAL

DATE  
2023-07-26

SUBJECT | SUJET  
MEZZANINE PLAN

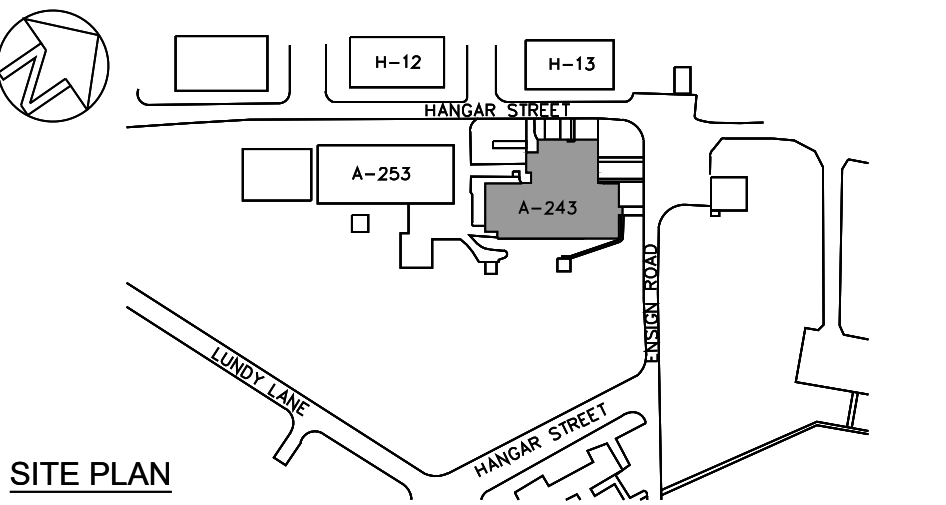
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DRAWN   DESSINÉ M.K.	PROJ MGR   GEST PROJ XX
CHECKED   VÉRIFIÉ S.E.F.	DES MGR   GEST CONC X.X.
COORDINATION A.K.C./S.E.F.	FIRE   INCENDIE X.X.

WBS NO. | NO. OTP  
N.700113.18.05

PF NO. | NO. DP  
BN186586

DWG. NO. | NO. DESSIN  
L-B147-9618/12-204






1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	A.C.
NO.	DATE	REVISION	APPR.
SCALE   ÉCHELLE			
AS NOTED 1:100			

LOCATION | EMPLACEMENT  
17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

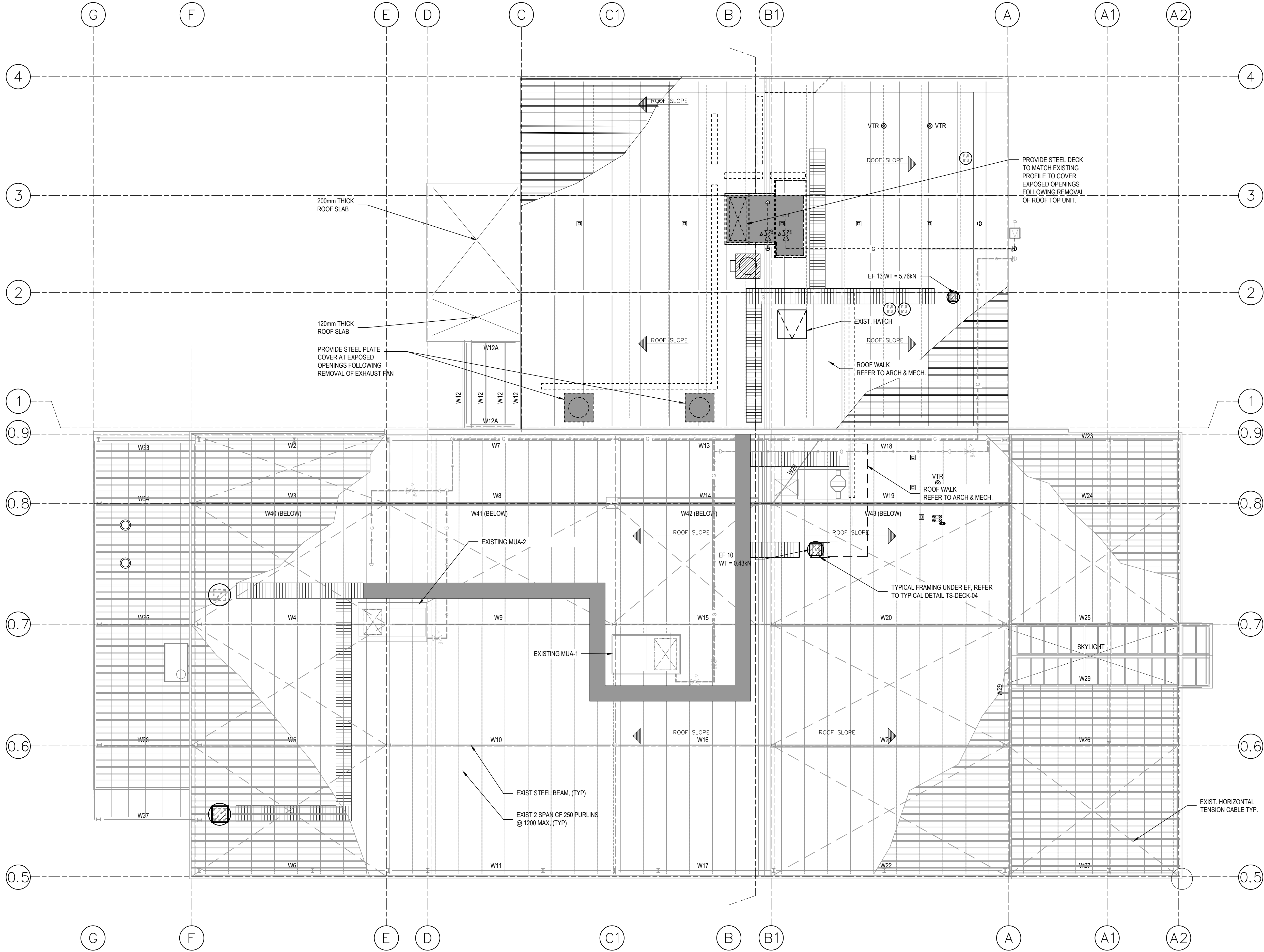
PROJECT | PROJET  
SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER STRUCTURAL	DATE 2023-02-24
SUBJECT   SUJET ROOF PLAN	

PRODUCTION	DESIGNED   ÉTUDIÉ	DESIGNED   ÉTUDIÉ
A.K.C.		DESIGNED   ÉTUDIÉ
DRAWN   DESSINÉ		DESIGNED   ÉTUDIÉ
N.C./M.K.		DESIGNED   ÉTUDIÉ
CHECKED   VÉRIFIÉ		DESIGNED   ÉTUDIÉ
S.E.F.		DESIGNED   ÉTUDIÉ
COORDINATION		DESIGNED   ÉTUDIÉ
A.K.C./S.E.F.		DESIGNED   ÉTUDIÉ

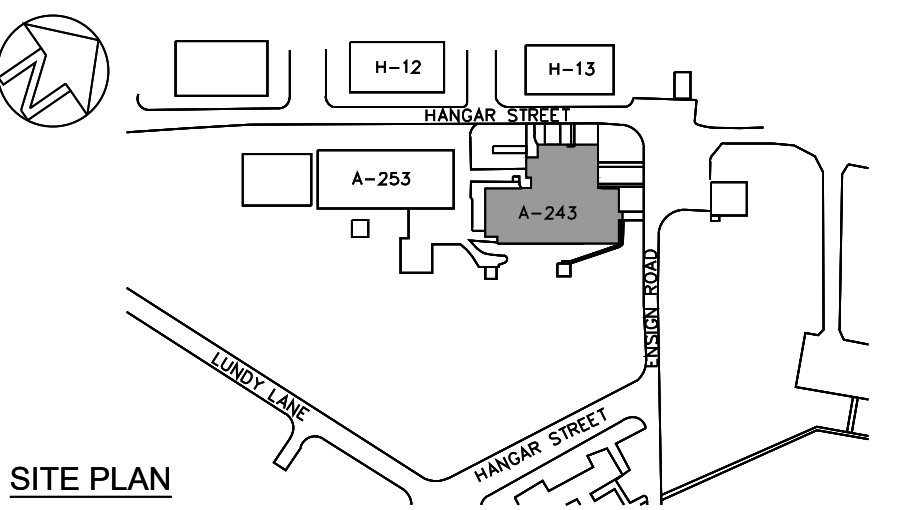
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DWG. NO.   NO. DESSIN L-B147-9618/12-205
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1 ROOF PLAN  
205 SCALE: 1:100





1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	A.C.
NO.	DATE	REVISION	APPR.
SCALE   ÉCHELLE			
AS NOTED 1:100			

LOCATION | EMPLACEMENT  
17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET  
SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

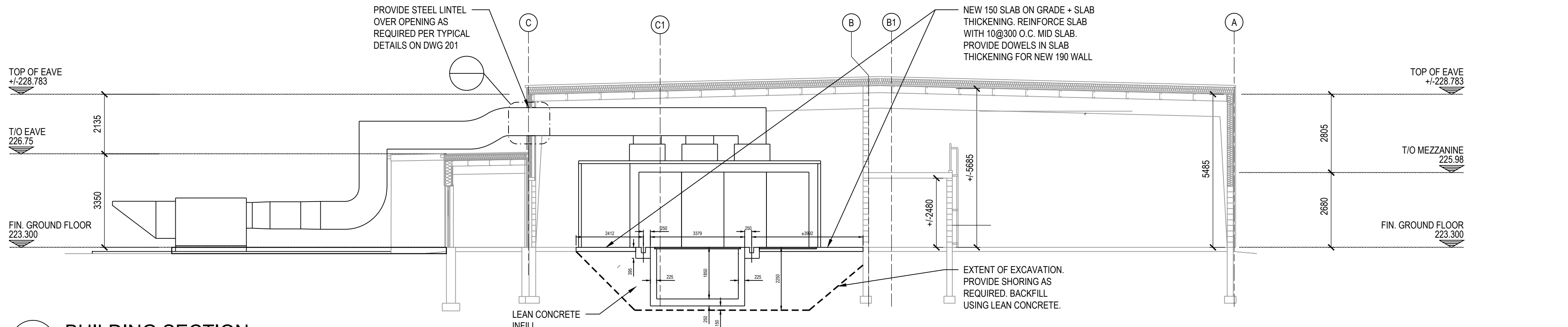
TRADE   MÉTIER	DATE
STRUCTURAL	2023-07-26

SUBJECT | SUJET  
BUILDING SECTIONS

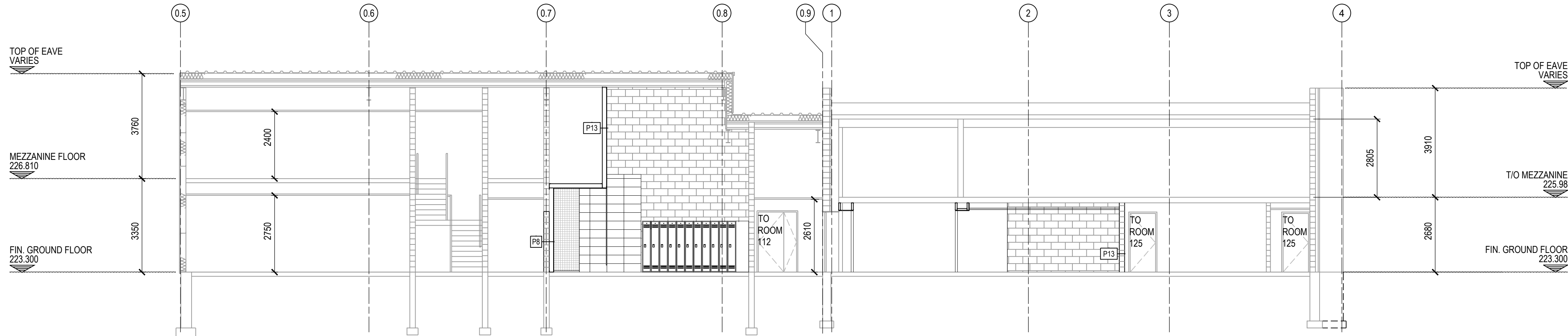
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A.K.C.		X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
M.K.		XX
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
S.E.F.		X.X.
COORDINATION		FIRE   INCENDIE
A.K.C./S.E.F.		X.X.

WBS NO.   NO. OTP	PF NO.   NO. DP
N.700113.18.05	BN186586

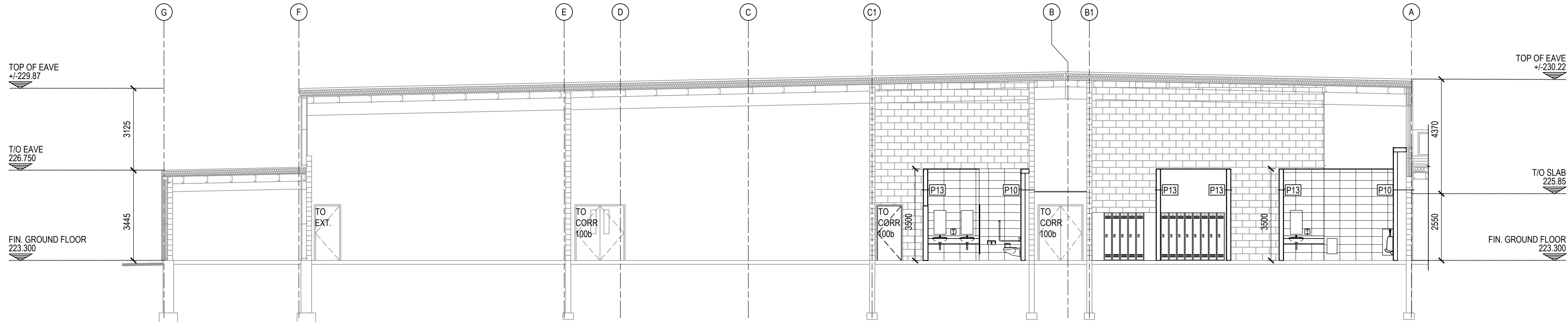
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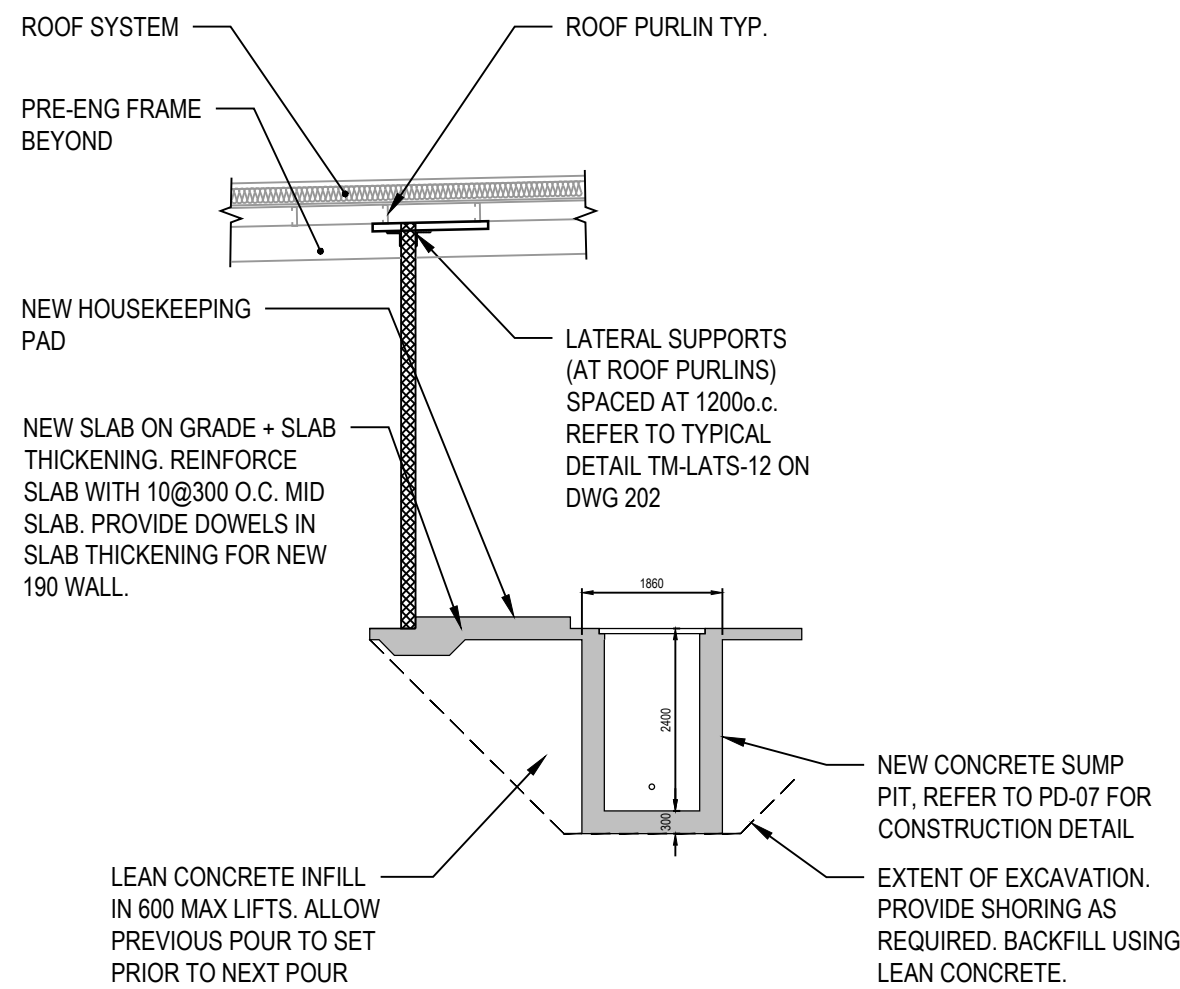
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206 SCALE: 1:100



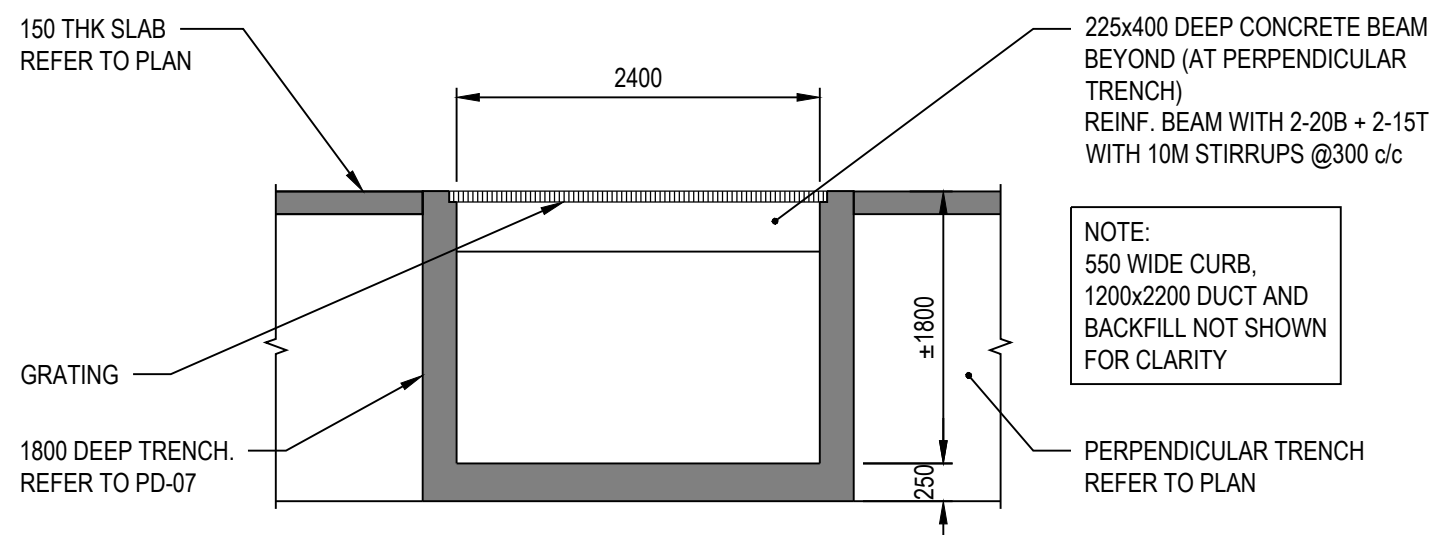
2 BUILDING SECTION  
206 SCALE: 1:100



3 BUILDING SECTION  
206 SCALE: 1:100



4 SUMP PIT SECTION  
206 SCALE: 1:100



5 SECTION  
206 SCALE: 1:50



# LEGEND

	GRID DESTINATION
	ROOM NAME ROOM NUMBER
	D = DOOR XXX = DOOR NUMBER
	W-XXX = WINDOW XXX = WINDOW NUMBER
	PX = PARTITION TYPE
	BUILDING ELEVATION NUMBER SHEET NUMBER
	BUILDING WALL SECTION NUMBER SHEET NUMBER
	DRAWING NUMBER SHEET NUMBER TYPICAL/SIMILAR CONFIGURATION
	CEILING FINISH CEILING HEIGHT
	ELEVATION
	DRAWING NUMBER SHEET NUMBER TYPICAL/SIMILAR CONFIGURATION
	EXISTING AREA / CONSTRUCTION TO REMAIN / N.I.C.
	EXISTING MAIN SANITARY LINE*
	EXISTING DOOR AND FRAME TO REMAIN.
	EXISTING TOILET TO BE REMAIN
	EXISTING SINK TO BE REMAIN
	EXISTING SURFACE MOUNTED FLUORESCENT LIGHT FIXTURE TO REMAIN*
	EXISTING AIR DIFFUSER TO REMAIN*
	EXISTING AIR RETURN TO REMAIN*
	NEW SPRINKLER HEAD*
	EXISTING INCANDESCENT LIGHTING TO REMAIN*
	EXISTING DOOR AND FRAME TO BE REMOVED.
	EXISTING PARTITION TO BE REMOVED.
	EXISTING SINK TO BE DEMOLISHED*
	EXISTING URINAL TO BE DEMOLISHED*
	EXISTING TOILET TO BE DEMOLISHED*
	EXISTING SHOWER TO BE DEMOLISHED*
	EXISTING EYE WASH STATION TO BE RELOCATED*
	LAY-IN CEILING TO BE REMOVED

\* REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION ON THESE ITEMS

## GENERAL NOTES:

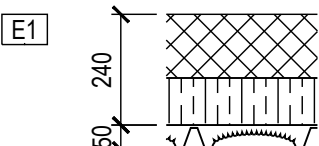
- ALL DIMENSIONS IN MILLIMETERS UNLESS NOTED OTHERWISE.
- CONTRACTOR CONFIRM ALL EXISTING CONDITIONS AND VERIFY ALL DIMENSIONS BEFORE START OF WORK. REPORT TO CONSULTANT ANY DISCREPANCIES.
- REFER TO STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR COMPLETE SCOPE OF WORK.
- ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES, SUCH AS THE LATEST EDITIONS OF:
  - NATIONAL BUILDING CODE OF CANADA (NBCC);
  - NFPA 13 (FIRE PROTECTION SPRINKLERS);
  - TSSA (TECHNICAL STANDARDS AND SAFETY ASSOCIATION)
  - ULC & CSA/CAN INSTRUCTIONS & REQUIREMENT.
- CONTRACTOR MUST COMPLY WITH LOCAL BY-LAWS, CANADIAN CONSTRUCTION SAFETY CODE AND ALL REGULATIONS SET BY AUTHORITIES HAVING JURISDICTION. IN CASE OF CONFLICT OR DISCREPANCY, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
- THE WORD "PROVIDE" SHALL MEAN "SUPPLY & INSTALL". CONTRACTOR SHALL PROVIDE ALL REQUIRED EQUIPMENT AND PARTS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK AND VERIFY ALL RELEVANT DIMENSIONS AND MATERIALS ON SITE AND REPORT ALL ERRORS AND OMISSIONS TO THE ENGINEER.
- DO NOT SCALE DRAWINGS.
- THIS DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS, INSPECTIONS AND APPROVALS AS WELL AS ASSOCIATED COSTS.
- CONTRACTORS SHALL PROVIDE SHOP DRAWINGS IN ACCORDANCE WITH SPECIFICATION SECTION 01 33 00.
- REFER TO DESIGNATED SUBSTANCE REPORTS FOR INFORMATION RELATED TO HAZARDOUS MATERIALS.
- PROVIDE NEW CUT OPENINGS IN WALLS AND FLOORS AS REQUIRED TO ACCOMMODATE INSTALLATION OF NEW MECHANICAL AND ELECTRICAL ITEMS. LOCATE OPENINGS TO AVOID EXISTING STRUCTURAL ELEMENTS. SEAL ALL NEW PENETRATIONS IN EXISTING WALLS AND FLOORS TO ACHIEVE CONTINUOUS FIRE RATING AS PER FIRE RATING PLAN AFTER INSTALLATION OF NEW MECHANICAL AND ELECTRICAL ITEMS. REFER TO MECHANICAL AND ELECTRICAL.
- PATCH AND REFINISH ALL WALLS AND CEILINGS AFTER DEMOLISHING EXISTING MECHANICAL AND ELECTRICAL ITEMS. PAINT AFFECTED AREAS UP TO NEAREST WALL CORNER. REFER TO MECHANICAL AND ELECTRICAL. PAINT COLOURS ARE TO MATCH EXISTING ADJACENT COLOURS, OR TO BE SELECTED BY DCC REPRESENTATIVE.
- PAINT ALL NEW GYPSUM BOARD WALLS AND CEILINGS. PAINT COLOUR IS TO BE SELECTED BY DCC REPRESENTATIVE.

## FIRE PLAN NOTES

- 1 HR. FIRE RATED WALL
- 2 HR. FIRE RATED WALL
- 4 HR. FIRE RATED WALL/DOOR
- ALL NOTED SHAFT PARTITIONS INDICATED IN ELEVATIONS AND SECTIONS TO BE FINISHED ON THE TOP WITH GYPSUM BOARD TO MATCH PARTITION CONSTRUCTION. GYPSUM BOARD AND STUD FRAMING TO TERMINATE AND COVER SHAFT SPACING BACK TO CONCRETE BLOCK WALL OR EXTERIOR WALL.

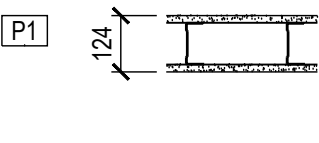
# WALL ASSEMBLIES

## EXTERIOR PARTITIONS

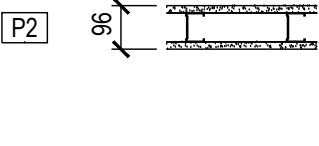


140mm CONCRETE BLOCK  
VAPOUR BARRIER  
100mm SEMI-RIGID INSULATION  
50mm PRE-FINISHED METAL SIDING

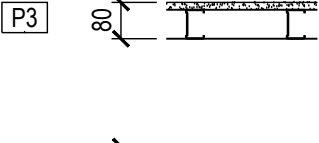
## INTERIOR PARTITIONS



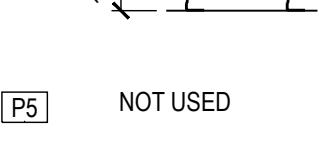
WALL FINISH  
16mm MOISTURE RESISTANT GYP. BD.  
92mm METAL STUDS @ 406mm O.C.



WALL FINISH  
16mm MOISTURE RESISTANT GYP. BD.  
92mm METAL STUDS @ 406mm O.C.



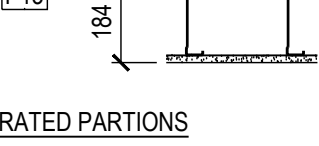
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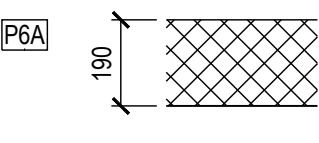
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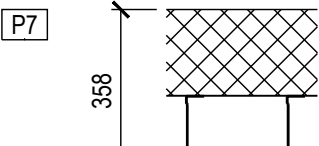
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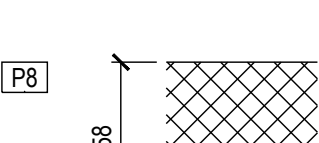
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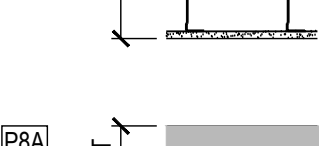
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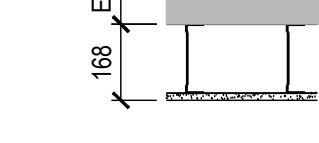
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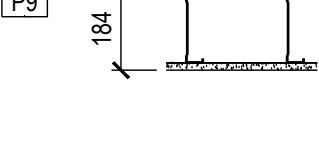
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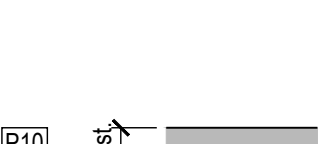
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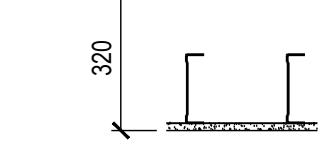
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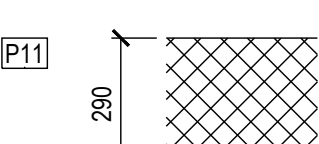
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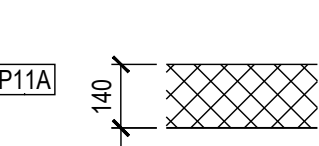
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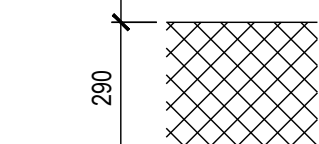
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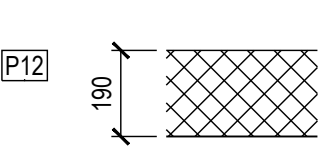
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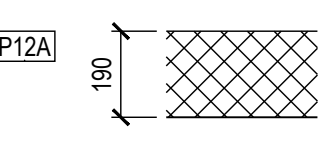
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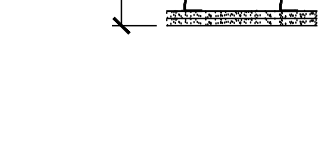
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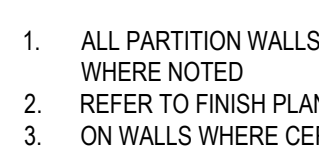
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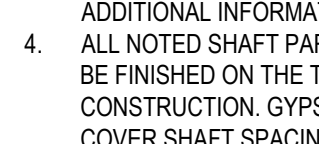
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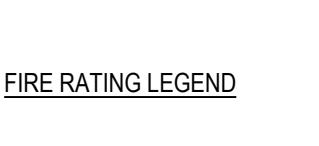
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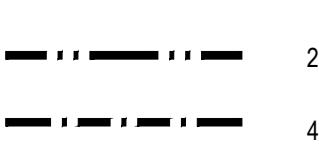
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WALL FINISH  
16mm MOISTURE RESISTANT GYP. BD.  
92mm METAL STUDS @ 406mm O.C.

# Acronym/Definition

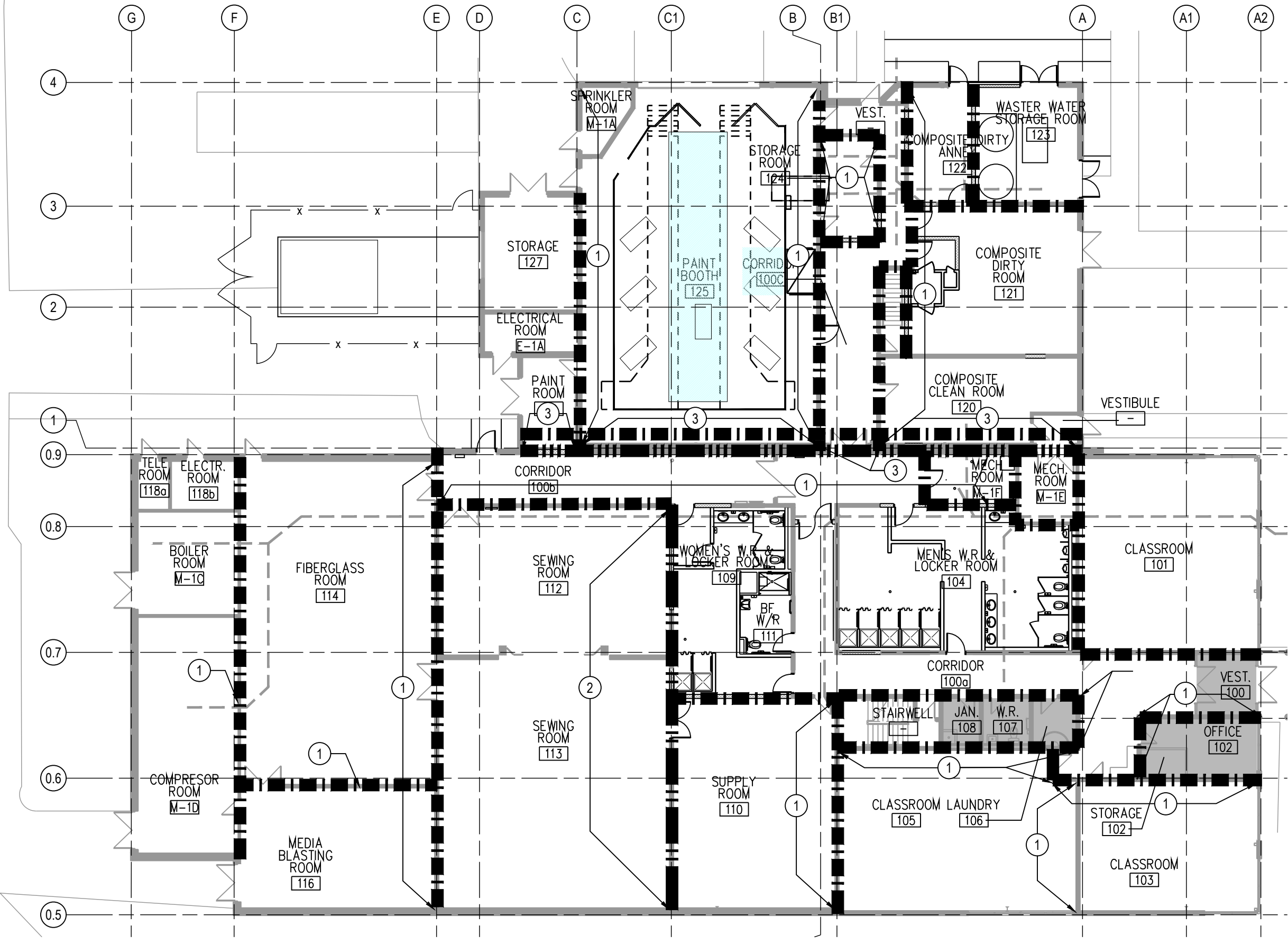
A/C	Air Conditioning
ACT	Acoustic Ceiling Tile
AD	Access Door
ADJ	Adjustable
AFF	Above Finished Floor
ALUM	Aluminum
ANOD	Anodized
APPROX	Approximate
ARCH	Architectural
AVB	Air/Vapour Barrier
BD	Board
BLDG	Building
BLKG	Blocking
BULK	Bulkhead
C/C	Contractor Supplied, Contractor Installed.
C/W	Complete With
CRU	Cementitious Backer Unit
CH	Coat Hook
CL	Centreline
CLG	Ceiling
CLR	Clear Finish
CLT	Closet
CMC	Calculation of Small Colour Differences for Acceptability
CMU	Concrete Masonry Unit
CO	Clean Out
COL	Column
CONC	Concrete
CONT	Continuous
CORR	Corridor
CT	Ceramic Tile
CURBD	Cupboard
DEPT	Department
DET	Detail
DIM	Dimension
DIV	Division
DN	Down
DWG	Drawing
(E)	Existing
ELEC	Electric
ELEV	Elevation
EMERG	Emergency
EQUIP	Equipment
EXIST	Existing
EXT	Exterior
FD	Floor Drain
FIN	Finished
FIXT	Fixture
FL	Floor
FRR	Fire Resistance Rating
GB	Gypsum Board
GL	Glass/Glazing
GRD	Ground
HM	Hollow Metal (Doors)
HSD	Hand Sanitizer Dispenser
HVAC	Heating, Ventilation, and Air Conditioning
INCL	Including
INS	Insulation
INT	Interior
JAN	Janitor's Closet
LAV	Lavatory
LH	Left Hand
MAX	Maximum
MECH	Mechanical
MEZZ	Mezzanine
MIN	Minimum
MIR	Mirror
ND	Not in Contract
NIC	Not in Contract
NO	Number
NTS	Not To Scale
O.C	On Centre
O/C	On Centre
PLAIN	Plastic Laminate
PLYWD	Plywood
PREFAB	Prefabricated
PREFIN	Prefinished
PT	Paint
PTD	Paper Towel Dispenser
RB	Resilient Base
RD	Roof Drain
REV	Revision
RH	Right Hand
RM	Room
SAN	Sanitary
SC	Solid Core
SCTR	Shower Track And Curtain
SD	Soap Dispenser
SHV	Sheet Vinyl
SHV	Sheet Vinyl
SIM	Similar
SND	Sanitary Napkin Disposal
SPEC	Specification
SPR	Sprinkler
SQ	Square
SS	Stainless Steel
ST	Street
STL	Steel
STRUCT	Structural
SUSP	Suspended
TDL	Towel Disposal
TEMP	Temporary
TTD	Toilet Tissue Dispenser
TWB	Towel Bar
TYP	Typical
U/S	Underside
UNO	Unless Noted Otherwise
VB	Vapour barrier
VERT	Vertical
VEST	Vestibule
WC	Water Closet
WD	Wood
WHMIS	Workplace Hazardous Materials Information System
WR	Washroom
WRC	Waste Receptacle

## NOTES:

- ALL PARTITION WALLS GO TO UNDER SIDE OF STRUCTURE DECK EXCEPT WHERE NOTED
- REFER TO FINISH PLAN FOR WALL FINISHES
- ON WALLS WHERE CERAMIC TILE ARE TO BE INSTALLED, GYP. BD. IS TO BE REPLACED BY TILE BACKER BOARD. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- ALL NOTED SHAFT PARTITIONS INDICATED IN ELEVATIONS AND SECTIONS TO BE FINISHED ON THE TOP WITH GYPSUM BOARD TO MATCH PARTITION CONSTRUCTION. GYPSUM BOARD AND STUD FRAMING TO TERMINATE AND COVER SHAFT SPACING BACK TO CONCRETE BLOCK WALL OR EXTERIOR WALL.

## FIRE RATING LEGEND

	1 HOUR RATED WALL
	2 HOUR RATED WALL
	4 HOUR RATED WALL



**1 FIRE PLAN**  
SCALE: 1:200

ONTARIO BUILDING CODE / NATIONAL BUILDING CODE INFORMATION					
FIRM NAME: ARCHITECTURE 49 INC.					
CERTIFICATE OF PRACTICE NO.: 5312					
NAME OF PROJECT: CFB BORDEN BUILDING SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243					
LOCATION: 17 HANGAR STREET, BORDEN, ON.					
ITEM	ONTARIO BUILDING CODE DATA MATRIX PARTS 3 & 9			O.B.C. REFERENCE	N.B.C. REFERENCE
1	PROJECT DESCRIPTION: INTERIOR DEMOLITION / ROOFING AND MECHANICAL MODIFICATIONS			<input checked="" type="checkbox"/> PART 3 1.1.2 [A]	<input checked="" type="checkbox"/> PART 3 1.1.2 [A]
2	MAJOR OCCUPANCY(S): GROUP F3 GROUP F1 - MINOR OCCUPANCY			3.1.2.1 (1)	3.1.2.1 (1)
3A	BUILDING AREA EXIST: 1,820 m² NEW: NA TOTAL: 1,820 m²			1.4.1.2 [A]	1.4.1.2 [A]
4	GROSS AREA EXIST: 1,885 m² NEW: NA TOTAL: 1,885 m²			1.4.1.2 [A]	1.4.1.2 [A]
5	NUMBER OF STOREYS 2 ABOVE GRADE: 2 BELOW GRADE: 0			1.4.1.2 [A] & 3.2.1.1	1.4.1.2 [A] & 3.2.1.1
6	NUMBER OF STREETS / FIRE FIGHTER ACCESS: 2			3.2.2.62	3.2.2.61
7	BUILDING CLASSIFICATION: 3.2.2.23. GROUP A2, UP TO 2 STOREYS SPRINKLERED			3.2.2.72	3.2.2.61
8	SPRINKLER SYSTEM PROPOSED <input checked="" type="checkbox"/> ENTIRE BUILDING <input type="checkbox"/> BASEMENT ONLY <input type="checkbox"/> IN LIEU OF ROOF RATING <input type="checkbox"/> NOT REQUIRED			3.2.2.20-83 3.2.1.5 3.2.2.17 INDEX	3.2.2.20-83 3.2.1.5 3.2.2.17 INDEX
9	STANDPIPE REQUIRED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			3.2.9	3.2.5.8
10	FIRE ALARM REQUIRED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			3.2.4	3.2.4
11	WATER SERVICE / SUPPLY IS ADEQUATE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			3.2.5.7	3.2.5.7
12	HIGH BUILDING <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			3.2.6	3.2.6
13	PERMITTED CONSTRUCTION ACTUAL CONSTRUCTION <input type="checkbox"/> COMBUSTIBLE <input type="checkbox"/> NON-COMBUSTIBLE <input type="checkbox"/> BOTH <input type="checkbox"/> BOTH			3.2.2.20-83	3.2.2.20-83
14	MEZZANINES) AREA (m²) EXISTING: 0m² NEW: 0m²			3.2.1.1 (4)	3.2.1.1 (4)
15	OCCUPANT LOAD BASED ON 1st FLOOR: 2nd FLOOR: OCCUPANCY A2 OCCUPANCY A2 LOAD 196 PERSONS LOAD 17 PERSONS			3.1.17	3.1.17
16	BARRIER-FREE DESIGN <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (EXPLAIN) 9.6.2.1(2)			3.8	3.8
17	HAZARDOUS SUBSTANCES <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			3.3.1.2 & 3.3.1.19	3.3.1.2 & 3.3.1.20
18	REQUIRED FIRE RESISTANCE RATING (FRR) HORIZONTAL ASSEMBLIES FRR (HOURS) N/A FLOORS: 2 HRS. ROOF: 0 HR. MEZZANINE: N/A FRR OF SUPPORTING MEMBERS FLOORS: N/A ROOF: N/A MEZZANINE: N/A LISTED DESIGN NO. OR DESCRIPTION (SG-2) LISTED DESIGN NO. OR DESCRIPTION (SG-2)			3.2.2.20-83 & 3.2.1.4 3.2.2.64	3.2.2.20-83 & 3.2.1.4 3.2.2.64
19	SPATIAL SEPARATION - CONSTRUCTION OF EXTERIOR WALLS			3.2.3	3.2.3
REAR	NORTH	NO CHANGE			
FRONT	SOUTH	NO CHANGE			
STREET	EAST	NO CHANGE			
SIDE YARD	WEST	NO CHANGE			

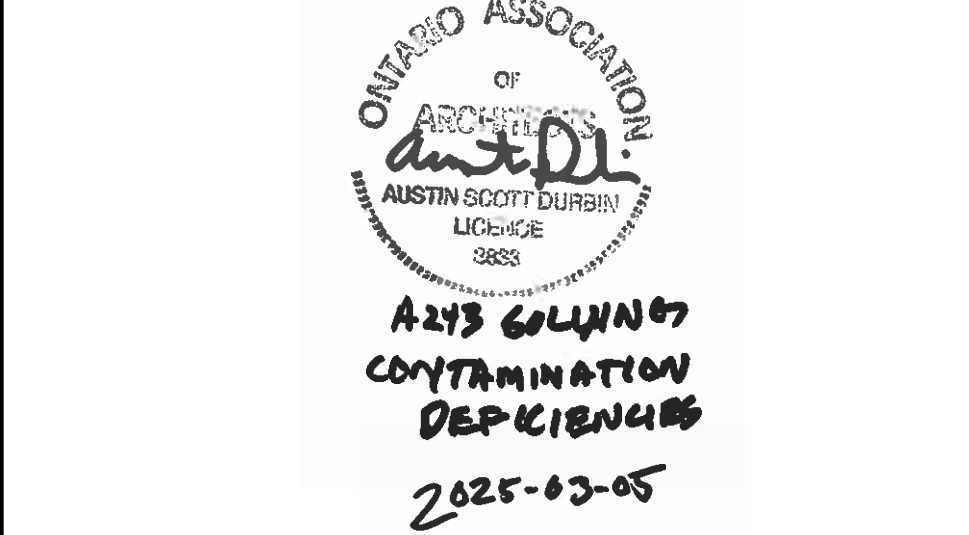
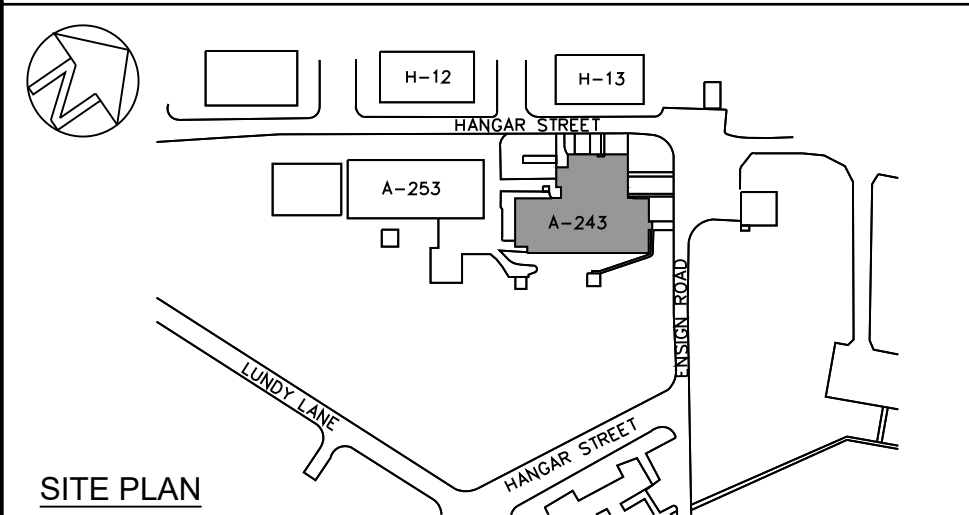
**2 CODE MATRIX**  
SCALE:

LEVEL OF SECURITY / NIVEAU DE SÉCURITÉ  
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# ARCHITECTURE | 49



1	2025/03/05	100% SUBMISSION - ISSUE FOR TENDER	AD
NO.	DATE	REVISION	APPR.

SCALE / ÉCHELLE

AS NOTED

LOCATION / EMPLACEMENT  
17 HANGAR STREET,  
CFB BORDEN  
ONTARIO

PROJECT / PROJET  
**SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243**

TRADE / MÉTIER  
**ARCHITECTURAL**

DATE  
2017-05-29

SUBJECT / SUJET  
**LEGEND, CONSTRUCTION ASSEMBLIES, FIRE, GENERAL NOTES & CODE MATRIX**

PRODUCTION	DESIGNED / ÉTUDIÉ	REVIEWED / REVU
DESIGNED / ÉTUDIÉ	XX   XX	DES O   AGENT CONC
DRAWN / DESSINÉ	XX.X.	PROJ MGR   GEST PROJ
H.A. / I.B.		J.C.
CHECKED / VÉRIFIÉ		DES MGR   GEST CONC
A.D. / I.B.		XX.
COORDINATION		FIRE / INCENDIE
A.D. / I.B.		XX.

WBS NO. | NO. OTP  
N.700113.18.05

PF NO. | NO. DP  
BN186586

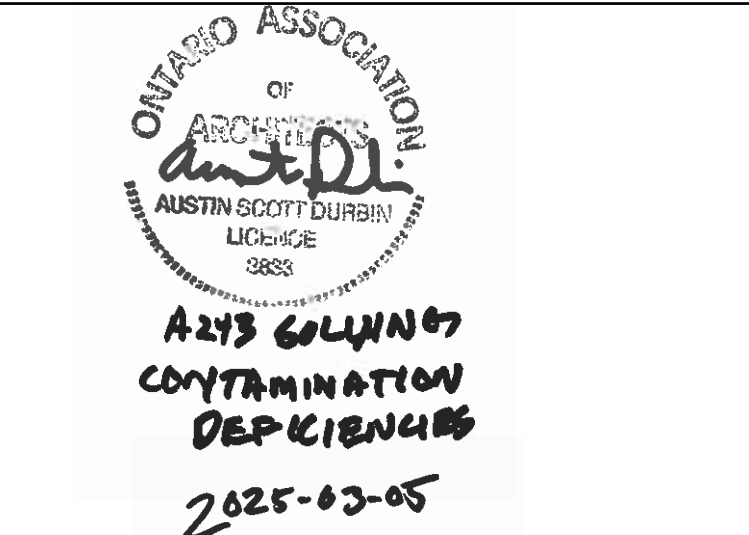
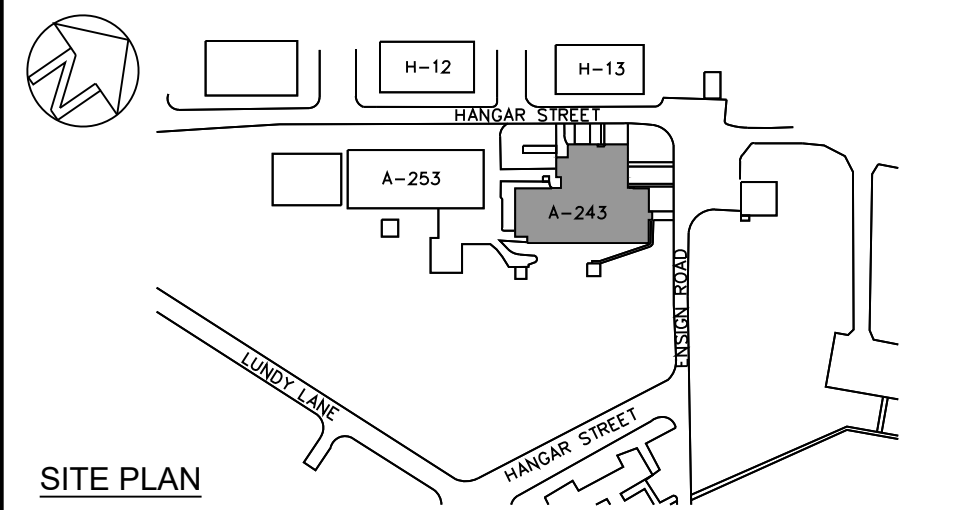
DWG. NO. | NO. DESSIN



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# ARCHITECTURE | 49



1	2025/03/05	100% SUBMISSION - ISSUE FOR TENDER	AD
NO.	DATE	REVISION	APPR.

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LOCATION | EMPLACEMENT  
17 HANGAR STREET,  
CFB BORDEN  
ONTARIO

## SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER ARCHITECTURAL	DATE 2017-05-29
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### FLOOR PLAN - DEMOLITION

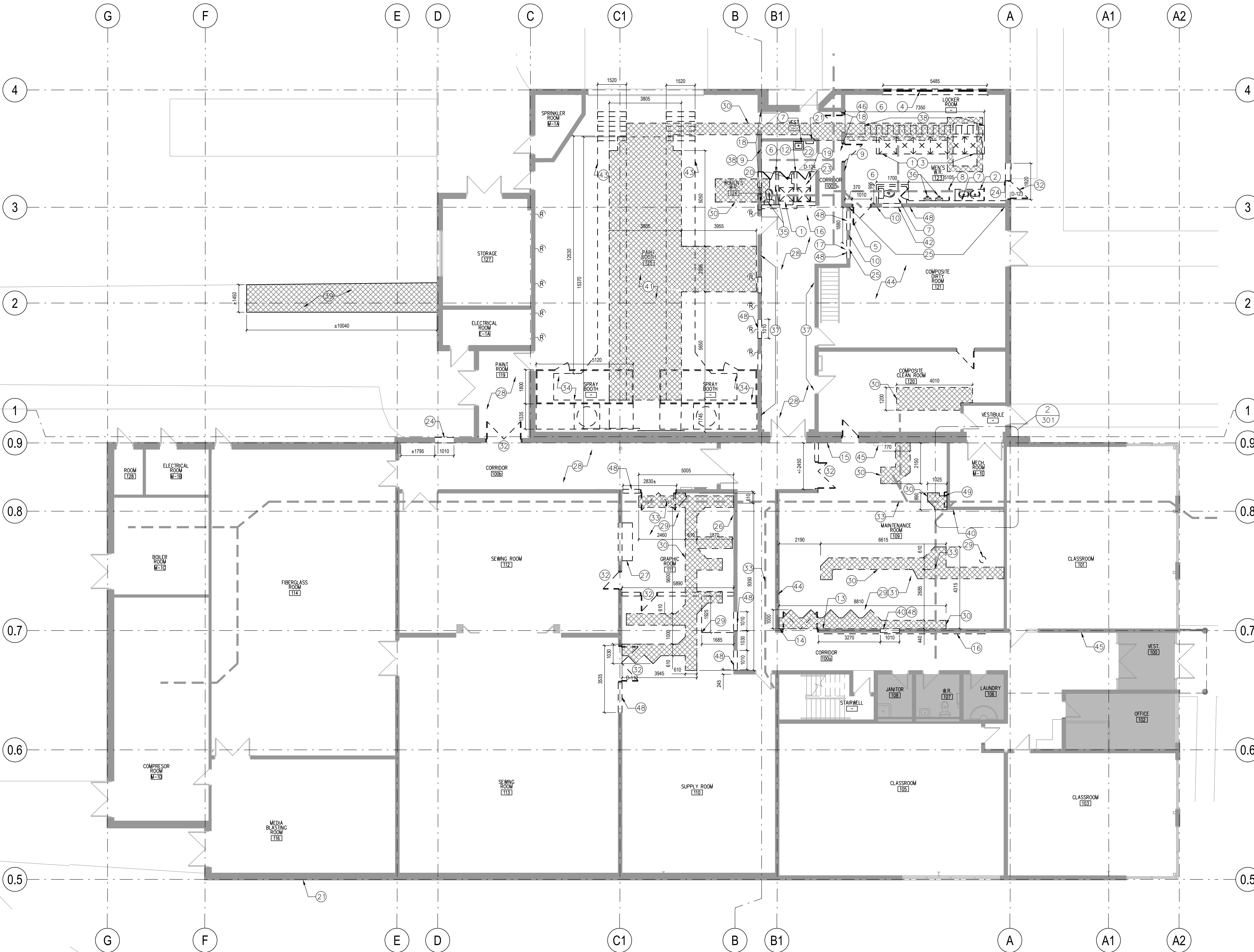
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G.M.		X.X.
COORDINATION		FIRE   INCENDIE
A.D. / G.M.		X.X.

WBS NO.   NO. OTP N.700113.18.05	PF NO.   NO. DP BN186586
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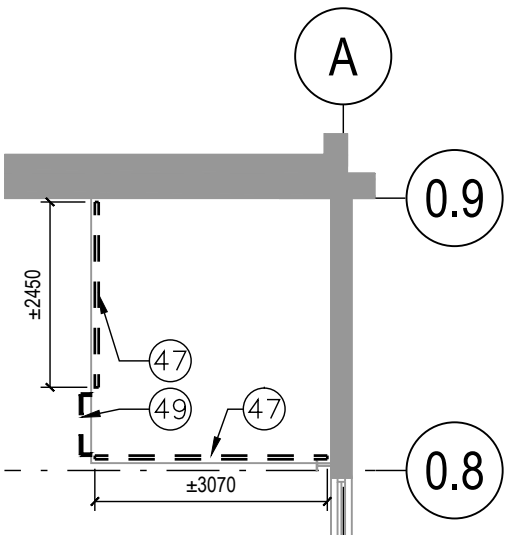
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L-B147-9618/12-301

- GENERAL DEMOLITION NOTES
- REMOVE ENTIRE HEIGHT OF PARTITION WHERE DEMOLITION IS INDICATED.
  - ADDITIONAL WORK NOT INDICATED ON THIS DRAWING MAY BE REQUIRED. COORDINATE ALL DEMOLITION WITH STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR COMPLETE SCOPE OF WORK (REMOVALS, REINSTATEMENT AND NEW WALLS).
  - THOROUGHLY INSPECT ALL AREAS TO REMAIN. PATCH AND REPAIR ANY VISIBLE DAMAGE. NEW FINISH TO MATCH EXISTING ADJACENT SURFACE UNLESS NOTED OTHERWISE.
  - PROTECT ALL EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT TO REMAIN.
  - ALL EXISTING FIRE SEPARATIONS TO BE MAINTAINED. INFILL NEW/EXISTING PENETRATIONS TO ACHIEVE CONTINUOUS RATING. CONTRACTOR TO INCLUDE A QUANTITY OF 1.5 SM. OF TOTAL AREA FOR PATCHING TO BE CONDUCTED IN 7 LOCATIONS. INCLUDE COST WITHIN CONSTRUCTION PRICE.
  - ALL SLABS SHALL BE SCANNED PRIOR TO CUTTING, CORING & DETAILING.
  - ALL DIMENSIONS ARE TO FACE OF STUD, UNLESS OTHERWISE NOTED.
  - REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL SWITCH AND OUTLETS LOCATION. PATCH AND REPAIR EXISTING WALL AFFECTED BY THE INSTALLATION OF OUTLETS AND SWITCHES. NEW SURFACE TO MATCH EXISTING ADJACENT SURFACES.
  - PATCH AND REPAIR ALL SURFACES AFFECTED DURING DEMOLITION. NEW FINISH TO MATCH ADJACENT SURFACE.
  - PAINT ALL EXISTING WALLS, DOORS & FRAMES TO REMAIN WITHIN THE SCOPE OF WORK TO MATCH EXISTING.
  - CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL EXISTING WALLS AND WINDOWS BEFORE PROCEEDING WITH ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO DCC REPRESENTATIVE.
  - THE CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL REMOVED MATERIALS, UNLESS NOTED OTHERWISE.
  - CONTRACTOR TO PATCH WALLS AT ALL REMOVALS OF ANY ELECTRICAL/FIRE ALARM CONTROLS AND/OR PANELS. REPAIR TO MATCH EXISTING IUN TEXTURE, COLOUR AND FIRE RATING.
  - UNLESS NOTED OTHERWISE, DEMOLITION OF WALLS TO EXTEND FROM FINISH FLOOR TO UNDERSIDE OF STRUCTURE, APPROXIMATELY 668MM HIGH.

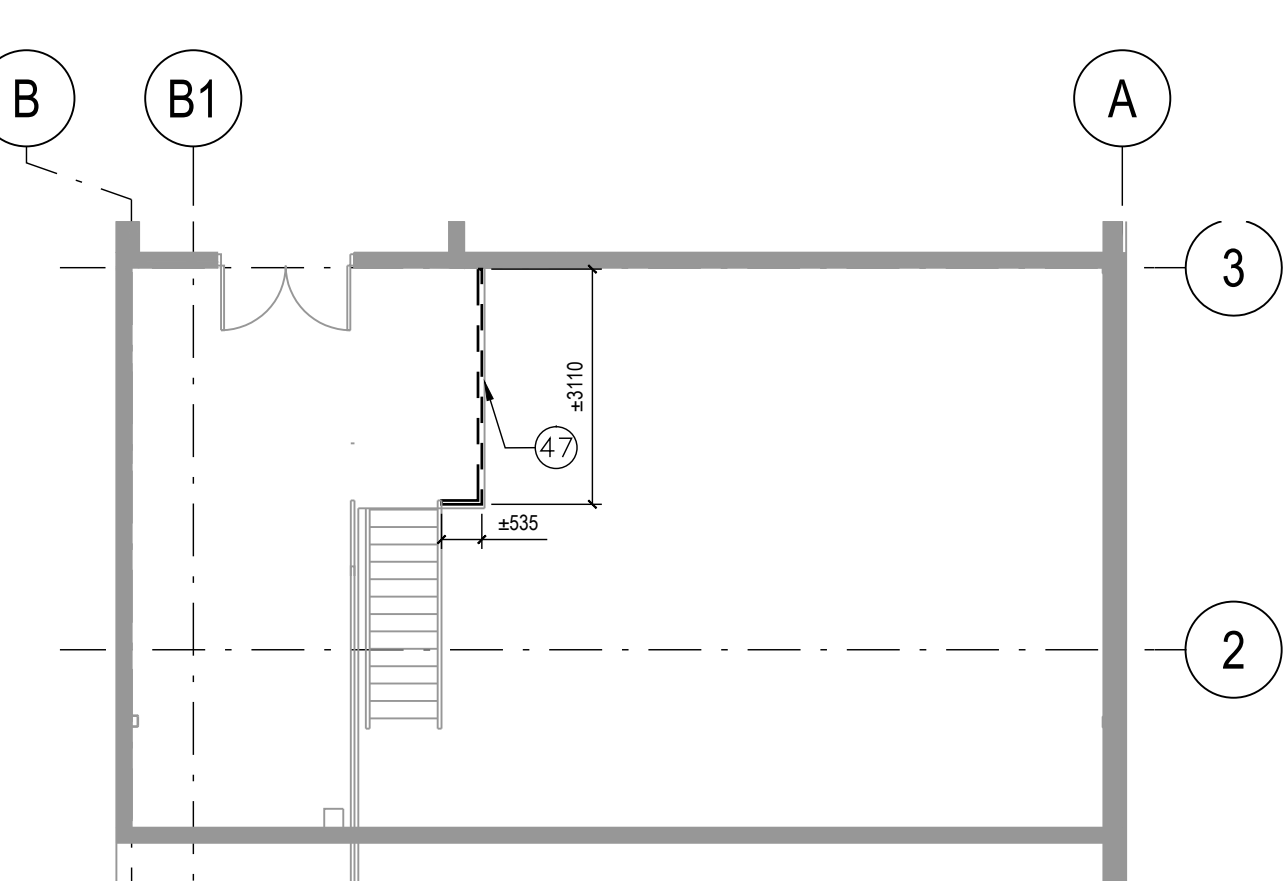
- DEMOLITION NOTES
- REMOVE EXISTING SHOWER STALLS C/W PARTITIONS AND ACCESSORIES. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - REMOVE EXISTING WALL MOUNTED MILLWORK C/W ALL ASSOCIATED BASES & SUPPORT. PATCH & PAINT ALL SURFACES TO REMAIN MATCH EXISTING ADJACENT ONES.
  - REMOVE EXISTING SHOWER CURTAIN ROD
  - REMOVE EXISTING VERTICAL BLINDS C/W MOUNTING TRACKS.
  - REMOVE EXISTING FLOOR MOUNTED DOOR STOP. PATCH Voids W/ SELF LEVELING CEMENTITIOUS COMPOUND. PREP FOR NEW FLOOR FINISH AS PER MANUFACTURER'S RECOMMENDATIONS.
  - EXISTING SHEET VINYL FLOORING AND BASE TO BE REMOVED. CHIP/GRIND SMOOTH SLAB & PATCH Voids W/ SELF LEVELING CEMENTITIOUS COMPOUND. PREP FOR NEW FLOOR FINISH AS PER MANUFACTURER'S RECOMMENDATIONS & REPAIR ADJACENT AFFECTED AREAS TO MATCH EXISTING (APPROX. 57 M<sup>2</sup>). REFER TO FINISH PLAN.
  - REMOVE ALL WALL MOUNTED ACCESSORIES (MIRRORS, SOAP DISPENSERS, HAND SANITIZER, PAPER TOWEL DISPENSER). PATCH & PAINT ALL SURFACES TO REMAIN MATCH EXISTING.
  - REMOVE EXISTING PRIVACY METAL DIVIDER.
  - REMOVE EXISTING WALL HOOKS. PATCH & PAINT WALL TO REMAIN MATCH EXISTING ADJACENT SURFACE.
  - REMOVE PORTION OF CONCRETE MASONRY WALL. SIMILAR TO P12 CONSTRUCTION UP TO +12200 mm. A.F.F. COORDINATE HEIGHT OF REMOVALS WITH NEW STRUCTURAL LINTEL & HEIGHT OF NEW AIR SHOWER TO BE INSTALLED. PATCH & PAINT TO MATCH EXISTING. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - NOT USED.
  - REMOVE EXISTING WASHROOM PARTITIONS. PATCH & PAINT WALLS TO REMAIN TO MATCH EXISTING ADJACENT WALLS.
  - REMOVE EXISTING WALL MOUNTED FIRST AID KIT, FIRE EXTINGUISHER AND SIGNAGE AND RETURN TO DCC REPRESENTATIVE. PATCH & PAINT WALLS TO MATCH EXISTING ADJACENT WALLS.
  - REMOVE EXISTING WALL MOUNTED FIRE EXTINGUISHER, SIGNAGE AND EYE WASHING STATION AND RETURN TO DCC REPRESENTATIVE. PATCH & PAINT WALLS TO MATCH EXISTING ADJACENT WALLS.
  - EXISTING WALL MOUNTED MILLWORK, BULLETIN BOARD AND DISPENSER TO REMAIN. PATCH & PAINT WALLS TO MATCH EXISTING ADJACENT WALLS.
  - REMOVE EXISTING WOOD SHELVING C/W SUPPORTS. APPROX. 1220MM X 460MM X 1830MM. PATCH & PAINT WALLS TO MATCH EXISTING ADJACENT WALLS.
  - EXISTING FIRE DAMPERS AT MEZZANINE LEVEL TO BE REMOVED AS PER MECHANICAL DRAWINGS. CONTRACTOR TO INFILL WALL WITH APPROVED ULG SYSTEM TO MAINTAIN 1HR FIRE SEPARATION TO MATCH EXISTING. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION INCLUDING SIZE OF DAMPER/DUCT.
  - REMOVE WALL MOUNTED SOAP DISPENSER.
  - REMOVE WALL MOUNTED TOWEL ROD.
  - EXISTING WALL MOUNTED FAN TO BE REPLACED. SEAL ALL JOINTS AFTER INSTALLATION OF NEW FAN. FOR FAN REMOVAL AT EXTERIOR WALL, PATCH AND REPAIR EXTERIOR METAL SIDING AS NOTED IN SPECIFICATIONS. FOR INTERIOR PARTITION, INFILL OPENING WITH CONCRETE BLOCK WALL AND GROUT TO MAINTAIN FIRE SEPARATION. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - REMOVE SIGNAGE ON BOTH SIDES OF DOOR. MAKE GOOD TO RECEIVE NEW FINISH AS PER DOOR SCHEDULE.
  - REMOVE EXISTING CERAMIC TILE FLOORING C/W CURB. CHIP/GRIND SMOOTH SLAB & PATCH Voids W/ SELF LEVELING CEMENTITIOUS COMPOUND. APPROX. 5.5M<sup>2</sup>. PREP FOR NEW FLOOR FINISH AS PER MANUFACTURER'S RECOMMENDATIONS & REPAIR ADJACENT AFFECTED AREAS TO MATCH EXISTING. REFER TO FINISH SCHEDULE.
  - REMOVE PORTION OF EXISTING WALL C/W BASE SIMILAR TO E1 CONSTRUCTION WHERE APPLICABLE TO FIT NEW DOOR. MAINTAIN EXISTING FIRE RATING AS PER FIRE PLAN. PATCH & PAINT TO MATCH EXISTING ADJACENT WALL. REFER TO STRUCTURAL AND ELECTRICAL DRAWINGS AND DOOR SCHEDULE FOR ADDITIONAL INFORMATION.
  - EXISTING DUCTWORK C/W SUPPORTS/HANGERS TO BE REMOVED. PATCH AND PAINT WALL TO MATCH EXISTING. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - REMOVE EXISTING BULLETIN BOARD. PATCH AND PAINT WALL AS PER FINISH SCHEDULE.
  - REMOVE EXISTING ROLL-UP CANTEEN DOOR C/W FRAME, SILL AND MECHANICAL OPERATOR. APPROX. 1000MM X 2000MM.
  - REMOVE EXISTING RUBBER FLOORING C/W RUBBER BASE. CHIP/GRIND SMOOTH SLAB & PATCH Voids W/ SELF LEVELING CEMENTITIOUS COMPOUND. PREP FOR NEW FLOOR FINISH AS PER MANUFACTURER'S RECOMMENDATIONS & REPAIR ADJACENT AFFECTED AREAS TO MATCH EXISTING. REFER TO FINISH PLAN FOR ADDITIONAL INFORMATION.
  - SAW CUT EXISTING SLAB TO ALLOW INSTALLATION OF NEW PIPING. COORDINATE WITH MECHANICAL DRAWINGS AND WITH LOCATION OF EXISTING SANITARY LINE. REFER TO STRUCTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION. CONTRACTOR TO SCAN SLAB PRIOR TO SAW CUTTING. DIMENSIONS ARE APPROXIMATE.
  - EXISTING POWER EQUIPMENT TO BE REMOVED AND STORED WITH CARE FOR FUTURE RELOCATION. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - REMOVE EXISTING DOORS & FRAME. STORE WITH CARE AND REINSTALL IN NEW CONSTRUCTION. REFER TO DOOR SCHEDULE FOR ADDITIONAL INFORMATION.
  - APPROXIMATE LOCATION OF EXISTING SANITARY LINE. REFER TO MECHANICAL FOR ADDITIONAL INFORMATION.
  - EXISTING PAINT BOOTHS TO BE REMOVED, INCLUDING STEEL PLATED WALL AND SUPPORT STRUCTURE. REMOVE ALL MECHANICAL AND ELECTRICAL EQUIPMENT AS REQUIRED. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - REMOVE EXISTING TOILET PAPER DISPENSER AND GRAB BAR. PATCH AND PAINT WALL TO MATCH EXISTING.
  - REMOVE EXISTING URINALS C/W VALVES & STORE WITH CARE FOR FUTURE INSTALLATION. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - EXISTING FULL HEIGHT METAL LOCKERS TO BE REMOVED, STORED AND RELOCATED BY DCC REPRESENTATIVE. APPROX. 47 LOCKERS.
  - EXISTING DOUBLE STACKED METAL LOCKERS TO BE REMOVED, STORED AND RELOCATED APPROX. 21 LOCKERS.
  - REMOVE EXISTING PAVING FOR NEW CONCRETE PAD FOR NEW MECHANICAL UNIT. REFER TO MECHANICAL AND STRUCTURAL FOR DETAILS.
  - EXISTING HOSE REEL, PIPING & DUCTS TO BE REMOVED. PATCH AND PAINT WALL TO MATCH EXISTING. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - EXTENT OF TRENCHING REQUIRED FOR NEW PAINT BOOTH HVAC AND PLUMBING SYSTEM. REFER TO STRUCTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - EXISTING EYE WASH STATION TO BE RELOCATED. PATCH AND PAINT WALL TO MATCH EXISTING. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - LOCATION OF EXISTING TRENCH AND GRATE TO BE REMOVED AND INFILLED. REFER TO MECHANICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - REPAIR EXISTING WALLS TO MATCH ADJACENT SURFACES AFTER REMOVALS OF THOUGH WALL DUCTWORK AT ALL LOCATIONS. CONTRACTOR TO MAINTAIN EXISTING FIRE SEPARATION WITH APPROVED ULG SYSTEM. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - ELECTRICAL/FIRE ALARM PANEL BOXES TO REMAIN. REFER TO ELECTRICAL DRAWINGS FOR INFORMATION ON SCOPE RELATED TO PANEL.
  - CONTRACTOR TO REPAIR CONCRETE SLAB AT MEZZANINE AFTER REMOVALS OF MECHANICAL ITEMS. REFER TO SPECIFICATIONS AND MECHANICAL DOCUMENTS FOR ADDITIONAL INFORMATION.
  - REMOVE EXISTING MEZZANINE ACCESS LADDER / RAIL.
  - REMOVE PORTION OF CONCRETE MASONRY WALL C/W BASE WHERE APPLICABLE TO FIT NEW DOOR. MAINTAIN EXISTING FIRE RATING AS PER FIRE PLAN. PATCH AND PAINT EXISTING ADJACENT WALL. REFER TO STRUCTURAL AND ELECTRICAL DRAWINGS AND DOOR SCHEDULE FOR ADDITIONAL INFORMATION.
  - EXISTING STEEL LADDER TO BE RELOCATED TO NEW LOCATION. SEE NEW FLOOR PLAN FOR NEW LOCATION. REMOVE FASTENERS FOR RELOCATION.



