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SET NO. - SERIE NO.

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DCC NO. - CDC NO. ZKN99

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Canada

UNCLASS

Canadian Forces Base (CFB) KINGSTON, ON

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CFHA Apartment Buildings Tier 4 6-Plex

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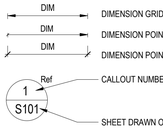
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GENERAL NOTES

1. DO NOT SCALE DRAWINGS.
2. DESIGN LIVE LOADS SHALL NOT BE EXCEEDED AT ANY TIME DURING CONSTRUCTION. FOR CONCRETE STRUCTURES, DESIGN LIVE LOADS MAY ONLY BE APPLIED AFTER CONCRETE REACHES ITS DESIGN STRENGTH.
3. CONSTRUCTION LOADS MUST NOT BE IMPOSED ON STRUCTURE IN EXCESS OF SPECIFIED DESIGN LIVE LOAD. DESIGN LIVE LOADS MAY ONLY BE APPLIED AFTER CONCRETE REACHED ITS DESIGN STRENGTH.
4. THE CONTRACTOR IS TO VERIFY DIMENSIONS, ELEVATIONS, SLOPES, DETAILS, CONDITIONS AND OTHER DATA NOTED ON THE STRUCTURAL DRAWINGS WITH CONDITIONS ON THE SITE. CO-ORDINATE ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION OR FABRICATION OF ANY BUILDING COMPONENT, AND IS HELD RESPONSIBLE FOR REPORTING ANY DISCREPANCIES THAT EFFECT STRUCTURAL FRAMING TO THE DCC REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK. VARIATIONS AND MODIFICATIONS TO WORK SHOWN ON THE STRUCTURAL DRAWINGS SHALL NOT BE CARRIED OUT WITHOUT WRITTEN PERMISSION FROM THE DCC REPRESENTATIVE.
5. MODIFICATIONS, ALTERATIONS OR SUBSTITUTIONS MUST BE AUTHORIZED IN WRITING BY THE DCC REPRESENTATIVE.
6. THE GENERAL CONTRACTOR SHALL LOCATE ALL EXISTING SITE SERVICES PRIOR TO CONSTRUCTION.
7. FOR OPENINGS IN SLABS, FLOOR, WALLS, ROOF, ETC. REFER TO ARCHITECTURAL, MECHANICAL, STRUCTURAL AND OR OTHER PERTINENT DRAWINGS.
8. LOCATION OF CONSTRUCTION JOINTS NOT INDICATED ON PLANS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR BUT APPROVAL MUST BE OBTAINED FROM THE DCC REPRESENTATIVE BEFORE PROCEEDING.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL NECESSARY SHORING, BRACING AND FORM WORK. FORM WORK FOR NEW CONSTRUCTION SHALL BE BRIDGED OVER EXISTING SERVICES.
10. THE STRUCTURE AND GRADE BEAMS SHALL BE BRACED IN ALL DIRECTIONS TO SAFELY WITHSTAND ALL LATERAL FORCES WHICH MAY BE ENCOUNTERED DURING ERECTION. THE BRACING SHALL REMAIN IN PLACE UNTIL ALL PERMANENT BRACING, FRAMING, CLADDING AND BACKFILL ARE IN PLACE.
11. ALL CODES REFERENCED IN THESE NOTES SHALL BE OF THE LATEST APPLICABLE REVISION.
12. ALL BEAMS, ANGLES AND MISCELLANEOUS METALS INDICATED ON ARCHITECTURAL DRAWINGS BUT NOT SHOWN ON STRUCTURAL DRAWINGS, SHALL BE INCLUDED IN THE TENDER PRICE. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING SIZES AND LOCATIONS OF THESE MEMBERS WITH BOTH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO CONSTRUCTION OR FABRICATION OF ANY BUILDING COMPONENT.
13. DO NOT CUT OR DRILL ANY OPENINGS INTO STRUCTURAL MEMBERS WITHOUT OBTAINING WRITTEN PERMISSION FROM THE DCC REPRESENTATIVE.
14. THE CONTRACTOR SHALL RETAIN A MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE ANCHOR INSTALLATION TRAINING FOR ALL OF THEIR PRODUCTS SPECIFIED. THE DCC REPRESENTATIVE MUST RECEIVE DOCUMENTED CONFIRMATION THAT THE CONTRACTORS PERSONNEL ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS .

DIMENSIONS & SYMBOLS



DIMENSION GRID TO GRID
DIMENSION POINT TO GRID
DIMENSION POINT TO POINT
CALLOUT NUMBER
SHEET DRAWN ON

DESIGN SPECIFICATIONS

1. THE BUILDING IS DESIGNED IN ACCORDANCE WITH THE 2020 NATIONAL BUILDING CODE.
2. IMPORTANCE CATEGORY FOR BUILDING = NORMAL
3. DESIGN SPECIFIED LOADS:
   - LIVE LOADS: AS PER FLOOR PLANS
   - DEAD LOADS: AS PER FLOOR PLANS
4. ALL CLIMATIC DATA BASED ON KINGSTON, ONTARIO.
5. SNOW LOADS:
   - DESIGN SNOW LOAD = 2.08 kPa
   - GROUND SNOW LOAD, SS = 2.10 kPa (1/50 YEAR RETURN)
   - ASSOCIATED RAIN LOAD, SR = 0.4 kPa (1/50 YEAR RETURN)
   - ADDITIONAL SNOW LOADS ADJACENT HIGHER ROOFS, WALLS, MECHANICAL UNITS, ETC. AS INDICATED ON DRAWINGS.
6. WIND LOADS:
   - HOURLY WIND PRESSURE, q = 0.47 kPa (1/50 YEAR RETURN)
   - EXPOSURE FACTOR. CE = 1.01, BASED ON OPEN TERRAIN
   - INTERNAL PRESSURE COEFFICIENT, Cpi = -0.45 TO +0.30
   - DESIGN WIND LOADS CALCULATED IN ACCORDANCE WITH THE NBCC STATIC PROCEDURE
7. SEISMIC LOADS:
   - Sa(0.2) = 0.261
   - Sa(0.5) = 0.138
   - Sa(1.0) = 0.0739
   - Sa(2.0) = 0.0352
   - Sa(5.0) = 0.00958
   - Sa(10.0) = 0.00357
   - PGA = 0.109
   - PGV = 0.0922
   - Site Class = B
   - SEISMIC CATEGORY = SC2
   - SEISMIC BASE SHEARS CALCULATED IN ACCORDANCE WITH EQUIVALENT STATIC FORCE PROCEDURE.
   - SEISMIC FORCE RESISTING SYSTEM (SFRS) = NAILED SHEAR WALLS, WOOD BASED
   - Ta = 0.25 s
   - S (Ta) = 0.224
   - Rd = 3
   - Ro = 1.7
   - V = 0.03W

SPREAD/STRIP FOOTINGS

1. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF SUBGRADE SERVICES PRIOR TO EXCAVATION.
2. DEPTH TO FROST IS 1.5m. ALL FOOTINGS SHALL BE PROTECTED BY A MINIMUM OF 1.5m OF EARTH COVER OR EQUIVALENT INSULATION.
3. ALL FOUNDATIONS SHALL BE SPREAD OR STRIP FOOTINGS DIMENSIONED AS SHOWN ON PLAN. FOOTINGS SHALL BEAR ON ENGINEERED FILL OR NATIVE CLAY WITH THE FOLLOWING BEARING RESISTANCES:
   - SPREAD FOOTINGS:
     - FACT. ULS = 200 kPa
     - SLS = 150 kPa
   - STRIP FOOTINGS:
     - FACT. ULS = 200 kPa
     - SLS = 150 kPa
4. FOOTINGS ARE TO BE PLACED ON UNDISTURBED SOILS, FREE OF FROST, TOPSOIL AND ORGANIC MATERIALS. VARIANCES IN THE SOIL CONDITIONS FROM THE ABOVE SHALL BE REPORTED TO THE DCC REPRESENTATIVE BEFORE PROCEEDING.
5. POUR JOINTS IN THE FOUNDATION SHALL BE APPROVED BY THE DCC REPRESENTATIVE.
6. CONTRACTOR TO CONFIRM BEARING SURFACE, AS PART OF QUALITY CONTROL TASKING, AND THIRD PARTY TESTING. REPORT TO BE PROVIDED TO DCC REPRESENTATIVE. THE GEOTECHNICAL ENGINEER SHALL BE RETAINED BY THE CONTRACTOR.
7. REPORTS OF ALL INSPECTIONS TO BE FORWARDED TO THE DCC REPRESENTATIVE.
8. ENGINEERED FILL, IF REQUIRED, SHALL BE PLACED ON THE NATIVE CLAY AND SHALL CONSIST OF OPSS 1010 GRANULAR A COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD). PLACE IN LIFTS NOT EXCEEDING 150mm, AND COMPATIBLE WITH THE COMPACTION EQUIPMENT USED. THE GEOTECHNICAL ENGINEER SHALL MONITOR THE PLACEMENT OF ALL ENGINEERED FILL BELOW FOUNDATIONS.
9. IN ORDER TO PREVENT DIFFERENTIAL PERFORMANCE OF THE FOOTINGS WHERE SHALLOW BEDROCK IS ENCOUNTERED, PROVIDE A MINIMUM 300mm OPSS 1010 GRANULAR A LAYER COMPACTED TO 100% SPMDD BETWEEN THE UNDERSIDE OF FOOTING AND UNDERLYING BEDROCK. PLACE AND COMPACT IN LIFTS NOT EXCEEDING 150mm, AND COMPATIBLE WITH THE COMPACTION EQUIPMENT USED. BEDROCK REMOVAL MAY BE REQUIRED IN ORDER TO ACHIEVE THE REQUIRED FROST COVER DEPTH.

CONCRETE

1. CONCRETE, AS SPECIFIED IN A23.1-19, SHALL HAVE THE FOLLOWING PROPERTIES.

CONCRETE STRENGTH AND MIX SPECIFICATIONS

USE	EXPOSURE CLASS	CEMENT TYPE	MINIMUM COMPRESSIVE STRENGTH	MAXIMUM WATER TO CEMENT RATIO	AIR CONTENT (%)	SLUMP	MAXIMUM AGGREGATE SIZE
GRADE BEAMS, FOOTINGS, PIERS	F-2	GU	25 MPa AT 28 DAYS	0.55	4-7	90 mm	20 mm
INTERIOR SLABS (STRUCTURAL OR ON GRADE) & TOPPING ON STEEL DECK	N	GU	25 MPa AT 28 DAYS	0.55	NONE	90 mm	20 mm
EXTERIOR SLABS (REINFORCED)	C-1	GU	35 MPa AT 56 DAYS	0.40	5-8	90 mm	20 mm
EXTERIOR SIDE WALKS, CURBS, GUTTERS, SPLASH PADS & SUMP PITS	C-2	GU	32 MPa AT 28 DAYS	0.45	5-8	90 mm	20 mm

2. REDUCE GREENHOUSE GAS (GHG) EMISSIONS FROM READY-MIX CONCRETE BY MINIMUM 30% LESS THAN THOSE CALCULATED USING THE GLOBAL WARMING POTENTIALS (GWPs) OF THE BASELINE MIX IN THE REGIONAL INDUSTRY AVERAGE ENVIRONMENTAL PRODUCT DECLARATIONS (EPDs).
3. CONSTRUCTION JOINTS SHALL BE MADE AND LOCATED SO AS NOT TO SIGNIFICANTLY IMPAIR THE STRENGTH OF THE STRUCTURE. THE LOCATION OF CONSTRUCTION JOINTS SHALL BE APPROVED BY THE DCC REPRESENTATIVE. SLAB AND BEAM CONSTRUCTION JOINT DETAILS SHALL BE APPROVED BY THE DCC REPRESENTATIVE.
4. PROVIDE 152mm PLASTIC WRAPPED CARDBOARD VOID FORM BELOW ALL BEAMS, WALLS, PILE CAPS AND STRUCTURAL SLABS.
5. STRUCTURAL SLABS ON VOID FORM TO BE PLACED ON 20 MIL POLY VAPOUR BARRIER ON OSB ON VOID FORM OVER LOOSE FILL UNLESS NOTED OTHERWISE. REFER TO ARCHITECTURAL DRAWINGS FOR VAPOUR BARRIER DETAILS.
6. PLACE CONCRETE AS A CONTINUOUS OPERATION STOPPING ONLY AT CONSTRUCTION JOINTS. CONSTRUCTION JOINTS SHALL BE ADEQUATELY DOWELLED AND KEYED. IF NOT PROVIDED AS PART OF THIS DRAWING SET, DETAILS AND LOCATIONS OF CONSTRUCTION JOINTS SHALL BE PROVIDED BY THE CONTRACTOR AND REVIEWED BY THE DCC REPRESENTATIVE.
7. REINFORCING STEEL MUST BE REVIEWED BY THE DCC REPRESENTATIVE PRIOR TO PLACING CONCRETE.
8. THE GENERAL CONTRACTOR SHALL NOTIFY THE DCC REPRESENTATIVE AT LEAST 72 HOURS PRIOR TO ALL CONCRETE POURS.
9. CONCRETE SHALL BE FREE OF SURFACE DEFECTS SUCH AS HONEYCOMBING, SAND STREAKING, LIFT LINES, VARIATIONS IN COLOUR, SOFT AREAS, AND LARGE SURFACE VOIDS AS DEFINED IN CSA A23.1:19. ALL SURFACE DEFECTS SHALL BE REPAIRED AS DIRECTED BY THE DCC REPRESENTATIVE. WHERE HONEYCOMBING HAS OCCURRED, ALL DEFECTIVE CONCRETE SHALL BE REMOVED SUFFICIENTLY TO EXPOSE SOUND CONCRETE AND REPAIRED AS DIRECTED BY THE DCC REPRESENTATIVE.
10. TIMING FOR REMOVAL OF FORM WORK TO BE BASED ON STRENGTH OF CONCRETE, AS DETERMINED BY THE TESTING OF FIELD CURED CONCRETE CYLINDERS. DO NOT REMOVE FORM WORK FROM THICKENED EDGE BEFORE CONCRETE HAS REACHED 50% OF ITS DESIGN STRENGTH.
11. UNLESS NOTED OTHERWISE, CONTRACTOR TO TEST CONCRETE FOR EACH DAY'S CONCRETING AND/OR EVERY 40 CUBIC METERS EACH DAY CONCRETING. FORWARD TEST RESULTS TO THE DCC REPRESENTATIVE.
12. ALL FRESHLY PLACED AND CONSOLIDATED CONCRETE SHALL BE CURED IN ACCORDANCE WITH CSA A23.1:19. UNLESS OTHERWISE NOTED, CONCRETE CURING TYPE SHALL BE IN ACCORDANCE WITH CSA A23.1:19, TABLE 2 / TABLE 19 FOR THE EXPOSURE CLASS NOTED.
13. ALL FRESHLY PLACED, CONSOLIDATED CONCRETE SHALL BE SUITABLY PROTECTED DURING THE CURING PERIOD AGAINST DAMAGE FROM ADVERSE WEATHER CONDITIONS SUCH AS WINDS, PRECIPITATION AND EXTREME TEMPERATURES IN ACCORDANCE WITH CSA A23.1:19.
14. PROVIDE HYDROPHILIC SWELLING-TYPE WATERSTOP IN ALL CONCRETE JOINTS BELOW GRADE AND ALL PIT WALLS OR SLABS.
15. PROVIDE MINIMUM 100mm DEEP POCKET/CHASE FOR ALL CONCRETE BEAMS FRAMING INTO CONCRETE WALLS OR BEAMS FOR THE FULL HEIGHT AND WIDTH OF THE SUPPORTED BEAM. PROVIDE DOWELS FROM THE BEAM OR WALL TO MATCH THE SUPPORTED BEAM.
16. ACCEPTABLE POST-INSTALLED ANCHORS TO CONCRETE:
   - EXPANSION ANCHORS:
     - HILTI KWIK BOLT TZ2
     - SIMPSON STRONG TIE STRONG BOLT 2
     - DEWALT POWER-STUD+ SD1
   - ADHESIVE ANCHORS:
     - HILTI HIT-HY 200
     - SIMPSON STRONG TIE SET-3G
     - DEWALT PURE110+
17. REFER TO SPECIFICATIONS FOR SUSTAINABLE DESIGN REQUIREMENTS AND SUBMITTALS FOR CONCRETE.

WOOD FRAMING

1. WOOD FRAMING AND CONSTRUCTION SHALL CONFORM TO CSA O86:19.
2. SAWN LUMBER: SPRUCE-PINE-FIR, GRADE NO. 1/NO. 2 OR BETTER, S4S, SEASONED DRY, UNLESS OTHERWISE NOTED.
3. PLYWOOD SHEATHING:
   A) DOUGLAS FIR PLYWOOD (DFP): TO CSA O121:17
   B) CANADIAN SOFTWOOD PLYWOOD (CSP): TO CSA O151:17
5. OSB SHEATHING: TO CSA O437.0:93, GRADE O-2
6. STRUCTURAL COMPOSITE LUMBER (SCL) AND I-JOISTS: DESIGNED AND FABRICATED IN ACCORDANCE WITH PART 4 OF THE NATIONAL BUILDING CODE OF CANADA AND CSA O86:19. I-JOISTS AND SCL PRODUCTS TO BE MEET CANADIAN CONSTRUCTION MATERIAL CENTRE (CCMC) GUIDELINES AND HAVE AN EVALUATION NUMBER AND EVALUATION REPORT.
   MINIMUM SCL GRADES:
   A) LAMINATED VENEER LUMBER (LVL): GRADE 2.0E
   B) PARALLEL STRAND LUMBER (PSL): GRADE 2.2E
   C) LAMINATED STRAND LUMBER (LSL): GRADE 1.55E
7. CONNECTIONS:
   A) NAILS: COMMON STEEL WIRE NAILS TO CSA B111:1974 AND ASTM F1667:18A
   B) WOOD SCREWS: TO MEET THE REQUIREMENTS OF ASME B18.6.1:1981
   C) LAG SCREWS: TO MEET THE REQUIREMENTS OF ASME B18.2.1:2012(R2021). STEEL TO MEET OR EXCEED THE REQUIREMENTS OF SAE J429 GRADE 1.
   D) BOLTS, NUTS, AND WASHERS: TO ASTM A307:21 OR SAE J429 GRADE 2
   E) JOIST AND BEAM HANGERS: GALVANIZED STEEL TO MEET THE CONNECTION FORCES INDICATED. IF FORCES NOT INDICATED, DESIGN FOR THE FULL SHEAR CAPACITY OF THE SUPPORTED MEMBER.
   F) ALL FASTENERS AND HARDWARE EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED.
8. SHEATHING:
   A) WALL SHEATHING SHALL BE 19MM (3/4") PLYWOOD UNLESS OTHERWISE NOTED.
   B) FLOOR SHEATHING SHALL BE 19MM (3/4") TONGUE AND GROOVE OSB UNLESS OTHERWISE NOTED.
   C) ROOF SHEATHING SHALL BE 19MM (3/4") TONGUE AND GROOVE PLYWOOD UNLESS OTHERWISE NOTED.
   D) SHEATHING FOR FLOORS, ROOFS, AND WALLS SHALL BE INSTALLED WITH FACE GRAIN AT RIGHT ANGLES TO STUDS, TRUSSES, OR JOISTS.
   E) UNLESS OTHERWISE NOTED, EXTERIOR WALL SHEATHING, FLOOR AND ROOF SHEATHING TO BE FASTENED WITH 3.33Ø X 64MM LONG (0.13Ø X 2-1/2") COMMON WIRE NAILS AT 152MM (6") O.C. AT PANEL EDGES AND 305MM (12") O.C. AT INTERMEDIATE MEMBERS.
   F) PROVIDE GALVANIZED STEEL H-CLIPS ON UNSUPPORTED EDGES OF FLOOR AND ROOF SHEATHING WHEN TONGUE AND GROOVE SHEATHING IS NOT USED. H-CLIPS TO BE SPACED EVENLY BETWEEN JOISTS OR TRUSSES.
9. WOOD FRAMING SHALL NOT BE NOTCHED OR DRILLED FOR SERVICES UNLESS APPROVED BY DCC REPRESENTATIVE.
10. ALL SAWN LUMBER EXPOSED TO WEATHER OR EARTH TO BE PRESSURE TREATED IN ACCORDANCE WITH CAN/CSA O80 SERIES - 15.
11. ALL SAWN LUMBER IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED IN ACCORDANCE WITH CAN/CSA O80 OR SEPARATED BY USE OF A SILL GASKET OR OTHER MEANS APPROVED BY DCC REPRESENTATIVE.
12. NAILING FOR BUILT-UP BEAMS AND COLUMNS SHALL BE IN ACCORDANCE WITH PART 9 OF THE NATIONAL BUILDING CODE OF CANADA.
13. PROVIDE SOLID BLOCKING BETWEEN STUDS AT 1220MM (4') O.C. FOR ALL LOAD-BEARING STUD WALLS AND SHEAR WALLS, UNLESS OTHERWISE NOTED.
14. PROVIDE SOLID BLOCKING AT ALL SHEATHING PANEL JOINTS IN SHEAR WALLS.
15. PROVIDE WOOD-BASED SHEATHING FOR ALL WOOD STUD WALLS SHOWN ON STRUCTURAL DRAWINGS.
16. PROVIDE SOLID BLOCKING AROUND ALL EDGES OF FLOOR AND ROOF OPENINGS, AND BELOW PERIMETER OF RTUS.
17. ALL WOOD BEAMS AND JOISTS TO BE FLUSH-FRAMED AND SUPPORTED BY HANGERS BY SUPPLIER, UNLESS OTHERWISE NOTED.
18. ALL WOOD COLUMNS AND KING/CRIPPLE STUDS AT LINTELS SHALL BE CONTINUOUS DOWN TO FOUNDATIONS, COMPLETE WITH SOLID BLOCKING THROUGH FLOOR SYSTEMS.
19. PROVIDE 3-PLY BUILT-UP STUD COLUMNS AT ALL GIRDER TRUSS SUPPORT LOCATIONS FOR THE FULL HEIGHT OF THE BUILDING, UNLESS OTHERWISE NOTED.
20. PROVIDE GALVANIZED STAND-OFF BASE FOR ALL WOOD COLUMNS BEARING ON CONCRETE, UNLESS OTHERWISE NOTED.
21. PROVIDE GALVANIZED COLUMN CAP FOR ALL COLUMNS WHERE BEAMS ARE SUPPORTED ABOVE, UNLESS OTHERWISE NOTED.
22. SHOP DRAWINGS:
   A) SUBMIT ENGINEERED SHOP DRAWINGS FOR ALL SCL, I-JOISTS, AND TRUSSES BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROJECT PROVINCE FOR REVIEW PRIOR TO FABRICATION AND INSTALLATION.
   B) SHOP DRAWINGS SHALL INDICATE METAL HANGERS, SQUASH BLOCKING, BRIDGING/BLOCKING, TIE-DOWNS, WEB STIFFENERS, AND ALL ASSOCIATED CONNECTIONS AS REQUIRED.
   C) ALL MEMBERS SHALL BE DESIGNED FOR A MAXIMUM LIVE LOAD DEFLECTION OF L/360, UNLESS OTHERWISE NOTED.
   D) ALL ROOF MEMBERS TO BE DESIGNED FOR A MINIMUM NET UPLIFT OF 0.5 KPA.
   E) WOOD TRUSS SUPPLIER TO DESIGN AND INSTALL BLOCKING AND BRACING AS REQUIRED, PER WTA TRUSS INSTALLATION GUIDE.
   F) PROFESSIONAL ENGINEER WHOSE SEAL IS ON SHOP DRAWINGS SHALL REVIEW CONSTRUCTION AND PROVIDE A LETTER CERTIFYING THAT THE MEMBERS AND CONNECTIONS FOR WHICH THEY ARE RESPONSIBLE HAVE BEEN INSTALLED IN ACCORDANCE WITH THE REVIEWED SHOP DRAWINGS.

EXCAVATION AND BACKFILL

1. ALL EXCAVATIONS FOR THE CONSTRUCTION OF FOOTINGS AND UNDERGROUND SERVICES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITION OF THE OCCUPATIONAL HEALTH AND SAFETY ACT (OHSA).
2. GRADE BEAMS AND FOUNDATION WALLS SHALL BE BACKFILLED WITH FREE DRAINING GRANULAR A OR GRANULAR B TYPE II (75mm MINUS). EXISTING NATIVE OR FILL MATERIALS ARE NOT TO BE USED AS BACKFILL FOR GRADE BEAMS OR FOUNDATION WALLS. PLACE AND COMPACT BACKFILL TO 98% SPMDD IN LAYERS NOT EXCEEDING 150mm WITH DUE CARE TO AVOID DAMAGE TO WALLS.
3. SLAB ON GRADE CONSTRUCTION:
   - REMOVE ALL SURFICIAL TOPSOIL AND FILL MATERIALS TO EXPOSE SUITABLE SUBGRADE MATERIALS. SUBGRADE MATERIALS SHALL BE REVIEWED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF SUB-BASE MATERIAL.
   - PROOF ROLL SUB-GRADE TO REVEAL LOOSE OR UNSUITABLE MATERIAL AND REPLACE WITH GRANULAR B TYPE II MATERIAL COMPACTED TO 95% SPMDD, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
   - MINIMUM 200mm THICK SUB-BASE OF GRANULAR B TYPE II COMPACTED TO 100% SPMDD.
   - MINIMUM 200mm THICK BASE OF 19mm CLEAR CRUSHED STONE OR GRANULAR A COMPACTED TO 100% SPMDD.
   - BASE AND SUB-BASE TO BE PROVIDED IN LIFTS NOT EXCEEDING 150mm.
4. EXCAVATION, BACKFILL AND COMPACTION IS TO BE SUPERVISED BY A GEOTECHNICAL ENGINEER.THE GEOTECHNICAL ENGINEER SHALL BE RETAINED BY THE CONTRACTOR.
5. ALL COMPACTION TEST RESULTS ARE TO BE FORWARDED TO THE DCC REPRESENTATIVE.

TYPICAL WATER LINE LOADS

1. SEE MECHANICAL DRAWINGS FOR WATER PIPE AND / OR SPRINKLER LINE LOCATION.
2. ALL SUPPORTING ROOF JOISTS / TRUSSES SHALL BE DESIGNED TO WITHSTAND WATER FILLED PIPE LOADS. 'W' AS SHOWN IN ADDITION TO THE BASIC SPECIFIED DESIGN.
   - 102MM (4") Ø PIPES: Ø SMALLER = IGNORE
   - 127MM (5") Ø PIPES: W = 24.00 LBS/FT
   - 152MM (6") Ø PIPES: W = 32.23 LBS/FT
   - 203MM (8") Ø PIPES: W = 51.44 LBS/FT
   - PLUS 45 KG (100 LBS) AT THE POINT OF HANGING
3. ALL MECHANICAL PIPES 51MM (2") OR LAGER SHALL BE HUNG FROM THE TOP CHORD OF JOISTS / TRUSSES AT PANEL POINTS ONLY. DUCT WORK MAY BE HUNG FROM TOP OF JOISTS / TRUSSES AT LOCATIONS OTHER THAN PANEL POINTS.

REINFORCING STEEL

1. REINFORCING STEEL SHALL BE NEW BILLET, DEFORMED BARS IN ACCORDANCE WITH CSA G30.18:09. MINIMUM YIELD STRENGTH TO BE 400 MPa.
2. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST RSIC REINFORCING STEEL MANUAL OF STANDARD PRACTICE.
3. LAP TOP BARS AT CENTRE SPAN AND BOTTOM BARS OVER SUPPORTS.
4. ALL REINFORCING TO BE HELD IN PLACE AND TIED BY THE USE OF PROPER ACCESSORIES SUCH AS HI-CHAIRS, SPACERS, ETC., TO BE SUPPLIED BY THE REINFORCING STEEL FABRICATOR.
5. REINFORCING IN CONCRETE BEAMS/WALLS AND MASONRY BOND BEAMS TO BE BENT 24" (600MM) AROUND CORNERS OR USE 3'-0" X 3'-0" (900MM X 900MM) CORNER BARS.
6. FRAME ALL OPENINGS IN CONCRETE BEAMS, WALLS AND/OR SLABS WITH 2-20M BARS (EXTRA) ALL FOUR SIDES. EXTEND BARS 24" (600 MM) BEYOND EDGES OF OPENINGS EXCEPT AS NOTED.
7. SUBMIT SHOP DRAWINGS WHICH CLEARLY INDICATE BAR SIZES, GRADE, SPACING, HOOKS, BENDS, AND SUPPORTING/SPACING DEVICES, ETC., FOR REVIEW TO THE DCC REPRESENTATIVE PRIOR TO FABRICATION OF THE REINFORCING STEEL.
8. PIT WALLS/SLABS SHALL BE 8" (200MM) THICK REINFORCED WITH 15M @ 12" (300MM) O.C. EACH WAY AT CENTER UNLESS OTHERWISE SHOWN.
9. HOUSEKEEPING PADS SHALL BE A MINIMUM 4" 4" (100MM) THICK AND REINFORCED WITH 10M @ 12" (300MM) O.C. EACH WAY AT CENTRE UNLESS OTHERWISE SHOWN.
10. PRIOR TO PLACING CONCRETE, ENSURE ALL REINFORCING STEEL IS CLEAN, FREE OF LOOSE SCALE,RUST, MUD, OIL OR OTHER FOREIGN MATERIAL WHICH WOULD REDUCE BOND.
11. HEATING, QUENCHING AND BENDING OF REINFORCING STEEL ON THE SITE IS NOT ALLOWED.
12. SPLICES AT POINTS OF MAXIMUM TENSILE STRESS SHALL BE AVOIDED WHEREVER POSSIBLE. SUCH SPLICES, WHERE USED, SHALL BE APPROVED BY THE DCC REPRESENTATIVE, THE MINIMUM LAP SHALL BE 48 BAR DIAMETERS.
13. CONTINUOUS AND TEMPERATURE REINFORCING BARS SHALL BE LAPPED 24 BAR DIAMETERS, OR 18" (450MM) MINIMUM AT SPLICE OR AT CORNERS. TERMINATE CONTINUOUS BAR AT NON-CONTINUOUS ENDS WITH STANDARD HOOK.
14. MINIMUM CLEAR DISTANCE BETWEEN PARALLEL BARS SHALL BE GREATER THAN THE LARGEST OF THE FOLLOWING:
   a) 1.4 TIMES BAR DIAMETER.
   b) 1.4 TIMES MAXIMUM SIZE OF AGGREGATES.
   c) 1 3/16" (30MM) MINIMUM.
15. MINIMUM CONCRETE COVER FOR REINFORCING:

EXPOSURE CONDITION	EXPOSURE CLASS		
	N	F-1, F-2, S-1, S-2	
PILES, FOOTING, RETAINING WALL, AND CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.	--	75mm	75mm
BEAMS, GIRDERS, COLUMNS.	30mm	40mm	60mm
SLABS, WALLS, JOISTS, SHELLS AND FOLDED PLATES	20mm	40mm	60mm

STAIRS

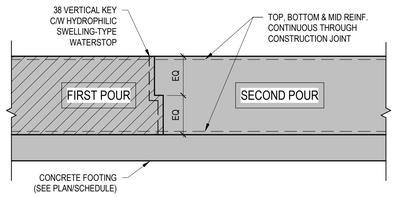
1. ALL STAIRS AND INTERMEDIATE LANDINGS INDICATED ON ALL ARCHITECTURAL & STRUCTURAL DRAWINGS SHALL BE DESIGNED BY CONTRACTOR.
2. ALL STAIRS IN ENTRANCES AND EXITS SHALL BE DESIGNED FOR A LIVE LOAD OF 4.8 kPa (100 PSF) MIN.
3. PROVIDE SEALED ENGINEERED SHOP DRAWINGS STAMPED BY AN ENGINEER LICENSED TO PRACTICE IN THE PROJECT PROVINCE OF ONTARIO. DRAWINGS SHALL INDICATE DIMENSIONS, SIZE AND LOCATION OF ALL COMPONENTS.
4. ALL CONNECTIONS SHALL BE INDICATED ON THE DRAWING. INCLUDING CONNECTIONS OF STAIRS TO LANDINGS.
5. STAIR DRAWINGS TO BE COORDINATED WITH GUARDRAIL DETAILS TO ENSURE ALL GUARDRAIL TO STAIR CONNECTIONS ARE ALLOWED FOR IN THE DESIGN.
6. SHOP DRAWINGS WILL NOT BE REVIEWED UNTIL SEALED BY P. ENG. ALL SHOP DRAWINGS SHALL BE INDICATED AS "ISSUED FOR CONSTRUCTION".
7. STRUCTURAL STEEL SUPPLIER SHALL SUBMIT SHOP DRAWINGS BEARING THE SEAL OF A PROFESSIONAL ENGINEER IN THE PROJECT PROVINCE SHOWING ALL DESIGN AND FABRICATION DETAILS OF CONNECTIONS TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.

STRUCTURAL STEEL

1. FABRICATE & ERECT STRUCTURAL STEEL TO CSA S16:19.
2. STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO CSA G40.21:13, GRADE 350W AND CSA G40.21:13, GRADE 350W FOR H.S.S., CLASS C.
3. ALL WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS FULLY APPROVED FOR STRUCTURAL WELDING BY THE CANADIAN WELDING BUREAU IN ACCORDANCE WITH CSA W47.1:19 AND CSA W59-18.
4. UNLESS SHOWN OTHERWISE ON THE DRAWINGS, CONNECT ALL FLEXURAL MEMBERS (BEAMS, CHANNELS, ETC...) AT EACH END FOR ONE HALF OF THE TOTAL UNIFORMLY DISTRIBUTED FACTORED LOAD OF THE LATERALLY SUPPORTED BEAM, IN ADDITION TO THE TRANSFER OF FACTORED MOMENTS, WHERE SHOWN ON THE DRAWINGS.
5. SPLICING OF MEMBERS NOT PERMITTED UNLESS OTHERWISE NOTED.
6. STRUCTURAL STEEL ERECTOR SHALL SUPPLY AND INSTALL ALL TEMPORARY GUYING AND BRACING NECESSARY TO PROVIDE STABILITY FOR THE STRUCTURE AS A WHOLE. THESE SHALL REMAIN IN PLACE UNTIL FLOOR SLABS ARE WELL CURED, STEEL ROOF DECK IS FULLY WELDED AND/OR PERMANENT BRACING IS INSTALLED.
7. STRUCTURAL STEEL SUPPLIER SHALL SUBMIT SHOP DRAWINGS BEARING THE SEAL OF A PROFESSIONAL ENGINEER IN THE PROJECT PROVINCE SHOWING ALL DESIGN AND FABRICATION DETAILS OF CONNECTIONS TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.
8. PIPE SECTIONS TO ASTM A53:22, MINIMUM YIELD POINT 241 MPa (35 ksi).
9. STRUCTURAL BOLTS, NUTS, AND WASHERS TO ASTM F3125/F3125M-18, GRADE A325, MINIMUM BOLT DIAMETER 19mm (3/4").
10. ANCHOR BOLTS TO ASTM A307:21.
11. PRIMER TO CONFORM TO THE REQUIREMENTS OF CGSB OR CISC/CPMA STANDARDS.
12. GROUT BED UNDER BASE PLATES TO BE 35 MPA NON SHRINK GROUT.
13. ALL BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF TWO BOLTS IN EACH CONNECTED PIECE AND BE DESIGNED WITH BEARING-TYPE CONNECTIONS WITH THREADS INCLUDED IN SHEAR PLANE, UNLESS NOTED OTHERWISE.
14. ALL STEEL SHALL RECEIVE A SHOP COAT OF PRIMER EXCEPT SURFACES TO BE CONCRETED, WELDED, LIGHT ZINC COATED OR GALVANIZED.
15. CLEAN ALL FIELD WELDS AFTER ERECTION AND TOUCH UP ALL UNPAINTED SURFACES WITH ONE COAT OF PRIMER PAINT TO MATCH SHOP COAT.
16. THERE SHALL BE NO CUTTING OF THE STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL CONSULTANT.
17. ALL EXPOSED STEEL TO BE GALVANIZED.
18. PROVIDE WEEP HOLES FOR EXTERIOR HSS MEMBERS AND MEMBERS INSIDE EXTERIOR WALL. HOLES TO BE LOCATED AT LOW POINT OF MEMBER TO ALLOW FOR RELIEF MOISTURE.

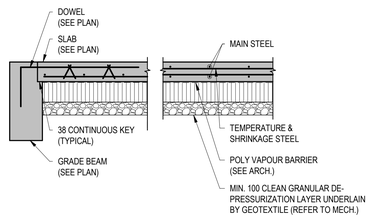
GUARDRAIL AND HANDRAIL

1. ALL GUARDRAIL AND HANDRAILS INDICATED ON ALL ARCHITECTURAL & STRUCTURAL DRAWINGS SHALL BE DESIGNED BY CONTRACTOR. GUARDRAILS REQUIRED AT ALL LOCATIONS WITH AN ELEVATION DIFFERENCE GREATER THAN 24" (610 mm).
2. GUARDRAILS AND HANDRAILS SHALL BE DESIGNED AS PER PART 4 2020 NBCC.
3. PROVIDE SEALED ENGINEER



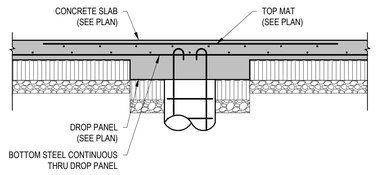
1/201 TYPICAL GRADE BEAM CONSTRUCTION JOINT

SCALE: 1 : 20



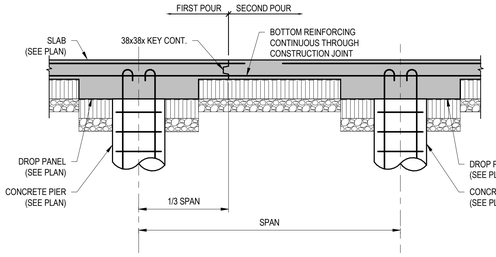
2/201 TYPICAL STRUCTURAL SLAB SECTION

SCALE: 1 : 20



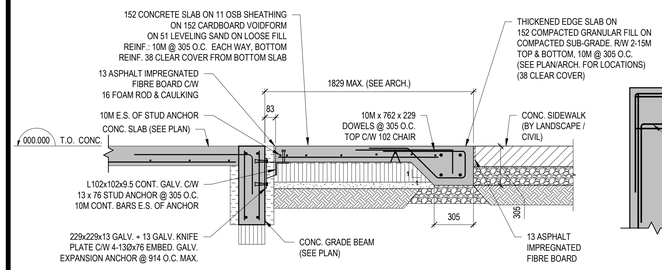
3/201 TYPICAL DROP PANEL @ PIER

SCALE: 1 : 20



4/201 TYPICAL CONSTRUCTION JOINT DETAIL WITH DROP PANELS

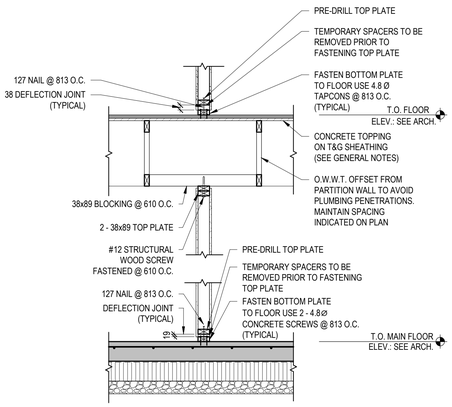
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5/201 TYPICAL ENTRANCE SLAB

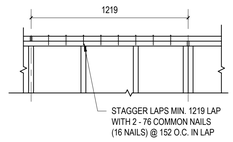
SCALE: 1 : 20

NOTE:
- ENSURE SUBGRADE IS PROPERLY COMPACTED & THICKENED EDGE IS BEARING ON COMPACTED GRANULAR.



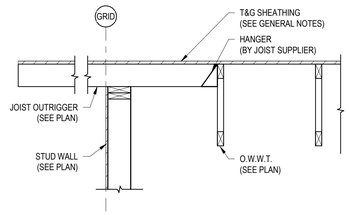
6/201 TYPICAL NON-STRUCTURAL PARTITION WALL

SCALE: 1 : 20



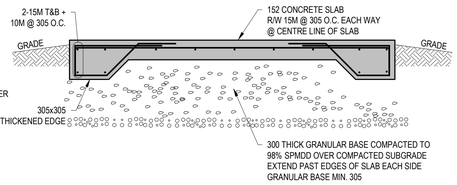
7/201 TYPICAL TOP PLATE CONNECTION

SCALE: 1 : 20



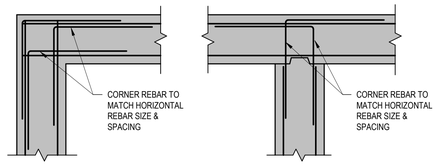
8/201 SECTION AT OUTRIGGER

SCALE: 1 : 16



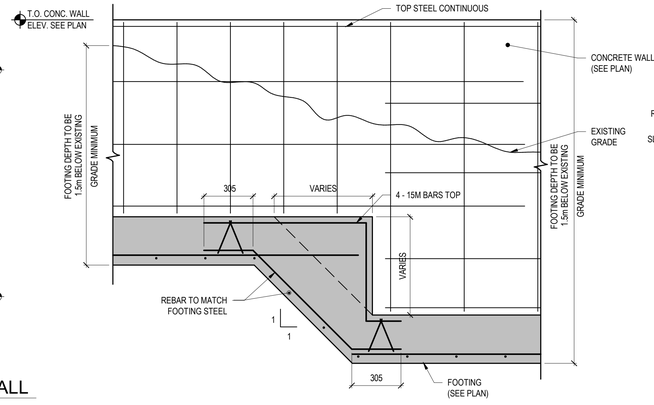
9/201 TYPICAL EXTERIOR EQUIPMENT PAD

SCALE: 1 : 20



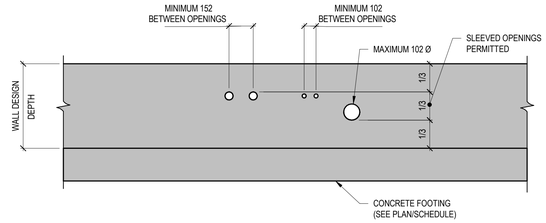
10/201 TYPICAL GRADE BEAM / WALL CORNER REBAR

SCALE: 1 : 16



11/201 TYPICAL CONCRETE WALL & FOOTING STEP DETAIL

SCALE: 1 : 16

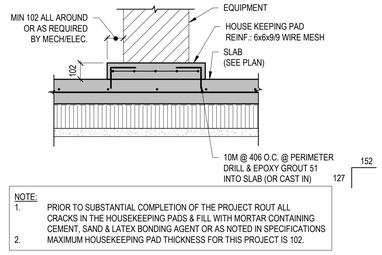


CONCRETE WALL ON STRIP FOOTING

NOTES:
1. ALL SLEEVE OPENINGS SHALL BE LOCATED WITHIN THE MIDDLE 1/3 OF WALL HEIGHT UNLESS OTHERWISE NOTED.
2. OPENINGS SHALL BE FORMED IN WALL PRIOR TO CONCRETE PLACEMENT.
3. CONTRACTOR TO PROVIDE SLEEVING SHOP DRAWINGS TO THE DCC REPRESENTATIVE PRIOR TO THE START OF CONSTRUCTION. ALL SERVICE SLEEVES SHALL BE INDICATED WITH LOCATIONS AND ELEVATIONS GIVEN.

12/201 TYPICAL SLEEVING CONCRETE WALL

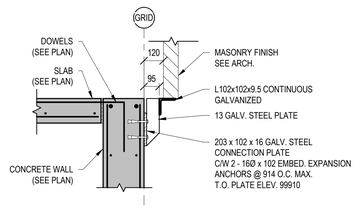
SCALE: 1 : 16



NOTE:
1. PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT ROUT ALL CRACKS IN THE HOUSEKEEPING PADS & FILL WITH MORTAR CONTAINING CEMENT, SAND & LATEX BONDING AGENT OR AS NOTED IN SPECIFICATIONS
2. MAXIMUM HOUSEKEEPING PAD THICKNESS FOR THIS PROJECT IS 102.

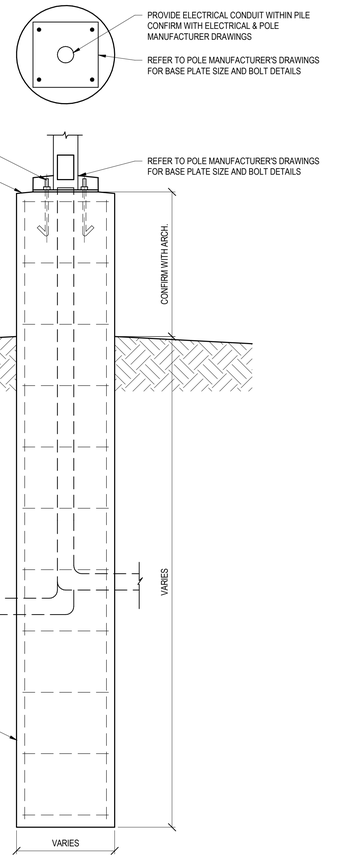
14/201 TYPICAL HOUSEKEEPING PAD

SCALE: 1 : 16



15/201 TYPICAL BRICK SUPPORT

SCALE: 1 : 16



POLE HT.	DIAMETER	DEPTH BELOW FINISH GRADE	REINFORCEMENT
TO 7620	610	3048	6-20M VERT. 10M TIES @ 305 O.C.
TO 9144	762	3658	10-20M VERT. 10M TIES @ 305 O.C.
TO 10668	762	4267	10-20M VERT. 10M TIES @ 305 O.C.

13/201 LUMINAIRE BASE DETAIL

SCALE: 1 : 16

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REPUBLIC ARCHITECTURE INC
385 St. Mary Avenue
Winnipeg, MB R3C 0N1
T 204 989 0102
F 204 989 0094
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LICENSED PROFESSIONAL ENGINEER
E. J. N. LAVERGNE
100550939
PROVINCE OF ONTARIO
January 24, 2025

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	DK

SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier 4 6-Plex

TRADE | MÉTIER: STRUCTURAL

DATE: 2025/01/24

SUBJECT | SUJET: TYPICAL DETAILS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: DK		DES O | AGENT CONC
DRAWN | DESSINÉ: MM		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: DK		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT: WBS #

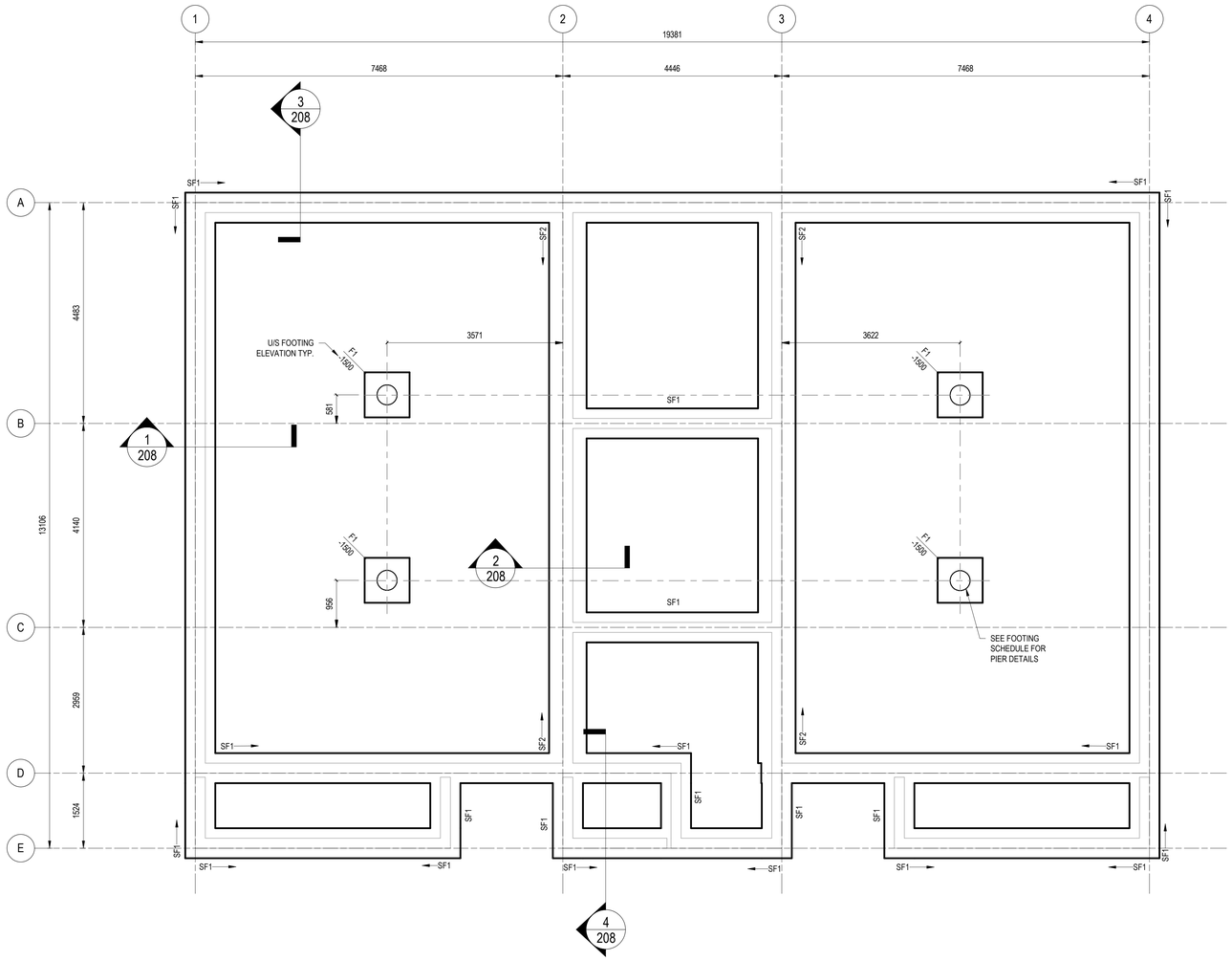
PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99- 201 - B

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1/202 FOUNDATION PLAN

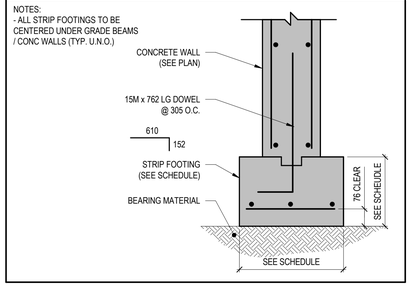
SCALE: 1 : 50

FOUNDATION PLAN NOTES:
- ALL FOOTINGS TO BE PLACED ON ENGINEERED FILL OR NATIVE CLAY.
- UNDERSIDE OF FOOTING ELEVATION = -1500 U.N.O.

STRIP FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICKNESS	REINFORCING
SF1	610	<varies>	203	15M @ 305 O.C. BOTTOM SHORT DIRECTION 3-15M CONT BOTTOM LONG DIRECTION
SF2	762	<varies>	203	15M @ 305 O.C. BOTTOM SHORT DIRECTION 3-15M CONT BOTTOM LONG DIRECTION

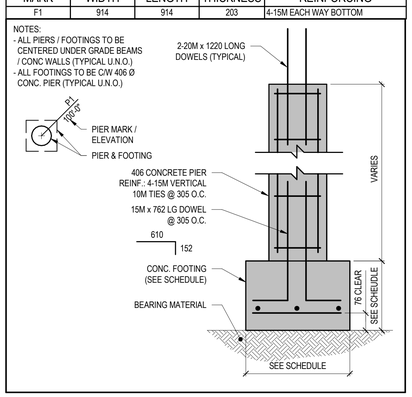
NOTES:
- ALL STRIP FOOTINGS TO BE CENTERED UNDER GRADE BEAMS / CONC WALLS (TYP. U.N.O.)



CONCRETE FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICKNESS	REINFORCING
F1	914	914	203	4-15M EACH WAY BOTTOM

NOTES:
- ALL PIERS / FOOTINGS TO BE CENTERED UNDER GRADE BEAMS / CONC WALLS (TYPICAL U.N.O.)
- ALL FOOTINGS TO BE C/W 406 Ø CONC. PIER (TYPICAL U.N.O.)



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REPUBLIC ARCHITECTURE INC
385 St. Mary Avenue
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T 204 989 0102
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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: STRUCTURAL
DATE: 2025/01/24

SUBJECT | SUJET
FOUNDATION PLAN

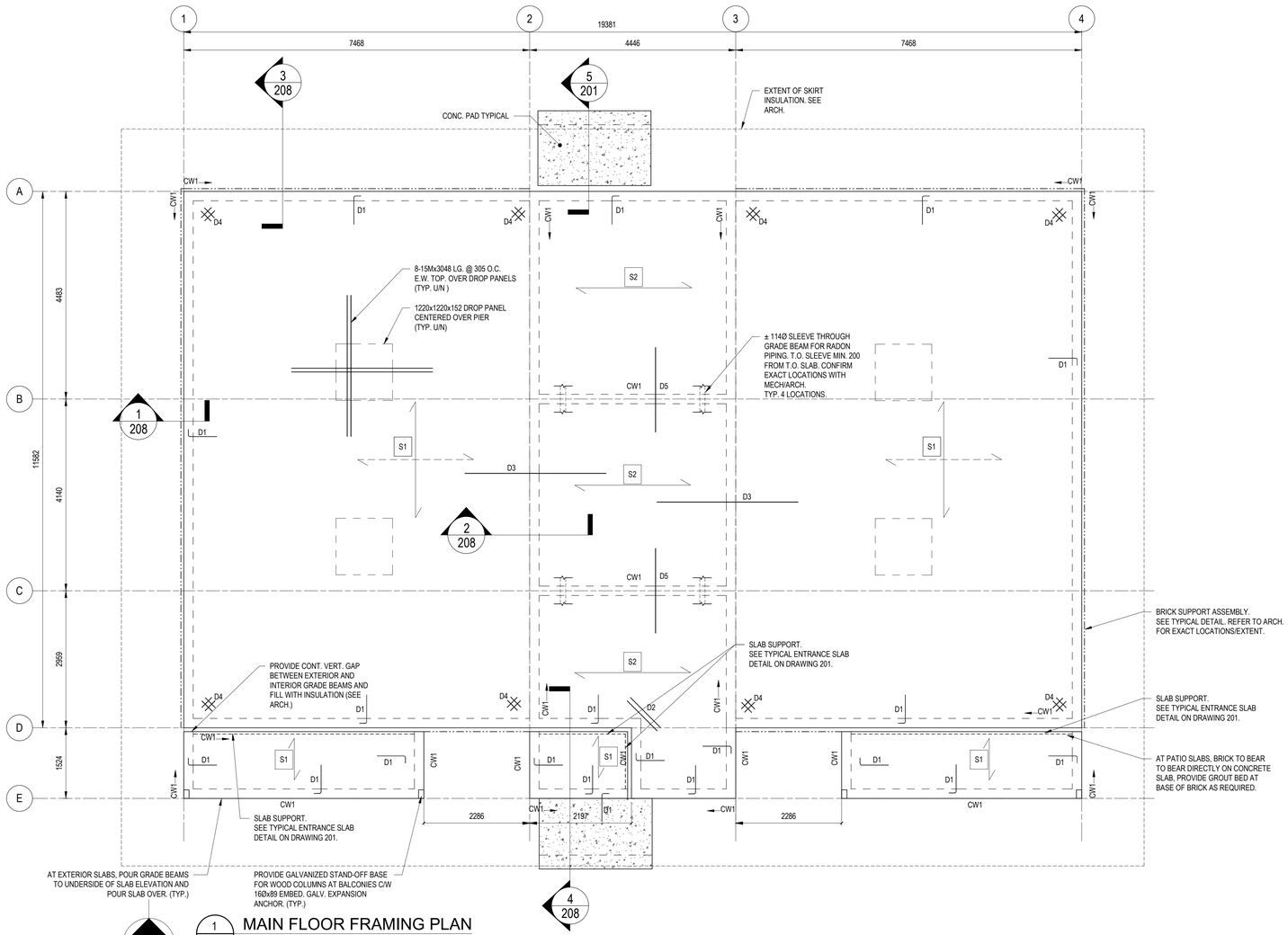
PRODUCTION	REVIEWED	REVU	
DESIGNED	ÉTUDIÉ: DK		DES O | AGENT CONC
DRAWN	DESSINÉ: MM		PRO MGR | GÉST PROJ
CHECKED	VÉRIFIÉ: DK		DES MGR | GÉST CONC
COORDINATION			FIRE | INCENDIE

WBS NUMBER | NO. SRT: WBS #
PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99- 202 - B

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MAIN FLOOR FRAMING PLAN

1
203

SCALE: 1 : 50

MAIN FLOOR FRAMING PLAN NOTES
- T.O. MAIN FLOOR ELEVATION = 0
- DESIGN DEAD LOAD = 4.3 kPa, INCLUDES CALCULATED PARTITION LOAD.
- DESIGN LIVE LOAD SUITES= 1.9 kPa
- DESIGN LIVE LOAD STAIRS, BALCONIES, EXT. LANDINGS & CORRIDORS = 4.8 kPa
- EXTERIOR GRIDS ARE OUTSIDE FACE OF CONCRETE (TYPICAL U.N.O.)
- ALL EXTERIOR LUMBER TO BE PRESSURE TREATED (P.T.)

DOWEL SCHEDULE

MARK	DESCRIPTION
D1	15M DOWELS x 1524 LG. @ 305 O.C. TOP (1219 / 305)
D2	2-15M x 1829 LG. TOP CORNER BARS (1829)
D3	15M x 3048 @ 305 O.C. TOP (3048)
D4	3-15M x1829 @ 305 O.C. EACH WAY TOP (305 / 305)
D5	15M x 1829 @ 305 O.C. TOP (1829)

SLAB SCHEDULE

MARK	THICKNESS	REINFORCING		DESCRIPTION
		BOTTOM BARS	TOP BARS	
S1	152	15M @ 305 O/C E.W.	N/A	STRUCTURAL SLAB ON VOIDFORM
S2	152	15M @ 254 O/C B.L.L. 10M @ 305 O/C B.U.L.	N/A	STRUCTURAL SLAB ON VOIDFORM

CONCRETE WALL SCHEDULE

MARK	WIDTH	REINFORCING	
		VERTICAL REINFORCING	HORIZONTAL REINFORCING
CW1	203	10M @ 406 O.C. E.F.	2-20M TOP AND BOTTOM 10M @ 406 O.C. E.F.

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LICENSED PROFESSIONAL ENGINEER
E. J. N. LAVERGNE
100550939
PROVINCE OF ONTARIO
January 24, 2025

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	DK

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: STRUCTURAL
DATE: 2025/01/24

SUBJECT | SUJET
MAIN FLOOR FRAMING PLAN

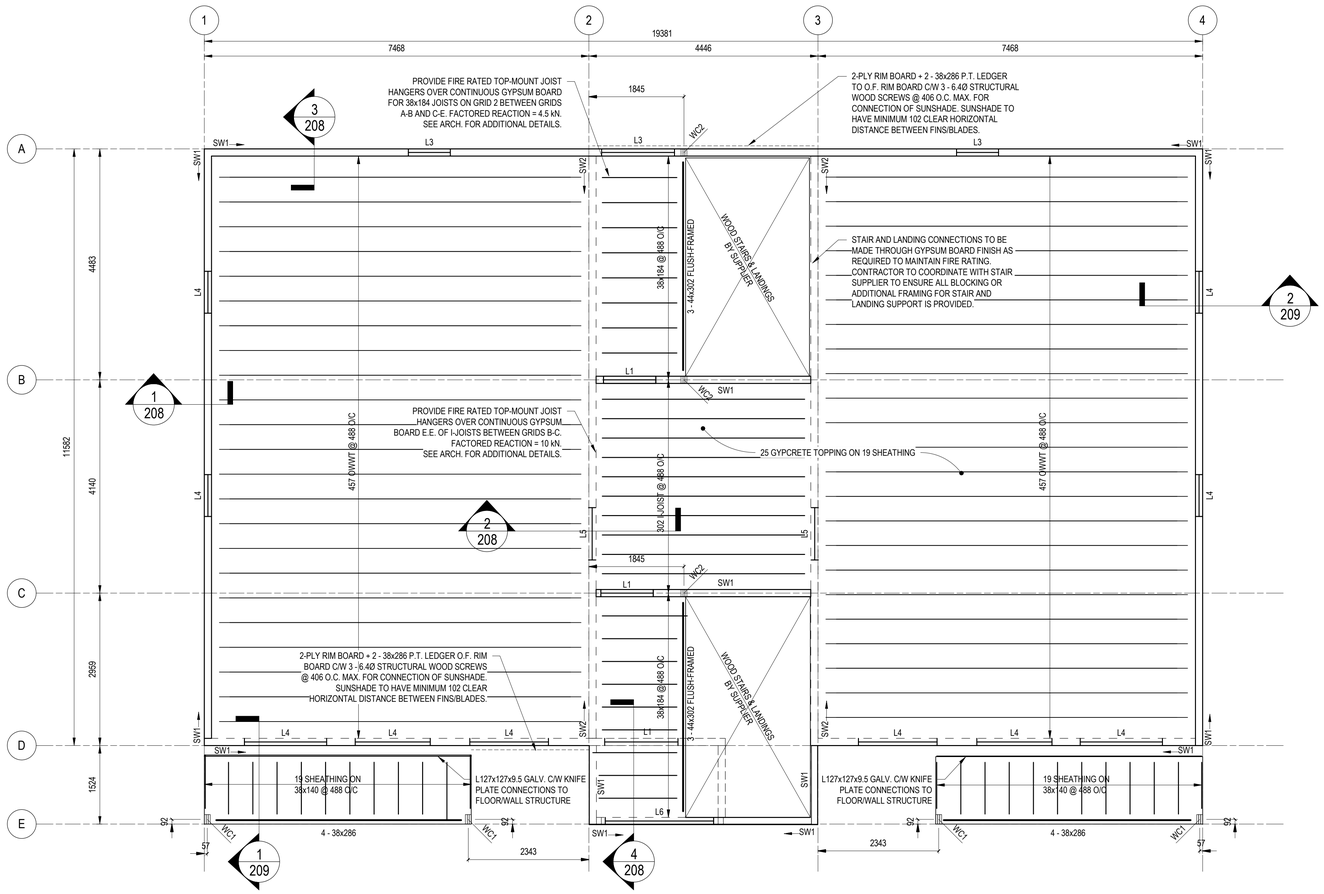
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COORDINATION: LDA		FIRE | INCENDIE

WBS NUMBER | NO. SRT: WBS #
PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99- 203 - B

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N

1
204

SECOND FLOOR FRAMING PLAN

SCALE: 1 : 50

2ND FLOOR FRAMING PLAN NOTES:
- T.O. 2ND FLOOR ELEVATION = 2997
- DESIGN DEAD LOAD = 1.5 kPa (INCLUDES CALCULATED PARTITION LOAD)
- DESIGN LIVE LOAD SUITES = 1.9 kPa
- DESIGN LIVE LOAD STAIRS, BALCONIES, EXT. LANDINGS, CORRIDORS = 4.8 kPa
- EXTERIOR GRIDS ARE OUTSIDE FACE OF STUD (TYPICAL U.N.O.)
- ALL EXTERIOR LUMBER TO BE PRESSURE TREATED (P.T.)
- ALL BEAMS & JOISTS TO BE FLUSH FRAMED C/W HANGERS BY LVL / JOIST SUPPLIER (TYPICAL U.N.O.)
- ALL COLUMNS AND LINTEL KING & CRIPPLER STUDS TO BE CONTINUOUS FROM ROOF TO FOUNDATION C/W SOLID BLOCKING THOUGH FLOOR SYSTEMS.

STUD WALL SCHEDULE

MARK	DESCRIPTION
SW1	38x140 @ 406 O.C.
SW2	38x140 @ 305 O.C.

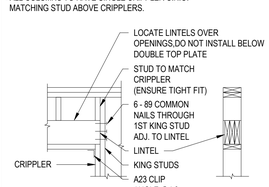
WOOD COLUMN SCHEDULE

MARK	DESCRIPTION
WC1	3-38x184
WC2	3-38x140

LINTEL SCHEDULE

MARK	LINTEL SIZE	CRIPPLER	KING STUD	REMARKS
L1	2-38x184	2-PLY	2-PLY	-
L2	3-44x241 LVL	3-PLY	2-PLY	-
L3	38x457 LSL RIM BOARD	-	-	- 2-PLY B.U. COLUMN E.S.
L4	2-38x457 LSL RIM BOARD	-	-	- EXTEND 2ND PLY MIN. 305 BEYOND EDGE OF OPENING E.S. - 3-PLY B.U. COLUMN E.S.
L5	3-38x184	2-PLY	2-PLY	-
L6	3-44x356 LVL	2-PLY	2-PLY	-

NOTES:
- ALL SAWN LUMBER LINTELS TO BE NO. 1 / NO. 2 SPF.
- ALL LVL LINTELS TO BE 2.0E
- ALL COLUMNS TO HAVE SINGLE CRIPPLER U.N.O. MATCHING STUD ABOVE CRIPPLERS.



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AS NOTED

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Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: STRUCTURAL
DATE: 2025/01/24

SUBJECT | SUJET
SECOND FLOOR FRAMING PLAN

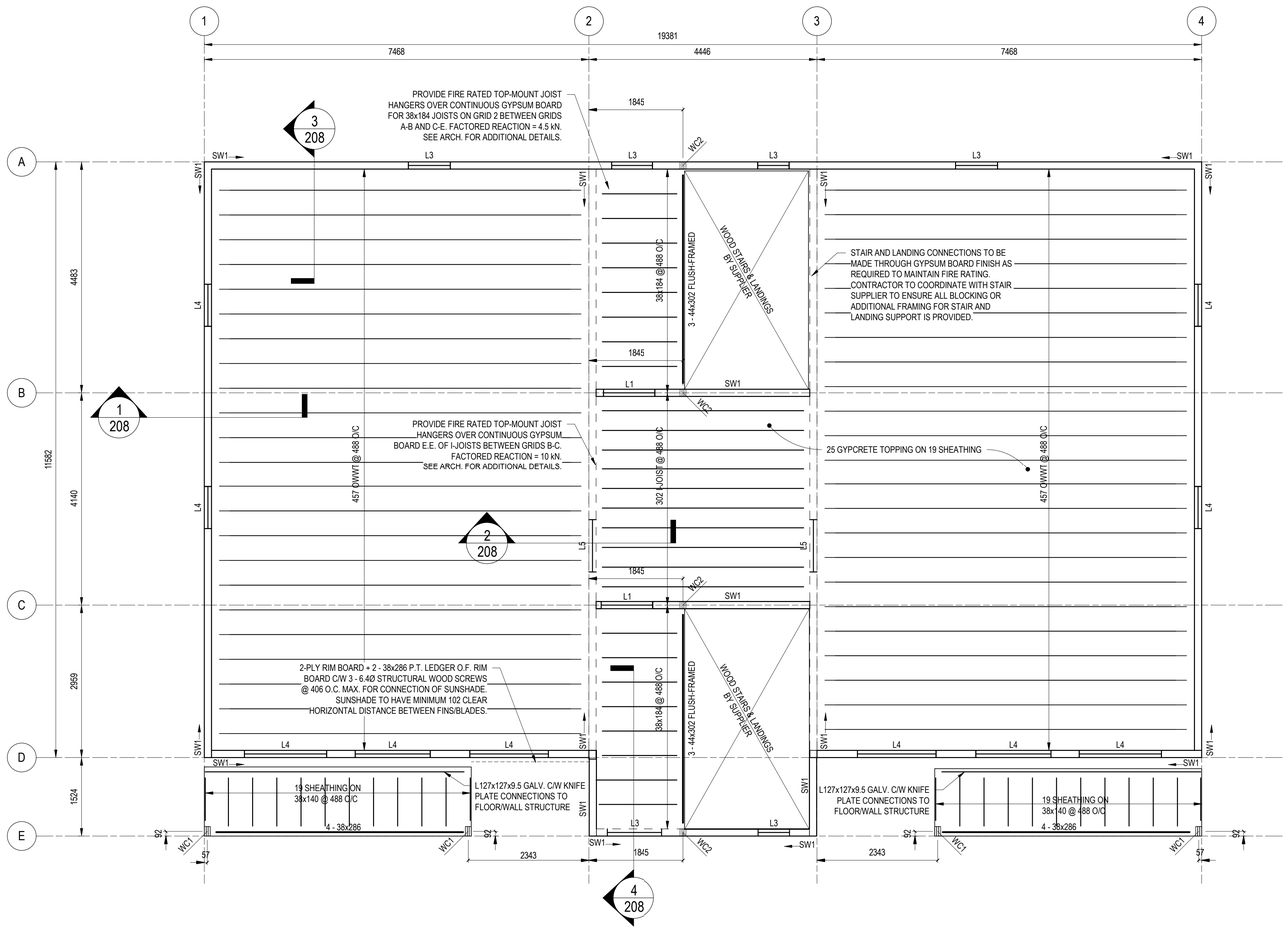
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CHECKED | VÉRIFIÉ: DK		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

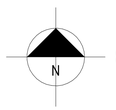
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PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99- 204 - B

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1
205

THIRD FLOOR FRAMING PLAN

SCALE: 1 : 50

3RD FLOOR FRAMING PLAN NOTES:
- T.O. 3RD FLOOR ELEVATION = 5994
- DESIGN DEAD LOAD = 1.5 kPa (INCLUDES CALCULATED PARTITION LOAD)
- DESIGN LIVE LOAD SUITES = 1.9 kPa
- DESIGN LIVE LOAD STAIRS, BALCONIES, EXT. LANDINGS, CORRIDORS = 4.8 kPa
- EXTERIOR GRIDS ARE OUTSIDE FACE OF STUD (TYPICAL U.N.O.)
- ALL EXTERIOR LUMBER TO BE PRESSURE TREATED (P.T.)
- ALL BEAMS & JOISTS TO BE FLUSH FRAMED C/W HANGERS BY LVL / JOIST SUPPLIER (TYPICAL U.N.O.)
- ALL COLUMNS AND LINTEL KING & CRIPPLER STUDS TO BE CONTINUOUS FROM ROOF TO FOUNDATION C/W SOLID BLOCKING THOUGH FLOOR SYSTEMS.

STUD WALL SCHEDULE

MARK	DESCRIPTION
SW1	38x140 @ 406 O.C.
SW2	38x140 @ 305 O.C.

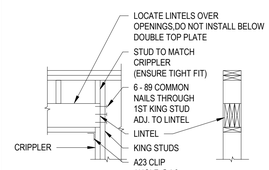
WOOD COLUMN SCHEDULE

MARK	DESCRIPTION
WC1	3-38x184
WC2	3-38x140

LINTEL SCHEDULE

MARK	LINTEL SIZE	CRIPPLER	KING STUD	REMARKS
L1	2-38x184	2-PLY	2-PLY	-
L2	3-44x241 LVL	3-PLY	2-PLY	-
L3	38x457 LSL RIM BOARD	-	-	- 2-PLY B.U. COLUMN E.S.
L4	2-38x457 LSL RIM BOARD	-	-	- EXTEND 2ND PLY MIN. 305 BEYOND EDGE OF OPENING E.S. - 3-PLY B.U. COLUMN E.S.
L5	3-38x184	2-PLY	2-PLY	-
L6	3-44x356 LVL	2-PLY	2-PLY	-

NOTES:
- ALL SAWN LUMBER LINTELS TO BE NO. 1 / NO. 2 SPF.
- ALL LVL LINTELS TO BE 2.0E
- ALL COLUMNS TO HAVE SINGLE CRIPPLER U.N.O. MATCHING STUD ABOVE CRIPPLERS.



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100552939
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January 24, 2025

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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: STRUCTURAL
DATE: 2025/01/24

SUBJECT | SUJET
THIRD FLOOR FRAMING PLAN

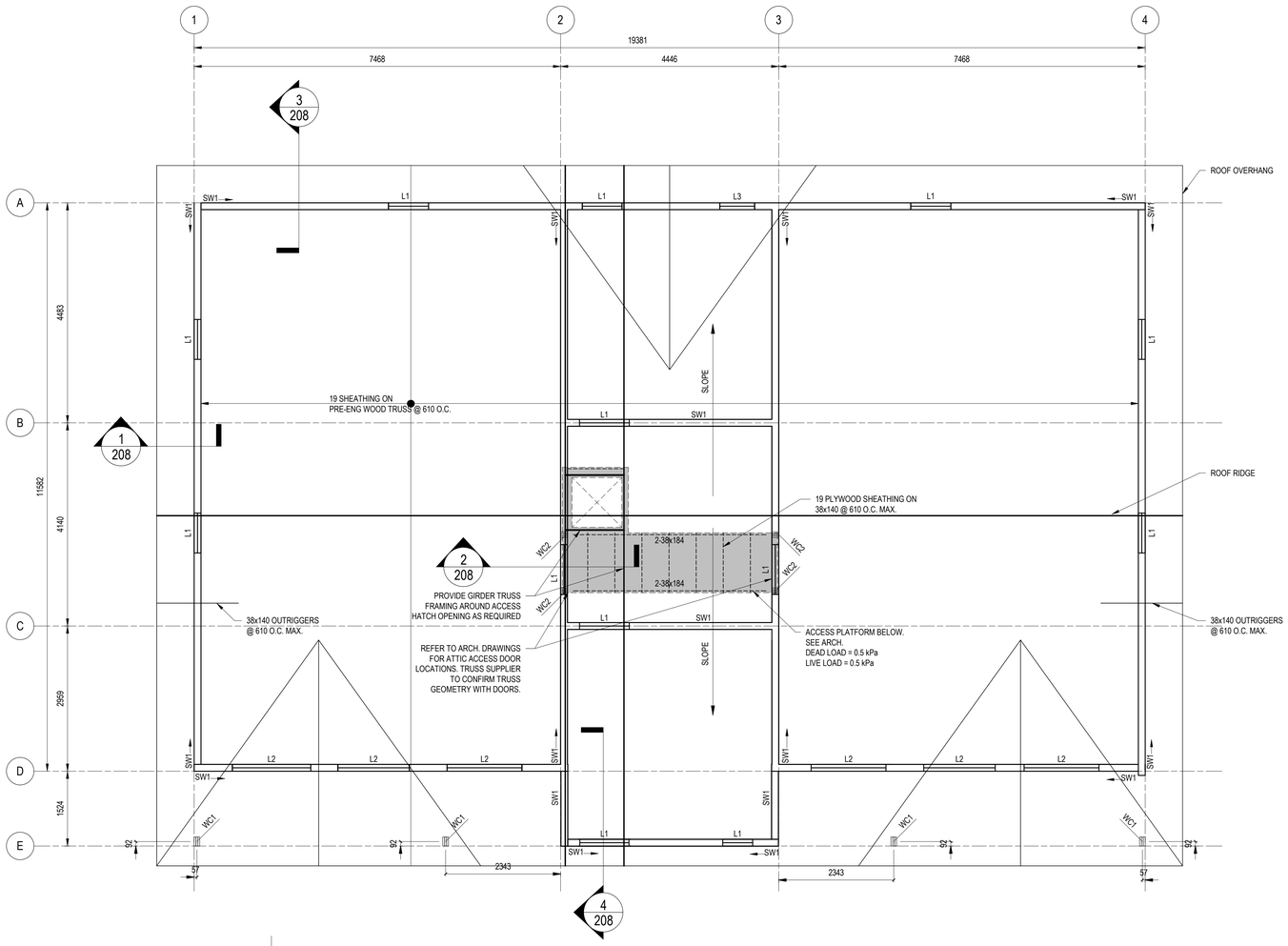
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COORDINATION		FIRE | INCENDIE

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206

ROOF FRAMING PLAN

SCALE: 1 : 50

ROOF FRAMING PLAN NOTES

- U/S OF TRUSS = 8544
- DESIGN SNOW LOAD = 2.08 kPa U/N
- DESIGN DEAD LOAD = 1.5 kPa (0.5 kPa TOP CHORD, 1.0 kPa BOTTOM CHORD)
- DESIGN LIVE LOAD (BOTTOM CHORD) = 0.5 kPa
- EXTERIOR GRIDS ARE OUTSIDE FACE OF SHEATHING (TYPICAL U.N.O.)
- DIMENSIONS ARE TO FACE OF STUD (TYPICAL U.N.O.)
- SEE ARCHITECTURAL DRAWINGS FOR ROOF SLOPES.
- SEE GENERAL NOTES AND SHEAR WALL PLAN FOR ADDITIONAL DIAPHRAGM AND SHEAR WALL REQUIREMENTS.
- G.T. DENOTES GIRDER TRUSS.
- PROVIDE 13 OSB SHEATHING TO UNDERSIDE OF ROOF TRUSS BOTTOM CHORD.

STUD WALL SCHEDULE

MARK	DESCRIPTION
SW1	38x140 @ 406 O.C.
SW2	38x140 @ 305 O.C.

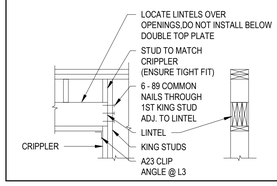
WOOD COLUMN SCHEDULE

MARK	DESCRIPTION
WC1	3-38x184
WC2	3-38x140

LINTEL SCHEDULE

MARK	LINTEL SIZE	CRIPPLER	KING STUD	REMARKS
L1	2-38x184	2-PLY	2-PLY	-
L2	3-44x241 LVL	3-PLY	2-PLY	-
L3	38x457 LSL RIM BOARD	-	-	- 2-PLY B.U. COLUMN E.S.
L4	2-38x457 LSL RIM BOARD	-	-	- EXTEND 2ND PLY MIN. 305 BEYOND EDGE OF OPENING E.S. - 3-PLY B.U. COLUMN E.S.
L5	3-38x184	2-PLY	2-PLY	-
L6	3-44x356 LVL	2-PLY	2-PLY	-

NOTES:
- ALL SAWN LUMBER LINTELS TO BE NO. 1 / NO. 2 SPF.
- ALL LVL LINTELS TO BE 2.0E
- ALL COLUMNS TO HAVE SINGLE CRIPPLER U.N.O. MATCHING STUD ABOVE CRIPPLERS.



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SCALE | ÉCHELLE
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Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: STRUCTURAL
DATE: 2025/01/24

SUBJECT | SUJET
ROOF FRAMING PLAN

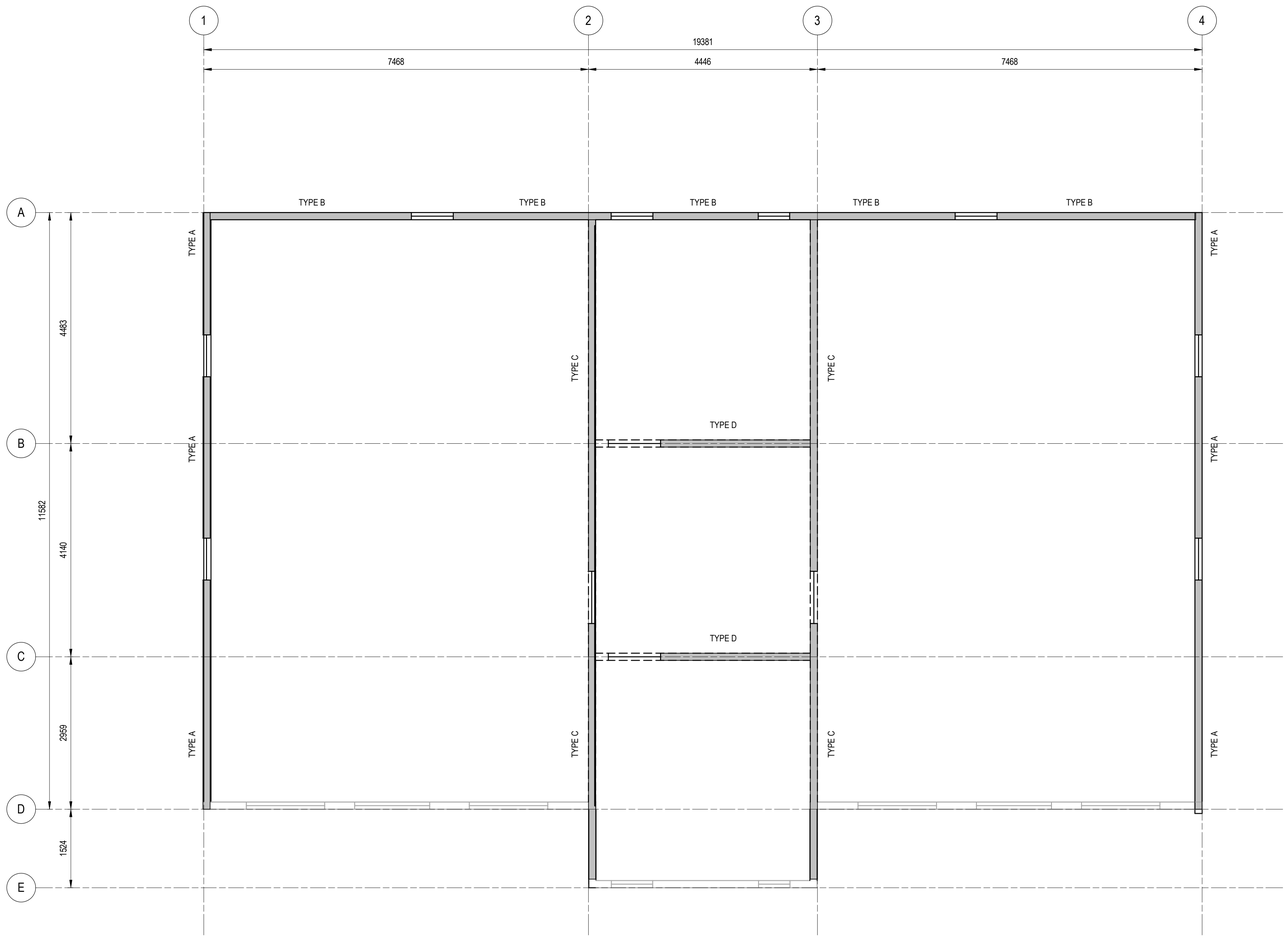
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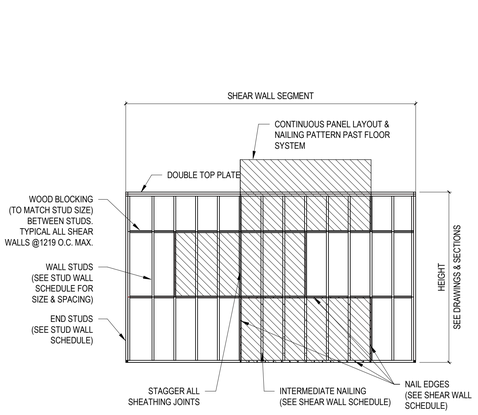


SHEAR WALL PLAN

1 / 207

SCALE: 1 : 50

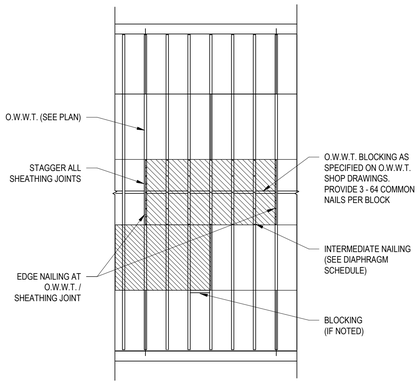
SHEAR WALL NOTES:
- FOR CONNECTION OF NAILER TO CONCRETE AT MAIN FLOOR, USE 13Ø EXPANSION ANCHORS @ 610 O/C, 102 MIN. EMBEDMENT INTO CONCRETE. INSTALL EXPANSION ANCHORS 89 FROM OUTSIDE FACE OF CONCRETE.
- ALL NAILS TO BE COMMON WIRE NAILS BY LENGTH AND SPACING NOTED.
- FOR WALLS AND WALL SECTIONS THAT ARE NOT SHEAR WALLS, CONNECTION DETAILS TO MATCH TOP FLOOR FOR ALL FLOORS.
- SHEAR WALL SHEATHING TO BE FASTENED TO STUDS WITH 3.33Ø x64 LONG COMMON WIRE NAILS U.N.O.
- SHEATHING TO BE FASTENED TO BUILT-UP COLUMNS AT THE ENDS OF SHEAR WALLS WITH SPACING EQUAL TO THE PANEL EDGE SPACING SPECIFIED IN THE SCHEDULE.
- GYPSUM PANELS ON SHEAR WALLS TO BE FASTENED AT MAX. 102 O/C, TYPE W AS PER ASTM C1002.
- ALL SHEAR WALLS TO BE BLOCKED.
- SHEAR WALL SHEATHING ON THE SIDE OF THE SHEAR WALL TAG ON PLAN.



SHEAR WALL NAILING PATTERN

2 / 207

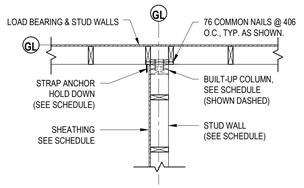
SCALE: N.T.S.



FLOOR / ROOF DIAPHRAGM NAILING PATTERN

3 / 207

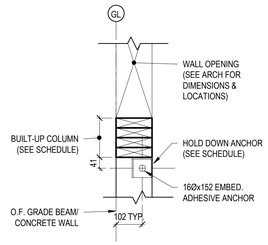
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TYPICAL SHEAR WALL EXTERIOR PLAN DETAIL

4 / 207

SCALE: 1 : 20



TYPICAL HOLD DOWN ANCHOR AT MAIN FLOOR

5 / 207

SCALE: 1 : 10

FASTENER SPACING FOR DIAPHRAGMS

DIAPHRAGM LEVEL	BLOCKED	PANEL EDGES SPACING	INTERIOR MEMBERS
ROOF	NO	150	300
3RD	NO	150	300
2ND	NO	150	300

TYPE A SHEAR WALLS

WALL SUPPORTING	BLOCKED	PANEL EDGES SPACING	INTERIOR MEMBERS SPACING	MIN. B.U. COLUMN @ EACH END	HOLD DOWNS
ROOF	YES	150	300	2-PLY	HD2
3RD	YES	125	300	2-PLY	HD2
2ND	YES	75	300	3-PLY	HD3

NOTE:
- FASTEN ONE LAYER OF 16mm TYPE X GYPSUM WALL BOARD APPLIED DIRECTLY TO FRAMING WITH FASTENERS PER GENERAL NOTES.

TYPE B SHEAR WALLS

WALL SUPPORTING	BLOCKED	PANEL EDGES SPACING	INTERIOR MEMBERS SPACING	MIN. B.U. COLUMN @ EACH END	HOLD DOWNS
ROOF	YES	150	300	2-PLY	HD1
3RD	YES	100	300	2-PLY	HD2
2ND	YES	75	300	3-PLY	HD3

NOTE:
- FASTEN ONE LAYER OF 16mm TYPE X GYPSUM WALL BOARD APPLIED DIRECTLY TO FRAMING WITH FASTENERS PER GENERAL NOTES.

TYPE C SHEAR WALLS

WALL SUPPORTING	BLOCKED	PANEL EDGES SPACING	INTERIOR MEMBERS SPACING	MIN. B.U. COLUMN @ EACH END	HOLD DOWNS
ROOF	YES	150	300	2-PLY	N/A
3RD	YES	125	300	2-PLY	HD2
2ND	YES	75	300	3-PLY	HD3

NOTE:
- MIN. 9.5mm PLYWOOD SHEATHING ONE SIDE OF WALL

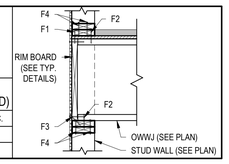
TYPE D SHEAR WALLS

WALL SUPPORTING	BLOCKED	PANEL EDGES SPACING	INTERIOR MEMBERS SPACING	MIN. B.U. COLUMN @ EACH END	HOLD DOWNS
ROOF	YES	200	300	2-PLY	N/A
3RD	YES	200	300	2-PLY	N/A
2ND	YES	200	300	3-PLY	N/A

NOTE:
- ONE LAYER OF 16mm TYPE X GYPSUM WALL BOARD E.S. (NO SHEATHING) APPLIED DIRECTLY TO FRAMING WITH FASTENERS PER GENERAL NOTES.

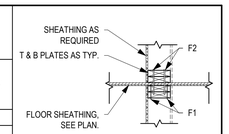
WALL TO FLOOR CONNECTION SCHEDULE (CONNECTION A)

LEVEL SUPPORTED	F1	F2	F3 (TOENAIL)	F4 (STAGGERED)
ROOF	89 @ 406 O.C.	2 - 76 PER JOIST	89 @ 406 O.C.	2 - 89 @ 406 O.C.
3RD	89 @ 203 O.C.	2 - 76 PER JOIST	89 @ 254 O.C.	89 @ 254 O.C.
2ND	89 @ 127 O.C.	2 - 76 PER JOIST	89 @ 102 O.C.	89 @ 203 O.C.



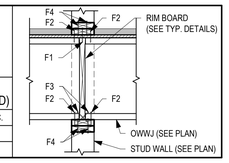
WALL TO FLOOR CONNECTION SCHEDULE (CONNECTION B)

LEVEL SUPPORTED	F1 (STAGGERED)	F2 (STAGGERED	F2 OPTION W/ 152x6.4 SIMPSON STRONG DRIVE SDS SCREWS
ROOF	89 @ 406 O.C.	152 @ 406	89 @ 406 O.C.
3RD	89 @ 203 O.C.	152 @ 406	89 @ 254 O.C.
2ND	89 @ 127 O.C.	152 @ 305	89 @ 102 O.C.



WALL TO FLOOR CONNECTION SCHEDULE (CONNECTION C)

LEVEL SUPPORTED	F1	F2	F3 (TOENAIL)	F4 (STAGGERED)
ROOF	89 @ 406 O.C.	2 - 76 PER JOIST	89 @ 406 O.C.	2 - 89 @ 406 O.C.
3RD	89 @ 203 O.C.	2 - 76 PER JOIST	89 @ 254 O.C.	89 @ 254 O.C.
2ND	89 @ 127 O.C.	2 - 76 PER JOIST	89 @ 102 O.C.	89 @ 203 O.C.



HOLD DOWN ANCHOR SCHEDULE

MARK	DESCRIPTION
HD1	16 GA. GALV. STEEL STRAP ANCHOR FACTORED TENSILE RESISTANCE = 20.8 kN
HD2	16 GA. GALV. STEEL STRAP ANCHOR FACTORED TENSILE RESISTANCE = 27.8 kN
HD3	GALV. STEEL HOLD-DOWN ANCHOR FACTORED TENSILE RESISTANCE = 21.5 kN

NOTE: INSTALL ALL HOLD-DOWN ANCHORS AS PER MANUFACTURER'S INSTRUCTIONS.