1 FLOOR PLAN - DEMOLITION  
SCALE: 1:100



2 MEZZANINE PLAN - DEMOLITION  
SCALE: 1:100



2 MEZZANINE PLAN - DEMOLITION  
SCALE: 1:100



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www



A243 COLUNGT  
CONTAMINATION  
DEFICIENCIES  
2025-03-05

SCALE | ÉCHELLE

AS NOTED

LOCATION	EMPLACEMENT
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17 HANGAR STREET,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

## SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243

SUBJECT   SUJET
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PRODUCTION | REVIEWED | REVISED

WBS NO.   NO. OTP N.700113.18.05	PF NO.   NO. DP BN186586
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DWG. NO.   NO. DESSIN	L-B147-9618/12-302
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Canada



1. PROVIDE EXPANSION JOINTS EVERY 9M AND AT EVERY LOCATION A CONCRETE SIDEWALK ABUTS A RIGID SURFACE (IE. CONCRETE CURB, WALL, ASPHALT PAVING) THE BITUMINOUS EXPANSION JOINT TO BE THE WIDTH OF THE CONCRETE SIDEWALK AND HAVE A JOINT SEALANT AT THE SURFACE.
2. PROVIDE CONTROL JOINTS EVERY 1.5m. CONTROL JOINT TO BE A SAW CUT JOINT AT A DEPTH OF 12.5mm.
3. PROVIDE CONSTRUCTION JOINTS AS NECESSARY. CONSTRUCTION JOINT TO HAVE A BITUMINOUS FILLER AND SEALANT AT THE SURFACE. JOIN BOTH SLABS WITH A SMOOTH, CREASED ROD EXTENDING 75mm IN EACH SIDE.

NOT

- NOTE:**
1. ENSURE FINISHED GRADE IS 30mm BELOW SIDEWALK ELEVATION AS INDICATED.
  2. ALL DISTURBED GRADE IS TO BE RESTORED WITH TOPSOIL AND SOD.



1:20



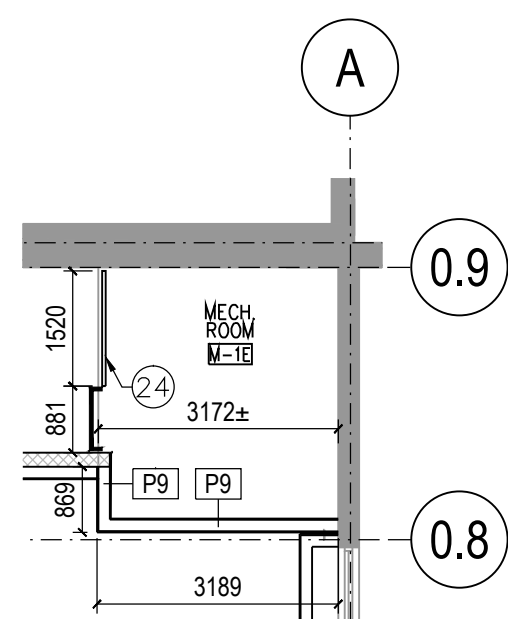
1:20

DETAIL B  
CONCRETE SIDEWALK TYP.

1:20

## FLOOR PLAN - NEW WORK

SCALE: 1:100



MEZZANINE PLAN - NEW WORK ROOM M-1E

SCALE: 1:100

MEZZANINE PLAN - NEW WORK ROOM 121

SCALE: 1:100

## TYP. SIDE WALK DETAILS

SCALE: 1:10





- GENERAL CEILING NOTES
- REFER TO ELECTRICAL DRAWINGS AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - CONTRACTOR TO REPLACE MISSING CEILING TILES AND DAMAGED TILES DURING DEMOLITION.
- CEILING NOTES
- EXISTING CEILING TILE TO BE TEMPORARILY REMOVED AND REINSTATED. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS (APPROX. 11 M<sup>2</sup>).
  - REMOVE EXISTING DRYWALL CEILING AND ITS SUPPORT SYSTEM ENTIRELY. REFER TO MECHANICAL & ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION (APPROX. 49 M<sup>2</sup>).
  - NO EXISTING CEILING IN THIS AREA. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR REMOVALS INFORMATION.
  - EXISTING SUSPENDED CEILING TO REMAIN.
  - EXISTING CEILING TILE AND SUSPENDED GRID TO BE REMOVED. (APPROX. 42 M<sup>2</sup>).

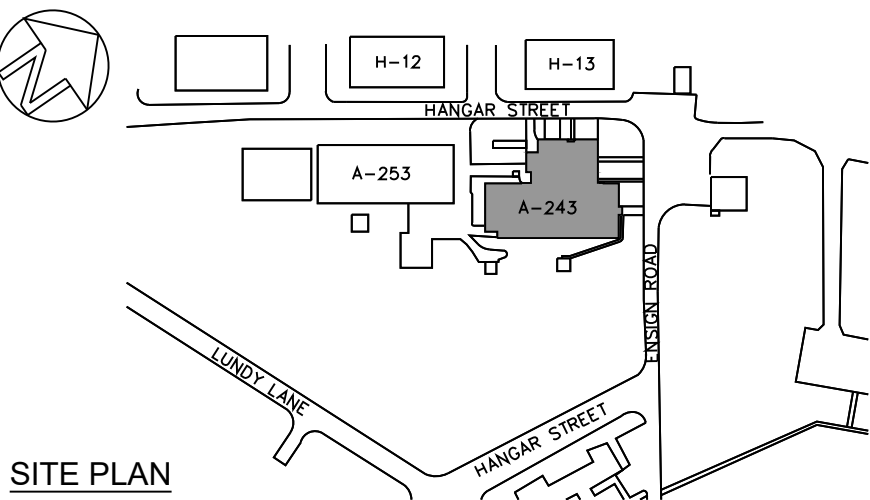
1 REFLECTED CEILING PLAN - DEMOLITION  
303 SCALE: 1:100

LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ  
UNCLASS | NON CLASSIFIÉ

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ARCHITECTURE | 49



A243 BUILDING  
CONTAMINATION  
DEFICIENCIES  
2025-02-05

1	2025/03/05	100% SUBMISSION - ISSUE FOR TENDER	AD
NO.	DATE	REVISION	APPR.
SCALE   ÉCHELLE 1:100			

LOCATION | EMPLACEMENT  
17 HANGAR STREET,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET  
SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
ARCHITECTURAL

DATE  
2017-05-29

SUBJECT | SUJET  
REFLECTED CEILING PLAN  
- DEMOLITION

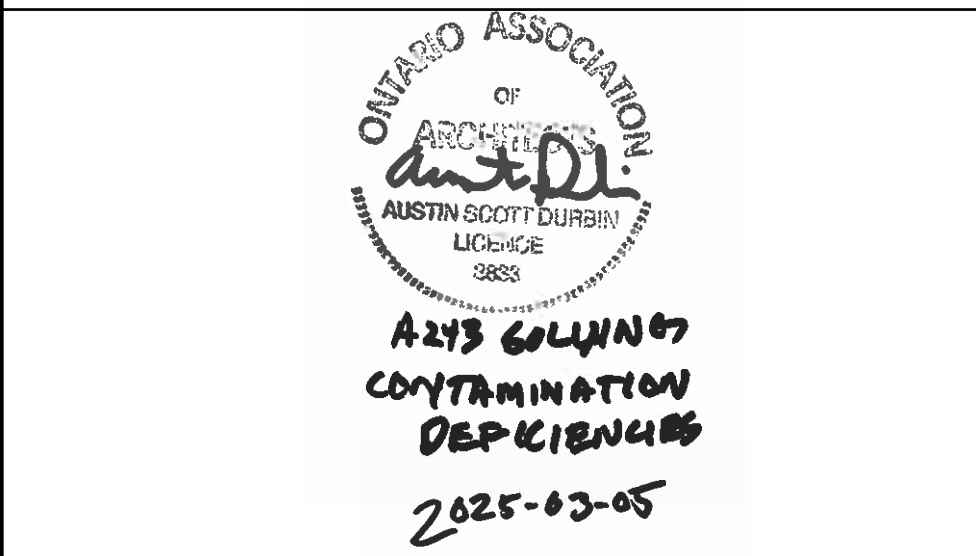
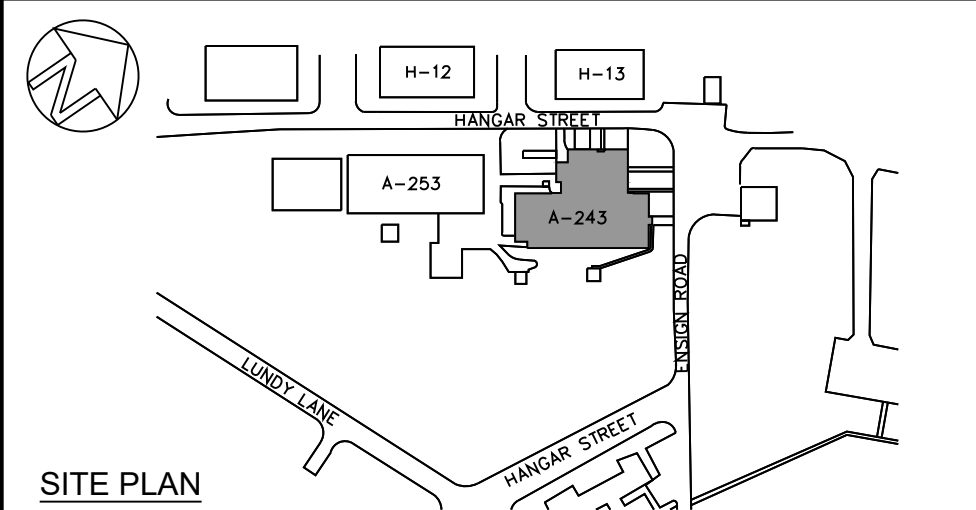
PRODUCTION	REVIEWED   REVU	
DESIGNED   ÉTUDIÉ	XX   XX	DES O   AGENT CONC
M.D.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
M.D.		J.C.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
D.C.		X.X.
COORDINATION		FIRE   INCENDIE
M.D.		X.X.

WBS NO. | NO. OTP  
N.700113.18.05

PF NO. | NO. DP  
BN186586

DWG. NO. | NO. DESSIN  
L-B147-9618/12-303





1	2025/03/05	100% SUBMISSION - ISSUE FOR TENDER	AD
NO.	DATE	REVISION	APPR.
SCALE   ÉCHELLE			
1:100			

LOCATION | EMPLACEMENT  
17 HANGAR STREET,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
ARCHITECTURAL

DATE  
2017-05-29

SUBJECT | SUJET

REFLECTED CEILING PLAN  
- NEW WORK & DETAILS

DESIGNED   ÉTUDIÉ	XX   XX	DES O   AGENT CONC
A.D.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
H.A. / I.B.		J.C.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
G.M.		X.X.
COORDINATION		FIRE   INCENDIE
A.D. / G.M.		X.X.

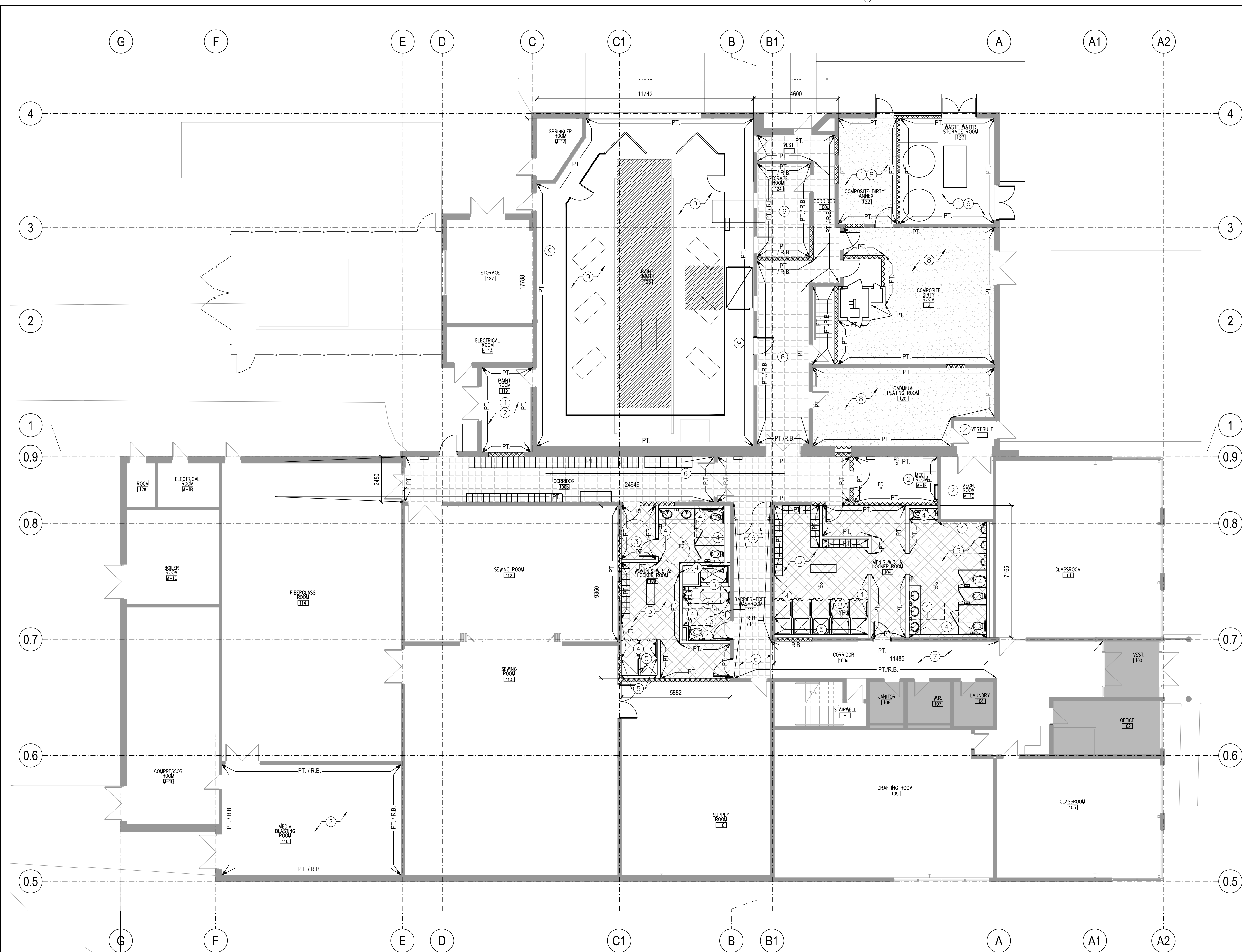
WBS NO. | NO. OTP  
N.700113.18.05

PF NO. | NO. DP  
BN186586

DWG. NO. | NO. DESSIN  
L-B147-9618/12-304







- FLOOR FINISH NOTES
- CHIP/GRIND SMOOTH SLAB & PATCH VOIDS W/ SELF LEVELING CEMENTITIOUS COMPOUND.
  - NO NEW FLOORING IN THIS AREA.
  - NEW 305 x 610 SLIP RESISTANT CERAMIC TILE FLOORING (CT-1), APPROX. 125 SQ.M.
  - NEW 305 x 610 CERAMIC WALL TILE (CT-2), APPROX. 190 SQ.M.
  - NEW 51 x 102 MOSAIC WALL TILE (CT-3), APPROX. 70 SQ.M.
  - NEW SHEET VINYL FLOORING AND COVE BASE, APPROX. 125 SQ.M OF FLOOR AREA.
  - EXISTING RUBBER FLOORING TO REMAIN.
  - NEW EPOXY FLOORING AND COVE BASE, APPROX. 325 SQ.M.
  - SEAL CONCRETE FLOOR, APPROX. 215 SQ. M.

NOTE:  
REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

FINISHES ABBREVIATIONS

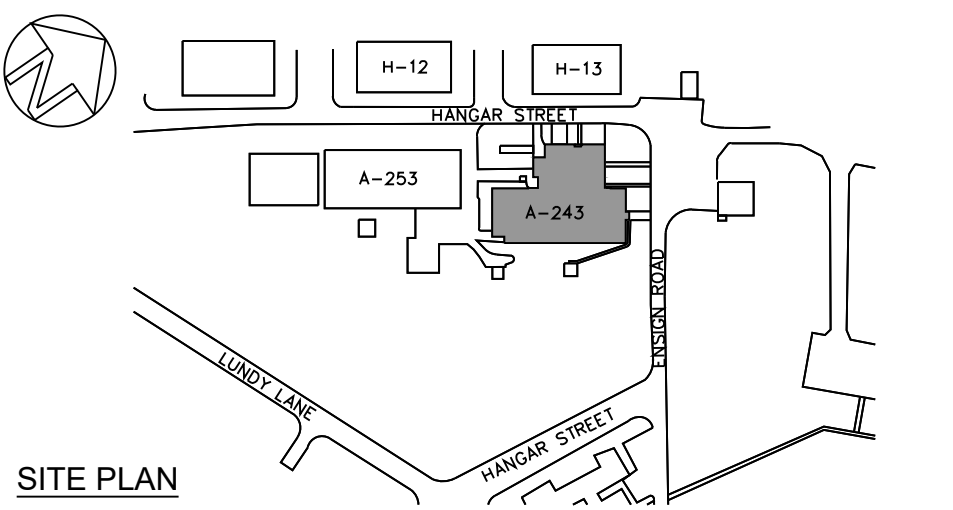
- C.T. = CERAMIC TILE WALL FINISH  
EPX = EPOXY  
P.T. = PAINT  
R.B. = RUBBER BASE  
SHV. = SHEET VINYL  
(E) = EXISTING TO REMAIN  
CONC. = CONCRETE

LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ  
UNCLASS | NON CLASSIFIÉ

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ARCHITECTURE | 49



A243 COLUING  
CONTAMINATION  
DEFICIENCIES  
2025-02-05

1	2025/03/05	100% SUBMISSION - ISSUE FOR TENDER	AD
NO.	DATE	REVISION	APPR.
SCALE   ÉCHELLE			
1:100			

LOCATION | EMPLACEMENT  
17 HANGAR STREET,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET  
SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
ARCHITECTURAL

DATE  
2017-05-29

SUBJECT | SUJET  
FINISHES FLOOR PLAN

PRODUCTION	REVIEWED   REVU	DES O   AGENT CONC
DESIGNED   ÉTUDIÉ	XX   XX	X.X.
A.D.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
A.K.		J.C.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
G.M.		X.X.
COORDINATION		FIRE   INCENDIE
A.D. / G.M.		X.X.

WBS NO. | NO. OTP  
N.700113.18.05

PF NO. | NO. DP  
BN186586

DWG. NO. | NO. DESSIN  
L-B147-9618/12-305





1  
306  
ROOF PLAN - DEMOLITION  
SCALE: 1:100

GENERAL NOTES:

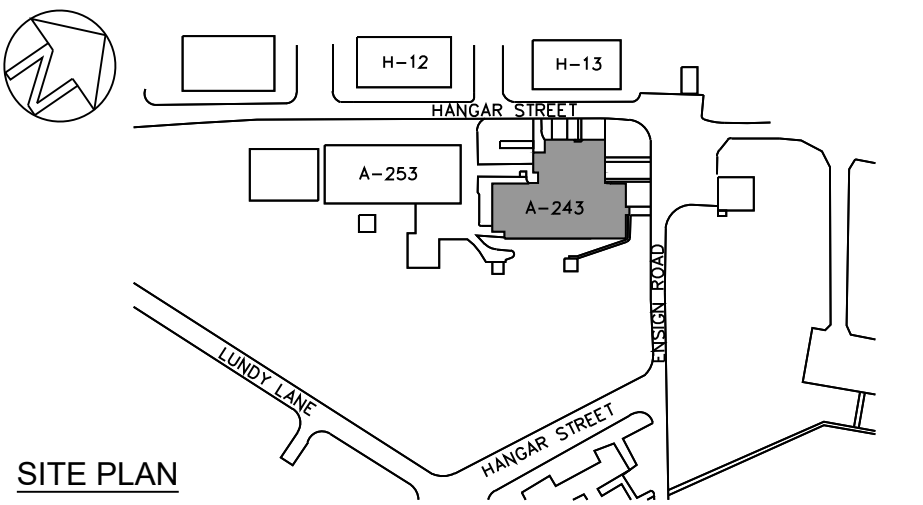
1. CONTRACTOR TO COORDINATE LOCATION OF ALL NEW ROOF OPENINGS TO CLEAR ALL EXISTING STRUCTURAL, MECHANICAL AND ELECTRICAL SYSTEMS.

ROOFING NOTES:

1. EXISTING MAKE-UP AIR UNIT. REFER TO MECHANICAL.
2. EXISTING EXHAUST FAN. REFER TO MECHANICAL.
3. REMOVE EXISTING EXHAUST FAN AND ASSOCIATED EQUIPMENT (SHOWN HATCHED). REFER TO MECHANICAL & ELECTRICAL.
4. APPROXIMATE REMOVAL OF METAL ROOFING SYSTEM INCLUDING INSULATION BACK TO CEILING METAL LINER PANEL TO PROVIDE OPENINGS FOR NEW MECHANICAL UNITS DUCTWORK AND INSTALLATION OF PRE-MANUFACTURED CURBS. SHOWN HATCHED. REFER TO MECHANICAL.
5. EXISTING ROOF ACCESS HATCH.
6. EXISTING HORIZONTAL ROOF TENSION WIRES CABLES BELOW.
7. REMOVE EXISTING METAL WALKWAY FASTENED THROUGH METAL ROOFING SYSTEM. APPROX 40 M. PATCH AND SEAL ALL PENETRATIONS. REFER TO SPEC.
8. REMOVE METAL ROOFING SYSTEM INCLUDING INSULATION BACK TO CEILING METAL LINER PANEL TO PROVIDE OPENINGS FOR NEW VENT STACK. REFER TO MECHANICAL FOR DETAILS.
9. APPROXIMATE LOCATION OF EXISTING STRUCTURE BELOW (TYP).
10. EXISTING MECHANICAL UNIT STRUCTURAL SUPPORT FRAMING TO REMAIN. REMOVE ALL DEBRIS, CAULKING & GASKETS FROM THE SUPPORT FRAME.
11. EXISTING MECHANICAL UNIT TO BE REMOVED. REFER TO MECHANICAL.
12. REPAIR OPENING AT ROOFING SYSTEM AFTER MECHANICAL DUCT REMOVALS. REFER TO DETAIL 3307.

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A243 COLUING  
CONTAMINATION  
DEFICIENCIES  
2025-03-05

1	2025/03/05	100% SUBMISSION - ISSUE FOR TENDER	AD
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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE  
1:100

LOCATION | EMPLACEMENT  
17 HANGAR STREET,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
ARCHITECTURAL

DATE  
2017-05-29

SUBJECT | SUJET

ROOF PLAN - DEMOLITION

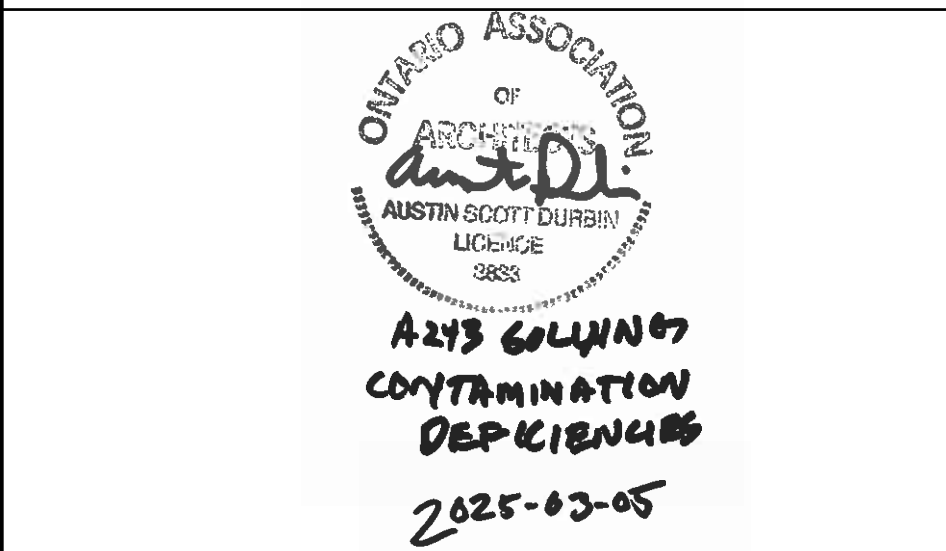
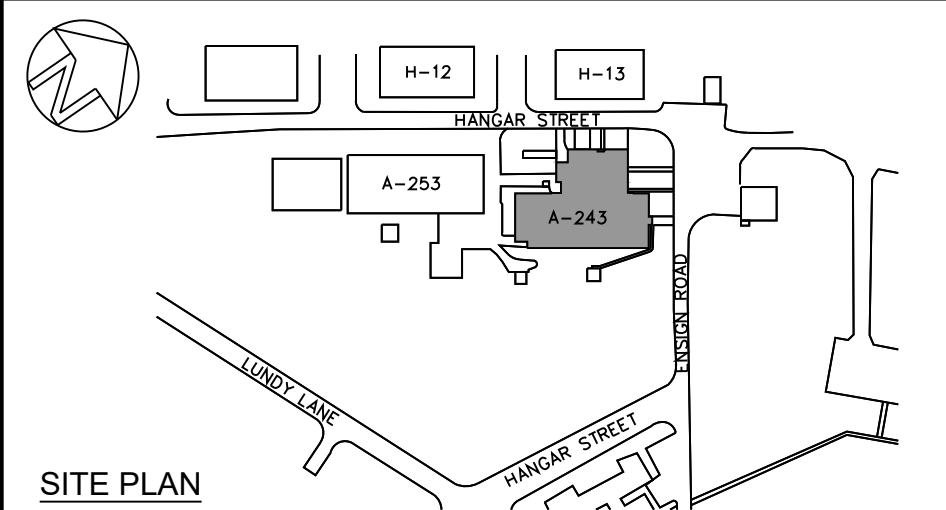
PRODUCTION	REVIEWED   REVU	
DESIGNED   ÉTUDIÉ	XX   XX	DES O   AGENT CONC
A.D.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
H.A. / I.B.		J.C.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
G.M.		X.X.
COORDINATION		FIRE   INCENDIE
A.D. / G.M.		X.X.

WBS NO. | NO. OTP  
N.700113.18.05

PF NO. | NO. DP  
BN186586

DWG. NO. | NO. DESSIN  
L-B147-9618-306





1	2025/03/05	100% SUBMISSION - ISSUE FOR TENDER	AD
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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE

1:100

LOCATION | EMPLACEMENT

17 HANGAR STREET,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER	DATE
ARCHITECTURAL	2017-05-29

SUBJECT | SUJET

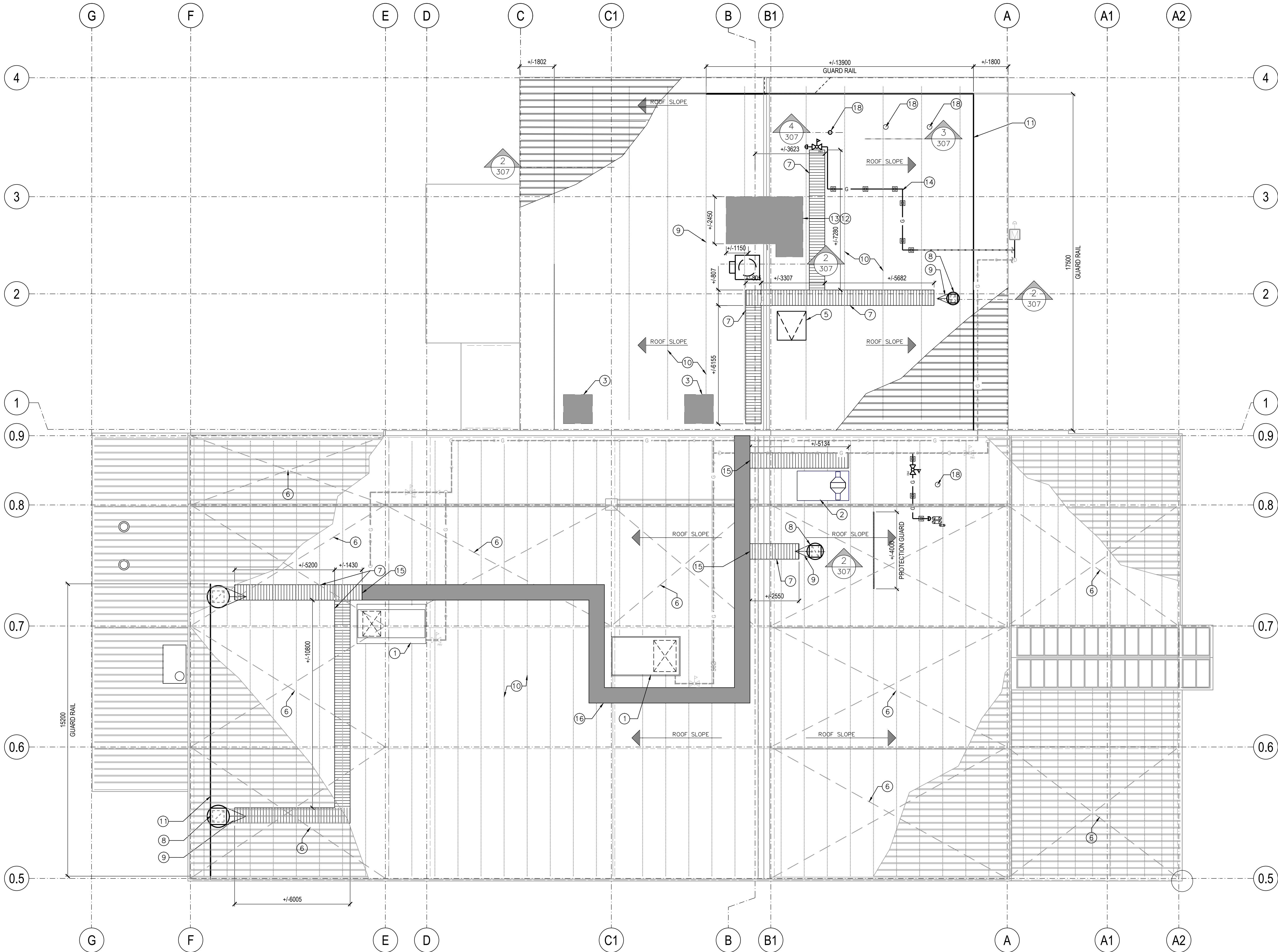
ROOF PLAN - NEW WORK  
& DETAILS

PRODUCTION	DESIGNED   ÉTUDIÉ	REVIEWED   REVU	DES O   AGENT CONC
A.D.	XX   XX	X.X.	X.X.
DRAWN   DESSINÉ			PROJ MGR   GEST PROJ
H.A. / I.B.			J.C.
CHECKED   VÉRIFIÉ			DES MGR   GEST CONC
G.M.			X.X.
COORDINATION			FIRE   INCENDIE
A.D. / G.M.			X.X.

WBS NO.   NO. OTP	PF NO.   NO. DP
B.700113.18.05	BN186586

DWG. NO. | NO. DESSIN

L-B147-9618-307

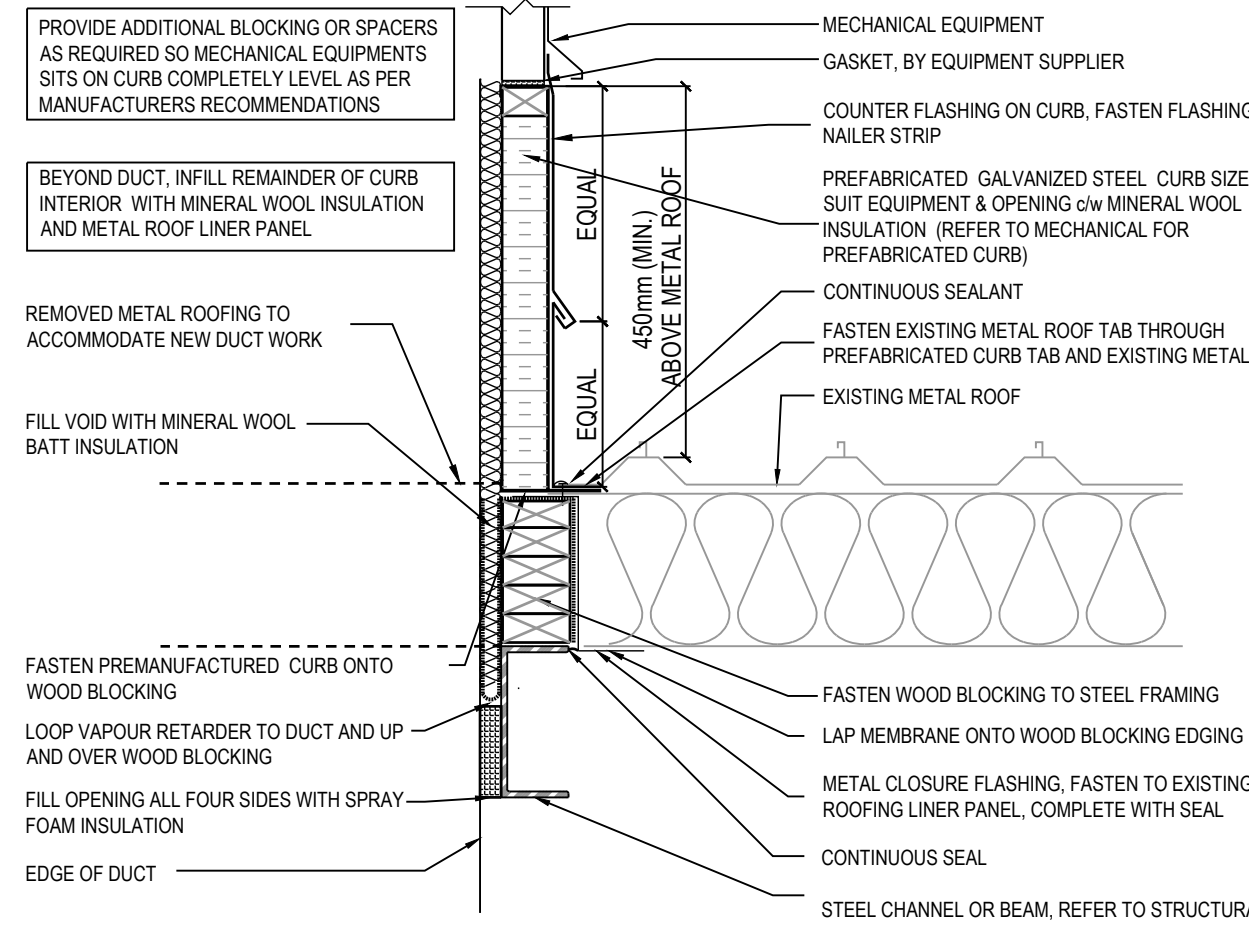


- GENERAL NOTES:
- CONTRACTOR TO COORDINATE LOCATION OF ALL NEW ROOF OPENINGS TO CLEAR ALL EXISTING STRUCTURAL, MECHANICAL AND ELECTRICAL SYSTEMS.
  - REFER TO DETAIL 4/307 FOR TYPICAL FLASHING DETAIL AT PIPE VENT. REFER TO MECHANICAL DOCUMENTS FOR SCOPE OF WORK.

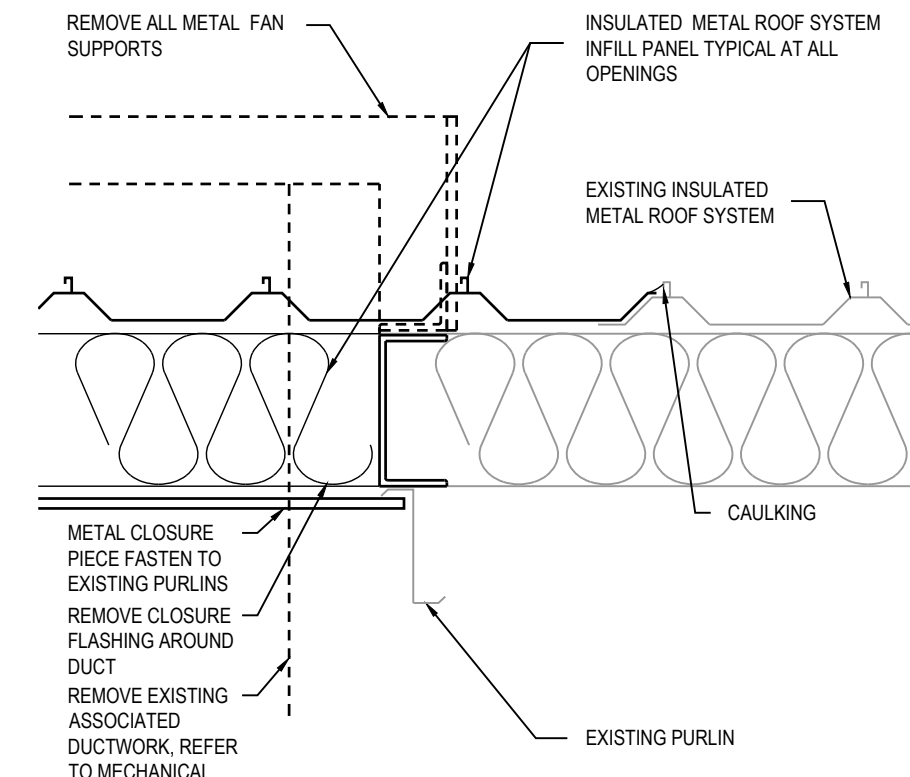
- ROOFING NOTES
- EXISTING MAKE-UP AIR UNIT, REFER TO MECHANICAL.
  - EXISTING EXHAUST FAN, REFER TO MECHANICAL.
  - PROVIDE NEW INSULATED METAL ROOF FILLER PANEL AT EXISTING ROOF OPENING AND METAL LINER PANEL AT CEILING LEVEL. AFTER REMOVAL OF EXHAUST FAN DUCT, FASTEN METAL ROOF LINER PANEL AND OVERLAP ONTO EXISTING LINER BY 300mm. PROVIDE CONTINUOUS SEALANT ALL AROUND PANEL. REFER TO DETAIL 3/307.
  - HATCH REPRESENTS ENTIRE METAL ROOF PANEL TO BE REPLACED WITH NEW METAL ROOFING PANEL TO MATCH ADJACENT & INFILL IN BETWEEN PANELS WITH MINERAL WOOL ROOFING INSULATION UP AGAINST CEILING METAL LINER PANEL.
  - EXISTING ROOF ACCESS HATCH.
  - EXISTING HORIZONTAL ROOF WIRE CABLES BELOW.
  - NEW 800mm WIDE SERVICE WALKWAY SYSTEM, CLAMPED TO EXISTING METAL STANDING SEAM ROOF. REFER TO SPECIFICATIONS.
  - NEW PREFABRICATED CURB TO SUPPORT MAKE UP AIR UNIT OR EXHAUST FAN. METAL CRICKET AT ALL NEW EQUIPMENT PENETRATIONS. SEAL ALL JOINTS.
  - APPROXIMATE LOCATION OF EXISTING STRUCTURE BELOW (TYP.)
  - INFILL REMAINDER OF INSIDE OF CURB WITH MINERAL WOOL INSULATION AND METAL ROOFING PANEL.
  - 1070mm HIGH PRE-MANUFACTURED GUARD RAIL SYSTEM, CLAMPED TO EXISTING METAL STANDING SEAM ROOF. REFER TO SPECIFICATIONS.
  - EXISTING STRUCTURAL SUPPORT FRAMING FOR THE REMOVED MECHANICAL UNIT IS TO REMAIN. REMOVE ANY DEBRIS/CAULKING/GASKETS FROM THE SUPPORT FRAME.
  - REPAIR OPENING AT REMOVED DUCT PENETRATION THROUGH ROOF. REFER TO DETAIL 3/307 SIMILAR.
  - NEW GAS LINE AND PIPE SUPPORTS. CONTRACTOR TO COORDINATE (LOCATION, TYPE AND LAYOUT) ALL ROOF TOP PIPING SUPPORTS WITH ALL EXISTING AND NEW ROOFTOP ELEMENTS. REFER TO MECHANICAL DRAWINGS AND SPECS FOR FURTHER DETAILS/INFORMATION.
  - PROVIDE SMOOTH & LEVELED TRANSITION AT NEW / EXISTING WALKWAY CONNECTION.
  - EXISTING WALKWAY TO REMAIN.
  - NOT IN USE.
  - VENT PIPE THROUGH METAL ROOF.

- ROOF LEGEND
- EXISTING EQUIPMENT/CURBS/WALKWAYS/OPENINGS. REFER TO NOTES FOR SCOPE AND IDENTIFICATION.
  - ROOF PANELS
  - STRUCTURAL JOIST BELOW

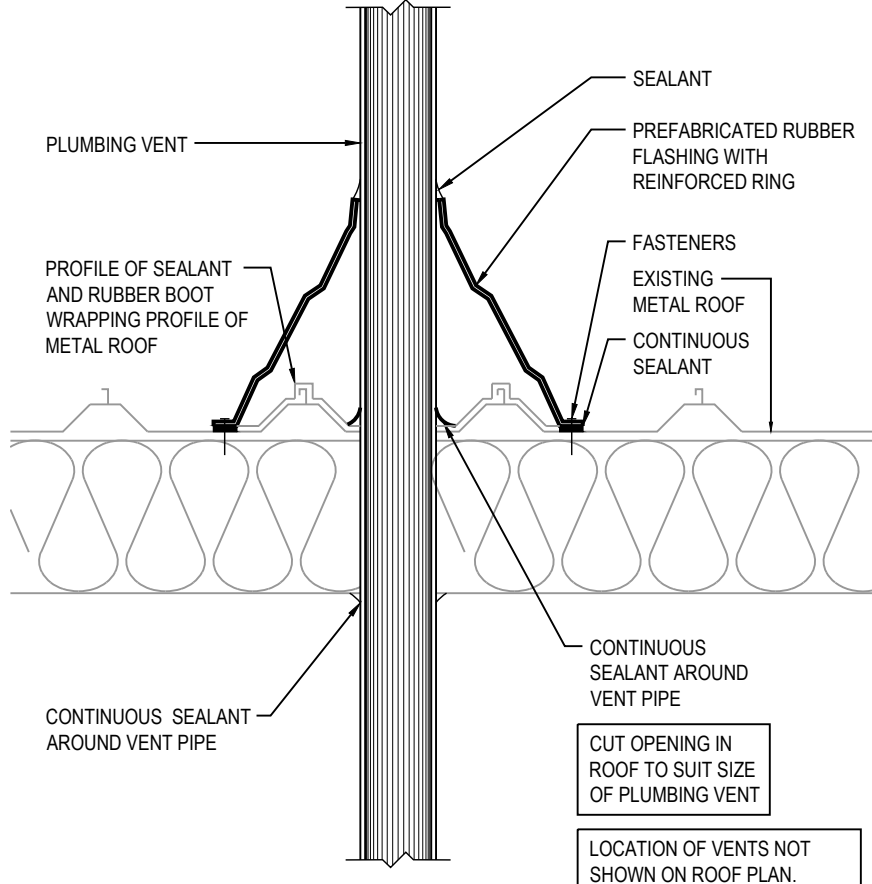
1 ROOF PLAN - NEW WORK  
307 SCALE: 1:100



2 CURB DETAIL THROUGH METAL ROOF  
307 SCALE: 1:10



3 CLOSURE PLATE  
307 SCALE: 1:10

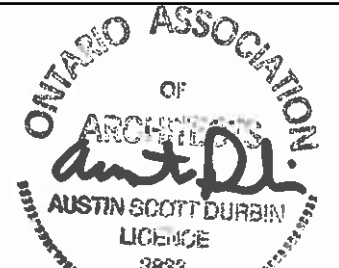
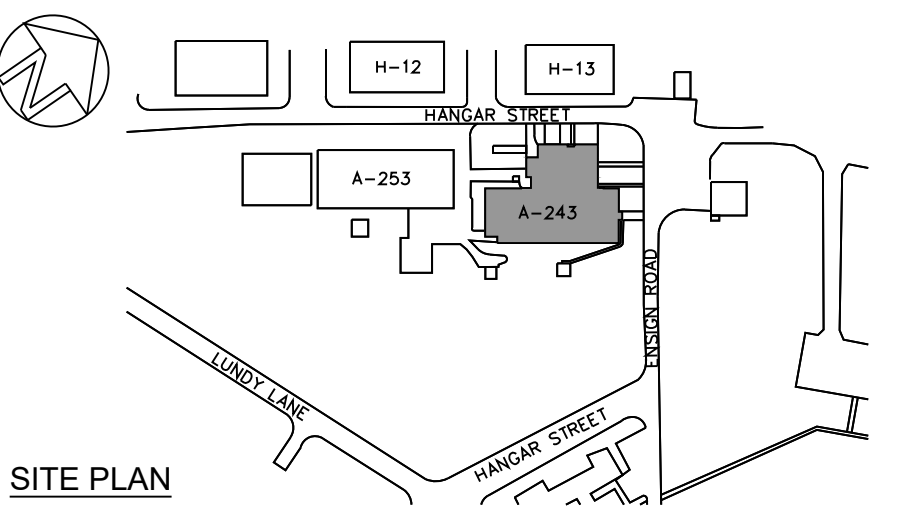


4 VENT PIPE THROUGH METAL ROOF  
307 SCALE: 1:10



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A243 COLIVING  
CONTAMINATION  
DEFICIENCIES  
2025-02-05

1	2025/03/05	100% SUBMISSION - ISSUE FOR TENDER	AD
NO.	DATE	REVISION	APPR.

SCALE | ÉCHELLE  
AS NOTED

LOCATION | EMPLACEMENT  
17 HANGAR STREET,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET  
SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
ARCHITECTURAL

DATE  
2017-05-29

SUBJECT | SUJET  
BUILDING SECTIONS &  
DETAILS

DESIGNED   ÉTUDIÉ	XX   XX	DES O   AGENT CONC
A.D.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
H.A. / I.B.		J.C.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
G.M.		X.X.
COORDINATION		FIRE   INCENDIE
A.D. / G.M.		X.X.

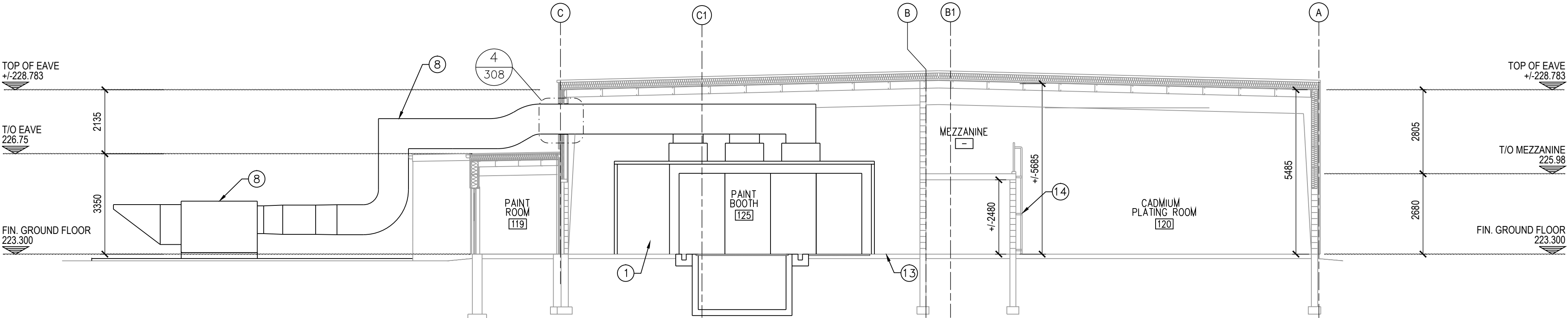
WBS NO. | NO. OTP  
N.700113.18.05

PF NO. | NO. DP  
BN186586

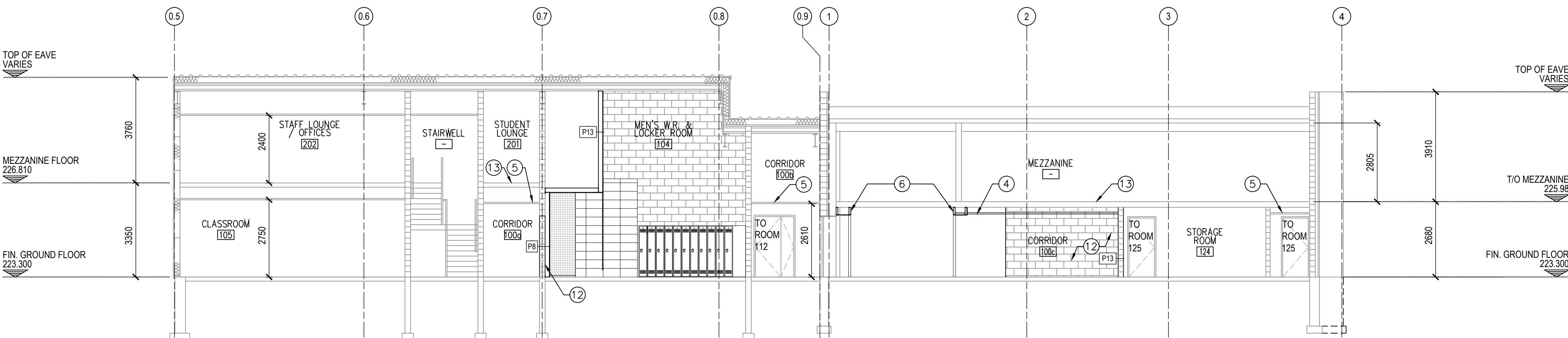
DWG. NO. | NO. DESSIN  
L-B147-9618/12-308

BUILDING SECTIONS NOTES

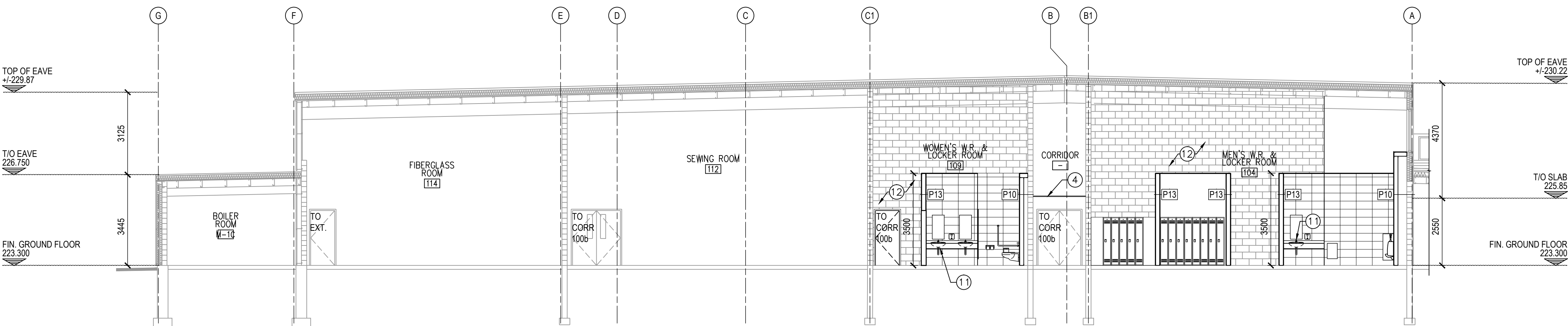
1. NEW PAINT BOOTH. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. NEW AIR SHOWER TYPE "A". REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. NEW AIR SHOWER TYPE "B". REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. NEW ACOUSTIC TILE CEILING. REFER TO REFLECTED CEILING PLAN.
5. EXISTING ACOUSTIC TILE CEILING TO REMAIN.
6. NEW GYPSUM BOARD BULKHEAD. CONTRACTOR TO COORDINATE WITH WITH INSTALLATION OF NEW AIR SHOWER.
7. EXISTING OVERHEAD DOOR.
8. NEW MECHANICAL EQUIPMENT/DUCTWORK. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. NEW GYPSUM BOARD CEILING. REFER TO REFLECTED CEILING PLAN AND SPECIFICATIONS.
10. NEW METAL RAILING AND GATE WITH WIRE MESH AT MECHANICAL MEZZANINE. REFER TO SPECIFICATIONS.
11. NEW SINKS IN SOLID SURFACE COUNTERS. REFER TO INTERIOR ELEVATIONS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
12. EXISTING NEW FIRE RATED WALL. REFER TO FLOOR PLANS FOR EXTENT OF INFILL.
13. EXISTING CONCRETE SLAB.
14. EXISTING METAL RAIL AND ACCESS LADDER.