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385 St. Mary Avenue
Winnipeg, MB R3C 0N1
T 204 989 0102
F 204 989 0094
www.republicarchitecture.ca

LICENSED PROFESSIONAL ENGINEER
E. J. N. LAVERGNE
100559039
PROVINCE OF ONTARIO
January 24, 2025

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	DK

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: STRUCTURAL
DATE: 2025/01/24

SUBJECT | SUJET
SHEAR WALL PLAN

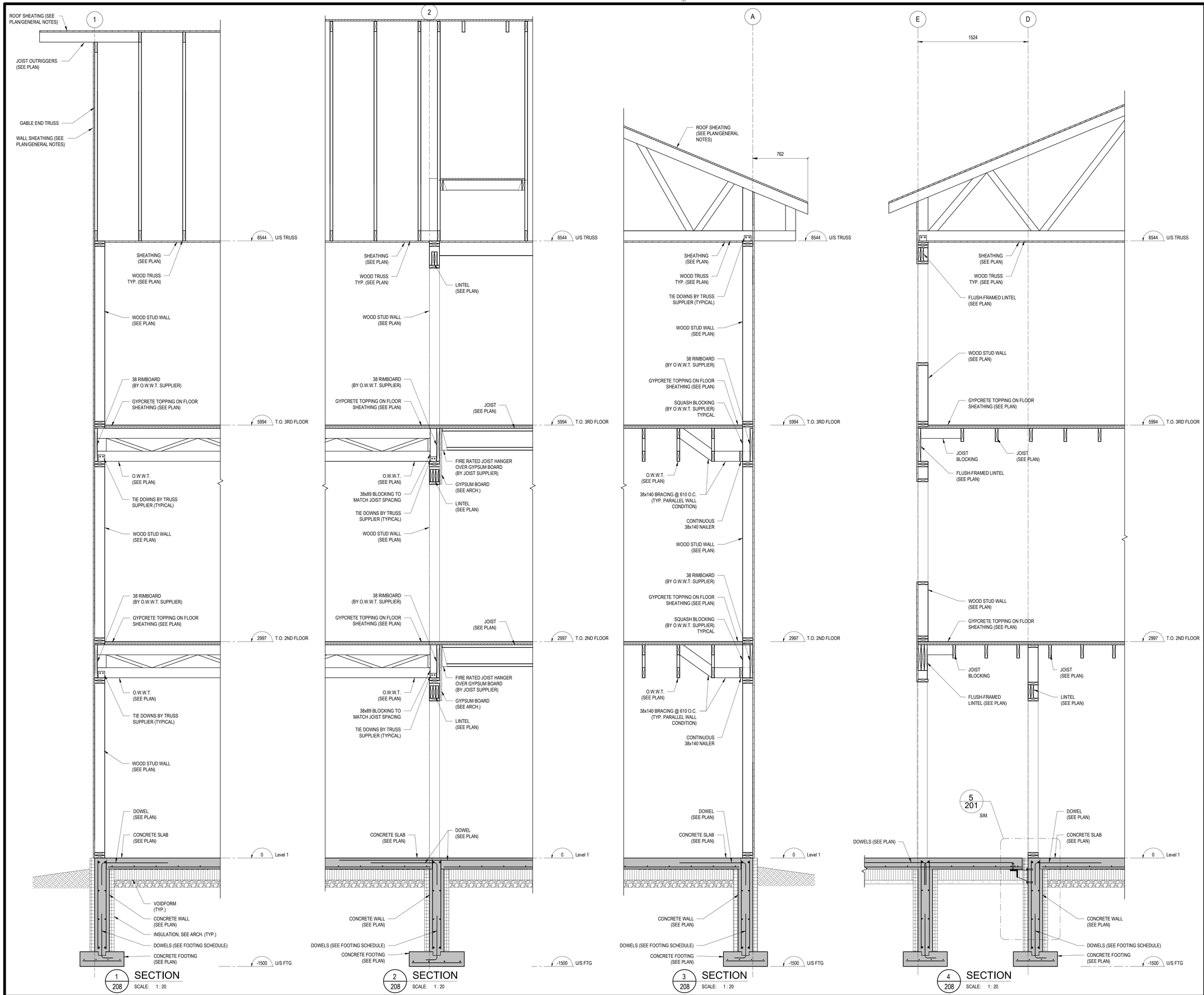
PRODUCTION	REVIEWED	REVU
DESIGNED	ÉTUDIÉ: DK	DES O | AGENT CONC
DRAWN	DESSINÉ: MM	PRO MGR | GÉST PROJ
CHECKED	VÉRIFIÉ: DK	DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT: WBS #
PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99- 207 - B

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385 St. Mary Avenue
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T 204 989 0102
F 204 989 0094
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LICENSED PROFESSIONAL ENGINEER
E. J. N. LAVERGNE
100550939
PROVINCE OF ONTARIO
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TRADE | MÉTIER
STRUCTURAL

DATE
2025/01/24

SUBJECT | SUJET
SECTIONS

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DRAWN | DESSINÉ: MM		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: DK		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

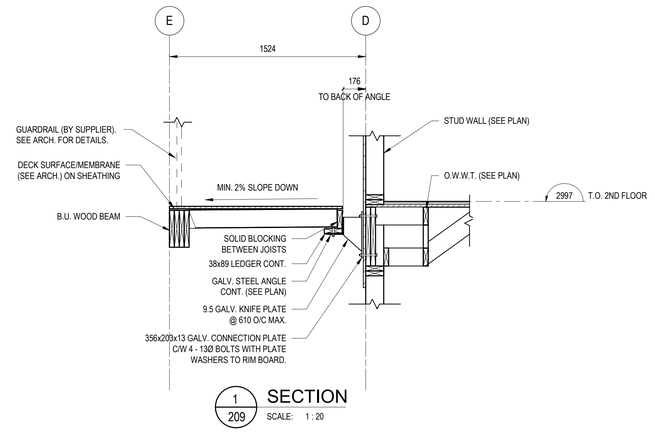
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PF NUMBER | NO. DP: ZKN99

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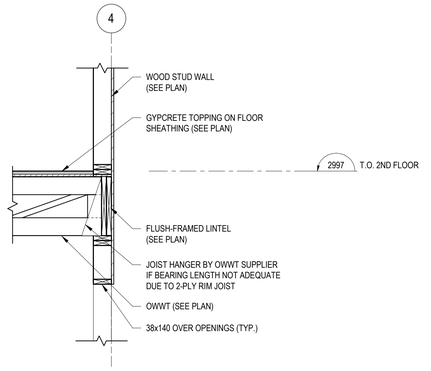
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1/209 SECTION

SCALE: 1 : 20



2/209 SECTION

SCALE: 1 : 20

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Winnipeg, MB R3C 0N1
T 204 989 0102
F 204 989 0094
www.republicarchitecture.ca

LICENSED PROFESSIONAL ENGINEER
E. J. N. LAVERGNE
100550939
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January 24, 2025

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SCALE | ÉCHELLE
AS NOTED

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KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: STRUCTURAL
DATE: 2025/01/24

SUBJECT | SUJET
SECTIONS

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DESIGNED | ÉTUDIÉ: DK			DES O | AGENT CONC
DRAWN | DESSINÉ: MM			PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: DK			DES MGR | GÉST CONC
COORDINATION			FIRE | INCENDIE

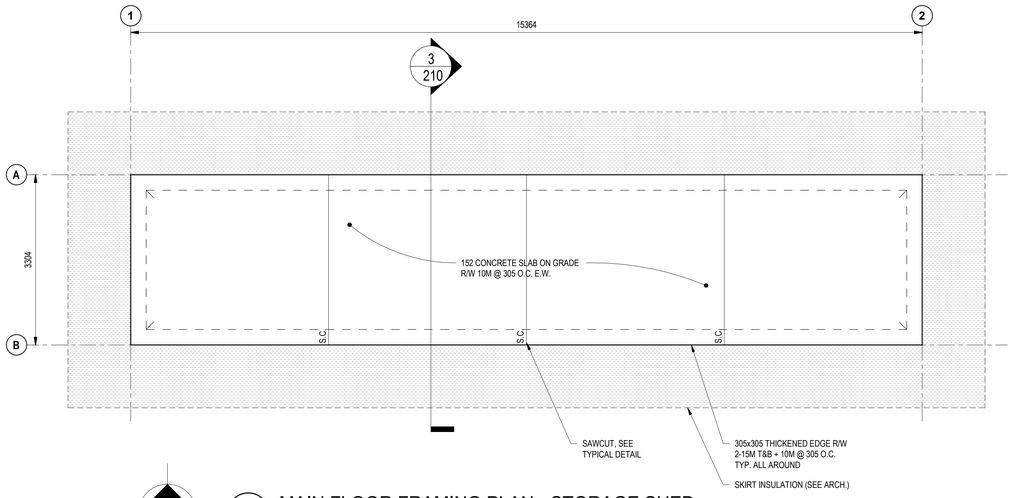
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PF NUMBER | NO. DP: ZKN99

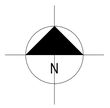
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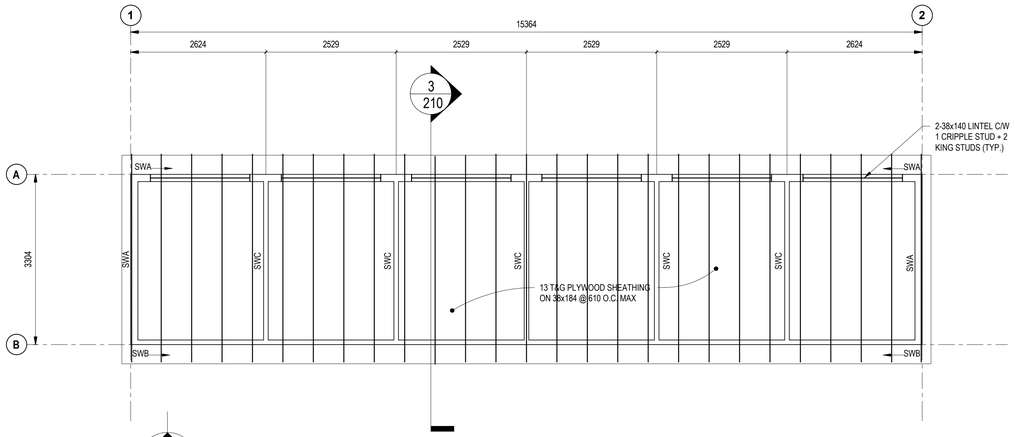


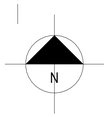


1 / 210 **MAIN FLOOR FRAMING PLAN - STORAGE SHED**

SCALE: 1 : 50

MAIN FLOOR FRAMING PLAN NOTES
- DESIGN DEAD LOAD = 4.6 kPa
- DESIGN LIVE LOAD = 4.8 kPa

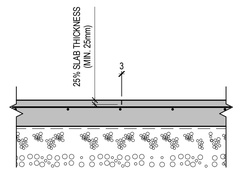




2 / 210 **ROOF FRAMING PLAN - STORAGE SHED**

SCALE: 1 : 50

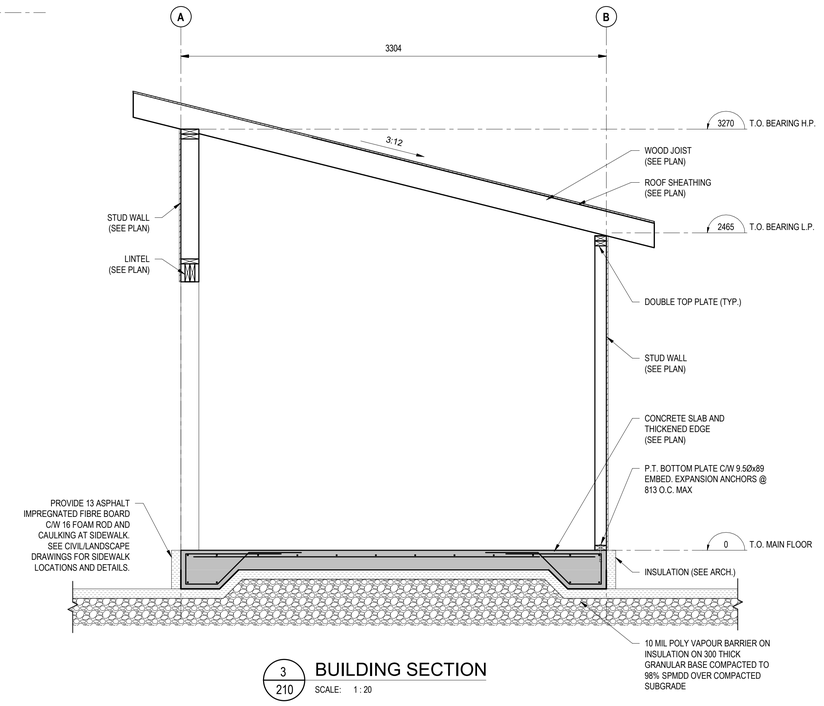
ROOF FRAMING PLAN NOTES:
- DESIGN DEAD LOAD = 0.8 kPa
- DESIGN SNOW LOAD = 2.08 kPa
- FASTEN GYPSUM WALL BOARD TO STUD WALLS WITH TYPE W GYPSUM BOARD SCREWS @ 150 O.C. MAX. AT PANEL EDGES AND 300 O.C. AT INTERMEDIATE FRAMING MEMBERS.



NOTES:
1. SAW CUTTING SHALL BE COMPLETED WITHIN 6 TO 18 HOURS OF PLACING CONCRETE.
2. AFTER THE SLAB IS A MINIMUM 60 DAYS OLD, REMOVE ALL DEBRIS FROM THE SAW CUTS AND FILL WITH MORTAR CONTAINING CEMENT, SAND AND LATEX BONDING AGENT, OR AS NOTED IN SPECIFICATIONS, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT CONSTRUCTION ACTIVITIES WILL NOT REDUCE QUALITY OR DURABILITY OF FILLED JOINTS.
3. MAXIMUM SPACING OF SAWCUTS IN SLAB ON GRADE SHALL NOT EXCEED THE 25 TIMES THE SLAB THICKNESS, BUT NO MORE THAN 4496. CONSULT DCC REPRESENTATIVE IF SPECIALTY MIXES ARE USED. (ie. 102 SLAB - MAXIMUM SPACING 2540, 127 SLAB - MAXIMUM SPACING 3175, 152 SLAB - MAXIMUM SPACING 3810, 178 SLAB - MAXIMUM SPACING 4445, 203 SLAB - MAXIMUM SPACING 4496)
4. COORDINATE EXACT LOCATION OF SAWCUTS IN SLAB ON GRADE WITH ARCHITECTURAL FLOOR FINISHES.
5. SAWCUT SLAB ON GRADE AT LOCATIONS NOTED ABOVE. ALTERNATE DETAIL SHALL BE SUBMITTED TO DCC REPRESENTATIVE FOR REVIEW, WELL IN ADVANCE OF POURING SLAB ON GRADE.
6. PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT GROUT ALL CRACKS IN THE SLAB ON GRADE AND FILL WITH MORTAR CONTAINING CEMENT, SAND AND LATEX BONDING AGENT OR AS NOTED IN SPECIFICATIONS.

4 / 210 **TYPICAL SAW CUT DETAIL**

SCALE: 1 : 15



3 / 210 **BUILDING SECTION**

SCALE: 1 : 20

STUD WALL SCHEDULE - STORAGE SHED

MARK	DESCRIPTION
SWA	38x140 @ 406 O.C. 13 PLYWOOD SHEATHING ON EXTERIOR FACE
SWB	38x89 @ 406 O.C. 13 PLYWOOD SHEATHING ON EXTERIOR FACE
SWC	38x89 @ 406 O.C. 13 TYPE X GYPSUM WALL BOARD EACH FACE

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January 24, 2025

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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: STRUCTURAL
DATE: 2025/01/24

SUBJECT | SUJET
STORAGE SHED FRAMING PLANS AND DETAILS

PRODUCTION	REVIEWED	REVU
DESIGNED | ÉTUDIÉ: DK		DES O | AGENT CONC
DRAWN | DESSINÉ: MM		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: DK		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT: WBS #
PF NUMBER | NO. DP: ZKN99

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Building Code Data Matrix

Code Version: National Building Code 2020

Item	National Building Code Data Matrix Parts 3 AND 9			NBC Reference	
1	Project Description: 6 Unit - 3 Storey Apartment	☐ Change of use ☒ New ☐ Addition ☐ Alteration		☐ Part 3	☒ Part 9 9.10.1.3
2	Major Occupancy(s)	Group C - Residential		3.1.2.1.(1)	9.10.2
3	Building Area (m²)	Existing: 0 m² New: 229 m² Total: 229 m²		1.4.1.2	1.4.1.2
4	Gross Area (m²)	Existing: 0 m² New: 655 m² Total: 655 m²			
5	Number of Storeys	Above grade: 3 Below grade: N/A		3.1.2.1 AND 3.2.2.15	
6	Height of Building (m)	8.6 to U/S roof, 13.8 to peak		1.4.1.2	
7	Number of Streets/Access Routes	1		3.2.2.10 AND 3.2.5.5	
8	Building Classification	Group C - Residential		3.2.2.20 - .90	9.10.4
9	Sprinkler System Proposed As per NBC	☒ Entire Building ☐ Basement only ☐ In lieu of roof rating ☐ Not required as per NBC requirements		3.2.2.20 - .90 3.2.1.5 3.2.2.17	9.10.8.2
10	Standpipe Required	☐ Yes ☐	☒ No	3.2.5.8	
11	Fire Alarm Required	☒ Yes, as per FMD 4003	☐ No	3.2.4	9.10.18.2
12	Water Service/Supply Is Adequate	☒ Yes	☐ No	3.2.5.7	
13	High Building	☐ Yes	☒ No	3.2.6	
14	Permitted Construction	☐ Combustible ☐ Non-combustible ☒ Both		3.2.2.20-.90	9.10.6
	Actual Construction	☒ Combustible ☐ Non-combustible ☐ Both			
15	Mezzanine(s) Area (m²)	N/A		3.2.1.1.(3)-(7)	9.10.4.1
16	Occupant load based on Basement Occupancy: N/A Load 0 persons 1st Floor Occupancy: 2 persons / Bdrm Load 8 persons 2nd Floor Occupancy: 2 persons / Bdrm Load 8 persons 3rd Floor Occupancy: 2 persons / Bdrm Load 8 persons	☐ m²/person ☒ Design of building		3.1.17	9.9.1.3
17	Barrier-free Design	☒ Yes , Common Areas	☐ No (Explain)	3.8	9.5.2
18	Hazardous Substances	☐ Yes ☒ No		3.3.1.2.(1) AND 3.3.1.20	9.10.1.3.(4)
19	Required Fire Resistance Rating (FRR) Horizontal Assemblies FRR (Hours) Floors 60 Minutes Roof 0 Minutes Mezzanine N/A Minutes FRR of Supporting Members Floors 60 Minutes Roof 0 Minutes Mezzanine N/A Minutes Listed Design No. or Description (SG-2) DESIGN NO.			3.2.2.20- 90 AND 3.2.1.4	9.10.8 9.10.9
20	Spatial Separation - Construction of Exterior Walls			3.2.3	9.10.14

	Wall	Area of EBF (m²)	L.D. (m)	L/H or H/L	Permitted Max. % of Openings	Proposed % of Openings	FRR (Hours)	Listed Design or Description	Comb. Constr.	Comb. Constr. Nonc. Cladding	Non-comb. Constr.
	North	18.7	8.0	4.7:1	100%	5%	1 HR	EW2a	Yes	Both	N/A
	South	18.7	8.0	4.7:1	100%	36%	1 HR	EW2a	Yes	Both	N/A
	East	27.95	5.0 / 6.0	3.2:1	39% / 88%	7%	1 HR	EW2a	Yes	Yes / Both	N/A
	West	27.95	5.0 / 6.0	3.2:1	39% / 88%	7%	1 HR	EW2a	Yes	Yes / Both	N/A

NOTE :

GENERAL NOTES

1. THE DRAWINGS SHALL NOT BE SCALED FOR INFORMATION.
2. THE CONTRACTOR SHALL VISIT THE SITE FOLLOWING AWARD OF CONTRACT TO SATISFY THEMSELF THAT ALL DIMENSIONS, DATUMS AND DETAILED INFORMATION SHOWN ARE CORRECT.
3. THE CONTRACTOR IS TO REPORT ANY DISCREPANCIES OR OMISSIONS PRIOR TO COMMENCEMENT OF WORK.
4. THE CONTRACTOR IS TO REVIEW AND COORDINATE ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR OPENINGS THRU FLOORS, WALLS AND CEILINGS INCLUDING BUT NOT LIMITED TO DUCT, PIPING AND ELECTRICAL RISERS.
5. PRODUCTS AND MATERIALS ARE TO BE USED AND INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. DIMENSIONAL PROPERTIES OF THE MATERIALS ARE NOTED IN MILLIMETERS UNLESS INDICATED OTHERWISE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE TO PATCH AND MAKE GOOD ALL EXISTING SURFACES ADJACENT NEW CONSTRUCTION AND ALL EXISTING FINISHES AFFECTED BY THE CONSTRUCTION.
7. DIMENSIONS ARE TAKEN TO FACE OF STUD OR EXTERIOR SHEATHING UNLESS NOTED/SHOWN OTHERWISE.

ABBREVIATION LEGEND

AL	ALUMINUM	N.I.C.	NOT IN CONTRACT
AN	ANODIZED	O/C	ON CENTER
AVB	AIR VAPOUR BARRIER	PH	PRE-HUNG
C/W	COMPLETE WITH	PLYWD	PLYWOOD
CH	COAT HOOK	PS	PRESSED STEEL
CT	CERAMIC TILE	PT	PAINTED
DW	DISHWASHER (N.I.C.)	PTD	PAPER TOWEL DISPENSER
FD	FLOOR DRAIN	RBR	RUBBER
FG	FIBERGLASS	RSF	RESILIENT SHEET FLOORING
FR	FRIDGE (N.I.C.)	SA	SELF ADHERED
FS	FIRE SEPERATION	SCHB	SOLID CORE HARD BOARD
GB	GRAB BAR	SCWV	SOLID CORE WOOD VENEER
GL	GLAZING	SD	SOAP DISPENSER
GWB	GYPSUM WALL BOARD	SK	SINK
HCHB	HOLLOW CORE HARD BAORD	ST	STOVE (N.I.C.)
HM	HOLLOW METAL	TB	TOWEL BAR
HMI	HOLLOW METAL INSULATED	TO	TOILET
HV	HOOD VENT	TPD	TOILET PAPER DISPENSER
HWT	HOT WATER TANK	TR	TOWEL RING
ICF	INSULATED CONCRETE FOUNDATION	VARN	VARNISH
INSUL	INSULATED	VB	VAPOUR BARRIER
LVP	LUXURY VINYL PLANK	VP	VAPOUR PERMEABLE
MF	MECHANICALLY FASTENED	WB	WASTE BIN
MFR	MANUFACTURER	WD	WOOD
MR	MIRROR	XPS	EXTRUDED POLYSTYRENE

DRAWING LEGEND

LINETYPES

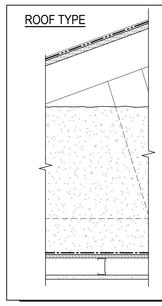
- SMART VAPOUR RETARDER
- SELF ADHERED AIR BARRIER
- MECHANICALLY FASTENED AIR BARRIER
- SELF ADHERED AIR VAPOUR BARRIER
- POLY VAPOUR BARRIER
- SELF ADHERED WATERPROOFING MEMBRANE
- GEOTEXTILE FABRIC
- OBJECT OVERHEAD
- ROOFLINE ABOVE
- PROPERTY LINE
- CENTRE DASH
- DASHED LONG
- DASHED MEDIUM
- DASHED SHORT
- FIRE 000
- FIRE 060
- FIRE 060 (EXTERIOR WALLS)
- GRID

SYMBOL LEGEND

- XX — WALL TYPE: E = EXTERIOR WALL ASSEMBLY; P = INTERIOR WALL ASSEMBLY
- X — FLOOR AND ROOF TYPE: F = FLOOR TYPE; R = ROOF TYPE
- X — KEYNOTE
- XX — ABBREVIATION
- XX — WINDOW TYPE
- XXX — DOOR NUMBER
- ROOM NAME / XYZ — ROOM TAG
- ℄ — CENTER LINE
- TYPE / HEIGHT — CEILING TAG: CEILING MATERIAL AND TYPE; HEIGHT ABOVE FINISHED FLOOR LEVEL
- 000.000 NAME | NOM — ELEVATION DATUM
- NORTH ARROW TRUE
- REFERENCE NORTH ARROW (N)

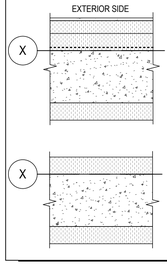
Item	National Energy Code of Canada 2020 Data Matrix		NEBC Reference
1	Classification	Group C	
	Building Area (New)	230 m²	
	Building Height	13.7 m	
2	Zone	6	
	Heating Degree Days	4300	
	Exposure (Terrain Type)	Open	
	Fenestration Performance Class	AW	
3	Elevation	225 m	TABLE C-1
	Design Temperature January (2.5%)	-23	
	Design Temperature July (Dry Bulb)	29	
	Degree Days Below 18°C	4300	
	Degree Days Below 15°C	3470	

ROOF TYPE



R1 - WOOD TRUSS ROOF (BASE ASSEMBLY) - RSI-11.54 EFFECTIVE
- CONCEALED FASTENER METAL ROOFING 24 ga
- SELF ADHERED SYNTHETIC ROOFING MEMBRANE
- 19mm TONGUE AND GROOVE PLYWOOD
- WOOD TRUSS @ 610mm ON CENTER - 685mm HEEL (100mm above settled insulation height)
- 572mm LOOSE FILL CELLULOSE INSULATION (457mm settled Loose Fill cellulose) Nominal RSI= 11.44
- SMART VAPOUR RETARDER MEMBRANE
- 16mm TYPE 'X' GYPSUM BOARD
- 64mm SERVICE CAVITY - 64mm STEEL STUDS @ 400mm O/C - RUN PERPENDICULAR TO TRUSSES
- 12.7mm GWB

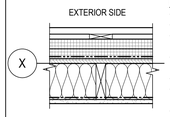
EXTERIOR FOUNDATION WALL TYPES



FW1 - FOUNDATION WALL / GRADE BEAM - RSI 3.57 EFFECTIVE
- MASONRY SEALER APPLIED TO FACE OF CFI PANEL
- 50mm CONCRETE FACED XPS INSULATION BOARD
- 75mm XPS RIGID INSULATION BOARD (MIN. RSI 1.9)
- SELF ADHERED SHEET WATERPROOFING MEMBRANE
- CONCRETE FOUNDATION WALL, BY STRUCTURAL
- 75mm XPS RIGID INSULATION BOARD (MIN. RSI 1.9)

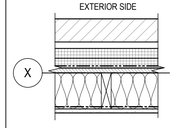
FW2 - INTERIOR FOUNDATION WALL / GRADE BEAM - RSI 3.57 EFFECTIVE
- 75mm XPS RIGID INSULATION BOARD (MIN. RSI 1.9)
- CONCRETE FOUNDATION WALL, BY STRUCTURAL
- 75mm XPS RIGID INSULATION BOARD (MIN. RSI 1.9)

EXTERIOR WALL TYPES

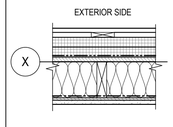


EW1 (BASE ASSEMBLY) - EXTERIOR WALL - 1 HOUR FIRE RESISTANCE RATING - RSI 4.39 EFFECTIVE
- HORIZONTAL METAL CLADDING
- 19mm VERTICAL WOOD STRAPPING @400 O/C
- 2 LAYERS 38mm RIGID MINERAL BOARD INSULATION WITH SEAMS LAPPED
- SELF ADHERED VAPOUR PERMEABLE AIR BARRIER
- 19mm PLYWOOD SHEATHING
- MINERAL FIBRE BATT INSULATION TO FILL STUD CAVITY (MINIMUM R22 NOMINAL)
- 38x140mm WOOD STUDS @ 400 O/C
- SMART VAPOUR RETARDER
- 16mm TYPE 'X' GYPSUM BOARD

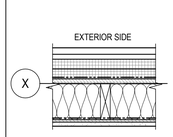
EXTERIOR WALL TYPES



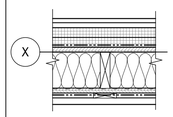
EW1a (BASE ASSEMBLY) - EXTERIOR WALL - 1 HOUR FIRE RESISTANCE RATING - RSI 4.39 EFFECTIVE
- 90mm STONE VENEER CLADDING
- 25mm AIR SPACE
- 2 LAYERS 38mm SEMI-RIGID MINERAL BOARD INSULATION WITH SEAMS LAPPED
- SELF ADHERED VAPOUR PERMEABLE AIR BARRIER
- 19mm PLYWOOD SHEATHING
- MINERAL FIBRE BATT INSULATION TO FILL STUD CAVITY (MINIMUM R22 NOMINAL)
- 38x140mm WOOD STUDS @ 400 O/C
- SMART VAPOUR RETARDER
- 16mm TYPE 'X' GYPSUM BOARD



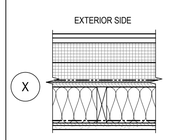
EW2 (BASE ASSEMBLY) - EXTERIOR WALL @ STAIR - 1 HOUR FIRE RESISTANCE RATING - RSI 4.39 EFFECTIVE
- METAL CLADDING TYPE '2' (AS PER ELEVATIONS)
- 19mm VERTICAL WOOD STRAPPING @400 O/C
- 2 LAYERS 38mm RIGID MINERAL BOARD INSULATION
- SELF ADHERED VAPOUR PERMEABLE AIR BARRIER
- 19mm PLYWOOD SHEATHING
- MINERAL FIBRE BATT INSULATION TO FILL STUD CAVITY (MINIMUM R22 NOMINAL)
- 38x140mm WOOD STUDS @ 400 O/C
- SMART VAPOUR RETARDER
- 9.5mm OSB SHEATHING
- 16mm TYPE 'X' GYPSUM BOARD



EW2a (BASE ASSEMBLY) - EXTERIOR WALL @ STAIR - 1 HOUR FIRE RESISTANCE RATING - RSI 4.39 EFFECTIVE
- METAL CLADDING TYPE '1' (AS PER ELEVATIONS)
- 19mm HORIZONTAL STRAPPING @ 400 O/C
- 2 LAYERS 38mm RIGID MINERAL BOARD INSULATION
- SELF ADHERED VAPOUR PERMEABLE AIR BARRIER
- 19mm PLYWOOD SHEATHING
- MINERAL FIBRE BATT INSULATION TO FILL STUD CAVITY (MINIMUM R22 NOMINAL)
- 38x140mm WOOD STUDS @ 400 O/C
- SMART VAPOUR RETARDER
- 9.5mm OSB SHEATHING (UNLESS NOTED OTHERWISE)
- 16mm TYPE 'X' GYPSUM BOARD

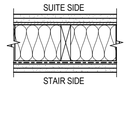


EW3 (BASE ASSEMBLY) - STAIR WALL - RSI 4.39 EFFECTIVE
- METAL CLADDING TYPE '1' (AS PER ELEVATIONS)
- 19mm HORIZONTAL WOOD STRAPPING @400 O/C
- 2 LAYERS 38mm RIGID MINERAL BOARD INSULATION
- SELF ADHERED VAPOUR PERMEABLE AIR BARRIER
- 19mm PLYWOOD SHEATHING
- MINERAL FIBRE BATT INSULATION TO FILL STUD CAVITY (MINIMUM R22 NOMINAL)
- 38x140mm WOOD STUDS @ 400 O/C
- SELF ADHERED VAPOUR PERMEABLE AIR BARRIER
- 19mm PLYWOOD SHEATHING
- 19mm VERTICAL WOOD STRAPPING @ 400 O/C,
- METAL CLADDING TYPE '2' (AS PER ELEVATIONS)

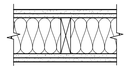


EW4 (BASE ASSEMBLY) - EXTERIOR WALL @ NORTH STAIR - 1 HOUR FIRE RESISTANCE RATING - RSI 4.39 EFFECTIVE
- METAL CLADDING TYPE '1' (AS PER ELEVATIONS)
- 19mm HORIZONTAL WOOD STRAPPING @400 O/C
- 2 LAYERS 76mm RIGID MINERAL BOARD INSULATION
- SELF ADHERED VAPOUR PERMEABLE AIR BARRIER
- 19mm PLYWOOD SHEATHING
- MINERAL FIBRE BATT INSULATION TO FILL STUD CAVITY (MINIMUM R22 NOMINAL)
- 38x140mm WOOD STUDS @ 400 O/C
- SMART VAPOUR RETARDER
- 9.5mm OSB SHEATHING
- 16mm TYPE 'X' GYPSUM BOARD

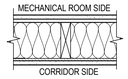
INTERIOR WALL TYPES



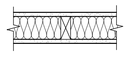
W1 - 1 HOUR FIRE RESISTANCE RATING - STC 55 - NBC W6d
- 2 LAYERS 16mm TYPE 'X' GYPSUM BOARD
- 9.5mm PLYWOOD SHEATHING (SUITE SITE)
- 38x140mm WOOD STUDS @ 300 OR 400 O/C (REFER TO STRUCTURAL)
- ACOUSTIC FIRE BATT INSULATION TO FILL STUD CAVITY
- MECHANICALLY FASTENED AIR BARRIER (STAIR SIDE)
- 13mm HORIZONTAL RESILIENT METAL CHANNELS @ 600 O/C (STAIR SIDE)
- 2 LAYERS 16mm TYPE 'X' GYPSUM BOARD



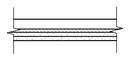
W2 -1 HOUR FIRE RESISTANCE RATING - STC 38 - NBC W2a
- 2 LAYERS 16mm TYPE 'X' GYPSUM BOARD
- 38x140mm WOOD STUDS @ 400 O/C
- ACOUSTIC FIRE BATT INSULATION TO FILL STUD CAVITY
- 2 LAYERS 16mm TYPE 'X' GYPSUM BOARD



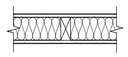
W3 - STC 45 - NBC W3b
- 16mm TYPE 'X' GYPSUM BOARD
- 13mm RESILIENT CHANNEL @ 600 O/C (MECHANICAL ROOM SIDE)
- 38x140mm WOOD STUDS @ 600 O/C
- ACOUSTIC FIRE BATT INSULATION TO FILL STUD CAVITY
- 9.5mm OSB SHEATHING (CORRIDOR SIDE)
- 16mm TYPE 'X' GYPSUM BOARD



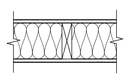
W4 - 1 HOUR FIRE RESISTANCE RATING - NBC W1a
- 16mm TYPE 'X' GYPSUM BOARD
- 38x89mm WOOD STUDS @ 400 O/C
- ACOUSTIC FIRE BATT INSULATION TO FILL STUD CAVITY
- 16mm TYPE 'X' GYPSUM BOARD



W5 - ATTIC FIRE BLOCK
- 16mm TYPE 'X' GYPSUM BOARD
- 13mm PLYWOOD SHEATHING



P1 - INSULATED PARTITION WALL
- 13mm GYPSUM BOARD
- 38x89mm WOOD STUDS @ 400mm O/C
- SOUND BATT INSULATION TO FILL STUD CAVITY
- 13mm GYPSUM BOARD



P2 - INSULATED PARTITION WALL
- 13mm GYPSUM BOARD
- 38x140mm WOOD STUDS @ 400mm O/C
- SOUND BATT INSULATION TO FILL STUD CAVITY
- 13mm GYPSUM BOARD



P3 - PARTITION WALL
- 13mm GYPSUM BOARD
- 38x89mm WOOD STUDS @ 600mm O/C
- 13mm GYPSUM BOARD

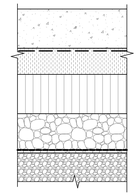


P4 - FURRING WALL @ PLUMBING
- 13mm GYPSUM BOARD
- 38x140mm WOOD STUDS @400mm O/C

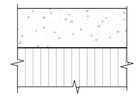


P5 - FURRING WALL @ MILLWORK
- HPDL PANEL
- 38x89mm WOOD STUDS @ 600mm O/C

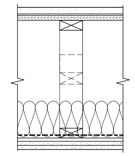
FLOOR TYPES



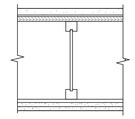
F1 - INSULATED STRUCTURAL CONCRETE SLAB
- FINISH AS PER ROOM FINISH SCHEDULE
- REINFORCED CONCRETE SLAB, REFER TO STRUCTURAL
- 20mil POLY VAPOUR BARRIER
- 100mm RIGID INSULATION (R-20 NOMINAL)
- 150mm VOID FORM
- 150mm PERMEABLE CRUSHED STONE
- GEOTEXTILE FILTER FABRIC
- COMPACTED BASE/ SOIL PREP, REFER TO STRUCTURAL



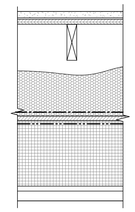
F2 - PATIO SLAB
- FINISH AS PER ROOM FINISH SCHEDULE
- REINFORCED CONCRETE SLAB, REFER TO STRUCTURAL
- 150mm VOID FORM
- COMPACTED BASE/ SOIL PREP, REFER TO STRUCTURAL



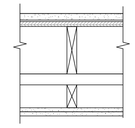
F3 - WOOD JOIST FLOOR - 1 HOUR FIRE RESISTANCE RATING - NBC F15d - STC 66
- FINISH FLOORING - REFER TO SCHEDULES
- 25.4mm CEMENTITIOUS GYPSUM TOPPING
- 6mm ENCAPSULATED SOUND MAT
- 19mm TONGUE AND GROOVE PLYWOOD SUBFLOOR
- 457mm OPEN WEB WOOD TRUSSES @ 488mm (19.2") O/C
- 140mm SOUND INSULATION MINERAL WOOL BATTS
- MECHANICALLY FASTENED AIR BARRIER
- RESILIENT METAL CHANNELS @600mm O/C - PERPENDICULAR TO JOISTS
- 2 LAYERS 16mm TYPE 'X' GYPSUM BOARD



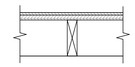
F4 - WOOD JOIST FLOOR (@ G.L 2-3 CORRIDOR) - 1 HOUR FIRE RESISTANCE RATING - NBC F15f - STC 64
- FINISH FLOORING - REFER TO SCHEDULES
- 25.4mm CEMENTITIOUS GYPSUM TOPPING
- 6mm ENCAPSULATED SOUND MAT
- 19mm T&G PLYWOOD SUBFLOOR - PERPENDICULAR TO JOISTS
- PREFABRICATED WOOD JOIST - REFER TO STRUCTURAL
- RESILIENT METAL CHANNEL @600mm O/C
- 2 LAYERS 16mm TYPE 'X' GYPSUM BOARD



F6 - WOOD JOIST FLOOR - ENTRANCE - NBC F13a STC 43
- FINISH FLOORING - REFER TO SCHEDULES
- 25.4mm CEMENTITIOUS GYPSUM TOPPING
- 6mm ENCAPSULATED SOUND MAT
- 19mm T&G PLYWOOD SUBFLOOR
- SOLID SAWN WOOD JOIST - REFER TO STRUCTURAL
- 100mm MEDIUM DENSITY CLOSED CELL SPRAY FOAM INSULATION
- SMART VAPOUR RETARDER
- 19mm T&G PLYWOOD SUBFLOOR
- SELF ADHERED VAPOUR PERMEABLE AIR BARRIER
- 250mm RIGID INSULATION
- 19mm VERTICAL WOOD STRAPPING @400 O/C
- METAL CLADDING TYPE '2'



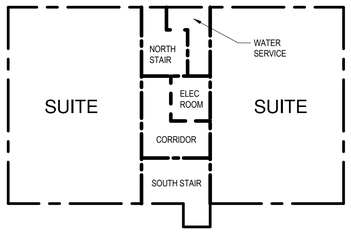
F6 - WOOD JOIST FLOOR - STAIR LANDINGS - 1 HOUR FIRE RESISTANCE RATING
- FINISH FLOORING - REFER TO SCHEDULES
- 25.4mm CEMENTITIOUS GYPSUM TOPPING
- 6mm ENCAPSULATED SOUND MAT
- 19mm T&G PLYWOOD SUBFLOOR
- SOLID SAWN WOOD JOIST - REFER TO STRUCTURAL
- WOOD BLOCKING TO SUIT
- 2 LAYERS 16mm TYPE 'X' GYPSUM BOARD



F7 - WOOD JOIST FLOOR - INTERMEDIATE STAIR LANDINGS
- FINISH FLOORING - REFER TO SCHEDULES
- 10mm PLYWOOD SUBFLOOR
- 19mm T&G PLYWOOD SUBFLOOR
- SOLID SAWN WOOD JOIST - REFER TO STRUCTURAL

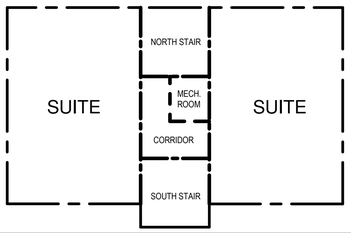
MAIN FLOOR FIRE SEPARATION DIAGRAM

- 0 HOUR FIRE SEPARATION
- 1 HR FIRE SEPARATION DOORS IN FIRE SEPARATION TO BE RATED 45MIN
- 1 HR FIRE RATED EXTERIOR WALLS

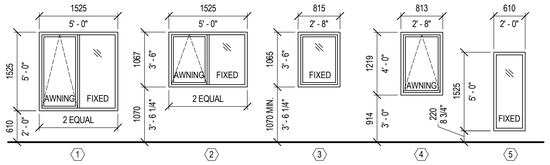


SECOND & THIRD FLOOR FIRE SEPARATION DIAGRAM

- 0 HOUR FIRE SEPARATION
- 1 HR FIRE SEPARATION DOORS IN FIRE SEPARATION TO BE RATED 45MIN
- 1 HR FIRE RATED EXTERIOR WALLS



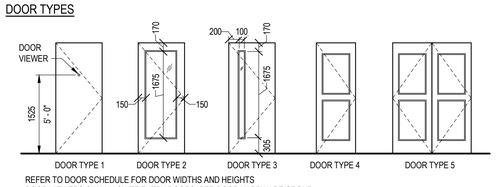
WINDOW TYPES



DOOR ABBREVIATIONS

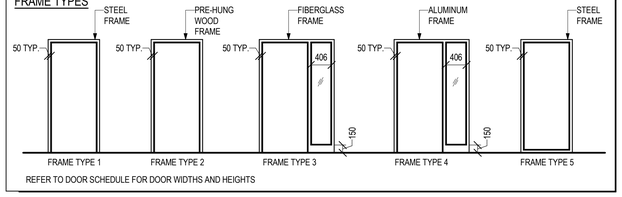
AL	ALUMINUM
AN	ANODIZED
FG	FIBERGLASS
GL	GLAZING
HCHB	HOLLOW CORE HARD BOARD
HM	HOLLOW METAL
HMI	HOLLOW METAL INSULATED
INSUL	INSULATED
PH	PRE-HUNG
PS	PRESSED STEEL
PT	PAINTED
SCHB	SOLID CORE HARD BOARD
SCWV	SOLID CORE WOOD VENEER
VARN	VARNISH
WD	WOOD

DOOR TYPES



REFER TO DOOR SCHEDULE FOR DOOR WIDTHS AND HEIGHTS
DOOR VIEWERS ONLY IN SUITE ENTRY DOORS, PER DOOR HARDWARE GROUP

FRAME TYPES



REFER TO DOOR SCHEDULE FOR DOOR WIDTHS AND HEIGHTS

Government of Canada / Gouvernement du Canada

LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ
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REPUBLIC ARCHITECTURE INC
385 St. Mary Avenue
Winnipeg, MB R3C 0N1
T 204 989 0102
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2025-01-24
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7252

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: ARCHITECTURAL
DATE: 2025/01/24

SUBJECT | SUJET
PROJECT DATA & LEGENDS

PRODUCTION	REVIEWED	REVU	
DESIGNED | ÉTUDIÉ: SO			DES O | AGENT CONC
DRAWN | DESSINÉ: SO, CR, JK			PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP			DES MGR | GÉST CONC
COORDINATION: REPUBLIC			FIRE | INCENDIE

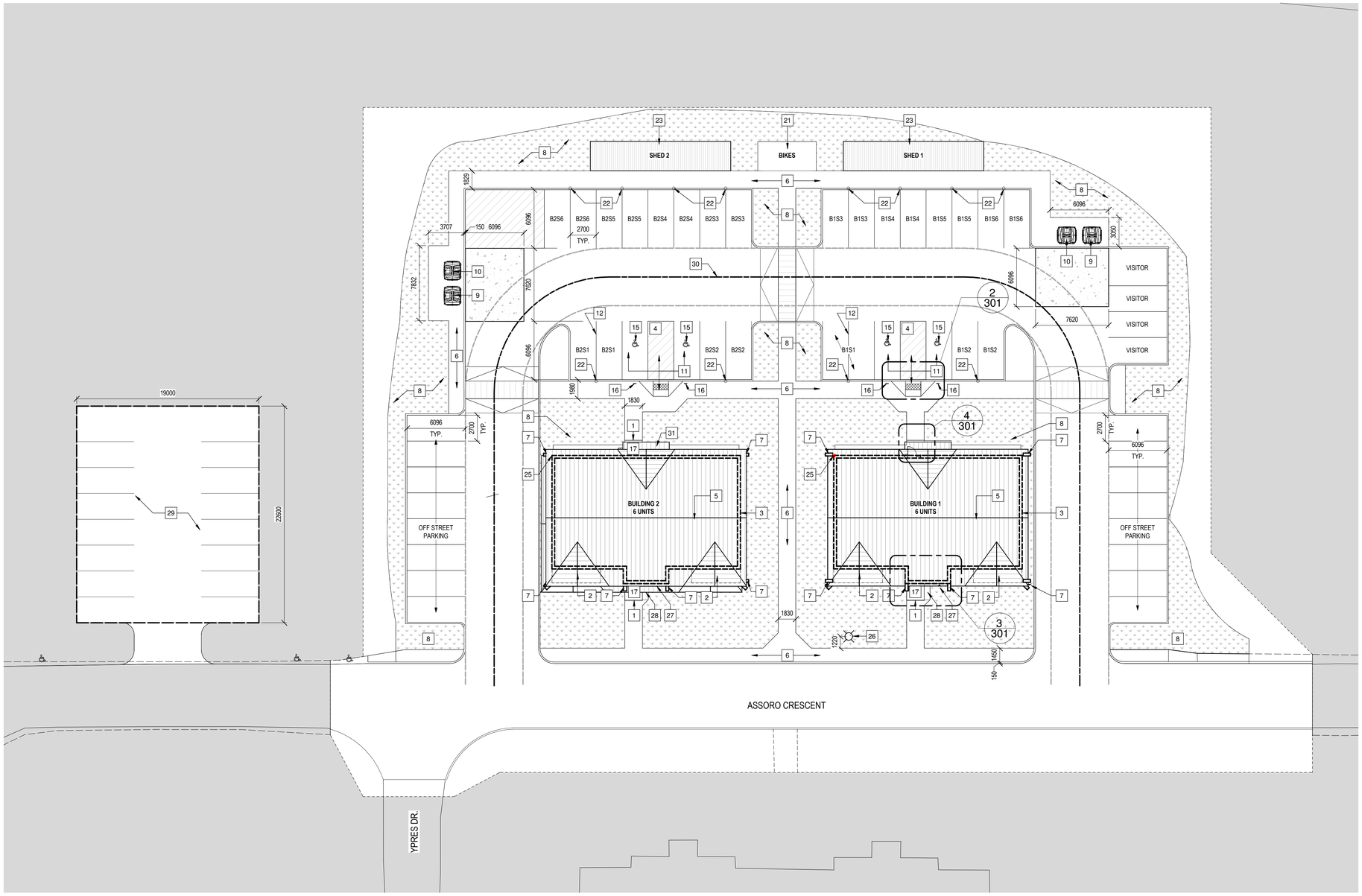
WBS NUMBER | NO. SRT: WBS #
PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 300 - B

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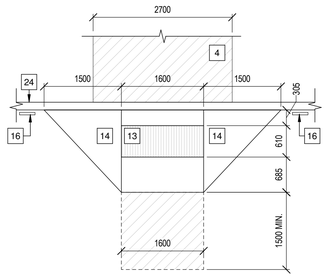
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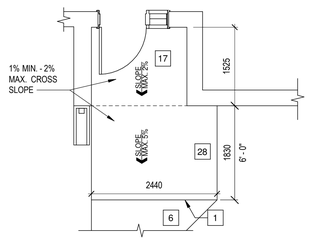
1 / 301 KINGSTON - BUILDINGS 1 & 2 SITE PLAN

SCALE: 1 : 200



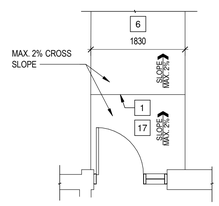
2 / 301 CONCRETE LETDOWN AT PARKING LOT

SCALE: 1 : 50



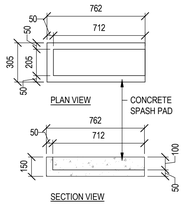
3 / 301 TYPICAL CONCRETE LANDING PLAN SOUTH

SCALE: 1 : 50



4 / 301 TYPICAL CONCRETE LANDING PLAN NORTH

SCALE: 1 : 50



5 / 301 TYPICAL SPLASH PAD DETAIL

SCALE: 1 : 20

SITE PLAN LEGEND

- EXTENT OF SOD
- AREA NOT IN SCOPE

NOTE: SLOPE HARD SURFACING 1% - 2% TO DRAIN

SITE PLAN KEYNOTE LEGEND

1	ENTRY SLAB / CONCRETE SIDEWALK CONNECTION , REFER TO STRUCTURAL / CIVIL
2	EXTERIOR CONCRETE STRUCTURAL SLAB, REFER TO STRUCTURAL & CIVIL
3	BUILDING OUTLINE TYPICAL
4	DIAGONAL PARKING LINE PAINTING - 100mm LINE,650mm SPACE
5	ROOF PEAK, ALL PENETRATIONS THROUGH ROOF TO OCCUR AT NORTH OF PEAK
6	SIDEWALK, REFER TO CIVIL
7	PREFABRICATED CONCRETE SPLASHPAD @ DOWNSPOUT LOCATION
8	APPLY SOD. COVER EXTENT OF REGRADED AREA, REFER TO CIVIL - EXTENTS APPROXIMATE
9	WASTE COLLECTION BIN, N.I.C. PROPOSED
10	RECYCLING COLLECTION BIN, N.I.C. PROPOSED
11	CURB-CUT, ACCESSIBLE AISLE AND STALL
12	GENERAL PARKING LINE PAINTING - 100mm, TYPICAL
13	DETECTABLE HAZARD INDICATOR
14	FLARED SIDE, SLOPE 1:10-1:15
15	ACCESSIBLE SYMBOL ON PAVEMENT
16	ACCESSIBLE SIGN ON POST
17	ENTRANCE LANDING, LEVEL AREA, 1% SLOPE TOWARD SIDEWALK. REFER TO STRUCTURAL
18	GRAVEL FILL, REFER TO CIVIL
19	COMPACTED SUBGRADE, REFER TO CIVIL
20	CROSS SLOPE - 1% MIN., 2% MAX SLOPE
21	BIKE RACKS, N.I.C.
22	PARKING PEDESTAL COMPLETE WITH RECEPTACLES, REFER TO ELECTRICAL
23	PROPOSED STORAGE SHED
24	CONCRETE CURB, REFER TO CIVIL
25	BUILDING LOCATION SET POINT
26	APPROXIMATE LOCATION OF FIRE HYDRANT, REFER TO CIVIL
27	FIRE DEPARTMENT CONNECTION, REFER TO MECHANICAL & CIVIL
28	PEDESTAL MOUNTED MAILBOX
29	TEMPORARY PARKING AREA - REFER TO CIVIL (PACKAGE A)
30	FIRE TRUCK ACCESS ROUTE
31	PREFABRICATED CONCRETE SPLASHPAD @ SPRINKLER DRAIN

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LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ
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T 204 989 0102
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LICENCE 7262

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER	DATE
ARCHITECTURAL	2025/01/24

SUBJECT | SUJET
SITE PLAN & DETAILS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: SO		DES O | AGENT CONC
DRAWN | DESSINÉ: SO, CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

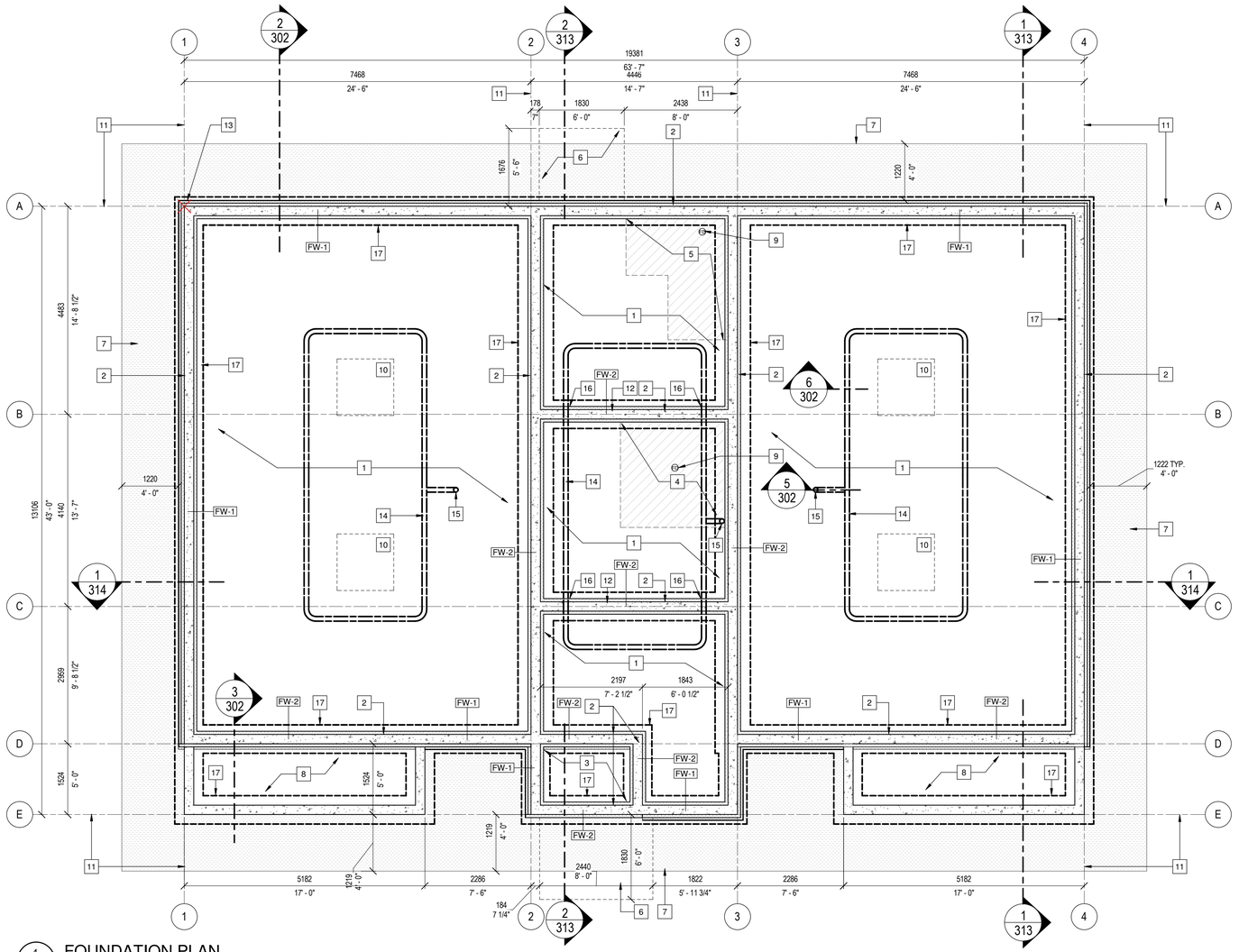
WBS NUMBER | NO. SRT	PF NUMBER | NO. DP
WBS #	ZKN99

DWG. NO. | NO. DESSIN
L-KN-ZKN99 - 301 - B

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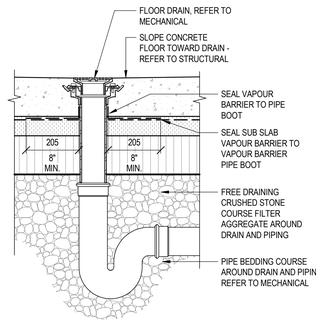


1 / 302 FOUNDATION PLAN

SCALE: 1 : 50

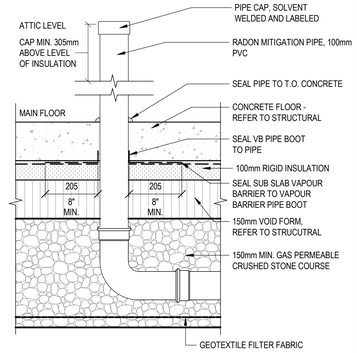
FOUNDATION PLAN KEYNOTE LEGEND

1. STRUCTURAL SLAB ABOVE, REFER TO STRUCTURAL
2. CONCRETE GRADE BEAM, REFER TO STRUCTURAL
3. EXTRANCE SLAB WITH THERMAL BREAK, REFER TO STRUCTURAL
4. SERVICE AREA FOR ELECTRICAL ENTRY
5. SERVICE AREA FOR WATER ENTRY
6. EXTERIOR CONCRETE APRON SLAB FROM ABOVE, REFER TO STRUCTURAL
7. SKIRT INSULATION 100mm THICKNESS @ 1219mm EXTENT, SLOPE 15 DEGREES. TYPICAL AROUND BUILDING PERIMETER
8. EXTERIOR CONCRETE STRUCTURAL SLAB, REFER TO STRUCTURAL
9. APPROXIMATE LOCATION OF FLOOR DRAIN ABOVE, REFER TO MECHANICAL
10. DROP PANEL BELOW, REFER TO STRUCTURAL
11. GRIDLINE TO ALIGN WITH EXTERIOR FACE OF CONCRETE/ FOUNDATION WALL
12. WALL CENTERED ON GRIDLINE
13. BUILDING LOCATION DATUM
14. RADON MITIGATION PIPING, PERFORATED 100mm PVC SOIL GAS COLLECTION PIPE
15. RADON MITIGATION PIPING, VERTICAL VENT STACK SOLID 100mm PVC SOIL GAS COLLECTION VENT PIPE TO SUB GRADE T
16. RADON MITIGATION PIPING PENETRATES GRADE BEAM
17. FOOTING BELOW, REFER TO STRUCTURAL



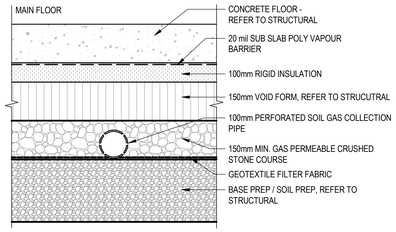
4 / 302 TYPICAL FLOOR DRAIN PENETRATION @ SLAB

SCALE: 1 : 10



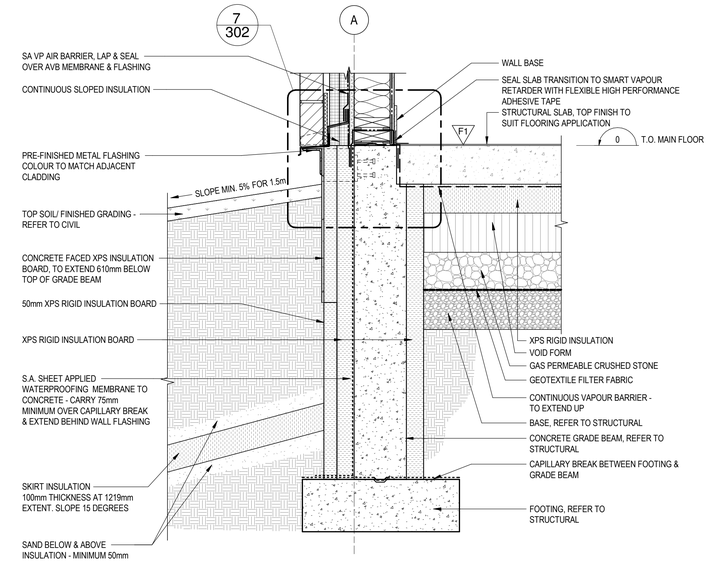
5 / 302 TYPICAL PIPE THROUGH FLOOR PENETRATION

SCALE: 1 : 10



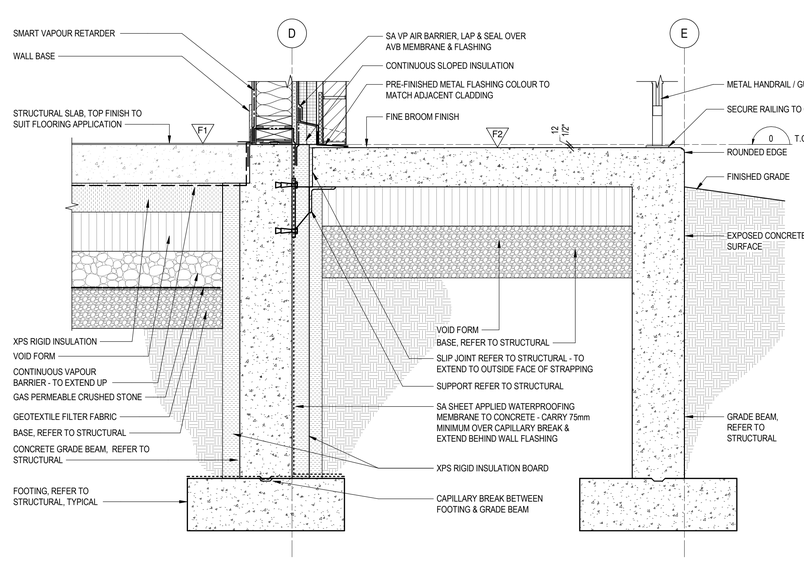
6 / 302 TYPICAL SOIL GAS PIPE BEDDING

SCALE: 1 : 10



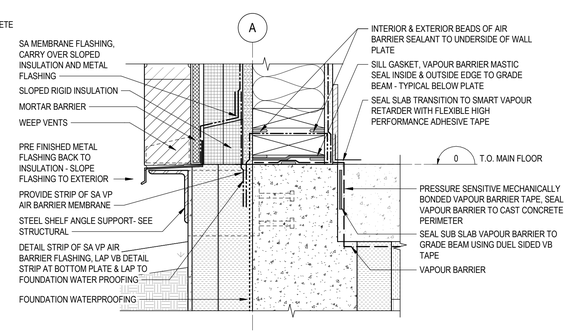
2 / 302 TYPICAL FOUNDATION DETAIL

SCALE: 1 : 10



3 / 302 FOUNDATION DETAIL @ ENTRY SLAB

SCALE: 1 : 10



7 / 302 TYPICAL BOTTOM PLATE CONNECTION DETAIL

SCALE: 1 : 5

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LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ
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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

SUBJECT | SUJET
FOUNDATION PLAN & DETAILS

PRODUCTION	REVIEWED	REVU	
DESIGNED	ÉTUDIÉ		DES O | AGENT CONC
SO			
DRAWN | DESSINÉ			PRO MGR | GÉST PROJ
SO, CR			
CHECKED | VÉRIFIÉ			DES MGR | GÉST CONC
RP			
COORDINATION			FIRE | INCENDIE
REPUBLIC			

WBS NUMBER | NO. SRT
WBS #

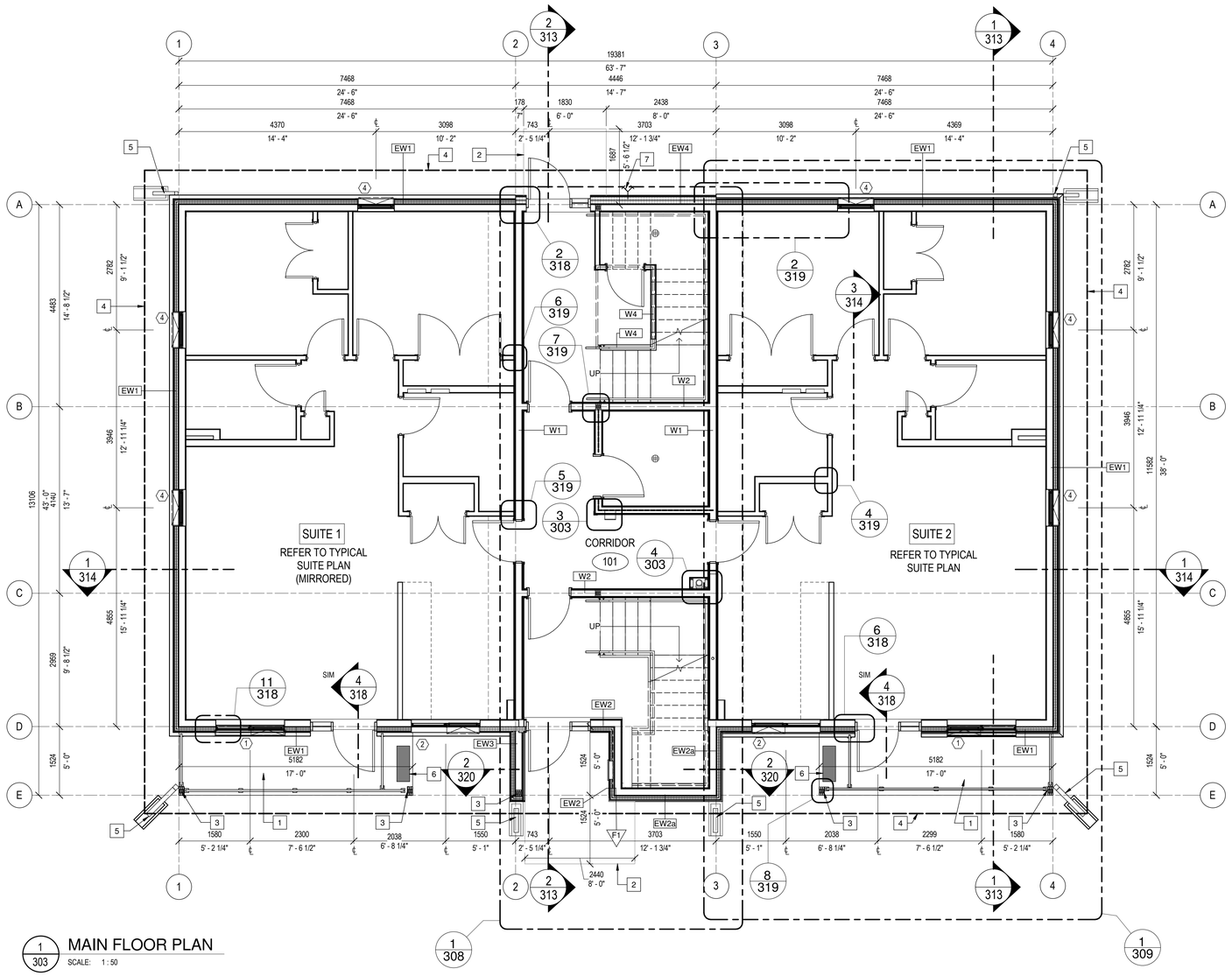
PF NUMBER | NO. DP
ZKN99

DWG. NO. | NO. DESSIN
L-KN-ZKN99 - 302 - B

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1/303 MAIN FLOOR PLAN
SCALE: 1 : 50

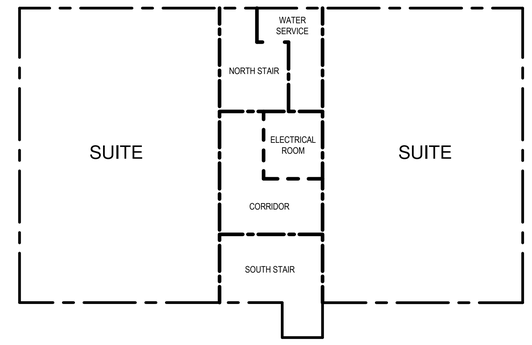
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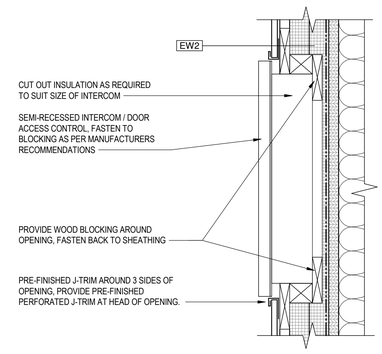
MAIN FLOOR PLAN KEYNOTE LEGEND

1 EXTERIOR CONCRETE STRUCTURAL SLAB, REFER TO STRUCTURAL
2 EXTERIOR CONCRETE ENTRY SLAB, REFER TO STRUCTURAL
3 BUILT UP COLUMN, REFER TO STRUCTURAL
4 ROOF OVERHANG ABOVE
5 PREFINISHED METAL DOWNSPOUT COMPLETE WITH SPLASH PAD BELOW
6 PROPOSED AC UNIT, REFER TO MECHCANICAL
7 FIRE DEPARTMENT CONNECTION, REFER TO MECHANICAL & CIVIL

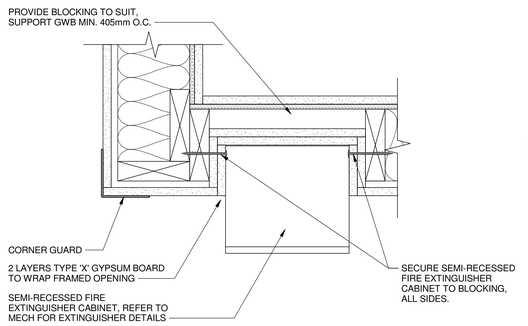
MAIN FLOOR FIRE SEPARATION DIAGRAM

FIRE SEPARATION WITH NO FIRE RESISTANCE RATING
1 HR FIRE SEPARATION
DOORS IN FIRE SEPARATION TO BE RATED 45MIN
1 HR FIRE RATED EXTERIOR WALLS

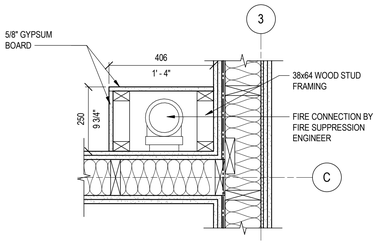




2/303 INTERCOM DETAIL
SCALE: 1 : 5



3/303 FIRE EXTINGUISHER CABINET DETAIL
SCALE: 1 : 5



4/303 FIRE CONNECTION CHASE DETAIL
SCALE: 1 : 10

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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

SUBJECT | SUJET
MAIN FLOOR PLAN

PRODUCTION	REVIEWED	REVU	
DESIGNED	ÉTUDIÉ		DES O	AGENT CONC
SO			
DRAWN	DESSINÉ		PRO MGR	GÉST PROJ
SO, CR			
CHECKED	VÉRIFIÉ		DES MGR	GÉST CONC
RP			
COORDINATION			FIRE	INCENDIE
REPUBLIC			

WBS NUMBER | NO. SRT
WBS #

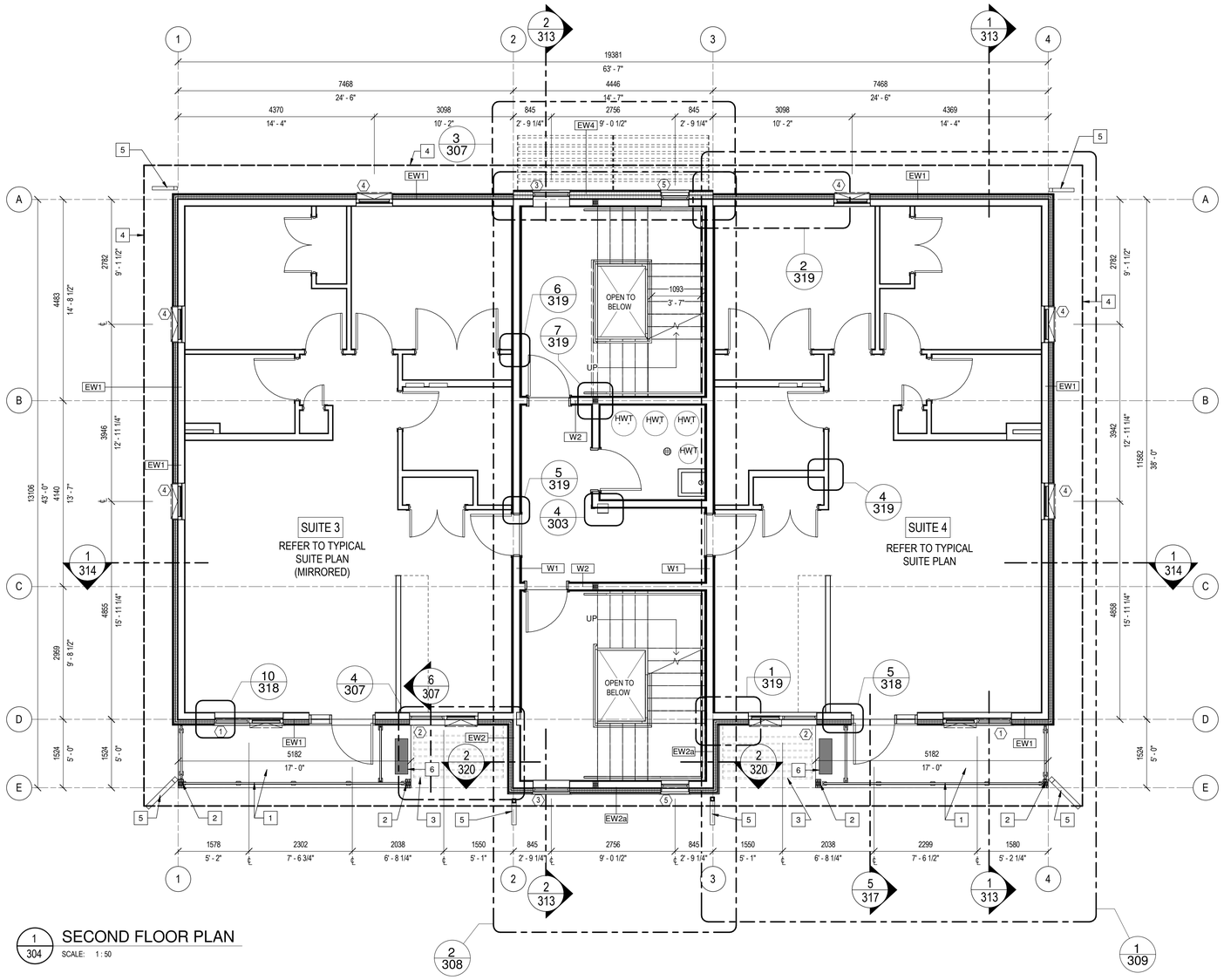
PF NUMBER | NO. DP
ZKN99

DWG. NO. | NO. DESSIN
L-KN-ZKN99 - 303 - B

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1/304 SECOND FLOOR PLAN
SCALE: 1 : 50

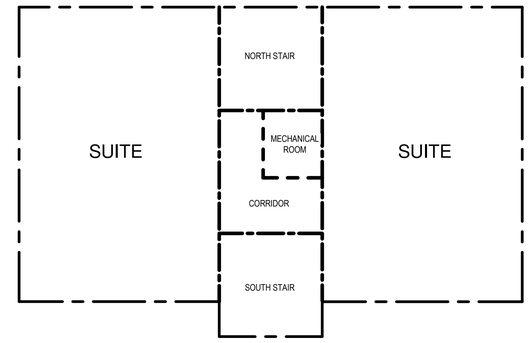
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SECOND FLOOR PLAN KEYNOTE LEGEND

1 BALCONY & RAIL
2 BUILT UP COLUMN, REFER TO STRUCTURAL
3 SOLAR SHADING DEVICE
4 ROOF OVERHANG ABOVE
5 PREFINISHED METAL DOWNSPOUT C/W SPLASH PAD BELOW
6 PROPOSED AC UNIT, REFER TO MECHCANICAL

SECOND & THIRD FLOOR FIRE SEPARATION DIAGRAM

0 HOUR FIRE SEPARATION
1 HR FIRE SEPARATION
DOORS IN FIRE SEPARATION TO BE RATED 45MIN
1 HR FIRE RATED EXTERIOR WALLS



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LICENCE
7202

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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

SUBJECT | SUJET
SECOND FLOOR PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: SO		DES O | AGENT CONC
DRAWN | DESSINÉ: SO, CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

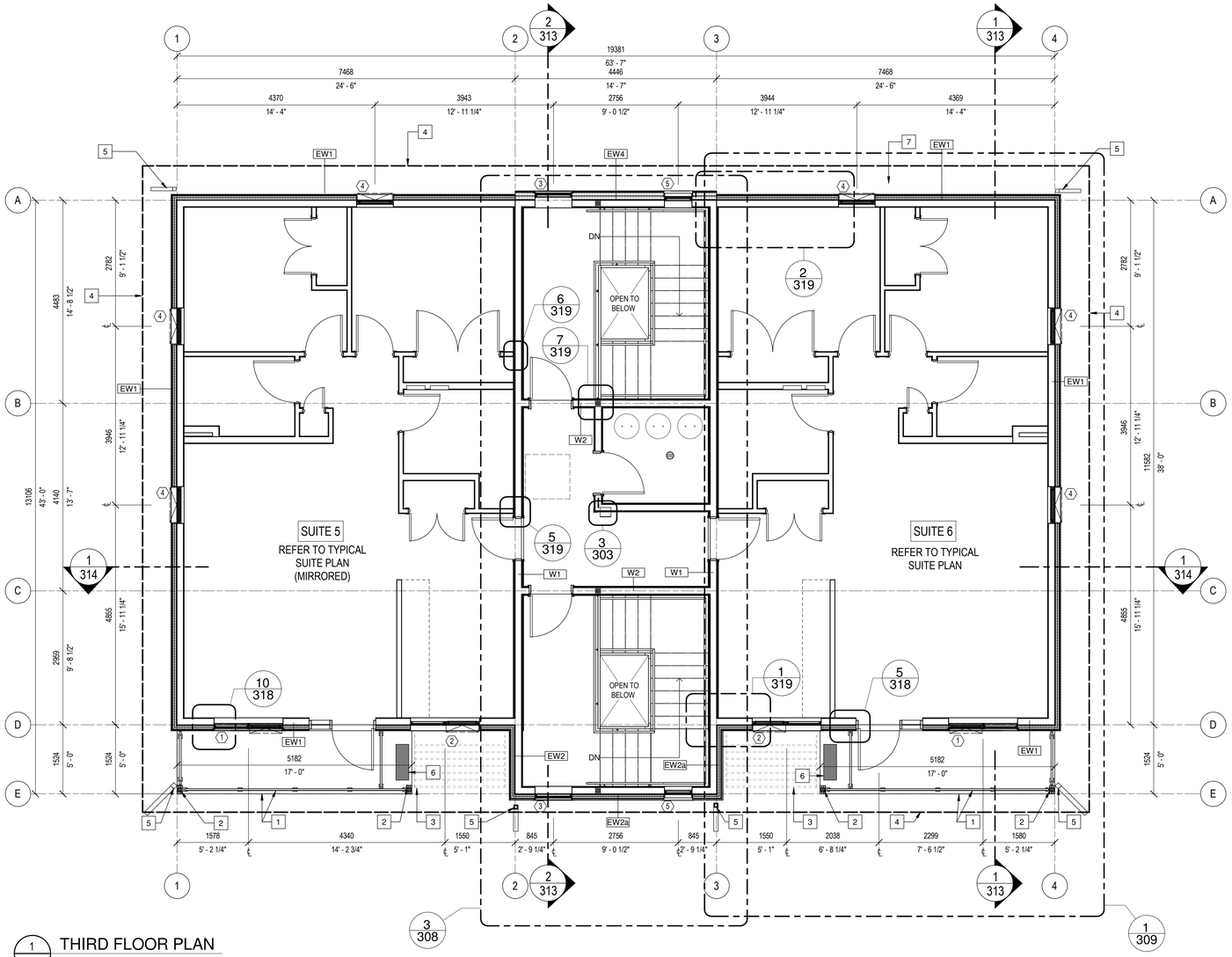
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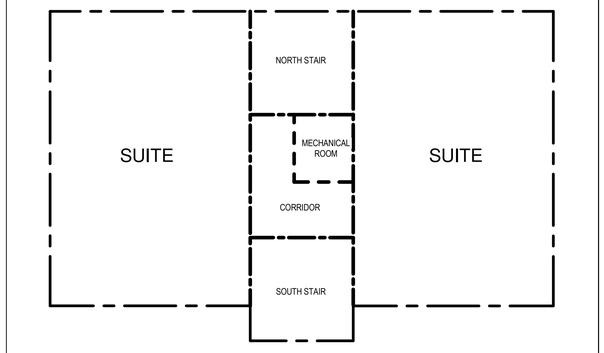


1/305 THIRD FLOOR PLAN
SCALE: 1 : 50

THIRD FLOOR PLAN KEYNOTE LEGEND

1 BALCONY & RAIL
2 BUILT UP COLUMN, REFER TO STRUCTURAL
3 SOLAR SHADING DEVICE
4 ROOF OVERHANG ABOVE
5 PREFINISHED METAL DOWNSPOUT C/W SPLASH PAD BELOW
6 PROPOSED AC UNIT, REFER TO MECHCANICAL
7 SOFFIT ABOVE

SECOND & THIRD FLOOR FIRE SEPARATION DIAGRAM



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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: ARCHITECTURAL
DATE: 2025/01/24

SUBJECT | SUJET
THIRD FLOOR PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: SO		DES O | AGENT CONC
DRAWN | DESSINÉ: SO, CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

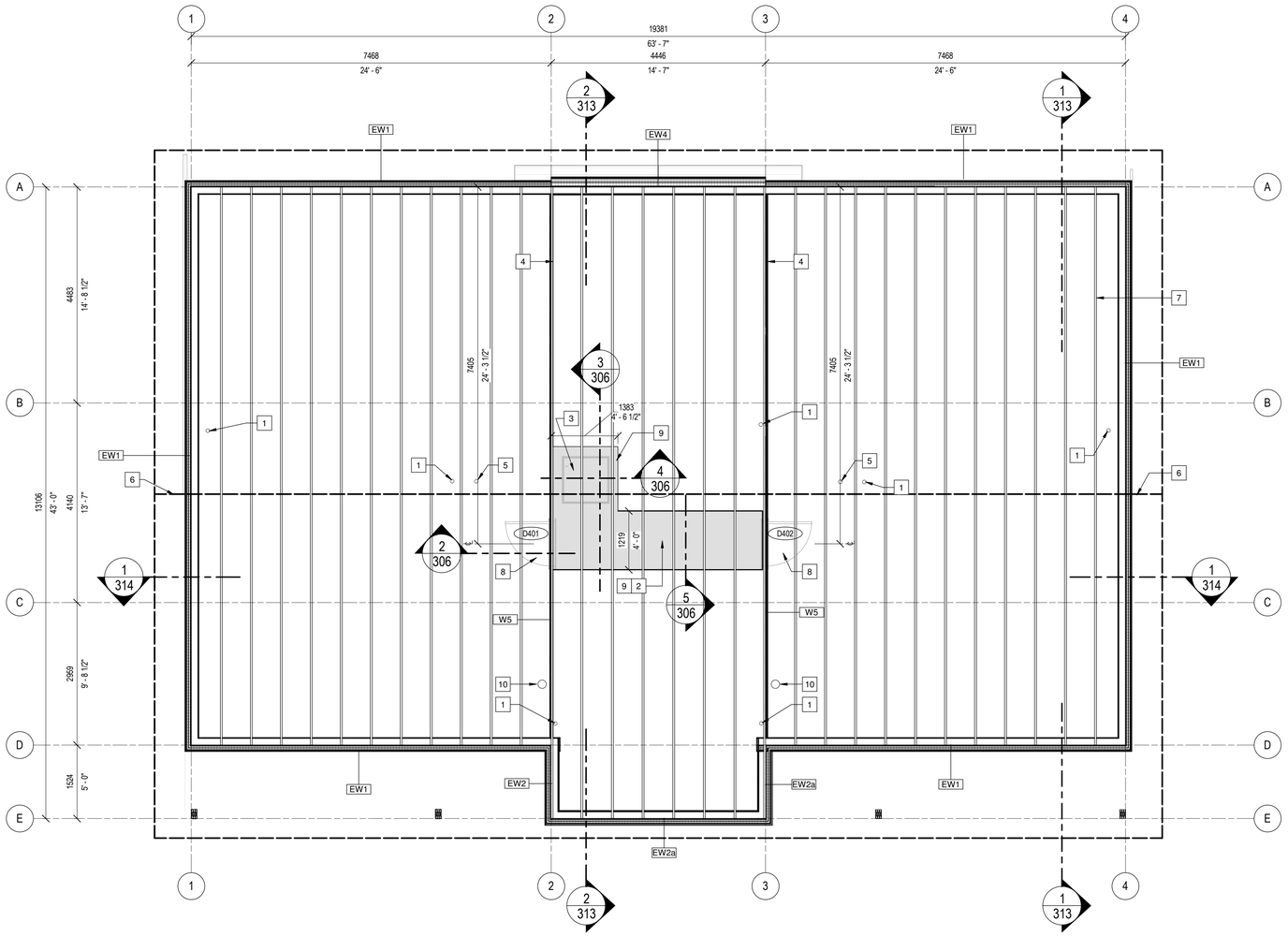
WBS NUMBER | NO. SRT: WBS #
PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 305 - B

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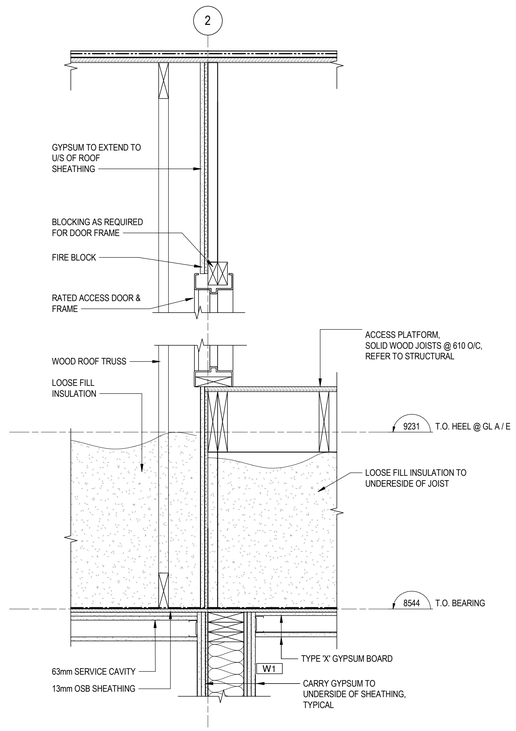
1 306 ATTIC GENERAL PLAN

SCALE: 1 : 50

DOOR NUMBER	ROOM NAME	DOOR NOMINAL SIZE (w x h x t)	TYPE	MATERIAL	FINISH	CORE	GLASS	FRAME TYPE	MATERIAL	FINISH	GLASS	STC RATING	FIRE RATING	HARDWARE SET	NOTES
D401		915 x 1220 x 44	1	HM	PS	-	-	5	PS	PT1	-	-	45 MIN.	8	DOOR IN FIRE BLOCK PARTITION
D402		915 x 1220 x 44	1	HM	PS	-	-	5	PS	PT1	-	-	45 MIN.	8	DOOR IN FIRE BLOCK PARTITION

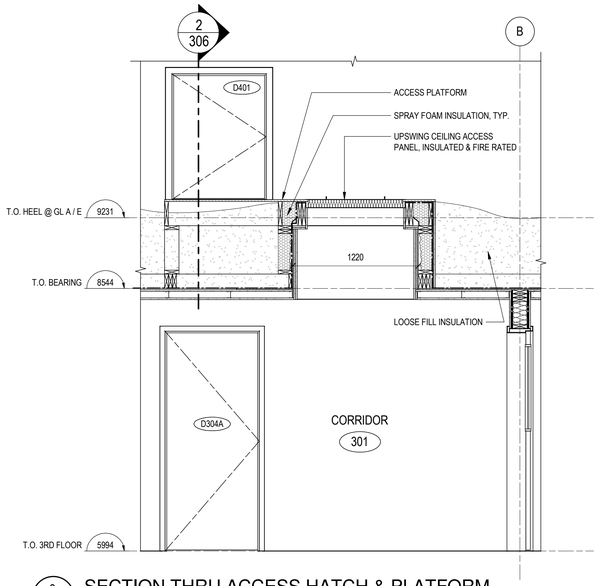
ATTIC PLAN KEYNOTE LEGEND

1 SANITARY VENT, REFER TO MECHANICAL
2 ATTIC ACCESS PLATFORM ABOVE INSULATION
3 915mm x 915mm ATTIC ACCESS HATCH FROM CORRIDOR BELOW, FRAME OPENING TO SUIT
4 FIRE BLOCK
5 RADON MITIGATION VENT PIPE TO BE CAPPED IN ATTIC SPACE, REFER TO FOUNDATION PLAN FOR DETAILS
6 ROOF PEAK ABOVE
7 WOOD TRUSS, TYPICAL. REFER TO STRUCTURAL
8 TRUSS SUPPLIER TO ENSURE TRUSS DESIGN ALLOWS FOR SWING OF DOOR
9 TRUSS SUPPLIER TO ENSURE TRUSS DESIGN ALLOWS FOR WALKWAY PATH AND ATTIC HATCH
10 RANGE EXHAUST, REFER TO MECHANICAL



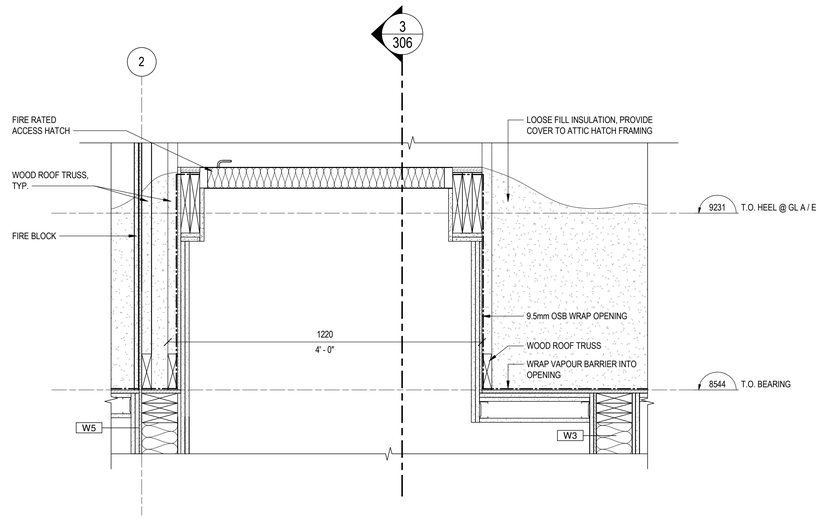
2 306 TYP. SECTION THRU FIRE RATED SEPERATION

SCALE: 1 : 10



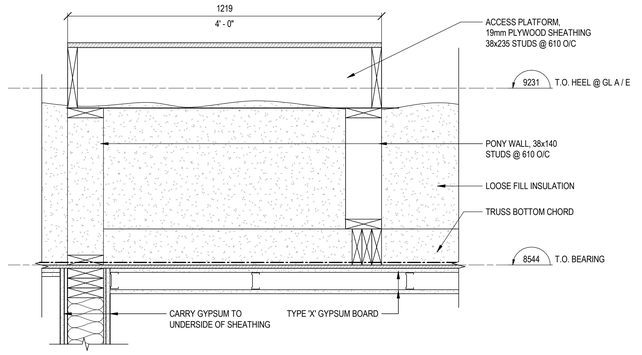
3 306 SECTION THRU ACCESS HATCH & PLATFORM

SCALE: 1 : 25



4 306 ATTIC ACCESS

SCALE: 1 : 10



5 306 ACCESS PLATFORM

SCALE: 1 : 10

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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

SUBJECT | SUJET
ATTIC PLAN & DETAILS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: SO		DES O | AGENT CONC
DRAWN | DESSINÉ: SO, CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

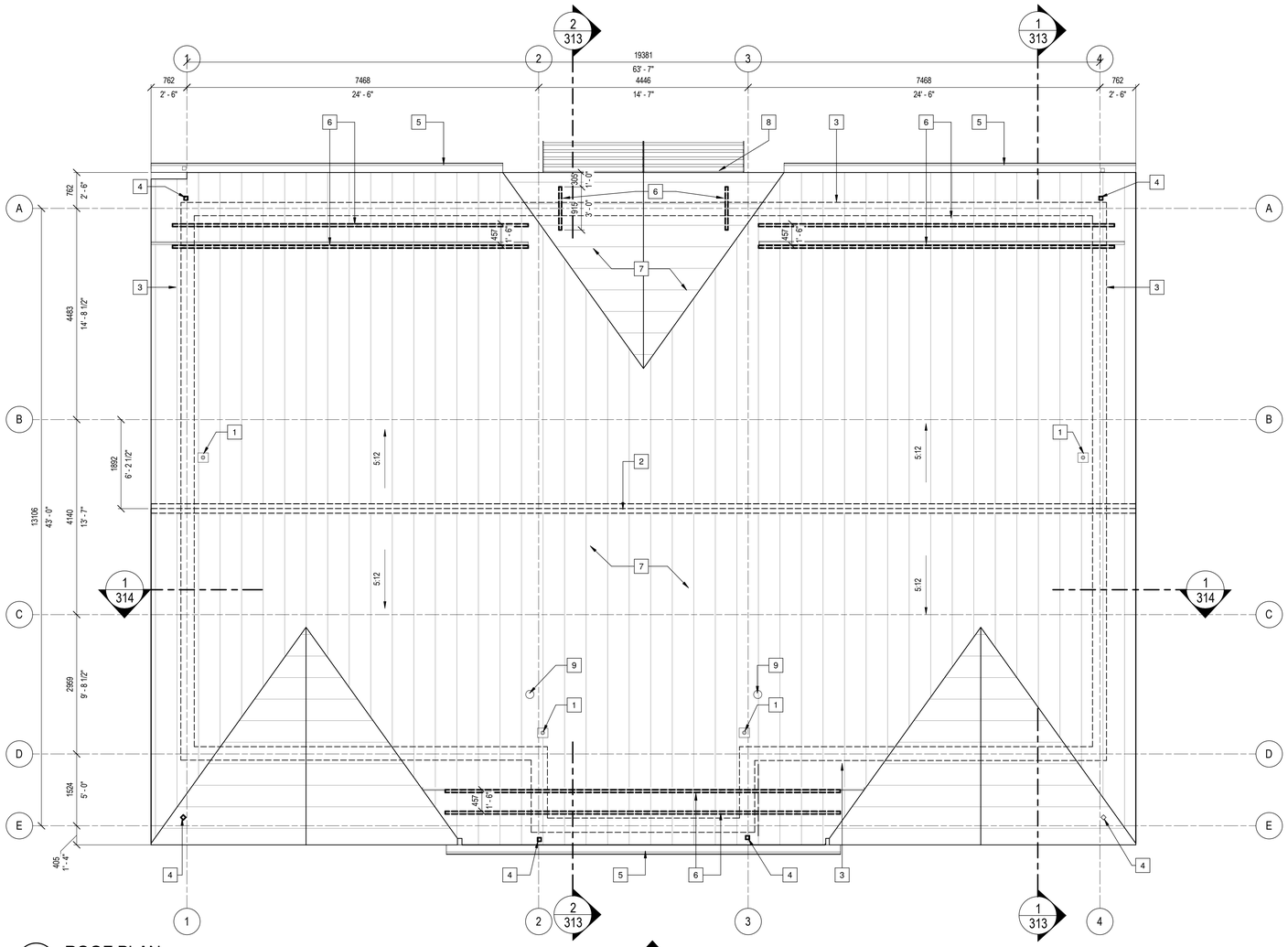
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PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 306 - B

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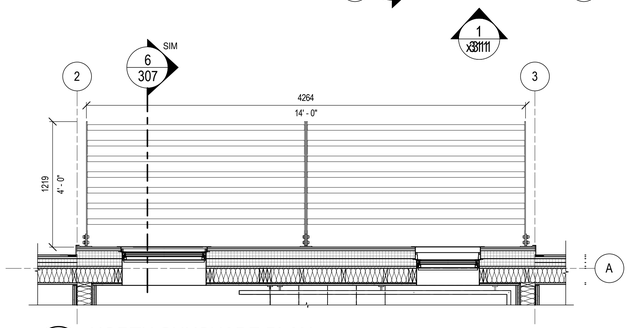
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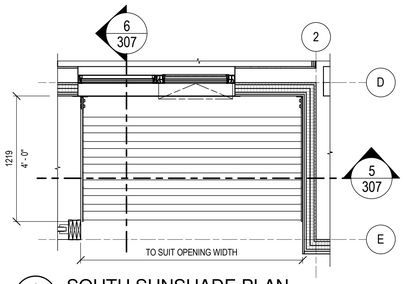
1 / 307 ROOF PLAN
SCALE: 1 : 50

ROOF PLAN KEYNOTE LEGEND

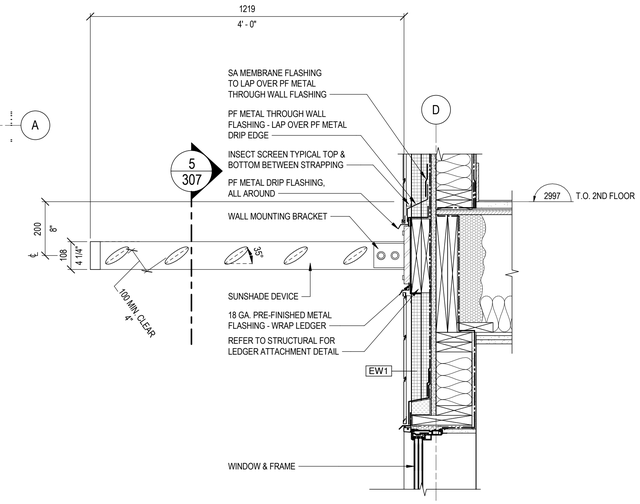
1 VENT RISER, REFER TO MECHANICAL
2 CONTINUOUS RIDGE VENT AT ROOF PEAK
3 BUILDING OUTLINE BELOW
4 PREFINISHED METAL DOWNSPOUT C/W SPLASH PAD BELOW
5 PRE-FINISHED METAL GUTTER 140mm WIDTH
6 CONTINUOUS SNOW STOP
7 CONCEALED FASTENER METAL ROOFING
8 AIR INTAKE, REFER TO MECHANICAL
9 RANGE EXHAUST, REFER TO MECHANICAL



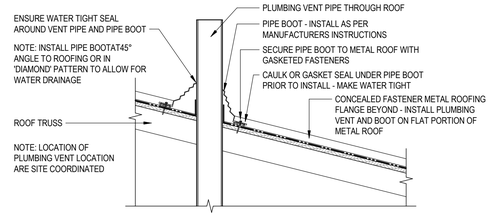
3 / 307 NORTH SUNSHADE PLAN
SCALE: 1 : 25



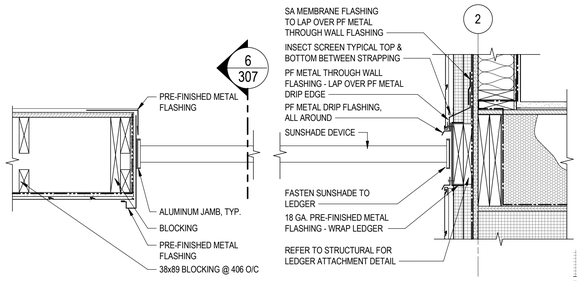
4 / 307 SOUTH SUNSHADE PLAN
SCALE: 1 : 25



6 / 307 SUNSHADE MOUNTING DETAIL / SECTION
SCALE: 1 : 10



2 / 307 PLUMBING VENT DETAIL
SCALE: 1 : 10



5 / 307 SOUTH SUNSHADE EAST-WEST SECTION
SCALE: 1 : 10

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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