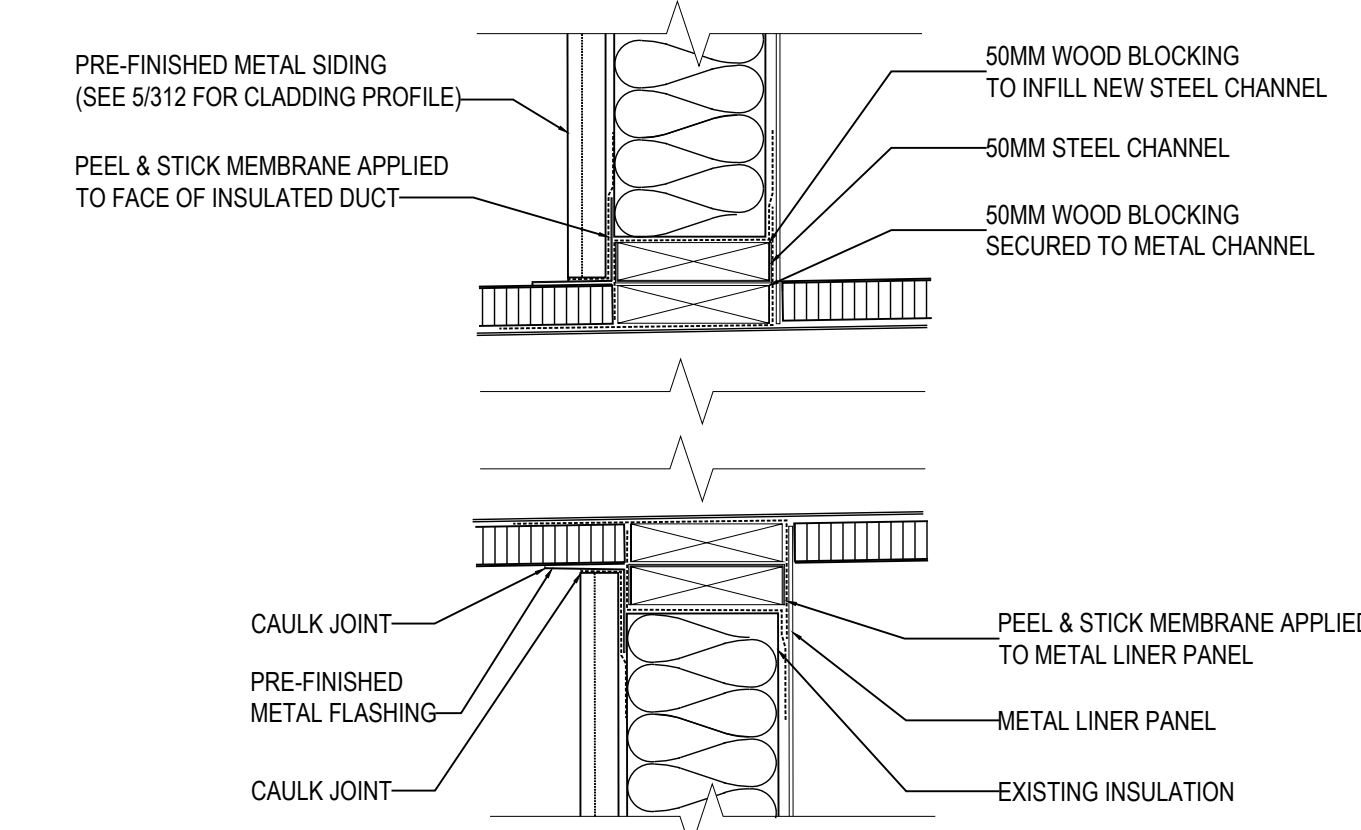
1  
308  
BUILDING SECTION  
SCALE: 1:100



2  
308  
BUILDING SECTION  
SCALE: 1:100

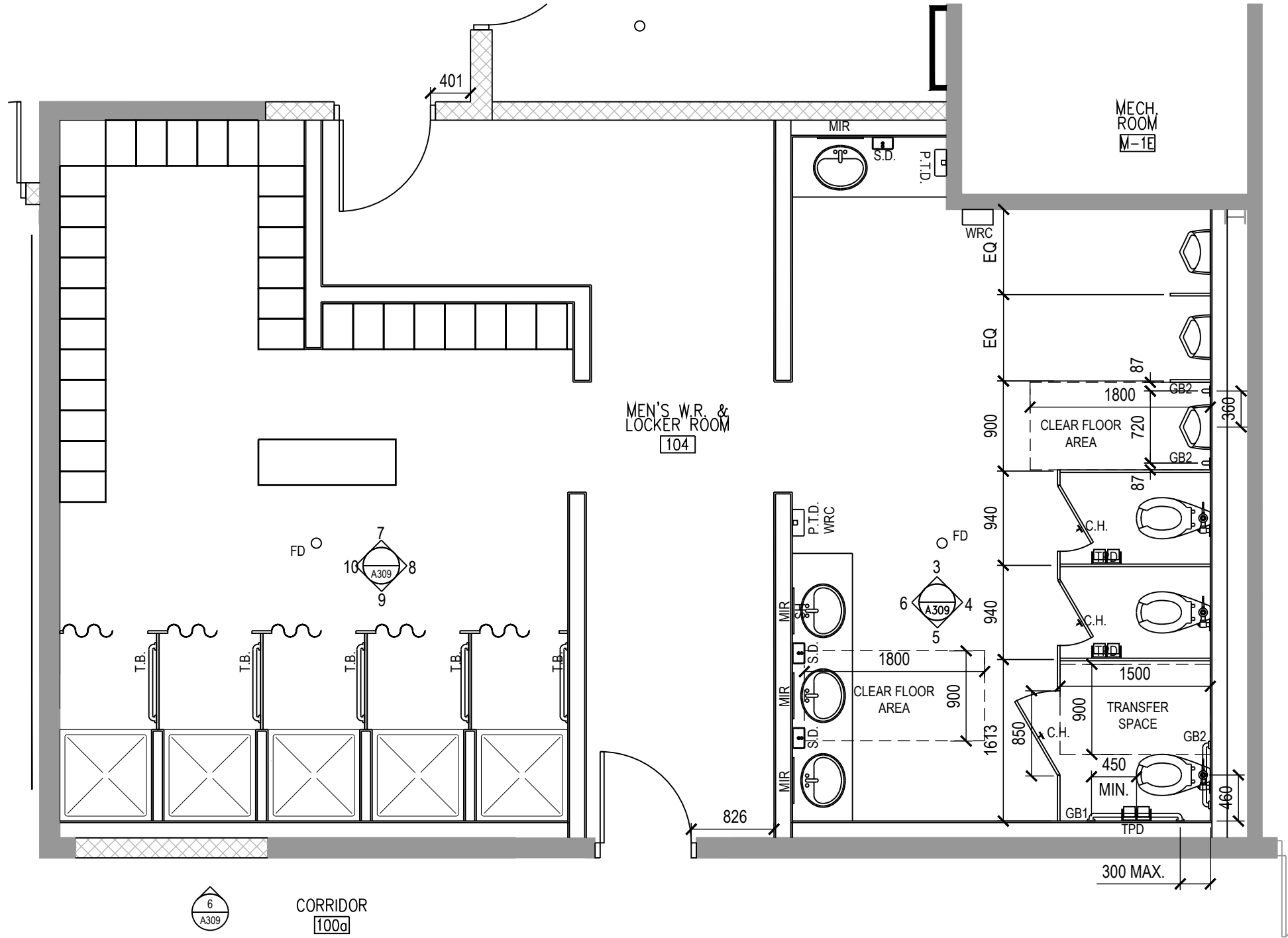


3  
308  
BUILDING SECTION  
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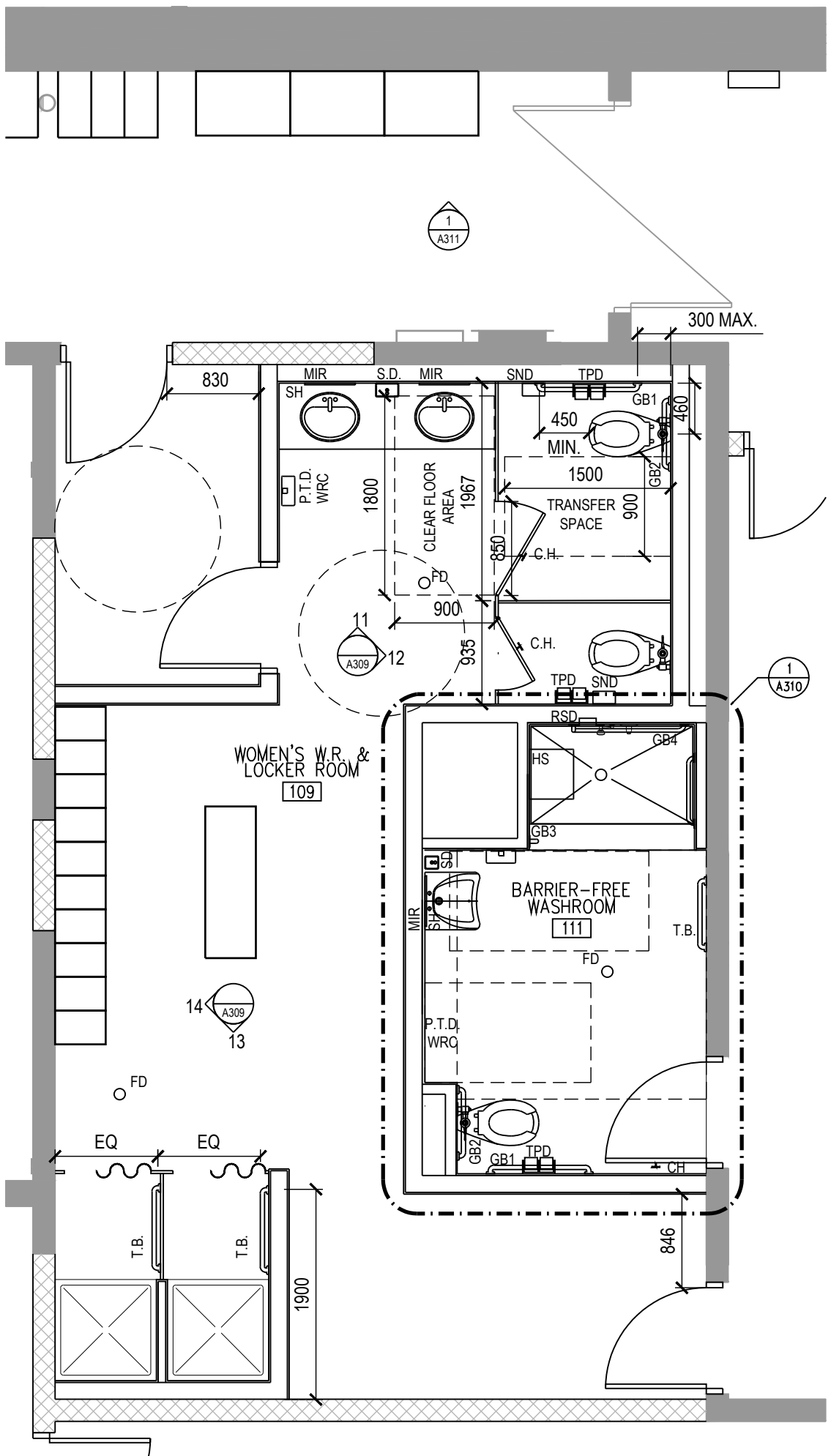


4  
308  
DETAIL FOR DUCT PENETRATION  
SCALE: 1:10

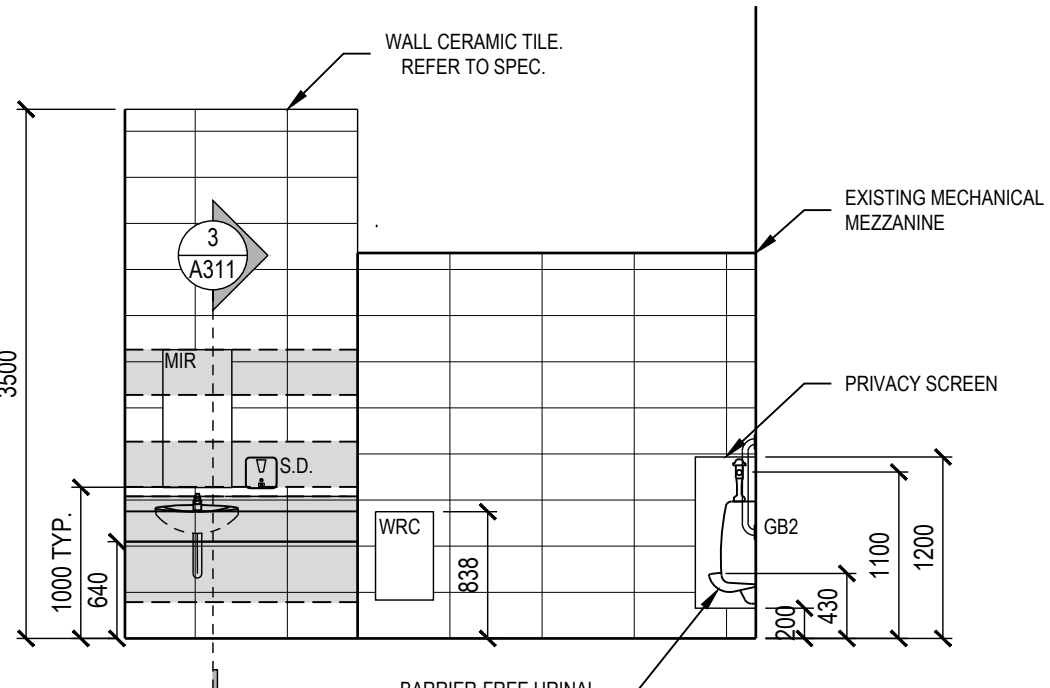




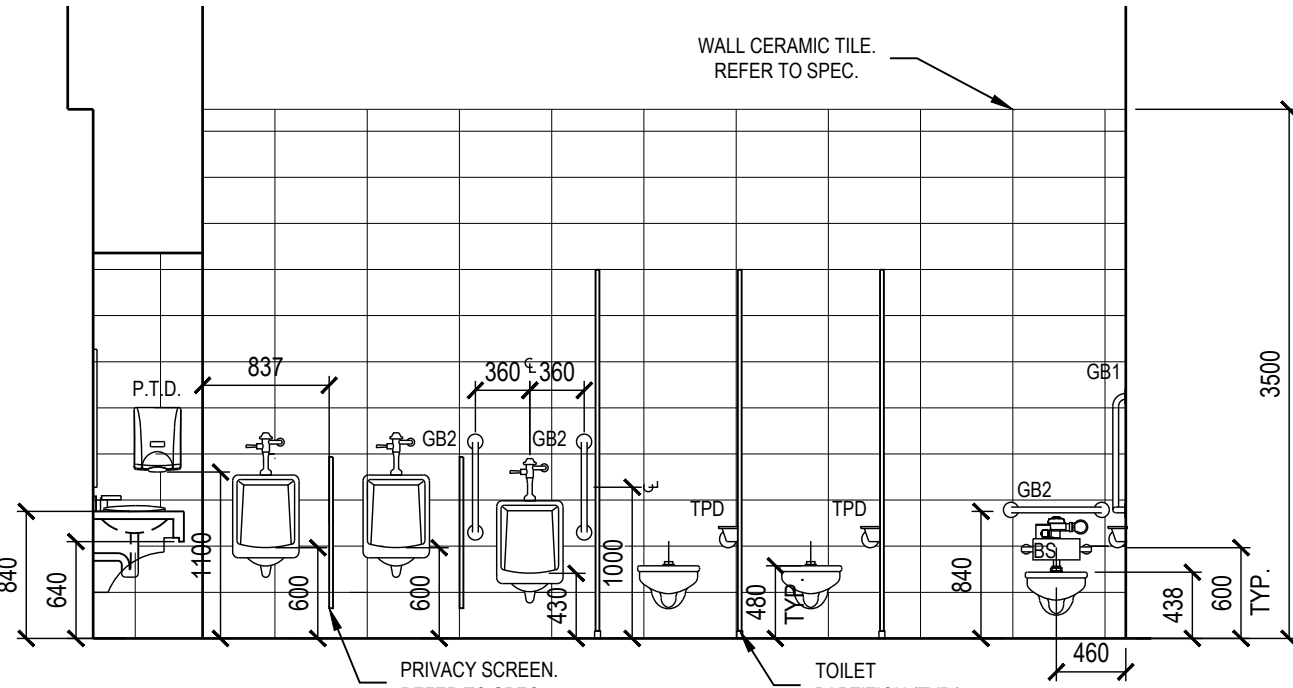
1 ENLARGED PLAN @ MEN'S W.R. & LOCKER ROOM  
309 SCALE: 1:50



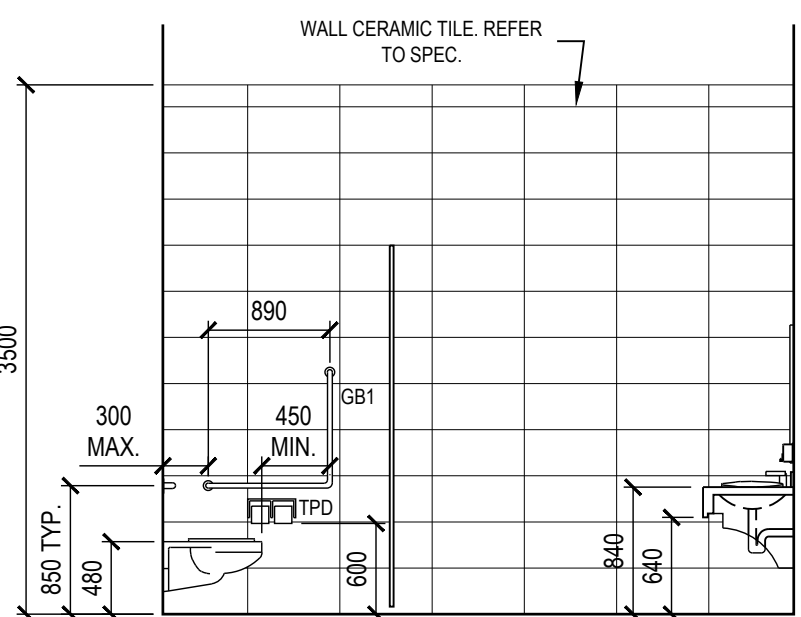
2 ENLARGED PLAN @ WOMEN'S W.R. AND LOCKER ROOM  
309 SCALE: 1:50



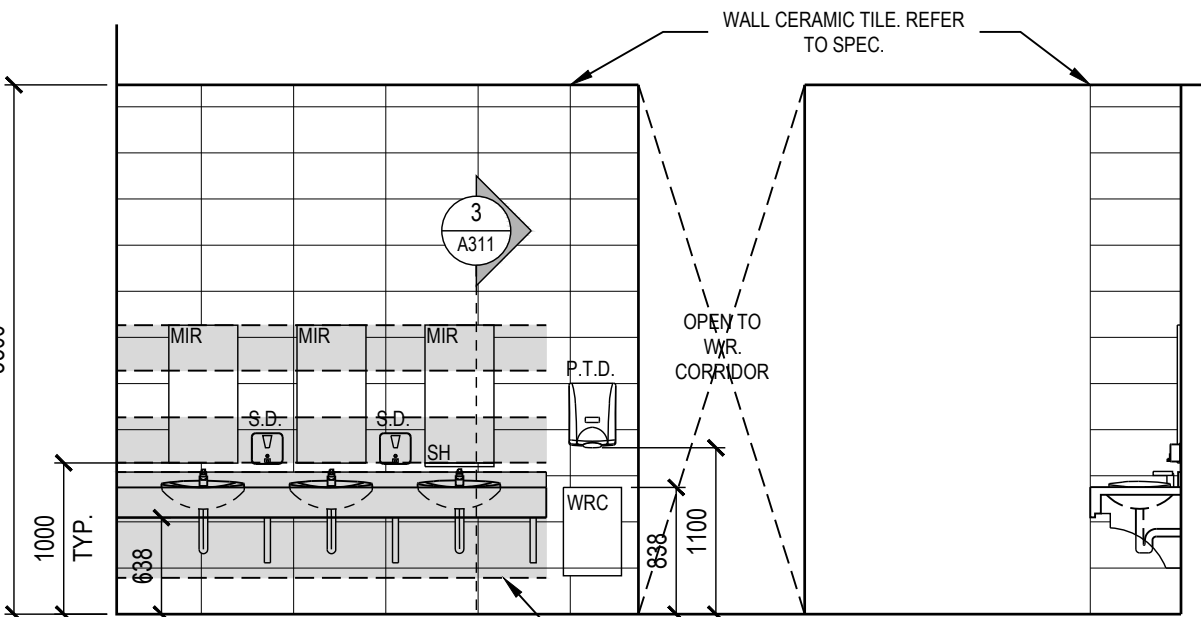
3 INTERIOR ELEVATION  
309 SCALE: 1:50



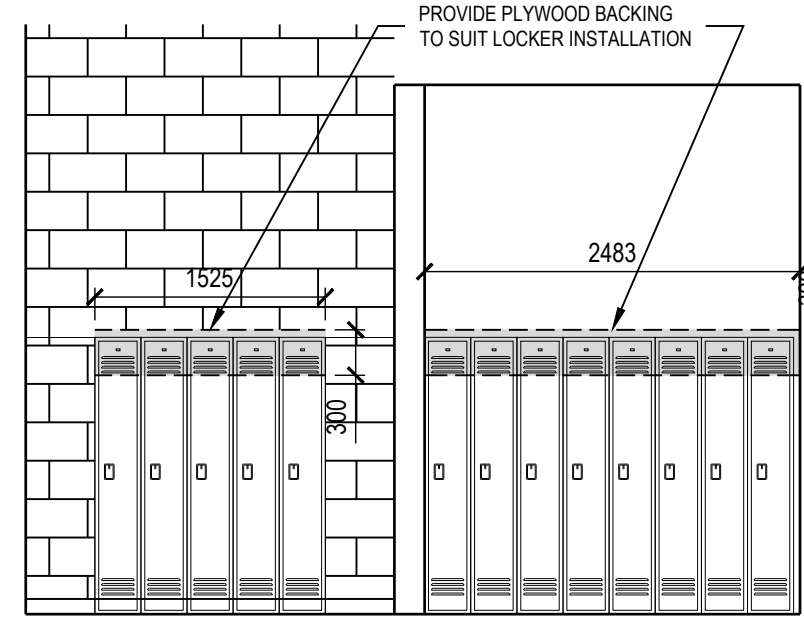
4 INTERIOR ELEVATION  
309 SCALE: 1:50



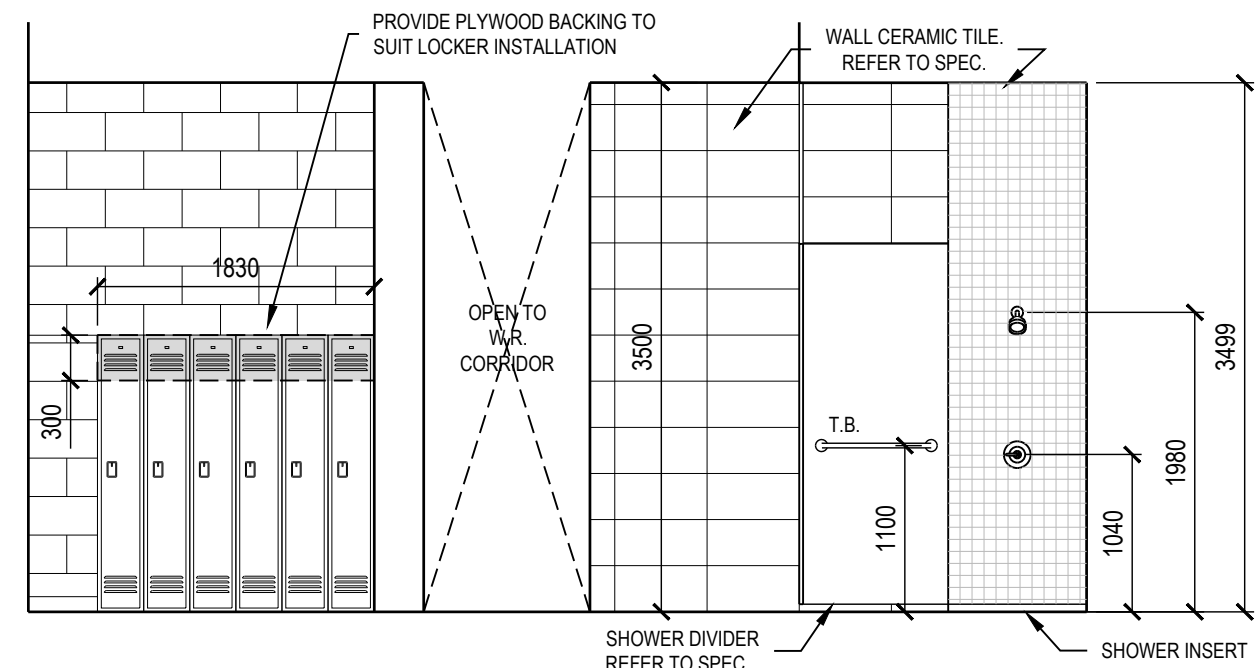
5 INTERIOR ELEVATION  
309 SCALE: 1:50



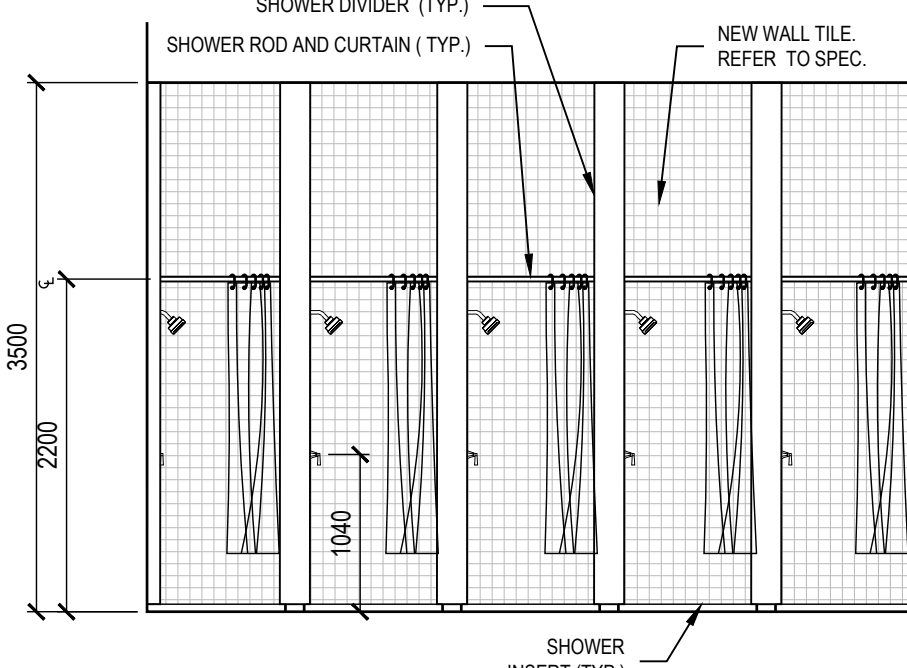
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309 SCALE: 1:50



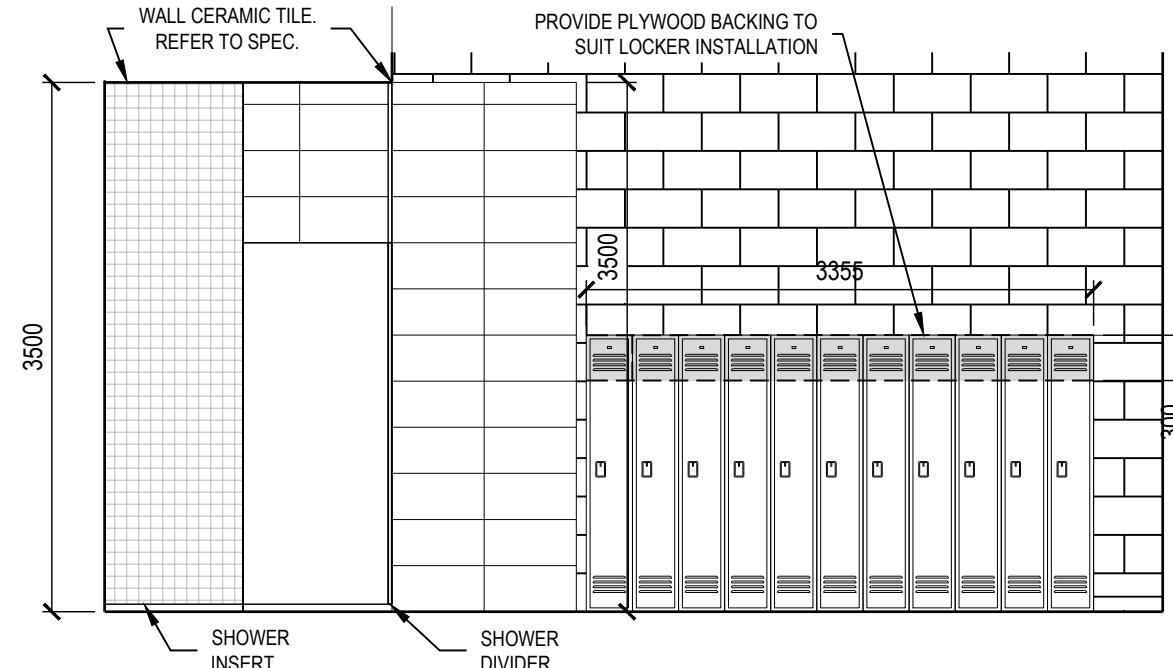
7 INTERIOR ELEVATION  
309 SCALE: 1:50



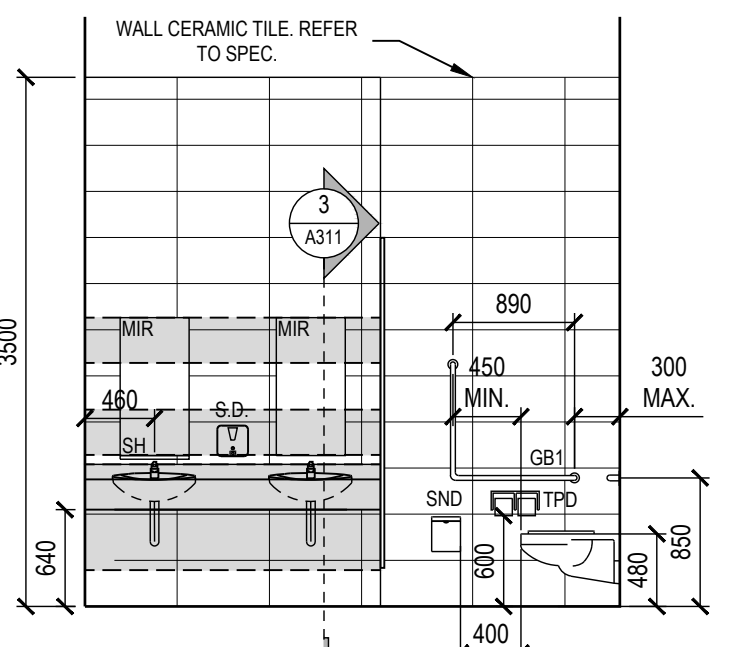
8 INTERIOR ELEVATION  
309 SCALE: 1:50



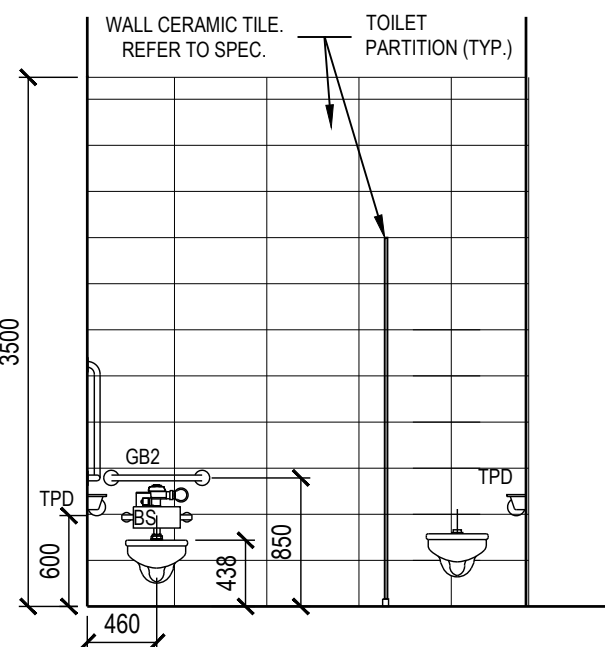
9 INTERIOR ELEVATION  
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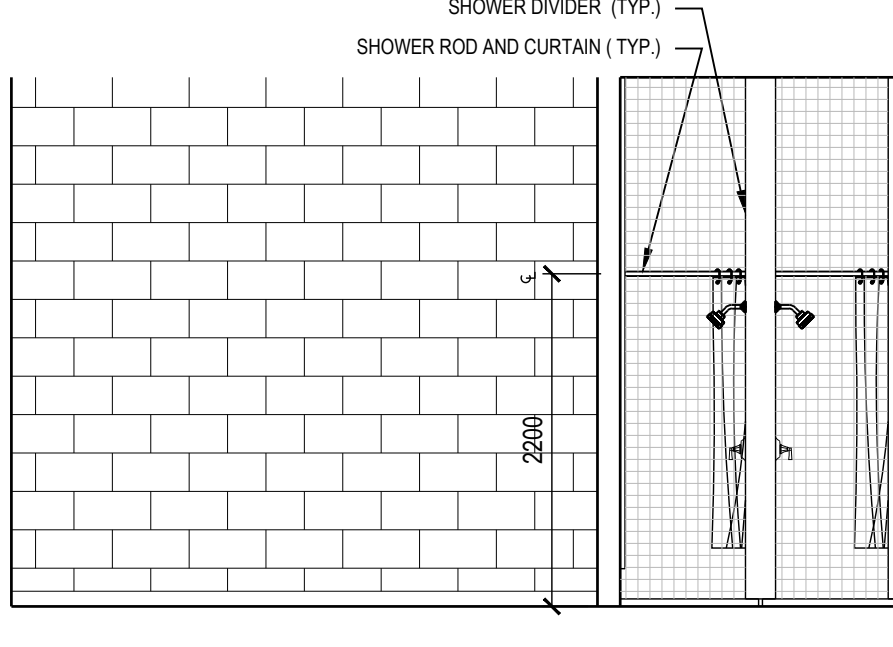
10 INTERIOR ELEVATION  
309 SCALE: 1:50



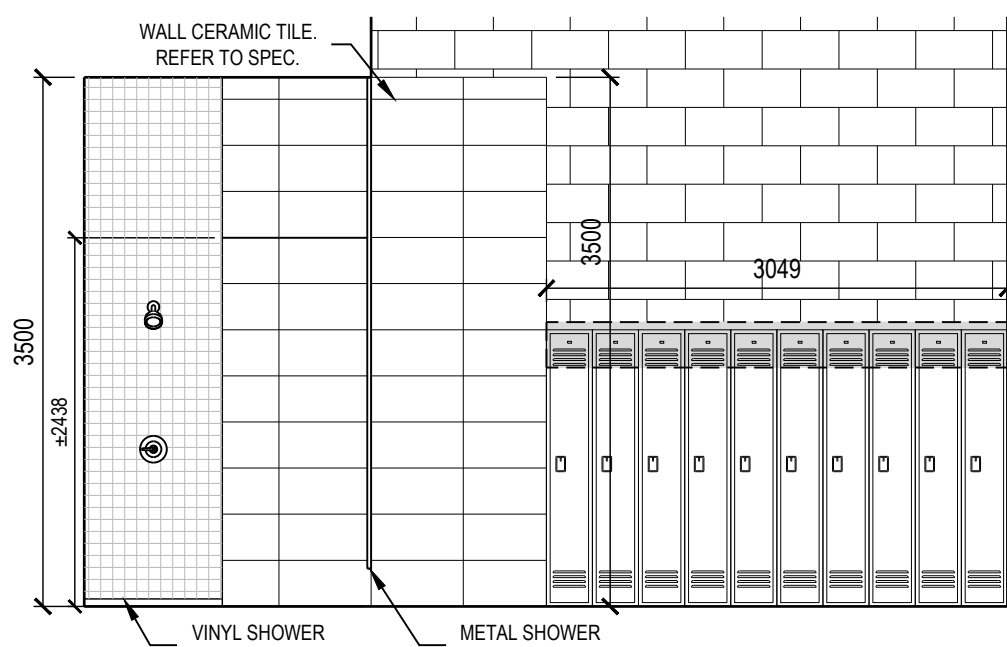
11 INTERIOR ELEVATION  
309 SCALE: 1:50



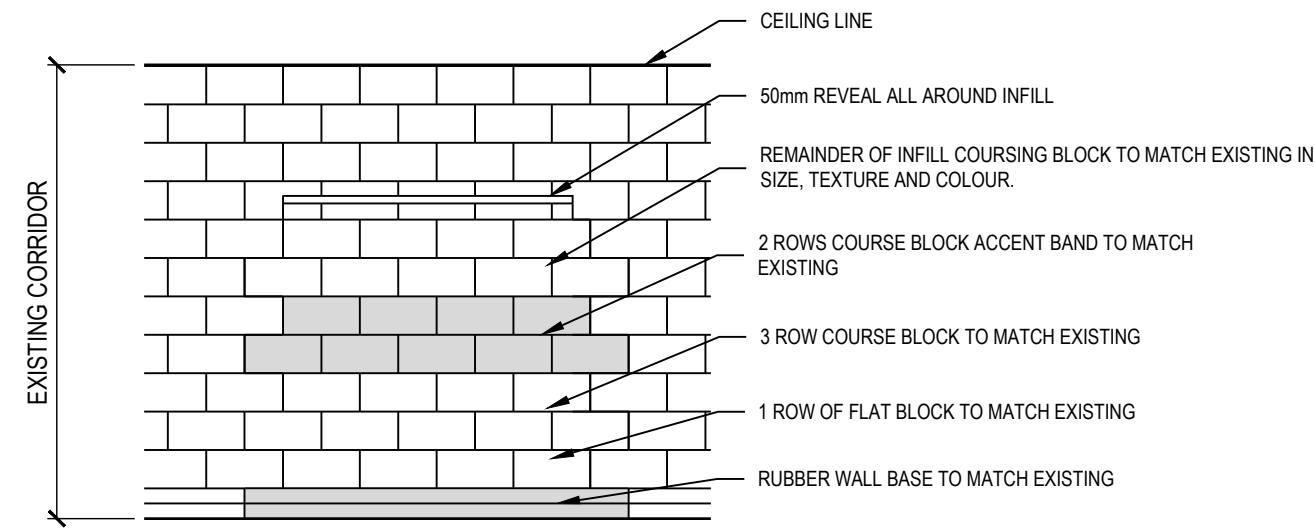
12 INTERIOR ELEVATION  
309 SCALE: 1:50



13 INTERIOR ELEVATION  
309 SCALE: 1:50



14 INTERIOR ELEVATION  
309 SCALE: 1:50



15 INTERIOR ELEVATION  
309 SCALE: 1:50

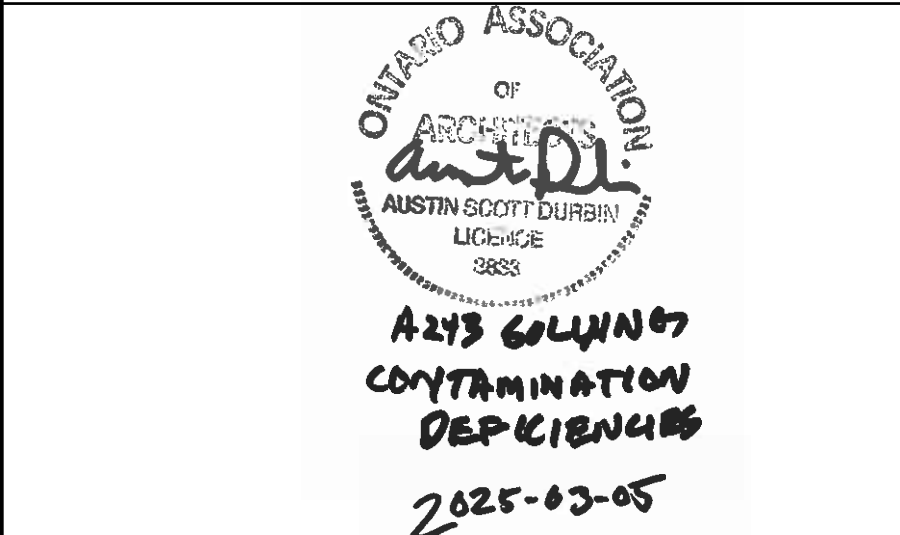
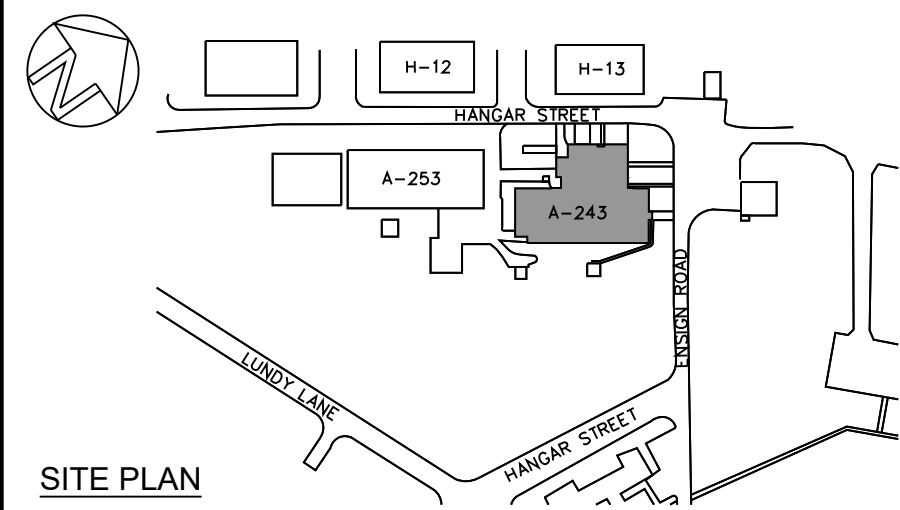
#### WASHROOM ACCESSORIES LEGEND

BS	BACK SUPPORT
CH	COAT HOOK
EM1	EMERGENCY CALL KIT INCLUDING PUSH BUTTON, TRANSFORMER, HORN/STROBE AND SIGNAGE
GB1	890mm x 760mm L-SHAPED GRAB BAR
GB2	600mm LONG GRAB BAR
GB3	1000mm LONG GRAB BAR
GB4	1000mm x 750mm L-SHAPED GRAB BAR
HS	450mm WIDE x 400mm DEEP HINGED SHOWER SEAT
MIR	MIRROR
P.T.D.	PAPER TOWEL DISPENSER
S.D.	SOAP DISPENSER
SH	SHELF
SND	SANITARY DISPOSAL
T.B.	725mm LONG TOWEL BAR
TPD	TOILET PAPER DISPENSER
WRC	WASTE RECEPTACLE

#### WASHROOM CONSTRUCTION NOTES

1. PROVIDE MOLD AND MOISTURE RESISTANT GYPSUM BOARD ON WASHROOM SIDE OF PARTITIONS.
2. PROVIDE PLYWOOD BLOCKING AT ALL ACCESSORY AND/OR FIXTURES AT GYPSUM BOARD ASSEMBLIES.
3. PROVIDE PLYWOOD BACKING TO SUIT LOCKER INSTALLATION.
4. PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL FOR ALL ACCESSORIES.
5. POSITION FLUSH VALVE ON TRANSFER SIDE OF WATER CLOSET.

## ARCHITECTURE | 49



1	2025/03/05	100% SUBMISSION - ISSUE FOR TENDER	AD
NO.	DATE	REVISION	APPR.

SCALE | ÉCHELLE  
AS NOTED

LOCATION | EMPLACEMENT  
17 HANGAR STREET,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET  
SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
ARCHITECTURAL  
DATE  
2017-05-29

SUBJECT | SUJET  
ENLARGED PLANS &  
INTERIOR ELEVATIONS

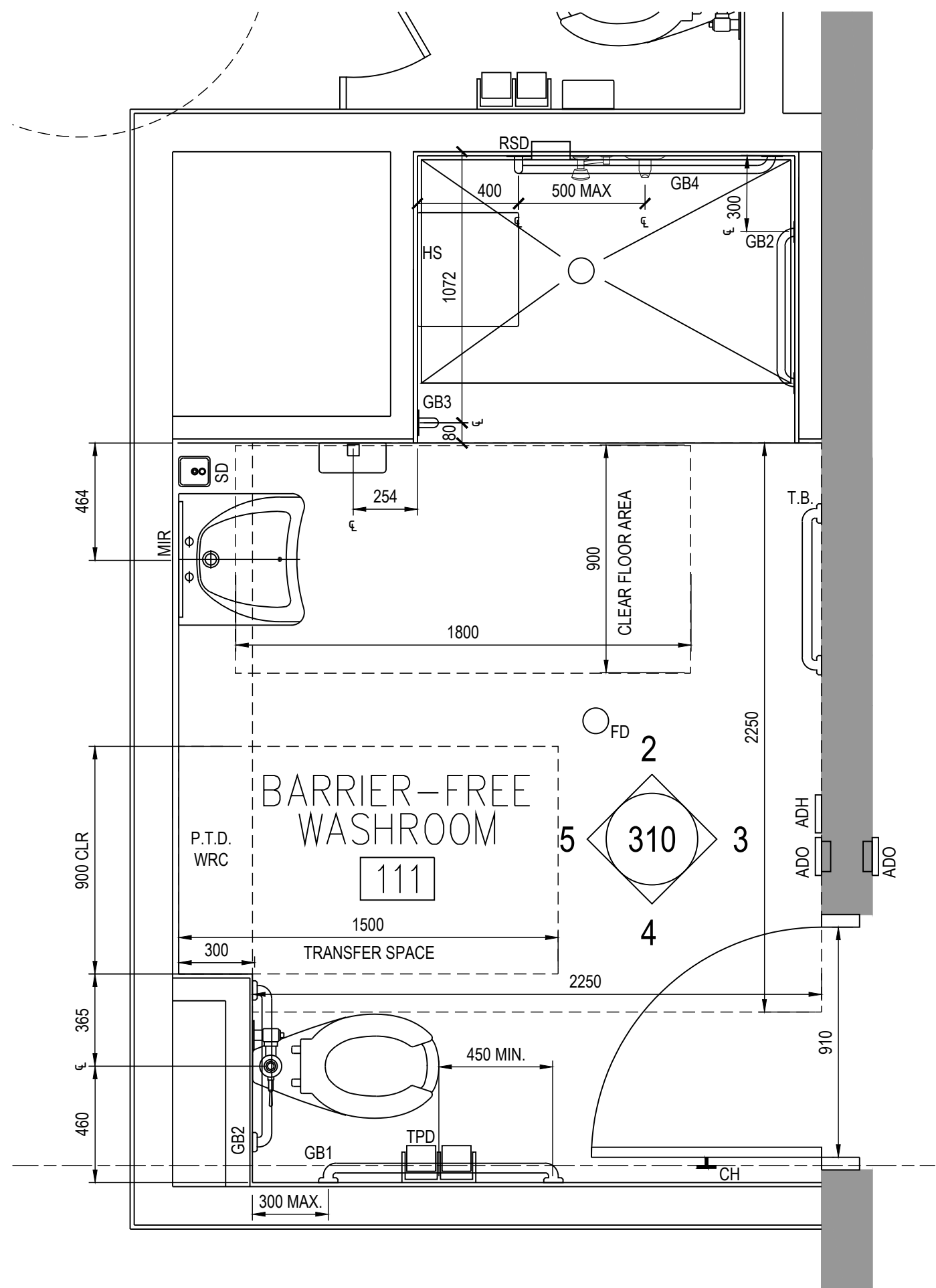
PRODUCTION	DESIGNED   ÉTUDIÉ	REVIEWED   REVU	DES O   AGENT CONC
A.D.	XX   XX	X.X.	X.X.
DRAWN   DESSINÉ	H.A. / I.B.	J.C.	PROJ MGR   GEST PROJ
CHECKED   VÉRIFIÉ	G.M.	X.X.	DES MGR   GEST CONC
COORDINATION	A.D. / G.M.	X.X.	FIRE   INCENDIE

WBS NO. | NO. OTP  
N.700113.18.05  
PF NO. | NO. DP  
BN186586

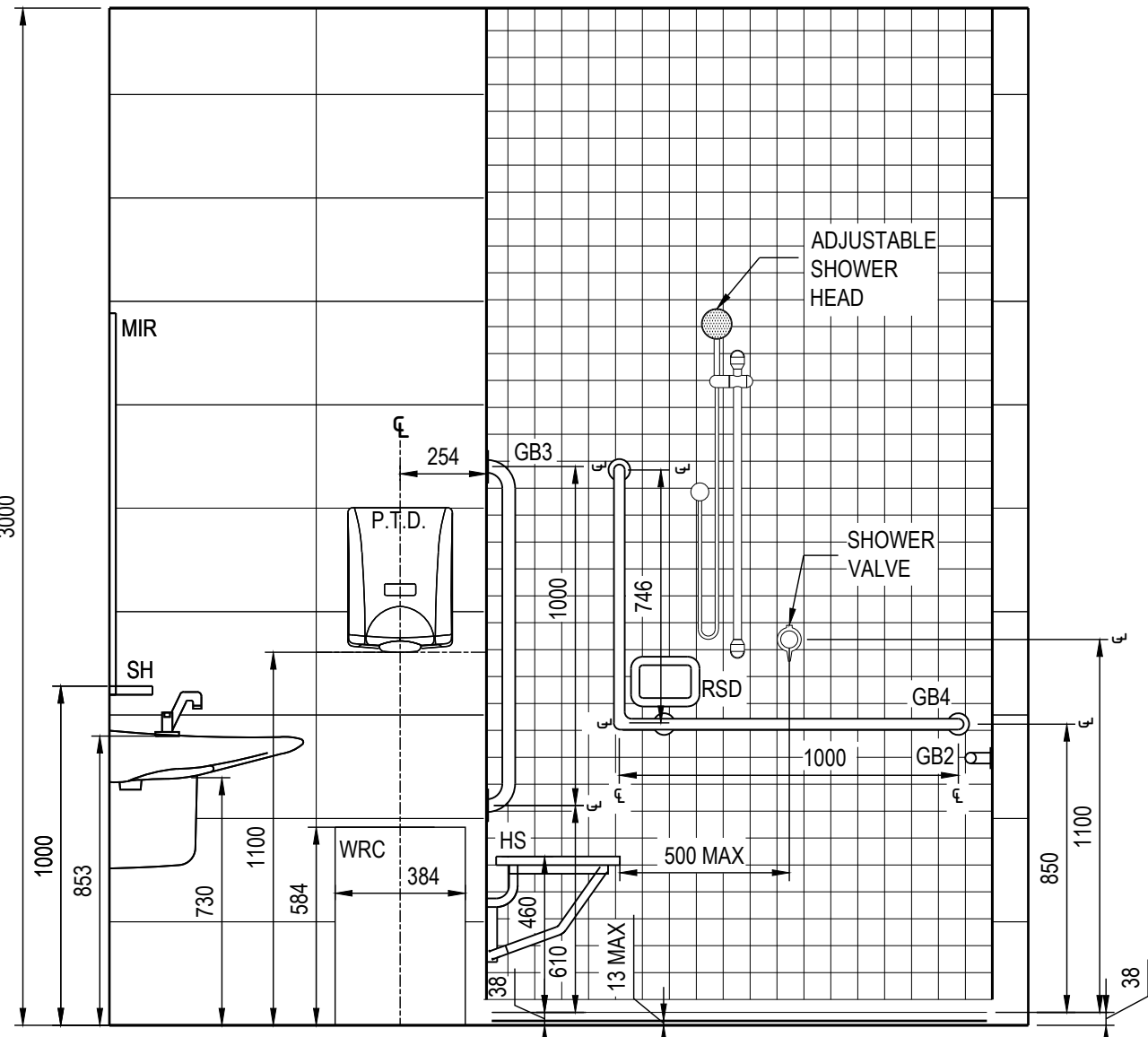
DWG. NO. | NO. DESSIN  
L-B147-9618/12-309

Canada

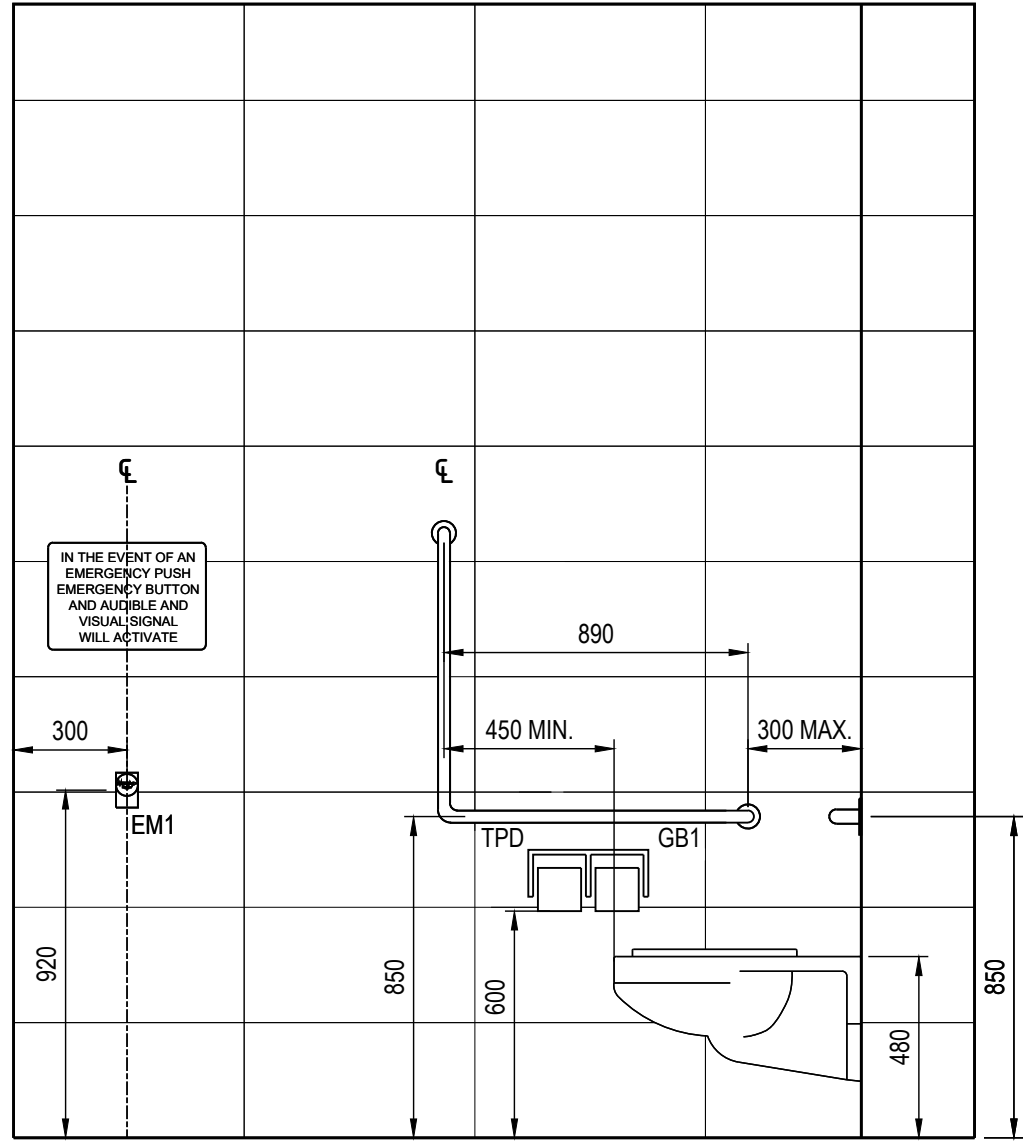




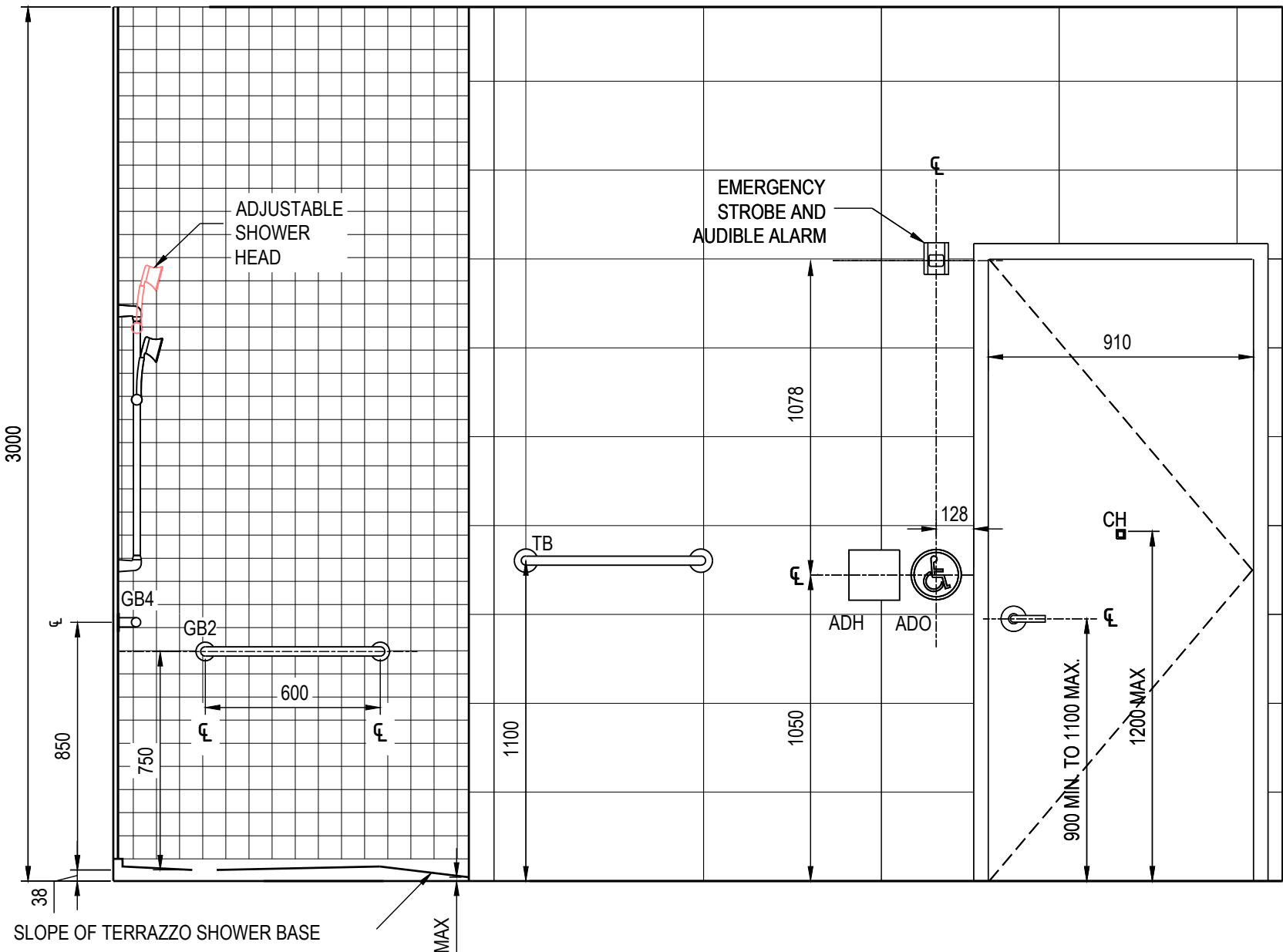
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310  
SCALE: 1:20  
GENDER NEUTRAL WASHROOM FLOOR PLAN



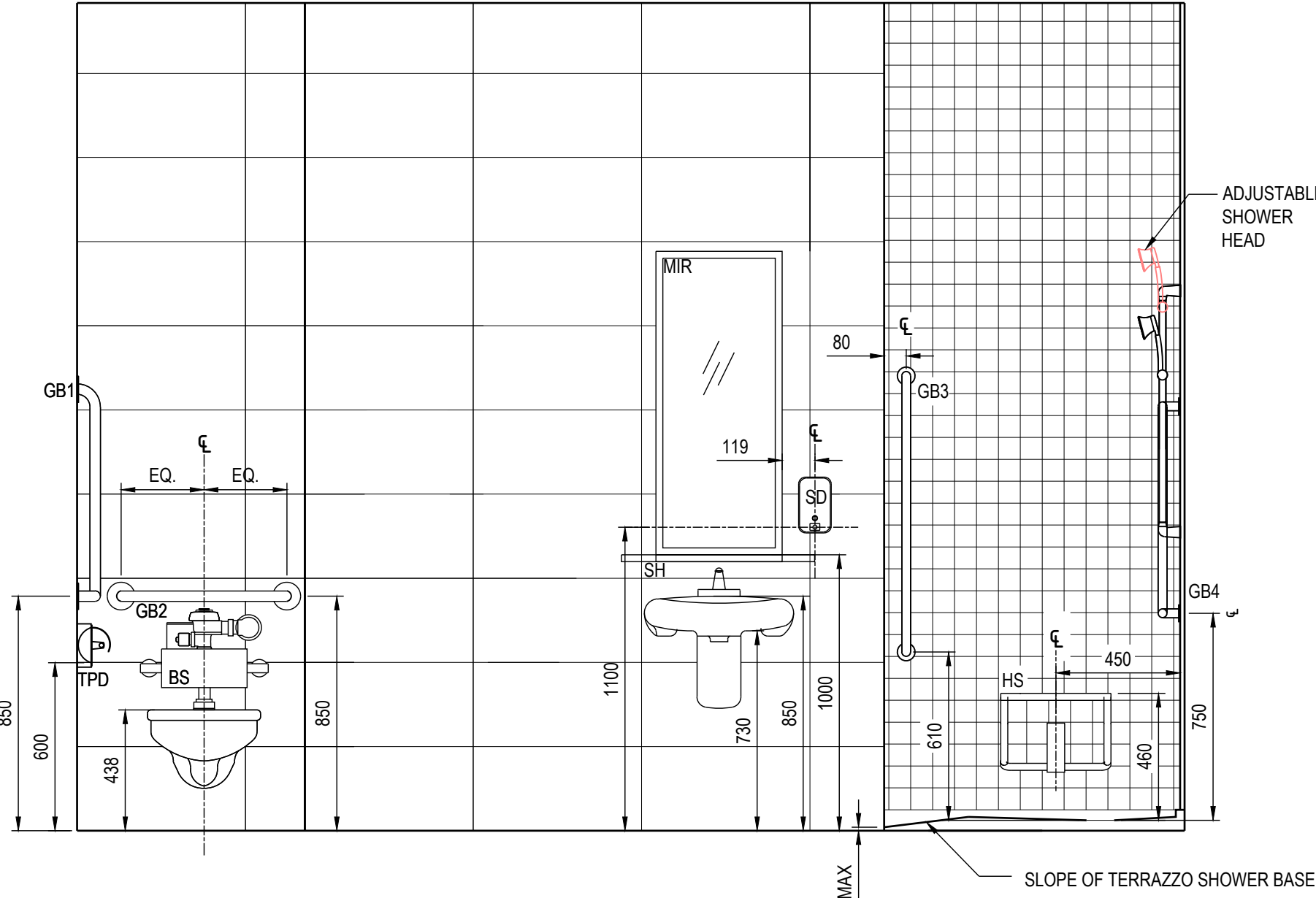
2  
310  
SCALE: 1:20  
INTERIOR ELEVATION



4  
310  
SCALE: 1:20  
INTERIOR ELEVATION



3  
310  
SCALE: 1:20  
INTERIOR ELEVATION



5  
310  
SCALE: 1:20  
INTERIOR ELEVATION

WASHROOM ACCESSORIES LEGEND

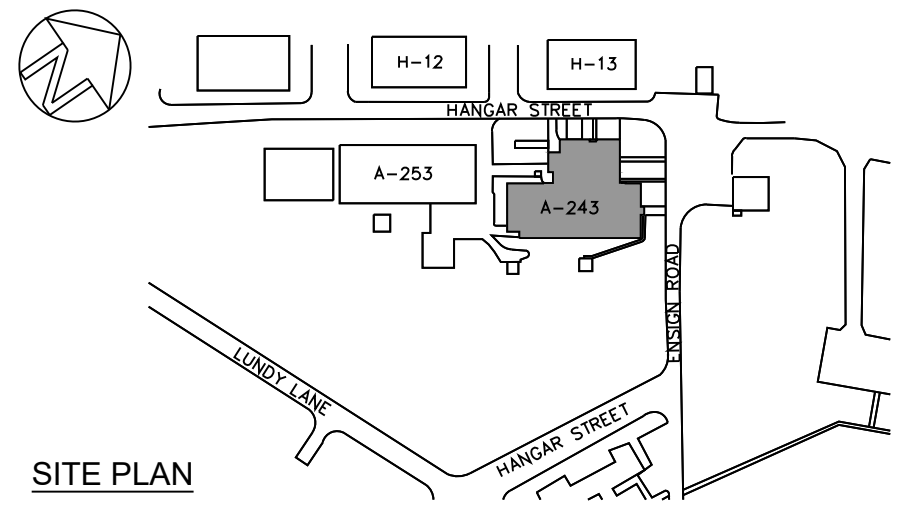
ADH	ACCESSIBLE DOOR HARDWARE
ADO	AUTOMATIC DOOR OPERATOR
BS	BACK SUPPORT
CH	COAT HOOK
EM1	EMERGENCY CALL KIT INCLUDING PUSH BUTTON, TRANSFORMER, HORN/STROBE AND SIGNAGE
GB1	880mm x 750mm L-SHAPED GRAB BAR
GB2	600mm LONG GRAB BAR
GB3	1000mm LONG GRAB BAR
GB4	1000mm x 750mm L-SHAPED GRAB BAR
HS	450mm WIDE x 400mm DEEP HINGED SHOWER SEAT
MIR	MIRROR
P.T.D.	PAPER TOWEL DISPENSER
S.D.	SOAP DISPENSER
SH	SHELF
SND	SANITARY DISPOSAL
T.B.	725mm LONG TOWEL BAR
TPD	TOILET PAPER DISPENSER
WRC	WASTE RECEPTACLE

WASHROOM CONSTRUCTION NOTES

1. PROVIDE MOLD AND MOISTURE RESISTANT GYPSUM BOARD ON WASHROOM SIDE OF PARTITIONS.
  2. PROVIDE PLYWOOD BLOCKING AT ALL ACCESSORY AND/OR FIXTURES AT GYPSUM BOARD ASSEMBLIES.
  3. PROVIDE PLYWOOD BACKING TO SUIT LOCKER INSTALLATION.
  4. PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL FOR ALL ACCESSORIES.
  5. POSITION FLUSH VALVE ON TRANSFER SIDE OF WATER CLOSET.
- CONTRACTOR RESPONSIBLE FOR ENSURING THAT BARRIER FREE WASHROOM HARDWARE FUNCTIONS ACCORDING TO THE FOLLOWING DESCRIPTION:
- PROVIDE REQUIRED ELECTRIC STRIKE AND TRANSFORMER AS PER EMERGENCY KIT SPECIFICATIONS
  - CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT UNIVERSAL WASHROOM HARDWARE FUNCTIONS ACCORDING TO THE FOLLOWING DESCRIPTION:
    - A. STOREROOM FUNCTION LEVER HANDLE WITH KEYED ACCESS FROM OUTSIDE AND ALWAYS OPERABLE FROM THE INSIDE.
    - B. PUSHED TO OPEN FROM THE OUTSIDE, AND OPEN FROM THE INSIDE USING THE LEVER HANDLE. THE "PUSH TO LOCK" BUTTON ACTIVATES AN ELECTRIC STRIKE WHICH LOCKS THE DOOR, AND ILLUMINATES AN "OCCUPIED WHEN LIT" ANNUNCIATOR ON THE OUTSIDE OF THE WASHROOM.
    - C. WHEN THE ANNUNCIATOR IS ACTIVATED, THE EXTERIOR DOOR OPERATOR IS DISABLED WHILE THE INTERIOR OPERATOR REMAINS ACTIVE.
    - D. SYSTEM RESET VIA MAGNETIC DOOR CONTACTS
  - THE "PUSH IN CASE OF EMERGENCY" BUTTON ACTIVATES A STROBE AND AUDIBLE ALARM, BOTH INSIDE AND OUTSIDE THE WASHROOM.
  - SET THE ELECTRIC STRIKE TO "FAIL-SAFE"
  - CIL OF ADO AND PUSH TO LOCK PADDLES MOUNTED AT 1050mm A.F.F.
  - REFER TO ELECTRICAL DRAWINGS
  - PROVIDE SIGNAGE IN BOTH FRENCH AND ENGLISH FOR THE OPERATIONS OF THE EMERGENCY BUTTON, DOOR OPERATOR AND DOOR LOCK. SIGNAGE TO BE LOCATED ABOVE DOOR HARDWARE.

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A243 SOLVING  
CONTAMINATION  
DEFICIENCIES  
2025-02-05

1	2025/03/05	100% SUBMISSION - ISSUE FOR TENDER	AD
NO.	DATE	REVISION	APPR.

SCALE | ÉCHELLE

AS NOTED
LOCATION   EMPLACEMENT
17 HANGAR STREET, CFB BORDEN ONTARIO
PROJECT   PROJET
SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER	DATE
ARCHITECTURAL	2017-05-29

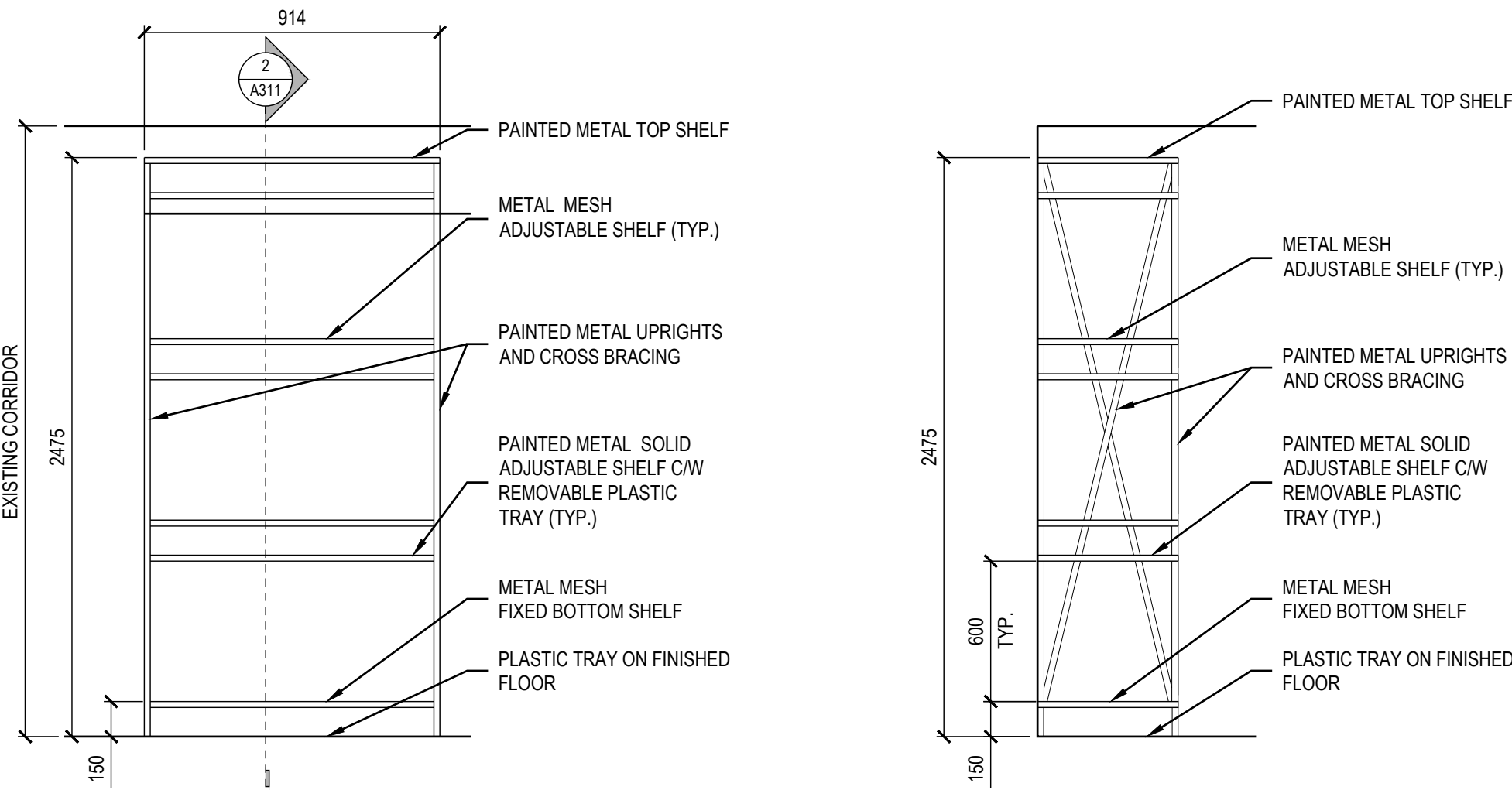
SUBJECT   SUJET
GENDER NEUTRAL WASHROOM PLAN AND INTERIOR ELEVATIONS

PRODUCTION	REVIEWED   REVU
DESIGNED   ÉTUDIÉ	XX   XX
A.D.	X.X.
DRAWN   DESSINÉ	PROJ MGR   GEST PROJ
A.K.	J.C.
CHECKED   VÉRIFIÉ	DES MGR   GEST CONC
G.M.	X.X.
COORDINATION	FIRE   INCENDIE
A.D. / G.M.	X.X.