SUBJECT | SUJET
ROOF PLAN & SUNSHADE DETAILS

PRODUCTION	REVIEWED	REVU	
DESIGNED	ÉTUDIÉ		DES O | AGENT CONC
SO			
DRAWN	DESSINÉ		PRO MGR | GÉST PROJ
SO, CR			
CHECKED	VÉRIFIÉ		DES MGR | GÉST CONC
RP			
COORDINATION			FIRE | INCENDIE
REPUBLIC			

WBS NUMBER | NO. SRT
WBS #

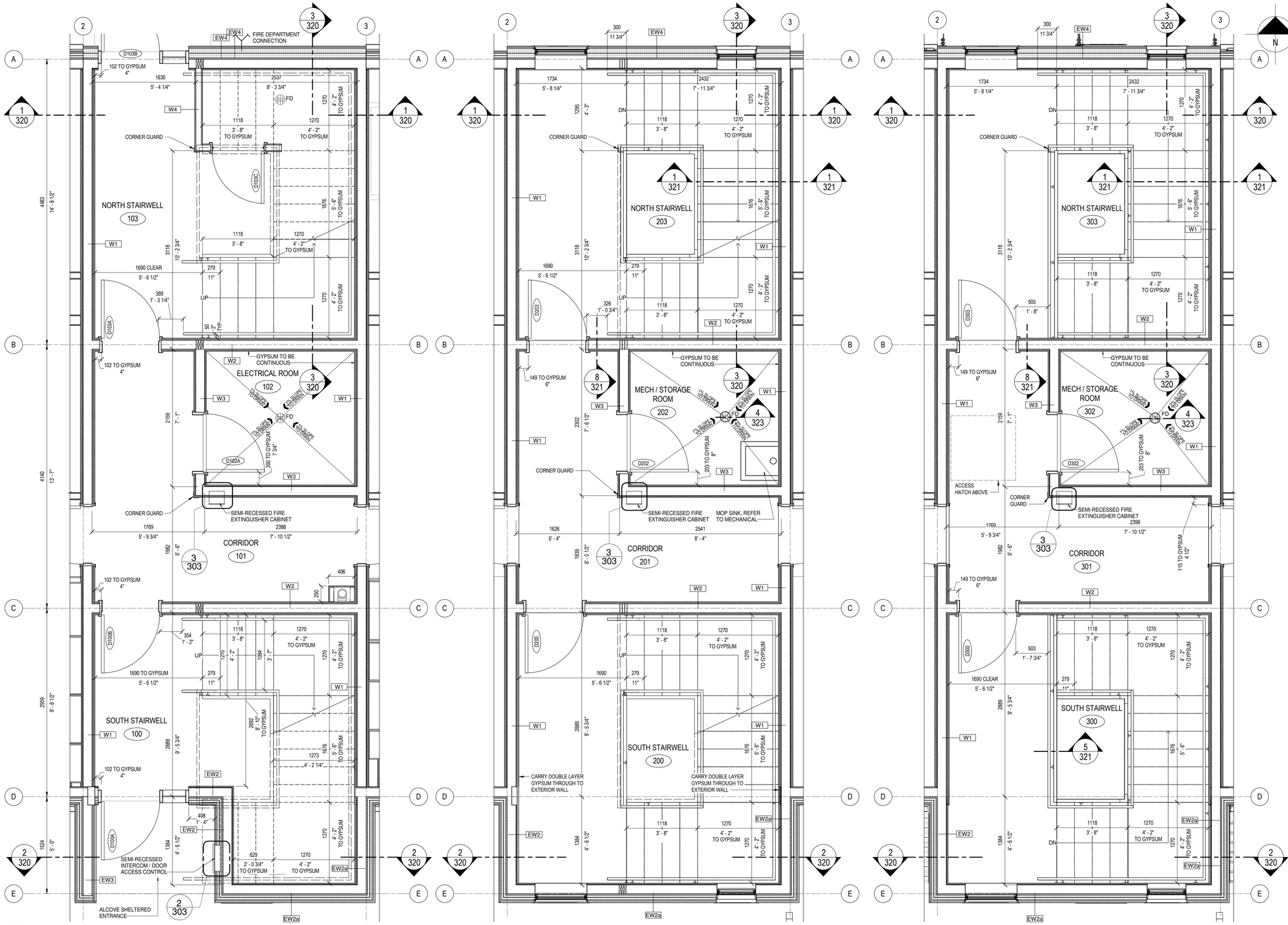
PF NUMBER | NO. DP
ZKN99

DWG. NO. | NO. DESSIN
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1 / 308 MAIN FLOOR - ENLARGED COMMON AREA PLAN

SCALE: 1 : 25

2 / 308 2nd FLOOR - ENLARGED COMMON AREA PLAN

SCALE: 1 : 25

3 / 308 3rd FLOOR ENLARGED COMMON AREA PLAN

SCALE: 1 : 25

DOOR NUMBER	ROOM NAME	DOOR						FRAME				STC RATING	FIRE RATING	HARDWARE SET	NOTES
		NOMINAL SIZE (w x h x t)	TYPE	MATERIAL	FINISH	CORE	GLASS	TYPE	MATERIAL	FINISH	GLASS				
D100A	SOUTH STAIRWELL	915 x 2135 x 44	2	AL	AN	-	GL	4	AL	AN	GL	-	-	7	FULL GLAZED
D100B	SOUTH STAIRWELL	915 x 2135 x 44	3	HMI	PT1	INSUL.	GL	1	PS	PT1	-	-	45 MIN.	3	LONG NARROW LITE
D102A	ELECTRICAL ROOM	915 x 2135 x 44	1	HM	PT1	-	-	1	PS	PT1	-	-	45 MIN.	4	
D103A	NORTH STAIRWELL	915 x 2135 x 44	3	HMI	PT1	INSUL.	GL	1	PS	PT1	-	-	45 MIN.	3	LONG NARROW LITE
D103B	NORTH STAIRWELL	915 x 2135 x 44	2	AL	AN	-	GL	4	AL	AN	GL	-	0	7	FULL GLAZED
D103C	NORTH STAIRWELL	813 x 2035 x 44	1	HM	PT1	-	-	1	PS	PT1	-	-	45 MIN.	4	
D200	SOUTH STAIRWELL	915 x 2135 x 44	3	HMI	PT1	INSUL.	GL	1	PS	PT1	-	-	45 MIN.	3	LONG NARROW LITE
D202	MECH / STORAGE ROOM	915 x 2135 x 44	1	HM	PT1	-	-	1	PS	PT1	-	-	45 MIN.	4	
D203	NORTH STAIRWELL	915 x 2135 x 44	3	HMI	PT1	INSUL.	GL	1	PS	PT1	-	-	45 MIN.	3	LONG NARROW LITE
D300	SOUTH STAIRWELL	915 x 2135 x 44	3	HMI	PT1	INSUL.	GL	1	PS	PT1	-	-	45 MIN.	3	LONG NARROW LITE
D302	MECH / STORAGE ROOM	915 x 2135 x 44	1	HM	PT1	-	-	1	PS	PT1	-	-	45 MIN.	4	
D303	NORTH STAIRWELL	915 x 2135 x 44	3	HMI	PT1	INSUL.	GL	1	PS	PT1	-	-	45 MIN.	3	LONG NARROW LITE

ROOM NUMBER	ROOM NAME	WALL								FLOOR		CEILING		NOTES
		NORTH		EAST		SOUTH		WEST						
		MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	BASE MATERIAL	CEILING MATERIAL	CEILING FINISH	
100	SOUTH STAIRWELL	GWB	PT2	GWB	PT2	GWB	PT2	GWB	PT2	RSF	RBR	GWB	PT5	
101	CORRIDOR	GWB	PT2	GWB	PT2	GWB	PT2	GWB	PT2	RSF	RBR	GWB	PT5	
102	ELECTRICAL ROOM	GWB	PT3	GWB	PT3	GWB	PT3	GWB	PT3	RSF	RBR	GWB	PT5	
103	NORTH STAIRWELL	GWB	PT2	GWB	PT2	GWB	PT2	GWB	PT2	RSF	RBR	GWB	PT5	
104	WATER SERVICE	GWB	PT2	GWB	PT2	GWB	PT2	GWB	PT2	RSF	COVE	GWB	PT5	HEAT WELD ALL SEAMS IN RSF
200	SOUTH STAIRWELL	GWB	PT2	GWB	PT2	GWB	PT2	GWB	PT2	RSF	RBR	GWB	PT5	
201	CORRIDOR	GWB	PT2	GWB	PT2	GWB	PT2	GWB	PT2	RSF	RBR	GWB	PT5	
202	MECH / STORAGE ROOM	GWB	PT3	GWB	PT3	GWB	PT3	GWB	PT3	RSF	COVE	GWB	PT5	HEAT WELD ALL SEAMS IN RSF
203	NORTH STAIRWELL	GWB	PT2	GWB	PT2	GWB	PT2	GWB	PT2	RSF	RBR	GWB	PT5	
300	SOUTH STAIRWELL	GWB	PT2	GWB	PT2	GWB	PT2	GWB	PT2	RSF	RBR	GWB	PT5	
301	CORRIDOR	GWB	PT2	GWB	PT2	GWB	PT2	GWB	PT2	RSF	RBR	GWB	PT5	
302	MECH / STORAGE ROOM	GWB	PT3	GWB	PT3	GWB	PT3	GWB	PT3	RSF	COVE	GWB	PT5	HEAT WELD ALL SEAMS IN RSF
303	NORTH STAIRWELL	GWB	PT2	GWB	PT2	GWB	PT2	GWB	PT2	RSF	RBR	GWB	PT5	

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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: ARCHITECTURAL
DATE: 2025/01/24

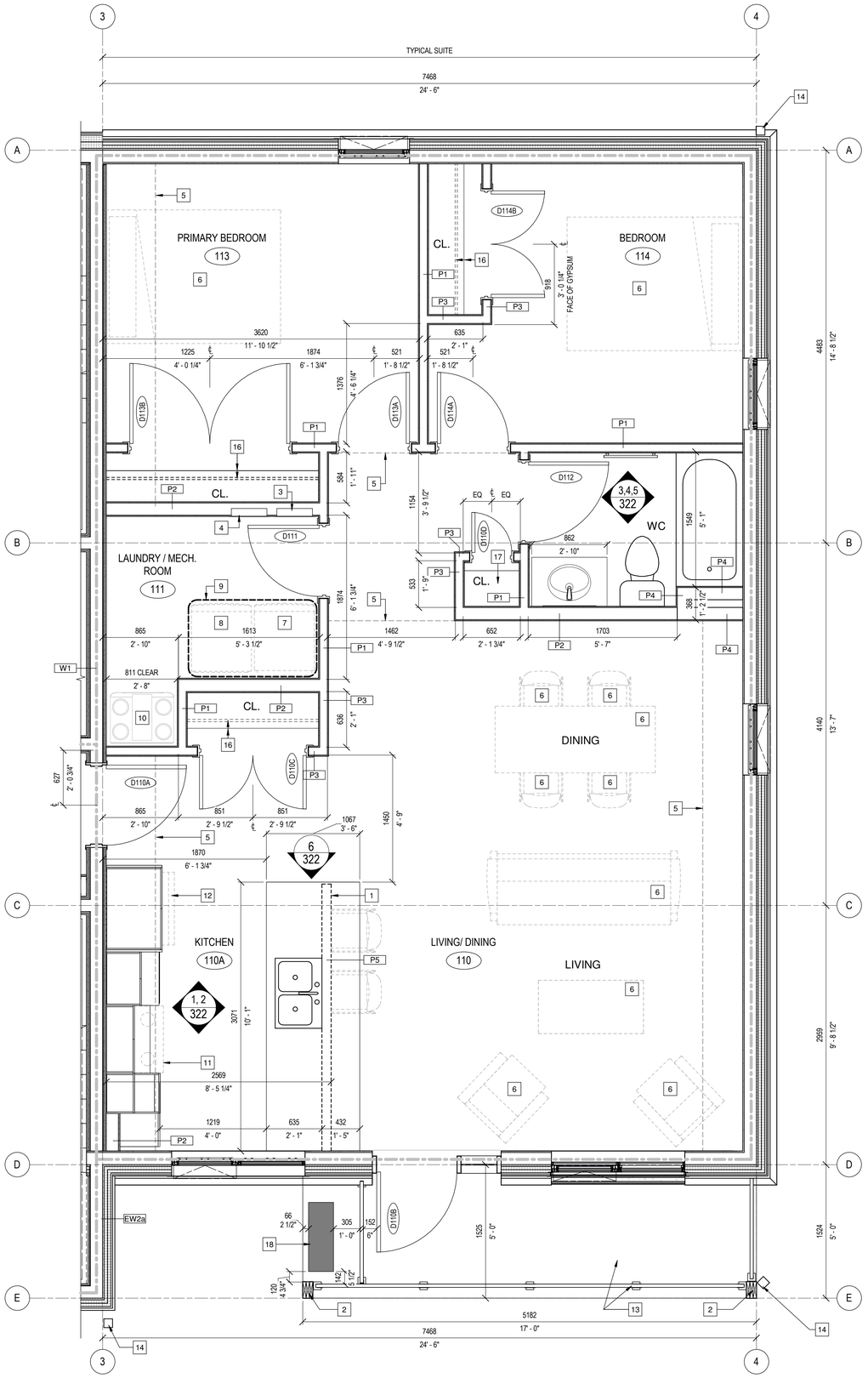
SUBJECT | SUJET
ENLARGED COMMON AREA PLANS

PRODUCTION	REVIEWED	REVU
DESIGNED	ÉTUDIÉ: SO	DES O | AGENT CONC
DRAWN	DESSINÉ: SO, CR	PRO MGR | GÉST PROJ
CHECKED	VÉRIFIÉ: RP	DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

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DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 308 - B

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1 / 309 ENLARGED TYPICAL SUITE PLAN

SCALE: 1 : 25

N

TYPICAL SUITE KEYNOTE LEGEND

1 SERVICE / PLUMBING WALL AT REAR OF MILLWORK TO UNDERSIDE OF COUNTER
2 BUILT UP COLUMN, REFER TO STRUCTURAL
3 RECESSED ELECTRICAL PANEL, REFER TO ELECTRICAL. PROVIDE PROTECTIVE BACKING.
4 RECESSED TELECOM PANEL, REFER TO ELECTRICAL. PROVIDE PROTECTIVE BACKING.
5 BULKHEAD ABOVE
6 FURNITURE, NOT IN CONTRACT
7 WASHER, NOT IN CONTRACT
8 DRYER, NOT IN CONTRACT
9 CONFIGURATION NOT TO BE MIRRORED IN SUITES 1, 3 & 5
10 HEAT RECOVERY VENTILATOR, REFER TO MECHANICAL
11 RANGE, NOT IN CONTRACT
12 FRIDGE, NOT IN CONTRACT
13 BALCONY AND RAIL
14 PREFINISHED METAL DOWNSPOUT COMPLETE WITH SPLASH PAD BELOW
16 FULL WIDTH 405mm DEPTH WIRE SHELF C/W ROD
17 WIRE SHELVING, 4 FULL WIDTH BY 405mm WIRE SHELVES ON HEIGHT ADJUSTABLE TRACK
18 PROPOSED AC UNIT, REFER TO MECHCANICAL

TYPICAL SUITE DOOR SCHEDULE

DOOR NUMBER	ROOM NAME	DOOR NOMINAL SIZE (w x h x t)	TYPE	MATERIAL	FINISH	CORE	GLASS	FRAME TYPE	MATERIAL	FINISH	GLASS	STC RATING	FIRE RATING	HARDWARE SET	NOTES
SUITE 2															
D110A	SUITE 2	915 x 2135 x 44	1	SCWV	VARN	-	-	1	PS	PT1	-	-	45 MIN.	5	DOOR VIEWER REQUIRED
D110B	BALCONY	915 x 2135 x 44	2	FG	PT	-	-	3	FG	PT	GL	-	-	9	FULL GLAZED
D110C	ENTRY CLOSET	1220 x 2035 x 38	5	HCHB	PT4	-	-	2	WD	PT4	-	-	-	6	
D110D	LINEN CLOSET	457 x 2035 x 38	4	HCHB	PT4	-	-	2	WD	PT4	-	-	-	2	
D111	LAUNDRY / MECH. ROOM	813 x 2035 x 38	4	SCHB	PT4	-	-	2	WD	PT4	-	-	-	2	
D112	BATHROOM	915 x 2035 x 38	4	HCHB	PT4	-	-	2	WD	PT4	-	-	-	1	
D113A	PRIMARY BEDROOM	813 x 2035 x 38	4	HCHB	PT4	-	-	2	WD	PT4	-	-	-	1	
D113B	PRIMARY BEDROOM	1830 x 2035 x 38	5	HCHB	PT4	-	-	2	WD	PT4	-	-	-	6	
D114A	BEDROOM	813 x 2035 x 38	4	HCHB	PT4	-	-	2	WD	PT4	-	-	-	2	
D114B	BEDROOM	1220 x 2035 x 38	5	HCHB	PT4	-	-	2	WD	PT4	-	-	-	6	

SUITE DOOR NUMBER LEGEND

SUITE DOOR NUMBER LEGEND

ROOM	SUITE 1*	SUITE 2	SUITE 3*	SUITE 4	SUITE 5*	SUITE 6
SUITE ENTRY	D105A	D110A	D204A	D209A	D304A	D309A
BALCONY	D105B	D110B	D204B	D209B	D304B	D309B
ENTRY CLOSET	D105C	D110C	D204C	D209C	D304C	D309C
LINEN CLOSET	D105D	D110D	D204D	D209D	D304D	D309D
LAUNDRY/MECH	D106	D111	D205	D210	D305	D310
BATHROOM	D107	D112	D206	D211	D306	D311
PRIMARY BEDROOM	D108A	D113A	D207A	D212A	D307A	D312A
PRIMARY CLOSET	D108B	D113B	D207B	D212B	D307B	D312B
BEDROOM	D109A	D114A	D208A	D213A	D308A	D313A
BEDROOM CLOSET	D109B	D114B	D208B	D213B	D308B	D313B
		TYPICAL SUITE SHOWN THIS SHEET				

* INDICATES MIRRORED SUITE

TYPICAL SUITE ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	WALL NORTH MAT.	NORTH FIN.	EAST MAT.	EAST FIN.	SOUTH MAT.	SOUTH FIN.	WEST MAT.	WEST FIN.	FLOOR FLR MAT.	FLOOR BASE MAT.	CEILING CEILING MAT.	CEILING CEILING FIN.	NOTES
SUITE 2														
110	LIVING/ DINING	GWB	PT4	GWB	PT4	GWB	PT4	GWB	PT4	LVP	WD	GWB	PT5	
110A	KITCHEN	GWB	PT4	GWB	PT4	GWB	PT4	GWB	PT4	LVP	WD	GWB	PT5	
111	LAUNDRY / MECH. ROOM	GWB	PT4	GWB	PT4	GWB	PT4	GWB	PT4	LVP	WD	GWB	PT5	
112	BATHROOM	GWB	PT3	GWB	PT3	GWB	PT3	GWB	PT3	CT	CT	GWB	PT5	
113	PRIMARY BEDROOM	GWB	PT4	GWB	PT4	GWB	PT4	GWB	PT4	LVP	WD	GWB	PT5	
114	BEDROOM	GWB	PT4	GWB	PT4	GWB	PT4	GWB	PT4	LVP	WD	GWB	PT5	

SUITE ROOM NUMBER LEGEND

SUITE ROOM NUMBER LEGEND

ROOM	SUITE 1*	SUITE 2	SUITE 3*	SUITE 4	SUITE 5*	SUITE 6
LIVING/DINING	105	110	204	209	304	309
KITCHEN	105A	110A	204A	209A	304A	309A
LAUNDRY/MECH	106	111	205	210	305	310
BATHROOM	107	112	206	211	306	311
PRIMARY BEDROOM	108	113	207	212	307	312
BEDROOM	109	114	208	213	308	313
		TYPICAL SUITE SHOWN THIS SHEET				

* INDICATES MIRRORED SUITE

FINISH SCHEDULE


MILLWORK - MAPLE


HARDWARE


HDPL - COUNTER TOP SURFACES
HDPL - GABLE PANELS AND WINDOW SILLS


WALL TILE


FLOOR TILE


RESILIENT FLOOR - PLANK


RESILIENT BASE / TREAD


RESILIENT FLOOR - SHEET


PAINT 1 (PT1)
HEX CODE #2e3549
METAL DOORS & FRAMES


PAINT 2 (PT2)
HEX CODE #676662
STAIRWELLS & COMMON AREAS


PAINT 3 (PT3)
HEX CODE #E3E2DA
SUITE BATHROOMS, WATER SERVICE, ELECTRICAL & MECHANICAL ROOMS


PAINT 4 (PT4)
HEX CODE #EFEEE5
SUITES WALLS, TRIMS, WOOD DOORS & FRAMES


PAINT 5 (PT5)
HEX CODE #FFFFFF
CEILINGS

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F 204 989 0094
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ONTARIO ASSOCIATION OF ARCHITECTS 2025-01-24 SHANE SCLOSTEN L/C5140E 7263

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: ARCHITECTURAL
DATE: 2025/01/24

SUBJECT | SUJET
ENLARGED TYPICAL SUITE PLAN

PRODUCTION	REVIEWED	REVU
DESIGNED	ÉTUDIÉ: SO	DES O | AGENT CONC
DRAWN	DESSINÉ: SO, CO, CR	PRO MGR | GÉST PROJ
CHECKED	VÉRIFIÉ: RP	DES MGR | GÉST CONC
COORDINATION: REPIBLIC		FIRE | INCENDIE

WBS NUMBER | NO. SRT: WBS #
PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 309 - B

Canada

2025-01-24 5:41:47 PM C:\Revit Local Files\743_CFHA_Tier 4_CENTRAL_2024_cuttlebugsZTOZ.rvt

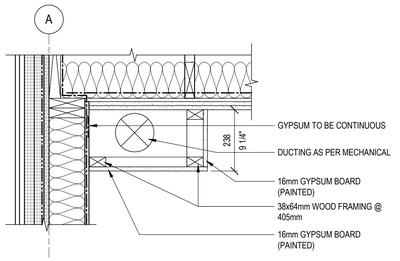
REFLECTED CEILING PLAN KEYNOTE LEGEND

1 SUSPENDED GYPSUM CEILING
2 BULKHEAD
3 BULKHEAD, THIRD FLOOR SUITES ONLY
4 915mm x 915mm ATTIC ACCESS HATCH
5 PREFINISHED METAL DOWNSPOUT C/W SPLASH PAD BELOW
6 BUILT UP COLUMN, REFER TO STRUCTURAL

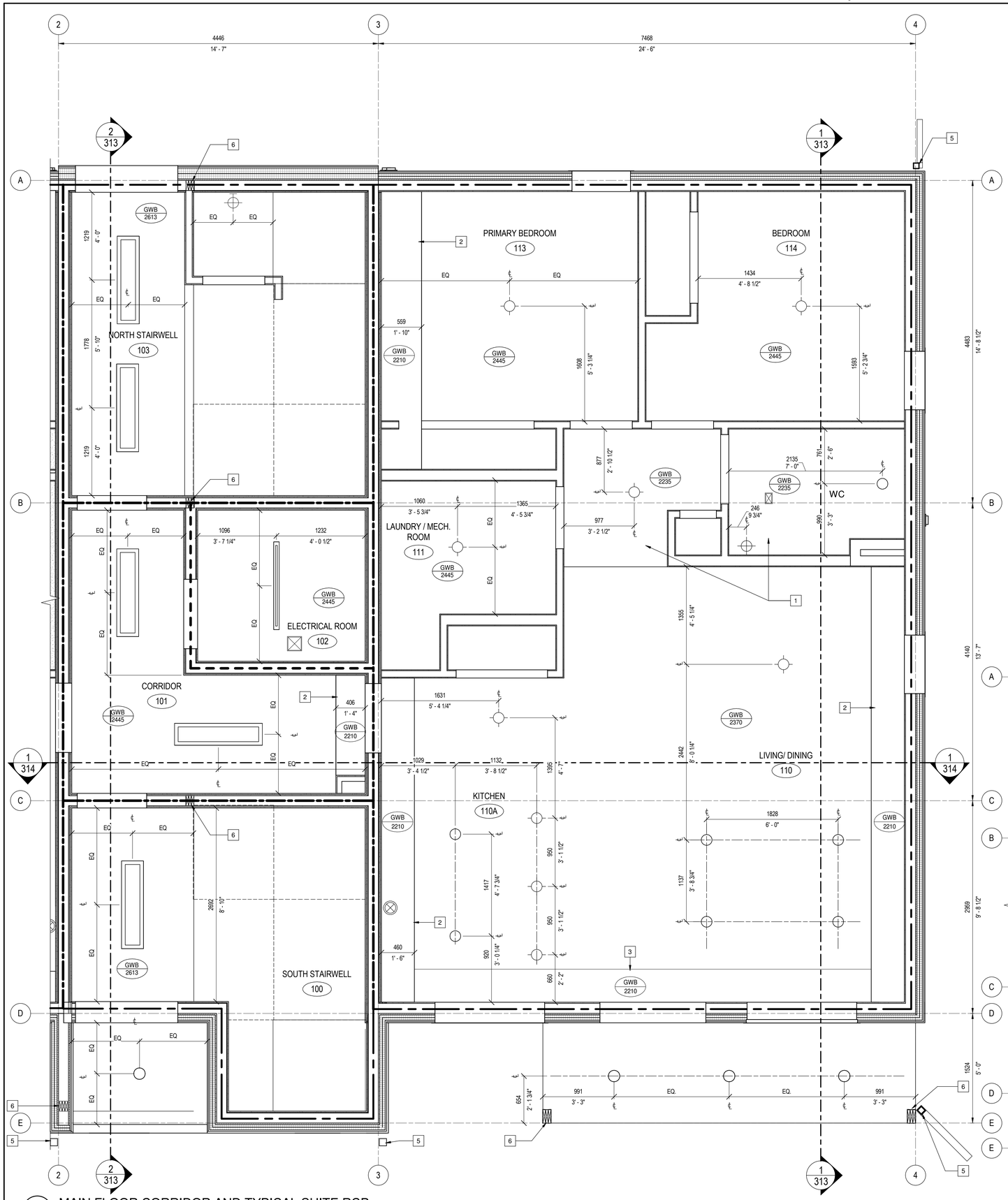
REFLECTED CEILING PLAN LEGEND

- MECHANICAL SUPPLY AIR VENT, REFER TO MECHANICAL
- MECHANICAL RETURN AIR VENT, REFER TO MECHANICAL
- LIGHT FIXTURE - SURFACE MOUNT
- SURFACE MOUNTED LIGHT
- WALL MOUNTED LIGHT
- RECESSED POT LIGHT
- ACCESS HATCH

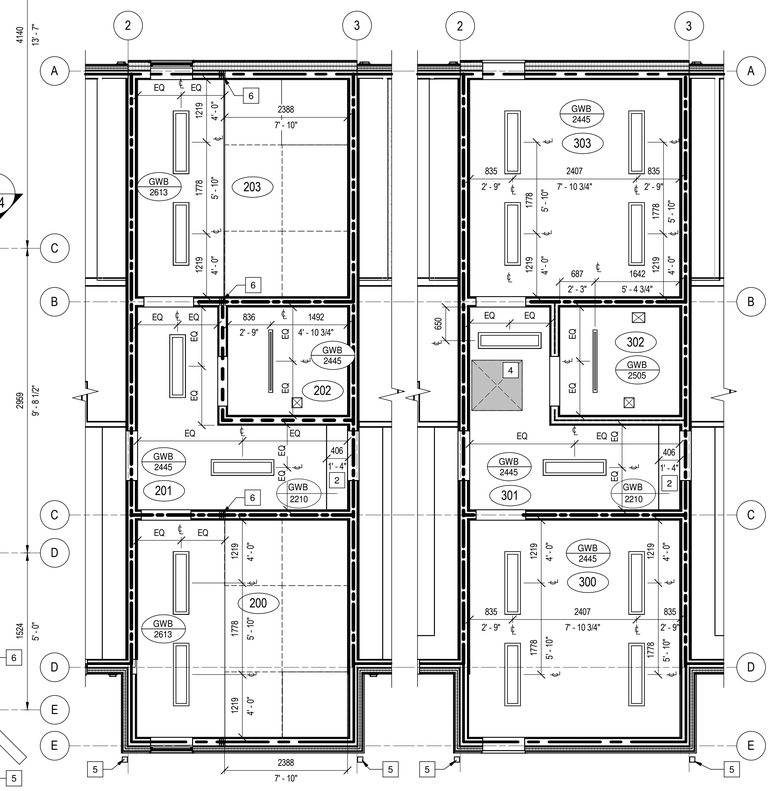
NOTE: DIMENSIONS FOR LIGHT FIXTURES ARE FROM FACE OF GYPSUM BOARD



4 / 310 TYPICAL BULKHEAD DETAIL
SCALE: 1 : 10



1 / 310 MAIN FLOOR CORRIDOR AND TYPICAL SUITE RCP
SCALE: 1 : 25



2 / 310 SECOND FLOOR CORRIDOR RCP
SCALE: 1 : 50

3 / 310 THIRD FLOOR CORRIDOR RCP
SCALE: 1 : 50

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T 204 989 0102
F 204 989 0094
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BORDER LAST UPDATED 2010-08-20

ONTARIO ASSOCIATION OF ARCHITECTS 2025-01-24 SHANE EDELSON 12024 LICENCE 7263

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER	DATE
ARCHITECTURAL	2025/01/24

SUBJECT | SUJET
REFLECTED CEILING PLANS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: SO		DES O | AGENT CONC
DRAWN | DESSINÉ: SO, CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

WBS NUMBER | NO. SRT	PF NUMBER | NO. DP
WBS #	ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 310 - B

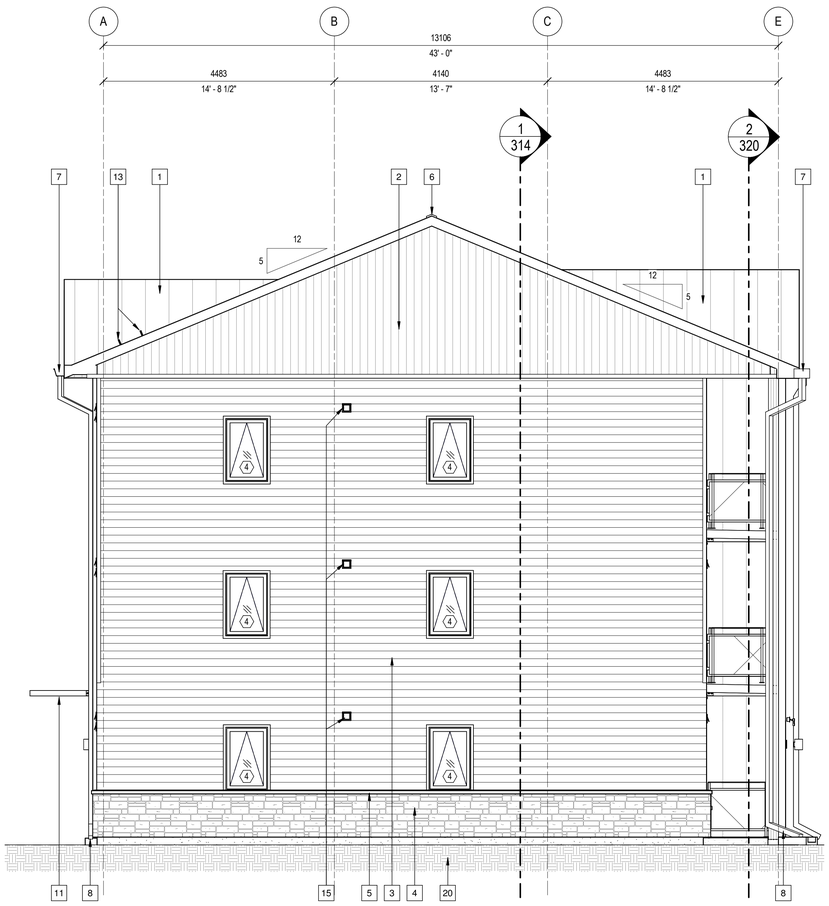
Canada

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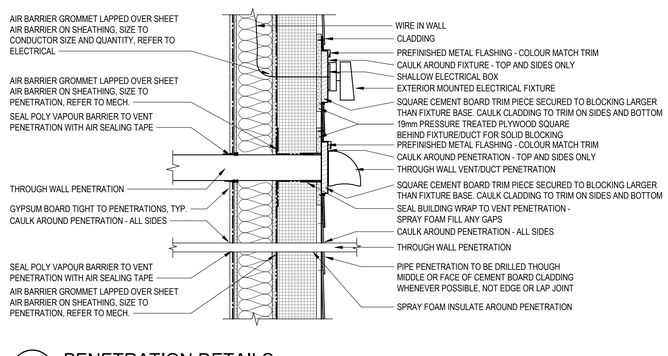
1 311 SOUTH ELEVATION

SCALE: 1 : 50



2 311 WEST ELEVATION

SCALE: 1 : 50



3 311 PENETRATION DETAILS

SCALE: 1 : 10

EXTERIOR FINISH LEGEND

- 490mm VERTICAL CONCEALED FASTENER PROFILE
- 150mm VERTICAL CONCEALED FASTENER PROFILE
- 150mm HORIZONTAL CONCEALED FASTENER PROFILE
- MASONRY VENEER CLADDING

NOTE: COLOURS TO BE DETERMINED POST TENDER.

SOUTH/WEST ELEVATION KEYNOTE LEGEND

1	490mm VERTICAL CONCEALED FASTENER PROFILE
2	150mm VERTICAL CONCEALED FASTENER PROFILE
3	150mm HORIZONTAL CONCEALED FASTENER PROFILE
4	MASONRY VENEER CLADDING
5	PRE-CAST CONCRETE SILL
6	CONTINUOUS RIDGE VENT AT ROOF PEAK
7	PRE-FINISHED METAL GUTTER 140mm WIDTH
8	PREFINISHED METAL DOWNSPOUT COMPLETE WITH SPLASH PAD BELOW
9	FRAME & GLASS PANEL GUARD RAIL
10	BUILT UP COLUMN AS PER STRUCTURAL, CLAD WITH PRE-FINISHED METAL
11	SOLAR SHADING DEVICE
12	BALCONY
13	CONTINUOUS SNOW STOP
14	EXTERIOR CONCRETE STRUCTURAL SLAB, REFER TO STRUCTURAL
15	HEAT RECOVERY VENTILATOR INTAKE, REFER TO MECHANICAL
16	RANGE EXHAUST, REFER TO MECHANICAL
17	WALL MOUNT LIGHT FIXTURE
18	150mm (6") TALL ALUMINUM LETTERS FOR BUILDING NUMBER - TO BE CONFIRMED
19	WALL MOUNT SENSOR, REFER TO ELECTRICAL
20	GRADE, REFER TO CIVIL

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T 204 989 0102
F 204 989 0094
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ONTARIO ASSOCIATION OF ARCHITECTS 2025-01-24 SHANE EDUCATION LICENCE 7952

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER	DATE
ARCHITECTURAL	2025/01/24

SUBJECT | SUJET
EXTERIOR ELEVATIONS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: SO		DES O | AGENT CONC
DRAWN | DESSINÉ: SO, CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

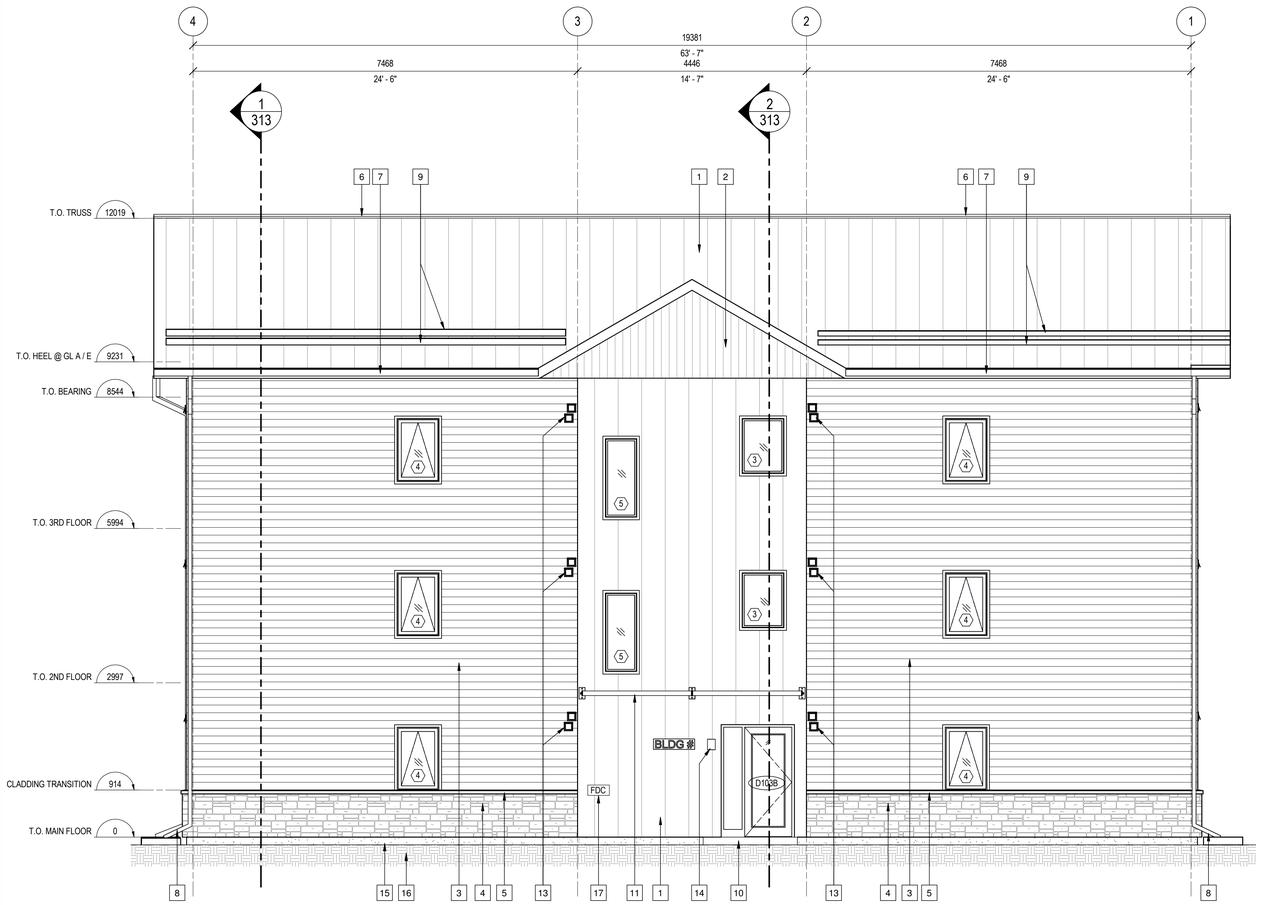
WBS NUMBER | NO. SRT	PF NUMBER | NO. DP
WBS #	ZKN99

DWG. NO. | NO. DESSIN
L-KN-ZKN99 - 311 - B

Canada

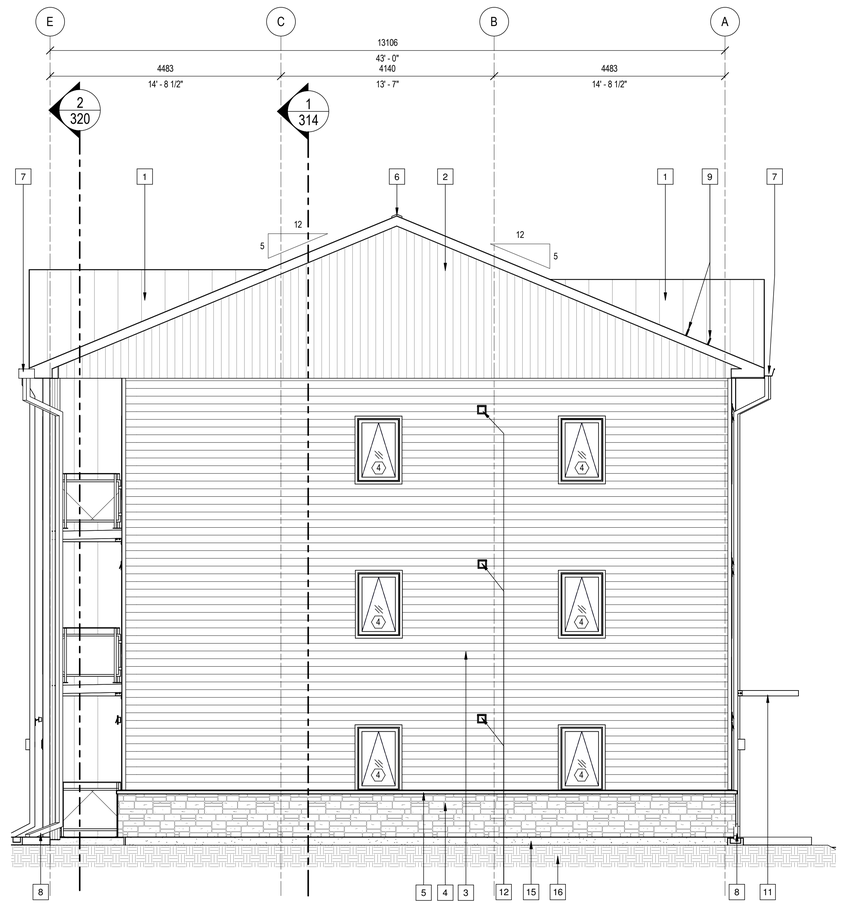
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1/312 NORTH ELEVATION

SCALE: 1 : 50



2/312 EAST ELEVATION

SCALE: 1 : 50

EXTERIOR FINISH LEGEND

- 490mm VERTICAL CONCEALED FASTENER PROFILE
- 150mm VERTICAL CONCEALED FASTENER PROFILE
- 150mm HORIZONTAL CONCEALED FASTENER PROFILE
- MASONRY VENEER CLADDING

NOTE: COLOURS TO BE DETERMINED POST TENDER.

NORTH/EAST ELEVATION KEYNOTE LEGEND

1	490mm VERTICAL CONCEALED FASTENER PROFILE
2	150mm VERTICAL CONCEALED FASTENER PROFILE
3	150mm HORIZONTAL CONCEALED FASTENER PROFILE
4	MASONRY VENEER CLADDING
5	PRE-CAST CONCRETE SILL
6	CONTINUOUS RIDGE VENT AT ROOF PEAK
7	PRE-FINISHED METAL GUTTER 140mm WIDTH
8	PREFINISHED METAL DOWNSPOUT COMPLETE WITH SPLASH PAD BELOW
9	CONTINUOUS SNOW STOP
10	EXTERIOR CONCRETE STRUCTURAL SLAB, REFER TO STRUCTURAL
11	SOLAR SHADING DEVICE
12	HEAT RECOVERY VENTILATOR INTAKE, REFER TO MECHANICAL
13	DRYER EXHAUST, REFER TO MECHANICAL
14	WALL MOUNT LIGHT FIXTURE
15	CONCRETE FACED INSULATION PANEL
16	GRADE, REFER TO CIVIL
17	FIRE DEPARTMENT CONNECTION, REFER TO MECHANICAL & CIVIL

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ONTARIO ASSOCIATION OF ARCHITECTS 2025-01-24 SHANE EDGERTON LICENCE 7952

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: ARCHITECTURAL
DATE: 2025/01/24

SUBJECT | SUJET
EXTERIOR ELEVATIONS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: SO		DES O | AGENT CONC
DRAWN | DESSINÉ: SO, CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

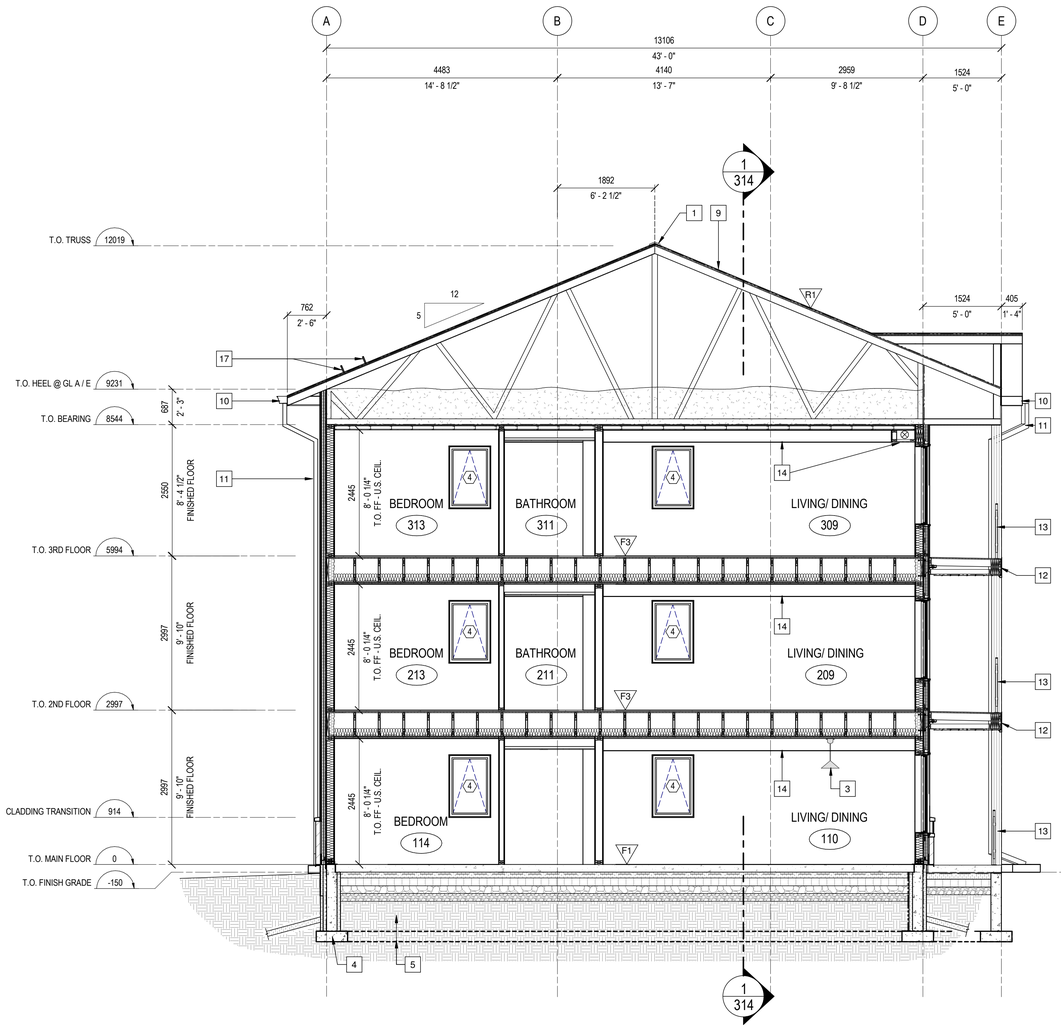
WBS NUMBER | NO. SRT: WBS #
PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 312 - B

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1/313 TYPICAL NORTH-SOUTH SECTION AT SUITE

SCALE: 1 : 50

2/313 TYPICAL NORTH-SOUTH SECTION AT CORRIDOR/ STAIRWELL

SCALE: 1 : 50

BUILDING SECTIONS KEYNOTE LEGEND

1 CONTINUOUS RIDGE VENT
2 SEMI-RECESSED INTERCOM / DOOR ACCESS CONTROL
3 CEILING MOUNTED FIXTURES IN MAIN LIVING AREAS. INSULATED AND GASKETED FOR SOUND.
4 FOOTINGS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY, TYPICAL REFER TO STRUCTURAL
5 ICF GRADE BEAM AND FOOTING BEYOND, REFER TO STRUCTURAL
6 ATTIC FIRE RESISTANT RATED COMPARTMENT DOOR. RAISED SILL TO ACCOMODATE INSULATION
7 ACCESS PLATFORM
8 ATTIC ACCESS HATCH
9 CONCEALED FASTENER METAL ROOFING
10 PRE-FINISHED METAL GUTTER 140mm WIDTH
11 PRE-FINISHED METAL DOWNSPOUT
12 BALCONY
13 FRAME AND GLASS PANEL GUARD RAIL
14 BULKHEAD
15 GUARDRAIL & HANDRAIL
16 INSULATED FLOOR ABOVE ENTRANCE
17 CONTINUOUS SNOW STOP

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ONTARIO ASSOCIATION OF ARCHITECTS
2025-01-24
SHANE EDLUND
LICENCE
7052

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

SUBJECT | SUJET
BUILDING SECTIONS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: SO		DES O | AGENT CONC
DRAWN | DESSINÉ: SO, CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

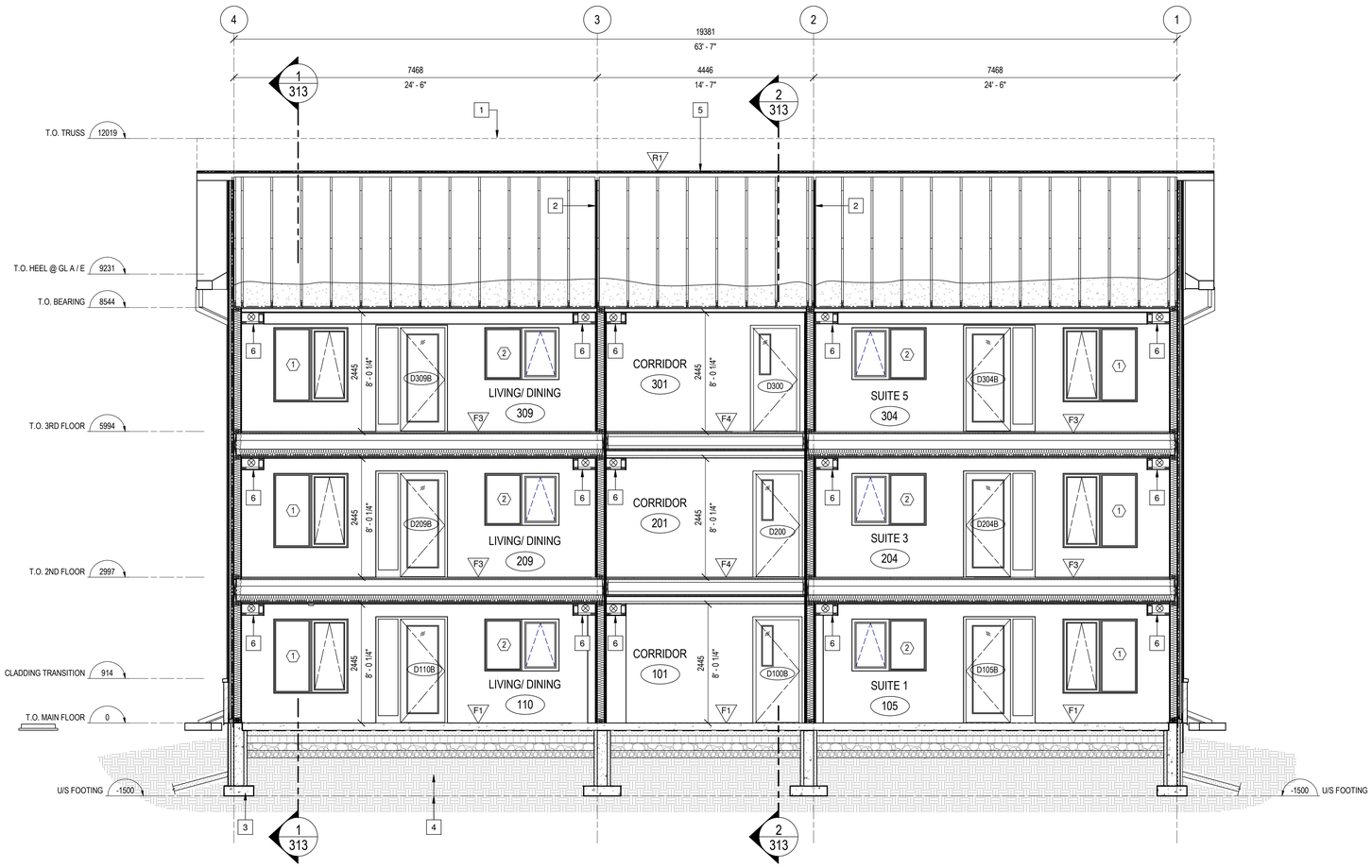
WBS NUMBER | NO. SRT: WBS #
PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN
L-KN-ZKN99 - 313 - B

Canada

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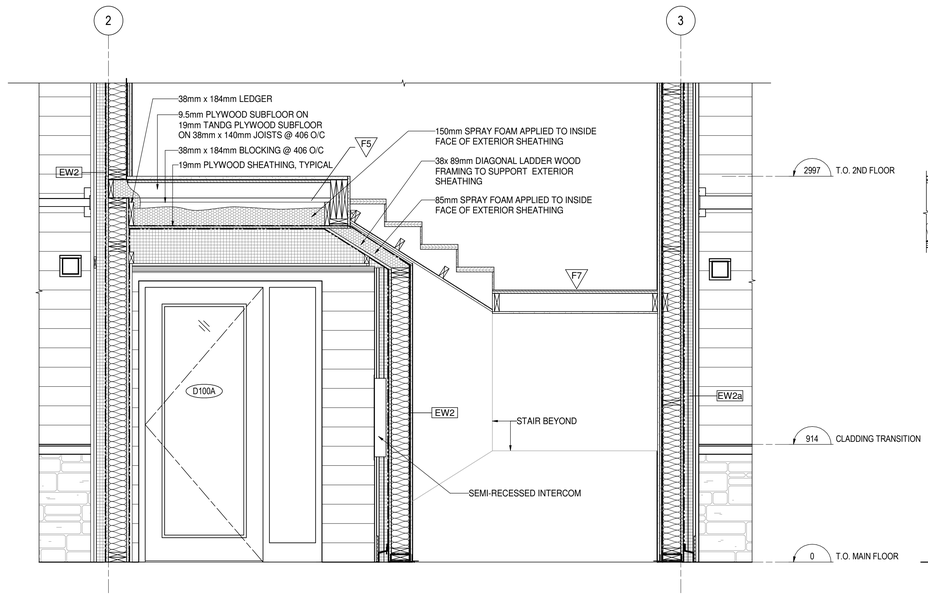


BUILDING SECTION KEYNOTE LEDGEND

1 ROOF PEAK IN FOREGROUND
2 ATTIC FIRE BLOCK, REFER TO SHEET 306 FOR DETAILS
3 FOOTINGS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY, TYPICAL REFER TO STRUCTURAL
4 ICF GRADE BEAM AND FOOTING BEYOND, REFER TO STRUCTURAL
5 CONCEALED FASTENER METAL ROOFING
6 BULKHEAD

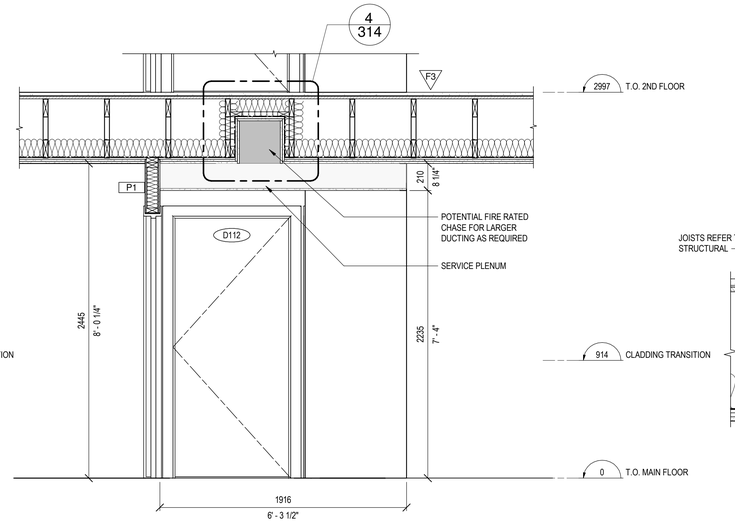
1/314 TYPICAL EAST-WEST LONGITUDINAL SECTION

SCALE: 1 : 50



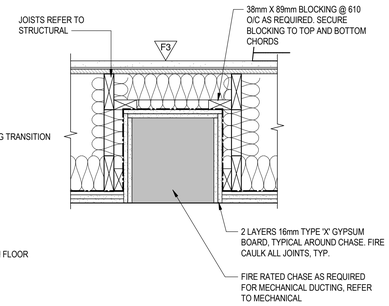
2/314 SECTION @ SOUTH ENTRY

SCALE: 1 : 20



3/314 TYPICAL BULKHEAD BETWEEN W/C AND LAUNDRY ROOM

SCALE: 1 : 20



4/314 CHASE DETAIL

SCALE: 1 : 10

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LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ
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ONTARIO ASSOCIATION OF ARCHITECTS
2025-01-24
SHANE GOLDSON
LICENCE
7303

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

SUBJECT | SUJET
BUILDING SECTIONS

PRODUCTION	REVIEWED	REVU	
DESIGNED | ÉTUDIÉ: SO			DES O | AGENT CONC
DRAWN | DESSINÉ: SO, CR			PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP			DES MGR | GÉST CONC
COORDINATION: REPUBLIC			FIRE | INCENDIE

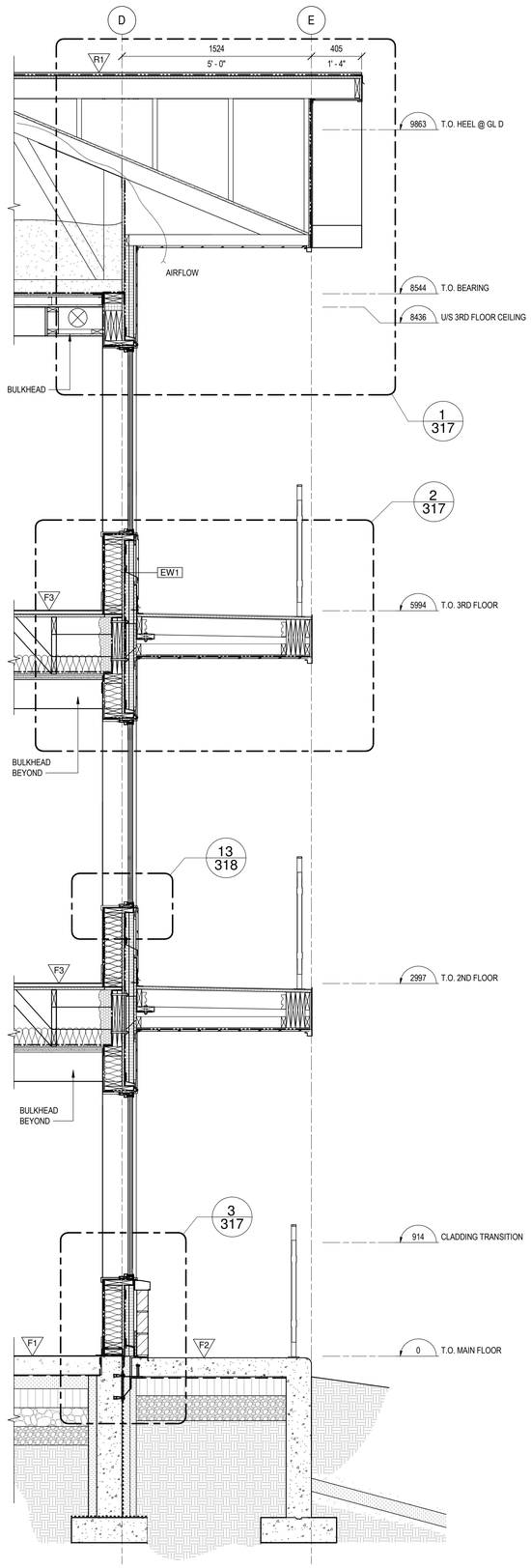
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PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN
L-KN-ZKN99 - 314 - B

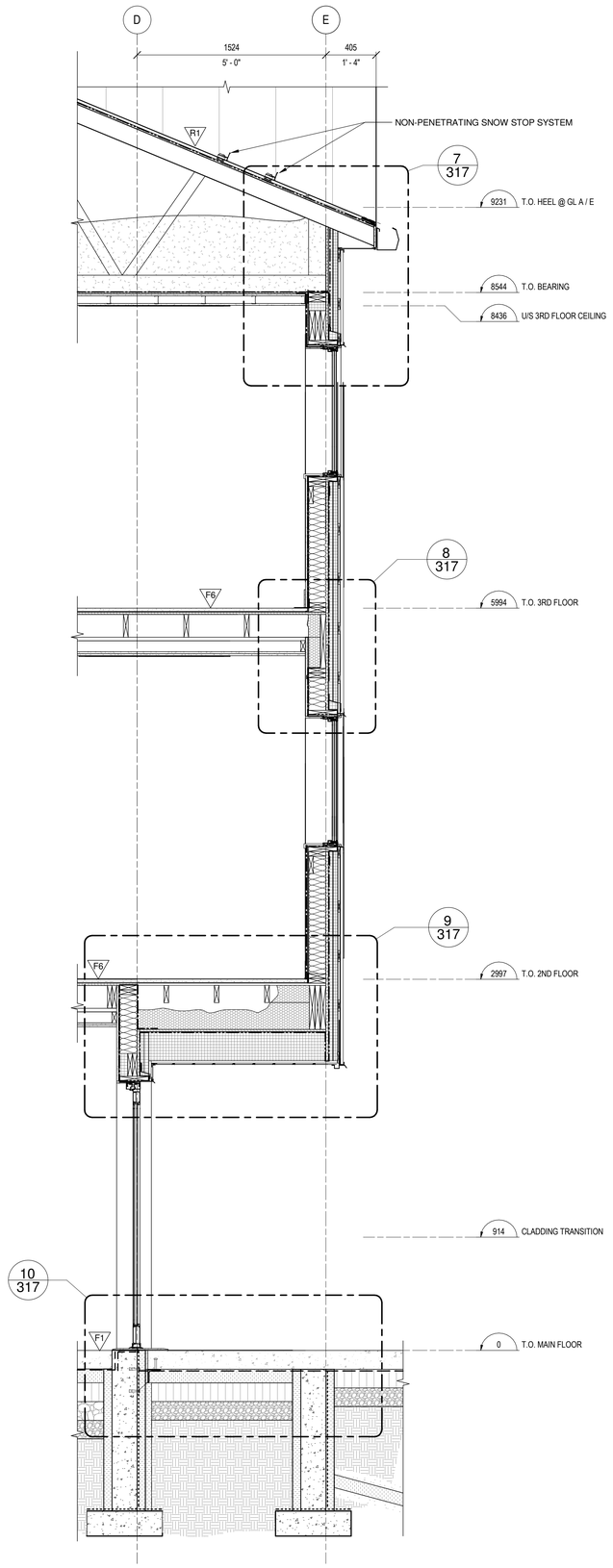
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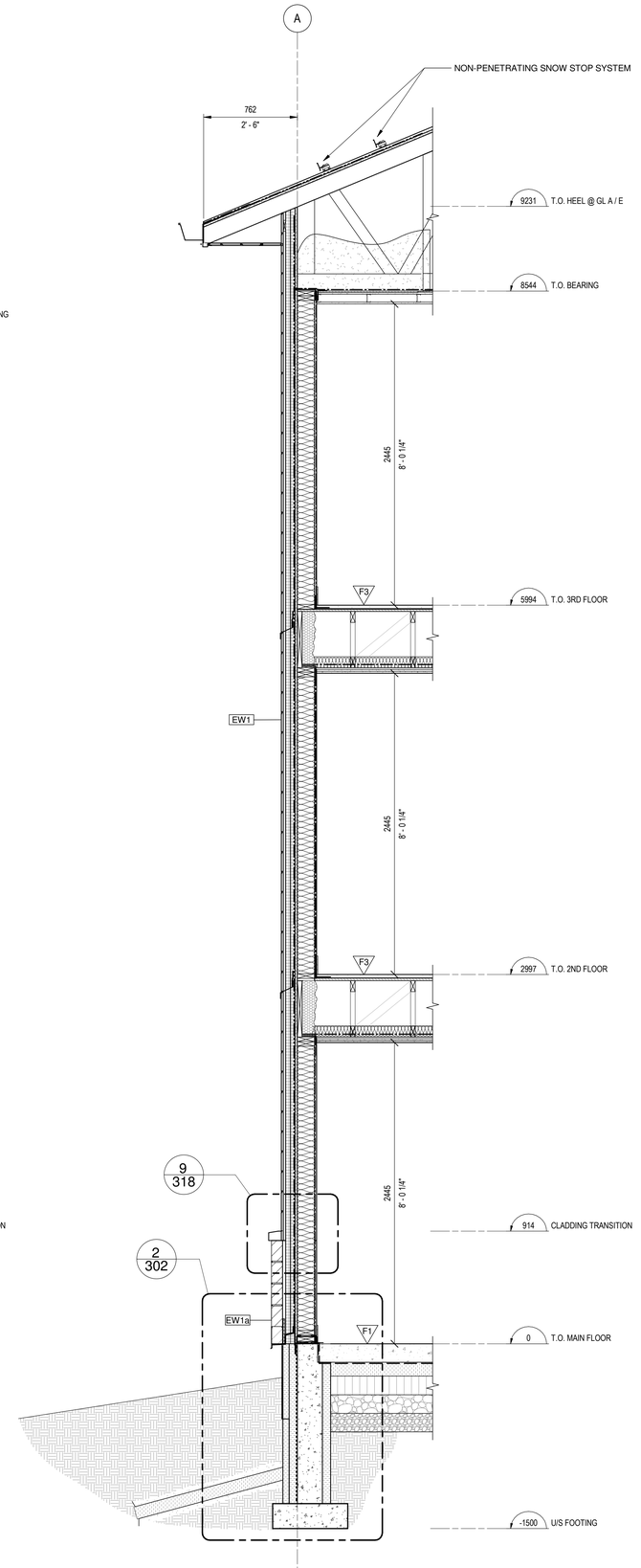
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1 / 315 TYP. SOUTH EXTERIOR WALL SECTION
SCALE: 1 : 20



2 / 315 SOUTH EXTERIOR WALL SECTION AT STAIRWELL
SCALE: 1 : 20



3 / 315 TYPICAL NORTH EXTERIOR WALL SECTION
SCALE: 1 : 20

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2025-01-24
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LICENCE
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NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

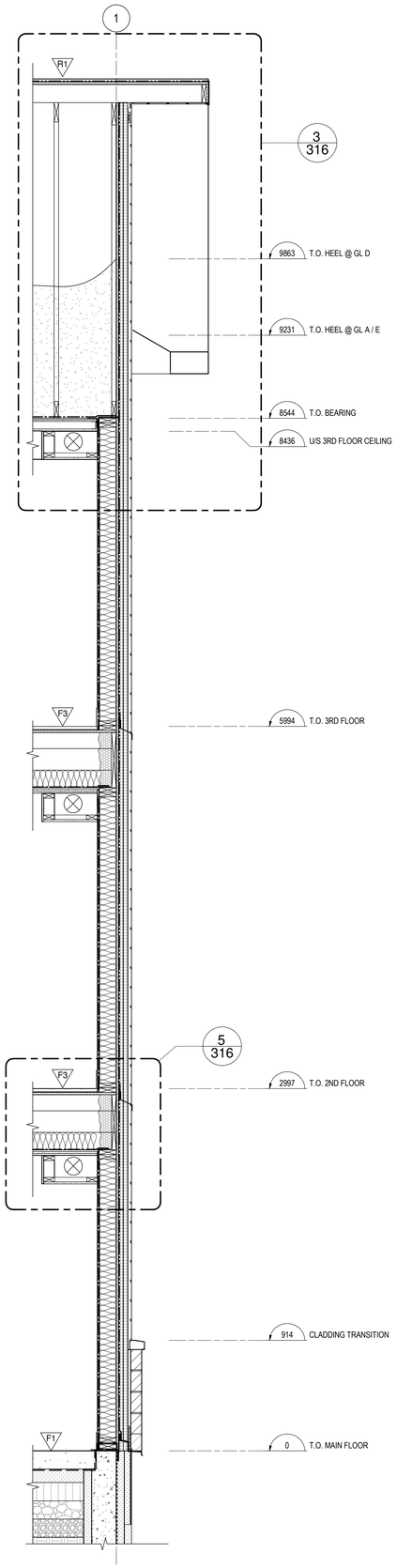
SUBJECT | SUJET
WALL SECTIONS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: SO		DES O | AGENT CONC
DRAWN | DESSINÉ: SO, CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

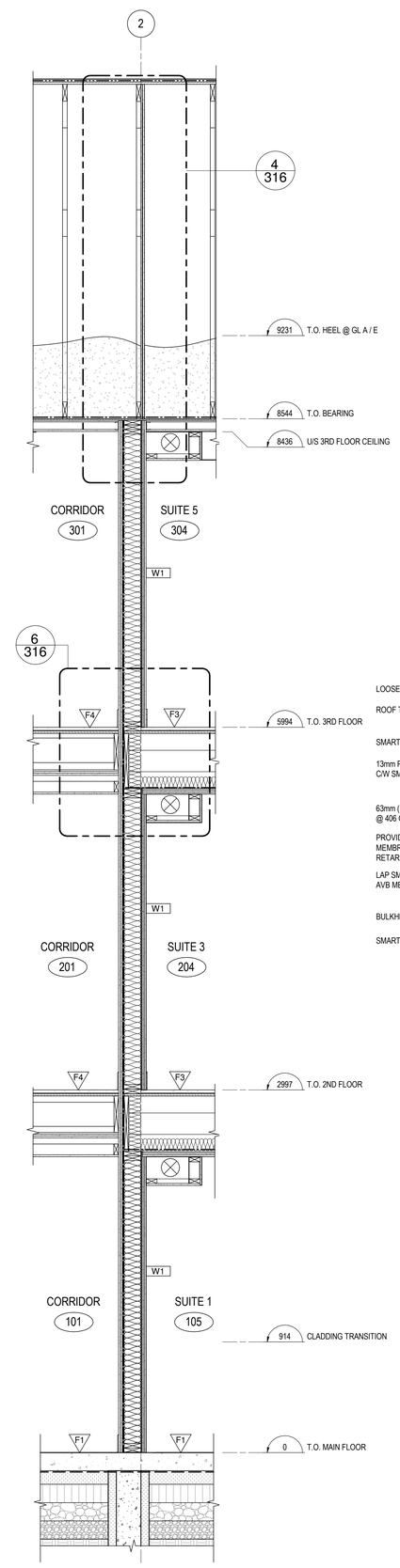
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PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 315 - B

Canada

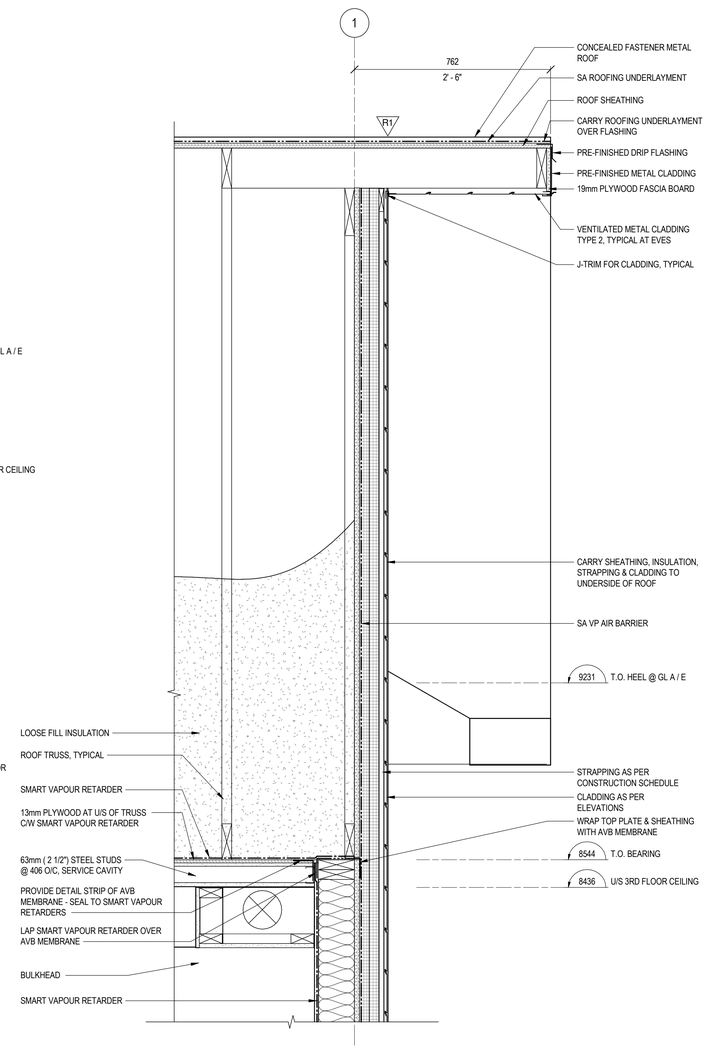
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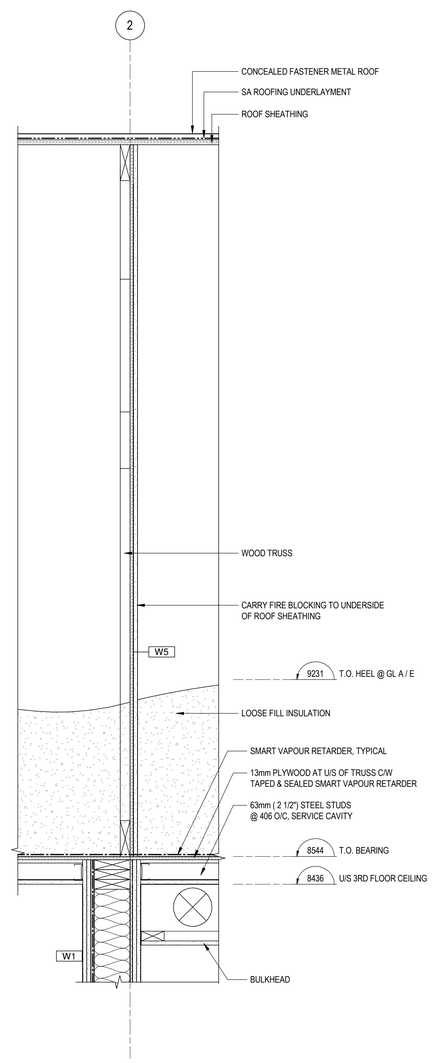
1 316 TYPICAL EXT. WALL SECTION
SCALE: 1 : 20



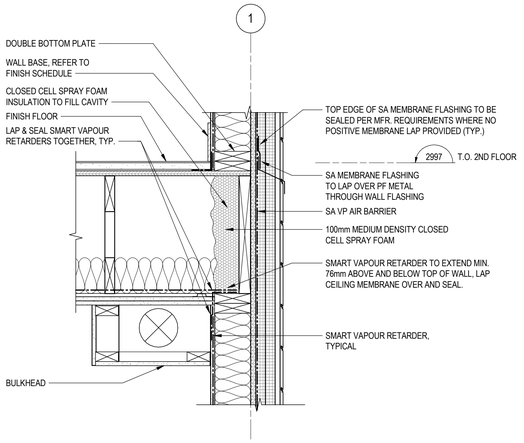
2 316 TYPICAL DEMISING WALL SECTION
SCALE: 1 : 20



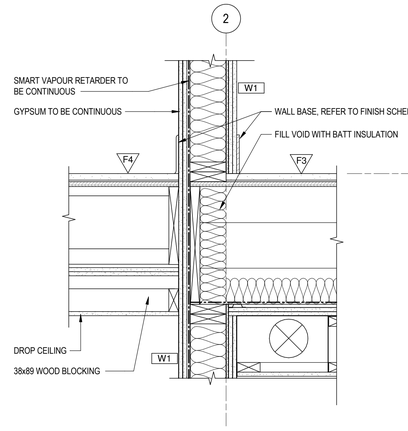
3 316 SECTION DETAIL
SCALE: 1 : 10



4 316 SECTION DETAIL
SCALE: 1 : 10



5 316 SECTION DETAIL
SCALE: 1 : 10



6 316 SECTION DETAIL
SCALE: 1 : 10

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2025-01-24
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7302

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

SUBJECT | SUJET
WALL SECTIONS & SECTION DETAILS

PRODUCTION	REVIEWED	REVU	
DESIGNED	ÉTUDIÉ		DES O | AGENT CONC
SO			
DRAWN	DESSINÉ		PRO MGR | GÉST PROJ
SO, CR			
CHECKED	VÉRIFIÉ		DES MGR | GÉST CONC
RP			
COORDINATION			FIRE | INCENDIE
REPUBLIC			

WBS NUMBER | NO. SRT
WBS #

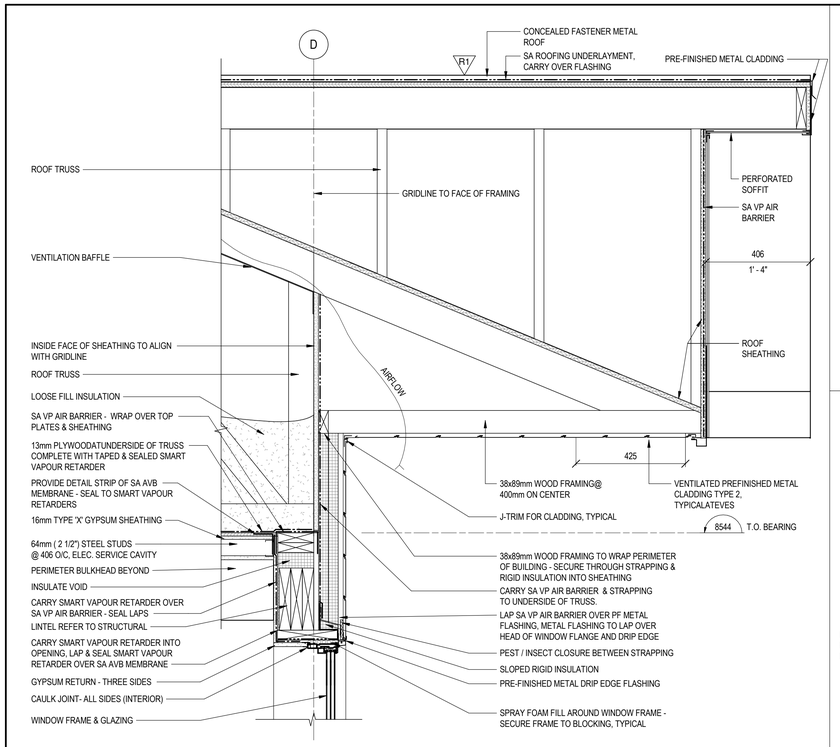
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ZKN99

DWG. NO. | NO. DESSIN
L-KN-ZKN99 - 316 - B

Canada

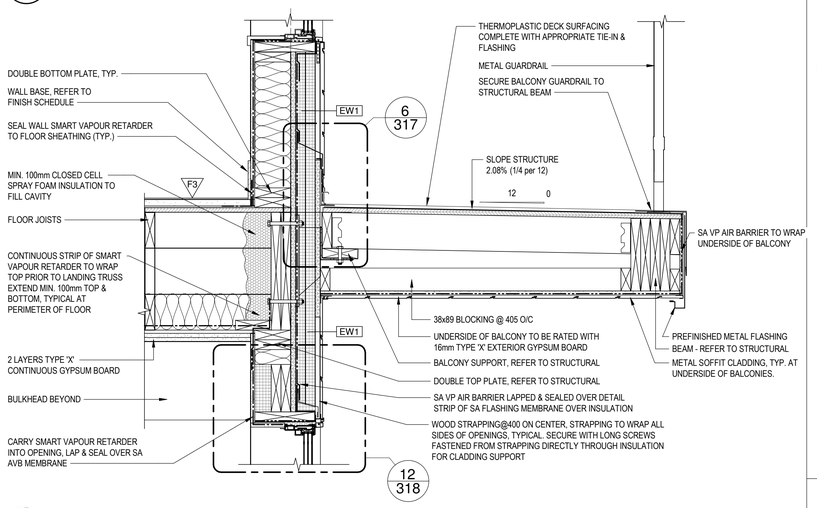
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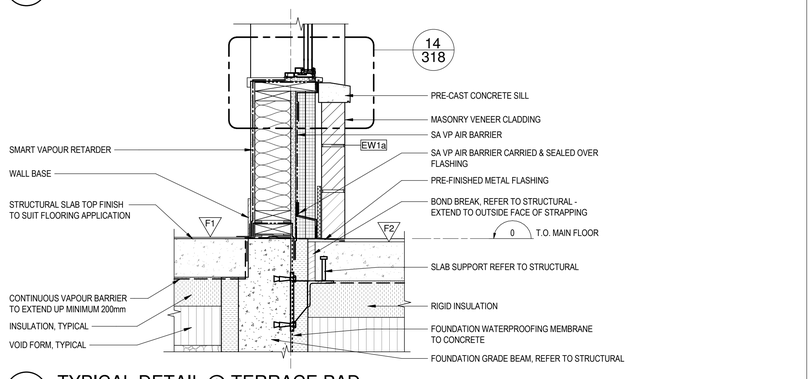
1 / 317 TYPICAL ROOF DETAIL @ OVERHANG

SCALE: 1 : 10



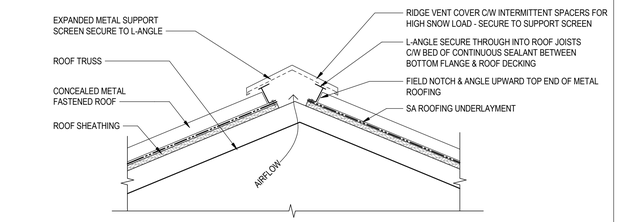
2 / 317 TYPICAL BALCONY SECTION

SCALE: 1 : 10



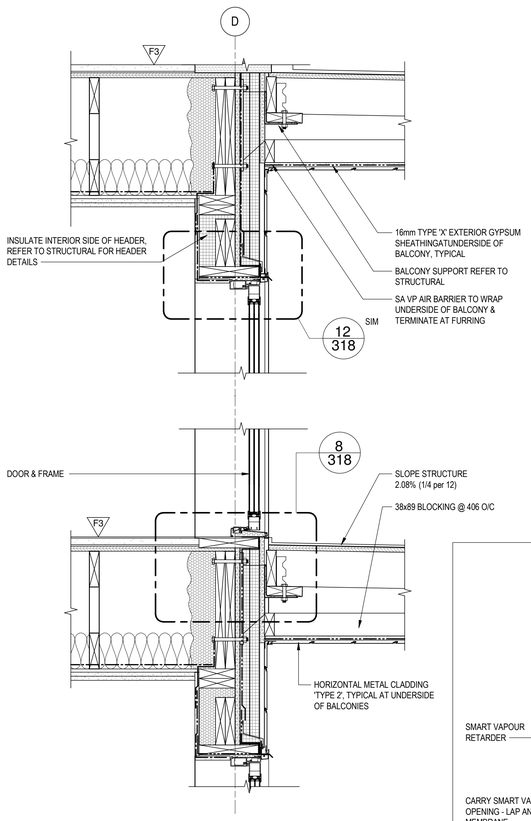
3 / 317 TYPICAL DETAIL @ TERRACE PAD

SCALE: 1 : 10



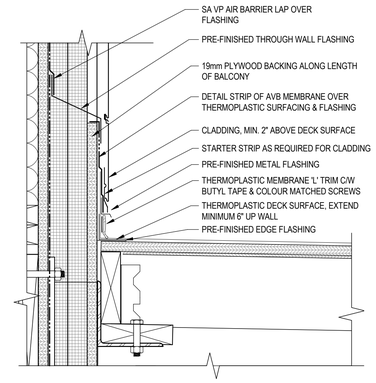
4 / 317 TYPICAL RIDGE VENTING DETAIL

SCALE: 1 : 10



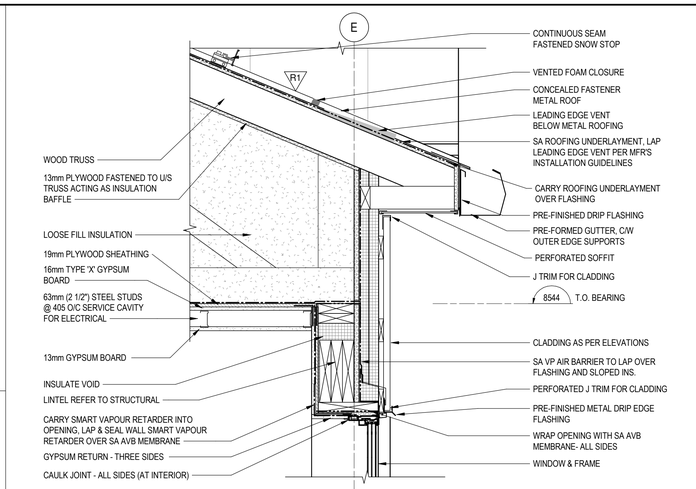
5 / 317 TYPICAL SECTION @ FIBERGLASS DOOR

SCALE: 1 : 10



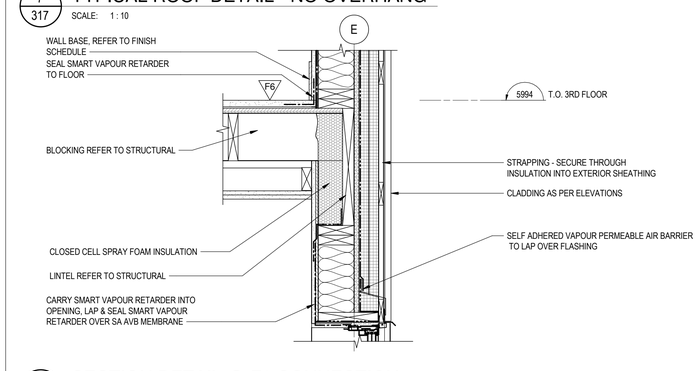
TYPICAL BALCONY DETAIL @ FLOOR TIE-IN

6 / 317 SCALE: 1 : 5



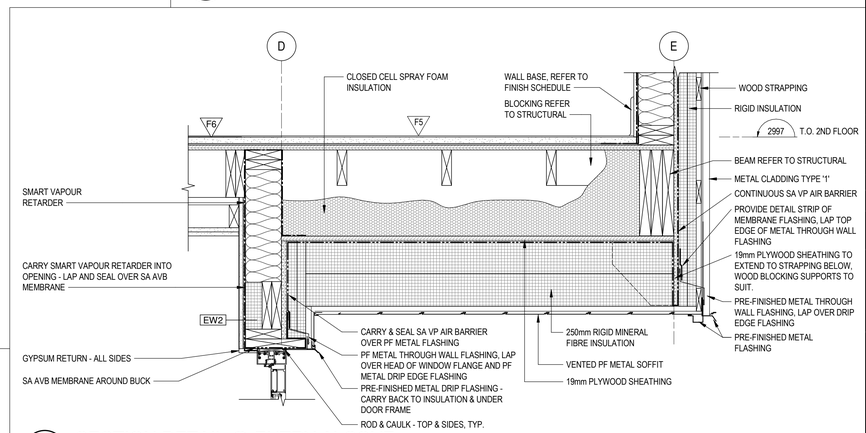
7 / 317 TYPICAL ROOF DETAIL - NO OVERHANG

SCALE: 1 : 10



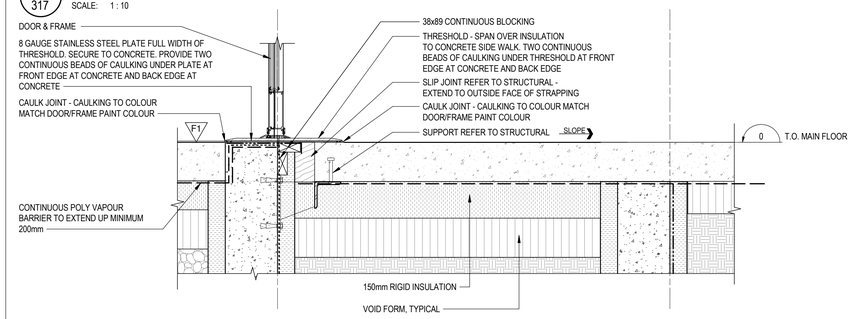
8 / 317 SECTION DETAIL @ F6 CONNECTION

SCALE: 1 : 10



9 / 317 SECTION DETAIL @ ENTRY ALCOVE

SCALE: 1 : 10



10 / 317 SECTION DETAIL @ ENTRY DOOR

SCALE: 1 : 10

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ONTARIO ASSOCIATION OF ARCHITECTS 2025-01-24 SHANE EDDISON LICENCE 7202

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: ARCHITECTURAL
DATE: 2025/01/24

SUBJECT | SUJET
SECTION DETAILS

PRODUCTION	REVIEWED	REVU	
DESIGNED | ÉTUDIÉ: SO			DES O | AGENT CONC
DRAWN | DESSINÉ: SO, CR			PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP			DES MGR | GÉST CONC
COORDINATION: REPUBLIC			FIRE | INCENDIE

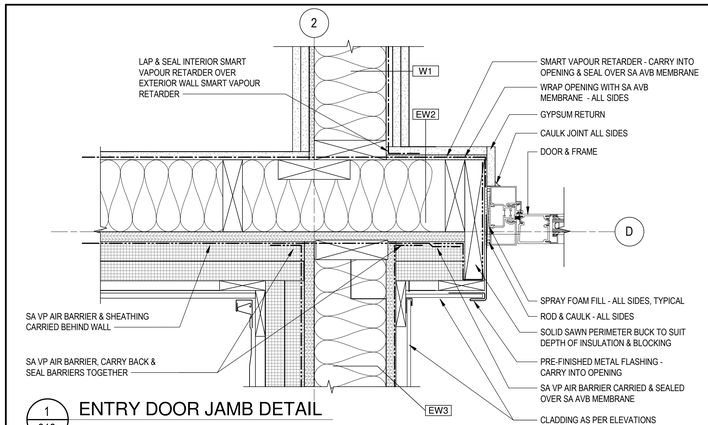
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PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 317 - B

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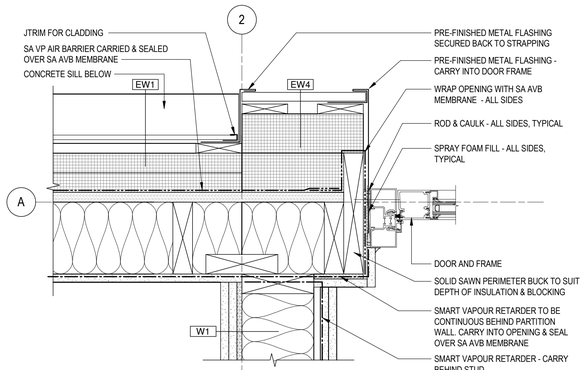
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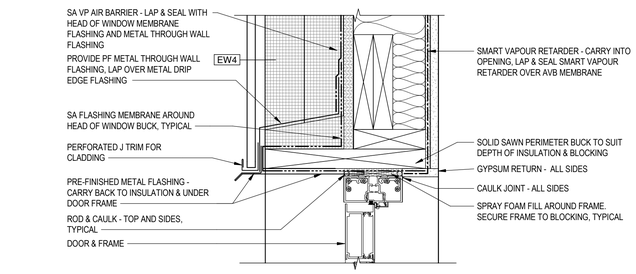
1 / 318 ENTRY DOOR JAMB DETAIL

SCALE: 1 : 5



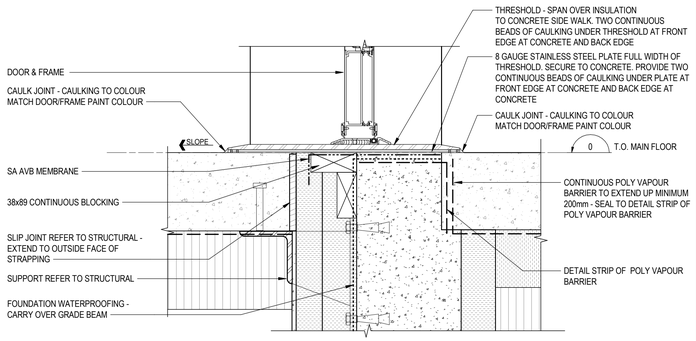
2 / 318 D103B DOOR JAMB DETAIL

SCALE: 1 : 5



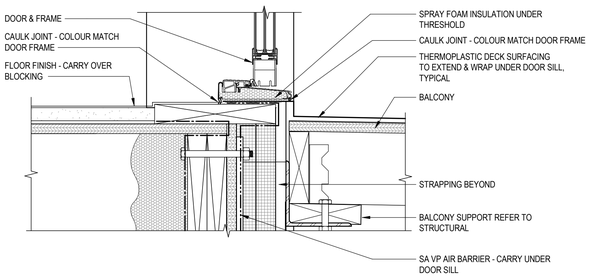
3 / 318 D103B HEAD DETAIL

SCALE: 1 : 5



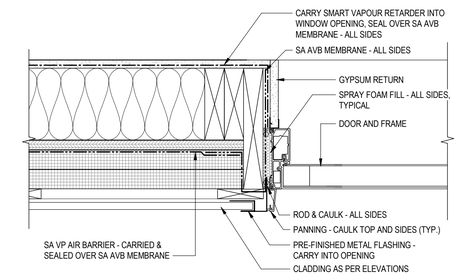
4 / 318 D103B SILL DETAIL

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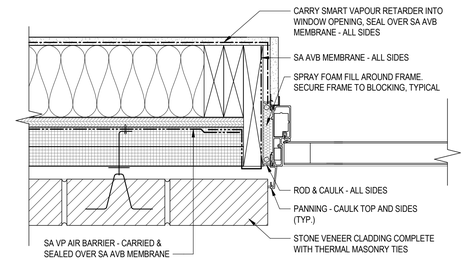
8 / 318 TYPICAL FIBERGLASS BALCONY DOOR SILL DETAIL

SCALE: 1 : 5



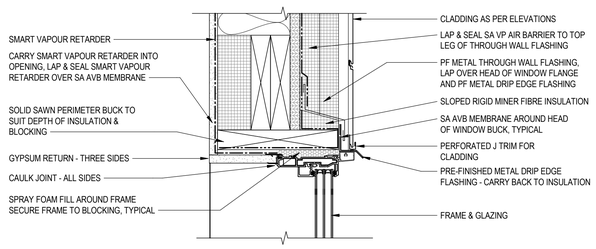
5 / 318 TYPICAL FIBERGLASS BALCONY DOOR JAMB DETAIL @ WALL EW1

SCALE: 1 : 5



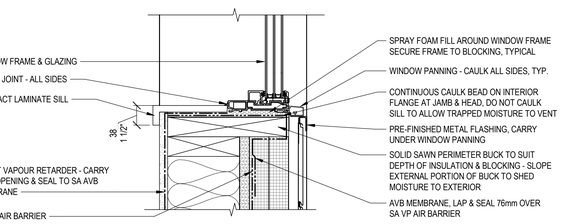
6 / 318 TYPICAL FIBERGLASS BALCONY DOOR JAMB DETAIL @ WALL EW1a

SCALE: 1 : 5



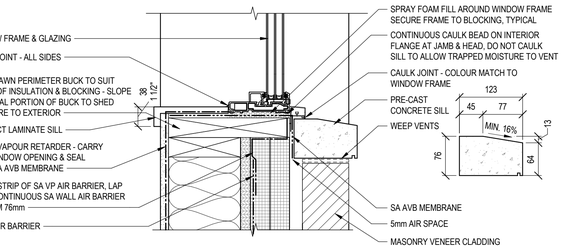
12 / 318 TYPICAL WINDOW HEAD DETAIL

SCALE: 1 : 5



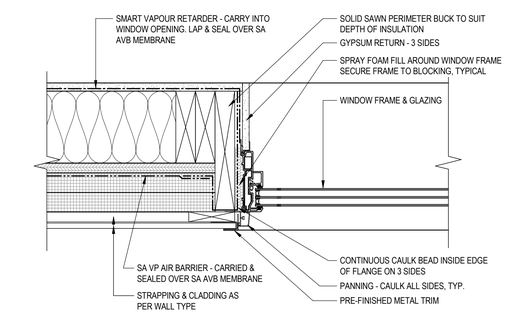
13 / 318 TYPICAL WINDOW SILL DETAIL @ EW1