WBS NO.   NO. OTP	PF NO.   NO. DP
N.700113.18.05	BN186586

DWG. NO.   NO. DESSIN	L-B147-9618/12-310
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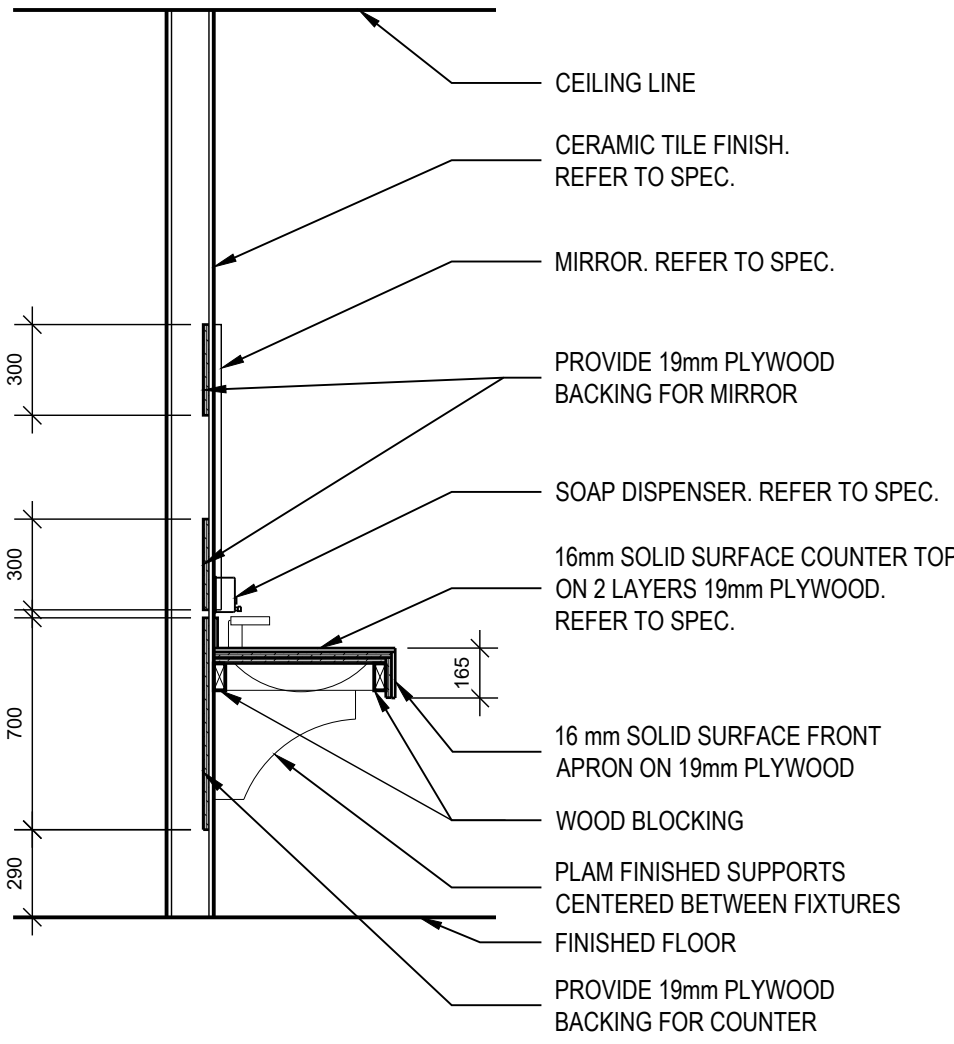


NOTE: REFER TO SPECIFICATION 10 56 13 - METAL STORAGE SHELVING FOR ADDITIONAL INFORMATION

1  
311

**BOOTS STORAGE - ELEVATION**

SCALE: 1:25



3  
311

**MILLWORK DETAIL**

SCALE: 1:25

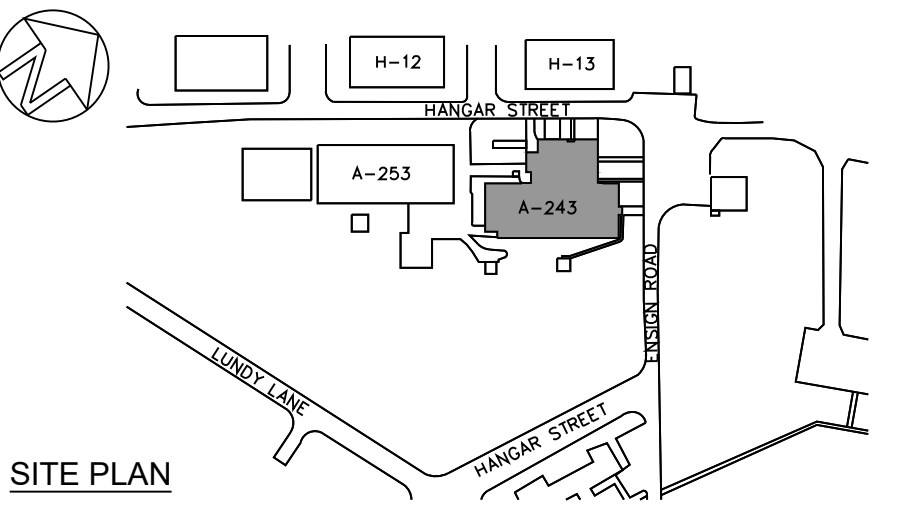
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311

**SECTION DETAIL**

SCALE: 1:25

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**A243 COLUING  
CONTAMINATION  
DEFICIENCIES**  
2025-02-05

1	2025/03/05	100% SUBMISSION - ISSUE FOR TENDER	AD
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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE

1:100

LOCATION | EMPLACEMENT

17 HANGAR STREET,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

**SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243**

TRADE   MÉTIER	DATE
ARCHITECTURAL	2017-05-29

SUBJECT | SUJET

**MILLWORK DETAILS**

PRODUCTION	REVIEWED   REVU	
DESIGNED   ÉTUDIÉ	XX   XX	DES O   AGENT CONC
X.X.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
X.X.		X.X.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
X.X.		X.X.
COORDINATION		FIRE   INCENDIE
X.X.		X.X.

WBS NO.   NO. OTP	PF NO.   NO. DP
N.700113.18.05	BN186586

DWG. NO.   NO. DESSIN	L-B147-9618-311
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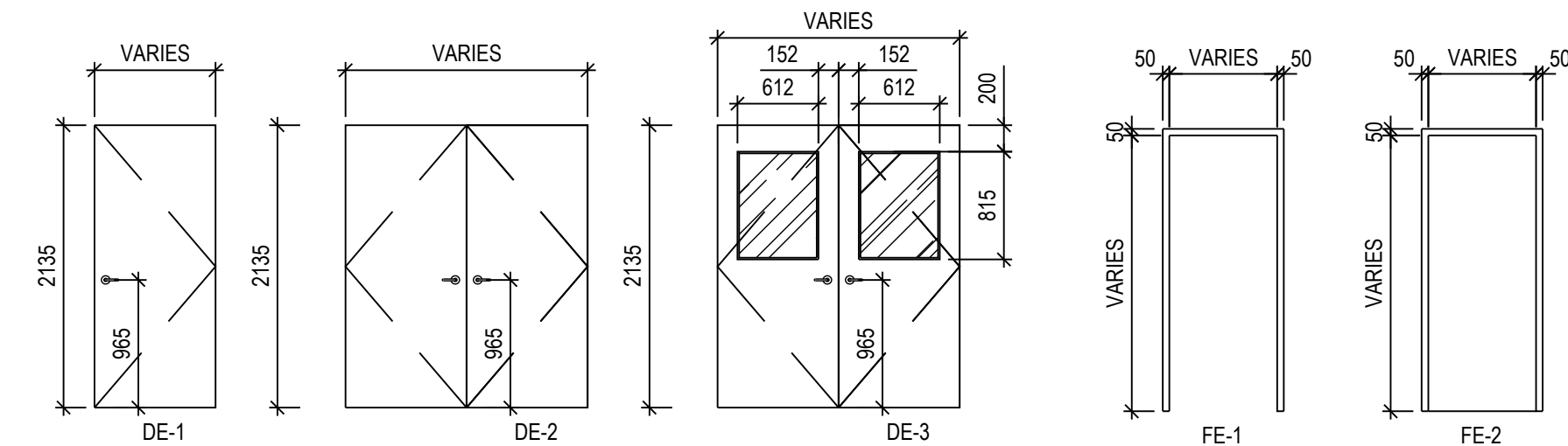


DOOR AND FRAME SCHEDULE																			
DOOR NUMBER	ROOM NAME & NUMBER		DOOR							FRAME					HARDWARE HEADING	FIRE RESISTANT RATING LABEL	NOTES		
	ROOM NAME	ROOM NUMBER	MATERIAL	ELEVATION	FINISH	GLAZING	WIDTH	HEIGHT	THICKNESS	MATERIAL	ELEVATION	JAMB /HEAD DETAIL	FINISH	GLAZING					
D-100b1	CORRIDOR	100b	IN-HM	DE-1	PT	-	910	2135	45	TB-HM	FE-2	J-3	PT	-	5	-			
D-100b2	CORRIDOR	100c	HM	DE-3	PT	-	810 X 810	2135	45	HM	FE-1	J-1	PT	-	6	-			
D-100b3	CORRIDOR	100C	EXIST	EXIST	EXIST	-	EXIST	EXIST	EXIST	EXIST	EXIST	EXIT	EXIT	-	EXIST	EXIST	EXISTING ELECTRICAL DOOR HOLD OPEN HARDWARE TO BE DECOMMISSIONED FOR BOTH PANELS OF DOOR. REMOVE ASSOCIATED HARDWARE ON DOOR. DISCONNECT AND PULL WIRING POWERING HOLD OPEN DEVICES. PROVIDE COVER PLATE FOR JUNCTION BOX ONCE HARDWARE AND ELECTRICAL WIRING IS REMOVED.		
D-100C	CORRIDOR	100c	HM	DE-1	PT	-	910	2135	45	HM	FE-1	J-1	PT	-	8	45 MIN			
D-M-1F	MECH. ROOM	M-1F	HM	DE-1	PT	-	910	2135	45	HM	FE-1	J-1	PT	-	3.1	45 MIN			
D-104A	MEN'S W.R. & LOCKER ROOM	104	HM	DE-1	PT	-	910	2135	45	HM	FE-1	J-1	PT	-	2.1	-			
D-104B	MEN'S W.R. & LOCKER ROOM	104	HM	DE-1	PT	-	910	2135	45	HM	FE-1	J-1	PT	-	3	-			
D-109A	WOMEN'S W.R. & LOCKER ROOM	109	HM	DE-1	PT	-	910	2135	45	HM	FE-1	J-1	PT	-	2	-			
D-109B	WOMEN'S W.R. & LOCKER ROOM	109	HM	DE-1	PT	-	910	2135	45	HM	FE-1	J-2	PT	-	4	-			
D-109C	WOMEN'S W.R. & LOCKER ROOM	109	HM	DE-1	PT	-	910	2135	45	HM	FE-1	J-1	PT	-	3	-			
D-110	SUPPLY ROOM	110	EXIST	EXIST	PT	-	EXIST	EXIST	EXIST	EXIST	EXIST	EXIST	EXIST	EXIST	EXIST	EXIST	REUSE EXISTING DOOR BETWEEN ROOM 110 AND 113 INCLUDING DOOR FRAME AND HARDWARE FOR NEW DOOR LOCATION. MAKE GOOD ANY FINISHES AFFECTED BY NEW WORK		
D-111	BARRIER-FREE WASHROOM	111	HM	DE-1	PT	-	910	2135	45	HM	FE-1	J-1	PT	-	7	45 MIN			
D-121A	COMPOSITE DIRTY ROOM	121	HM	DE-1	PT	-	910	2135	45	HM	FE-1	J-1	PT	-	3.1	45 MIN			
D-121B	COMPOSITE DIRTY ROOM	121	HM	DE-1	PT	-	910	2135	45	HM	FE-1	J-1	PT	-	3.1	45 MIN			
D-122A	COMPOSITE DIRTY ANNEX	122	IN-HM	DE-1	PT	-	910	2200	45	TB-HM	FE-2	J-3	PT	-	5	-			
D-122B	COMPOSITE DIRTY ANNEX	122	HM	DE-1	PT	-	910	2135	45	HM	FE-1	J-1	PT	-	3.1	45 MIN			
D-123A	WASTE WATER STORAGE ROOM	123	IN-HM	DE-2	PT	-	910 X 910	2200	45	TB-HM	FE-2	J-3	PT	-	1	-	ONE EXISTING DOOR, ONE NEW DOOR (TO MATCH EXISTING). NEW FRAME		
D-123B	WASTE WATER STORAGE ROOM	123	IN-HM	DE-2	PT	-	910 X 910	2150	45	TB-HM	FE-2	J-3	PT	-	1	-			
D-124	STORAGE ROOM	124	EXIST	EXIST	PT	-	EXIST	EXIST	EXIST	EXIST	EXIST	EXIST	PT	-	EXIST	45 MIN			
GENERAL NOTES:																ABBREVIATIONS:			
																DE	DOOR ELEVATION	IN	INSULATED
																EXIST.	EXISTING	TB	THERMALLY BROKEN
1. CONTRACTOR TO REPAIR PERFORATIONS ON EXISTING DOOR FRAMES TO ACHIEVE FIRE RATING LISTED ON FIRE RESISTANCE RATING PLATE ON DOOR. (TYPICAL ON ALL DOORS WITHIN THE SCOPE OF WORK)																EXT.	EXTERIOR		
																FE	FRAME ELEVATION		
																HM	HOLLOW METAL		
																J	JAMB		
2. CONTRACTOR TO PAINT ALL DOORS AND FRAMES WITHIN THE SCOPE OF WORK																PT	PAINT		

1

312

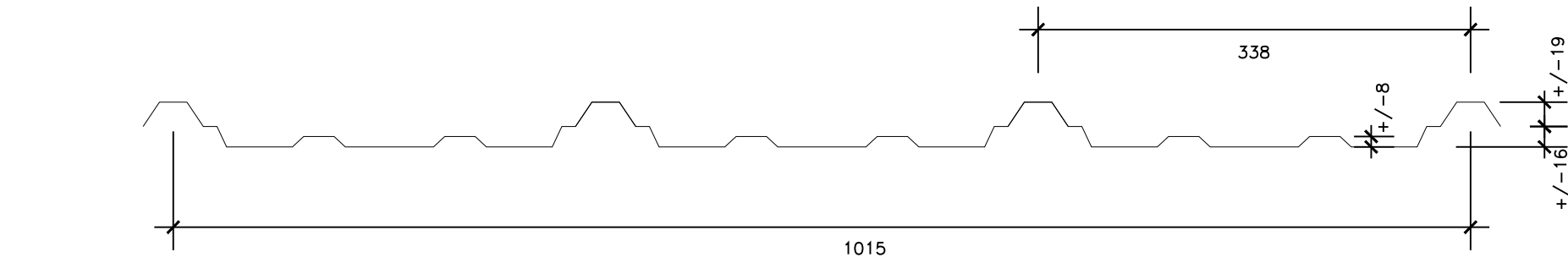
DOOR SCHEDULE



2

312

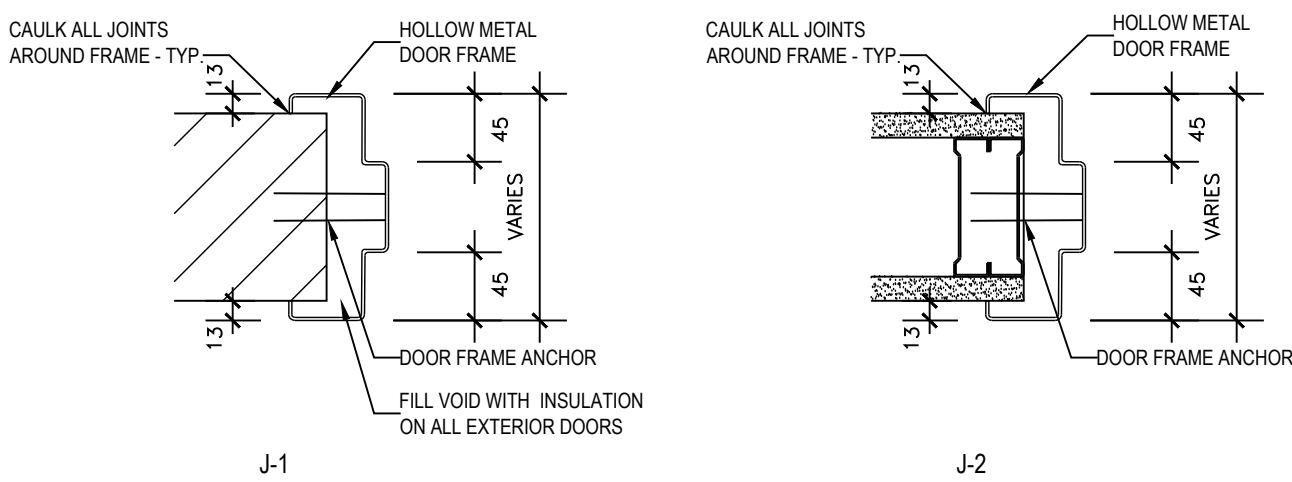
DOOR & FRAME ELEVATIONS



5

312

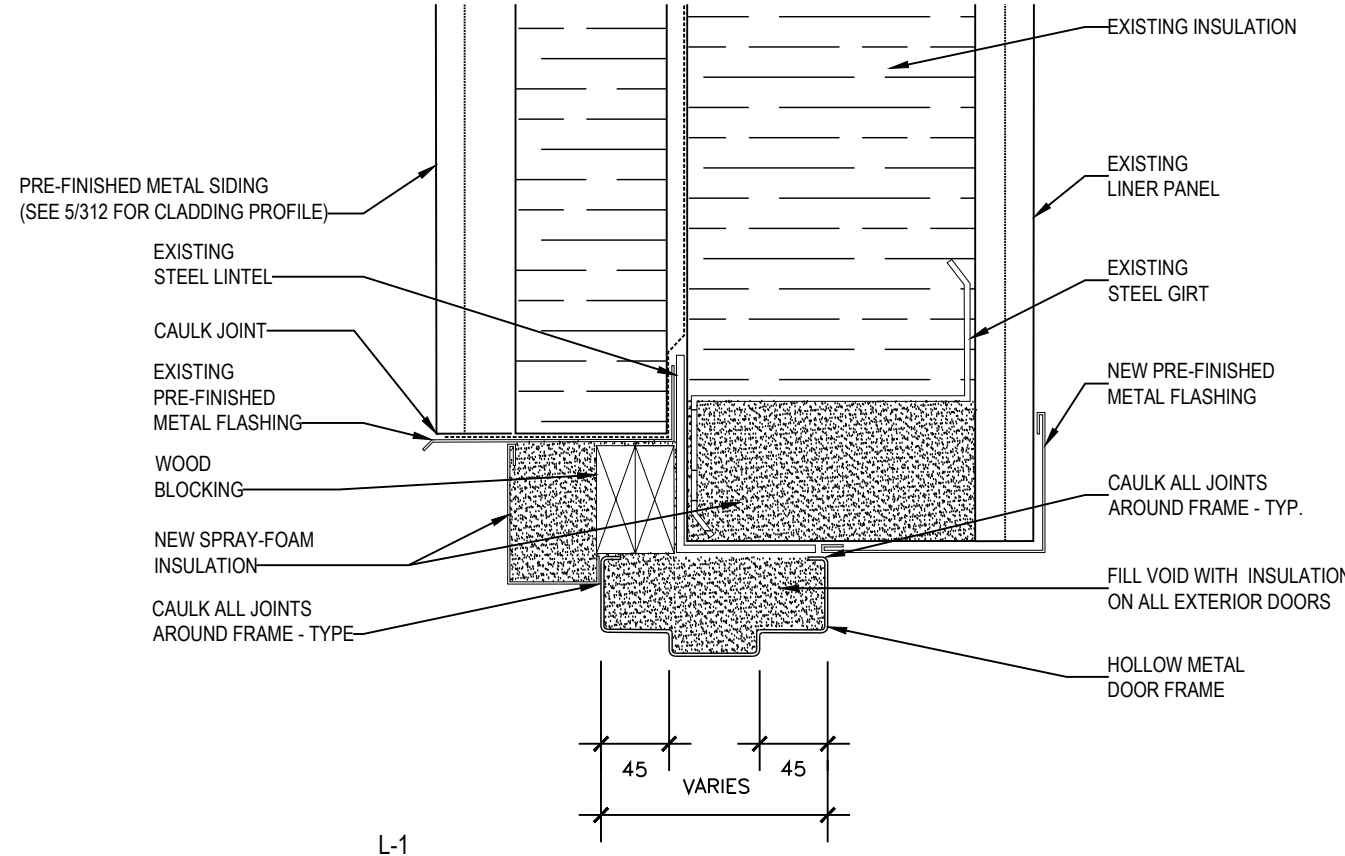
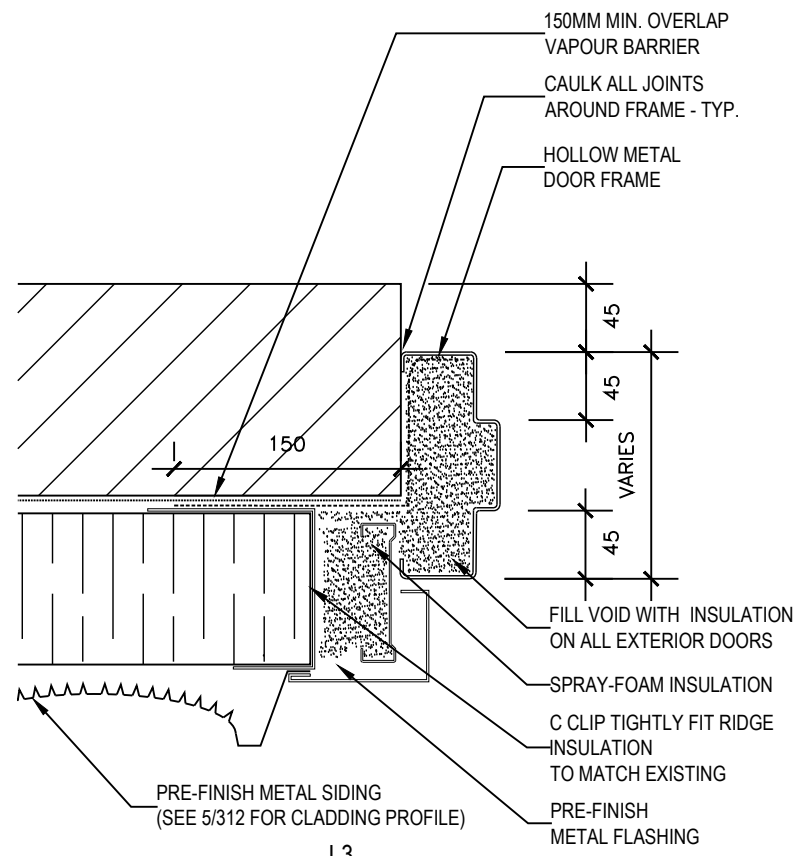
CLADDING PROFILE



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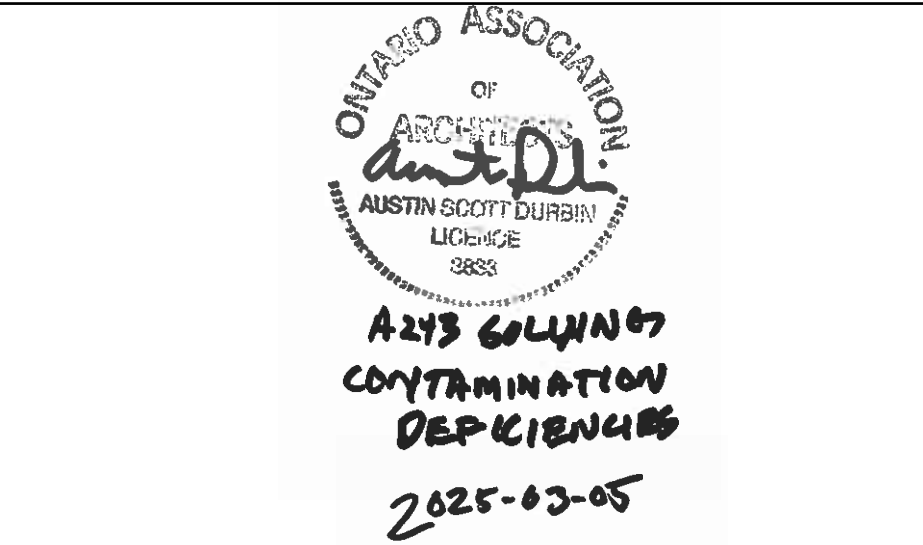
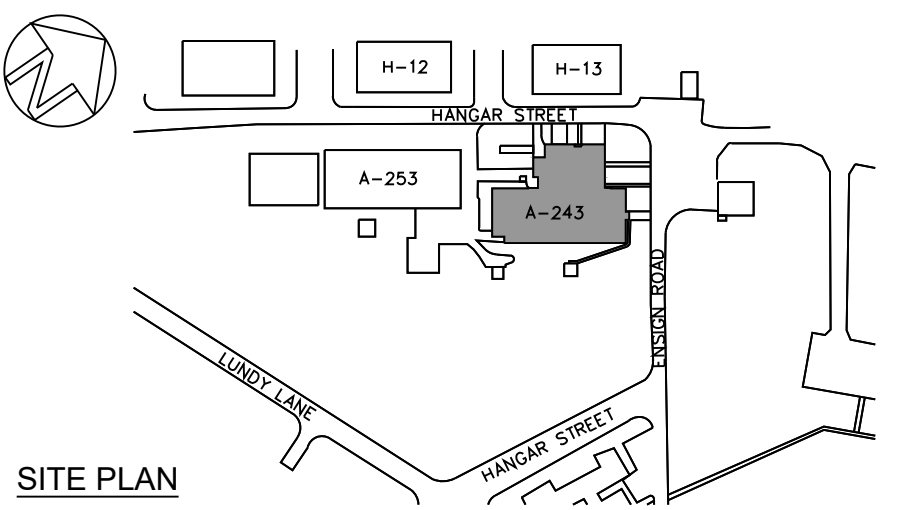
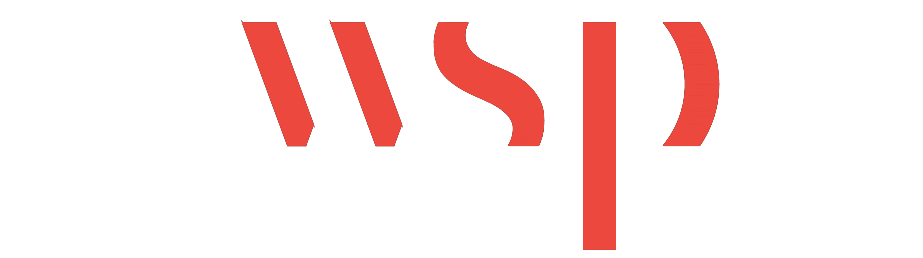
JAMB DETAILS



4

312

TYP. LINTEL DETAIL



1	2025/03/05	100% SUBMISSION - ISSUE FOR TENDER	AD

NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE

N.T.S.

LOCATION | EMPLACEMENT

17 HANGAR STREET,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER	DATE
ARCHITECTURAL	2017-05-29

SUBJECT | SUJET

DOOR SCHEDULE, DOOR & FRAME  
ELEVATIONS & JAMB DETAILS

PRODUCTION		REVIEWED   REVU
DESIGNED   ÉTUDIÉ	XX   XX	DES O   AGENT CONC
M.D.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
M.D.		J.C.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
D.C.		X.X.
COORDINATION		FIRE   INCENDIE
M.D.		X.X.

WBS NO.   NO. OTP	PF NO.   NO. DP
N.700113.18.05	BN186586

DWG. NO.   NO. DESSIN	L-B147-9618/12-312
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DRAWING LIST	
400	LEGENDS, DRAWING LIST AND CODE SYNOPSIS
410	GROUND FLOOR PLAN FIRE PROTECTION - DEMOLITION
411	GROUND FLOOR PLAN FIRE PROTECTION - NEW WORK
420	GROUND FLOOR PLAN PLUMBING - DEMOLITION
421	GROUND FLOOR PLAN PLUMBING - NEW WORK
422	ENLARGE GROUND FLOOR PART PLAN - PLUMBING & UTILITIES - NEW WORK
430	GROUND FLOOR PLAN HVAC - DEMOLITION
431	GROUND FLOOR PLAN HVAC - NEW WORK
440	ROOF PLAN - DEMOLITION
441	ROOF PLAN - NEW WORK
450	MECHANICAL SYSTEM CONTROL DIAGRAMS
460	MECHANICAL SCHEDULES - SHEET 1
461	MECHANICAL SCHEDULES - SHEET 2
470	MECHANICAL DETAILS - SHEET 1
471	MECHANICAL DETAILS - SHEET 2

BUILDING CODE SYNOPSIS	
COMPLIANCE WITH PART 3 OF THE CANADIAN NATIONAL BUILDING CODE (NBC) - 2020.	
CANADIAN FORCES FIRE MARSHALL DIRECTIVE FMD 4003: FIRE PROTECTION ENGINEERING, FIRE PROTECTION AND LIFE SAFETY ENGINEERING DESIGN GUIDE, 2019.	
CANADIAN FORCES FIRE MARSHALL DIRECTIVE FMD 4005: FIRE PROTECTION ENGINEERING, PARTIAL OCCUPANCY, SEPTEMBER 2009 V1.3.	
VENTILATION SYSTEMS TO BE INSTALLED IN ACCORDANCE WITH PART 6, AND THE FOLLOWING RELATED CODES AND STANDARDS: ASHRAE STANDARD 62.1-2022 VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY, ASHRAE 90.1-2019 ENERGY STANDARD FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS AND CAN/CSA B149.1-2020 NATURAL GAS AND PROPANE INSTALLATION CODE.	
PLUMBING SYSTEMS TO BE INSTALLED IN ACCORDANCE WITH 3.1.5.16, 3.7, THE NATIONAL PLUMBING CODE 2020 AND CAN/CSA B149.1-2020 NATURAL GAS AND PROPANE INSTALLATION CODE.	
COMPLIANCE WITH N.F.P.A. STANDARDS	
NFPA 13-2022, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS	
SPRINKLER SYSTEM TO BE DESIGNED AND INSTALLED IN ACCORDANCE WITH N.F.P.A.-13-2022; HAZARD CLASSIFICATION AS INDICATED.	
COMPLIANCE WITH ASHRAE/IEE 90.1 - 2019.	
ASHRAE 90.1 COMPLIANCE ACHIEVED BY APPLYING PRESCRIPTIVE METHOD FOR EQUIPMENT.	
PAINT ROOM 125 SHALL BE COMPLIANT WITH THE FOLLOWING CODES AND STANDARDS:	
DEPARTMENT OF NATIONAL DEFENCE STANDARD C-05-040-005/TS-001 PART 3, SECTION 2 DECONTAMINATION PROCEDURES, FACILITIES AND ZONES.	
DEPARTMENT OF NATIONAL DEFENCE STANDARD C-05-040-005/TS-001 PART 4, SECTION 1 REFINISHING FACILITY.	
DEPARTMENT OF NATIONAL DEFENCE STANDARD C-12-010-062/TP-000 PART 1, SECTION 3 FACILITIES, TOOLS AND EQUIPMENT.	
CFB BORDEN SITE SPECIFIC DESIGN CRITERIA, 2021-04-29	
NFPA 13-2022, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS	
NFPA 30-2021, FLAMMABLE AND COMBUSTIBLES LIQUID CODE.	
NFPA 33-2021, STANDARD FOR SPRAY APPLICATION USING FLAMMABLE OR COMBUSTIBLE MATERIALS	
NFPA 91-2020, STANDARD EXHAUST SYSTEMS FOR AIR CONVEYING OF VAPORS, GASES, MISTS, AND PARTICULATE SOLIDS	
C22.1-2021 CANADIAN ELECTRICAL CODE, PART 1, SAFETY STANDARD FOR ELECTRICAL INSTALLATIONS (24TH EDITION)	

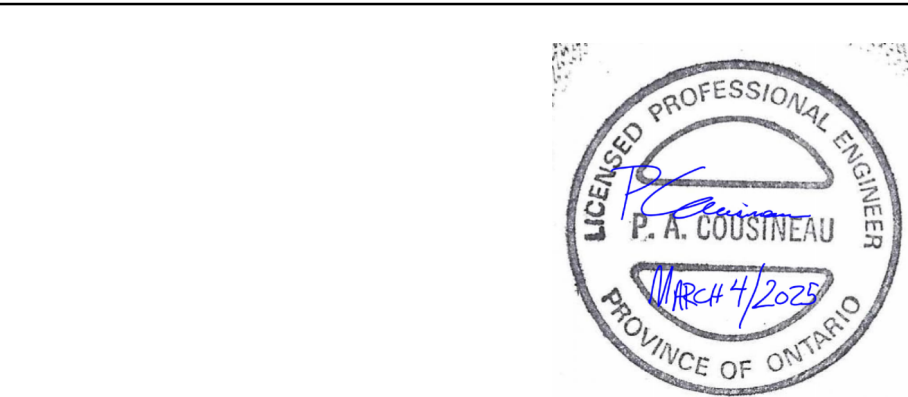
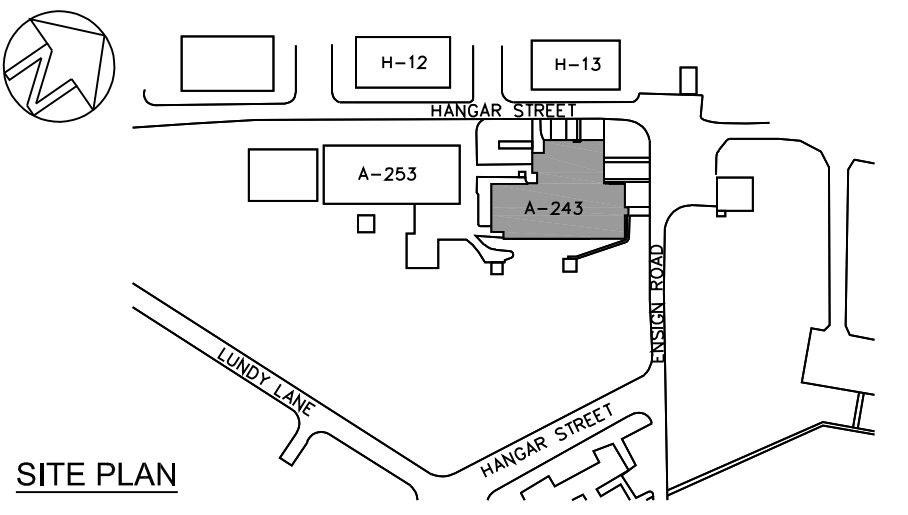
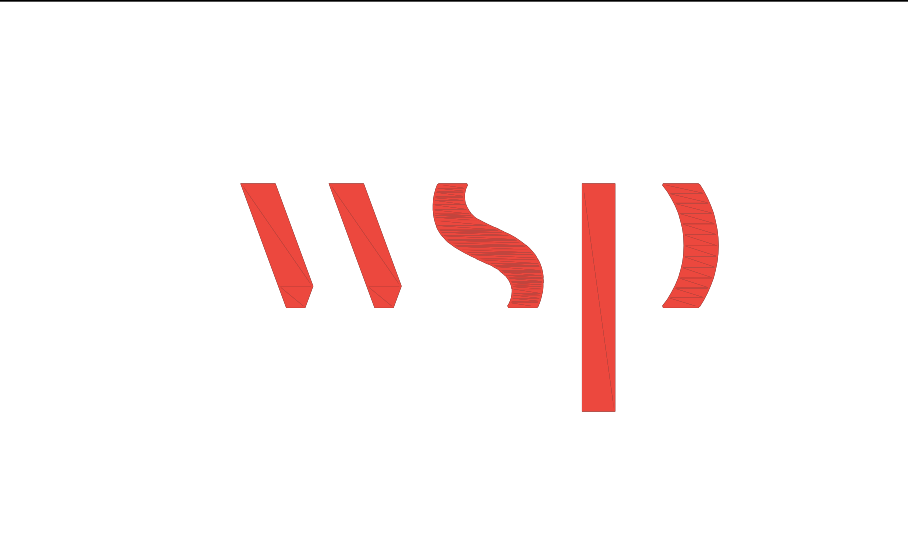
GENERAL WORK LEGEND	
SYMBOL	DESCRIPTION
	NEW WORK
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED

FIRE PROTECTION	
SYMBOL	DESCRIPTION
	SPRINKLER PIPING
	CHROME PENDANT SPRINKLER HEAD
	BRASS UPRIGHT SPRINKLER HEAD
	SIDEWALL SPRINKLER HEAD
	TEST & DRAIN VALVE
	FLOW SWITCH
	ELECTRICALLY SUPERVISED GATE VALVE
	CHECK VALVE
	ALARM VALVE
	PRESSURE GAUGE
	FLOW ALARM

CONTROL LEGEND	
	OUTDOOR AIR TEMPERATURE SENSOR
	TEMPERATURE SENSOR
	FLOW SWITCH
	LOCAL STAND-ALONE CONTROLLER
	INTERLOCK WIRING

PLUMBING LEGEND	
SYMBOL	DESCRIPTION
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	BURIED/UNDER FLOOR/ UNDER SLAB SANITARY
	ABOVE GROUND/FLOOR/SLAB SANITARY
	PUMPED SANITARY
	PLUMBING VENT
	NATURAL GAS
	COMPRESSED AIR PIPING
	LOW PRESSURE STEAM LINE
	HIGH PRESSURE STEAM LINE
	REDUCER
	PIPE DOWN
	PIPE UP
	PIPE CAP
	UNION
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BALL VALVE
	2 WAY CONTROL VALVE
	PLUG VALVE
	DOUBLE CHECK VALVE
	WATER METER
	GAS METER
	STRAINER
	BACKFLOW PREVENTER
	PIPE CONTINUATION
	FLOOR DRAIN
	FUNNEL FLOOR DRAIN
	ROOF DRAIN
	HUB DRAIN
	CLEAN OUT
	CLEAN OUT - FLOOR TYPE
	STRAINER
	PRESSURE GAUGE
	PUMP
	DRAIN VALVE
	SOLENOID VALVE
	LOCK SHIELD VALVE
	CHECK VALVE
	PRESSURE REDUCING VALVE
	CONTROL PNEUMATIC
	PRESSURE REGULATOR
	ELBOW RISE
	ELBOW DROP
	TEE RISE
	TEE DROP
	SANITARY TERMINAL ROOF VENT
	CIRUIT BALANCING VALVE.
	ELECTRIC DUCT HEATER
	BREATHING AIR QUICK CONNECT
	COMPRESSED AIR QUICK CONNECT
	FILTER

H.V.A.C. LEGEND	
SYMBOL	DESCRIPTION
	DUCT SECTION POSITIVE
	DUCT SECTION NEGATIVE
	ACOUSTICALLY LINED DUCT
	THERMALLY INSULATED DUCT
	FLEXIBLE CONNECTION
	DUCT OFFSET
	THERMALLY INSULATED SPIRAL OR FLEXIBLE DUCT
	DUCT TURNING VANES
	BALANCING DAMPER
	FIRE DAMPER
	DUCT BRANCH (TAKE-OFF) WITH DAMPER
	ACCESS DOOR
	TRANSFER GRILLE
	BY GENERAL CONTRACTOR
	ACCESS DOOR
	OUTSIDE AIR
	SUPPLY AIR
	RETURN AIR
	EXHAUST AIR
	FIRE DAMPER
	BALANCING DAMPER
	BACKDRAFT DAMPER
	MOTORIZED DAMPER
	MIXING VALVE
	NORMALLY OPEN
	NORMALLY CLOSED
	UNDERCUT DOOR
	DOOR GRILLE
	EXHAUST
	AIRFLOW
	SUPPLY AIR TEMPERATURE
	TRAP SEAL PRIMER
	AIR SUPPLY CEILING GRILLE / DIFFUSER
	AIR SUPPLY CEILING DIFFUSER
	AIR RETURN/EXHAUST CEILING DIFFUSER
	AIR RETURN/EXHAUST CEILING DIFFUSER
	EXHAUST OR RETURN AIR INLET
	AIR SUPPLY OUTLET
	UNIT HEATER
	LINEAR DIFFUSER
	ROOF MOUNTED FAN
	AIR RETURN/EXHAUST CEILING DIFFUSER
	AIR SUPPLY VALVE
	ACOUSTIC LINED TRANSFER DUCT
	AIR SUPPLY VALVE
	THERMOSTAT/TEMPERATURE SENSOR
	CONTROL WIRING
	DOMESTIC HOT WATER TANK
	EXHAUST FAN
	FAN COIL UNIT
	MOTORIZED DAMPER
	MAKE-UP AIR UNIT
	PUMP
	THROAT SIZE DIFFUSER TYPE FLOW (L/S)
	DETAIL LOCATION OF DETAIL



1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	PAC

NO.	DATE	REVISION	APPR.
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SCALE   ÉCHELLE			
NTS			

LOCATION   EMPLACEMENT	
17 HANGAR STREET., CFB BORDEN ONTARIO	

PROJECT   PROJET
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SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243	
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TRADE   MÉTIER	DATE
MECHANICAL	2017-05-29

SUBJECT   SUJET	
LEGENDS, DRAWING LIST AND CODE SYNOPSIS	

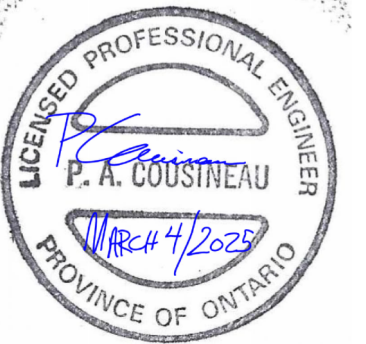
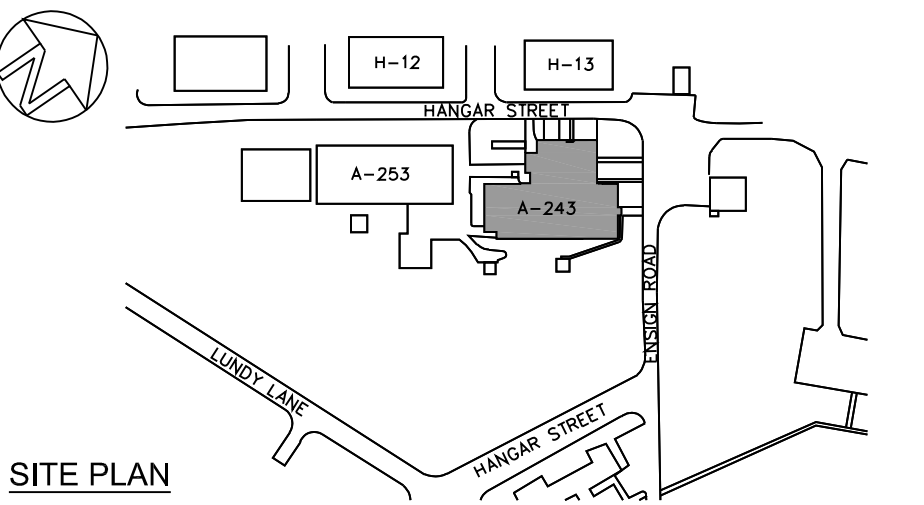
PRODUCTION		REVIEWED   REVU
DESIGNED   ÉTUDIÉ	XX   XX	DES O   AGENT CONC
L.M.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
Q.G./A.L.		J.C.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
P.C.		X.X.
COORDINATION		FIRE   INCENDIE
L.M./P.C.		X.X.

WBS NO.   NO. OTP	FF NO.   NO. DP
N.700113.18.05	BN186586

DWG. NO.   NO. DESSIN	B147-9618/12-400
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ARCHITECTURE | 49



1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	PAC
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NO.	DATE	REVISION	APPR.
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SCALE   ÉCHELLE	1:100	1 0 1 2 3 4 5 6 7m
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LOCATION | EMPLACEMENT  
17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER	DATE
MECHANICAL	2017-05-29

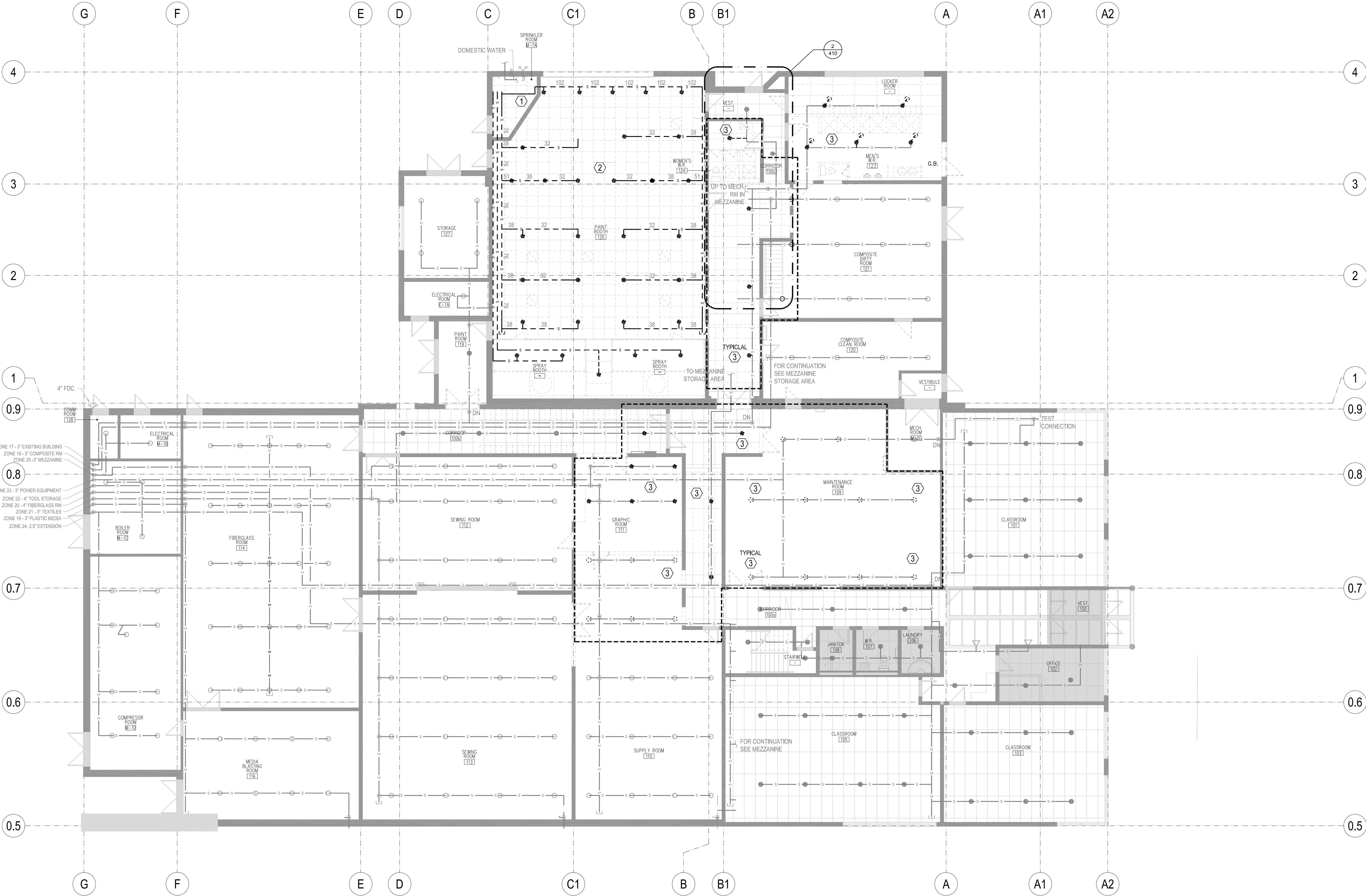
SUBJECT | SUJET

GROUND FLOOR PLAN FIRE PROTECTION  
- DEMOLITION

PRODUCTION	REVIEWED   REVU	
DESIGNED   ÉTUDE	XX   XX	DES O   AGENT CONC
L.M.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
Q.G./A.L.		
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
P.C.		X.X.
COORDINATION		FIRE   INCENDIE
L.M./P.C.		X.X.

WBS NO.   NO. OTP	FF NO.   NO. DP
N.700113.18.05	BN186586

DWG. NO.   NO. DESSIN	B147-9618/12-410
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1  
410  
SCALE: 1:100  
GROUND FLOOR PLAN FIRE PROTECTION - DEMOLITION

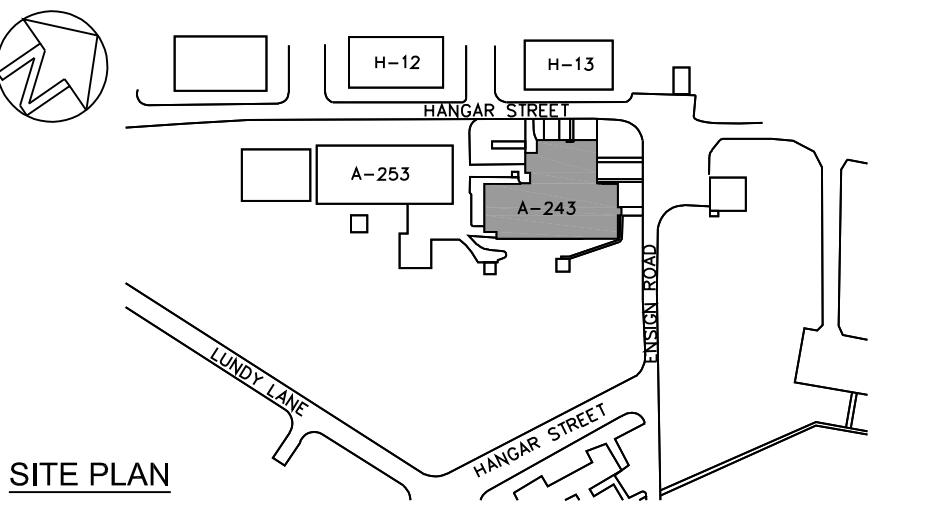
DRAWING NOTES

- DESCRIPTION OF SPRINKLER DEMOLITION WORK
1. REMOVE EXISTING DELUGE SPRINKLER SYSTEM INCLUDING CHECK VALVE, 3 DELUGE VALVES (1-150MM & 2-50MM) IN ITS ENTIRETY INCLUDING ALL DEVICES, STOP THE DEMO AT THE EXISTING CHECK VALVE FOR FIRE DEPARTMENT CONNECTION.
  2. REMOVE EXISTING SPRINKLERS PIPING AND HANGERS IN EXISTING PAINT BOOTH AREA.
  3. REMOVE EXISTING SPRINKLERS CONSERVE PIPING.









1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	PAC
NO.	DATE	REVISION	APPR.
SCALE   ÉCHELLE			
1:100			

LOCATION | EMPLACEMENT

17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
MECHANICAL

DATE  
2017-05-29

SUBJECT | SUJET

GROUND FLOOR PLAN PLUMBING  
- DEMOLITION

PRODUCTION	REVIEWED   REVU	
DESIGNED   ETUDIÉ	XX   XX	DES O   AGENT CONC
L.M.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
Q.G./A.L.		J.C.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
P.C.		X.X.
COORDINATION		FIRE   INCENDIE
L.M./P.C.		X.X.

WBS NO. | NO. OTP  
N.700113.18.05

FF NO. | NO. DP  
BN186586

DWG. NO. | NO. DESSIN  
B147-9618/12-420



1  
420

GROUND FLOOR PLAN PLUMBING - DEMOLITION

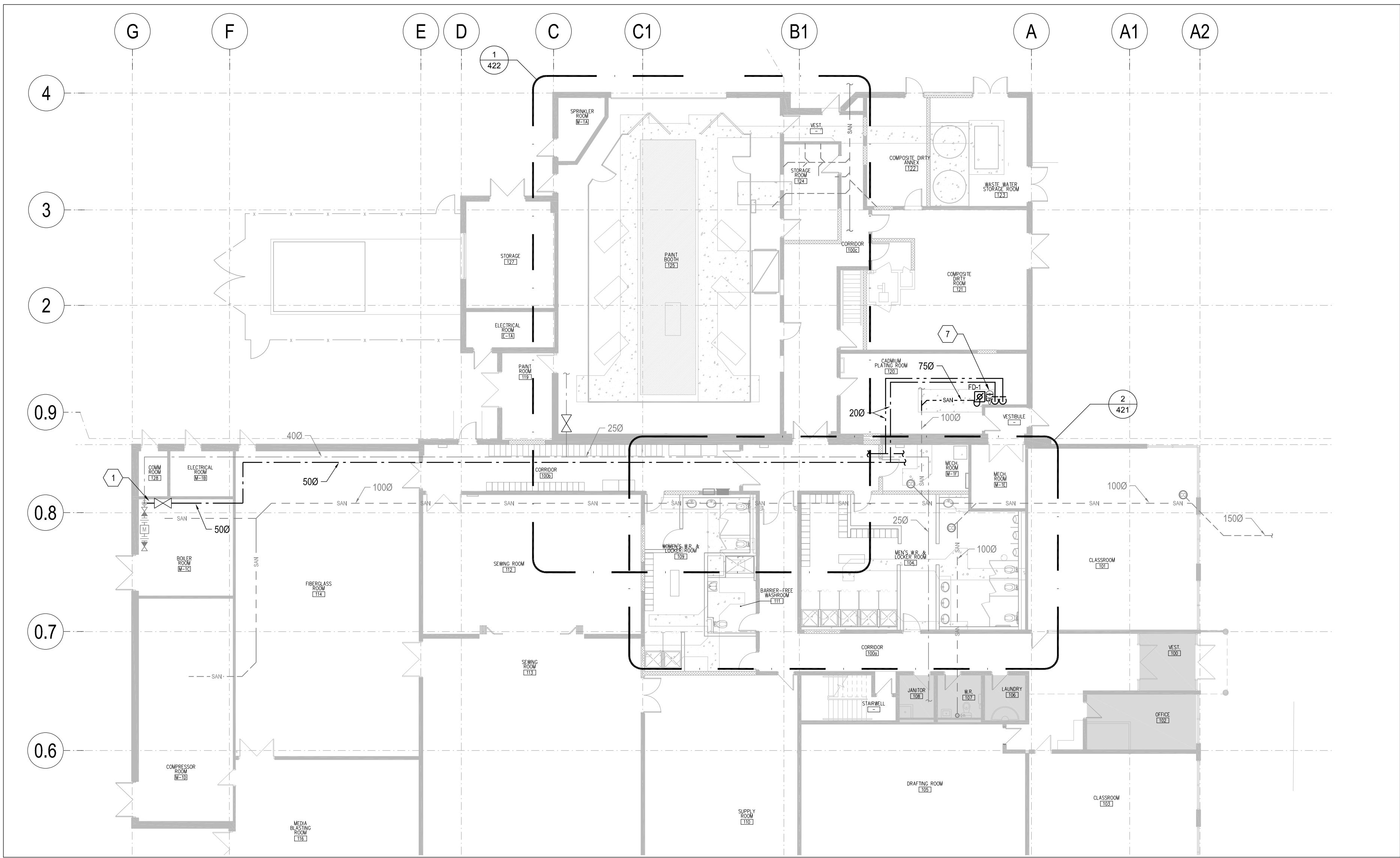
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DRAWING NOTES

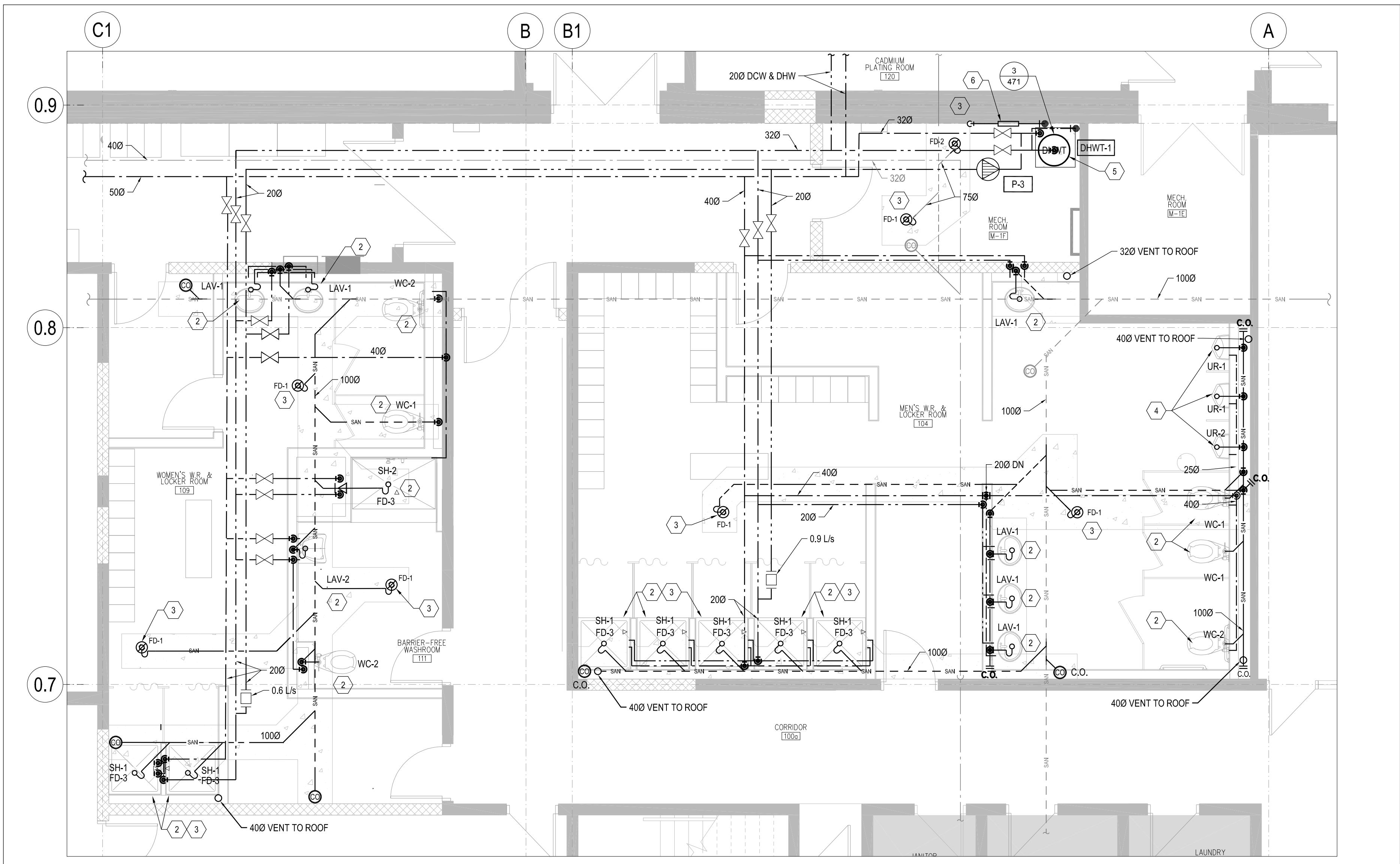
DESCRIPTION OF MECHANICAL DEMOLITION WORK

- EXISTING WATER CLOSETS TO BE DEMOLISHED IN FULL, COMPLETE WITH EXISTING ABOVE SLAB SANITARY DRAINAGE, DOMESTIC COLD WATER AND VENT BRANCHES, VALVES, SUPPORTS AND ACCESSORIES, CAP AND SEAL SANITARY DRAIN BELOW FINISHED FLOOR, CAP & SEAL VENT PIPING AT SOURCE OR ROOF PENETRATION.
- EXISTING LAVATORIES TO BE DEMOLISHED IN FULL, COMPLETE WITH EXISTING FAUCETS, ABOVE SLAB SANITARY DRAINAGE, DOMESTIC HOT/COLD WATER AND VENT BRANCHES, VALVES, SUPPORTS AND ACCESSORIES TO FACILITATE NEW WORKS, AS SHOWN, CAP AND SEAL SANITARY DRAIN BELOW FINISHED FLOOR, CAP & SEAL VENT PIPING AT SOURCE OR ROOF PENETRATION.
- EXISTING SHOWERS TO BE DEMOLISHED, COMPLETE WITH ALL FAUCETS WITH SHOWERHEAD, DOWNSPOUT, MIXING VALVE, ETC, ABOVE SLAB SANITARY, DOMESTIC HOT/COLD WATER AND VENT BRANCHES, VALVES, SUPPORTS AND ACCESSORIES, CAP AND SEAL SANITARY DRAIN BELOW FINISHED FLOOR, CAP & SEAL VENT PIPING AT SOURCE OR ROOF PENETRATION.
- EXISTING URINALS TO BE DEMOLISHED IN FULL, COMPLETE WITH ASSOCIATED SANITARY DRAINAGE, DOMESTIC COLD WATER AND VENT PIPING, VALVES, SUPPORTS AND ACCESSORIES, CAP AND SEAL SANITARY DRAIN BELOW FINISHED FLOOR, CAP & SEAL VENT PIPE BELOW ROOF PENETRATION.
- EXISTING EYEWASH AND ASSOCIATED MIXING VALVE TO BE RELOCATED, REFER TO NEW WORK DWG 421 FOR NEW LOCATION.
- DISCONNECT AND REMOVE EXISTING COMPRESSED AIR PIPING, ASSOCIATED HOSE REEL, VALVES, AND FITTINGS.
- DISCONNECT AND REMOVE EXISTING COMPRESSED AIR PIPING, ASSOCIATED VALVES, AND FITTINGS.
- DISCONNECT AND REMOVE EXISTING COMPRESSED AIR HOSE REELS (TYPICAL OF 3), ASSOCIATED MOUNTING BRACKET, FILTER-REGULATORS, AND ACCESSORIES.
- EXISTING DOMESTIC COLD WATER HOSE REEL AND ASSOCIATED PIPING TO BE REMOVED, CAP AND SEAL BRANCH PIPE AT SOURCE.
- EXISTING EYE WASH/DRENCH SHOWER AND ASSOCIATED MIXING VALVE TO BE REMOVED, RETAIN FOR RE-INSTALLATION AS SHOWN ON "NEW WORK" PLAN, CUT BACK DOMESTIC HOT AND COLD WATER, CAP AT SOURCE, DISCONNECT SANITARY DRAIN, CAP AND SEAL BELOW FINISHED FLOOR.
- DISCONNECT AND REMOVE EXISTING COMPRESSED AIR PIPING AS INDICATED, EXTEND PIPING AS SHOWN ON NEW WORK PLAN.





1  
421  
SCALE: 1:150  
GROUND FLOOR PLAN PLUMBING - NEW WORK



2  
421  
SCALE: 1:50  
ENLARGED GROUND FLOOR PART PLAN - PLUMBING - NEW WORK

DRAWING NOTES

DESCRIPTION OF MECHANICAL WORK:

1.

PROVIDE INSULATED DOMESTIC COLD WATER PIPING AS INDICATED. MODIFY EXISTING PIPING AT BUILDING DOMESTIC WATER METER FOR NEW CONNECTION TO EXISTING PIPING.

2.

INSTALL NEW PLUMBING FIXTURE CW ASSOCIATED TRIM, SUPPLIED BY DCC REPRESENTATIVE. PROVIDE NEW FLOOR MOUNTED WALL CARRIER FOR WATER CLOSETS AND WALL MOUNTED LAVATORIES. PROVIDE NEW DOMESTIC HOT, DOMESTIC COLD, SANITARY DRAIN, AND VENT PIPING. EXTEND NEW BRANCH PIPING TO NEW SERVICE MAINS.

3.

PROVIDE NEW FLOOR DRAIN CW TRAP SEAL PRIMER. EXTEND NEW SANITARY DRAIN, VENT, AND DOMESTIC WATER PIPING TO EXISTING BUILDING SERVICES.

4.

INSTALL PROVIDE NEW URINAL CW ASSOCIATED TRIM, SUPPLIED BY DCC REPRESENTATIVE. PROVIDE NEW FLOOR MOUNTED WALL CARRIER. PROVIDE NEW DOMESTIC COLD, SANITARY DRAIN, AND VENT PIPING. EXTEND NEW BRANCH PIPING TO NEW SERVICE MAINS. PROVIDE CLEANOUTS TO SERVE VERTICAL DRAINAGE PIPING FROM THE WALL HUNG URINAL EXTEND ABOVE THE FLOOR LEVEL RIM OF THE EACH URINAL.

5.

PROVIDE GAS FIRED DOMESTIC WATER HEATER CW ASSOCIATED RECIRCULATION, PUMP, EXPANSION TANK, DOMESTIC HOT, DOMESTIC COLD, AND GAS PIPING. EXTEND BRANCH PIPING TO NEW SERVICE MAINS.

6.

PROVIDE 20 DIA CONDENSATE DRAIN FROM DHWT VENT, EXTEND NEW PIPING THROUGH NEUTRALIZING TANK, DISCHARGE TO DRAIN.

7.

PROVIDE EYE WASH/DRENCH SHOWER ASSMBLY CW ASSOCIATED MIXING VALVE, PIPE AND FITTINGS.