SCALE: 1 : 5



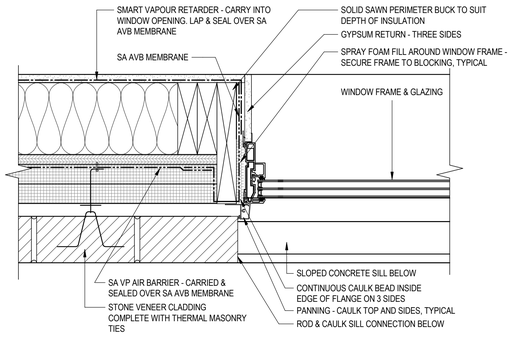
14 / 318 TYPICAL WINDOW SILL DETAIL @ EW1a

SCALE: 1 : 5



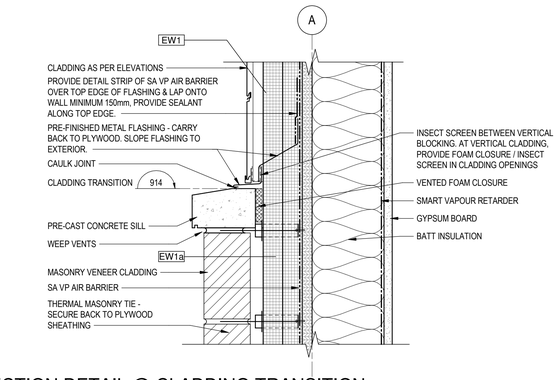
10 / 318 TYPICAL WINDOW JAMB DETAIL @ EW1

SCALE: 1 : 5



11 / 318 TYPICAL WINDOW JAMB DETAIL @ EW1a

SCALE: 1 : 5



9 / 318 SECTION DETAIL @ CLADDING TRANSITION

SCALE: 1 : 5

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ONTARIO ASSOCIATION OF ARCHITECTS
2025-01-24
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LICENCE
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NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER	DATE
ARCHITECTURAL	2025/01/24

SUBJECT | SUJET
SECTION & PLAN DETAILS

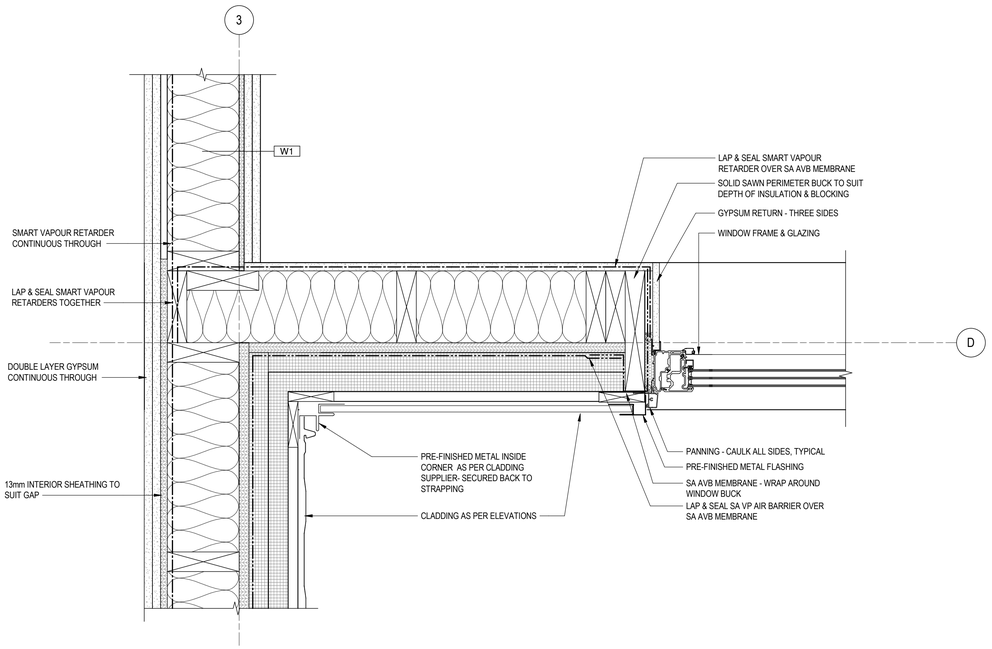
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DESIGNED | ÉTUDIÉ SO		DES O | AGENT CONC
DRAWN | DESSINÉ SO, CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ RP		DES MGR | GÉST CONC
COORDINATION REPUBLIC		FIRE | INCENDIE

WBS NUMBER | NO. SRT	PF NUMBER | NO. DP
WBS #	ZKN99

DWG. NO. | NO. DESSIN
L-KN-ZKN99 - 318 - B

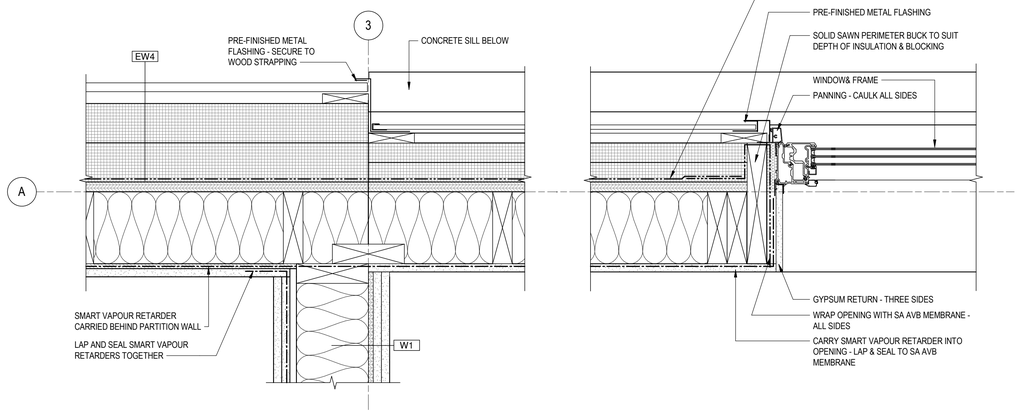
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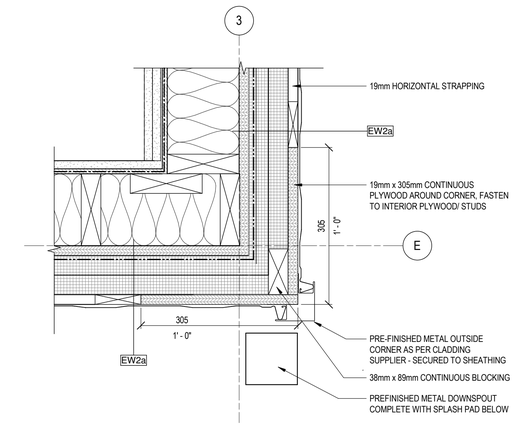
1/319 PLAN DETAIL @ STAIR BUMPOUT

SCALE: 1 : 5



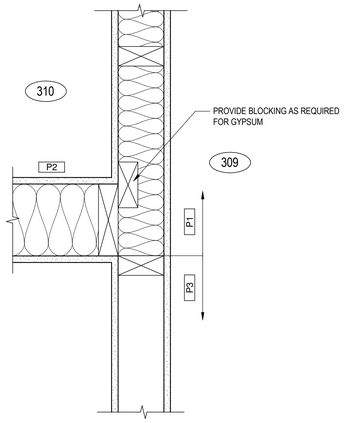
2/319 PLAN DETAIL

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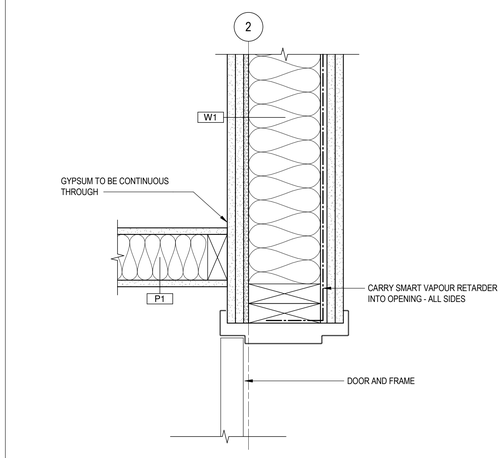
3/319 PLAN DETAIL @ STAIR BUMPOUT CORNER

SCALE: 1 : 5



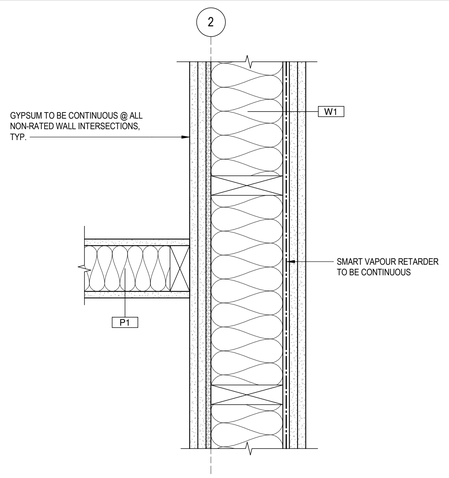
4/319 PLAN DETAIL @ SUITE MECH. ROOM

SCALE: 1 : 5



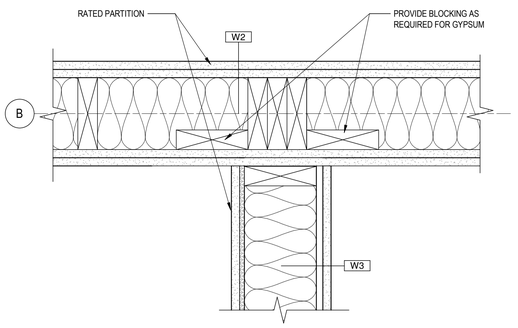
5/319 TYPICAL SUITE ENTRY DOOR JAMB DETAIL

SCALE: 1 : 5



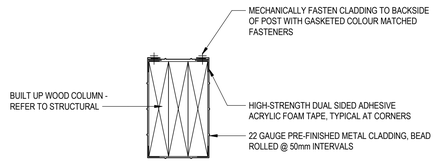
6/319 TYPICAL FIRE SEPERATION @ NON-RATED WALLS

SCALE: 1 : 5



7/319 TYPICAL FIRE SEPERATION @ INTERIOR RATED WALLS

SCALE: 1 : 5



8/319 PLAN DETAIL - COLUMN WRAP

SCALE: 1 : 5

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NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

SUBJECT | SUJET
PLAN DETAILS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ SO		DES O | AGENT CONC
DRAWN | DESSINÉ SO, CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ RP		DES MGR | GÉST CONC
COORDINATION REPUBLIC		FIRE | INCENDIE

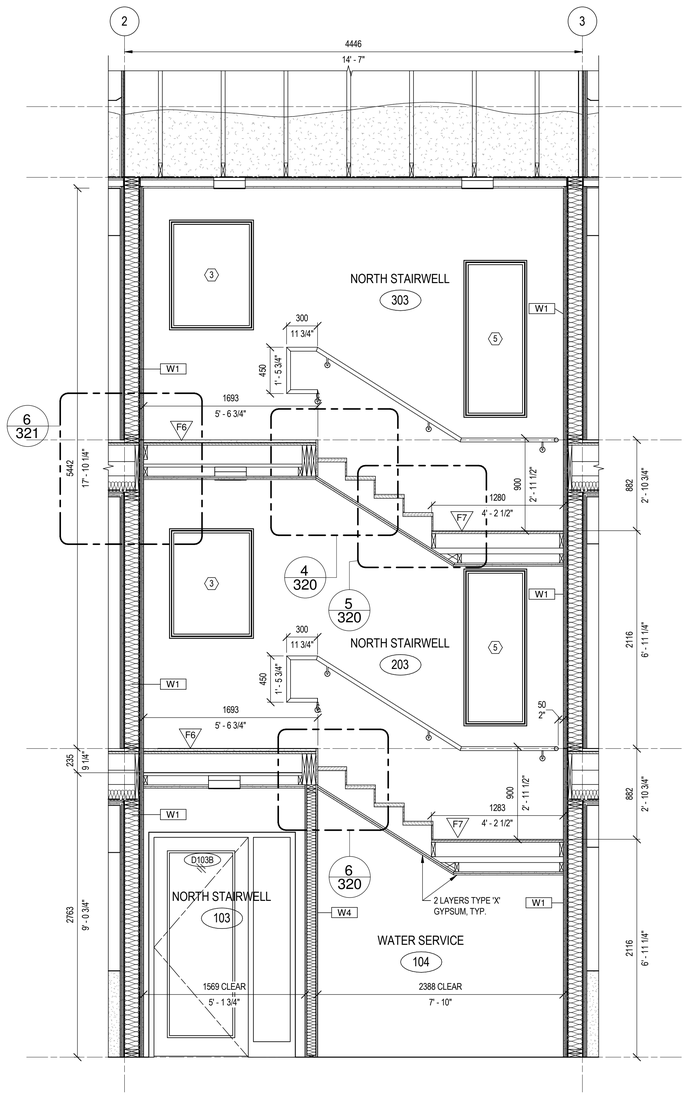
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WBS #

PF NUMBER | NO. DP
ZKN99

DWG. NO. | NO. DESSIN
L-KN-ZKN99 - 319 - B

Canada

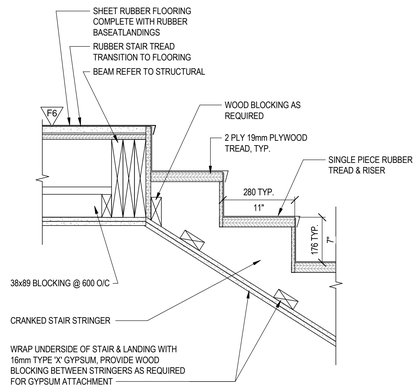
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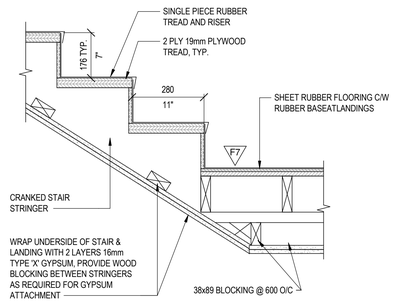
1 / 320 NORTH STAIRWELL E-W SECTION
SCALE: 1 : 25

2 / 320 SOUTH STAIRWELL E-W SECTION
SCALE: 1 : 25

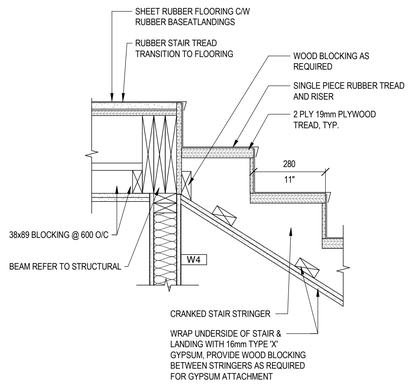
3 / 320 TYPICAL N-S STAIR SECTION
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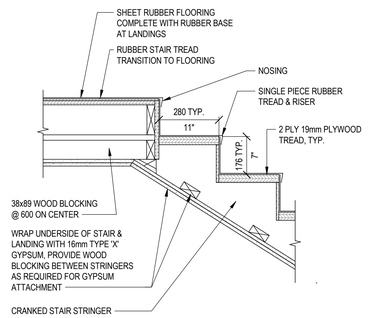
4 / 320 TYP. DEATIL TOP OF STAIR @ FLOOR
SCALE: 1 : 10



5 / 320 TYP. DEATIL @ BOTTOM OF STAIR
SCALE: 1 : 10



6 / 320 TYP. DETAIL @ WALL CONNECTION
SCALE: 1 : 10



7 / 320 TYP. DEATIL TOP OF STAIR @ LANDING
SCALE: 1 : 12

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2025-01-24
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7262

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

SUBJECT | SUJET
STAIR SECTIONS & DETAILS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ SO		DES O | AGENT CONC
DRAWN | DESSINÉ SO, CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ RP		DES MGR | GÉST CONC
COORDINATION REPUBLIC		FIRE | INCENDIE

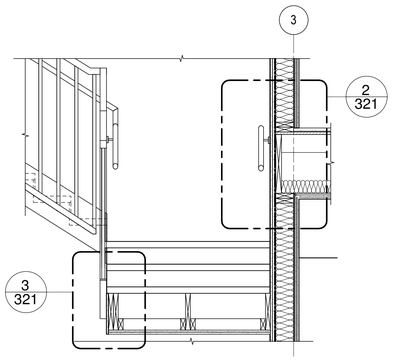
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PF NUMBER | NO. DP
ZKN99

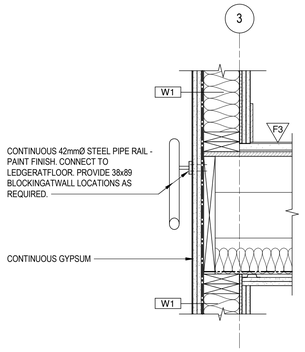
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L-KN-ZKN99 - 320 - B

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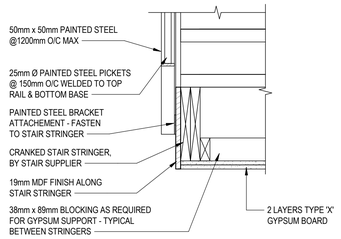
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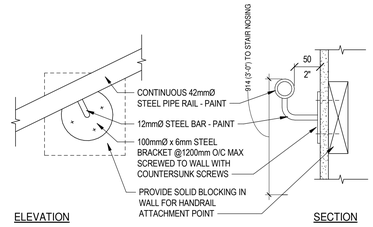
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SCALE: 1 : 20



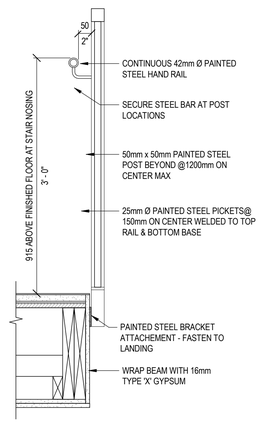
2/321 TYP. HANDRAIL DETAIL
SCALE: 1 : 10



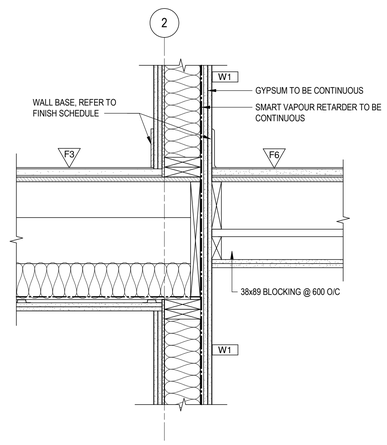
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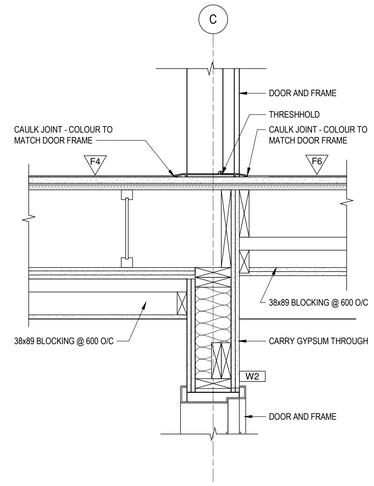
4/321 TYP. HANDRAIL DETAILS
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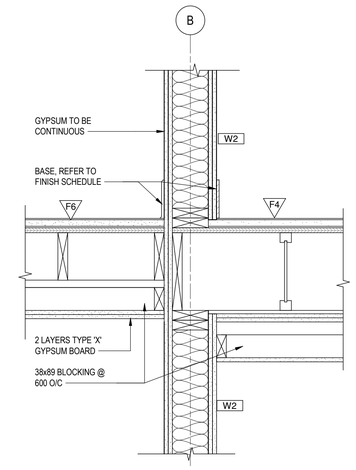
5/321 TYP. RAIL SECTION @ LANDING
SCALE: 1 : 10



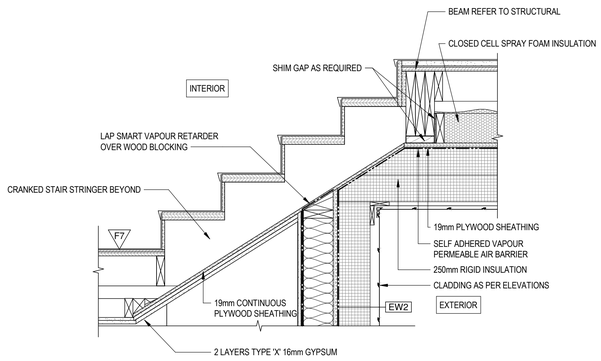
6/321 TYP. LANDING CONNECTION DETAIL
SCALE: 1 : 10



7/321 SECTION DETAIL
SCALE: 1 : 10



8/321 SECTION DETAIL
SCALE: 1 : 10



9/321 SECTION DETAIL @ ENTRY
SCALE: 1 : 12

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SCALE | ÉCHELLE
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CFHA Apartment Buildings
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TRADE | MÉTIER	DATE
ARCHITECTURAL	2025/01/24

SUBJECT | SUJET
STAIR SECTION DETAILS

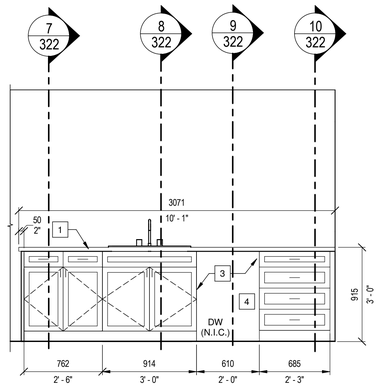
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CHECKED | VÉRIFIÉ RP		DES MGR | GÉST CONC
COORDINATION REPUBLIC		FIRE | INCENDIE

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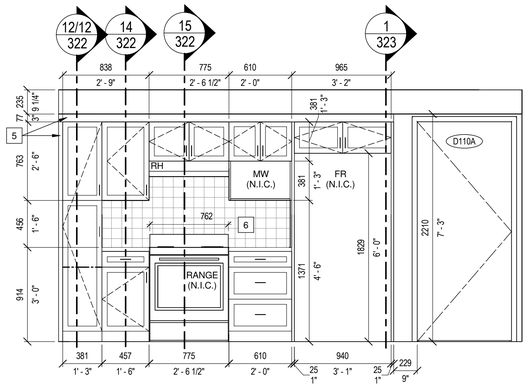
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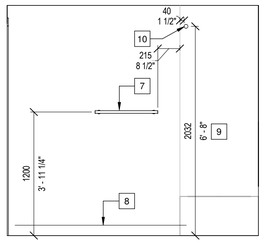
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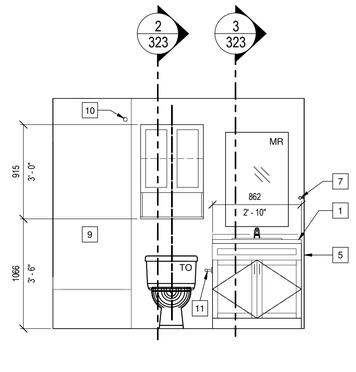
1 / 322 KITCHEN PENINSULA
SCALE: 1 : 25



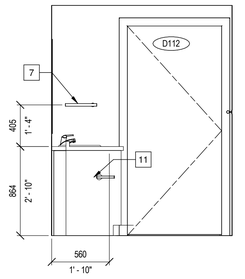
2 / 322 KITCHEN MILLWORK
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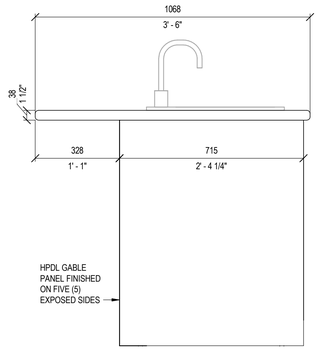
3 / 322 NORTH W/C
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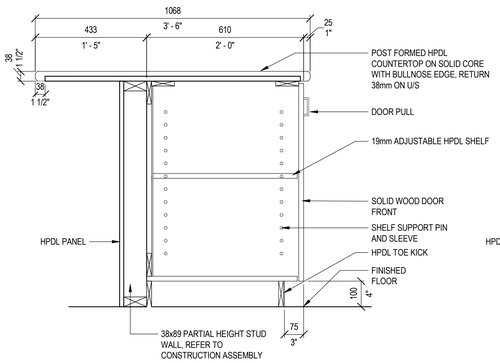
4 / 322 SOUTH W/C
SCALE: 1 : 25



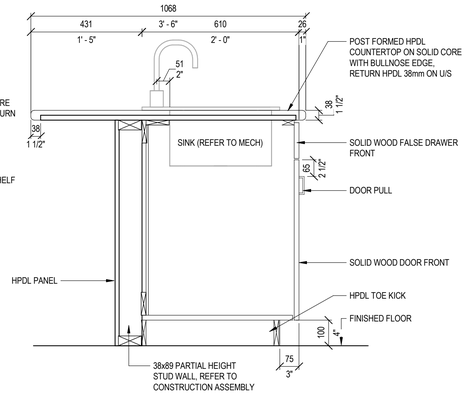
5 / 322 WEST W/C
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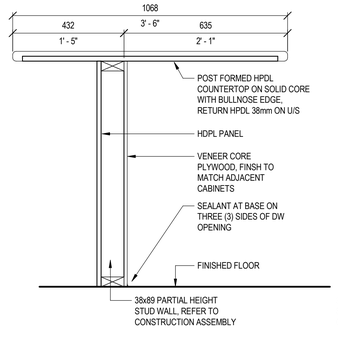
6 / 322 PENINSULA END ELEVATION
SCALE: 1 : 10



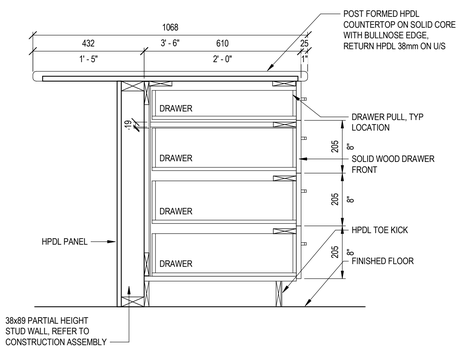
7 / 322 PENINSULA BASE SECTION
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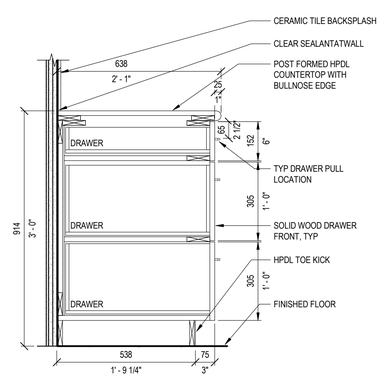
8 / 322 SINK MILLWORK SECTION
SCALE: 1 : 10



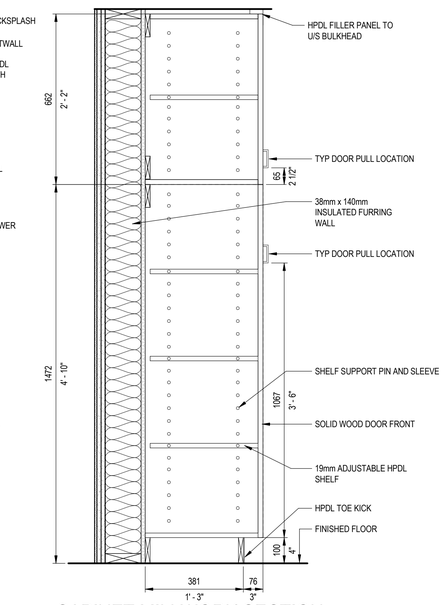
9 / 322 DISHWASHER MILLWORK SECTION
SCALE: 1 : 10



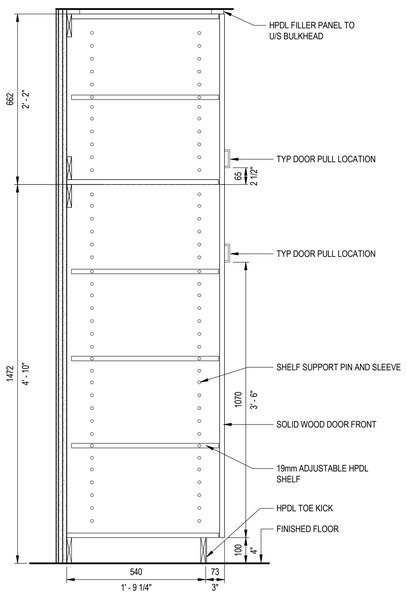
10 / 322 PENINSULA DRAWER SECTION
SCALE: 1 : 10



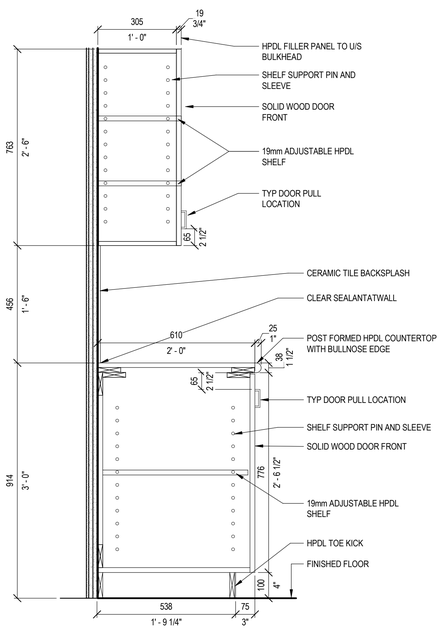
11 / 322 POT & PAN DRAWER SECTION
SCALE: 1 : 10



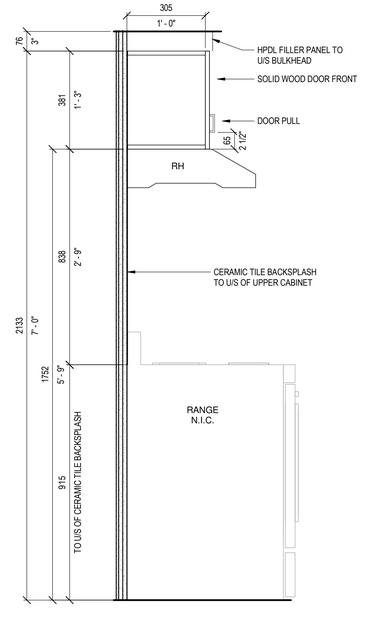
12 / 322 CABINET MILLWORK SECTION @ MAIN FLOOR
SCALE: 1 : 10



13 / 322 CABINET MILLWORK SECTION @ SECOND FLOOR
SCALE: 1 : 10



14 / 322 TYPICAL MILLWORK SECTION
SCALE: 1 : 10



15 / 322 STOVE MILLWORK SECTION
SCALE: 1 : 10

SHEET 324 KEYNOTE LEGEND

1	HPDL COUNTERTOP, SOLID CORE
3	FINISHED END
4	FINISHED PANEL, APPLIED TO PARTIAL HEIGHT WALL.
5	FILLER PANEL, MIN 25mm
6	CERAMIC TILE BACKSPLASH
7	TOWEL BAR. PROVIDE BLOCKING
8	WALL BASE AS SCHEDULED
9	TUB/SHOWER COMBINATION. REFER TO MECH
10	SHOWER ROD
11	TOILET PAPER HOLDER

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T 204 989 0102
F 204 989 0094
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ONTARIO ASSOCIATION OF ARCHITECTS
2025-01-24
SHANE EDGECOMBE
LICENCE
7052

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: ARCHITECTURAL
DATE: 2025/01/24

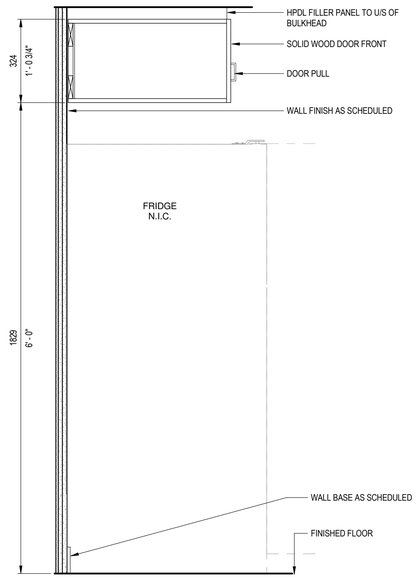
SUBJECT | SUJET
INTERIOR ELEVATIONS, MILLWORK SECTIONS & DETAILS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: SO		DES O | AGENT CONC
DRAWN | DESSINÉ: SO, CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

WBS NUMBER | NO. SRT: WBS #
PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 322 - B

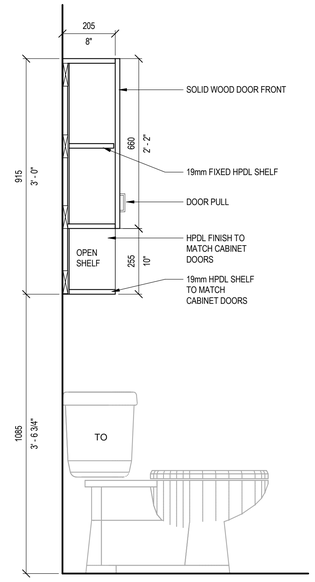
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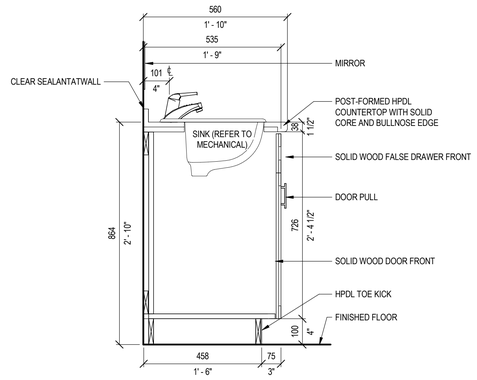
1 / 323 UPPER FRIDGE MILLWORK SECTION

SCALE: 1 : 10



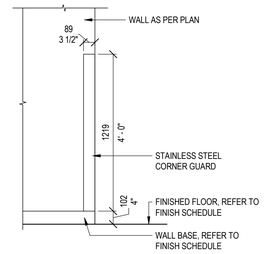
2 / 323 MEDICINE CABINET SECTION

SCALE: 1 : 10



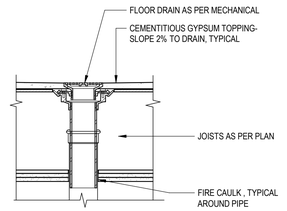
3 / 323 BATHROOM VANITY SECTION

SCALE: 1 : 10



5 / 323 TYPICAL CORNER GUARD DETAIL

SCALE: 1 : 20



4 / 323 TYPICAL FLOOR DRAIN DETAIL @ WOOD FLOORS

SCALE: 1 : 10

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LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ
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SHANE SOLOMON
LICENCE
7253

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KINGSTON, ON

PROJECT | PROJET
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Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

SUBJECT | SUJET
MILLWORK SECTIONS & TYPICAL DETAILS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: SO		DES O | AGENT CONC
DRAWN | DESSINÉ: CR, SO		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

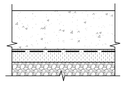
WBS NUMBER | NO. SRT: WBS #
PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN
L-KN-ZKN99 - 323 - B

Canada

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FLOOR TYPES



'SS1' SLAB ON GRADE
- FINISH AS PER ROOM FINISH SCHEDULE
- REINFORCED CONCRETE SLAB
- 10MIL VAPOUR BARRIER
- 50mm RIGID INSULATION
- COMPACTED BASE

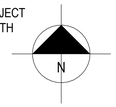
ROOF TYPES



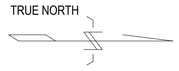
'SR1' WOOD JOIST ROOF
- CONCEALED FASTENER METAL ROOFING COLOUR AND STYLE TO MATCH APARTMENTS
- SELF ADHERED VAPOUR BARRIER ROOFING MEMBRANE
- 13mm PLYWOOD SHEATHING WITH H CLIPS
- 38x184 WOOD JOISTS @ 610 O.C.
- WHITE GALVANIZED DRIP EDGE - TYPICAL AROUND PERIMETER

NORTH ARROW

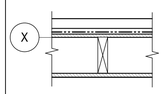
PROJECT NORTH



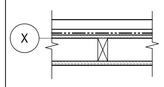
TRUE NORTH



EXTERIOR WALL TYPES

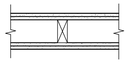


'SEW1' 140mm EXTERIOR WALL
- PRE-FINISHED VERTICAL METAL CLADDING - COLOUR AND STYLE TO MATCH APARTMENTS
- 22mm HORIZONTAL FURRING CHANNELS @ 400 O.C.
- SELF-ADHERED AIR BARRIER
- 13mm PLYWOOD SHEATHING
- 38x140 WOOD STUDS @ 400 O.C.
- 16mm PLYWOOD



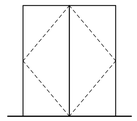
'SEW2' 89mm EXTERIOR WALL
- PRE-FINISHED METAL CLADDING - COLOUR AND STYLE TO MATCH APARTMENTS
- 22mm HORIZONTAL FURRING CHANNELS @ 400 O.C.
- SELF ADHERED AIR BARRIER
- 13mm PLYWOOD SHEATHING
- 38x89 WOOD STUDS @ 400 O.C.
- 16mm PLYWOOD

INTERIOR WALL TYPE



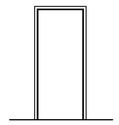
'SP1' INTERIOR SEPARATION WALL
- 2 LAYERS 13mm TYPE 'X' GYPSUM BOARD
- 38x89mm WOOD STUDS @400mm O.C.
- 2 LAYERS 13mm TYPE 'X' GYPSUM BOARD

DOOR TYPE



DOOR TYPE 1
REFER TO DOOR SCHEDULE FOR DOOR WIDTHS & HEIGHTS

FRAME TYPE



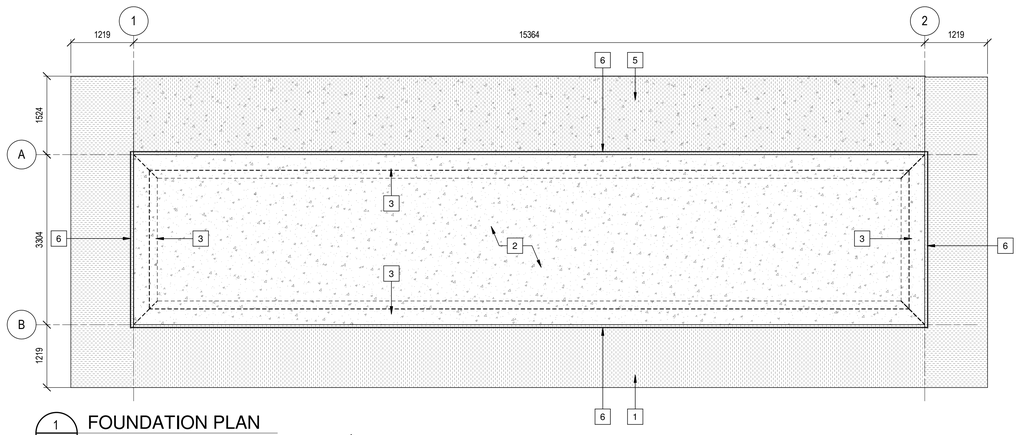
FRAME TYPE 1

DOOR SCHEDULE

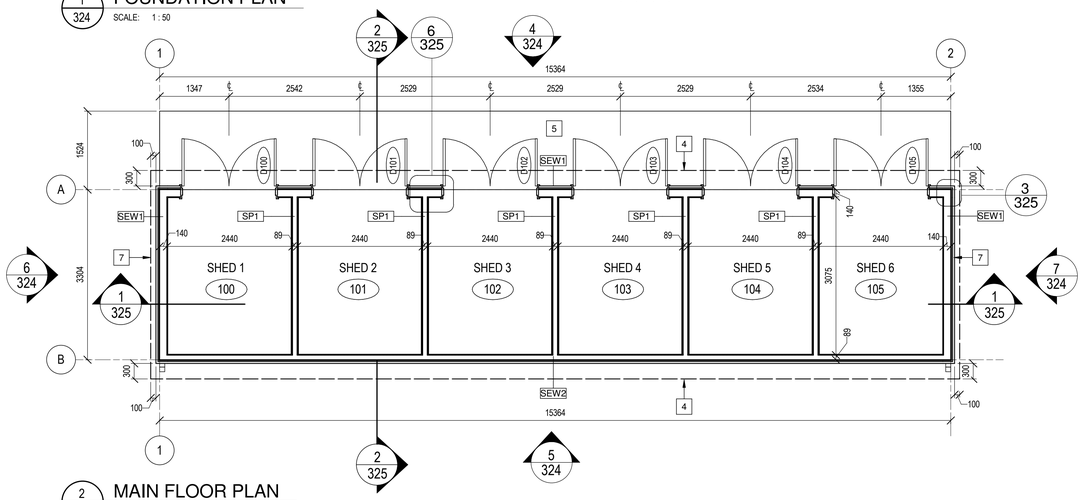
DOOR NUMBER	DOOR						FRAME				STC RATING	FIRE RATING	HARDWARE SET	NOTES
	NOMINAL SIZE (w x h x t)	TYPE	MATERIAL	FINISH	CORE	GLASS	TYPE	MATERIAL	FINISH	GLASS				
D100	1830 x 2035 x 45	1	HM	PT	-	-	1	PS	PT	-			11	
D101	1830 x 2035 x 45	1	HM	PT	-	-	1	PS	PT	-			11	
D102	1830 x 2035 x 45	1	HM	PT	-	-	1	PS	PT	-			11	
D103	1830 x 2035 x 45	1	HM	PT	-	-	1	PS	PT	-			11	
D104	1830 x 2035 x 45	1	HM	PT	-	-	1	PS	PT	-			11	
D105	1830 x 2035 x 45	1	HM	PT	-	-	1	PS	PT	-			11	

FINISH SCHEDULE

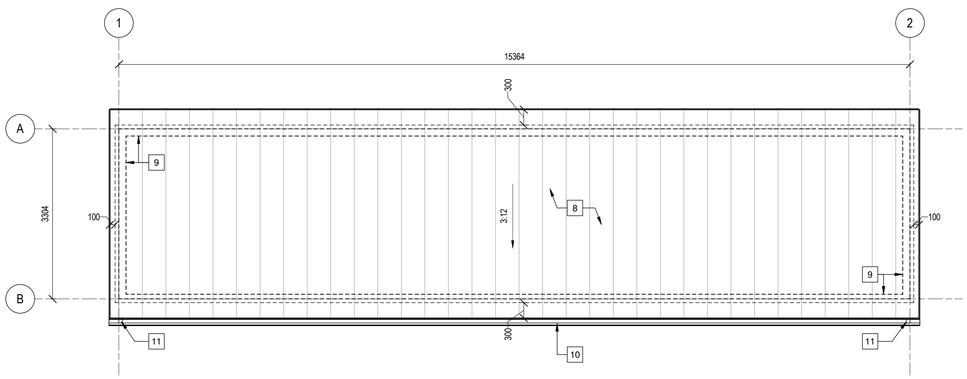
ROOM NUMBER	ROOM NAME	WALL								FLOOR		NOTES
		NORTH		EAST		SOUTH		WEST				
		MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	FLOOR MATERIAL	FLOOR FINISH	
100	SHED 1	PLYWD	PT	PLYWD	PT	PLYWD	PT	PLYWD	PT	CONC.	SEALER	
101	SHED 2	PLYWD	PT	PLYWD	PT	PLYWD	PT	PLYWD	PT	CONC.	SEALER	
102	SHED 3	PLYWD	PT	PLYWD	PT	PLYWD	PT	PLYWD	PT	CONC.	SEALER	
103	SHED 4	PLYWD	PT	PLYWD	PT	PLYWD	PT	PLYWD	PT	CONC.	SEALER	
104	SHED 5	PLYWD	PT	PLYWD	PT	PLYWD	PT	PLYWD	PT	CONC.	SEALER	
105	SHED 6	PLYWD	PT	PLYWD	PT	PLYWD	PT	PLYWD	PT	CONC.	SEALER	



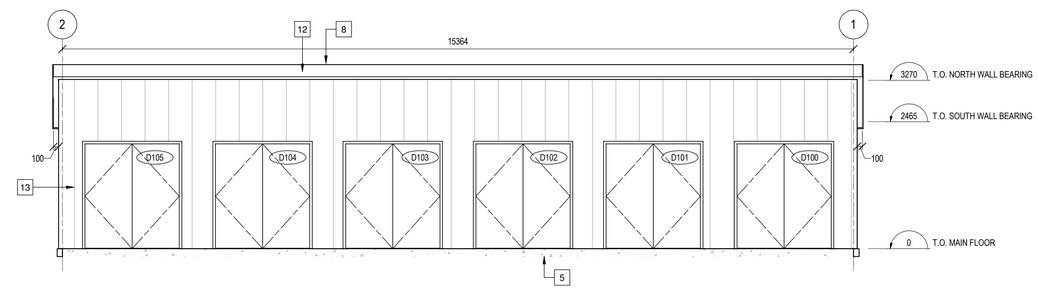
1/324 FOUNDATION PLAN
SCALE: 1 : 50



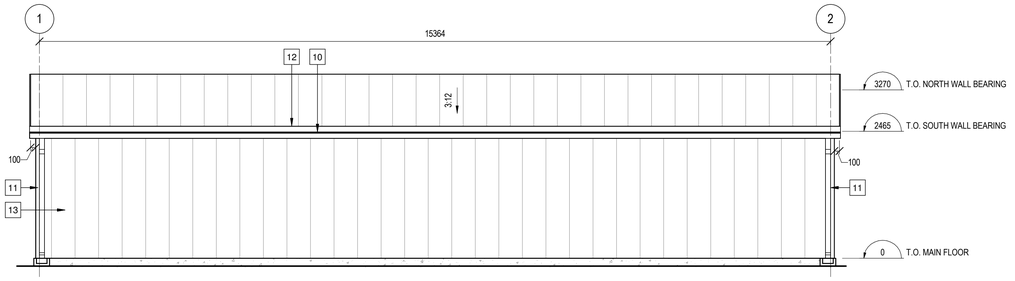
2/324 MAIN FLOOR PLAN
SCALE: 1 : 50



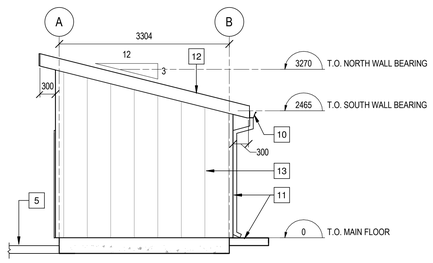
3/324 ROOF PLAN
SCALE: 1 : 50



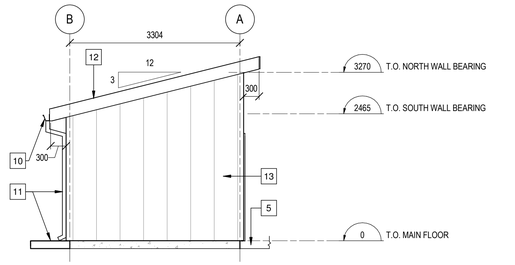
4/324 NORTH ELEVATION
SCALE: 1 : 50



5/324 SOUTH ELEVATION
SCALE: 1 : 50



6/324 WEST ELEVATION
SCALE: 1 : 50



7/324 EAST ELEVATION
SCALE: 1 : 50

SHEET 325 KEYNOTE LEGEND

1 SKIRT INSULATION 50mm THICKNESS, EXTENT AS DIMENSIONED. TYPICAL AROUND BUILDING PERIMETER
2 SLAB, REFER TO STRUCTURAL (209)
3 THICKENED EDGE, REFER TO STRUCTURAL (209)
4 ROOFLINE ABOVE, 300mm OVERHANG
5 150mm x 1524mm CONCRETE WALKWAY, LENGTH TO MATCH BUILDING. CARRY SKIRT INSULATION TO DEPTH OF WALKWAY
6 50mm CONCRETE FACED XPS INSULATION BOARD , TYPICAL AROUND FOUNDATION PERIMETER
7 ROOFLINE ABOVE, 100mm OVERHANG
8 CONCEALED FASTENER METAL ROOFING
9 WALLS BELOW
10 CONTINUOUS PRE-FINISHED METAL GUTTER 140mm WIDTH
11 PREFINISHED METAL DOWNSPOUT C/W SPLASH PAD BELOW
12 19mm PLYWOOD FASCIA COMPLETE WITH METAL FLASHING
13 PRE-FINISHED METAL CLADDING - COLOUR AND STYLE TO MATCH APARTMENTS