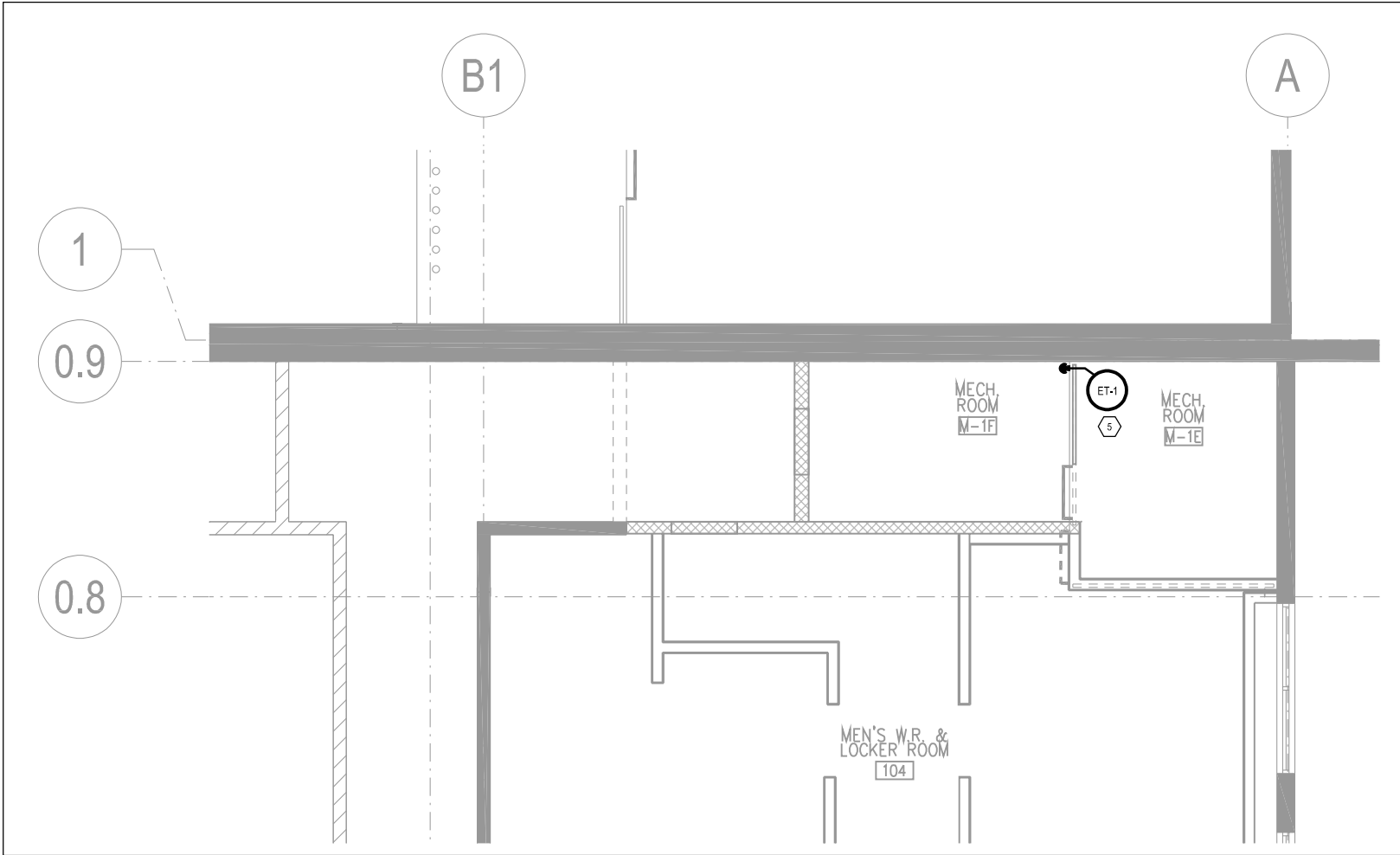
PLUMBING FIXTURE SERVICE CONNECTION SCHEDULE					
FIXTURE TYPE	QUANTITY	SANITARY (mm)	VENT (mm)	COLD WATER (mm)	HOT WATER (mm)
WATER CLOSET	1	100	75	25	-
	2 TO 4			40	-
	5 TO 12			50	-
URINAL	1	50	40	25	-
	2 TO 3	75	50	40	-
LAVATORY	1	32	25	20	20
	2 OR MORE	40	32	25	25
SHOWER	1	FD-3		12	12
	2 OR MORE			20	25
MV-1	1	-	-	25	25
FLOOR DRAIN	1	75	50	10	-
				TSP	

NOTES:

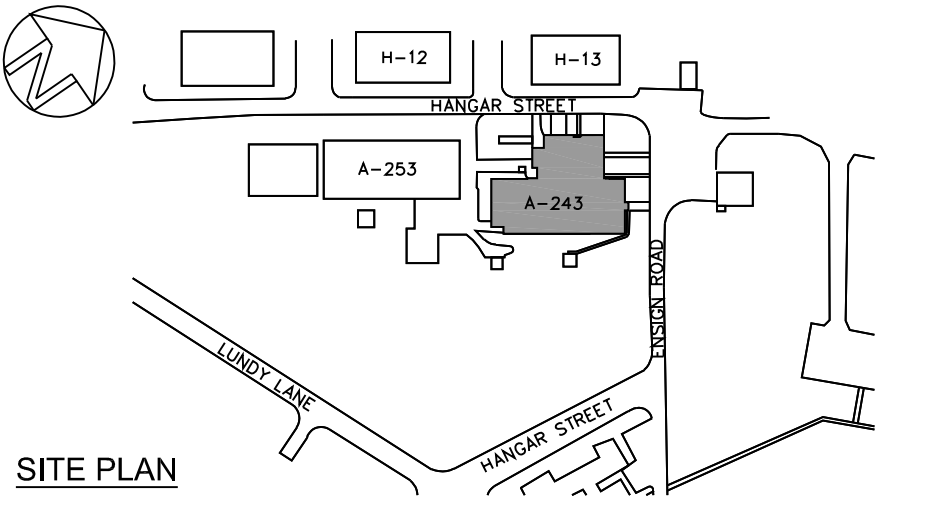
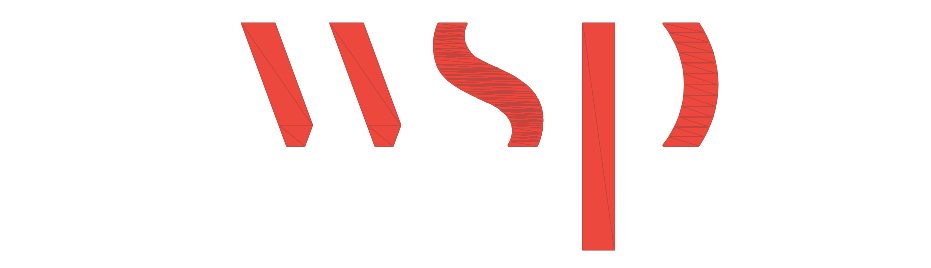
VENT SIZES INDICATED ARE MINIMUM. CONNECTED SIZE SHALL BE CALCULATED IN ACCORDANCE WITH CODE, BASED ON INSTALLATION.

MINIMUM SIZE OF BURIED SANITARY SHALL BE 75mm.

FOR PLUMBING FIXTURE CONNECTION SIZES NOT INDICATED, REFER TO PLUMBING FIXTURE SCHEDULE.



2  
421  
SCALE: 1:50  
MEZZANINE ABOVE MECH RM M-1E - PLUMBING NEW WORK



1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	PAC
NO.	DATE	REVISION	APPR.
SCALE   ÉCHELLE			
1:100			

LOCATION | EMPLACEMENT

17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER

MECHANICAL

DATE

2017-05-29

SUBJECT | SUJET

GROUND FLOOR PLAN -  
NEW WORK

PRODUCTION	DESIGNED   ÉTUDE	REVIEWED   REVU	DES O   AGENT CONC
L.M.	XX   XX	X.X.	X.X.
DRAWN   DESSINÉ	Q.G./A.L.	PROJ MGR   GEST PROJ	J.C.
CHECKED   VÉRIFIÉ	L.M.	DES MGR   GEST CONC	X.X.
COORDINATION	L.M./P.C.	FIRE   INCENDIE	X.X.

WBS NO. | NO. OTP

N.700113.18.05

FF NO. | NO. DP

BN186586

DWG. NO. | NO. DESSIN


B147-9618/12-421



Cette conception est un instrument de service protégé par le droit d'auteur. Le droit d'auteur sur l'instrument de service de l'expert-conseil appartient à ce dernier. Les exemplaires de ce dessin, y compris les exemplaires électroniques, ne peuvent servir qu'aux fins prévues, et ce, qu'une fois, sur le même chantier et pour le même projet. Ils ne peuvent être offerts en vente ni transférés sans le consentement écrit exprès de l'expert-conseil.

נספח



1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	PAC
NO.	DATE	REVISION	APPR.
SCALE   ÉCHELLE 1:100			

PROJECT | PROJET

TRADE   MÉTIER MECHANICAL	DATE 2017-05-29
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SUBJECT | SUJET

PRODUCTION | REVIEWED | REVU

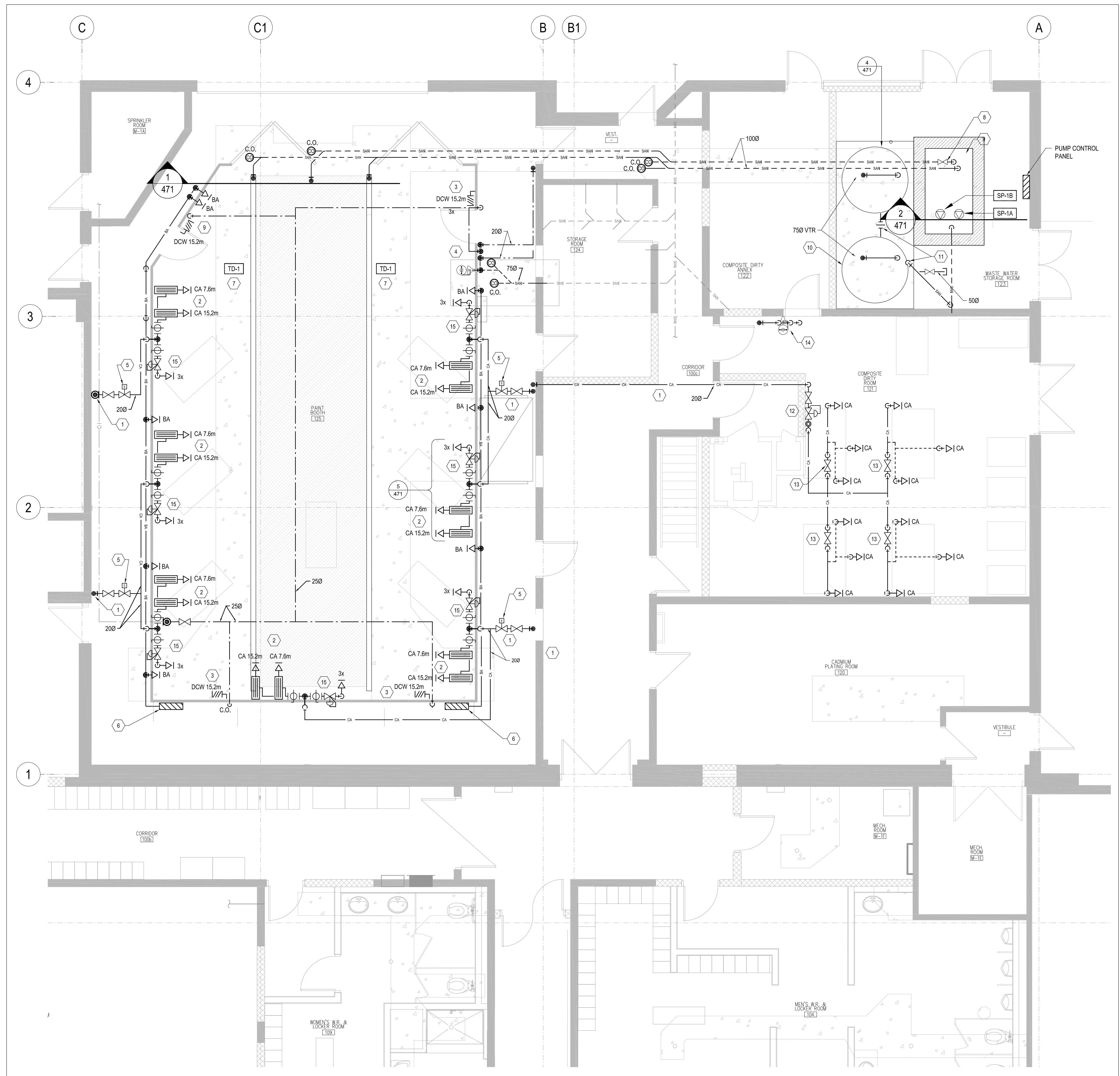
PRODUCTION	REVIEWED   REVU	
DESIGNED   ÉTUDIÉ L.M.	XX   XX X.X.	DES O   AGENT CONC X.X.
DRAWN   DESSINÉ Q.G./A.L.		PROJ MGR   GEST PRO. J.C.
CHECKED   VÉRIFIÉ L.M.		DES MGR   GEST CONCO X.X.
COORDINATION L.M./P.C.		FIRE   INCENDIE X.X.

WBS NO.   NO. OTP N.700113.18.05	PF NO.   NO. DP BN186586
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DWG. NO.   NO. DESSIN	D 117 2012/12 100
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B147-9618/12-422

Canada



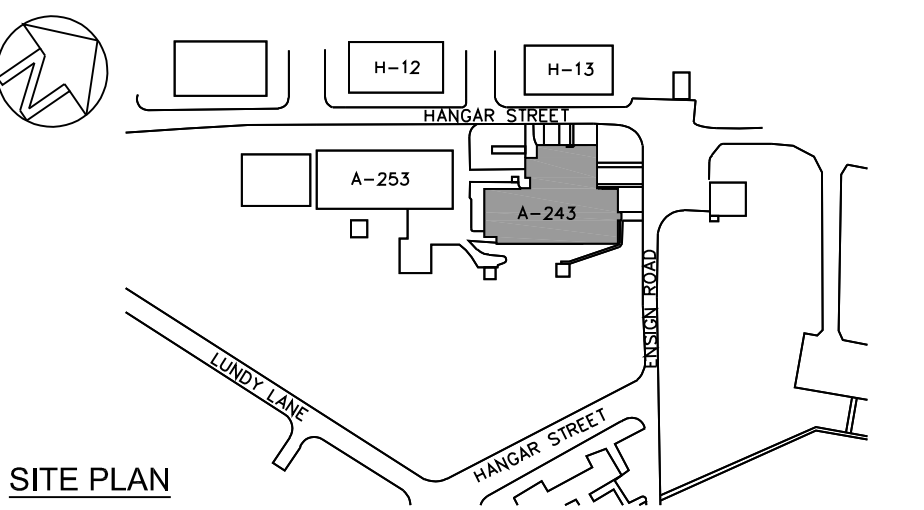
## DRAWING NOTES

DESCRIPTION OF MECHANICAL WORK:

1. PROVIDE NEW COMPRESSED AIR SERVICE PIPE, EXTEND TO EXISTING BUILDING SERVICES.
2. PROVIDE NEW WALL MOUNTED HOSE REEL ASSEMBLY CW H/VP SPRAY GUN QUICK-CONNECT, EXTEND NEW COMPRESSED AIR BRANCH PIPE TO NEW SERVICE MAIN.
3. PROVIDE NEW WALL MOUNTED HOSE REEL ASSEMBLY CW 20 DIA, HOSE-BIB CONNECTION, EXTEND NEW DOMESTIC COLD WATER BRANCH PIPE TO NEW SERVICE MAIN.
4. RELOCATE EXISTING EYEWASH/SHOWER STATION AND ASSOCIATED MIXING VALVE AS SHOWN, EXTEND DOMESTIC HOT & COLD WATER AND SANITARY DRAIN PIPE TO EXISTING BUILDING SERVICES.
5. PROVIDE 2-WAY COMPRESSED AIR SOLENOID VALVE INTERLOCKED WITH BOOTH VENTILATION SYSTEM.
6. PROVIDE ROUGH-IN FOR BREATHING AIR DISTRIBUTION HEADER AND PANEL ASSEMBLY, EXTEND NEW BRANCH PIPING TO QUICK-CONNECT WITH PAINTBOOTH ENCLOSURE.
7. PROVIDE NEW SS TRENCH DRAIN, EXTEND BELOW SLAB SANITARY DRAIN PIPE TO NEW SUMMERSIBLE SUMP SP-4A & SP-1B.
8. PROVIDE LOW POINT DRAIN CONNECTION CW ASSOCIATED SHUT-OFF VALVE FOR DUCT CLEANING MAINTENANCE.
9. PROVIDE DUPLEX SUMMERSIBLE PUMP STATION CW ASSOCIATED CONTROL PANEL AND ALARMS, EXTEND NEW PUMPED SANITARY TO HAZARDOUS WASTE HOLDING TANK.
10. PROVIDE 4500L HAZARDOUS WASTE HOLDING TANK (TYPICAL OF 2), PROVIDE NEW TANK VENT EXTENDED THROUGH ROOF TO ATMOSPHERE, PROVIDE VALVED & CAPPED DRAIN DOWN PUMP CONNECTION.
11. PROVIDE NEW PUMPED WASTE CONNECTION AT TANK TOP, PROVIDE 100 DIA, EQUALIZING CONNECTION BETWEEN TANKS.
12. PROVIDE MASTER SHUT-OFF VALVE CW REGULATOR AND OIL/WATER SEPARATOR.
13. PROVIDE FILTER/REGULATOR ASSEMBLY CW MANIFOLD DISTRIBUTION PIPING AND ISOLATION VALVE, PROVIDE QUICK-CONNECTS CW 1/4 IN FEMALE RECEIVER.
14. RELOCATE THE EXISTING EYEWASH AND ASSOCIATED MIXING VALVE S AS SHOWN, EXTEND DOMESTIC HOT & COLD WATER PIPING AND SANITARY DRAIN LINE TO EXISTING BUILDING SERVICES.
15. PROVIDE FILTER/REGULATOR CW ASSOCIATED VALVES, FITTINGS, AND 3 X FEMALE QUICK CONNECTS, EXTEND TO NEW COMPRESSED AIR DISTRIBUTION PIPING.

1 ENLARGED GROUND FLOOR PART PLAN - PLUMBING & UTILITIES - NEW WORK  
422 SCALE: 1:50





1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	PAC
NO.	DATE	REVISION	APPR.
SCALE   ÉCHELLE			
1:100			

LOCATION | EMPLACEMENT  
17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
MECHANICAL

DATE  
2017-05-29

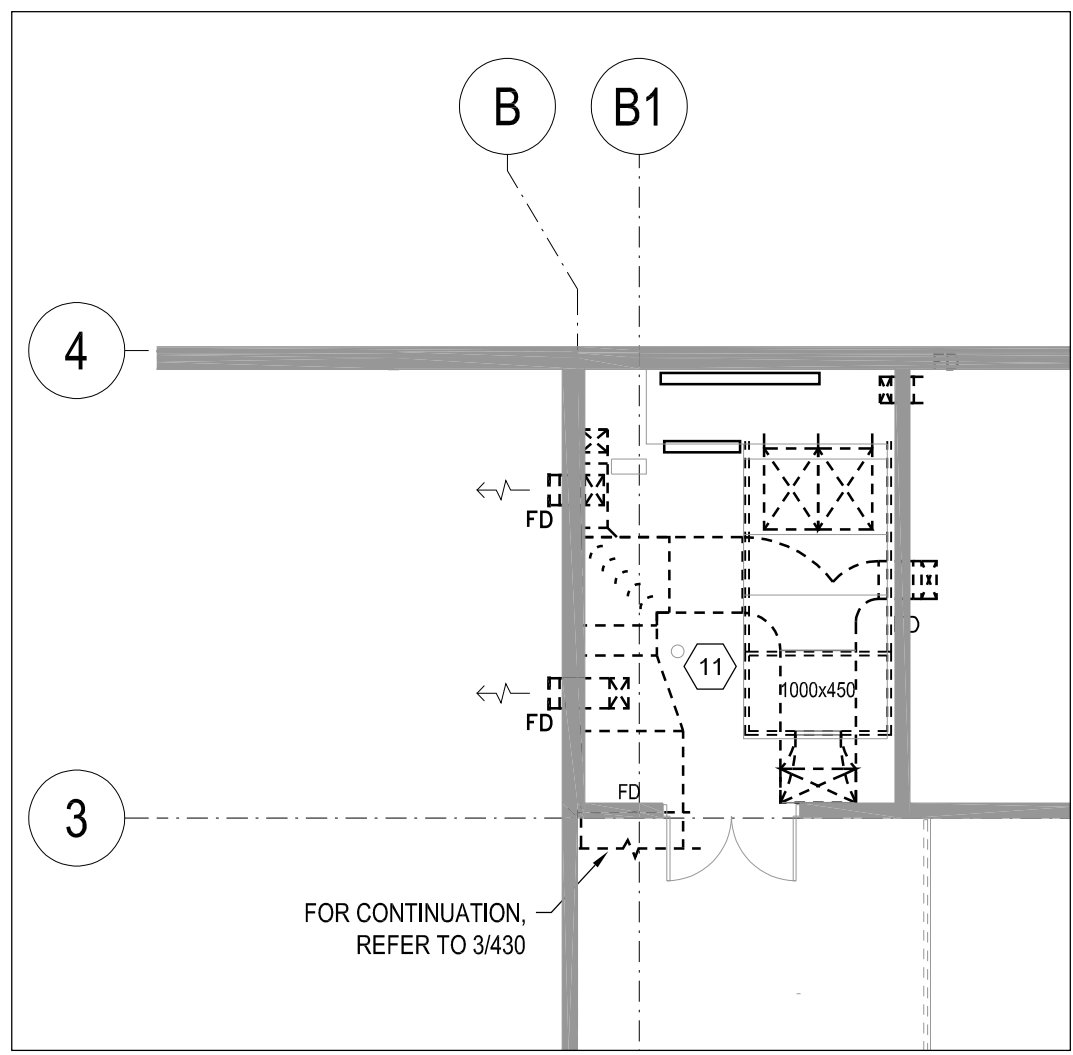
SUBJECT | SUJET  
GROUND FLOOR PLAN HVAC  
- DEMOLITION

DESIGNED   ETUDIÉ	XX   XX	DES O   AGENT CONC
L.M.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
J.C.		J.C.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
L.M.		X.X.
COORDINATION		FIRE   INCENDIE
L.M./P.C.		X.X.

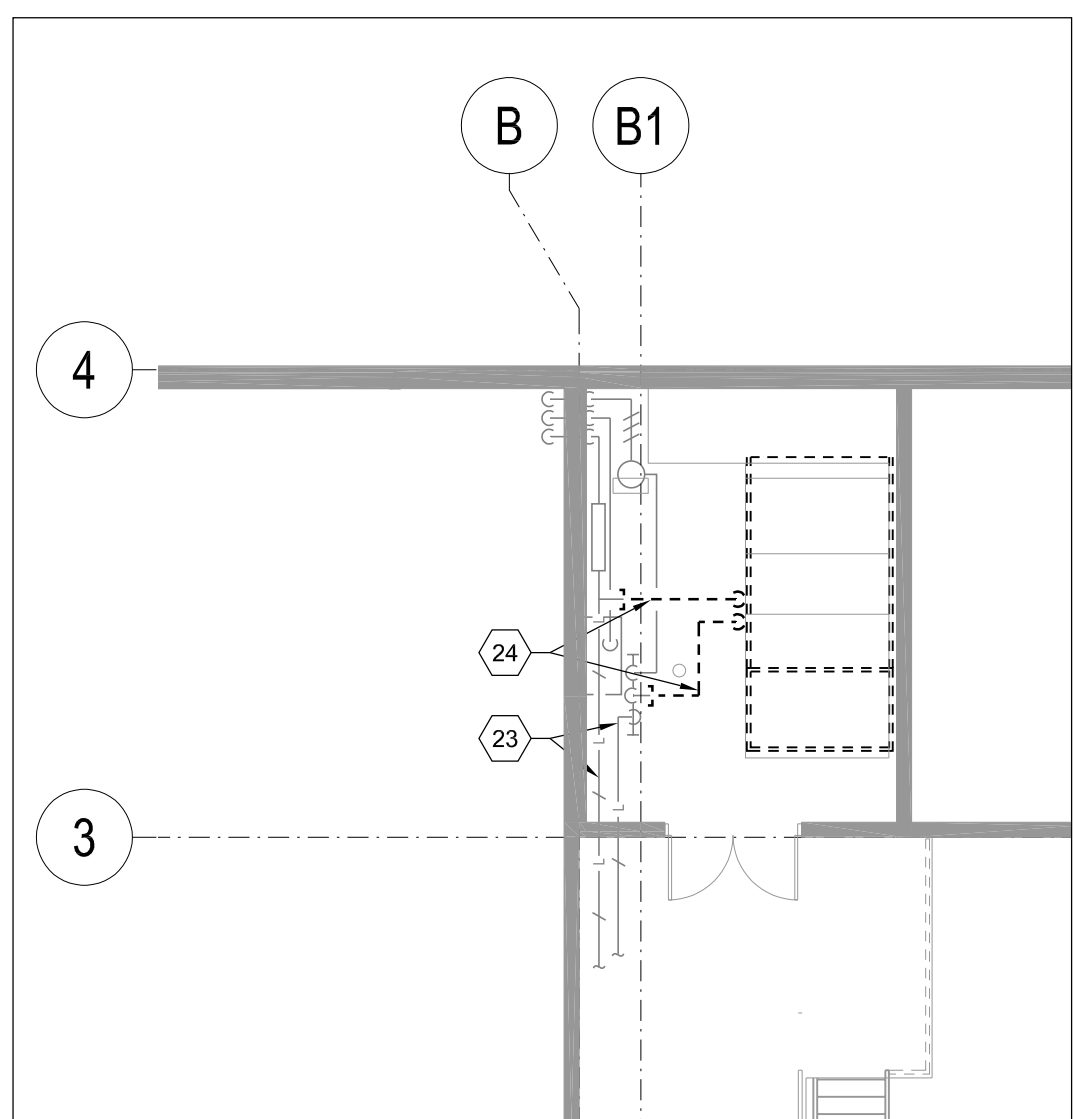
WBS NO. | NO. OTP  
N.700113.18.05

FF NO. | NO. DP  
BN186586

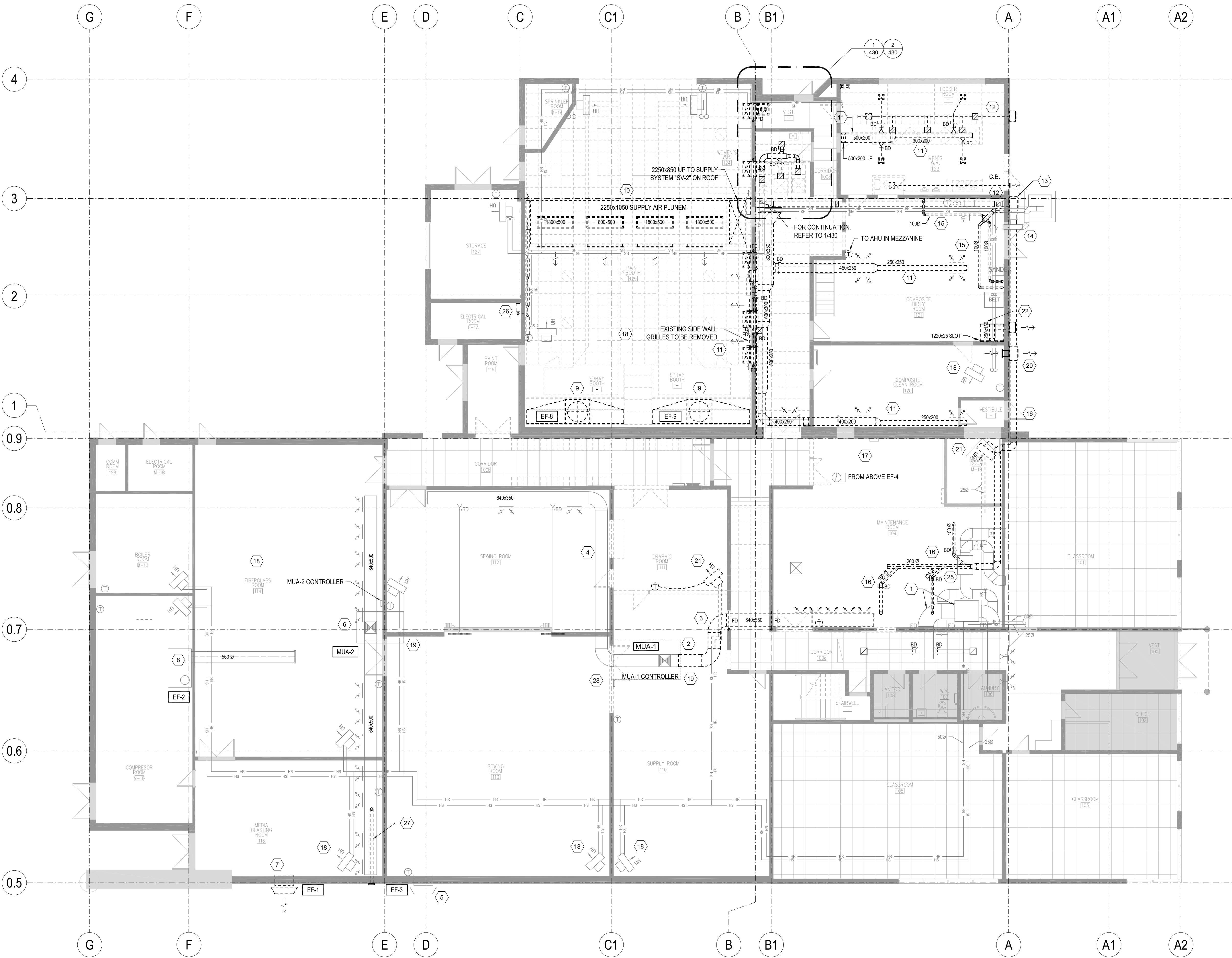
DWG. NO. | NO. DESSIN  
B147-9618/12-430



1  
430  
MEZZANINE MECH ROOM - HVAC DEMO  
SCALE: 1:100



2  
430  
MEZZANINE MECH ROOM - UTILITIES DEMO  
SCALE: 1:100



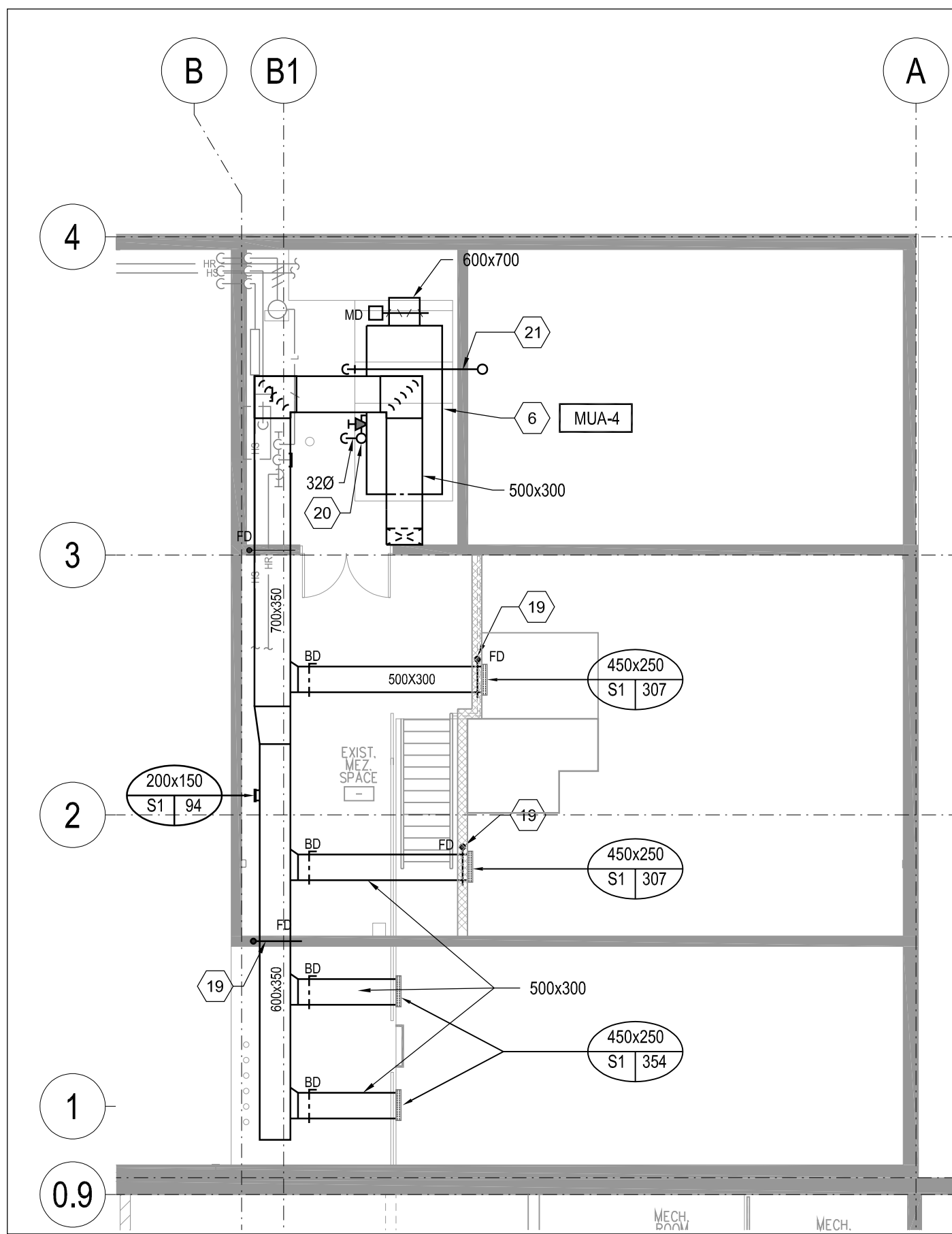
3  
430  
GROUND FLOOR PLAN HVAC - DEMOLITION  
SCALE: 1:100

DRAWING NOTES:

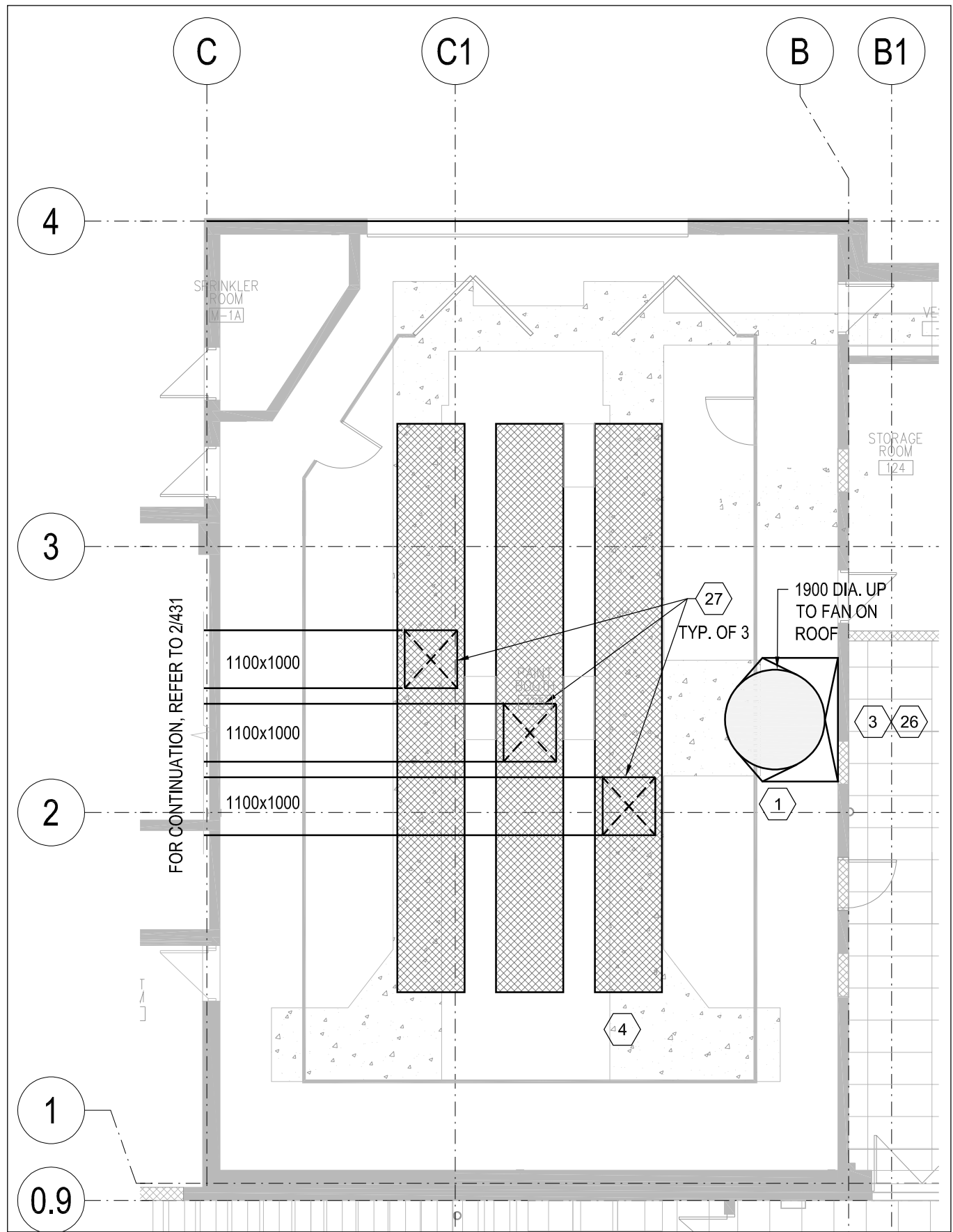
DESCRIPTION OF MECHANICAL DEMOLITION WORK

- EXISTING FAN-COIL UNIT (FC-1) AND ALL DUCT DISTRIBUTION, SA DIFFUSERS AND RA GRILLES TO REMAIN.
- EXISTING MAKE-UP AIR UNIT (MUA-1) ON ROOF ABOVE TO REMAIN.
- EXISTING 640x350 SUPPLY AIR DUCT TO BE DEMOLISHED, COMPLETE WITH ALL DIFFUSERS (TYPICAL 5), DAMPERS DUCTWORK SUPPORTS AND ACCESSORIES.
- EXISTING 640x350 SUPPLY AIR DUCT AND ALL DIFFUSERS TO REMAIN, AS INDICATED. REBALANCE AS SHOWN ON NEW WORK PLANS.
- EXISTING WALL MOUNTED EXHAUST FAN (EF-3) TO REMAIN.
- EXISTING MAKE-UP AIR UNIT (MUA-2) ON ROOF ABOVE AND ALL DUCT DISTRIBUTION, DIFFUSERS TO REMAIN.
- EXISTING WALL MOUNTED EXHAUST FAN (EF-1) TO BE REPLACED WITH NEW EXHAUST FAN (EF-1), REFER TO MECHANICAL DRAWING 431 FOR DETAILS.
- EXISTING EXHAUST FAN (EF-2) AND DUCTWORK TO REMAIN.
- DISCONNECT AND REMOVE TWO EXISTING ROOF EXHAUST FANS (EF-8 & EF-9), COMPLETE WITH ALL ASSOCIATED DUCTWORK, GRILLES, GUY WIRES, EXHAUST STACK AND CONTROLS. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF REPAIR.
- DISCONNECT AND REMOVE EXISTING ROOF MOUNTED MAKE-UP SYSTEM (SV-2), COMPLETE WITH ALL ASSOCIATED DUCTWORK, SUPPLY AIR PLENUM, DIFFUSERS, AND CONTROLS.
- EXISTING INDOOR MAKE-UP AIR UNIT (LOCATED IN EXISTING MEZZANINE MECHANICAL ROOM) TO BE DEMOLISHED IN FULL, COMPLETE WITH EXISTING STEAM HEATING COIL, STEAM AND CONDENSATE PIPING, DUCTWORK, DIFFUSERS, SUPPORTS AND ACCESSORIES. CAP AND SEAL STEAM AND CONDENSATE PIPING SERVICES AT MAINS, AS INDICATED.
- DISCONNECT AND REMOVE EXISTING WALL MOUNTED EXHAUST FAN (FOR EXISTING MEN'S WASHROOM (123) AND LOCKER ROOM (122) EXHAUST), ASSOCIATED DUCTWORK, GRILLES, AND CONTROLS. ALL EXISTING OPENING IS TO BE PATCHED AND REPAIRED. REFER TO ARCH DWGS FOR DETAILS.
- DISCONNECT AND REMOVE EXISTING WALL MOUNTED EXHAUST FAN (FOR EXISTING WOMEN'S WASHROOM (124) EXHAUST), ASSOCIATED DUCTWORK, GRILLES, AND CONTROLS.
- EXISTING DUST COLLECTOR TO REMAIN.
- EXISTING EXHAUST DUCTS TO EXISTING DUST COLLECTOR IN EXISTING COMPOSITE DIRTY ROOM (121) TO BE REMOVED, AS INDICATED.
- DISCONNECT AND REMOVE EXISTING EXHAUST DUCTWORK, AS INDICATED FOR EXISTING MAINTENANCE ROOM (109), CAP AND SEAL AT MAIN.
- ABANDONED ROOF MOUNTED EXHAUST FAN (EF-4) TO REMAIN, AS INDICATED.
- ALL EXISTING HEATING SYSTEM (INCLUDING ALL EXISTING BASEBOARD HEATERS, UNIT HEATERS, FORCE FLOW HEATERS ETC.) TO REMAIN, AS INDICATED.
- OUTLINE OF GAS FIRED MAKE-UP AIR UNIT ON ROOF ABOVE AS INDICATED.
- DISCONNECT AND REMOVE EXISTING WALL MOUNTED FAN, DUCTWORK, SUPPORTS, AND CONTROLS.
- DISCONNECT AND REMOVE EXISTING HYDRONIC UNIT HEATER, RETAIN FOR RE-USE AS SHOWN ON NEW WORK PLAN. TEMPORARILY CAP AND SEAL EXISTING HWS & HWR BRANCH PIPING.
- EXISTING GENERAL EXHAUST HOOD, ASSOCIATED WALL MOUNTED FAN, DUCTWORK, SUPPORTS, AND CONTROLS TO BE REMOVED.
- EXISTING LOW PRESSURE STEAM LINE AND ASSOCIATED STEAM EQUIPMENT TO REMAIN, AS INDICATED.
- DISCONNECT AND REMOVE EXISTING LOW PRESSURE STEAM AND CONDENSATE PIPING SERVING EXISTING AIR HANDLING UNIT STEAM COILS. CAP PIPING AT MAIN BRANCH AS INDICATED.
- EXISTING HRV UNIT (HRV-2) AND ALL DUCT DISTRIBUTION TO REMAIN.
- DISCONNECT AND REMOVE EXISTING LIGHTING BOX FAN, ASSOCIATED PIPING AND CONTROLS.
- REMOVE ABANDONED DUCT, INSULATE CAP AND SEAL WALL TERMINATION.
- DISCONNECT AND REMOVE EXISTING MUA CONTROLLER AND ASSOCIATED WIRING. RETAIN FOR RE-USE IN NEW LOCATION AS SHOWN ON NEW WORK PLAN. EXTEND NEW WIRING FROM CONTROLLER TO MUA UNIT ON ROOF ABOVE.

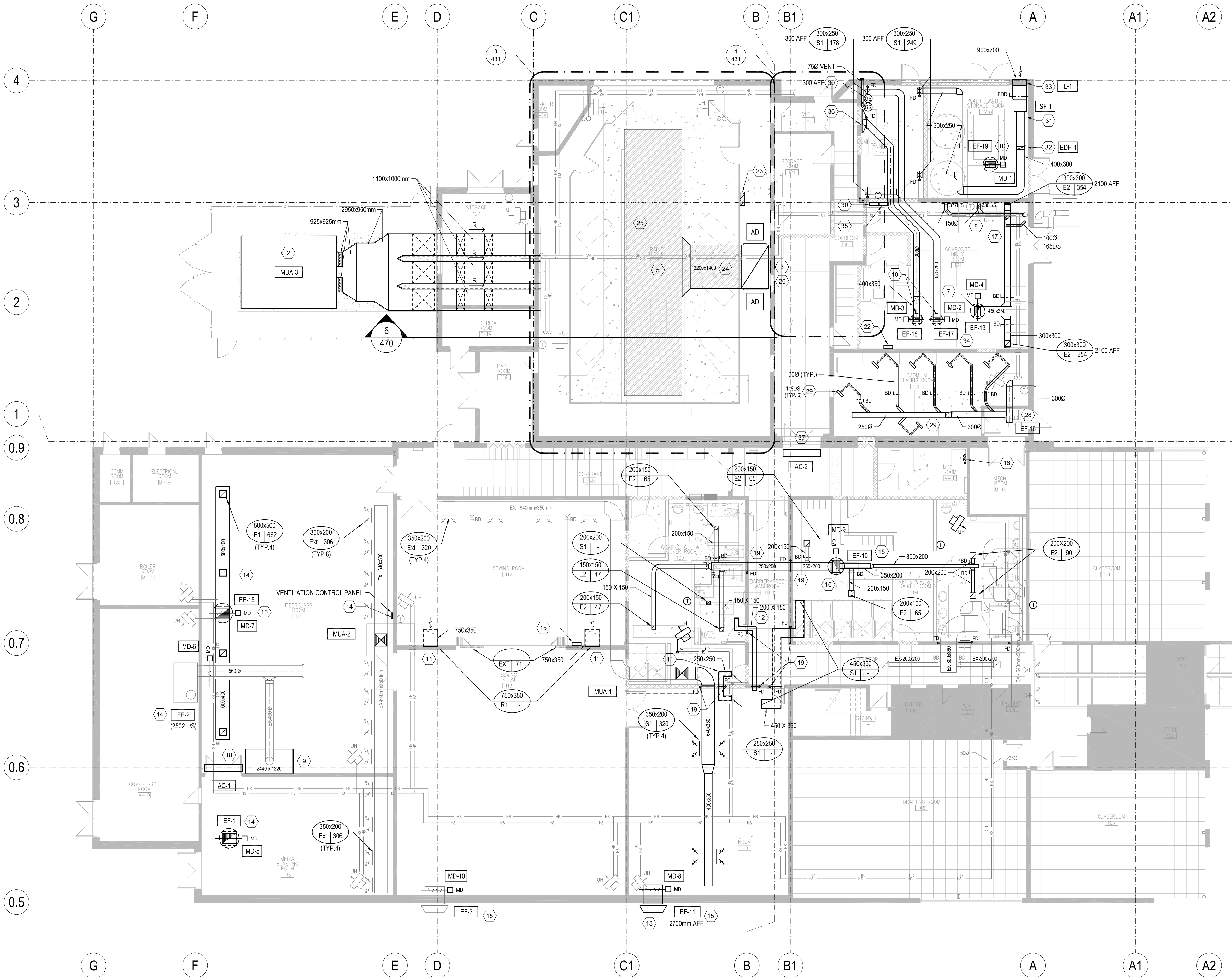




1 MEZZANINE MECH ROOM - NEW WORK  
431 SCALE: 01:100



3 PART FLOOR PLAN - BOOTH HIGH LEVEL  
431 SCALE: 1:100



2 GROUND FLOOR PLAN HVAC - NEW WORK  
431 SCALE: 1:100



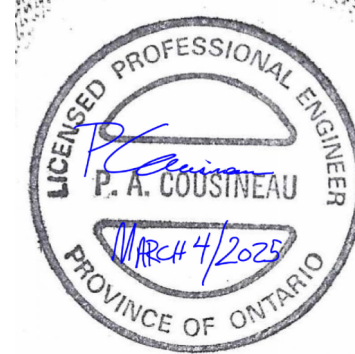
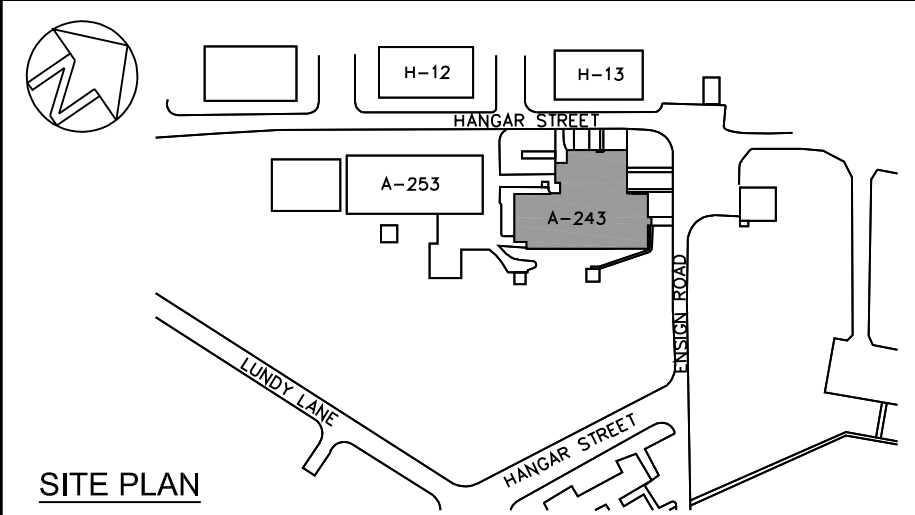
#### DRAWING NOTES:

##### DESCRIPTION OF MECHANICAL WORK

1. PROVIDE PAINT BOOTH VENTILATION ENCLOSURE, ASSOCIATED FILTRATION, INTERLOCKS, AND CONTROLS. APPROXIMATE OUTSIDE DIMENSIONS 8500 x 14000 x 3000. CONTRACTOR SHALL COORDINATE INSTALLATION OF ASSOCIATED EXHAUST FAN AND MAKE-UP AIR UNIT FOR A COMPLETE AND OPERATIONAL SYSTEM.
2. PROVIDE GAS FIRED MAKE-UP AIR UNIT C/W HORIZONTAL DISCHARGE, 900mm SEISMIC RATED ROOF CURB, ASSOCIATED DUCTWORK, PIPING, AND CONTROLS. COORDINATE OPERATIONAL CONTROLS AND SUPPLY AIR DISTRIBUTION CONNECTION TO PLENUM WITH PAINT BOOTH MANUFACTURER.
3. PROVIDE MIXED-FLOW INLINE EXHAUST FAN (EF-14) LOCATE ABOVE ROOF. PROVIDE ASSOCIATED EXHAUST STACK AND INLET DUCTWORK IN TRENCH BELOW FINISHED FLOOR, CONNECT TO FILTERED FLOOR GRATE AT BOOTH INTERIOR.
4. PROVIDE FILTERED SUPPLY PLENUM AT BOOTH CEILING. PROVIDE ASSOCIATED DUCT DISTRIBUTION FROM MAKE-UP AIR UNIT ON GRADE. COORDINATE ALL INTERCONNECTING DUCTWORK WITH BOOTH INSTALLER.
5. EXHAUST AIR PLENUM INSTALLED BELOW FINISHED FLOOR SHALL BE SLOPED TO LOW POINT DRAIN.
6. PROVIDE INDOOR MAKE-UP AIR UNIT (MUA-4) LOCATE IN MEZZANINE LEVEL EXISTING MECHANICAL ROOM. CONNECT TO EXISTING AIR INTAKE LOUVER FOR FRESH AIR INTAKE.
7. PROVIDE ROOF MOUNTED EXHAUST FAN (EF-13) FOR COMPOSITE DIRTY CARBON FIBRE WORKSHOP (121) EXHAUST.
8. PROVIDE NEW DUCTWORK TO TENANT EQUIPMENT. EXTEND TO EXISTING DUST COLLECTOR ASSEMBLY, BALANCE TERMINAL POINTS TO QUANTITIES INDICATED. ALLOW FOR ONE (1) FULL CHANGE OF BELTS, SHEAVES, AND PULLEY.
9. EXISTING CANOPY HOOD OF APPROXIMATE DIMENSIONS 2400 X 1220 X 800 WILL BE SUPPLIED TO CONTRACTOR DURING CONSTRUCTION. CONTRACTOR SHALL INSTALL HOOD AS INDICATED. PROVIDE NEW DUCT CONNECTIONS TO EXISTING... TEST, ADJUST, AND BALANCE ASSOCIATED EXISTING FAN TO CAPACITY INDICATED. ALLOW FOR ONE FULL CHANGE TO BELTS, SHEAVES, AND PULLEY.
10. PROVIDE ROOF MOUNTED EXHAUST FAN C/W ASSOCIATED DUCTWORK, GRILLES, AND CONTROLS.
11. PROVIDE ACOUSTICALLY LINED TRANSFER DUCT C/W ASSOCIATED GRILLES AND SUPPORTS.

12. PROVIDE ACOUSTICALLY LINED TRANSFER DUCT WITHIN SUSPENDED CEILING PLENUM. MOUNT AS HIGH AS POSSIBLE.
13. PROVIDE NEW WALL MOUNTED EXHAUST FAN, MOUNTED AS HIGH AS POSSIBLE.
14. PROVIDE LOCAL CONTROLLER, AUDIBLE AND VISUAL ALARM FOR MUA-2, EF-1, EF-2 AND EF-15. EMCS SHALL MONITOR FAN (SUPPLY AND EXHAUST) STATUS, SUPPLY AIR FLOW, AND MUA-2 FILTER DP. ANNUNCIATE ALL FAILURES AT LOCAL CONTROLLER.
15. PROVIDE LOCAL CONTROLLER, AUDIBLE AND VISUAL ALARM FOR MUA-1, EF-3, EF-10 & EF-11. EMCS SHALL MONITOR FAN (SUPPLY AND EXHAUST) STATUS, SUPPLY AIR FLOW, AND MUA-1 FILTER DP. ANNUNCIATE ALL FAILURES AT LOCAL CONTROLLER.
16. PROVIDE x2 1500 COMBUSTION AIR SUPPLY DUCTS TO DOMESTIC HOT WATER TANK. COMBUSTION AIR SUPPLY DUCTS SHALL BE TERMINATED WITHIN 300mm FROM FINISHED CEILING AND TERMINATED WITHIN 300mm OF FINISHED FLOOR. PROVIDE 750 COMBUSTION AIR VENT THROUGH ROOF.
17. PROVIDE DUST COLLECTION TERMINAL AND HOOD ASSEMBLY FOR CONNECTION TO EXISTING DUST EXTRACTION SYSTEM. FABRICATED TERMINALS SHALL INCLUDE FLOOR SWEEP, BAND SAW HOOD, AND DRILL PRESS HOOD.
18. PROVIDE NEW CEILING SUSPENDED AIR CURTAIN. INTEGRATE CONTROLS TO OPERATE DURING OCCUPANCY OF ROOM 116.
19. PROVIDE NEW FIRE DAMPER AS INDICATED.
20. GAS PIPE FROM ROOF ABOVE.
21. GAS FLUE VENT FROM MUA-4 BURNER UP TO THROUGH ROOF.
22. PROVIDE LOCAL CONTROLLER, AUDIBLE ALARM AND VISUAL ALARM FOR MUA-4 & EF-13 & EF-16 EMCS SHALL MONITOR FAN (SUPPLY AND EXHAUST) STATUS, SUPPLY AIR FLOW, AND MUA-4 FILTER DP. ANNUNCIATE ALL FAILURES AT LOCAL CONTROLLER.
23. PROVIDE PAINT BOOTH CONTROL PANEL C/W ASSOCIATED ALARMS AND EQUIPMENT OPERATION. BOOTH MANUFACTURER SHALL PROVIDE A COMPLETE AND INTEGRATED SYSTEM TO MANAGE BOOTH PAINT CYCLE, BAKE CYCLE, MAKE-UP AIR UNIT CONTROL, EXHAUST FAN CONTROL, MAN DOWN ALARM AND ALL ASSOCIATED FUNCTIONS.

24. PROVIDE ACCESSIBLE BELOW SLAB DUCTWORK, DRAINABLE TO LOW POINT.
25. BELOW SLAB EXHAUST AIR PLENUM C/W FLOOR GRATES AND FILTER ASSEMBLIES. DUCT PLENUM SHALL MAINTAIN MINIMUM 0.5% SLOPE TO LOW POINT DRAIN. COORDINATE INSTALLATION DETAILS WITH ARCHITECTURAL AND STRUCTURAL.
26. EXTEND 2200 X 1400 EXHAUST STACK TO HIGH LEVEL TRANSITION TO 1900 DIA. PRIOR TO ROOF PENETRATION.
27. CONNECT NEW MUA SUPPLY TO PRESSURIZED SUPPLY PLENUM ON BOOTH ROOF.
28. PROVIDE FUME EXHAUST FAN, ASSOCIATED DUCTWORK, SUPPORTS, AND CONTROLS.
29. PROVIDE FLEXIBLE FUME EXTRACTION ARM C/W CAPTURE HOOD AND CEILING BRACKET ASSEMBLY.
30. PROVIDE EXPLOSION RATED HAZARDOUS GAS SENSOR C/W ASSOCIATED CONTROL PANEL, AUDIBLE, AND VISUAL ALARM PANEL.
31. PROVIDE INLINE SUPPLY FAN, EXPLOSION RATED, C/W ASSOCIATED DUCTWORK, GRILLES, AND SUPPORTS.
32. PROVIDE EXPLOSION RATED ELECTRIC DUCT HEATER C/W AIRFLOW SWITCH, REMOTE THERMOSTAT, AND SCR CONTROLLER.
33. PROVIDE OUTDOOR AIR INTAKE LOUVER C/W THERMALLY INSULATED PLENUM.
34. PROVIDE GENERAL EXHAUST FAN, EXPLOSION RATED, C/W ASSOCIATED DUCTWORK, GRILLES, AND SUPPORTS.
35. PROVIDE LOCAL CONTROL PANEL FOR MANUAL CONTROL OF SF-1, EF-17, EF-18, AND ASSOCIATED SPACE TEMPERATURE CONTROL. INTERFACE PANEL WITH HAZARDOUS GAS DETECTION SYSTEM FOR AUTOMATIC START-UP OF SUPPLY AND EXHAUST FANS UPON DETECTION OF GAS.
36. PROVIDE BENCH TOP SLOT HOOD C/W ASSOCIATED DUCTWORK AND SUPPORTS. EXTEND NEW DUCTWORK TO EXPLOSION RATED FAN, EF-1.
37. PROVIDE NEW CEILING SUSPENDED AIR CURTAIN C/W DOOR SWITCH.



1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	PAC
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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE

1:100

LOCATION | EMPLACEMENT

17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

#### SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER MECHANICAL	DATE 2017-05-29
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SUBJECT | SUJET

#### GROUND FLOOR PLAN HVAC - NEW WORK

PRODUCTION DESIGNED   ETUDIÉ L.M.	REVIEWED   REVU XX   XX X.X.	DES O   AGENT CONC X.X.
DRAWN   DESSINÉ Q.G./A.L.		PROJ MGR   GEST PROJ J.C.
CHECKED   VÉRIFIÉ L.M.		DES MGR   GEST CONC X.X.
COORDINATION L.M./P.C.		FIRE   INCENDIE X.X.

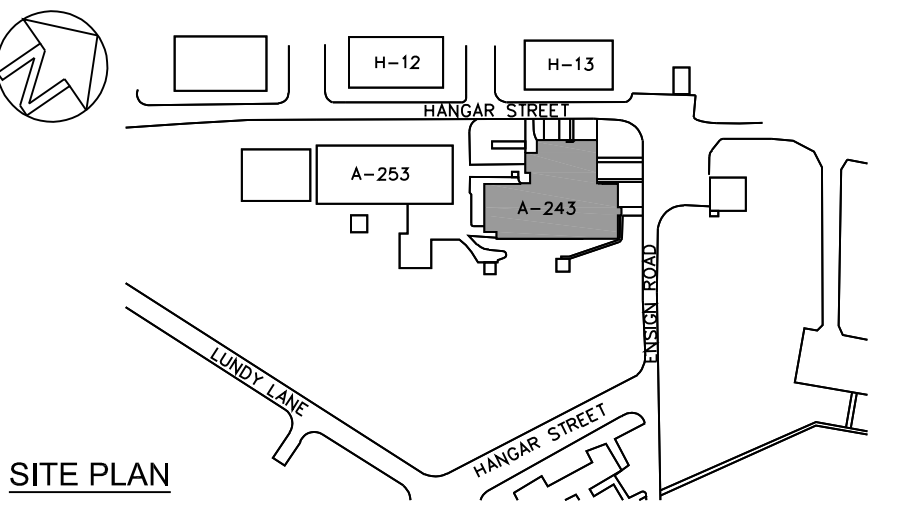
WBS NO. | NO. OTP  
18.05

FF NO. | NO. DP  
BN186586

DWG. NO. | NO. DESSIN

B147-9618/12-431





1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	PAC
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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE

1:100

LOCATION | EMPLACEMENT

17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER	DATE
MECHANICAL	2017-05-29

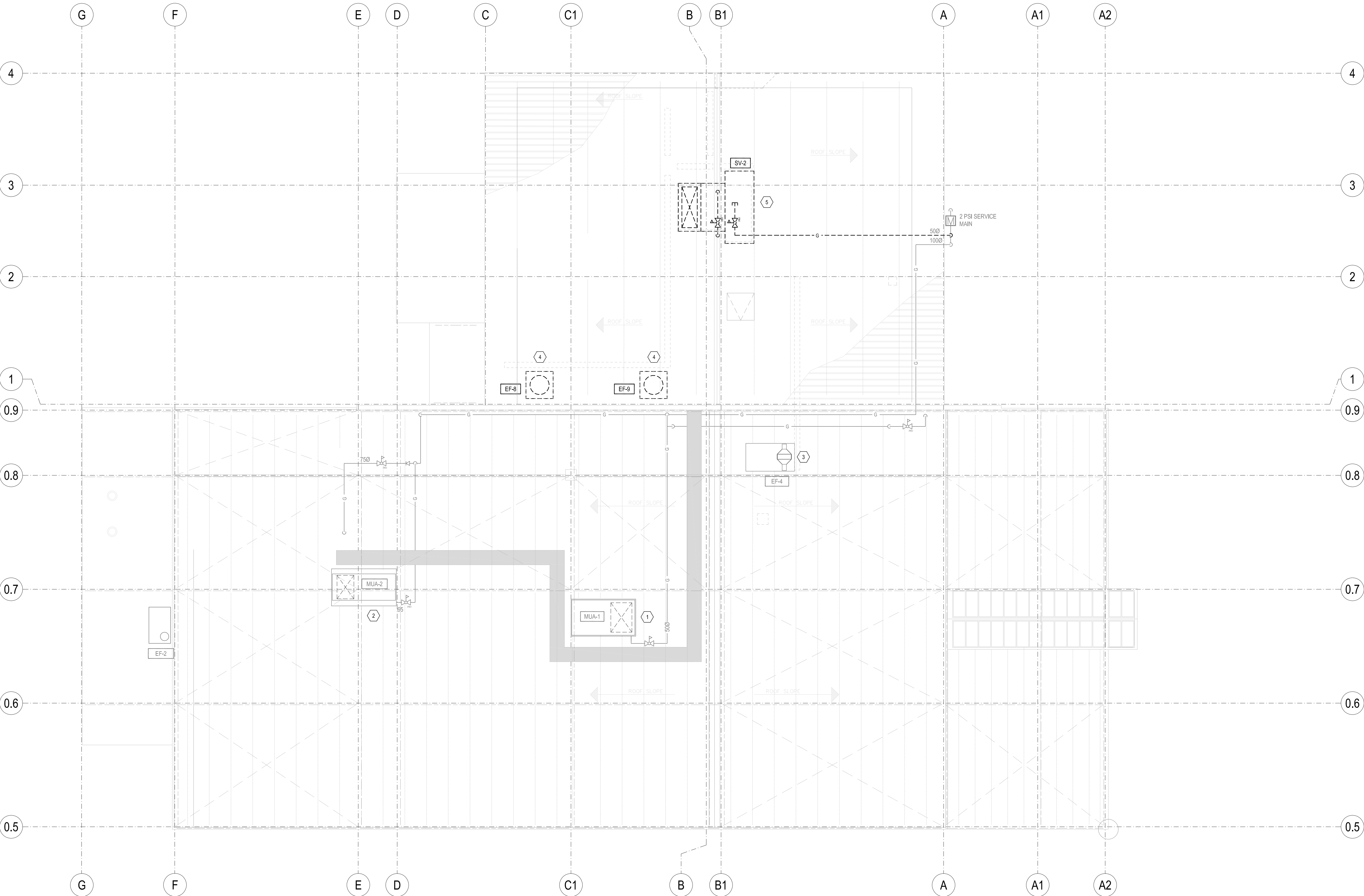
SUBJECT | SUJET

ROOF PLAN - DEMOLITION

PRODUCTION		REVIEWED   REVU
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L.M.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
Q.G./A.L.		J.C.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
P.C.		X.X.
COORDINATION		FIRE   INCENDIE
L.M./P.C.		X.X.

WBS NO.   NO. OTP	FF NO.   NO. DP
N.700113.18.05	BN186586

DWG. NO.   NO. DESSIN	B147-9618/12-440
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1  
440  
ROOF PLAN - DEMOLITION  
SCALE: 1:100

DRAWING NOTES:

DESCRIPTION OF MECHANICAL DEMOLITION WORK

1. EXISTING MAKE-UP AIR UNIT (MUA-1) TO REMAIN.

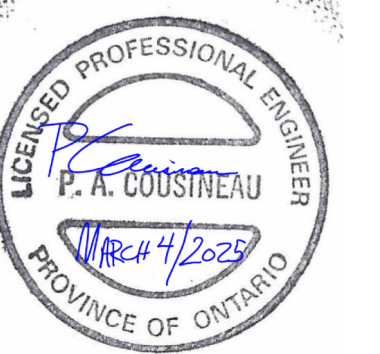
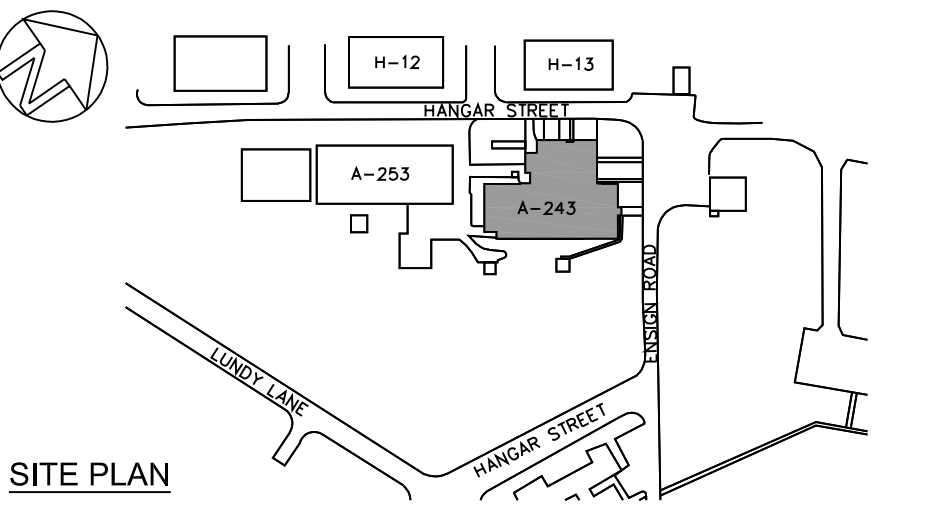
2. EXISTING MAKE-UP AIR UNIT (MUA-2) TO REMAIN.

3. EXISTING EXHAUST FAN (EF-2 & EF-4) TO REMAIN.

4. DISCONNECT AND REMOVE TWO EXISTING ROOF EXHAUST FANS (EF-8 & EF-9). COMPLETE WITH ALL ASSOCIATED DUCTWORK, GRILLES, AND CONTROLS. ALL EXISTING OPENINGS ARE TO BE PATCHED AND REPAIRED. REFER TO ARCHITECTURAL DWGS FOR DETAILS.

5. DISCONNECT AND REMOVE EXISTING ROOF MOUNTED MAKE-UP AIR SYSTEM (SV-2). COMPLETE WITH ALL ASSOCIATED DUCTWORK, SUPPLY AIR PLENUM, DIFFUSERS, AND CONTROLS. CAP AND DISCONNECT GAS PIPING SERVICES AS INDICATED.





1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	PAC
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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE  
1:100

LOCATION | EMPLACEMENT  
17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER	DATE
MECHANICAL	2017-05-29

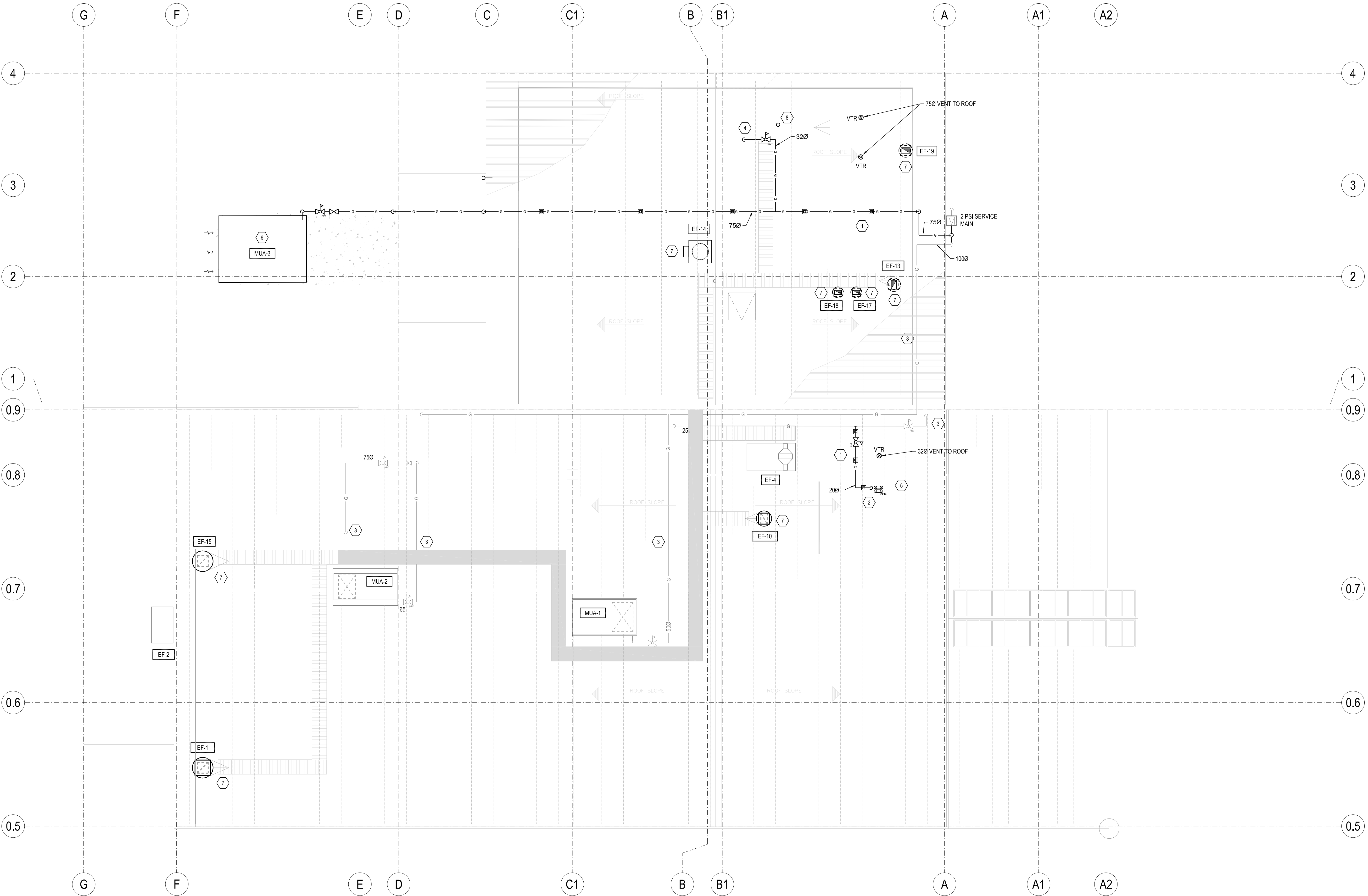
SUBJECT | SUJET

ROOF PLAN - NEW

DESIGNED   ÉTUDE	XX   XX	DES O   AGENT CONC
L.M.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
Q.G./A.L.		J.C.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
P.C.		X.X.
COORDINATION		FIRE   INCENDIE
L.M./P.C.		X.X.

WBS NO.   NO. OTP	FF NO.   NO. DP
N.700113.18.05	BN186586

DWG. NO.   NO. DESSIN	B147-9618/12-441
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1 ROOF PLAN - NEW  
441 SCALE: 1:100

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DRAWING NOTES:

DESCRIPTION OF MECHANICAL WORK

1.

PROVIDE NEW GAS SUPPLY PIPING C/W ASSOCIATED PRESSURE REGULATING VALVE AND SUPPORTS, EXTEND NEW PIPING TO EXISTING BUILDING SERVICES.

2.

PROVIDE NEW GAS SUPPLY DOWN TO MECHANICAL ROOM (120b) FOR DOMESTIC HOT WATER TANK, DHWT-1.

3.

EXISTING GAS PIPING TO REMAIN.

4.

PROVIDE GAS LINE DOWN TO MEZZANINE MECHANICAL ROOM FOR MUA-4.

5.

PROVIDE x2 1500 COMBUSTION AIR SUPPLY DUCTS TO DOMESTIC HOT WATER TANK. ONE COMBUSTION AIR SUPPLY SHALL BE TERMINATED WITHIN 300mm FROM FINISHED CEILING. ONE COMBUSTION AIR SUPPLY SHALL BE TERMINATED WITHIN 300mm FROM FINISHED FLOOR. PROVIDE 750 COMBUSTION AIR VENT THROUGH ROOF.

6.

PROVIDE GAS FIRED MAKE-UP AIR UNIT COMPLETE WITH ASSOCIATED ROOF CURB, SUPPORTS, GAS PIPING AND CONTROLS.

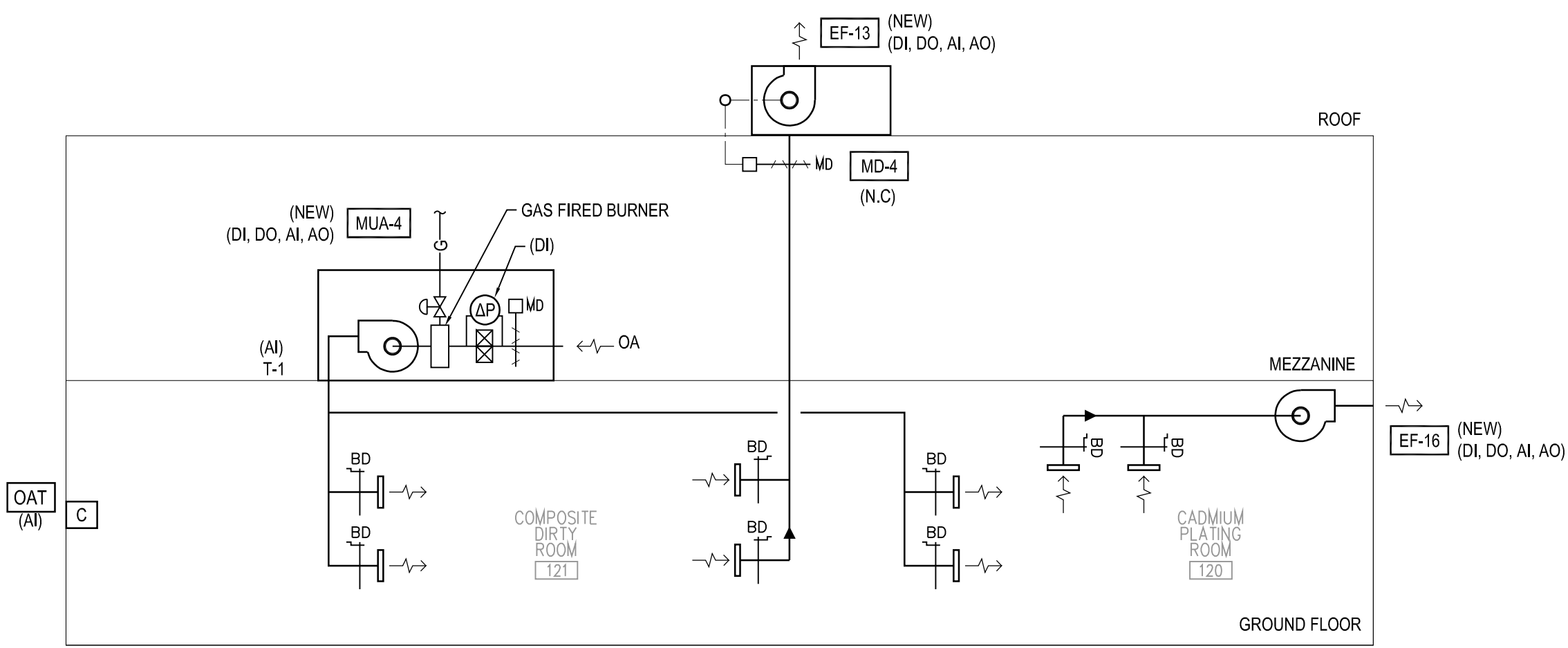
7.

PROVIDE ROOF MOUNTED EXHAUST FAN COMPLETE WITH ASSOCIATED ROOF CURB, SUPPORT AND CONTROLS.

8.

FLUE VENT FROM MUA-4 BELOW. TERMINATE VENT PIPE IN GOOSENECK 1.00M ABOVE ROOF LEVEL.





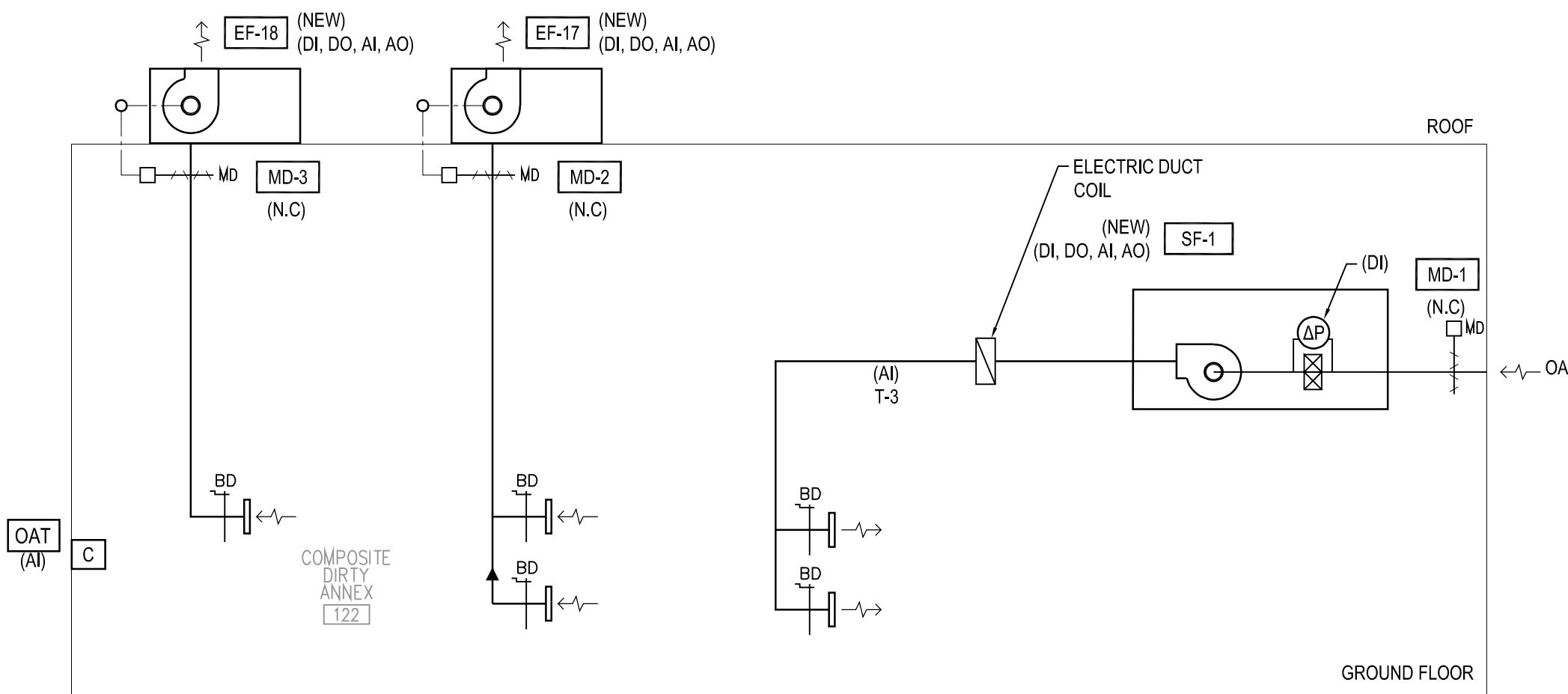
#### SEQUENCE OF OPERATION:

- ALL THE NEW CONTROLS SHALL BE IMPLEMENTED BY A LOCAL STAND-ALONE CONTROLLER. SYSTEMS SHALL OPERATE VIA USER INPUT AT LOCAL CONTROL PANEL.
- MAKE-UP AIR HANDLING UNIT MUA-4 EXHAUST FAN EF-13, AND EXHAUST FAN EF-16 SHALL BE ENERGIZED BY THE LOCAL STAND-ALONE CONTROLLER. MUA-4 SHALL BE INTERLOCKED WITH EF-13 AND EF-16.
- THE SUPPLY FAN OF MUA-4 SHALL RUN CONTINUALLY AT ITS FULL SPEED IN WINTER (OAT <15 °C) DISCHARGE AIR TEMPERATURE SENSOR (T-1) TO MODULATE MUA-4 GAS FIRED BURNER THROUGH UNIT CONTROLLER TO MAINTAIN (T-1) SET POINT (22 °C, ADJUSTABLE). IN SUMMER (OAT ≥15.6 °C), (T-1) SHALL BE IGNORED. THE SUPPLY FAN OF MUA-4 SHALL KEEP ON RUNNING AT ITS FULL SPEED.
- WHEN ALL SYSTEMS (MUA-4, EF-13, EF-16) ARE OFF, ASSOCIATED MOTORIZED DAMPER (MD-4) SHALL CLOSE.
- IF EF-13 FAILS TO RUN, ASSOCIATED MOTORIZED DAMPER MD-4 SHALL CLOSE, AND, AN AUDIBLE/VISUAL ALARM SHALL BE INDICATED AT LOCAL CONTROLLER.
- IF EF-16 FAILS TO RUN AN AUDIBLE/VISUAL ALARM SHALL BE INDICATED AT LOCAL CONTROLLER.
- PROVIDE WIRE CONNECTION FROM FAN STARTERS TO MOTORIZED DAMPER SWITCH.
- PROVIDE THE FOLLOWING CONTROL / MONITOR POINTS IN THE LOCAL STAND-ALONE CONTROLLER:
  - AIR FLOW SWITCH TO VERIFY EXHAUST FAN EF-13 FLOW CONDITION
  - AIR FLOW SWITCH TO VERIFY EXHAUST FAN EF-16 FLOW CONDITION
  - MOTORIZED DAMPER END SWITCH TO VERIFY DAMPER POSITION
  - FAN ON/OFF/AUTO STATUS FOR MUA-4
  - FAN ON/OFF STATUS FOR EF-13
  - FAN ON/OFF STATUS FOR EF-16
  - AUDIBLE ALARM AND VISUAL ALARM TO ANNUNCIATE FAILURE OF:
    - FAN OF MUA-4
    - CLOGGED FILTER OF MUA-4
    - EF-13
    - EF-16

NOTE:  
MECHANICAL VENTILATION EQUIPMENT  
SHALL HAVE DRY CONTACTS TO  
SHUT-DOWN THROUGH BUILDING FIRE  
ALARM SYSTEM, AS PER CFB BORDEN  
SITE SPECIFIC REQUIREMENTS.

### 1 COMPOSITE (ROOM 121) VENTILATION SYSTEM CONTROL

SCALE: N.T.S.



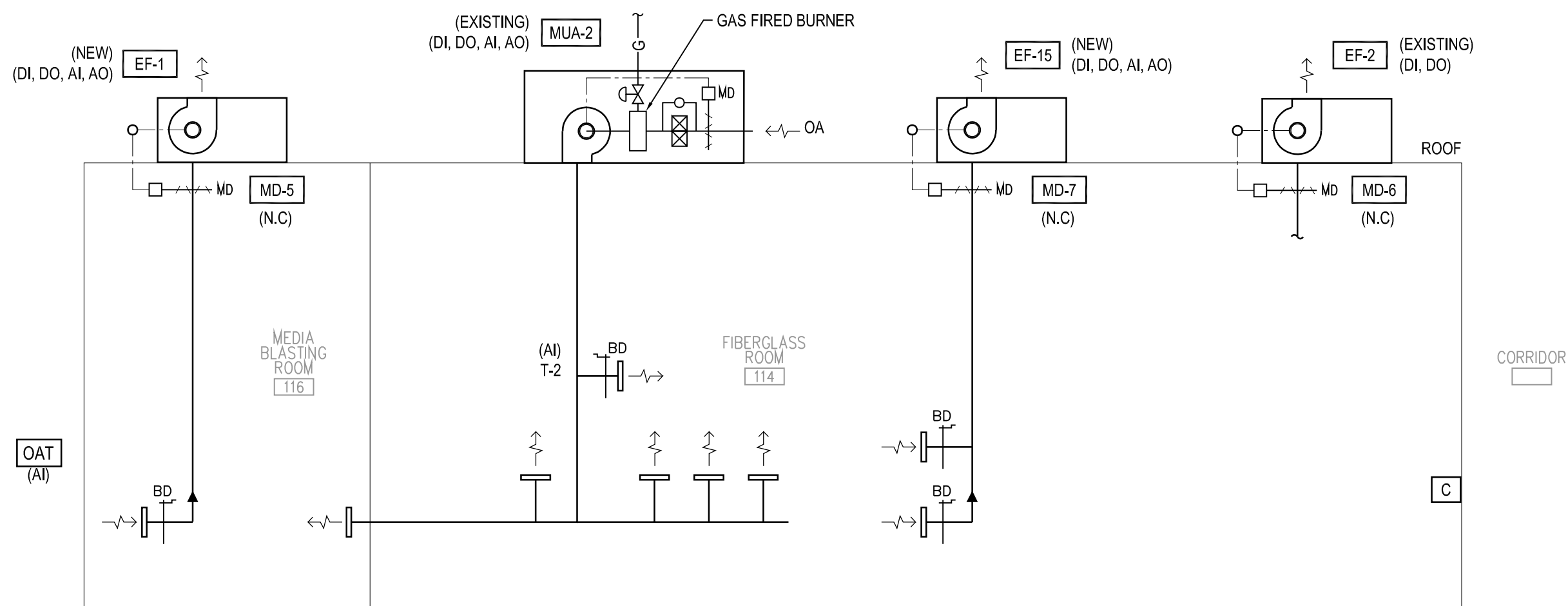
#### SEQUENCE OF OPERATION:

- ALL THE NEW CONTROLS SHALL BE IMPLEMENTED BY A LOCAL STAND-ALONE CONTROLLER. SYSTEMS SHALL OPERATE VIA USER INPUT AT LOCAL CONTROL PANEL.
- SUPPLY FAN SF-1, EXHAUST FAN EF-17, AND EXHAUST FAN EF-18 SHALL BE ENERGIZED BY THE LOCAL STAND-ALONE CONTROLLER. SF-1 SHALL BE INTERLOCKED WITH EF-17 AND EF-18.
- THE SUPPLY FAN SHALL RUN CONTINUALLY AT ITS FULL SPEED IN WINTER (OAT <15 °C) DISCHARGE AIR TEMPERATURE SENSOR (T-3) TO MODULATE ELECTRIC DUCT COIL THROUGH UNIT CONTROLLER TO MAINTAIN (T-3) SET POINT (22 °C, ADJUSTABLE). IN SUMMER (OAT ≥15.6 °C), (T-3) SHALL BE IGNORED. THE SUPPLY FAN OF SF-1 SHALL KEEP ON RUNNING AT ITS FULL SPEED.
- WHEN ALL SYSTEMS (SF-1, EF-17, EF-18) ARE OFF, ASSOCIATED MOTORIZED DAMPER (MD-1, MD-2, MD-3) SHALL CLOSE.
- IF EF-17 FAILS TO RUN, ASSOCIATED MOTORIZED DAMPER MD-2 SHALL CLOSE, AND, AN AUDIBLE/VISUAL ALARM SHALL BE INDICATED AT LOCAL CONTROLLER.
- SPACE SHALL BE MONITORED BY GAS DETECTION SYSTEM. WHEN ASSOCIATED VENTILATION EQUIPMENT ARE OFF (SF-1, EF-17, & EF-18) AND GAS DETECTED ABOVE HIGH LIMIT, THEN ALL VENTILATION SYSTEMS SHALL START AND A LOCAL AUDIBLE/VISUAL ALARM SHALL BE ANNUNCIATED
- IF EF-18 FAILS TO RUN, ASSOCIATED MOTORIZED DAMPER MD-3 SHALL CLOSE, AND, AN AUDIBLE/VISUAL ALARM SHALL BE INDICATED AT LOCAL CONTROLLER.
- PROVIDE WIRE CONNECTION FROM FAN STARTERS TO MOTORIZED DAMPER SWITCH.
- PROVIDE THE FOLLOWING CONTROL / MONITOR POINTS IN THE LOCAL STAND-ALONE CONTROLLER:
  - AIR FLOW SWITCH TO VERIFY EXHAUST FAN EF-17 FLOW CONDITION
  - AIR FLOW SWITCH TO VERIFY EXHAUST FAN EF-18 FLOW CONDITION
  - MOTORIZED DAMPER END SWITCH TO VERIFY DAMPER POSITION
  - FAN ON/OFF STATUS FOR SF-1
  - FAN ON/OFF STATUS FOR EF-17
  - FAN ON/OFF STATUS FOR EF-18
  - AUDIBLE ALARM AND VISUAL ALARM TO ANNUNCIATE FAILURE OF:
    - FAN OF SF-1
    - CLOGGED FILTER OF SF-1
    - EF-17
    - EF-18

NOTE:  
MECHANICAL VENTILATION EQUIPMENT  
SHALL HAVE DRY CONTACTS TO  
SHUT-DOWN THROUGH BUILDING FIRE  
ALARM SYSTEM, AS PER CFB BORDEN  
SITE SPECIFIC REQUIREMENTS.

### 3 COMPOSITE DIRTY ANNEX (ROOM 122) VENTILATION SYSTEM CONTROL

SCALE: N.T.S.



#### SEQUENCE OF OPERATION:

##### CANOPY HOOD (EF-2) 'ON':

- THE CONTROLS OF NEW EXHAUST FANS EF-15, EF-1 AND EXHAUST FAN EF-2 SHALL BE IMPLEMENTED BY A LOCAL STAND-ALONE CONTROLLER. SYSTEMS SHALL OPERATE IN ACCORDANCE WITH BUILDING OCCUPANCY SCHEDULE.
- THE SUPPLY FAN OF EXISTING MAKE-UP AIR HANDLING UNIT MUA-2, AND ITS INLET DAMPER SHALL BE SET AND FIXED AT ITS FULL POSITION OF 3682 L/S(7800 CFM). EF-1, EF-2, AND EF-15 SHALL BE ENERGIZED BY THE NEW LOCAL STAND-ALONE CONTROLLER. PROVIDE NEW INTERLOCK FROM EF-1, EF-2, AND EF-15 TO A NEW LOCAL CONTROLLER.
- WHEN EF-1 AND EF-2 RUNS, MUA-2 SHALL BE STARTED, EF-15 SHALL BE OFF.
- A LOCAL SWITCH SHALL ACTIVATE CANOPY HOOD EXHAUST FAN EF-2. WHEN DAMPER (MD-6) RELAY CLOSES, FAN EF-2 SHALL BE ON EXHAUST AND FAN EF-15 SHALL BE OFF, ASSOCIATED DAMPER (MD-7) SHALL BE CLOSED.
- THE SUPPLY FAN OF MUA-2 SHALL RUN CONTINUALLY AT 3682 L/S (7800 CFM) IN WINTER (OAT <15 °C) DISCHARGE AIR TEMPERATURE SENSOR (T-1) TO MODULATE MUA-2 GAS FIRED BURNER THROUGH INTEGRAL UNIT CONTROLLER TO MAINTAIN ROOM TEMPERATURE SET POINT (22 °C, ADJUSTABLE). IN SUMMER (OAT ≥15.6 °C), ROOM THERMOSTAT (T-1) SHALL BE IGNORED. THE SUPPLY FAN OF MUA-2 SHALL KEEP ON RUNNING AT ITS FULL SPEED.
- PROVIDE WIRE CONNECTION FROM FAN STARTERS TO MOTORIZED DAMPER SWITCHES.
- PROVIDE THE FOLLOWING CONTROL / MONITOR POINTS IN THE NEW LOCAL STAND-ALONE CONTROLLER:
  - AIR FLOW SWITCH TO VERIFY EF-1, EF-2 AND EF-15 FLOW CONDITION
  - MOTORIZED DAMPER END SWITCH TO VERIFY DAMPER POSITION
  - FAN ON/OFF STATUS FOR EF-1, EF-2 AND EF-15
  - AUDIBLE ALARM AND VISUAL ALARM TO ANNUNCIATE FAILURE OF EF-1, EF-2, EF-15 AND COMMON MUA-2

##### CANOPY HOOD (EF-2) 'OFF':

- THE CONTROLS OF NEW EXHAUST FANS EF-15, EF-1 AND EXHAUST FAN EF-2 SHALL BE IMPLEMENTED BY A LOCAL STAND-ALONE CONTROLLER.
- THE SUPPLY FAN OF EXISTING MAKE-UP AIR HANDLING UNIT MUA-2, AND ITS INLET DAMPER SHALL BE SET AND FIXED AT ITS FULL POSITION OF 3682 L/S(7800 CFM). EF-1, EF-2, AND EF-15 SHALL BE ENERGIZED BY THE NEW LOCAL STAND-ALONE CONTROLLER. PROVIDE NEW INTERLOCK FROM EF-1, EF-2, AND EF-15 TO A NEW LOCAL CONTROLLER.
- WHEN EF-1 AND EF-15 RUNS, MUA-2 SHALL BE STARTED, EF-2 SHALL BE OFF, ASSOCIATED DAMPER (MD-6) SHALL BE CLOSED.
- THE SUPPLY FAN OF MUA-2 SHALL RUN CONTINUALLY AT 3682 L/S (7800 CFM) IN WINTER (OAT <15 °C) DISCHARGE AIR TEMPERATURE SENSOR (T-1) TO MODULATE MUA-2 GAS FIRED BURNER THROUGH INTEGRAL UNIT CONTROLLER TO MAINTAIN ROOM TEMPERATURE SET POINT (22 °C, ADJUSTABLE). IN SUMMER (OAT ≥15.6 °C), ROOM THERMOSTAT (T-1) SHALL BE IGNORED. THE SUPPLY FAN OF MUA-2 SHALL KEEP ON RUNNING AT ITS FULL SPEED.
- PROVIDE WIRE CONNECTION FROM FAN STARTERS TO MOTORIZED DAMPER SWITCHES.
- PROVIDE THE FOLLOWING CONTROL / MONITOR POINTS IN THE NEW LOCAL STAND-ALONE CONTROLLER:
  - AIR FLOW SWITCH TO VERIFY EF-1, EF-2 AND EF-15 FLOW CONDITION
  - MOTORIZED DAMPER END SWITCH TO VERIFY DAMPER POSITION
  - FAN ON/OFF STATUS FOR EF-1, EF-2 AND EF-15
  - AUDIBLE ALARM AND VISUAL ALARM TO ANNUNCIATE FAILURE OF EF-1, EF-2, EF-15 AND COMMON MUA-2

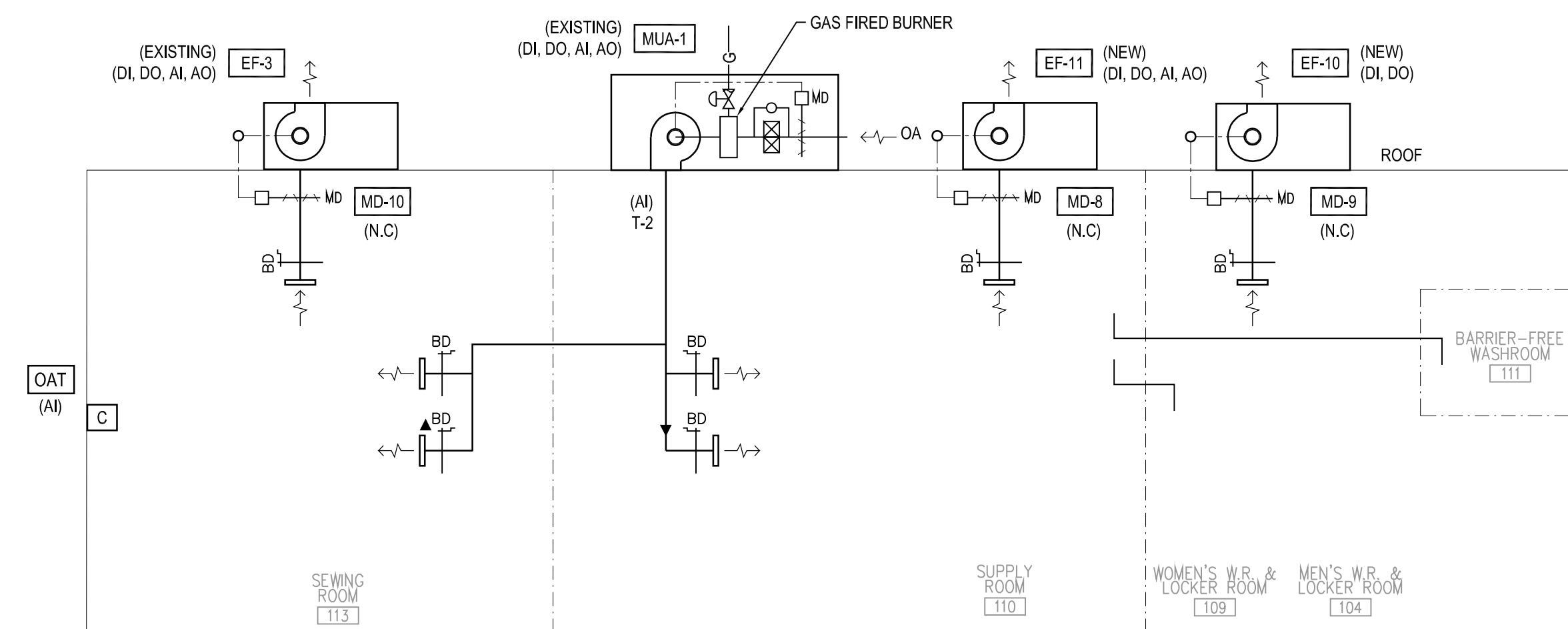
NOTE:  
MECHANICAL VENTILATION EQUIPMENT  
SHALL HAVE DRY CONTACTS TO  
SHUT-DOWN THROUGH BUILDING FIRE  
ALARM SYSTEM, AS PER CFB BORDEN  
SITE SPECIFIC REQUIREMENTS.

##### MEDIA BLASTING ROOM (116) OCCUPIED:

- A LOCAL SWITCH SHALL ACTIVATE ROOM LIGHTS TO 'ON' AND TURN AIR CURTAIN AC-1 ON.
- WHEN LOCAL SWITCH IS SWITCHED TO 'OFF' POSITION, LIGHT FIXTURES SHALL BE OFF AND AIR CURTAIN AC-1 SHALL CONTINUE TO OPERATE FOR 30 MINUTES (ADJUSTABLE)

### 2 FIBREGLASS (ROOM 114) & PLASTIC BLASTING (ROOM 116) VENTILATION SYSTEM CONTROL

SCALE: N.T.S.



#### SEQUENCE OF OPERATION:

- THE CONTROLS OF NEW EXHAUST FANS EF-10, EF-11 AND EXISTING EXHAUST FAN EF-3 SHALL BE IMPLEMENTED BY A LOCAL STAND-ALONE CONTROLLER. SYSTEMS SHALL OPERATE IN ACCORDANCE WITH BUILDING OCCUPANCY SCHEDULE.
- THE SUPPLY FAN OF EXISTING MAKE-UP AIR HANDLING UNIT MUA-1, AND ITS INLET DAMPER SHALL BE SET AND FIXED AT ITS FULL POSITION OF 2596 L/S(5500 CFM). EF-3, EF-10, AND EF-11 SHALL BE ENERGIZED BY THE NEW LOCAL STAND-ALONE CONTROLLER. PROVIDE NEW INTERLOCK FROM EF-3, EF-10, AND EF-11 TO A NEW LOCAL CONTROLLER.
- WHEN EF-3, EF-10, AND EF-11 RUN, MUA-1 SHALL BE STARTED.
- WHEN SYSTEMS ARE 'OFF', ASSOCIATED MOTORIZED DAMPER SHALL BE CLOSED; EF-3; MD-10; EF-10; MD-9; EF-11; MD-6
- THE SUPPLY FAN OF MUA-2 SHALL RUN CONTINUALLY AT 2596 L/S (5500 CFM) IN WINTER (OAT <15 °C) DISCHARGE AIR TEMPERATURE SENSOR (T-1) TO MODULATE MUA-1 GAS FIRED BURNER THROUGH INTEGRAL UNIT CONTROLLER TO MAINTAIN ROOM TEMPERATURE SET POINT (22 °C, ADJUSTABLE). IN SUMMER (OAT ≥15.6 °C), ROOM THERMOSTAT (T-1) SHALL BE IGNORED. THE SUPPLY FAN OF MUA-1 SHALL KEEP ON RUNNING AT ITS FULL SPEED.
- PROVIDE WIRE CONNECTION FROM FAN STARTERS TO MOTORIZED DAMPER SWITCHES.
- PROVIDE THE FOLLOWING CONTROL / MONITOR POINTS IN THE NEW LOCAL STAND-ALONE CONTROLLER:
  - AIR FLOW SWITCH TO VERIFY EF-3, EF-10 AND EF-11 FLOW CONDITION
  - MOTORIZED DAMPER END SWITCH TO VERIFY DAMPER POSITION
  - FAN ON/OFF STATUS FOR EF-3, EF-10 AND EF-11
  - AUDIBLE ALARM AND VISUAL ALARM TO ANNUNCIATE FAILURE OF EF-3, EF-10, EF-11 AND COMMON MUA-1

NOTE:  
MECHANICAL VENTILATION EQUIPMENT  
SHALL HAVE DRY CONTACTS TO  
SHUT-DOWN THROUGH BUILDING FIRE  
ALARM SYSTEM, AS PER CFB BORDEN  
SITE SPECIFIC REQUIREMENTS.

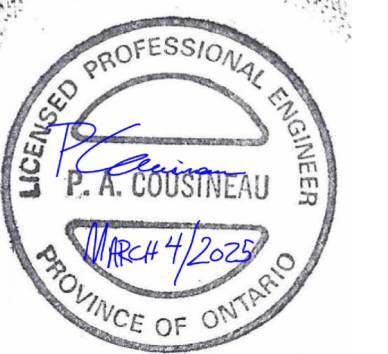
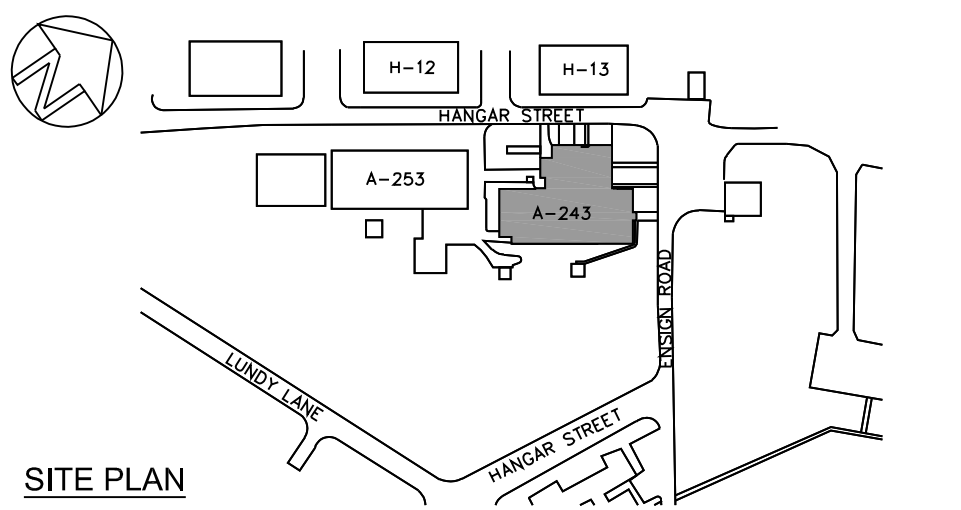
### 4 TEXTILE & STORAGE (RM 113 & 110) VENTILATION SYSTEM CONTROL

SCALE: N.T.S.

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## ARCHITECTURE | 49




1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	PAC
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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE

NTS

LOCATION | EMPLACEMENT

17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

## SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER <b>MECHANICAL</b>	DATE <b>2017-05-29</b>
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SUBJECT | SUJET

## MECHANICAL SYSTEM CONTROL DIAGRAMS

PRODUCTION	DESIGNED   ÉTUDIÉ	REVIEWED   REVU
L.M.	XX   XX	DES O   AGENT CONC
DRAWN   Dessiné	X.X.	X.X.
Q.G./A.L.		PROJ MGR   GEST PROJ
CHECKED   VÉRIFIÉ		J.C.
P.C.		DES MGR   GEST CONC
COORDINATION		X.X.
L.M./P.C.		FIRE   INCENDIE
		X.X.

WBS NO.   NO. OTP <b>N.700113.18.05</b>	PF NO.   NO. DP <b>BN186586</b>
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DWG. NO.   NO. DESSIN <b>B147-9618/12-450</b>
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NO.	DATE	REVISION	APPR.

NTS

PROJECT | PROJET

TRADE   MÉTIER MECHANICAL	DATE 2017-05-29
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PRODUCTION	REVIEWED   REVU	
DESIGNED   ÉTUDIÉ L.M.	XX   XX X.X.	DES O   AGENT CONC X.X.
DRAWN   DESSINÉ Q.G./A.L.		PROJ MGR   GEST PROJ J.C.
CHECKED   VÉRIFIÉ P.C.		DES MGR   GEST CONC X.X.
COORDINATION L.M./P.C.		FIRE   INCENDIE X.X.

DWG. NO. | NO. DESSIN | **D417 0010/10 100**

## Sheet 9 of #

**NOTES**



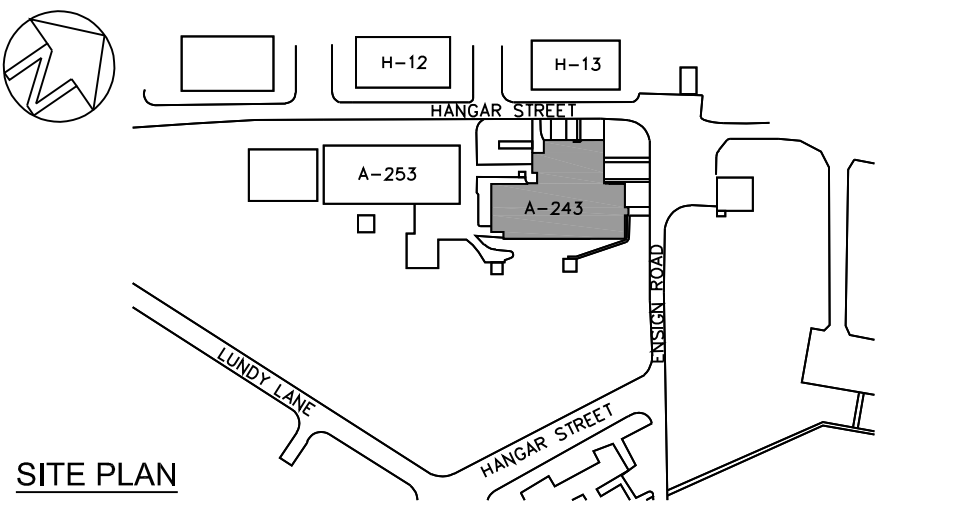
PLUMBING FIXTURE SCHEDULE										
TAG	FIXTURE TYPE	BASIC OF DESIGN		ACCEPTABLE ALTERNATE	PLUMBING CONNECTIONS				ACCESSORIES	NOTES
		MANUFACTURER	MODEL No.	MANUFACTURER	D.H.W. MM	D.C.W. MM	WASTE MM	VENT MM		
WC-1	WALL HUNG FLUSH VALVE	AMERICAN STANDARD	MADERA	N/A	-	25	100	40		FIXTURE AND TRIM SUPPLIED BY DND, INSTALLED BY MECHANICAL CONTRACTOR
WC-2	BARRIER FREE, WALL HUNG FLUSH VALVE	AMERICAN STANDARD	MADERA	N/A	-	25	100	40		FIXTURE AND TRIM SUPPLIED BY DND, INSTALLED BY MECHANICAL CONTRACTOR
UR-1	WALL HUNG	AMERICAN STANDARD	WASHBROOK	N/A	-	20	50	40	-	FIXTURE AND TRIM SUPPLIED BY DND, INSTALLED BY MECHANICAL CONTRACTOR
UR-2	BARRIER FREE, WALL HUNG	AMERICAN STANDARD	WASHBROOK	N/A	-	20	50	40	-	FIXTURE AND TRIM SUPPLIED BY DND, INSTALLED BY MECHANICAL CONTRACTOR
LAV-1	BARRIER FREE, COUNTER TOP	AMERICAN STANDARD	COLONY	N/A	12	12	32	32		FIXTURE AND TRIM SUPPLIED BY DND, INSTALLED BY MECHANICAL CONTRACTOR
LAV-2	BARRIER FREE, WALL HUNG	AMERICAN STANDARD	COLONY	N/A	12	12	32	32		FIXTURE AND TRIM SUPPLIED BY DND, INSTALLED BY MECHANICAL CONTRACTOR
SH-1	SHOWER	MOEN	T3291	N/A	12	12	-	-		FIXTURE AND TRIM SUPPLIED BY DND, INSTALLED BY MECHANICAL CONTRACTOR
SH-2	BARRIER FREE, SHOWER	MOEN	T3291	N/A	12	12	-	-		FIXTURE AND TRIM SUPPLIED BY DND, INSTALLED BY MECHANICAL CONTRACTOR
FD-1	FINISHED AREA FLOOR DRAIN	WATTS	FD 100	J.R. SMITH FIGURE 2010, ZURN Z415-BZ1-DP	-	-	SEE DWG.	-	-	ADJUSTABLE NICKEL BRONZE STRAINER ASSEMBLY
FD-2	FUNNEL FLOOR DRAIN	WATTS	FD 100	J.R. SMITH FIGURE 2010, ZURN Z415-BZ1-DP	-	-	SEE DWG.	-	-	ADJUSTABLE NICKEL BRONZE STRAINER ASSEMBLY, OVAL NICKEL BRONZE FUNNEL 4" x 9" (10cm x 23cm)
FD-3	SQUARE SHOWER DRAIN	WATTS	FD 203	J.R. SMITH FIGURE 2005, ZURN Z415S	-	-	SEE DWG.	-	-	EPOXY COATED CAST IRON WITH 4"x4" NICKEL BRONZE STRAINER
FD-4	HUB DRAIN	WATTS	FD 200	J.R. SMITH FIGURE 2010 C/W 2646, ZURN Z415 C/W Z1030	-	-	SEE DWG.	-	-	ADJUSTABLE HUB FUNNEL ASSEMBLY
TD-1	FINISHED AREA FLOOR DRAIN	BLUCHER	BHG	J.R. SMITH 9660, ZURN Z886-HDS	-	-	SEE DWG.	-	SEDIMENT BASKET	STAINLESS STEEL BODY & GRATE
<b>NOTES:</b> .1 VENT ALL FLOOR DRAINS AS REQUIRED BY N.B.C. .2 ALL SINK & LAVATORY DRILLINGS TO MATCH SPECIFIED TRIM. .3 PROVIDE TRAP SEAL PRIMERS FOR ALL FLOOR DRAINS. .4 PROVIDE C.P. FLEXIBLE SUPPLIES WITH SCREWDRIVER STOPS, C.P. OFFSET P-TRAPS, OPEN GRID STRAINERS FOR ALL LAVATORIES.  C.P. - CHROME PLATED										

DOMESTIC WATER HEATER SCHEDULE														
TAG	DESCRIPTION	LOCATION	BASIC OF DESIGN		ACCEPTABLE ALTERNATE	INPUT	CAPACITY		REMARKS	UNIT				CONTROL TYPE
			MANUFACTURER	MODEL No.	MANUFACTURER		Kw (MBH)	STORAGE LITRES (GAL)		TEMP RISE ° C (° F)	MCA	MAX FUSE SIZE	FLA	
DHWT-1	GAS FIRED WATER HEATER	MECH ROOM 120b	A.O. SMITH	BTX-80	RHEEM PROP G50	22.3	189	38.00	DIRECT VENT, SEALED		15.00	5.00	115/1	INTEGRAL CONTROLLER
					BRADFORD WHITE LC2PV50H763N	76.0	50	100.00	COMBUSTION, MINIMUM 95% THERMAL EFF.					
NOTES														

EXPANSION TANK SCHEDULE											
TAG	SERVICE	LOCATION	BASIC OF DESIGN		ACCEPTABLE ALTERNATE	DIMENSIONS		TANK VOLUME (litres)	ACCEPTANCE VOLUME (litres)	ORIENTATION	NOTES
			MANUFACTURER	MODEL No.	MANUFACTURER	HEIGHT (mm)	DIAMETER (mm)				
ET-1	DOMESTIC HOT WATER TANK	POTABLE WATER	AMTROL	ST-447C	ARMSTRONG AX-V, EXTROLM, WESSELS NTA	1150	610	200	200	VERTICAL	
<b>NOTES</b> .1											

PUMP SCHEDULE														
TAG	DESCRIPTION	SERVICE	LOCATION	BASIC OF DESIGN		ACCEPTABLE ALTERNATE	FLOW L/S	HEAD kPa	PUMP RPM	MOTOR DATA			CONTROL TYPE	NOTES
				MANUFACTURER	MODEL No.	MANUFACTURER				KW	VFD	VOLTAGE		
							Usgpm	FT		HP				
P-3	CIRCULATOR	DOMESTIC HOT WATER RECIRCULATION	Mechanical Room (M-1F)	ARMSTRONG	ASTRO 290SS	B & G E-60	1.5	29.9	3300	0.2	No	120/160	MANUAL	
						GRUNDFOSS ALPHA	24	10		0.3				
SP-1A SP-1B	SUBMERSIBLE	BOOTH WASH-DOWN	Paint Room (125)	ZOELLER	152	B & G 2WS	1.9	74.7	3450	0.3	No	120/160	PANEL	C/W ALTERNATING CONTROL PANEL, AUDIBLE & VISUAL ALARMS, MOUNTING RAIL, LIFTING ROD.
						PENTAIR SPD50	30	25		0.4				
FP-1	BOOSTER	SPRINKLER PRESSURE	SPRINKLER ROOM (M-1A)	ALBANY	CEP 93	ABSOLUTE AMT	1.5	115.0		0.3	No	120/160	PRESSURE SWITCH	
NOTE:														

MAKE-UP AIR UNIT SCHEDULE																			
TAG	DESCRIPTION	SERVICE	LOCATION	BASIC OF DESIGN		ACCEPTABLE ALTERNATE	O/A			HEATING CAPACITY		ELECTRICAL DATA							
				MANUFACTURER	MODEL No.	MANUFACTURER	MIN L/S (cfm)	MAX L/S (cfm)	E.S.P. Pa (in)	FAN RPM	INPUT KW (MBH)	OUPPUT KW (MBH)	EFF %	kW (HP)	VFD	VOLTAGE	MCA	UNIT MAX FUSE SIZE	FLA
MUA-1	EXISTING UNIT TO REMAIN	SEWING (113)	ROOF	Engineered Air	HE-100-O	N/A	2596	2596	199										
							5500	5500	0.80										EXISTING UNIT TO REMAIN, PERFORMANCE DATA FOR REFERENCE ONLY.
MUA-2	EXISTING UNIT TO REMAIN	FIBREGLOSS (114)	ROOF	Engineered Air	DJ-100	N/A	3682	3682	199										
							7800	7800	0.80										EXISTING UNIT TO REMAIN, PERFORMANCE DATA FOR REFERENCE ONLY.
MUA-3	MUA	SPRAY BOOTH (125)	GRADE	RuppAir	RAM 230	Engineered Air	15104	30208	199	480	2344.4	2156.8	91.0	37.3	YES	575/3/60	59.70	100.00	46.80
						ICE	32000	64000	0.80		8001	7361		50.0					INTEGRAL UNIT CONTROLLER AND VFD TO MODULATE GAS HEAT AND AIRFLOW COORDINATE SYSTEM REQUIREMENTS WITH PAINT BOOTH MANUFACTURER. MOUNT ON 900mm SEISMIC RATED ROOF CURD SECURED TO CONCRETE SLAB.
MUA-4	INDOOR MUA	COMPOSITE CLEAN ROOM (120) & COMPOSITE DIRTY ROOM (121)	SERVICE ROOM (MEZZANINE)	RuppAir	R2-IBT-600-300-300-20D	Engineered Air	1416	1416	124	1240	138.8	112.4	81.0	1.5		575/3/60	2.9	15.0	2.3
						ICE	3000	3000	0.50		474	384		2.0					INTEGRAL UNIT CONTROLLER TO MODULATE GAS HEAT AND AIRFLOW MECHANICAL VENTILATION EQUIPMENT THROUGH BUILDING FIRE ALARM SYSTEM, AS PER CFB BORDER SITE SPECIFIC REQUIREMENTS.
<b>NOTES</b> .1																			



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LOCATION | EMPLACEMENT  
17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER MECHANICAL	DATE 2017-05-29
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SUBJECT | SUJET

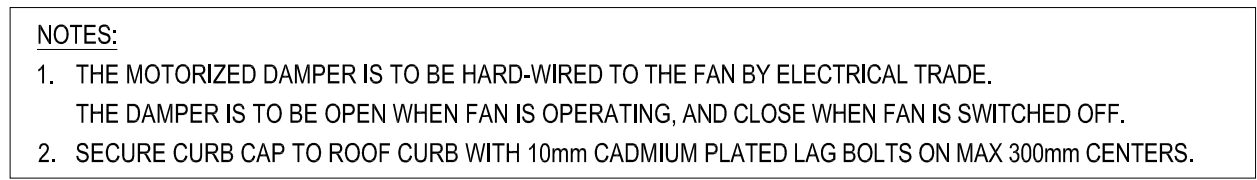
MECHANICAL SCHEDULES  
SHEET 2

PRODUCTION		REVIEWED   REVU
DESIGNED   ÉTUDIÉ	XX   XX	DES O   AGENT CONC
L.M.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
Q.G./A.L.		J.C.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
P.C.		X.X.
COORDINATION		FIRE   INCENDIE
L.M./P.C.		X.X.

WBS NO.   NO. OTP N.700113.18.05	FF NO.   NO. DP BN186586
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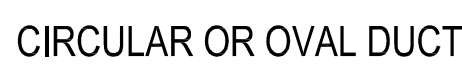
DWG. NO.   NO. DESSIN	B147-9618/12-461
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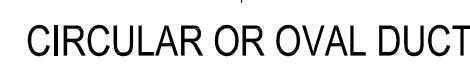
## 3 ROOF MOUNTED EXHAUST FAN DETAILS

470 SCALE: N.T.S.



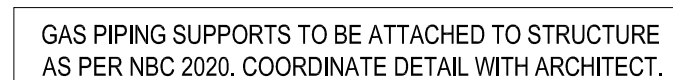
**NOTES:**  
FIRE DAMPER DETAILS INDICATE MINIMUM REQUIREMENTS. FINAL DETAIL SHALL COMPLY WITH MANUFACTURERS RECOMMENDATIONS AND SHALL ACHIEVE ULC APPROVAL.

1 HORIZONTAL FIRE DAMPER  
470 SCALE: 1:100



**NOTES:**  
FIRE DAMPER DETAILS INDICATE MINIMUM REQUIREMENTS. FINAL DETAIL SHALL COMPLY WITH MANUFACTURERS RECOMMENDATIONS AND SHALL ACHIEVE ULC APPROVAL.

2 VERTICAL FIRE DAMPER  
470 SCALE: N.T.S.



SPACING OF SUPPORTS FOR PIPING OR TUBING	
PIPE SIZE	MAXIMUM SPACING OF SUPPORTS (m)
13 mm OR LESS - HORIZONTAL	2
19 mm-25 mm - HORIZONTAL	2.5
32 mm - 63 mm - HORIZONTAL	3
75 mm- 100 mm - HORIZONTAL	5

5 GAS PIPE ROOF SUPPORT DETAIL  
470 SCALE: N.T.S.

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LOCATION | EMPLACEMENT

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CFB BORDEN  
ONTARIO

PROJECT | PROJET

## SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER <b>MECHANICAL</b>	DATE <b>2017-05-29</b>
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SUBJECT   SUJET
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MECHANICAL DETAILS - SHEET 1

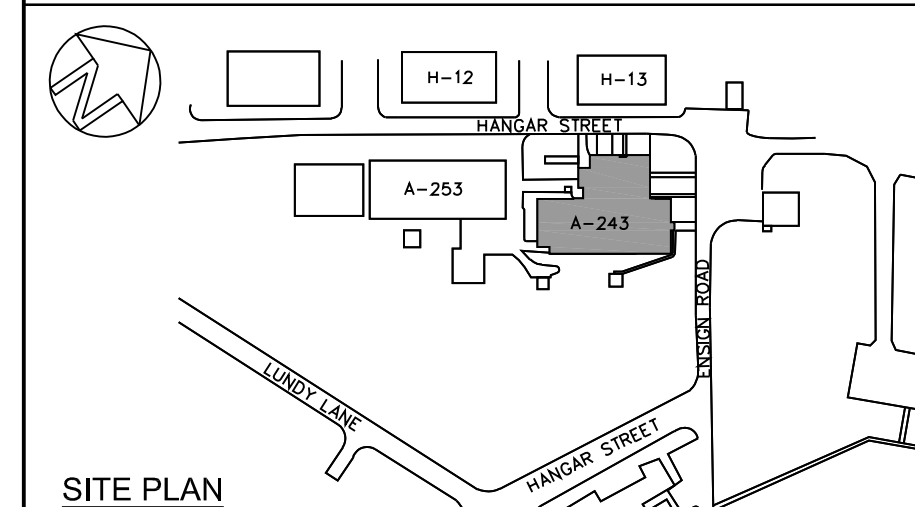
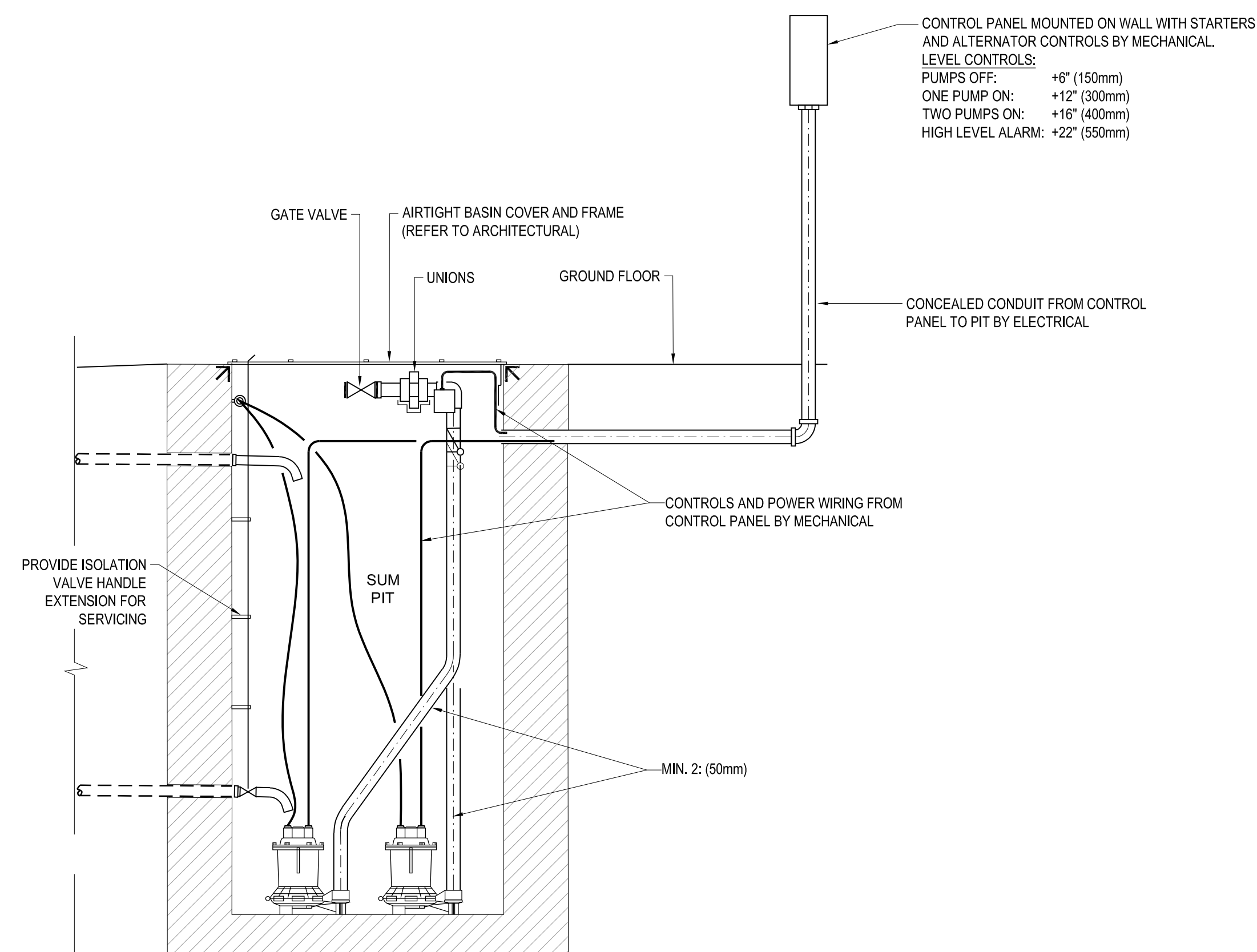
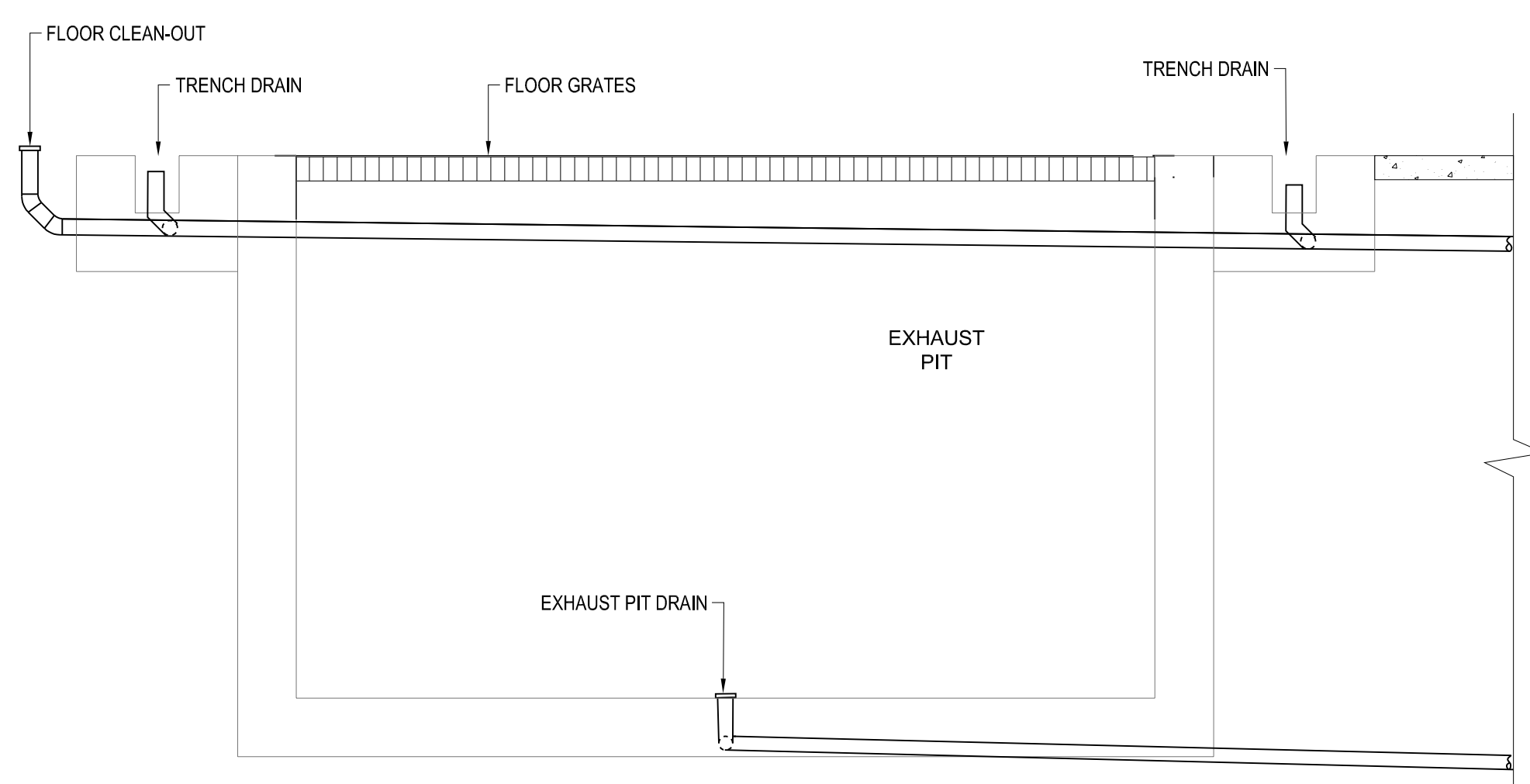
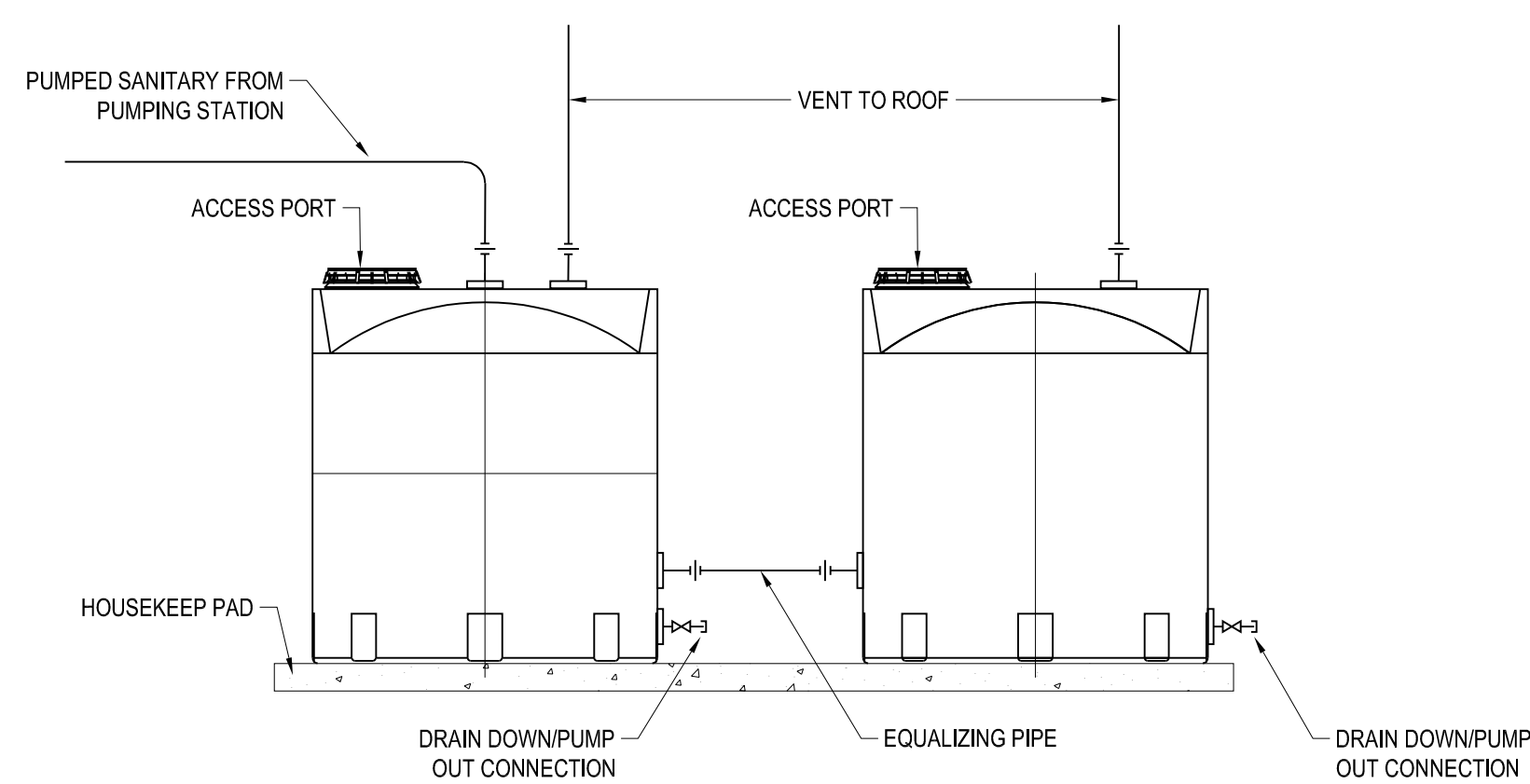
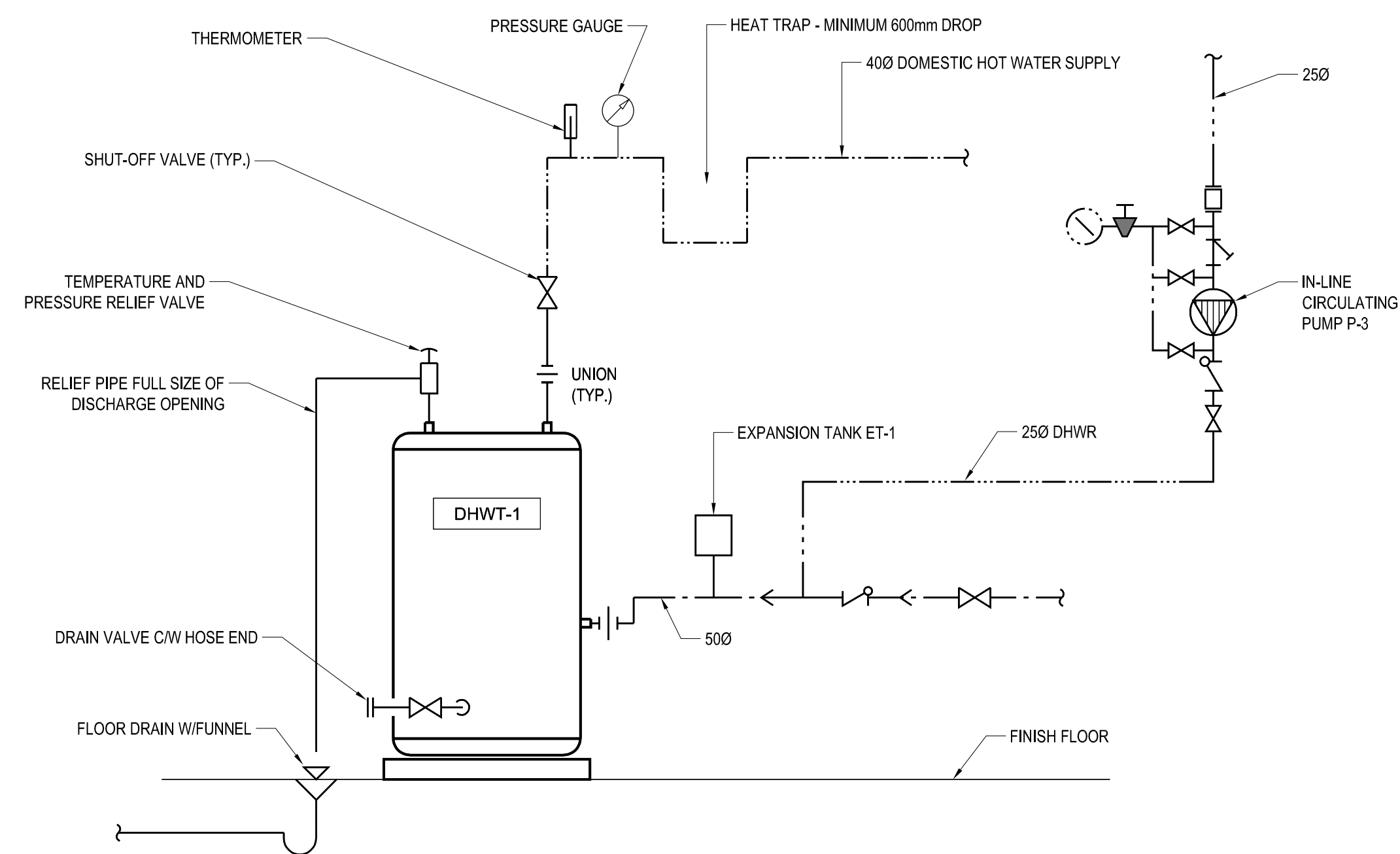
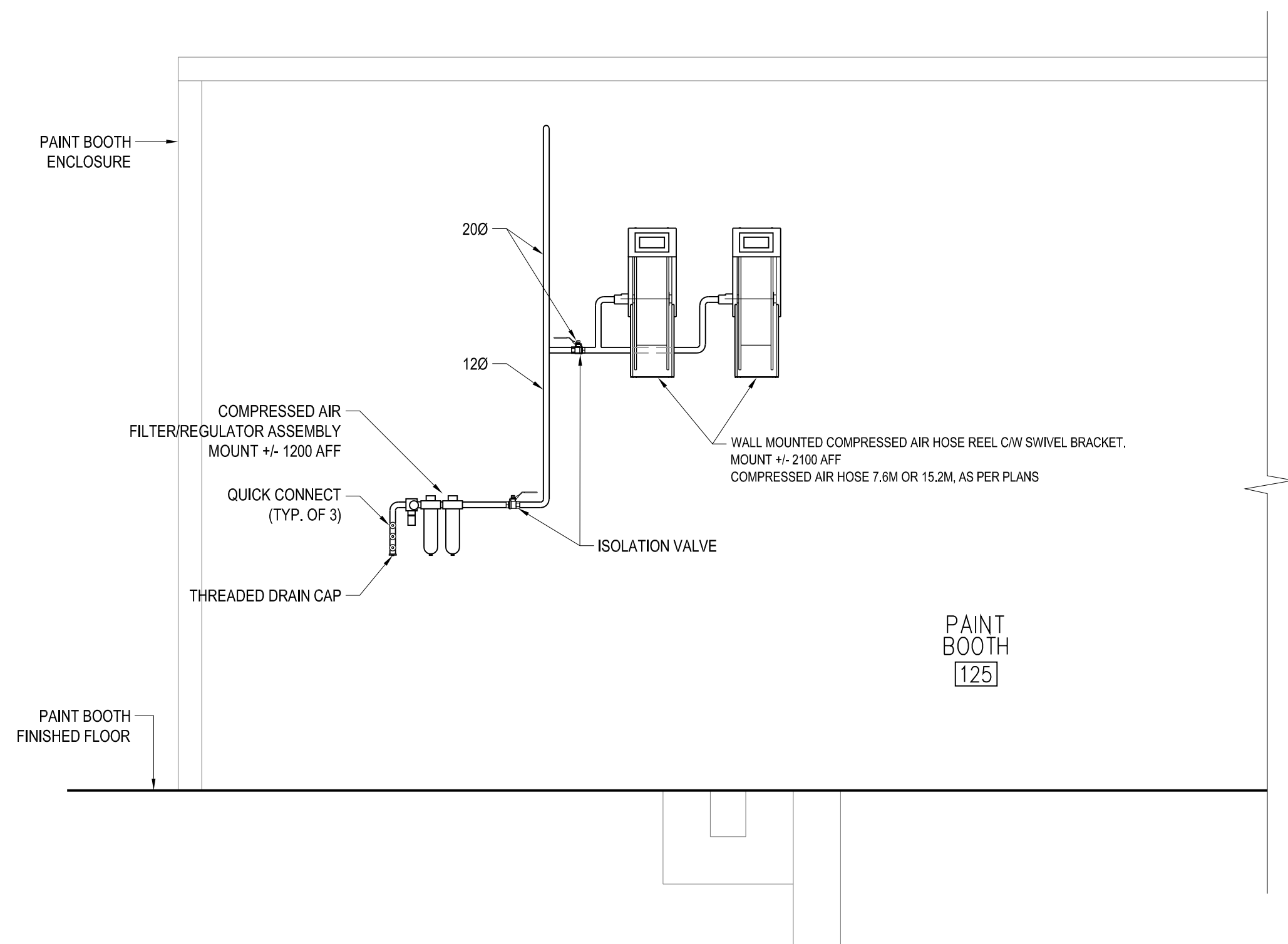
PRODUCTION	REVIEWED   REVU	
DESIGNED   ETUDIÉ L.M.	XX   XX X.X.	DES O   AGENT CONC X.X.
DRAWN   DESSINÉ Q.G./A.L.		PROJ MGR   GEST PROJ J.C.
CHECKED   VÉRIFIÉ P.C.		DES MGR   GEST CONC X.X.
COORDINATION L.M./P.C.		FIRE   INCENDIE X.X.

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DWG. NO.	NO. DESSIN	D 117 0010/10 170
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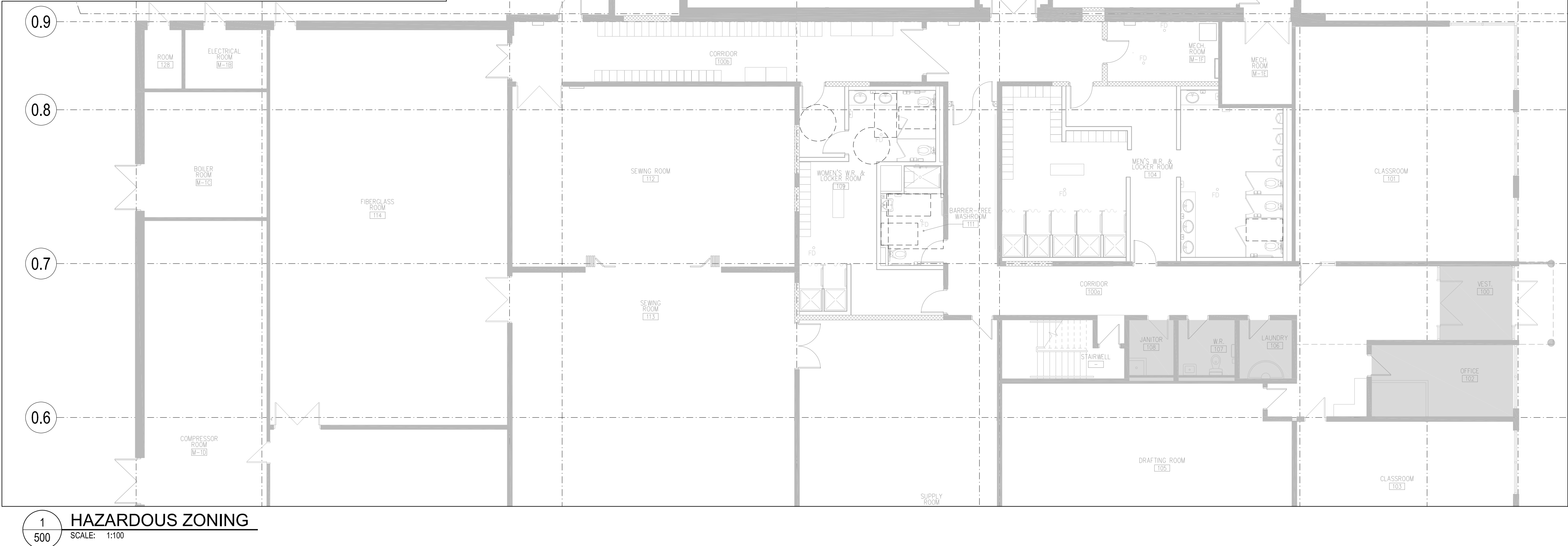
Canada








POWER LOAD NET DIFFERENCES:	
ON MAIN SERVICE PP-1:	
REMOVE PREVIOUS MUA (REPLACEMENT TAGGED MUA-4) =	- 3.1KVA FROM ASSUMED 2HP, 2.7FLA-575V-3PH
ADD MUA-4 =	3.1KVA FROM ASSUMED 2HP, 2.7FLA-575V-3PH
PANEL DP =	- 60.5KVA
ON SPLITTER IN RM M-1B =	3.8KVA
45KVA TRANSFORMER FEED TO PANEL B =	1.4KVA
45KVA TRANSFORMER FEED TO PANEL G =	1.1KVA
NEW DP2 =	64.8KVA
NEW PAINTBOOTH WITHIN PAINTBOOTH 125:	
NEW MUA-3 (CCT FROM NEW PAINTBOOTH CONTROL PANEL) =	68.9KVA FROM 50HP - 46.8FLA-59.74MCA-575V-3PH
NEW EF-14 (CCT FROM NEW PAINTBOOTH CONTROL PANEL) =	47.3KVA FROM 40HP -41FLA-575V-3PH
DIFFERENCE BETWEEN REMOVAL OF EXISTING LIGHTS, ADD OF NEW =	NEGIGABLE (CCT FROM NEW PAINTBOOTH CONTROL PANEL)
SUBTOTAL =	126.8KVA NET DIFFERENCE
PANEL DP (ASSUMED CCT PP1-13/15/17, 150A-3P):	
REMOVING VF-2 =	- 27.7KVA FROM ASSUMED 25HP, 24FLA-575V-3PH
ON SPLITTER IN RM E-1A =	- 38.2KVA
30KVA TRANSFORMER TO LPA =	5.3KVA DIFFERENCE
SUBTOTAL =	- 60.5KVA NET DIFFERENCE
ON SPLITTER IN RM E-1A (ASSUMED CCT DP- 14/16/18, 70A-3P):	
REMOVING EF-8 =	- 19.8KVA FROM ASSUMED 15HP, 17FLA-575V-3PH
REMOVING EF-9 =	- 19.8KVA FROM ASSUMED 15HP, 17FLA-575V-3PH
ADD EF-13 =	1.0KVA FROM 0.5HP -0.9FLA-575V-3PH
SUBTOTAL =	- 38.2KVA NET DIFFERENCE
PANEL D (NOW BY 75KVA TX ON NEW DP2):	
ADD BELT SANDER =	1.3KVA
ADD P-3 =	1.0KVA FROM 0.3HP-120V-1PH
ADD DHWT =	0.7KVA
ADD RECEPTACLES =	0.3 KVA
SUBTOTAL =	3.4KVA NET DIFFERENCE
PANEL D2 (NOW BY 75KVA TX ON NEW DP2):	
ADD AIR SHOWER =	6.1KVA FROM 5HP-15.3FLA-208V-3PH
ADD CADMIUM PLATING MACHINES (2 PER 6 TABLES = 12) =	8.7KVA
ADD SPRAY GUN CLEANER =	1.7KVA
ADD DRILL PRESS =	0.4KVA
ADD BAND SAW =	1.8KVA FROM 2KW-208V-1PH
ADD AIR CURTAIN =	1.1KVA
ADD EF-17 =	0.8KVA FROM 0.25HP-5.8FLA-120V-1PH
ADD EF-18 =	0.8KVA FROM 0.25HP-5.8FLA-120V-1PH
ADD EF-19 =	0.6KVA FROM 1/8HP - 4.4FLA-120-1PH
SF-1 =	1.3KVA FROM 0.5HP-9.8FLA-120V-1PH
SUBTOTAL =	23.2KVA NET DIFFERENCE
NEW DP-2 (ON PP-1):	
ADD EF-10 =	1.0KVA FROM 0.5HP-1.3FLA-600V-3PH
ADD EF-16 =	3.7KVA FROM 3HP-3.9FLA-600V-3PH
ELECTRICAL DUCT HEATER FOR DIRTY COMPOSITE ANNEX =	33.3KVA FROM 30KW
ADD 75KVA TX FOR PANEL 'D' AND PANEL 'D2' =	26.6KVA
SUBTOTAL =	64.8KVA NET DIFFERENCE
NET DIFFERENCE TO LOAD:	
THERE IS A CALCULATED NET INCREASE IN LOAD TO THE MAIN SERVICE SWITCHBOARD PP-1 OF: 126.8KVA REMAINING USABLE CAPACITY ON PP-1 BASED ON PEAK PER ABOVE: 312KVA	
THE REMAINING USABLE CAPACITY AFTER RENOVATION AT THE PAD- MOUNTED TRANSFORMER AND SWITCHBOARD PP-1 WOULD BE: 185KVA (ESTIMATED)	



POWER LOAD CONDITION BEFORE RENOVATION CALCULATION:		
ACTUAL PEAK DEMAND FROM 2020-01-01 TO 2023-02-06:	137KVA MAX PEAK MEASURED	
EXISTING PAD-MOUNT TRANSFORMER POWERING BUILDING A-243 IS:	500KVA	
ALLOWING FOR 90% MAX LOADING OF INCOMING TRANSFORMER:	450KVA USABLE	
REMAINING USABLE CAPACITY ON TRANSFORMER BASED ON PEAK ON TRANSFORMER (LOADED UP TO 90% MAX):	313KVA REMAINING USABLE CAPACITY	
REMAINING USABLE CAPACITY ON PP-1 BASED ON PEAK:	312KVA REMAINING USABLE CAPACITY ON PP-1 (LOADED UP TO 80% MAX ON 600A MAIN BREAKER, WITH 0.9 POWER FACTOR ASSUMED)	

EMERGENCY LIGHTING/EXIT SIGN LOAD CALCULATION										
EXISTING BATTERY PACKS FOR EM-A, EM-B AND EM-D ARE EACH 2-12V, 12AH BATTERIES. 2 x 12V x 12AH = 288WH x 2(0.5 H) = 576W WATTAGE CAPACITY MAXIMUM FOR 30 MINUTES FOR 12V EM HEADS AND EXIT SIGNS.										
EXISTING EM BATTERY PACK	NEW EM BATTERY PACK	LOCATION OF BATTERY PACK	# OF EXISTING EM HEADS	W PER EXISTING HEAD	OF NEW EM HEADS	W PER NEW HEAD	# OF NEW LED EXIT SIGNS	W PER EXIT SIGN	TOTAL WATTAGE	TOTAL MAX WATTAGE
EM-A		STAIRWELL	18	20	1	6	12	3	402	576
EM-B		SEWING RM 112	15	20	2	6	8	3	336	576
EM-D		ELEC RM E-1A	5	20	11	6	11	3	199	576
	EM-C	MENS LOCKER	0	20	5	6	1	3	33	108
	EM-E	WOMENS LOCKER	0	20	7	6	1	3	43	108

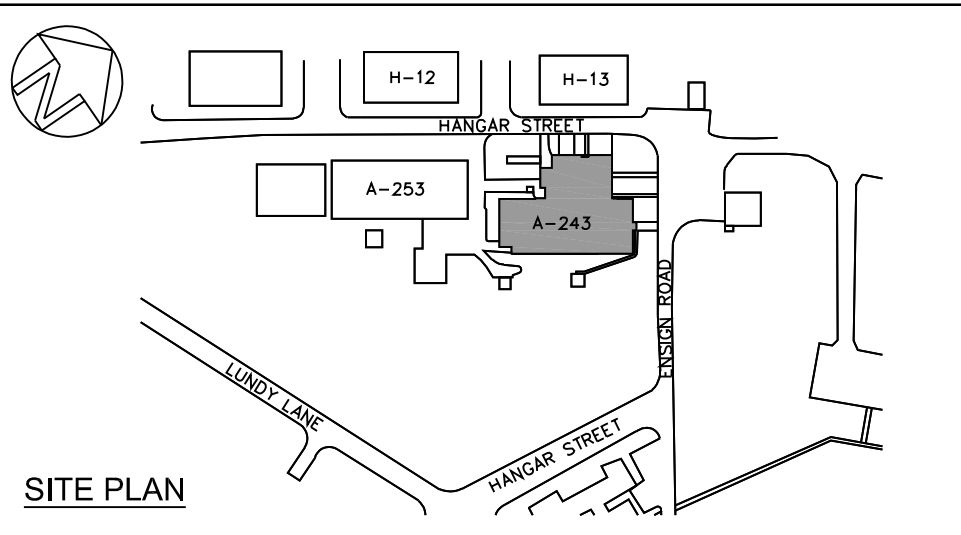
DRAWING LIST	
500	LEGENDS, DRAWING LIST
501	GROUND FLOOR PLAN POWER AND FIRE ALARM - DEMOLITION
502	GROUND FLOOR PLAN LIGHTING - DEMOLITION
503	GROUND FLOOR PLAN POWER AND FIRE ALARM - NEW WORK
504	GROUND FLOOR PLAN LIGHTING - NEW WORK
505	SECOND FLOOR PLAN - FIRE ALARM LAYOUT AND DIAGRAM
540	ROOF PLAN - DEMOLITION
541	ROOF PLAN - NEW WORK
560	SCHEDULES

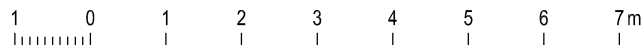
LIGHTING	
SYMBOL	DESCRIPTION
	1x4 LIGHTING FIXTURE, CEILING MOUNTED
	2x4 LIGHTING FIXTURE, CEILING MOUNTED
	1x4 LIGHTING FIXTURE, SURFACE MOUNTED
	LIGHTING FIXTURE, CEILING MOUNTED
	LIGHTING FIXTURE, WALL MOUNTED
	EMERGENCY LIGHTING FIXTURE, CEILING MOUNTED
	EMERGENCY LIGHTING PACK, SINGLE WALL MOUNTED
	EMERGENCY LIGHTING PACK, DOUBLE WALL MOUNTED
	EMERGENCY LIGHTING PACK, DOUBLE WALL MOUNTED, W/ BATTERY PACK, NEW ONES SUITABLE FOR 108 WATTAGE CAPACITY FOR 30 MINUTES
	EXIT SIGN, DOUBLE FACE, WIARROW, CEILING MOUNTED
	EXIT SIGN, SINGLE FACE, WIARROW, CEILING MOUNTED
	EXIT SIGN, DOUBLE FACE, CEILING MOUNTED
	EXIT SIGN, SINGLE FACE, CEILING MOUNTED
	LIGHTING SWITCH, SINGLE POLE
	LIGHTING SWITCH , EXPLOSION PROOF
	LIGHTING SWITCH, 3 WAY
	OCCUPANCY SENSOR

POWER	
SYMBOL	DESCRIPTION
	SINGLE RECEPTACLE, 240V
	DUPLEX RECEPTACLE, 120V 15A
	CONNECTION DIRECT TO EQUIPMENT
	SPECIAL PURPOSE OUTLET
	15A DUPLEX RECEPTACLE WITH INTERNAL GROUND FAULT
	GAS SENSOR
	SINGLE PHASE MOTOR
	THREE PHASE MOTOR
	DISCONNECT SWITCH, NON_FUSED
	DISCONNECT SWITCH, FUSED
	CONTACTOR
	JUNCTION BOX
	MOTOR STARTER, COMBINATION MAGNETIC
	MOTOR STARTER, MANUAL
	MOTOR STARTER, COMBINATION MANUAL
	MOTOR STARTER, MAGNETIC
	PUSH BUTTON, SINGLE
	MOTOR CONTROL BUTTONS, DOUBLE
	MOTOR CONTROL BUTTONS, START-STOP
	BARRIER-FREE PUSH BUTTON
	COMBINATION PUSHBUTTON & INDICATOR LIGHT
	COMBINATION BUZZER & DOME LIGHT
	DOOR CONTACT
	OCCUPIED LIGHT
	PUSH TO LOCK PUSH BUTTON
	ELECTRIC STRIKE
	CONTROL RELAY
	ELECTRICAL PANEL (RECESSED MOUNTED)
	ELECTRICAL PANEL (SURFACE MOUNTED)
	ELECTRICAL DOOR OPENER
	BASEBOARD RADIATOR
	UNIT HEATER
	ELECTRIC HEATER
	ELECTRIC DUCT COIL
	PHONE OUTLET BOX, WALL MOUNTED
	PUBLIC ADDRESS SPEAKER, WALL MOUNTED.
	DISTRIBUTION PANEL
	AIR SHOWER DOOR INTERLOCK CONTROL
	VARIABLE FREQUENCY DRIVE
	GROUNDING
	TRANSFORMER
	PAINT BOOTH MAN DOWN ALARM AUDIBLE/VISUAL ALARM DEVICE, REFER TO SPECIFICATION 23 45 00 PAINT SPRAY BOOTH SYSTEMS

FIRE ALARM SYSTEM	
SYMBOL	DESCRIPTION
	PULL STATION
	AUDIBLE DEVICE
	WALL MOUNTED STROBE LIGHT
	WALL MOUNTED COMBINATION AUDIBLE/STROBE
	SMOKE DETECTOR
	SMOKE DETECTOR WITH RELAY BASE
	DUCT TYPE SMOKE DETECTOR
	HEAT DETECTOR
	CARBON MONOXIDE DETECTOR, PROVIDE MONITORING OF DETECTOR THROUGH FIRE ALARM SYSTEM
	FIRE DAMPER
	CONTROL RELAY MODULE
	MONITORING MODULE
	FLOW SWITCH
	PRESSURE SWITCH
	TAMPER SWITCH
	FIRE ALARM CONTROL PANEL
	FIRE ALARM ANNUNCIATOR PANEL

ABBREVIATIONS	
SYMBOL	DESCRIPTION
N	NEW
E	EXISTING TO REMAIN
X	TO BE REMOVED
R	EXISTING TO BE RELOCATED, EXTEND EXISTING CONDUIT & WIRING UNLESS NOTED OTHERWISE
EXP	EXPLOSION PROOF
WP	WEATHERPROOF
20A	PROVIDE RECEPTACLE WITH 5-20R CONFIGURATION IN LIEU OF 5-15R



1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	NM	
NO.	DATE	REVISION	APPR.	
SCALE   ÉCHELLE				
1:100				

LOCATION | EMPLACEMENT

17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE   MÉTIER	DATE
ELECTRICAL	2017-05-29

SUBJECT | SUJET

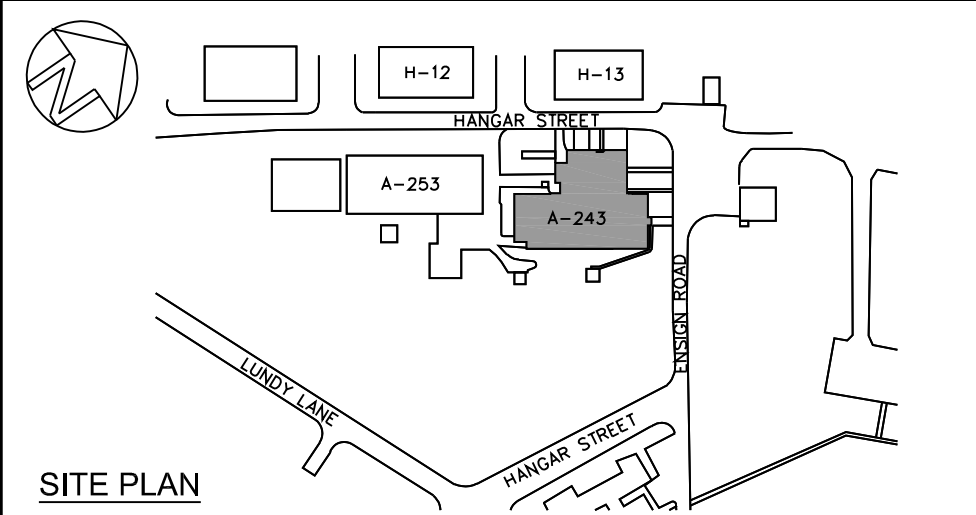
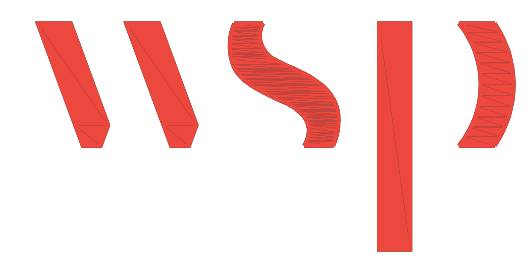
LEGENDS AND DRAWING LIST

PRODUCTION	REVIEWED   REVU	
DESIGNED   ÉTUDIÉ	XX   XX	DES O   AGENT CONC
N.M.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
O.G.		X.X.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
N.M.		X.X.
COORDINATION		FIRE   INCENDIE
X.X.		X.X.

WBS NO.   NO. OTP	FF NO.   NO. DP
N.700113.18.05	BN186586

DWG. NO.   NO. DESSIN	B147-9618/12-500
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1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	NM
NO.	DATE	REVISION	APPR.
SCALE   ÉCHELLE			

LOCATION | EMPLACEMENT  
17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

## SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
ELECTRICAL

DATE  
2017-05-29

SUBJECT | SUJET

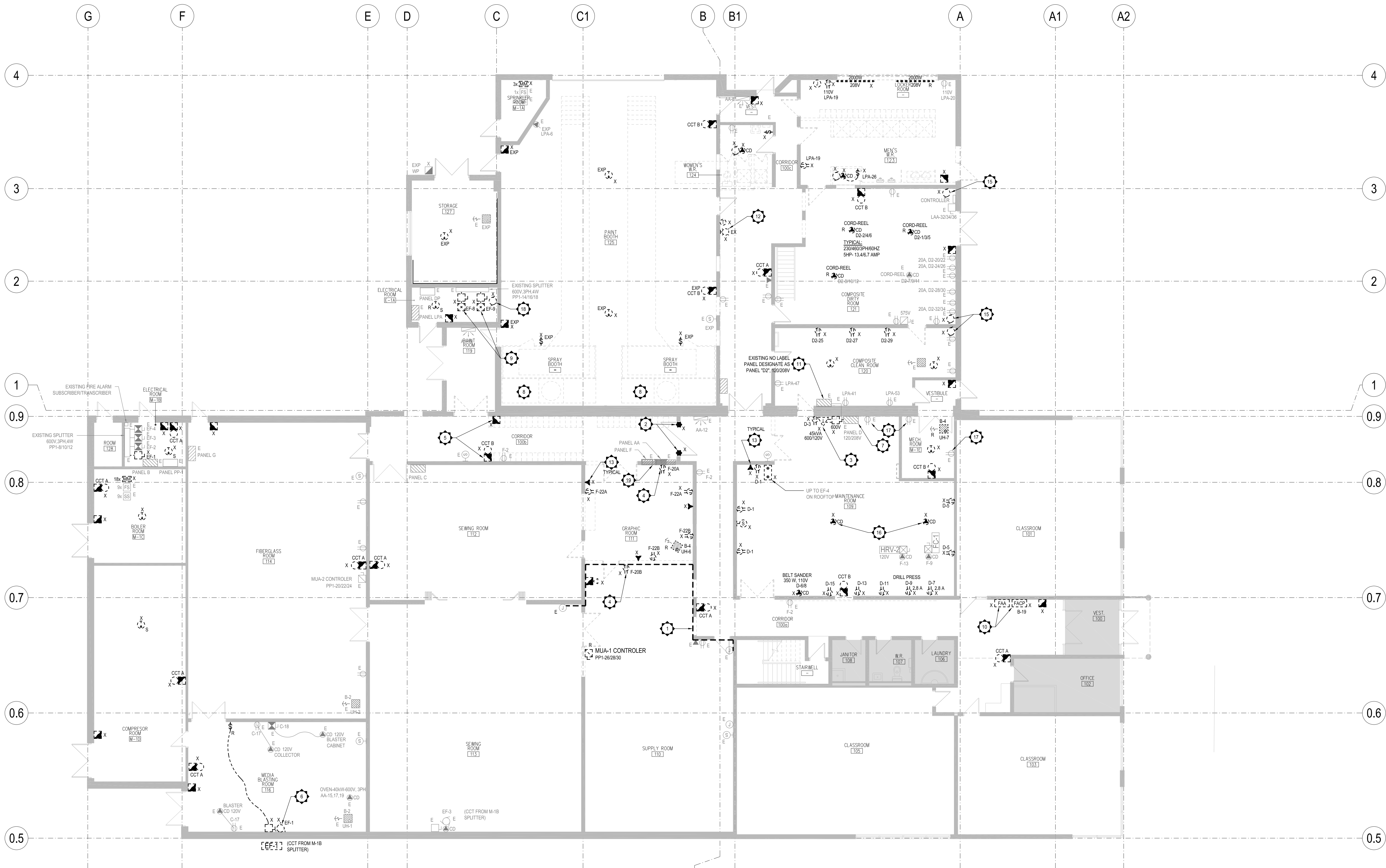
## GROUND FLOOR PLAN POWER AND FIRE ALARM - DEMOLITION

PRODUCTION	REVIEWED   REVU	
DESIGNED   ÉTUDE	XX   XX	DES O   AGENT CONC
N.M.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
Q.G.		X.X.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
N.M.		X.X.
COORDINATION		FIRE   INCENDIE
X.X.		X.X.

WBS NO. | NO. OTP  
N.700113.18.05

FF NO. | NO. DP  
BN186586

DWG. NO. | NO. DESSIN  
L-B147-9618/12-501



1  
501 GROUND FLOOR PLAN POWER AND FIRE ALARM - DEMOLITION  
SCALE: 1:100

### GENERAL NOTES:

- REFER TO DRAWING 500 FOR LEGEND.
- EXCEPT AS NOTED OTHERWISE, ALL EXISTING EQUIPMENT TO BE DEMOLISHED IS SHOWN IN THICK DASHED LINES AND IS MARKED WITH THE LETTER 'X'.
- EXCEPT AS NOTED OTHERWISE ALL EXISTING EQUIPMENT TO BE RELOCATED IS SHOWN IN THICK DASHED LINES AND IS MARKED WITH THE LETTER 'R'.
- EXCEPT AS NOTED OTHERWISE, ALL EXISTING EQUIPMENT TO REMAIN IS SHOWN IN LIGHT/GRAY SOLID LINES AND IDENTIFIED WITH 'E'.
- CIRCUIT NUMBERS NOTED ARE BASED ON PREVIOUS AS-BUILT DRAWINGS AND PANEL SCHEDULES. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING INSTALLATION ON SITE AND CONFIRM ALL EXISTING CIRCUIT TO BE DEMOLISHED AND/OR REUSE.
- UNLESS NOTED OTHERWISE, ITEMS INDICATED TO BE REMOVED ARE TO HAVE WIRING AND ANY SURFACE MOUNT BOXES AND CONDUIT (CONDUIT WHERE ACCESSIBLE) REMOVED BACK TO SOURCE.
- FOR FLUSH BACKBOXES ASSOCIATED WITH LIGHTING TOGGLE SWITCHES, RECEPTACLES OR COMMUNICATION JACKS, WHERE A NEW DEVICE IS NOT THEN INSTALLED IN THE SAME BACKBOXES, PROVIDE STAINLESS STEEL COVERPLATES TO COVER UNUSED BACKBOXES. EMPTY FLUSH BOXES TO BE FILLED WHERE WALL TILES ARE BEING INSTALLED ON EXISTING WALLS.
- SEAL ALL PENETRATION AFTER DEVICES AND CONDUIT ARE REMOVED.



### DEMOLITION SPECIFIC NOTES:

- REMOVE AND REROUTE PA SYSTEM CONDUIT AND WIRING BETWEEN EXISTING JUNCTION BOXES AS NORTH WALL WHERE CONDUIT RUNS IS TO BE REMOVED.
- REMOVE EXISTING DOOR HOLD OPEN DEVICE AND ALL ASSOCIATED CONDUIT & WIRING..
- REMOVE EXISTING 48VVA 600/120/208 V TRANSFORMER.
- DISCONNECT AND REMOVE EXISTING RECEPTACLE. MODIFY EXISTING WIRING TO MAINTAIN POWER TO EXISTING DEVICES TO REMAIN ON SAME CIRCUIT. TYPICAL.
- DISCONNECT AND REMOVE EXISTING FIRE ALARM DEVICE.
- ELECTRICALLY DISCONNECT EXISTING EXHAUST FAN COMPLETE WITH ASSOCIATED DISCONNECT SWITCH. RETAIN ASSOCIATED WIRING. DISCONNECT SWITCH FOR RECONNECTION TO NEW FAN.
- REPLACE PANEL 'D' 225A-120/208V-3PH-4W, 42 CIRCUIT SURFACE MOUNT PANEL WITH 225A-120/208V-3PH-4W, MINIMUM 60 CIRCUIT PANEL. RECONNECT EXISTING CIRCUITS TO BREAKERS AND PROVIDE NEW BREAKERS & CIRCUITS AS INDICATED ON DRAWING 560.
- ELECTRICALLY DISCONNECT EXISTING SPRAY BOOTH. REMOVE ASSOCIATED WIRING AND ACCESSIBLE/SURFACE CONDUIT, BOXES, ETC BACK TO PANEL LPA-A. MARK BREAKER(S) AS SPARE.
- DISCONNECT AND REMOVE EXISTING DISCONNECT SWITCH AND STARTER FOR SPRAY BOOTH EXHAUST FANS EF-8 AND EF-9. REMOVE ASSOCIATED CONDUIT AND WIRING UP TO FAN ON ROOF. REFER TO DRAWING 540 FOR LOCATION OF FANS.
- DISCONNECT AND REMOVE EXISTING FIRE ALARM SYSTEM C/W CONTROL PANEL, ANNUNCIATOR PANEL, DEVICES AND WIRING. CONTRACTOR IS TO ADVISE DCC AT LEAST 8 WEEKS IN ADVANCE OF PLANNED OUTAGE OF FIRE ALARM SYSTEM. FIRE WATCH FOR DURATION OF PERIOD WHEN WORK IS TO BE COMPLETED IS TO BE PROVIDED BY DND.
- EXISTING PANEL BOARD WITH NO LABEL (TAG AS 'D2') TO REMAIN.
- REMOVE "PAINT BOOTH IN-USE" EXPLOSION PROOF INDICATOR LIGHT.
- EXISTING DEVICES WERE ALREADY REMOVED. REMOVE ANY SURFACE MOUNTED CONDUIT & BOXES, PROVIDE STAINLESS STEEL COVERPLATES OVER RECESSED BACKBOXES.
- COMMS/PHONE BOXES TO BE REMOVED FROM ROOMS 111 AND 109 TO HAVE ANY COMMS WIRING REMOVED BY DND PRIOR TO CONTRACT AWARD. CONTRACTOR TO REMOVE ANY REMAINING JACKSPULL BOXES AND REPAIR SURFACES TO MATCH EXISTING.
- ELECTRICALLY DISCONNECT EXISTING EXHAUST FAN. REMOVE ASSOCIATED ELECTRICAL COMPONENTS, CONDUIT & WIRING BACK TO SOURCE. MARK BREAKER AS SPARE.
- DISCONNECT AND REMOVE ANY WIRING BACK TO SOURCE AND REMOVE SURFACE MOUNTED JUNCTION BOX DIRECT CONNECTION POINT AT FLOOR. SUCH THAT FLOOR TO BE MADE SMOOTH (REFER TO ARCHITECTURAL DRAWINGS). REMOVE ANY ASSOCIATED REDUNDANT CONDUIT EXPOSED IN FLOOR WITHIN THE SLAB WHEN CUTTING FOR THE NEW SANITARY LINES. MARK BREAKER AS SPARE.
- CONFIRM/TRACE EXISTING CIRCUIT. IF DESIGN CALLS FOR REUSING CIRCUIT FOR ANOTHER PURPOSE, CONNECT TO SPARE CIRCUIT IN PANEL (ASSUMED AS CIRCUIT D-19).
- DISCONNECT AND REMOVE WIRING AND ALL ACCESSIBLE/SURFACE MOUNT BOXES, CONDUIT, ETC FROM LIGHT BOX EXHAUST FAN. MARK BREAKER AS SPARE.
- EXISTING SURFACE MOUNTED CONDUIT TO BE CONCEALED BEHIND NEW WALL FURR OUT. PROVIDE ACCESS COVERS TO ACCESS JUNCTION BOX AND LB.



Cette conception est un instrument de service protégé par le droit d'auteur. Le droit d'auteur sur l'instrument de service de l'expert-conseil appartient à ce dernier. Les exemplaires de ce dessin, y compris les exemplaires électroniques, ne peuvent servir qu'aux fins prévues, et ce, qu'une fois, sur le même chantier et pour le même projet. Ils ne peuvent être offerts en vente ni transférés sans le consentement écrit exprès de l'expert-conseil.

נספח



LOCATION | EMPLACEMENT

17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

TRADE   MÉTIER ELECTRICAL	DATE 2017-05-29
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PRODUCTION	REVIEWED   REVU	
DESIGNED   ÉTUDIÉ	XX   XX	DES O   AGENT CONC
N.M.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
Q.G.		X.X.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
N.M.		X.X.
COORDINATION		FIRE   INCENDIE
X.X.		X.X.

DWG. NO. | NO. DESSIN

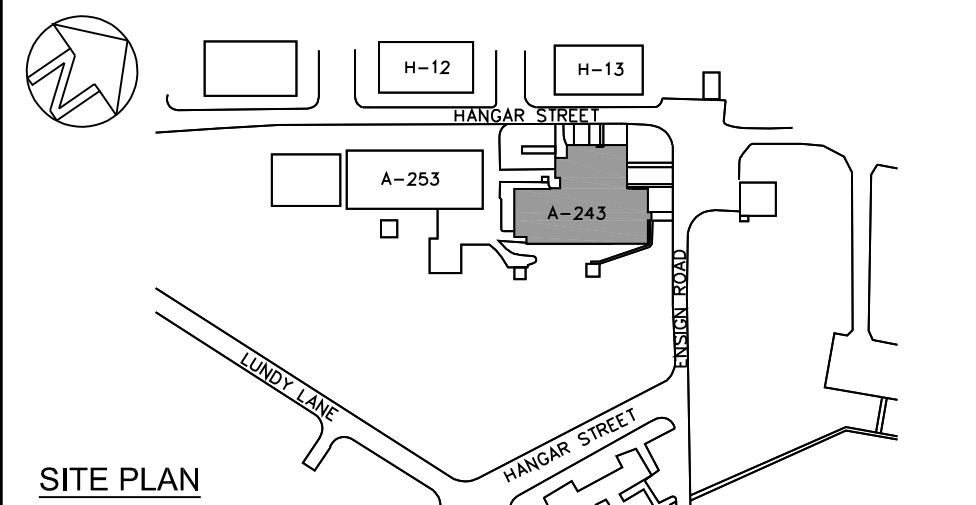
Canada



- A. REFER TO DRAWING 500 FOR LEGEND.
- B. EXCEPT AS NOTED OTHERWISE, ALL EXISTING EQUIPMENT TO BE DEMOLISHED IS SHOWN IN THICK DASHED LINES AND IS MARKED WITH THE LETTER 'X'.
- C. EXCEPT AS NOTED OTHERWISE, ALL EXISTING EQUIPMENT TO BE RELOCATED IS SHOWN IN THICK DASHED LINES AND IS MARKED WITH THE LETTER 'R'.
- D. EXCEPT AS NOTED OTHERWISE, ALL EXISTING EQUIPMENT TO REMAIN IS SHOWN IN LIGHT/GRAY SOLID LINES AND IS MARKED WITH THE LETTER 'E'.
- E. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING INSTALLATION ON SITE AND CONFIRM ALL EXISTING CIRCUIT TO BE DEMOLISHED AND/OR REUSE.
- F. UNLESS NOTED OTHERWISE, ITEMS INDICATED TO BE REMOVED ARE TO HAVE WIRING AND CONDUIT REUSED/EXTEND FOR NEW LIGHTING LAYOUTS.
- G. FOR FLUSH BACKBOXES ASSOCIATED WITH LIGHTING TOGGLE SWITCHES, RECEPTACLES OR COMMUNICATION JAKES, WHERE A NEW DEVICE IS NOT THEN INSTALLED IN THE SAME BACKBOXES, PROVIDE STAINLESS STEEL COVER PLATES TO COVER UNUSED BACKBOXES. EMPTY FLUSH BOXES TO BE FILLED WHERE WALL FLES ARE BEING INSTALLED ON EXISTING WALLS.
- H. SEAL ALL PENETRATION AFTER DEVICES AND CONDUIT ARE REMOVED.

1. DISCONNECT AND REMOVE EXISTING LIGHT FIXTURES. REMOVE ASSOCIATED WIRING AND LIGHT SWITCH BACK TO PANEL. EXISTING CIRCUIT TO BE RETAINED FOR CONNECTION TO NEW LIGHTS.
2. DISCONNECT AND REMOVE EXISTING LIGHT FIXTURES.
3. DISCONNECT AND REMOVE EXISTING EXIT SIGN. REFER TO NEW-WORK DRAWING 504 FOR NEW PICTOGRAM EXIT SIGN LOCATION. REUSE EXISTING CIRCUIT OR RECIRCUIT AS INDICATED ON DWG 504 (TYPICAL ALL EXIT SIGN LOCATIONS, UNLESS NOTED OTHERWISE).
4. LIGHTING FIXTURES TO BE TEMPORARY REMOVED FOR CEILING ACCESS DURING CONSTRUCTION, AND TO BE REINSTALLED TO THE SAME LOCATION IN NEW CEILING.
5. NOT USED.
6. DISCONNECT AND REMOVE EXISTING LIGHTING BOX EXHAUST FAN, ASSOCIATED PIPING, SUPPORTS, AND CONTROLS. REFER TO NOTE 18 ON DRAWING 501.
7. RECIRCUIT DEVICE AS INDICATED ON DRAWING 504.





NO.	DATE	REVISION	APPR.
1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	NM
SCALE   ÉCHELLE			
1:100			

LOCATION | EMPLACEMENT  
17 HANGAR STREET.,  
CFB BORDEN  
ONTARIO

PROJECT | PROJET

## SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
ELECTRICAL  
DATE  
2017-05-29

SUBJECT | SUJET

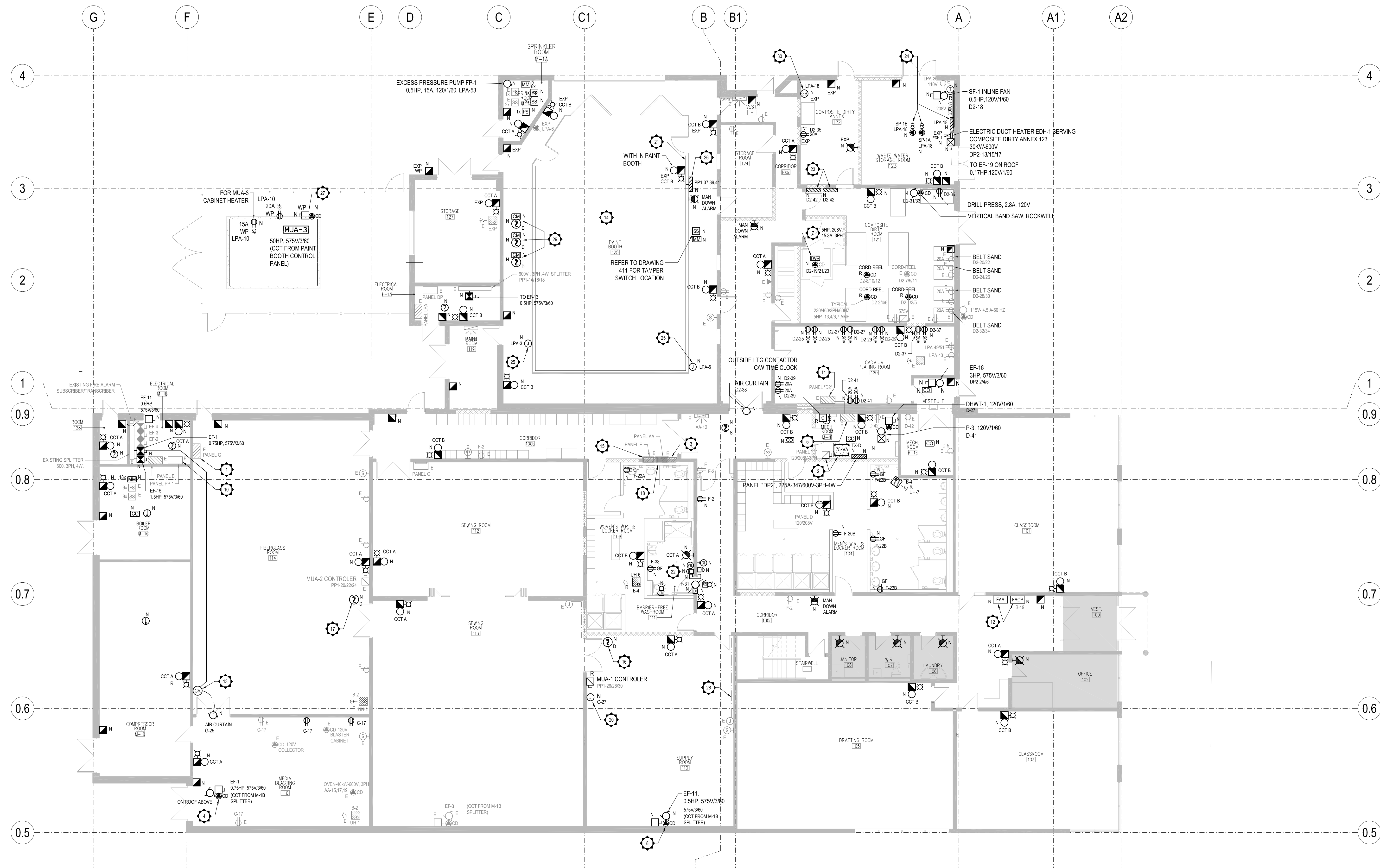
## GROUND FLOOR PLAN POWER AND FIRE ALARM - NEW WORK

PRODUCTION	DESIGNED   ETUDIÉ	REVIEWED   REVU
N.M.	XX   XX	DES O   AGENT CONC
DRAWN   Dessiné	X.X.	PROJ MGR   GEST PROJ
Q.G.		X.X.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
N.M.		X.X.
COORDINATION		FIRE   INCENDIE
X.X.		X.X.

WBS NO. | NO. OTP  
N.700113.18.05

FF NO. | NO. DP  
BN186586

DWG. NO. | NO. DESSIN  
B147-9618/12-503



1  
503  
SCALE: 1:100  
GROUND FLOOR PLAN POWER AND FIRE ALARM- NEW WORK

### GENERAL NOTES:

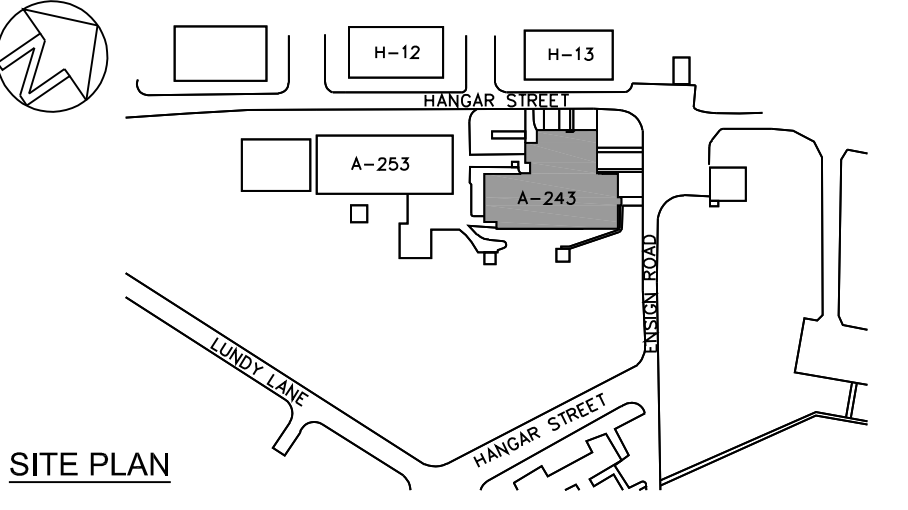
- REFER TO DRAWING 500 FOR LEGEND.
- EXCEPT AS NOTED OTHERWISE, ALL EXISTING EQUIPMENT IS SHOWN IN THICK SOLID LINES AND IS MARKED WITH THE LETTER 'E'.
- EXCEPT AS NOTED OTHERWISE, ALL NEW EQUIPMENT IS SHOWN IN THICK SOLID LINES AND IS MARKED WITH THE LETTER 'N'.
- EXCEPT AS NOTED OTHERWISE, ALL EXISTING RELOCATED EQUIPMENT IS SHOWN IN THICK SOLID LINES AND IS MARKED WITH THE LETTER 'R'.
- ALL NEW PANEL SCHEDULES AND EQUIPMENT LABELS SHALL BE SUPPLIED WITH NEW ROOM NUMBERS AND VERIFIED FOR ACCURACY.
- SEAL ALL PENETRATION AFTER DEVICES AND CONDUIT ARE REMOVED.
- FOR FLUSH BACKBOXES ASSOCIATED WITH LIGHTING TOGGLE SWITCHES, RECEPTACLES OR COMMUNICATION JACKS, WHERE A NEW DEVICE IS NOT THEN INSTALLED IN THE SAME BACKBOXES, PROVIDE STAINLESS STEEL COVERPLATE TO COVER UNUSED BACKBOXES. EMPTY FLUSH BOXES TO BE FILLED WHERE WALL TILES ARE BEING INSTALLED ON EXISTING WALLS.

### SPECIFIC NOTES:

- PROVIDE NEW BREAKERS IN PANEL 'G' AS NOTED PER PANEL DETAIL, ON DRAWING 560, UPDATE PANEL SCHEDULE.
- PROVIDE NEW TRANSFORMER TX-D, 75KVA-600V/120/208V-3PH C/W HOUSEKEEPING PAD. PROVIDE PRIMARY WIRING FROM DP2, GROUNDING, SECONDARY AND FUSED DISCONNECT ON SECONDARY TO PANELS 'D' AND 'D2' PER DRAWING 560, PANEL DP2 DETAIL.
- NOT USED.
- CONNECT NEW EXHAUST FAN EF-1 TO EXISTING WIRING AND DISCONNECT SWITCH OF REMOVED EF-1. CONNECT TO NEW STARTER IN ELECTRICAL ROOM M-18. STARTER SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR. FAN TO START WHEN LIGHTING TOGGLE SWITCH CONTROL RELAY TURNS LIGHTS ON IN ROOM, POWERED FROM SPLITTER IN RM M-18. POWERED FROM SPLITTER IN RM M-18.
- REPLACE PANEL 'D' 225A-120/208V-3PH-4W, 42 CIRCUIT SURFACE MOUNT PANEL WITH 225A-120/208V-3PH-4W, MINIMUM 60 CIRCUIT PANEL. RECONNECT EXISTING CIRCUITS TO BREAKERS AND PROVIDE NEW BREAKERS & CIRCUITS AS INDICATED ON DRAWING 560.
- NOT USED.
- PROVIDE FIRE ALARM RELAY TO DE-ENERGIZE DOOR INTERLOCK CONTROL OF AIR SHOWER DOORS ON FIRE ALARM CONDITION.
- PROVIDE 3#12+GND-21mmC TO CONNECT 600V, 3PH, 0.75 HP EXHAUST FAN EF-11 TO EXISTING 600V SPLITTER IN ELECTRICAL ROOM M-18.
- NOT USED.
- PROVIDE NEW BREAKERS IN DISTRIBUTION PANEL SECTION OF EXISTING 600V CUTLER-HAMMER SWITCHGEAR #CMPB3-600A-HLD PER PANEL SCHEDULE ON DRAWING 560. CONNECT MAKE-UP AIR UNIT MUA-4 TO THIS BREAKER WITH 3#12+GND-21mmC. PROVIDE #4/0 & 1#4BND IN 78mmC FROM PP-1 TO NEW PANEL DP2. REFER TO NOTE 26 FOR FEED TO PAINTBOOTH CONTROL PANEL.
- REVISE PANEL BREAKERS AND CIRCUITS PER REVISED PANEL SCHEDULE 'D2' ON DRAWING 560. SUPPLY AND INSTALL NEW NAMEPLATE FOR PANEL 'D2' AND FASTEN USING MECHANICAL MEANS.
- CONNECT NEW FIRE ALARM CONTROL PANEL TO EXISTING 120VAC POWER CIRCUIT AND MOUNT FIRE ALARM ANNUNCIATOR PANEL ADJACENT TO CONTROL PANEL.
- PROVIDE CONTROL RELAY ASSOCIATED WITH LIGHT SWITCH FOR PLASTIC MEDIA 116. CONTROL RELAY TO PROVIDE START SIGNAL TO EF-1 FAN VFD TO START AND FOR AIR CURTAIN TO START WHEN LIGHTING TOGGLE SWITCH CONTROL RELAY TURNS LIGHTS ON IN ROOM.
- PROVIDE PAINTBOOTH MANDOWN ALARM TRIGGER INSIDE PAINT BOOTH AND CONNECT TO PAINT BOOTH MANDOWN ALARM AUDIBLE/VISUAL ALARM DEVICES. REFER TO SPECIFICATION 23 45 00 PAINT SPRAY BOOTH SYSTEMS.
- IN PANEL 'F' REUSE CIRCUITS FROM DEMOLITION FOR RECEPTACLES IN NEW WOMEN'S AND MEN'S WASHROOM/LOCKER ROOMS. USE SPARE CIRCUIT F31 FOR BARRIER-FREE WASHROOM ASSISTANCE CONTROLS. WIRE NEW BREAKERS WHERE INDICATED ON DRAWING 560. UPDATE PANEL SCHEDULE.
- PROVIDE DUCT-TYPE SMOKE DETECTOR FOR MUA-1. COORDINATE EXACT LOCATION IN DUCT ON SITE.
- PROVIDE DUCT-TYPE SMOKE DETECTOR FOR MUA-2. COORDINATE EXACT LOCATION IN DUCT ON SITE.
- EXISTING SURFACE MOUNTED CONDUIT TO BE CONCEALED BEHIND NEW WALL FURR OUT. PROVIDE ACCESS COVERS TO ACCESS JUNCTION BOX AND LB.
- TYPICAL: PROVIDE A DUCT-DETECTOR AND CONTROL RELAY MODULE FOR EACH COMBINATION FIRE SMOKE DAMPER.
- PROVIDE JUNCTION BOX AT CEILING SPACE @ 120V CIRCUIT G-27 FOR MECHANICAL CONTROLS. MECHANICAL CONTROLS CONTRACTOR TO MAKE USE OF JUNCTION BOX AS IT RELATES TO MECHANICAL DRAWING M431, NOTE 15.
- PAINT BOOTH MAN DOWN ALARM PULL STRING TO BE PROVIDED WITH THE PAINT BOOTH BY PAINT BOOTH MANUFACTURER TO CONTROL PANEL AND TO AUDIBLE/VISUAL ALARM DEVICES. WIRE BY PAINT BOOTH SUPPLIER ELECTRICAL CONTRACTOR. LINE INDICATED HERE SHOWS CONCEPT/INTENT. REFER TO SPECIFICATION SECTION 23 45 00.
- REFER TO UNIVERSAL WASHROOM DETAIL FOR EXTENT OF WORK.
- PROVIDE CONDUIT & WIRING FROM COMPOSITE DIRTY ANNEX 122 CONTROL PANEL TO CONTROL FUNCTION OF EF-17, EF-18 AND SF-1. REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR EXTENT OF WORK. PROVIDE JUNCTION BOX AND 120V CIRCUIT IN PROXIMITY OF CONTROL PANEL FOR POWER AND ASSOCIATED MECHANICAL CONTROLS FOR CONTROL PANEL AND HAZARDOUS GAS-DETECTION AND ALARM PANEL. REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS.
- HAZARDOUS WASTE CONTROL PANEL AND SUMP PUMPS SP-1A, SP-1B, EACH 0.4HP, 8.5FLA, 120V PUMPS (LEAD LAG), CONTROL PANEL/ALARM, CCT, LPA-18.
- TERMINATE 15A-120V CIRCUIT TO A NEW JUNCTION BOX FOR FUTURE BREATHING AIR DISTRIBUTION PANEL. WALL MOUNT AT 1200mm ABOVE FINISHED FLOOR.
- PAINTBOOTH CONTROL PANEL. REFER TO SPECIFICATION 23 45 00 PAINT SPRAY BOOTH SYSTEMS. THIS TRADE PROVIDES POWER TO CONTROL PANEL, PAINTBOOTH ELECTRICAL TRADE PROVIDE POWER FROM CONTROL PANEL TO BOOTH ACCESSORIES, LIGHTING, MUA-3 AND EF-14. CONTROL PANEL TO BE ON CIRCUIT PP1-37.39.41. PROVIDE #20 + GND - 78mmC FROM PANEL PP-1 TO PAINTBOOTH CONTROL PANEL. PROVIDE FIRE ALARM FAN MONITORING AND SHUTDOWN WIRING FROM MUA-3 AND EF-14 TO TERMINATE AT CONTROL PANEL.
- PROVIDE CONDUIT & WIRING FROM MUA-3 PAINTBOOTH CONTROL PANEL AT ROOM 125. VFD FOR MUA-3 IS INTEGRAL OR LOCATED AT PAINTBOOTH CONTROL PANEL AND POWERED BY PAINTBOOTH CONTROL PANEL. PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT C/W EXPLOSION PROOF CONNECTORS FOR CONNECTION TO UNIT MOTORS. REFER TO SPECIFICATION 23 45 00 PAINT SPRAY BOOTH SYSTEMS. FIRE ALARM FAN MONITORING AND SHUTDOWN WIRING FOR MUA-3 TO TERMINATE AT PAINTBOOTH CONTROL PANEL. FROM PAINTBOOTH CONTROL PANEL TO MUA-3 PROVIDE 3#4 + GND IN 35mmC.
- PA CONDUIT & WIRING TO BE REROUTED/EXTENDED PER DEMOLITION SPECIFIC NOTE #1 ON DRAWING 501.
- PROVIDE DUCT DETECTORS AND CONTROL MODULES FOR MUA-3. COORDINATE EXACT LOCATION ON SITE.
- PROVIDE CONDUIT, WIRING AND BACKBOX FOR EXPLOSION RATED HAZARDOUS GAS SENSOR C/W ASSOCIATED CONTROL PANEL, AUDIBLE, AND VISUAL ALARM PANEL. REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS.



ARCHITECTURE | 49



1	2025/03/05	100% SUBMISSION - ISSUED FOR TENDER	NM
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LOCATION | EMPLACEMENT  
17 HANGAR STREET.,  
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ONTARIO

SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
ELECTRICAL

DATE  
2017-05-29

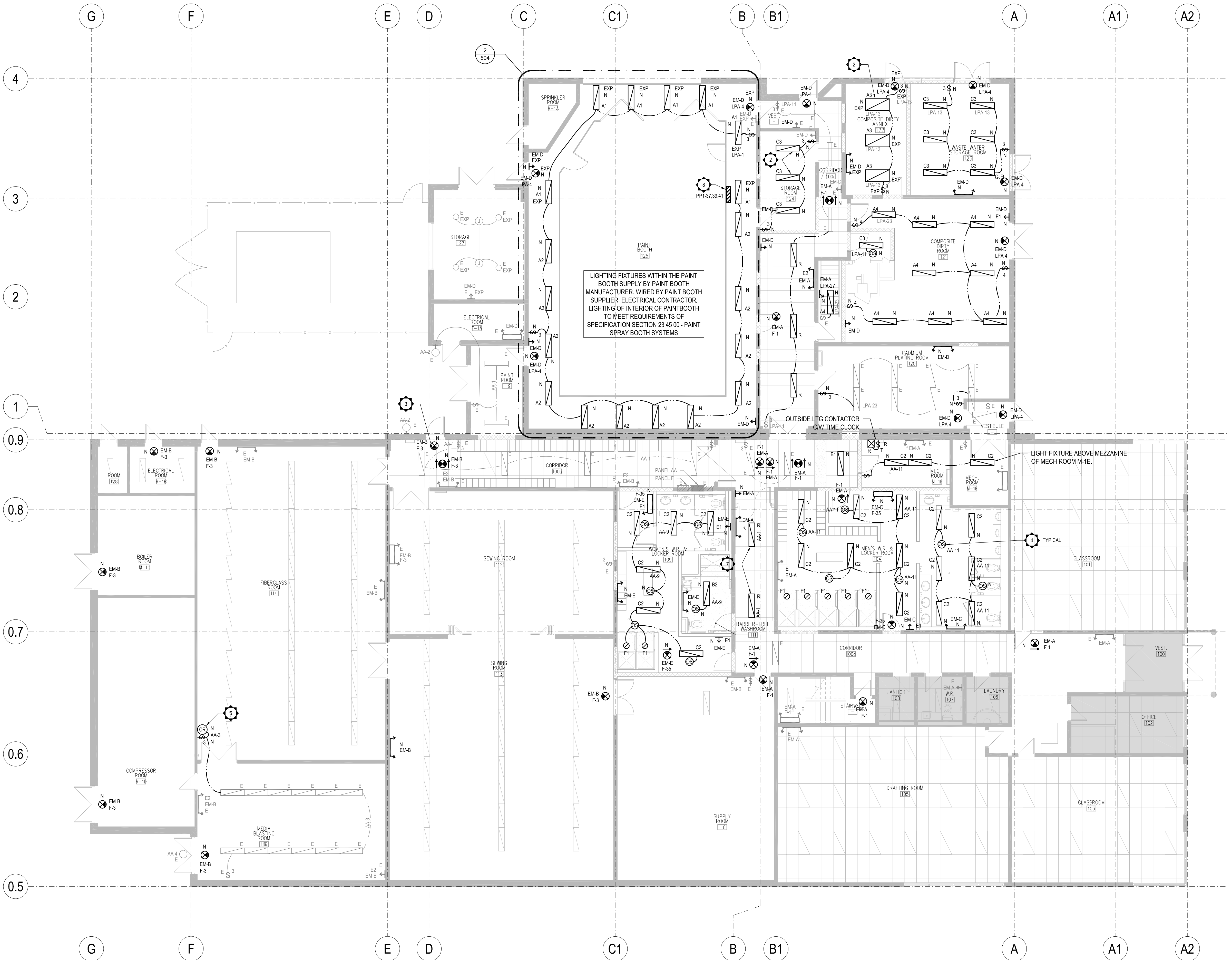
GROUND FLOOR PLAN LIGHTING  
- NEW WORK

DESIGNED   ÉTUDIÉ	XX   XX	DES O   AGENT CONC
N.M.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
Q.G.		X.X.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
N.M.		X.X.
COORDINATION		FIRE   INCENDIE
X.X.		X.X.

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N.700113.18.05

FF NO. | NO. DP  
BN186586

DWG. NO. | NO. DESSIN  
B147-9618/12-504



1  
504  
GROUND FLOOR PLAN LIGHTING - NEW WORK  
SCALE: 1:100

GENERAL NOTES:

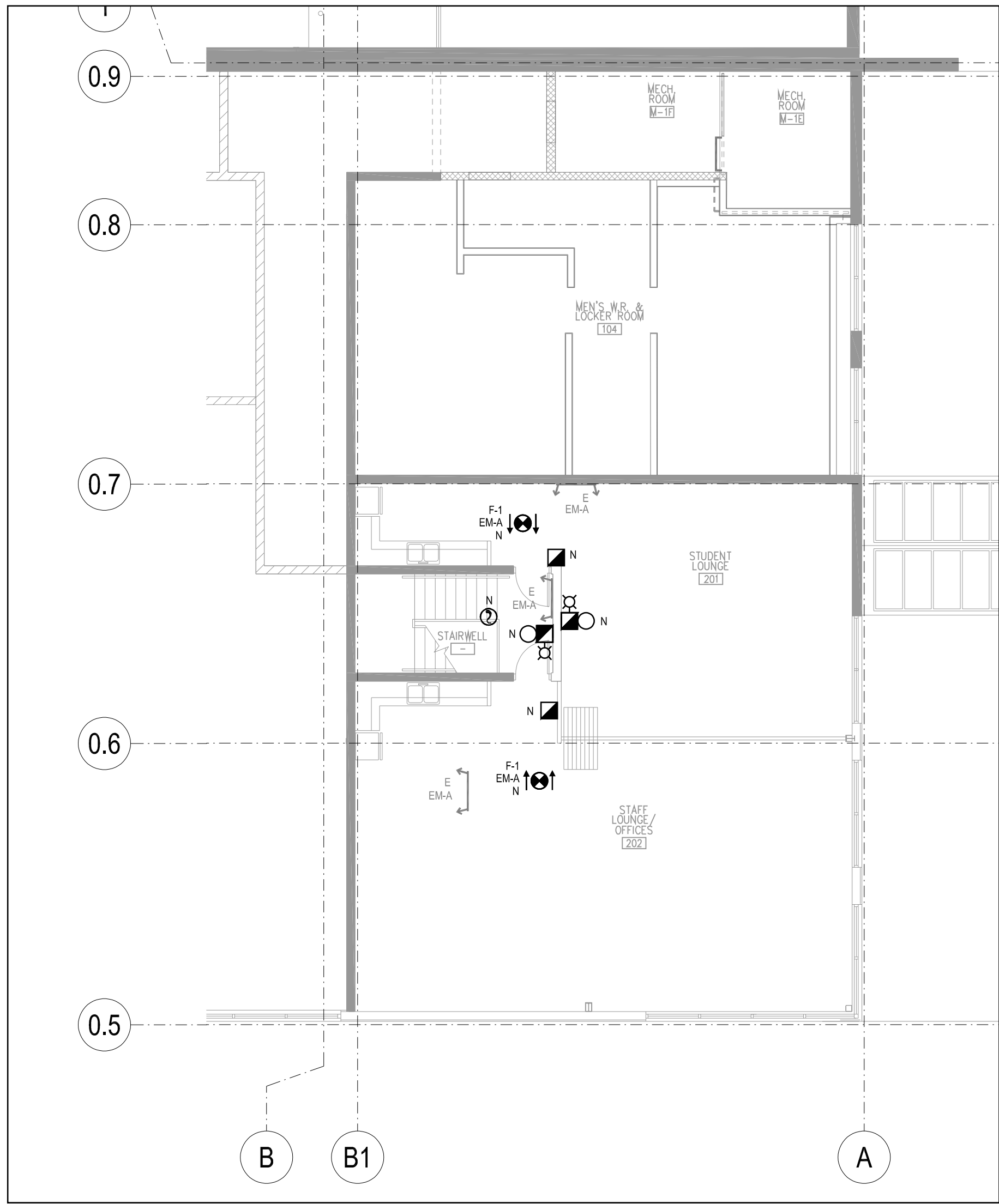
- REFER TO DRAWING 500 FOR LEGEND.
- EXCEPT AS NOTED OTHERWISE, ALL EXISTING EQUIPMENT IS SHOWN IN LIGHT GREY SOLID LINES AND IS MARKED WITH THE LETTER 'E'.
- EXCEPT AS NOTED OTHERWISE, ALL NEW EQUIPMENT IS SHOWN IN THICK SOLID LINES AND IS MARKED WITH THE LETTER 'N'.
- EXCEPT AS NOTED OTHERWISE, ALL EXISTING RELOCATED EQUIPMENT IS SHOWN IN THICK SOLID LINES AND IS MARKED WITH THE LETTER 'R'.
- ALL NEW PANEL SCHEDULES AND EQUIPMENT LABELS SHALL BE SUPPLIED WITH NEW ROOM NUMBERS AND VERIFIED FOR ACCURACY.
- SEAL ALL PENETRATION AFTER DEVICES AND CONDUIT ARE REMOVED.
- FOR FLUSH BACKBOXES ASSOCIATED WITH LIGHTING TOGGLE SWITCHES, RECEPTACLES OR COMMUNICATION JACKS, WHERE A NEW DEVICE IS NOT THEN INSTALLED IN THE SAME BACKBOXES, PROVIDE STAINLESS STEEL COVERPLATE TO COVER UNUSED BACKBOXES. EMPTY FLUSH BOXES TO BE FILLED WHERE WALL TILES ARE BEING INSTALLED ON EXISTING WALLS.



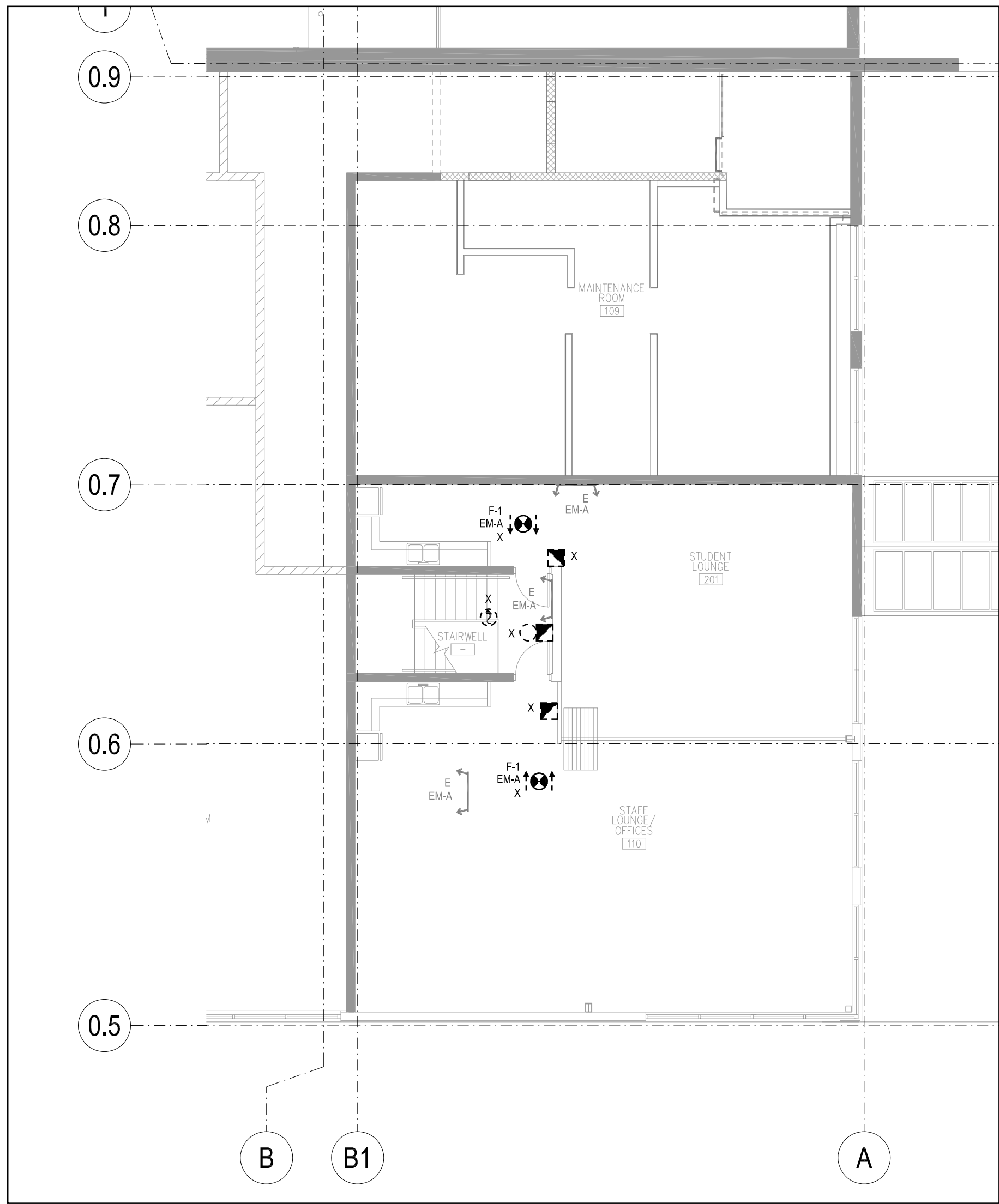
SPECIFIC NOTES:

- NOT USED.
- CONNECT NEW LIGHT FIXTURES IN ROOM TO EXISTING CIRCUIT OF REMOVED LIGHT FIXTURES. REWIRING TO LIGHT FIXTURES PER HAZARDOUS LOCATION REQUIREMENTS IN COMPOSITE DIRTY ANNEX 122. STANDARD WIRING IN STORAGE ROOM 124.
- PROVIDE NEW PICTOGRAM EXIT SIGN. CONNECT TO EXIT SIGN CIRCUIT AND BATTERY UNIT AS INDICATED. TYPICAL.
- PROVIDE OCCUPANCY SENSOR PER SPECIFICATION. CONNECT TO CIRCUIT AS INDICATED. TYPICAL. OCCUPANCY SENSORS TO BE SUSPENDED AND MOUNTED AT THE SAME HEIGHT AS LIGHT FIXTURES IN THE ROOM (REFER TO SPECIFICATION).
- PROVIDE CONTROL RELAY ASSOCIATED WITH LIGHT SWITCH FOR POWER EQUIPMENT ROOM 116. CONTROL RELAY TO PROVIDE START SIGNAL TO EF-1 FAN VFD TO START AND FOR AIR CURTAIN TO START WHEN LIGHTING TOGGLE SWITCH CONTROL RELAY TURNS LIGHTS ON IN ROOM.
- NOT USED.
- REINSTATE THE TEMPORARY REMOVAL EXISTING LIGHTING FIXTURE TO THE SAME LOCATION IN NEW CEILING. (SEE NOTE 4 ON DRAWING 502).
- PAINTBOOTH CONTROL PANEL. REFER TO SPECIFICATION 23 45 00 PAINT SPRAY BOOTH SYSTEMS. THIS TRADE PROVIDES POWER TO CONTROL PANEL. PAINTBOOTH ELECTRICAL TRADE PROVIDE POWER FROM CONTROL PANEL TO LIGHTS. CONTROL PANEL TO BE ON CIRCUIT PP-1-37.38.41. REFER TO NOTE 26 ON DRAWING 503.

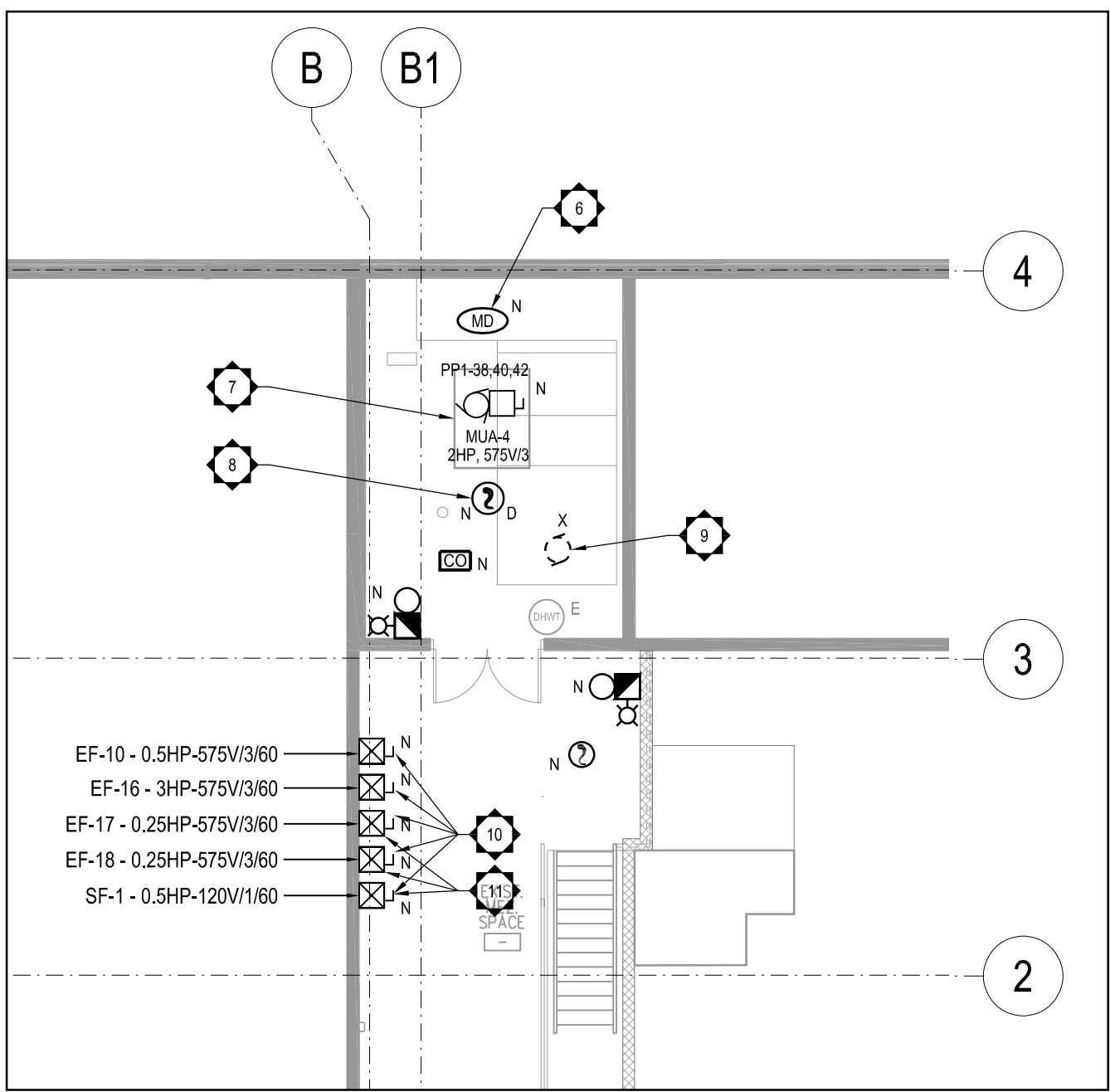




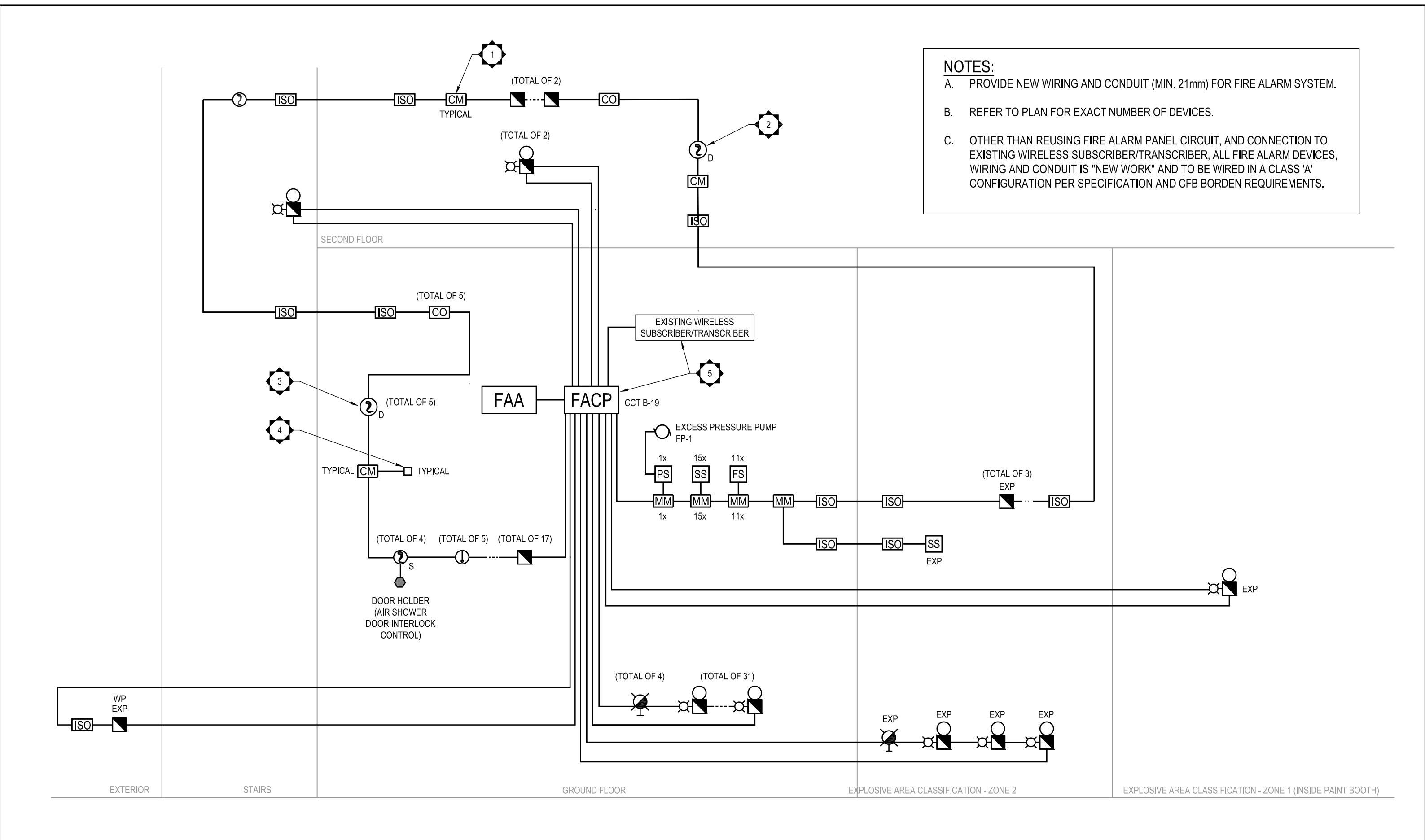
2 SECOND FLOOR PLAN - ELECTRICAL - NEW WORK  
SCALE: 1:100



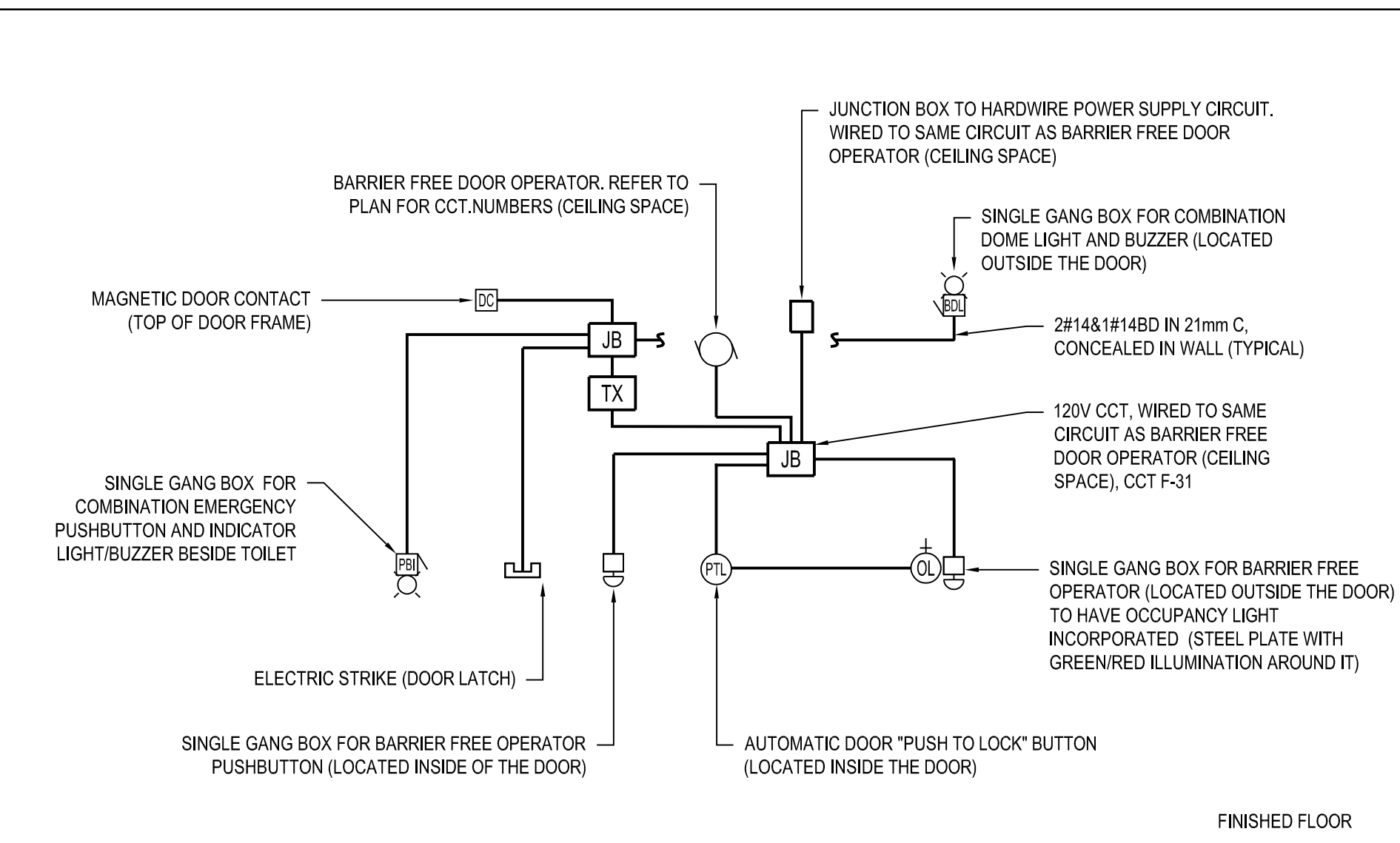
1 SECOND FLOOR PLAN - ELECTRICAL - DEMOLITION  
SCALE: 1:100



4 MEZZANINE MECH ROOM - POWER AND FIRE ALARM  
SCALE: 1:100



3 FIRE ALARM DIAGRAM  
SCALE: N.T.S.



5 UNIVERSAL WASHROOM DETAIL  
SCALE: N.T.S.

#### DRAWING SPECIFIC NOTES:

- TYPICAL: EFs, AHUs MUAs WITH UNIT MOUNTED CONTROL (REFER TO MECHANICAL DRAWING SPECS) FIRE ALARM SHUTDOWN.
- DUCT-DETECTOR FOR MUA-4.
- TYPICAL: DUCT-TYPE SMOKE DETECTORS FOR AHUs, MUAs, ETC.
- TYPICAL: EFs, AHUs, MUAs WITH VFD OR STARTER CONTROLS INDOOR FOR UNIT FIRE ALARM SHUT DOWN (MUA-1, MUA-2, MUA-3, MUA-4, EF-1, EF-11, EF-13, EF-14, EF-15, HRV-1 ETC.).
- PROVIDE FOR 4 SETS OF DRY CONTACTS FOR COMMUNICATIONS WITH WIRELESS SUBSCRIBER/TRANSMITTER FOR CONNECTION TO LOCAL FIRE HALL AND CAN BE BYPASSED. CONTRACTOR WILL BE RESPONSIBLE FOR SUBSCRIBER COMMUNICATIONS CABLES AND CONDUIT TO FACP, AND CONNECTION OF RELAYS. RPO ELECTRICAL SHOP WILL ASSIST IN TESTING TO THE FIREHALL.
- NEW MOTORIZED DAMPER.
- MUA-4 IN MEZZANINE FEED FROM PP-1 IN ELECTRICAL ROOM M-1B. REFER TO NOTE 10 OF DRAWING 503.
- PROVIDE DUCT TYPE DETECTOR AT ROOM WITH MUA-4 IN MEZZANINE.
- DISCONNECT EXISTING MUA IN MEZZANINE MECH. ROOM AND REMOVE ALL WIRING AND ACCESSIBLE/SURFACE MOUNT CONDUIT BACK TO SOURCE.
- COORDINATE EXACT LOCATION ON SITE.
- INTERCONNECT OPERATION OF EF-17, EF-18 AND SF-1 WITH CONTROL PANEL FOR COMPOSITE DIRTY ANNEX 122. LOCATED IN COMPOSITE DIRTY ROOM 121. REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR DETAILS.

#### GENERAL NOTES:

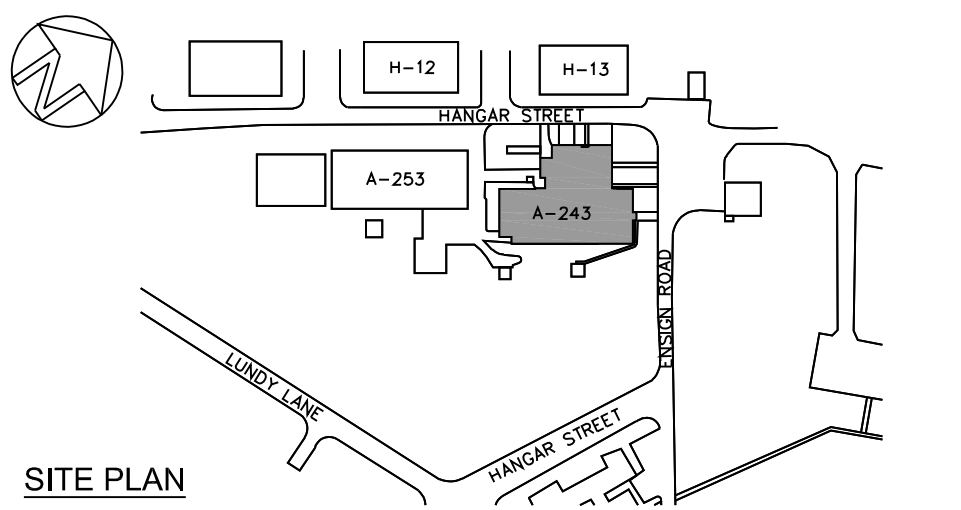
- REFER TO DRAWING 500 FOR LEGEND.
- EXCEPT AS NOTED OTHERWISE, ALL EXISTING EQUIPMENT TO BE DEMOLISHED IS SHOWN IN THICK DASHED LINES.
- EXCEPT AS NOTED OTHERWISE ALL EXISTING EQUIPMENT TO BE RELOCATED IS SHOWN IN THICK DASHED LINES AND IS MARKED WITH THE LETTER 'R'.
- EXCEPT AS NOTED OTHERWISE, ALL EXISTING EQUIPMENT TO REMAIN IS SHOWN IN THIN SOLID LINES.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING INSTALLATION ON SITE AND CONFIRM ALL EXISTING CIRCUIT TO BE DEMOLISHED AND/OR REUSE.
- PROVIDE NEW WIRING AND CONDUIT (MIN. 21mm) FOR FIRE ALARM SYSTEM.

#### FIRE ALARM ZONE LIST:

- FA ZONE 1 - GROUND FLOOR F/S  
FA ZONE 2 - COMPOSITE ROOM F/S 120,121  
FA ZONE 3 - MEDIA BLASTING RM F/S 116  
FA ZONE 4 - FIBRE GLASS RM F/S 114  
FA ZONE 5 - TEXTILE/SEWING RM F/S 112,113  
FA ZONE 6 - TOOL & STORAGE RM F/S 110  
FA ZONE 7 - MEN'S W.R. & LOCKER ROOM 104 F/S  
FA ZONE 8 - BAL OF EXT. F/S  
FA ZONE 9 - STAFF MEZZ. F/S 201, 202  
FA ZONE 10 - PAINTBOOTH F/S 125  
FA ZONE 11 - PAINTBOOTH ALARM  
FA ZONE 12 - RESERVED  
FA ZONE 13 - MAIN SPRK. F/S  
FA ZONE 14 - SPRINKLER RM M-1A T/S #1  
FA ZONE 15 - SPRINKLER RM M-1A T/S #2  
FA ZONE 16 - GROUND FLOOR T/S  
FA ZONE 17 - COMPOSITE RM T/S 120, 121  
FA ZONE 18 - MEDIA BLASTING T/S 116  
FA ZONE 19 - FIBRE GLASS RM T/S 114  
FA ZONE 20 - TEXTILE/SEWING RM T/S 112, 113  
FA ZONE 21 - TOOL & STORAGE RM T/S 110  
FA ZONE 22 - MEN'S W.R. & LOCKER ROOM 104 F/S  
FA ZONE 23 - BAL OF EXT. T/S  
FA ZONE 24 - STAFF MEZZ. T/S 201, 202  
FA ZONE 25 - SPRINKLER RM M-1A T/S #3  
FA ZONE 26 - SPRINKLER RM M-1A T/S #4  
FA ZONE 27 - MAIN SPRINKLER SHUT-OFF  
FA ZONE 28 - RESERVED  
FA ZONE 29 - RESERVED  
FA ZONE 30 - PAINT RM STORAGE HEAT 127  
FA ZONE 31 - PAINT RM STORAGE PULL 127  
FA ZONE 32 - MECH. MEZZ.  
FA ZONE 33 - ELECT RM #1 HEAT M-1B  
FA ZONE 34 - ELECT RM #1 PULL M-1B  
FA ZONE 35 - ELECT RM #2 E-1A  
FA ZONE 36 - BOILER RM M-1C  
FA ZONE 37 - COMPRESSOR RM M-1D  
FA ZONE 38 - PLASTIC MEDIA RM 116  
FA ZONE 39 - FIBER GLASS RM 114  
FA ZONE 40 - MAIN LOBBY EXT.  
FA ZONE 41 - STAFF MEZZANINE 201, 202  
FA ZONE 42 - CORRIDOR  
FA ZONE 43 - PAINT SPRAY RM 125  
FA ZONE 44 - VESTIBULE EXT 100  
FA ZONE 45 - MEN'S LOCKER RM 104  
FA ZONE 46 - WOMEN'S LOCKER RM 109  
FA ZONE 47 - BARRIER-FREE WASHROOM 111  
FA ZONE 48 - PAINT ROOM 119  
FA ZONE 49 - COMPOSITE DIRTY RM 121  
FA ZONE 50 - CADMIUM PLATING RM 120  
FA ZONE 51 - COMPOSITE DIRTY ANNEX 122  
FA ZONE 52 - WASTE WATER STORAGE RM 123  
FA ZONE 53 - STAFF MEZZ STAIRS  
FA ZONE 54 - COMPRESSOR HEAT M-1D  
FA ZONE 55 - SYSTEM FIRE ALARM  
FA ZONE 56 - STAIRWELL 200  
FA ZONE 57 - MUA-1  
FA ZONE 58 - MUA-2  
FA ZONE 59 - MUA-3  
FA ZONE 60 - MUA-4  
FA ZONE 61 - EF-1  
FA ZONE 62 - EF-2  
FA ZONE 63 - EF-3  
FA ZONE 64 - EF-4  
FA ZONE 65 - EF-10  
FA ZONE 66 - EF-11  
FA ZONE 67 - EF-13  
FA ZONE 68 - EF-14  
FA ZONE 69 - EF-15  
FA ZONE 70 - EF-16  
FA ZONE 71 - EF-17  
FA ZONE 72 - EF-18  
FA ZONE 73 - EF-19  
FA ZONE 74 - SF-1  
FA ZONE 75 - CARBON MONOXIDE - BOILER RM M-1C  
FA ZONE 76 - CARBON MONOXIDE - CORRIDOR 100C  
FA ZONE 77 - CARBON MONOXIDE - MECH RM M-1F  
FA ZONE 78 - CARBON MONOXIDE - MECH RM M-1E  
FA ZONE 79 - FIRE ALARM BELLS  
FA ZONE 80 - FIRE ALARM STROBES

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CFB BORDEN  
ONTARIO

PROJECT | PROJET

## SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
ELECTRICAL

DATE  
2017-05-29

SUBJECT | SUJET

## SECOND FLOOR PLAN FIRE ALARM LAYOUT AND DIAGRAM

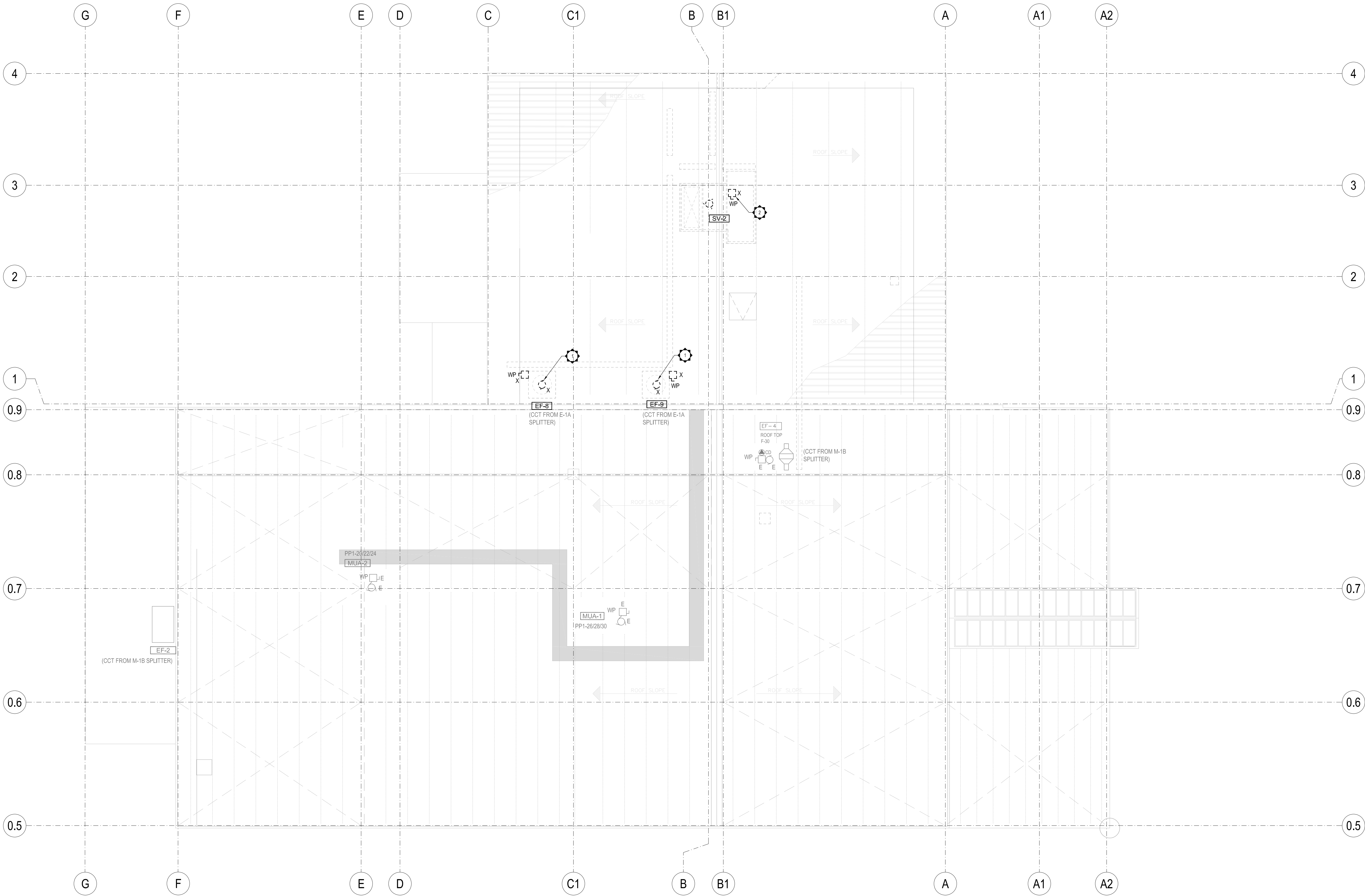
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DESIGNED   ÉTUDE	XX   XX	DES O   AGENT CONC
N.M.	X.X.	X.X.
DRAWN   DESSINÉ		PROJ MGR   GEST PROJ
Q.G.		X.X.
CHECKED   VÉRIFIÉ		DES MGR   GEST CONC
N.M.		X.X.
COORDINATION		FIRE   INCENDIE
X.X.		X.X.

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1 ROOF PLAN - DEMOLITION  
540 SCALE: 1:100

GENERAL NOTES:

- A. REFER TO DRAWING 500 FOR LEGEND.
- B. EXCEPT AS NOTED OTHERWISE, ALL EXISTING EQUIPMENT TO BE DEMOLISHED IS SHOWN IN THICK DASHED LINES.
- C. EXCEPT AS NOTED OTHERWISE ALL EXISTING EQUIPMENT TO BE RELOCATED IS SHOWN IN THICK DASHED LINES AND IS MARKED WITH THE LETTER 'R'.
- D. EXCEPT AS NOTED OTHERWISE, ALL EXISTING EQUIPMENT TO REMAIN IS SHOWN IN THIN SOLID LINES.
- E. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING INSTALLATION ON SITE AND CONFIRM ALL EXISTING CIRCUIT TO BE DEMOLISHED AND/OR REUSE.

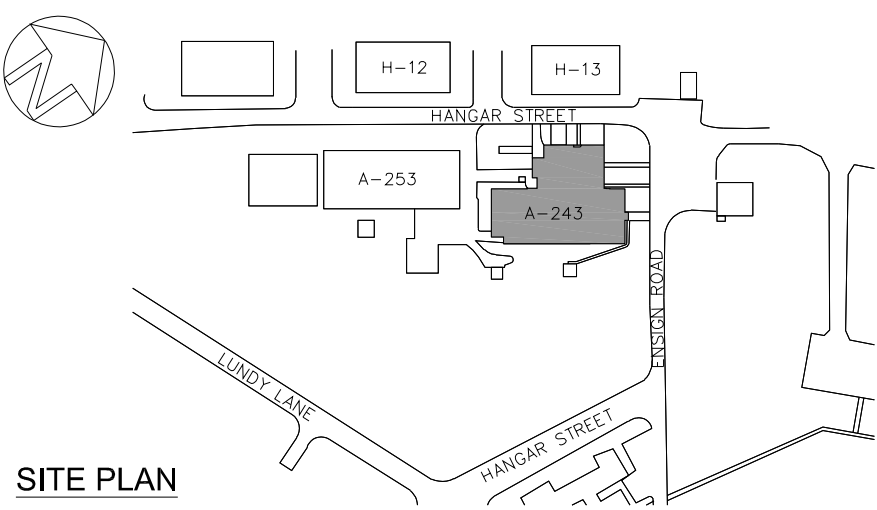


DEMOLITION SPECIFIC NOTES:

- ELECTRICALLY DISCONNECT EXISTING EXHAUST FAN. REMOVE ASSOCIATED DISCONNECT SWITCH, WIRING AND CONDUIT TO ASSOCIATED STARTER IN ELECTRICAL ROOM E-1A. REFER TO DRAWING 501 FOR LOCATION OF STARTER.
- ELECTRICALLY DISCONNECT EXISTING ROOFTOP UNITS. REMOVE ASSOCIATED DISCONNECT SWITCH, WIRING AND CONDUIT BACK ASSOCIATED STARTER IN ELECTRICAL ROOM E-1A. REFER TO DRAWING 501 FOR LOCATION OF STARTER.

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SOLVING CONTAMINATION  
DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
ELECTRICAL

DATE  
2017-05-29

SUBJECT | SUJET

ROOF PLAN - DEMOLITION

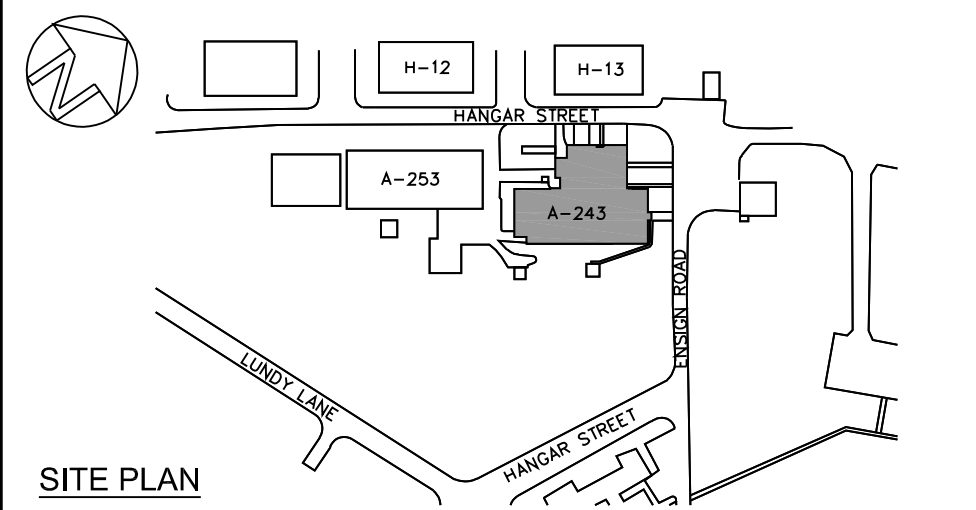
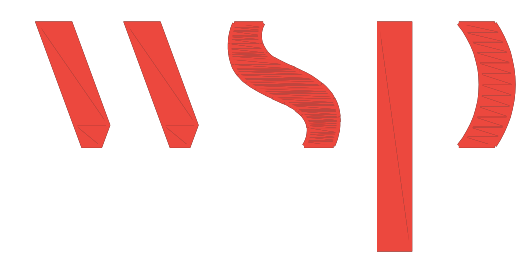
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DRAWN   DESSINÉ Q.G.		PROJ MGR   GEST PROJ X.X.
CHECKED   VÉRIFIÉ N.M.		DES MGR   GEST CONC X.X.
COORDINATION X.X.		FIRE   INCENDIE X.X.

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PROJECT | PROJET

## SOLVING CONTAMINATION DEFICIENCIES IN BUILDING A-243

TRADE | MÉTIER  
ELECTRICAL

DATE  
2017-05-29

SUBJECT | SUJET

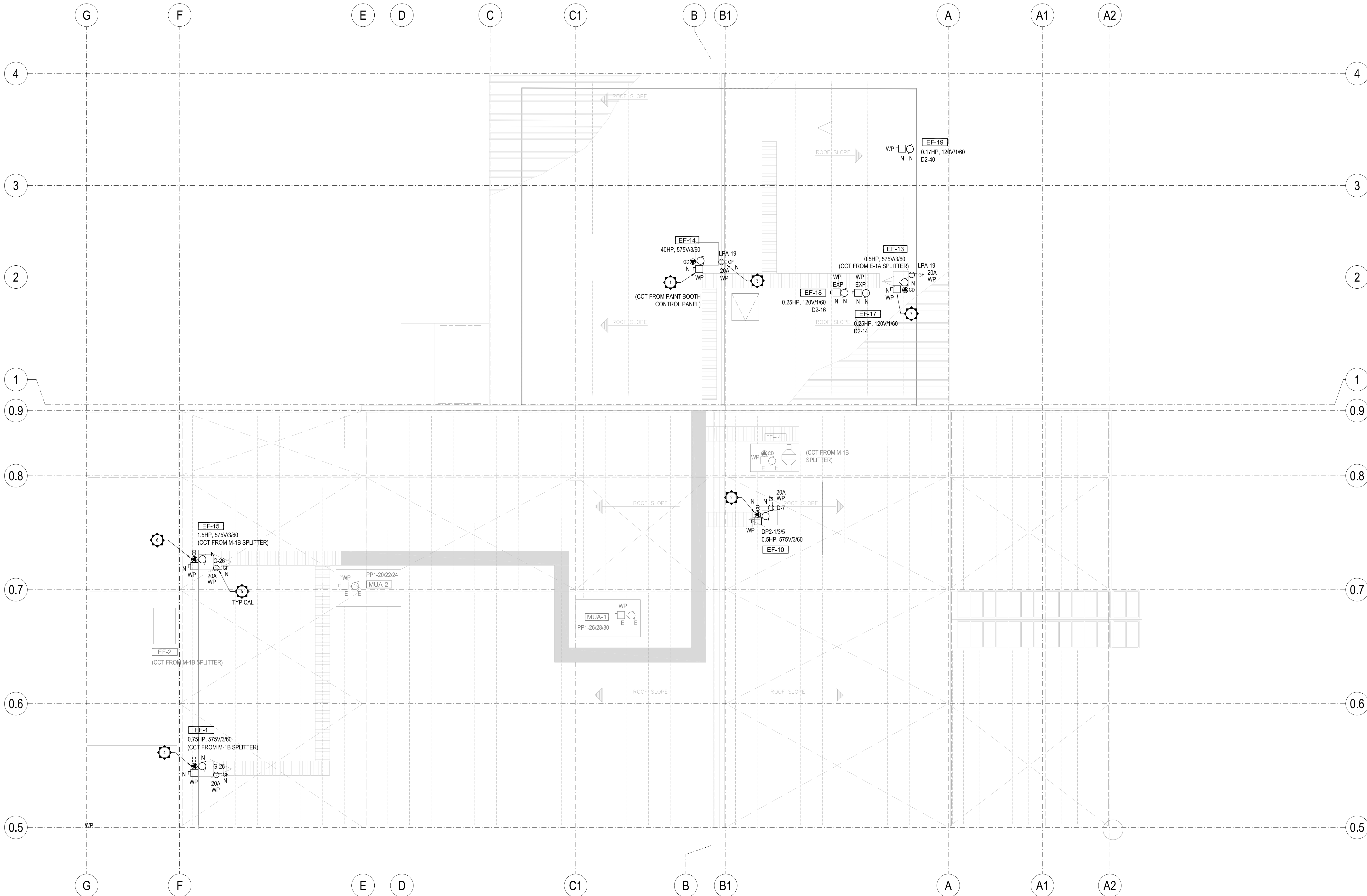
## ROOF PLAN - NEW WORK

DESIGNED   ÉTUDIÉ N.M.	REVIEWED   REVU XX   XX X.X.	DES O   AGENT CONC X.X.
DRAWN   DESSINÉ Q.G.		PROJ MGR   GEST PROJ X.X.
CHECKED   VÉRIFIÉ N.M.		DES MGR   GEST CONC X.X.
COORDINATION X.X.		FIRE   INCENDIE X.X.

WBS NO. | NO. OTP  
N.700113.18.05

FF NO. | NO. DP  
BN186586

DWG. NO. | NO. DESSIN  
B147-9618/12-541



1 ROOF PLAN - NEW WORK  
541 SCALE: 1:100

### GENERAL NOTES:

- REFER TO DRAWING 501 FOR LEGEND.
- EXCEPT AS NOTED OTHERWISE, ALL EXISTING EQUIPMENT TO BE DEMOLISHED IS SHOWN IN THICK DASHED LINES.
- EXCEPT AS NOTED OTHERWISE ALL EXISTING EQUIPMENT TO BE RELOCATED IS SHOWN IN THICK DASHED LINES AND IS MARKED WITH THE LETTER 'R'.
- EXCEPT AS NOTED OTHERWISE, ALL EXISTING EQUIPMENT TO REMAIN IS SHOWN IN THIN SOLID LINES.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING INSTALLATION ON SITE AND CONFIRM ALL EXISTING CIRCUIT TO BE DEMOLISHED AND/OR REUSE.



### SPECIFIC NOTES:

- PROVIDE CONDUIT & WIRING FROM EF-14 TO PAINTBOOTH CONTROL PANEL AT ROOM 125 BELOW. VFD FOR MUA-3 AND VFD FOR EF-13 ARE INTEGRAL OR LOCATED AT PAINTBOOTH CONTROL PANEL AND POWERED BY PAINTBOOTH CONTROL PANEL. PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT C/W EXPLOSION PROOF CONNECTORS FOR CONNECTION TO UNIT MOTORS. REFER TO SPECIFICATION 23 45 00 PAINT SPRAY BOOTH SYSTEMS. FIRE ALARM FAN MONITORING AND SHUTDOWN WIRING FOR EF-14 TO TERMINATE AT PAINTBOOTH CONTROL PANEL. FROM PAINTBOOTH CONTROL PANEL TO EF-14 PROVIDE 3/8" GND IN 27mmC.
- PROVIDE 3/8" GND-27mmC FROM VENTILATION UNIT TO COMBINATION STARTER IN MEZZANINE MECH ROOM (DETAIL 4/505) AND FROM STARTER TO CIRCUIT INDICATED. PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT C/W EXPLOSION PROOF CONNECTOR FOR CONNECTION TO FAN MOTOR.
- PROVIDE RECEPTACLE MIN 750 mm ABOVE TOP OF ROOF. COORDINATE INSTALLATION WITH MECHANICAL TRADES. ALL PROVIDED EXTERIOR RECEPTACLE TO HAVE IN-USE WEATHERPROOF COVER. TYPICAL.
- REFER TO DRAWING 503 FOR CIRCUITING REQUIREMENTS OF FAN EF-1, POWERED FROM SPLITTER IN RM M-18
- ALL RECEPTACLES ON THIS DRAWING ARE NEW AND TO BE INSTALLED. RECEPTACLES TO BE COMPLETED WITH "IN-USE" WEATHERPROOF COVER.
- PROVIDE 3/12" GND-21mmC FROM VENTILATION UNIT DISCONNECT SWITCH TO ASSOCIATED STARTER IN ELECTRICAL ROOM M-18. REFER TO DRAWING 503 FOR LOCATION OF STARTER. PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT FOR CONNECTION TO FAN MOTOR.
- PROVIDE 3/12" GND-21mmC FROM EXHAUST FAN COMBINATION STARTER IN ELECTRICAL ROOM E-1A. REFER TO DRAWING 503 FOR LOCATION OF STARTER. PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT FOR CONNECTION TO FAN MOTOR.



TYPE	DESCRIPTION	CATALOGUE NUMBER	LAMPS PER FIXTURE				VOLTS	TOTAL WATTS	MOUNTING	REMARKS	
			NO.	TYPE	WATTS	COLOUR					LUMENS
A1	LUMINING TECHNOLOGIES	FAL-EX-0072-120-40/70120SPCL	1	LED	72	4000K	9828	120	72	SUSPENDED TO MOUNTING HEIGHT 2750mm	LINEAR EXPLOSION PROOF FIXTURE , CLASSIFICATION ZONE 2 GROUP IIA
	HOLOPHANE	HEXSL4MNAKT4MCL+HEXSBIC	1	LED	80	4000K	9560	120	80		
	HAZLUX	L11-8-1-K4-WT-G-chain mount-G	1	LED	80	4000K	9600	120	80		
A2	LITHONIA	CSVTL486000LMVOL740K80CRICSVTRMBU	1	LED	49	4000K	6213	120	49	SUSPENDED TO MOUNTING HEIGHT 2750mm	150X1200mm FIXTURE , WHITE HOUSING, DIFFUSE ACRYLIC LENS, SEALED INDUSTRIAL
	COOPER METALUX	4VT3LD55G120VL840CD1U+VT3-SS-VBK	1	LED	51	4000K	6033	120	51		
	DAY-BRITE CFI	DWAEI6000lmL84-4-UNV-TBK-FKR-126	1	LED	55	4000K	6000	120	55		
B1	SIGNIFY/DAY-BRITE	1TG32L8404F802F347DM	1	LED	30	4000K	3200	347	30	RECESSED MOUNTING	RECESSED 300X1200mm, WHITE HOUSING, FROSTED ACRYLIC LENS
	COOPER METALUX	14GRLD36F1347L840CD1	1	LED	35	4000K	3600	347	35		
	LITHONIA	GT1433L347E21	1	LED	29	4000K	3465	347	29		
B2	SIGNIFY/DAY-BRITE	OWL40L840347DM	1	LED	37	4000K	3933	347	37	SURFACE MOUNT	1200mm SURFACE WRAP , WHITE HOUSING, FROSTED ACRYLIC LENS.
	COOPER METALUX	4WNLED-LD4-40SL-F-347-L840-CD1U	1	LED	30	4000K	4000	347	30		
	LITHONIA	LBL44000LM80CR40KMIN1GZT347	1	LED	32	4000K	4000	347	32		
C2	LITHONIA	ZL1DL485MR3000LMFST34740K80CRWH	1	LED	30	4000K	3880	347	30	SUSPENDED TO MOUNTING HEIGHT 2750mm	1200mm STRIP FIXTURE , WHITE HOUSING, FROSTED ACRYLIC ROUND LENS.
	COOPER METALUX	4SNX37SLV347L840CD1	1	LED	24	4000K	3545	347	24		
	DAY-BRITE CFI	FSS440L840347DM	1	LED	30	4000K	4000	347	30		
C3	LITHONIA	ZL1DL485MR3000LMFST12040K80CRWH	1	LED	30	4000K	3880	120	30	SURFACE MOUNT IN STORAGE ROOM 124, OTHERWISE SUSPENDED TO MOUNTING HEIGHT 2750mm	1200mm STRIP FIXTURE , WHITE HOUSING, FROSTED ACRYLIC ROUND LENS.
	COOPER METALUX	4SNX37SLV1WUNVL840CD1	1	LED	24	4000K	3545	120	24		
	DAY-BRITE CFI	FSS440L840120DM	1	LED	30	4000K	4000	120	30		
A3	VISCOR/CERTOLUX	CRS-35552x4/ALED840K052LUNVDSA-XH	1	LED	47	4000K	5200	120	47	SURFACE MOUNT	600X1200mm FIXTURE , WHITE HOUSING, DIFFUSE ACRYLIC LENS, CLASSIFICATION CLASS I, ZONE2, GROUPS IC, IIB +H2, IIA
	KURTZON	TLX12-S-1-X24-2LEDR-840-120V- P12ACR	1	LED	55	4000K	6718	120	55		
	KENALL	HSES0240L40KDDCC1202ZFHSYM	1	LED	68	4000K	7895	120	68		
A4	LITHONIA	CSVTL485000LMVOL740K80CRICSVTRMBU	1	LED	42	4000K	4946	120	42	SUSPENDED TO MOUNTING HEIGHT 2750mm	150X1200mm FIXTURE , WHITE HOUSING, DIFFUSE ACRYLIC LENS, CLASSIFICATION IP65 RATED
	COOPER METALUX	4VT3LD55G120VL840CD1U+VT3-SS-VBK	1	LED	44	4000K	5405	120	44		
	DAY-BRITE CFI	DWAE51L840-4-UNV-TBK-FKR-126	1	LED	46	4000K	5129	120	46		
F1	SIGNIFY/LIGHTOLIER	4RNCAL15940M103-C4RSLWH	1	LED	16	4000K	1500	347	16	RECESSED POT LIGHT	LENSED 100mm POTLIGHT WITH WHITE TRIM, WET LOCATION LISTED
	COOPER HALO COMMERCIAL	HC415D010347-HM40525840-4IMDW	1	LED	14.5	4000K	1500	347	14.5		
	CURRENT	LFR-4RD(SH)-15L8WDDM134-LFR-4RD-T-SH-WTAML	1	LED	12	4000K	1500	347	12		

347/600 VOLT, 3PH, 4W  
225 AMP MAINS  
RECESSED MAINS  
(FED FROM RP-1)  
(EATON 18KA)

S. N.

CORR. WIR. LIGHTING	10200W	15	1	2	15	8000W	EXT. LIGHTING
RM 116 LIGHTING	4000W	15	3	4	15	5000W	EXT. LIGHTING
RM 14 LIGHTING	11600W	15	5	6	15	12000W	EXT. LIGHTING
RM 112,113 LIGHTING	13500W	15	7	8	15	2000W	FF HEATER RM
RM 110,111 LIGHTING	8000W	15	9	10	15	2000W	FF HEATER RM
101,109 LIGHTING	14000W	15	11	12	15	1200W	FF HTR & BB HT
103,105 LIGHTING	14000W	15	13	14	15	1300W	MEZZ LTG SOUT
OVEN		15		16			
	4000W	15	17	18			
		60	19	20			
			21	22			
			23	24			
			25	26			
			27	28			
			29	30			
			31	32			
			33	34			
			35	36			
			37	38			
			39	40			
			41	42			

UNLESS OTHERWISE INDICATED, ALL BREAKERS SHOWN ARE EXISTING  
\* = PROVIDE NEW BREAKER

CONNECTED LOAD AS NOTED ON PANEL SCHEDULE: 20.6KW  
ESTIMATED DIVERSITY: 0.7  
LOAD WITH DIVERSITY: 14.5KW

347/600 VOLT, 3PH, 4W  
225 AMP MAINS  
SURFACE MOUNTED  
(FED FROM PP-1)  
(SQUARE D HCN2345-2 LINE PANELBOARD, 10KA)

TAL SPRAY MACHINE

EXHAUST SHAVER

SPLITTER 550V MEZZ.  
(U/LA LOAD REMOVED)

COMPRESSOR

BAND SAW

TRANSFORMER  
TO FEED LPA

SPLITTER 550V  
ELEC. RM

UNLESS OTHERWISE INDICATED, ALL  
BREAKERS SHOWN ARE EXISTING  
\* = PROVIDE NEW BREAKER

CONNECTED LOAD AS NOTED ON PANEL SCHEDULE: 63.7KW  
ESTIMATED DIVERSITY: 1.0  
LOAD WITH DIVERSITY: 63.7KW

120/208 VOLT, 3PH, 4W  
225 AMP MAINS  
SURFACE MOUNTED  
(FED FROM PP-1 THROUGH 450VA TX)  
(EATON POWER-LINE 100A)

PANEL C

PANEL D  
(ASSUMED POWERED  
BY 450VA TX OFF PP1)

PANEL E

F/A CTRL PANEL  
F/A TRANSMITTER

SPACE  
RECEPT.

HOT WATER

S<sub>1</sub> N<sub>1</sub>

1 2 15 300V  
3 4 15 425V  
5 6 15 200V  
7 8 15 200V  
9 10 15 200V  
11 12 15 200V  
13 14 15 800V  
15 16 15 200V  
17 18 15 200V  
19 20 15 200V  
21 22 15 200V  
23 24 15 100V  
25 26 15 100V  
27 28 15 100V  
29 30 20 150V

UNITS HTS  
UNITS HTS  
UNITS HTS  
BOILER B-  
BOILER B-  
COMP. ALT.  
A/C DAMP-  
SPRINKLER  
BOILER CO-  
BOILER CO-  
BOILER B-  
SPARE  
ELECT RM  
ELEC BASEBOA

UNLESS OTHERWISE INDICATED, ALL  
BREAKERS SHOWN ARE EXISTING  
\* = PROVIDE NEW BREAKER

CONNECTED LOAD AS NOTED ON PANEL SCHEDULE: 47.7KW  
ESTIMATED DIVERSITY: 0.7  
LOAD WITH DIVERSITY: 33.4KW

347600 VOLT, 3PH, 4W  
225 AMP MAINS  
SURFACE MOUNTED  
(FED FROM PP-1)

EF-10 EF-16 SPARE SPARE SPARE

ELECTRICAL DUCT HEATER  
EDH-1 SERVING COMPOSITE  
DIRTY ANNEX 123

30000W

THIS PANEL AND ALL ASSOCIATED  
COMPONENTS ARE TO BE PROVIDED (NEW)

CONNECTED LOAD AS NOTED ON PANEL SCHEDULE: 90KW  
ESTIMATED DIVERSITY: 1.0  
LOAD WITH DIVERSITY: 90KW

120/208 VOLT, 3PH, 4W  
225 AMP MAINS  
SURFACE MOUNTED  
(FED FROM PANEL "B")  
(EATON PRL-1A 10KA)

S. N.

SEWING MACHINE 380V 1 2 15 380V SEWING MACHINE

SEWING MACHINE 380V 3 4 16 380V SEWING MACHINE

SEWING MACHINE 380V 5 6 17 380V SEWING MACHINE

SEWING MACHINE 380V 7 8 18 380V SEWING MACHINE

SEWING MACHINE 380V 9 10 19 380V SEWING MACHINE

SEWING MACHINE 380V 11 12 20 380V SEWING MACHINE

RECEPTACLES 600V 13 14 21 200V RECEPTACLES RM 1

RECEPTACLES 600V 15 16 22 750V RECEPTACLES RM 1

RM 114 RECEPTACLES 450V 17 18 23 200V BLASTER

RM 116,117 RECEPTACLES 500V 19 20 24 380V CEILING FAN

COLLECTOR 380V 21 22 25 500V PROJECTOR

SEWING MACHINE 380V 23 24 26 380V SEWING MACHINE

SEWING MACHINE 380V 25 26 28 1500V VAC PUMP

SEWING MACHINE 380V 27 28 29 15 380V SEWING MACHINE

RECEPTACLE 380V 29 30 32 16 380V SEWING MACHINE

RECEPTACLE 380V 31 32 34 16 380V SEWING MACHINE

SEWING MACHINE 380V 33 34 36 16 380V SEWING MACHINE

MEDIA BLASTER #1 2000V 35 36 38 2000V MEDIA BLASTER #2

41 42 15

43 44

45 46

47 48

49 50

51 52

53 54

55 56

57 58

59 60

UNLESS OTHERWISE INDICATED, ALL  
BREAKERS SHOWN ARE EXISTING  
\* = PROVIDE NEW BREAKER

120/208VOLT, 3PH, 4W  
 225 AMP MAINS  
 SURFACE MOUNTED  
 (FED FROM ADJACENT 75KVA TX)  
 (10kA)

	S.	N.	
EXISTING CIRCUIT	1500W 20 1	2 15 800W	RECEPTACLE 103
EXISTING CIRCUIT	15 5	4 15 600W	RECEPTABLES
ROOF TOP RECEPTACLE	100W 20 7	8 15 600W	RECEPTABLES
EXISTING CIRCUIT	3000W 20 11	16 20 200W	RECEPTABLES
EXISTING CIRCUIT	4500W 30 15	14 15 200W	RECEPTABLES
BELT SANDER	1200W 30 17	18 15 200W	RECEPTABLES
EXISTING CIRCUIT	300W 15 19	20 15 400W	POWER POLES 103
EXISTING CIRCUIT	200W 15 21	22 15 150W	REC. WOMEN W/R 109
EXISTING CIRCUIT	200W 15 23	24 15 600W	POWER POLES 103
EXISTING CIRCUIT	100W 15 25	26 15 100W	EXISTING CIRCUIT
DHWT-1	600W 15 27	28 20 200W	RECEPTABLES
EXISTING CIRCUIT	100W 15 29	30 15 100W	EXISTING CIRCUIT
RECEPTACLE 105	600W 15 31	32 15 100W	POWER POLES 103
RECEPTACLE 105	600W 15 33	34 15 400W	POWER POLES 103
RECEPTACLE 105	600W 15 35	36 15 400W	POWER POLES 103
P-3	4500W 30 39	40 15 100W	DOOR HOLD OPEN DEVICE
SPARE	800W 30 41	42 15 300W	RECEPTABLES, RM M-11
SPARE	15 43	44 14	SPARE
SPACE	16 45	46 15	SPACE
	17 47	48 15	
	49	50	
	51	52	
	53	54	
	55	56	
	57	58	
	59	60	

REPLACE EXISTING 42 OCT PANEL WITH NEW 60CCT PANEL AND TRANSFER ALL LOADS TO NEW PANEL. PROVIDE NEW CIRCUITS AS INDICATED

CONNECTED LOAD AS NOTED ON PANEL SCHEDULE: 25.8KW  
 ESTIMATED DIVERSITY: 0.7  
 LOAD WITH DIVERSITY: 18.1KW

[illegible][illegible][illegible]

		120/208 VOLT, 3PH, 4W					
		225 AMP MAINS					
		RECESSED MOUNTED					
		(FED FROM PANEL B)					
		(EATON POW-R-LINE 1 10KA)					
		S.		N.			
EXIT LTS & EBU A	100W	16	1	16	750W	RECEPTACLES LOBBY	
EXIT LTS & EBU B	100W	16	3	4	600W	RECEPTACLES 101	
LOBBY 101 LIGHTING	200W	16	5	6	100W	RECEPTACLES 102	
LIGHTING CONTROL	100W	16	7	6	750W	RECEPTACLES RM 102, 103	
FAN COIL FC-1	700W	16	9	10	750W	RECEPTACLES RM 102, 103	
VENTILATOR V-1	100W	16	11	12	900W	RECEPTACLES RM 105	
VENTILATOR V-2	375W	16	13	14	900W	RECEPTACLES RM105	
		16	15	16	750W	RECEPTACLES RM 201	
HWT-1	2250W	16	17	18	750W	RECEPTACLES RM201	
		16	19	20	15 A, 100W	EXISTING CIRCUIT	
SPLIT RECEPTACLE	400W	16	21	22	15 B, 100W	REC. MEN W/R & LOCKER104	
		16	23	24	15 C, 200W	REC. WOMEN W/R & LOCKER 109	
		16	25	26	15 B, 100W	EXISTING CIRCUIT	
SPLIT RECEPTACLE	400W	16	27	28	15 A, 100W	EXISTING CIRCUIT	
		16	29	30	400W	SPLIT REC 202	
SPLIT REC. 202	400W	16	31	32	400W		
BARRIER-FREE W/R ASS. CONTROL	100W	16	33	34	150W	A/C RM 103	
BARRIER-FREE W/R GFCI REC.	100W *	16	35	36			
EM LIGHT BATTERY EM-C & EM-E	500W *	16	37	38	1500W	A/C	
HALL WAY LIGHTS	100W	16	39	40	15 A		
PAINT MIX	600W	16	41	42	15 B		
POWER POLE RM201	400W	16	43	44	100W	PIT ALARM 125	

UNLESS OTHERWISE INDICATED, ALL  
BREAKERS SHOWN ARE EXISTING  
\*\* = PROVIDE NEW BREAKER

CONNECTED LOAD AS NOTED ON PANEL SCHEDULE: 17.8KW  
ESTIMATED DIVERSITY: 0.7  
LOAD WITH DIVERSITY: 12.3KW