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ONTARIO ASSOCIATION OF ARCHITECTS
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SHANE SOUTAR
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Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

SUBJECT | SUJET
SHED - SCHEDULES, FOUNDATION PLAN, MAIN FLOOR PLAN, ROOF PLAN & ELEVATIONS

PRODUCTION | REVIEWED | REVU

DESIGNED | ÉTUDIÉ		DES O | AGENT CONC
SO		
DRAWN | DESSINÉ		PRO MGR | GÉST PROJ
CR		
CHECKED | VÉRIFIÉ		DES MGR | GÉST CONC
RP		
COORDINATION		FIRE | INCENDIE
REPUBLIC		

WBS NUMBER | NO. SRT
WBS #

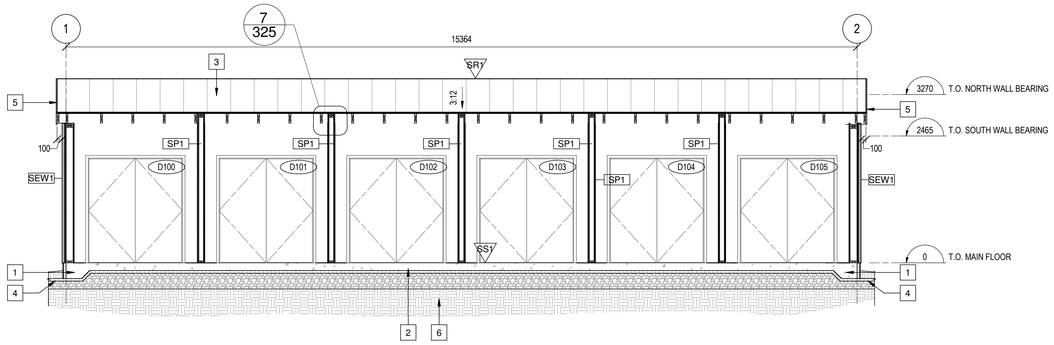
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ZBN99

DWG. NO. | NO. DESSIN
L-BN-ZBN99 - 324

Canada

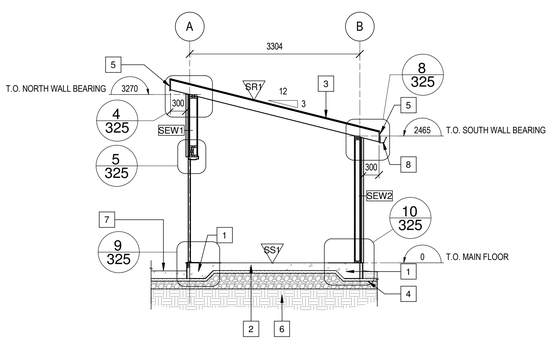
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1/325 EAST - WEST BUILDING SECTION

SCALE: 1 : 50

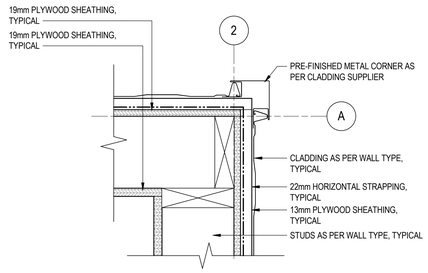


2/325 NORTH-SOUTH BUILDING SECTION

SCALE: 1 : 50

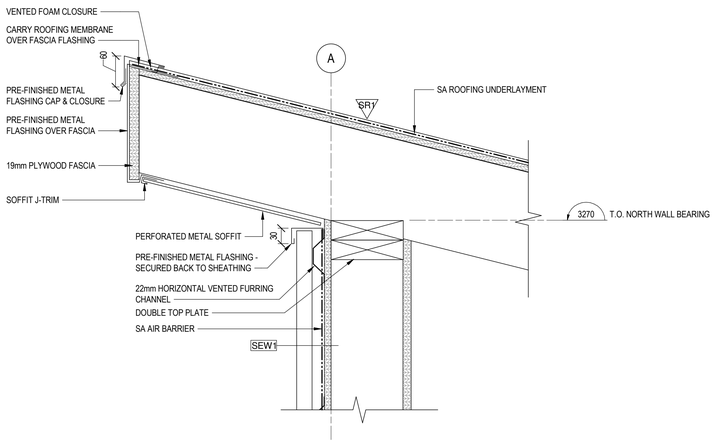
SHEET 326 KEYNOTE LEGEND

1 THICKENED EDGE, REFER TO STRUCTURAL (209)
2 SLAB, REFER TO STRUCTURAL (209)
3 CONCEALED FASTENER METAL ROOFING
4 SKIRT INSULATION 50mm THICKNESS, EXTENT AS DIMENSIONED. TYPICAL AROUND BUILDING PERIMETER
5 19mm PLYWOOD FASCIA COMPLETE WITH METAL FLASHING
6 EXISTING GRADE
7 150mm x 1524mm CONCRETE WALKWAY, LENGTH TO MATCH BUILDING. CARRY SKIRT INSULATION TO DEPTH OF WALKWAY
8 CONTINUOUS PRE-FINISHED METAL GUTTER 140mm WIDTH



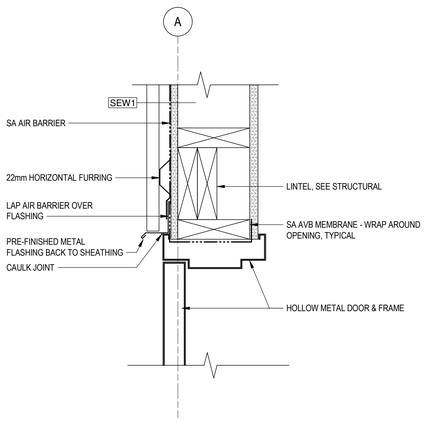
3/325 PLAN DETAIL - EXTERIOR CORNER

SCALE: 1 : 5



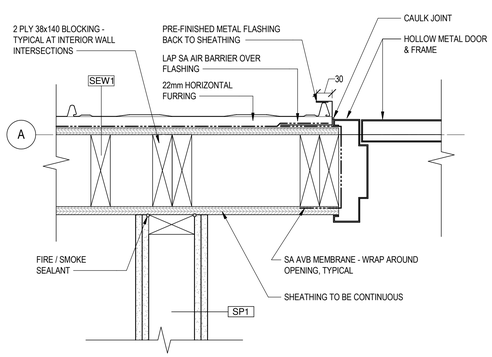
4/325 TYPICAL ROOF DETAIL

SCALE: 1 : 5



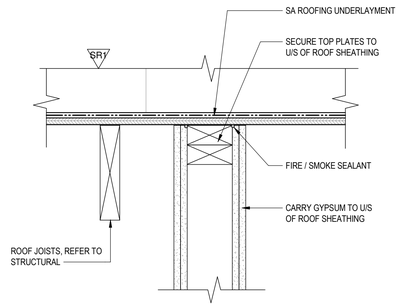
5/325 TYPIAL DOOR HEAD DETAIL

SCALE: 1 : 5



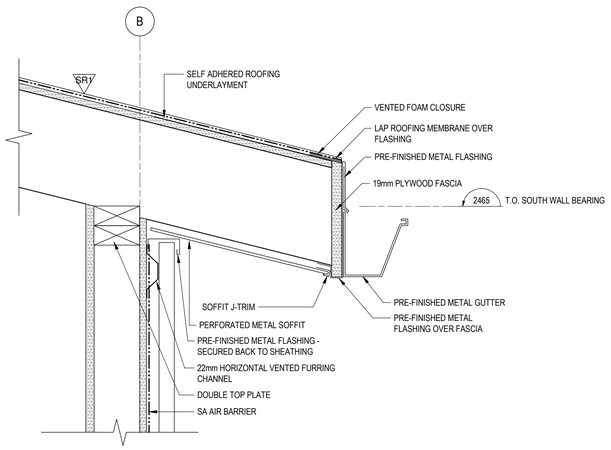
6/325 TYPICAL DOOR JAMB DETIAL

SCALE: 1 : 5



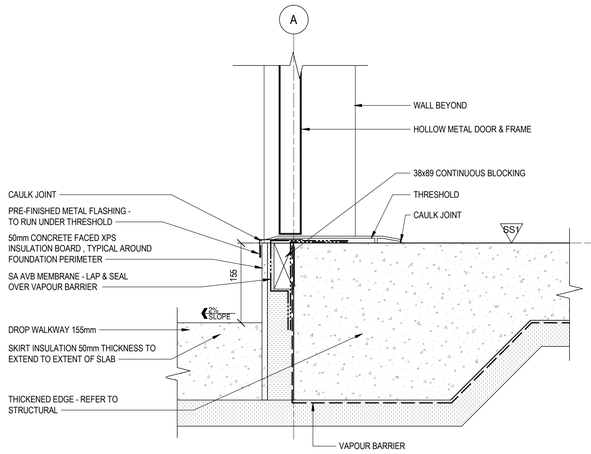
7/325 TYPICAL INTERIOR WALL @ ROOF

SCALE: 1 : 5



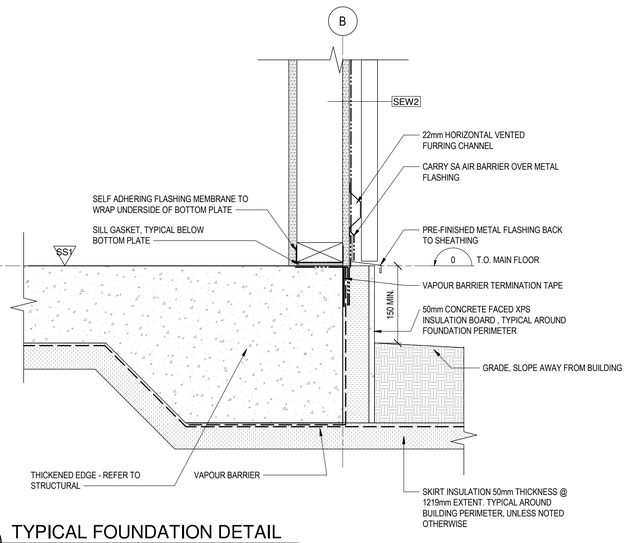
8/325 TYPICAL ROOF DETAIL @ GUTTER

SCALE: 1 : 5



9/325 TYPICAL DOOR SILL DETAIL

SCALE: 1 : 5



10/325 TYPICAL FOUNDATION DETAIL

SCALE: 1 : 5

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REPUBLIC ARCHITECTURE INC
385 St. Mary Avenue
Winnipeg, MB R3C 0N1
T 204 989 0102
F 204 989 0094
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7262

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	SO

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
CFHA Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER
ARCHITECTURAL

DATE
2025/01/24

SUBJECT | SUJET
SHED - BUILDING SECTIONS & DETAILS

PRODUCTION	REVIEWED	REVU
DESIGNED | ÉTUDIÉ: SO		DES O | AGENT CONC
DRAWN | DESSINÉ: CR		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: RP		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

WBS NUMBER | NO. SRT: WBS #
PF NUMBER | NO. DP: ZBN99

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GENERAL MECHANICAL SYMBOLS

- X — EQUIPMENT TAG
- CONTINUATION SYMBOL
- ITEM TO BE DEMOLISHED
- 50 — SIZE TAG (DIAMETER)
- 1.0% SLOPE — PIPE SLOPE TAG
- BELOW GROUND PIPING
- INVERT: -32029 — PIPE INVERT ELEVATION TAG
- (E) — EXISTING TAG
- PIPING BEING DEMOLISHED

FIRE PROTECTION SYMBOLS

- FP-W — FIRE PROTECTION WET
- FP-DOM-W — COMBINATION FIRE & DOMESTIC
- Upright Sprinkler
- Pendent Sprinkler
- Recessed Sprinkler
- Concealed Head
- Upright Sprinkler
- Pendent Sprinkler (DRY)
- Sidewall Sprinkler
- Sidewall Sprinkler (DRY)

PLUMBING AND PIPING SYMBOLS

- CD — CONDENSATE DRAINAGE
- G — NATURAL GAS
- REF-L — REFRIGERANT-LIQUID
- REF-S — REFRIGERANT-SUCTION
- REF-HG — REFRIGERANT-HOT GAS
- CW — DOMESTIC COLD WATER
- HW — HOT WATER
- HW-R — HOT WATER RECIRCULATION
- PD — PUMP DISCHARGE
- V — SANITARY VENT
- SS — SANITARY SEWER

PIPE DROP, PIPE RISE, PIPE TEE, CAP, REDUCER, CLEANOUT, BELOW GRADE CLEANOUT

PIPE ACCESSORY TAGS

Check Valve; Shutoff valve; Mixing Valve; Circuit Setter; Strainer; Dom. PRV; Dom. Water Meter; Trap Primer

DOUBLE CHECK VALVE; REDUCED PRESSURE ZONE

PLUMBING FIXTURE TAGS

DRAIN SIZE; TYPE (SEE SCHEDULE)

Floor Drain — 0 FD-1

Hub Drain — 25 FFD-1

Floor Sink — 80 FS-4

200 SD-12 — Roof Drain

HVAC SYMBOLS

- 450x300 — SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)
- 450/300 — OVAL DUCT SIZE TAG (WIDTH / HEIGHT)
- 450Ø — ROUND DUCT SIZE TAG (DIAMETER)
- (E) — EXISTING DUCT TAG
- DUCT BEING DEMOLISHED
- 450x450 S/A — SUPPLY AIR
- 450x450 S-O/A — CONDITIONED OUTSIDE AIR
- 450x450 O/A — OUTSIDE AIR
- 450x450 R/A — RETURN AIR
- 450x450 T/A — TRANSFER AIR
- 450x450 E/A — EXHAUST AIR
- DROP — RECTANGULAR SUPPLY/OUTSIDE AIR DUCT RISE
- DROP — ROUND SUPPLY/OUTSIDE AIR DUCT RISE
- DROP — RECTANGULAR RETURN/TRANSFER AIR DUCT RISE
- DROP — ROUND RETURN/TRANSFER AIR DUCT RISE
- DROP — RECTANGULAR EXHAUST/RELIEF AIR DUCT RISE
- DROP — ROUND EXHAUST/RELIEF AIR DUCT RISE
- AIRFLOW ARROW

GRILLES, REGISTERS & DIFFUSERS TAG

TYPE (SEE SCHEDULE); SD11 142 — 200Ø/600X600 — FLOW; NECK SIZE / MODULE SIZE

DAMPER TAGS

Smoke Damper (S); Motorized Damper (M); Backdraft Damper; Fire Damper (FD); Manual Damper (B D)

SENSORS & SWITCHES TAG

Thermostat (T); Humidistat (H); Switch ($)

PROJECT GENERAL NOTES

A. THIS PLAN IS DIAGRAMMATIC IN NATURE AND SHALL NOT BE SCALED TO DETERMINE THE LOCATION OR DIMENSIONS OF THE WORK. CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND ROUTING ON SITE. MINOR REROUTING OF SERVICES OR EQUIPMENT IF REQUIRED DUE TO SITE CONDITIONS OR COORDINATION WITH OTHER TRADES SHALL BE PERFORMED AT NO ADDITIONAL COST.

B. ALL NEW PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE STOPPED TO ENSURE THE CONTINUITY AND INTEGRITY OF THE FIRE SEPARATION. FIRE STOPPING SHALL BE U.L. LISTED.

C. PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.

D. FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.

E. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.

F. INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.

G. MAINTAIN CLEAR ACCESS TO SERVICE EQUIPMENT AND OTHER ACCESSORIES REQUIRING SERVICE. VISUAL INSPECTION OR HAND OPERATION. WHERE INDICATED OR REQUIRED, PROVIDE ACCESS PANELS OF THE TYPE SELECTED TO SUIT MATERIALS IN WHICH INSTALLED.

H. COORDINATE ALL EXTERIOR PENETRATIONS INCLUDING ROOF PENETRATIONS WITH OTHER TRADES TO ENSURE A COMPLETE AND FULLY WEATHER-PROOF INSTALLATION.

MECHANICAL SHEET INDEX

400	MECHANICAL SYMBOL LEGEND & SHEET LIST
401	DRAINAGE AND VENT SCHEMATIC DIAGRAM
402	WATER LINE SCHEMATIC DIAGRAM
403	FIRE PROTECTION SCHEMATIC DIAGRAM
404	MECHANICAL DETAILS
405	MECHANICAL DETAILS
406	LEVEL 1 HVAC PLAN
407	LEVEL 2 HVAC PLAN
408	LEVEL 3 HVAC PLAN
409	LEVEL 1 REFRIGERANT PIPING PLAN
410	LEVEL 2 REFRIGERANT PIPING PLAN
411	LEVEL 3 REFRIGERANT PIPING PLAN
412	MECHANICAL ROOF PLAN
413	LEVEL 1 PLUMBING PLAN
414	LEVEL 2 PLUMBING PLAN
415	LEVEL 3 PLUMBING PLAN
416	LEVEL 1 DRAINAGE PLAN
417	LEVEL 2 DRAINAGE PLAN
418	LEVEL 3 DRAINAGE PLAN
419	LEVEL 1 FIRE PROTECTION PLAN
420	LEVEL 2 FIRE PROTECTION PLAN
421	LEVEL 3 FIRE PROTECTION PLAN

HEAT RECOVERY UNIT SCHEDULE

TAG	SUPPLY AIRFLOW	ESP SUPPLY	MOTOR POWER	EXHAUST AIRFLOW	EXHAUST ESP	SENSIBLE EFF % @ -25C	SENSIBLE EFF% @ 0C	EFFICIENCY NOTES	DIMENSIONS	REMARKS
HRV-1	80 L/s	125.00 Pa	28 W	80 L/s	125.00 Pa	62	84	SENSIBLE EFFICIENCY	660mm X 559mm X 254mm	
HRV-2	80 L/s	125.00 Pa	28 W	80 L/s	125.00 Pa	62	84	SENSIBLE EFFICIENCY	660mm X 559mm X 254mm	
HRV-3	80 L/s	125.00 Pa	28 W	80 L/s	125.00 Pa	62	84	SENSIBLE EFFICIENCY	660mm X 559mm X 254mm	
HRV-4	80 L/s	125.00 Pa	28 W	80 L/s	125.00 Pa	62	84	SENSIBLE EFFICIENCY	660mm X 559mm X 254mm	
HRV-5	80 L/s	125.00 Pa	28 W	80 L/s	125.00 Pa	62	84	SENSIBLE EFFICIENCY	660mm X 559mm X 254mm	
HRV-6	80 L/s	125.00 Pa	28 W	80 L/s	125.00 Pa	62	84	SENSIBLE EFFICIENCY	660mm X 559mm X 254mm	

HEAT PUMP CONDENSING UNIT KINGSTON

TAG	SERVES	COOLING			HEATING		WEIGHT	COP	SEER2	HSPF2	NOTES
		OUTDOOR DB	OUTDOOR WB	RATED CAPACITY	OUTDOOR DB	RATED HEATING CAPACITY					
CU-1	HP-1	35 C	23.9 C	3.52 kW	8.3 °C	4.10 kW	35.6 KG	3.5	18.5	9.1	
CU-2	HP-2	35 C	23.9 C	3.52 kW	8.3 °C	4.10 kW	35.6 KG	3.5	18.5	9.1	
CU-3	HP-3	35 C	23.9 C	3.52 kW	8.3 °C	4.10 kW	35.6 KG	3.5	18.5	9.1	
CU-4	HP-4	35 C	23.9 C	3.52 kW	8.3 °C	4.10 kW	35.6 KG	3.5	18.5	9.1	
CU-5	HP-5	35 C	23.9 C	3.52 kW	8.3 °C	4.10 kW	35.6 KG	3.5	18.5	9.1	
CU-6	HP-6	35 C	23.9 C	3.52 kW	8.3 °C	4.10 kW	35.6 KG	3.5	18.5	9.1	
CU-7	HP-7	35 C	23.9 C	5.28 kW	8.3 °C	5.86 kW	57.7 KG	3.5	18	8.5	

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE

TAG	DESCRIPTION	MATERIAL	COLOUR	NOTES
A	DOUBLE DEFLECTION GRILLE	STEEL	WHITE ENAMEL	C/W OPPOSED BLADE DAMPER
B	EGG CRATE GRILLE	STEEL	WHITE ENAMEL	
C	LOUVERED GRILLE	STEEL	WHITE ENAMEL	

HEAT PUMP UNIT SCHEDULE

TAG	ASSOCIATED EQUIPMENT	INDOOR UNIT AIRFLOW	EXTERNAL STATIC PRESSURE	COOLING			HEATING		REMARKS
				INDOOR TEMP DB	INDOOR TEMP WB	TOTAL CAPACITY	INDOOR TEMP	SENSIBLE CAPACITY	
HP-1	CU-1	188 L/s	149.00 Pa	25 °C	17 °C	3.52 kW	20 °C	4.1 kW	
HP-2	CU-2	188 L/s	149.00 Pa	25 °C	17 °C	3.52 kW	20 °C	4.1 kW	
HP-3	CU-3	188 L/s	149.00 Pa	25 °C	17 °C	3.52 kW	20 °C	4.1 kW	
HP-4	CU-4	188 L/s	149.00 Pa	25 °C	17 °C	3.52 kW	20 °C	4.1 kW	
HP-5	CU-5	188 L/s	149.00 Pa	25 °C	17 °C	3.52 kW	20 °C	4.1 kW	
HP-6	CU-6	188 L/s	149.00 Pa	25 °C	17 °C	3.52 kW	20 °C	4.1 kW	
HP-7	CU-7	283 L/s	200.00 Pa	25 °C	17 °C	5.28 kW	19 °C	5.9 kW	

ELECTRIC HOT WATER HEATER SCHEDULE

TAG	DESCRIPTION	LOCATIONS	HEAT INPUT	UNIFORM ENERGY FACTOR	STORAGE TEMP	TEMP RISE	STORAGE DESIGN		REMARKS
							RECOVERY RATE	STORAGE CAPACITY	
HWT-1	HEAT PUMP WATER HEATER	MECH/ ELEC ROOM	4.5 kW	3.88	60 °C	32 °C	98 LPH	189 L	
HWT-2	HEAT PUMP WATER HEATER	MECH/ ELEC ROOM	4.5 kW	3.88	60 °C	32 °C	98 LPH	189 L	
HWT-3	HEAT PUMP WATER HEATER	MECH/ ELEC ROOM	4.5 kW	3.88	60 °C	32 °C	98 LPH	189 L	
HWT-4	HEAT PUMP WATER HEATER	MECH/ ELEC ROOM	4.5 kW	3.88	60 °C	32 °C	98 LPH	189 L	
HWT-5	HEAT PUMP WATER HEATER	MECH/ ELEC ROOM	4.5 kW	3.88	60 °C	32 °C	98 LPH	189 L	
HWT-6	HEAT PUMP WATER HEATER	MECH/ ELEC ROOM	4.5 kW	3.88	60 °C	32 °C	98 LPH	189 L	
HWT-7	ELECTRIC WATER HEATER	MECH/ ELEC ROOM	3.0 kW	N/A	60 °C	32 °C	53 LPH	38 L	

ELECTRIC DUCT COIL HEATER

TAG	HEATING CAPACITY	AIRFLOW	WIDTH	HEIGHT	CONTROLS	REMARKS
EDC-1	4500 W	189 L/s	200 mm	500 mm	SINGLE STAGE	
EDC-2	4500 W	189 L/s	200 mm	500 mm	SINGLE STAGE	
EDC-3	4500 W	189 L/s	200 mm	500 mm	SINGLE STAGE	
EDC-4	4500 W	189 L/s	200 mm	500 mm	SINGLE STAGE	
EDC-5	4500 W	189 L/s	200 mm	500 mm	SINGLE STAGE	
EDC-6	4500 W	189 L/s	200 mm	500 mm	SINGLE STAGE	
EDC-7	10500 W	283 L/s	100 mm	600 mm	C/W SCR	
EDC-8	10500 W	283 L/s	100 mm	600 mm	C/W SCR	

FORCE FLOW HEATER SCHEDULE

TAG	AIRFLOW	HEATING OUTPUT	CONTROLS	REMARKS
FF-1	76 L/s	4.00 kW	BUILT-IN THERMOSTAT	
FF-2	76 L/s	4.00 kW	BUILT-IN THERMOSTAT	

RANGE HOOD FAN

TAG	QUANTITY	FAN TYPE	AIRFLOW	STATIC PRESSURE	REQUIRED POWER	REMARKS
RH-1	6	RANGE HOOD	118 L/s	25.00 Pa	96.00 W	

EXPANSION TANK SCHEDULE

TAG	TANK VOLUME	ACCEPTANCE VOLUME	HEIGHT	DIAMETER	PRECHARGE PRESSURE	MAXIMUM SYSTEM PRESSURE	REMARKS
ET-1	132.00 L	89.00 L	1143	406	414 kPa	1034 kPa	

DRYER EXHAUST FAN

TAG	QUANTITY	FAN TYPE	AIRFLOW	STATIC PRESSURE	RPM	REQUIRED POWER	REMARKS
DEF-1	6	DRYER EXHAUST FAN	71 L/s	50.00 Pa	2587	78.00 W	C/W SECONDARY LINT TRAP

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1	2025/01/24	ISSUED FOR TENDER	CT

SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL

DATE: 2025/01/24

SUBJECT | SUJET: MECHANICAL SYMBOL LEGEND & SHEET LIST

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
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COORDINATION		FIRE | INCENDIE

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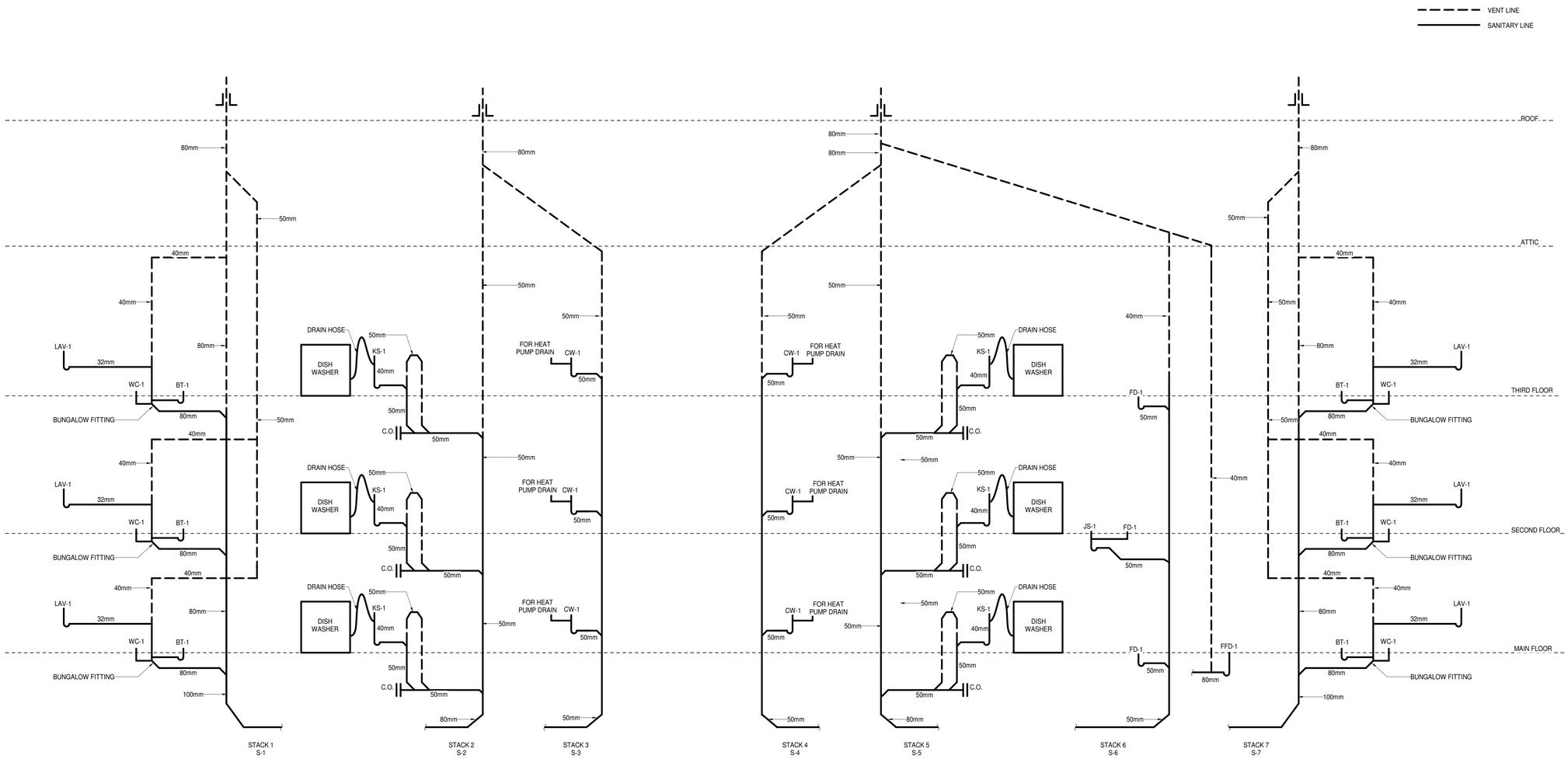
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PLUMBING FIXTURES	
LABEL	DESCRIPTION
WC-1	WATER CLOSET
LAV-1	LAVATORY
CW-1	CLOTHES WASHER
DW-1	DISHWASHER
KS-1	KITCHEN SINK
BT-1	BATHTUB
FFD-1	FUNNEL FLOOR DRAIN
FD-1	FLOOR DRAIN
HB-1	HOSE BIBB
FR-1	FRIDGE
JS-1	JANITOR SINK



1/401 DRAIN AND VENT SCHEMATIC DIAGRAM
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T 204 989 0102
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2025-01-24
C. J. TAIT
100595866
PROVINCE OF ONTARIO

NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET
DRAIN AND VENT SCHEMATIC DIAGRAM

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
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COORDINATION		FIRE | INCENDIE

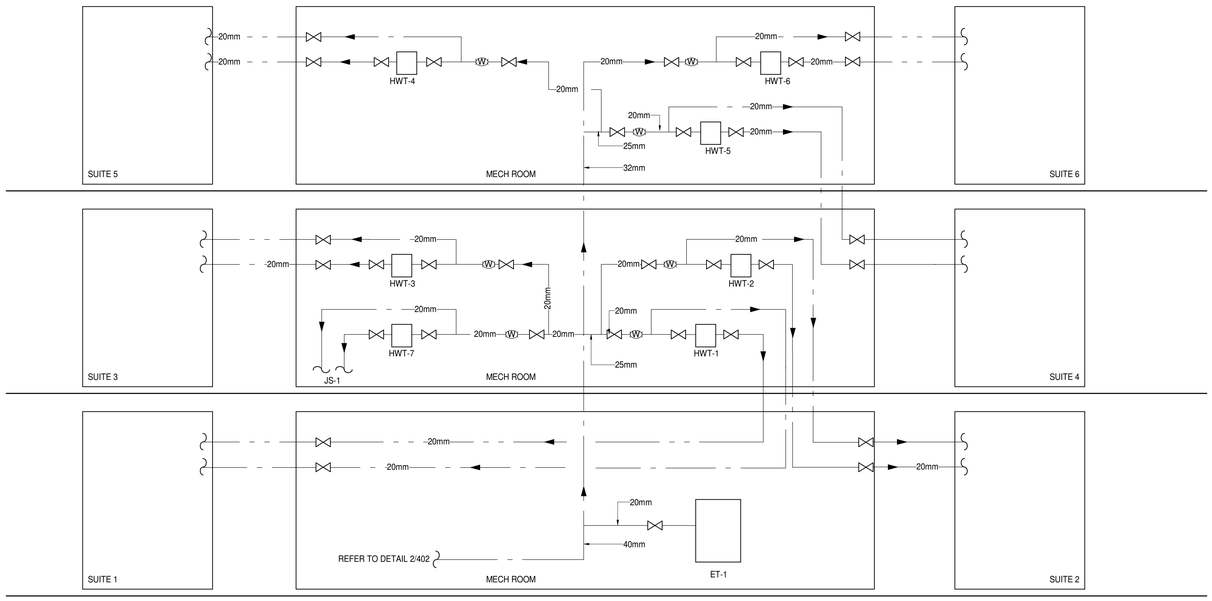
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PF NUMBER | NO. DP: ZKN99

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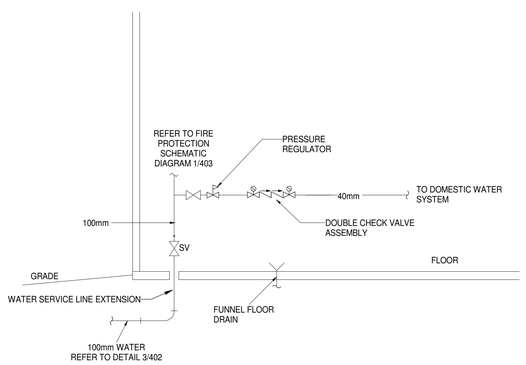
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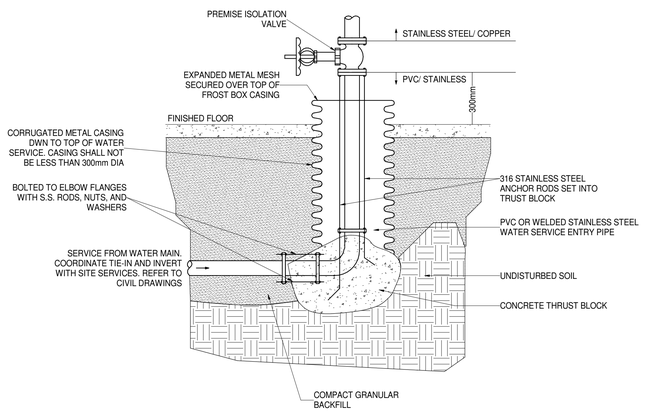
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1/402 WATER LINE SCHEMATIC DIAGRAM
NOT TO SCALE



2/402 WATER ENTRY DETAIL
NOT TO SCALE



3/402 WATER SERVICE LINE EXTENSION DETAIL
NOT TO SCALE

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LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ

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2025-01-24
C. J. TAIT
100595866
PROVINCE OF ONTARIO

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	CT

SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET: WATER LINE SCHEMATIC DIAGRAM

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

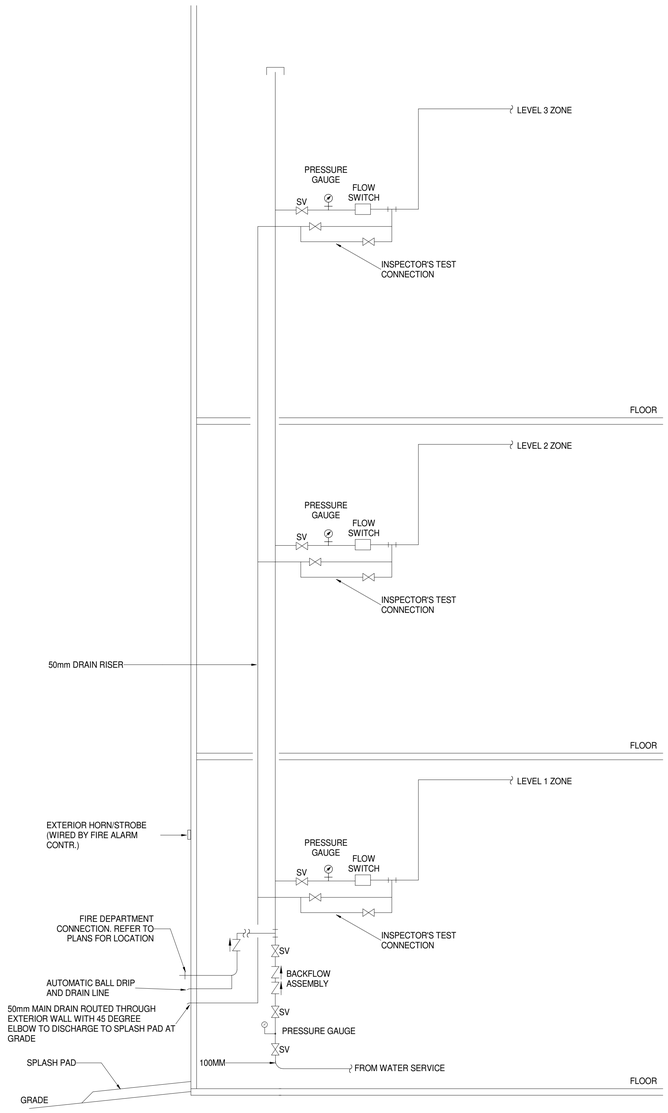
WBS NUMBER | NO. SRT:
PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 402 - B

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BORDER LAST UPDATED 2010-08-20

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1/403 FIRE PROTECTION RISER AND WATER METER DETAIL
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NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	CT

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER	DATE
MECHANICAL	2025/01/24

SUBJECT | SUJET
FIRE PROTECTION SCHEMATIC DIAGRAM

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

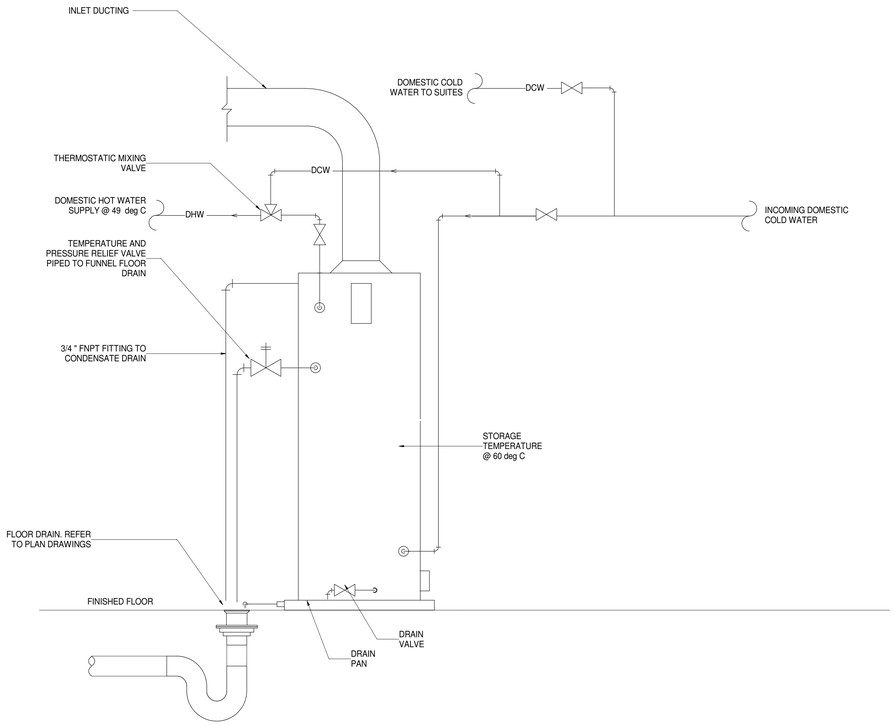
WBS NUMBER | NO. SRT	PF NUMBER | NO. DP
	ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 403 - B

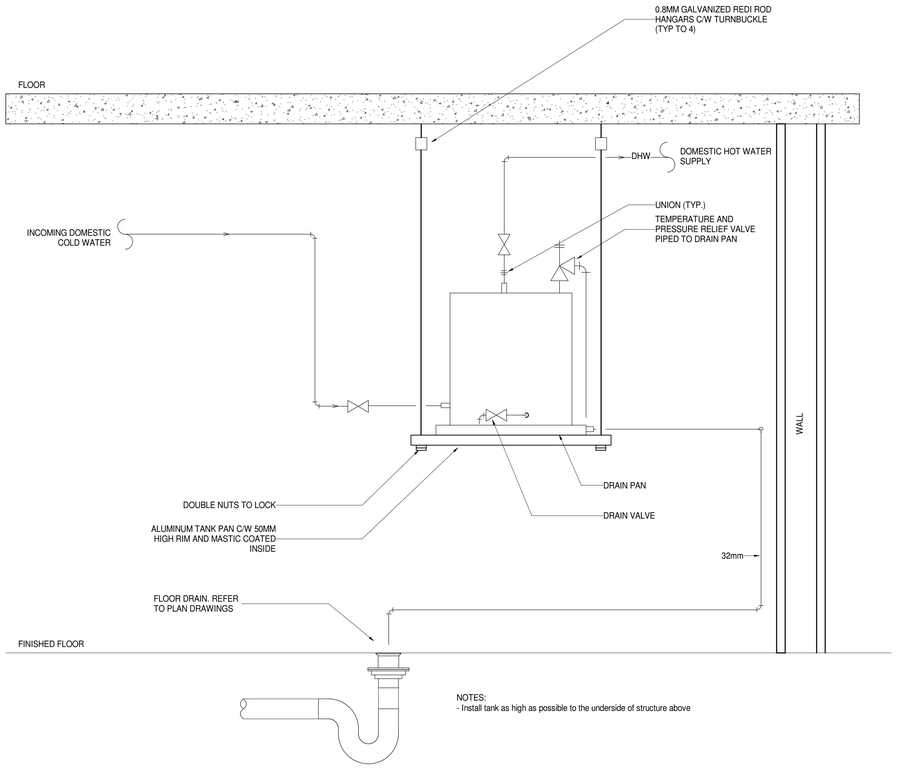
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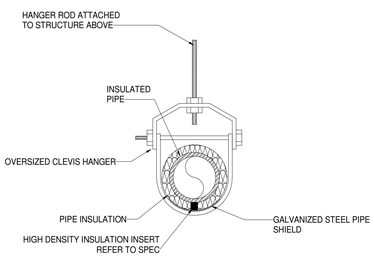


1/404 HEAT PUMP HOT WATER HEATER DETAIL
NOT TO SCALE



NOTES:
- Install tank as high as possible to the underside of structure above

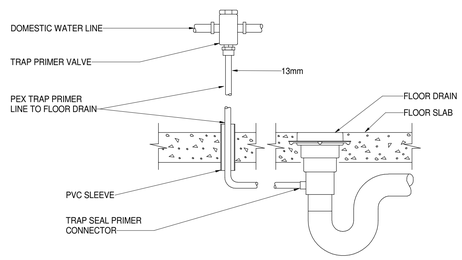
2/404 CEILING MOUNTED DOMESTIC HOT WATER TANK
NOT TO SCALE



NOTE:
THIS DETAIL IS NOT APPLICABLE FOR REFRIGERANT PIPING UNDER 20mm

3/404 INSULATED PIPE AT HANGER DETAIL
NOT TO SCALE

NOTES:
PROVIDE 12X12 ACCESS PANEL IN PLUMBING WALLS FOR SERVICING OF TRAP PRIMER VALVES.



4/404 TRAP PRIMER DETAIL
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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER
MECHANICAL

DATE
2025/01/24

SUBJECT | SUJET
MECHANICAL DETAILS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT

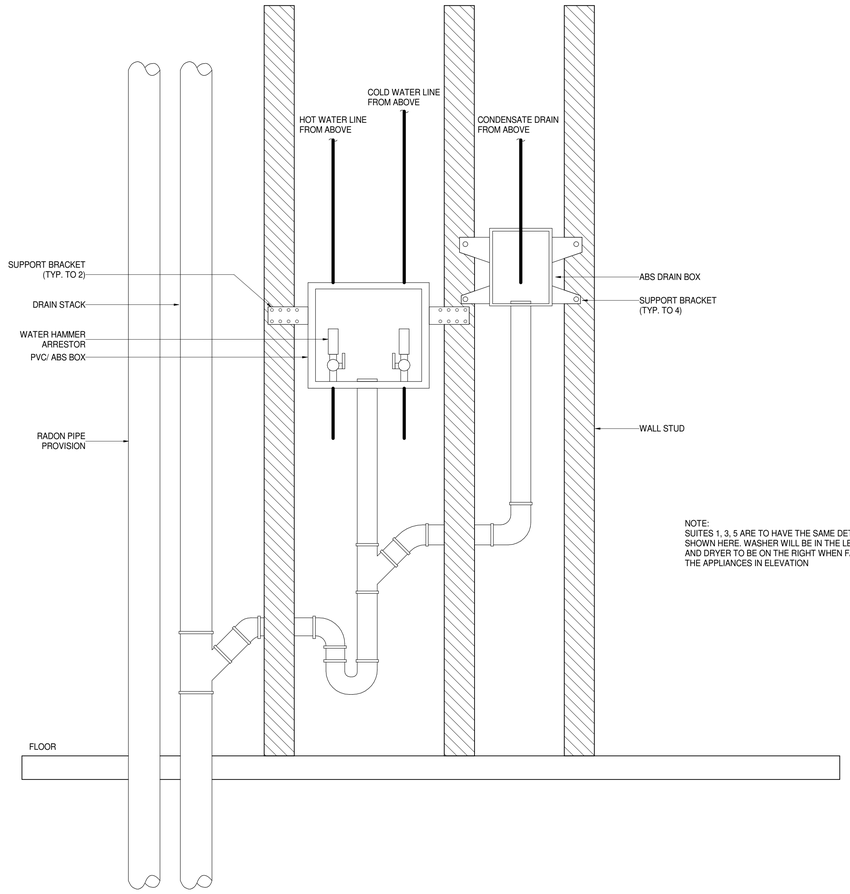
PF NUMBER | NO. DP
ZKN99

DWG. NO. | NO. DESSIN
L-KN-ZKN99 - 404 - B

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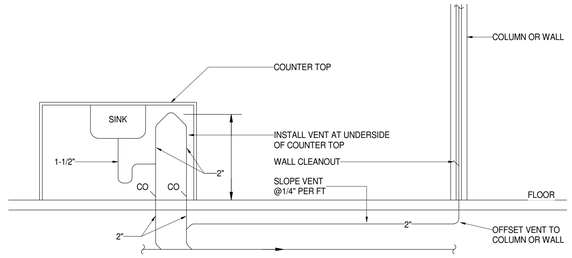
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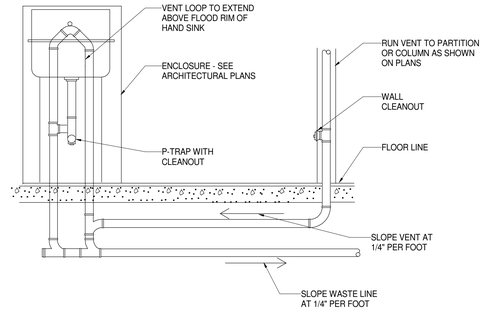
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NOTE:
SUITES 1, 3, 5 ARE TO HAVE THE SAME DETAIL AS SHOWN HERE. WASHER WILL BE IN THE LEFT AND DRYER TO BE ON THE RIGHT WHEN FACING THE APPLIANCES IN ELEVATION

1/405 CLOTHES WASHER AND FCU DRAIN DETAIL
NOT TO SCALE





2/405 PENINSULA VENT PIPING DETAIL
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SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET: MECHANICAL DETAILS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT:
PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 405 - B

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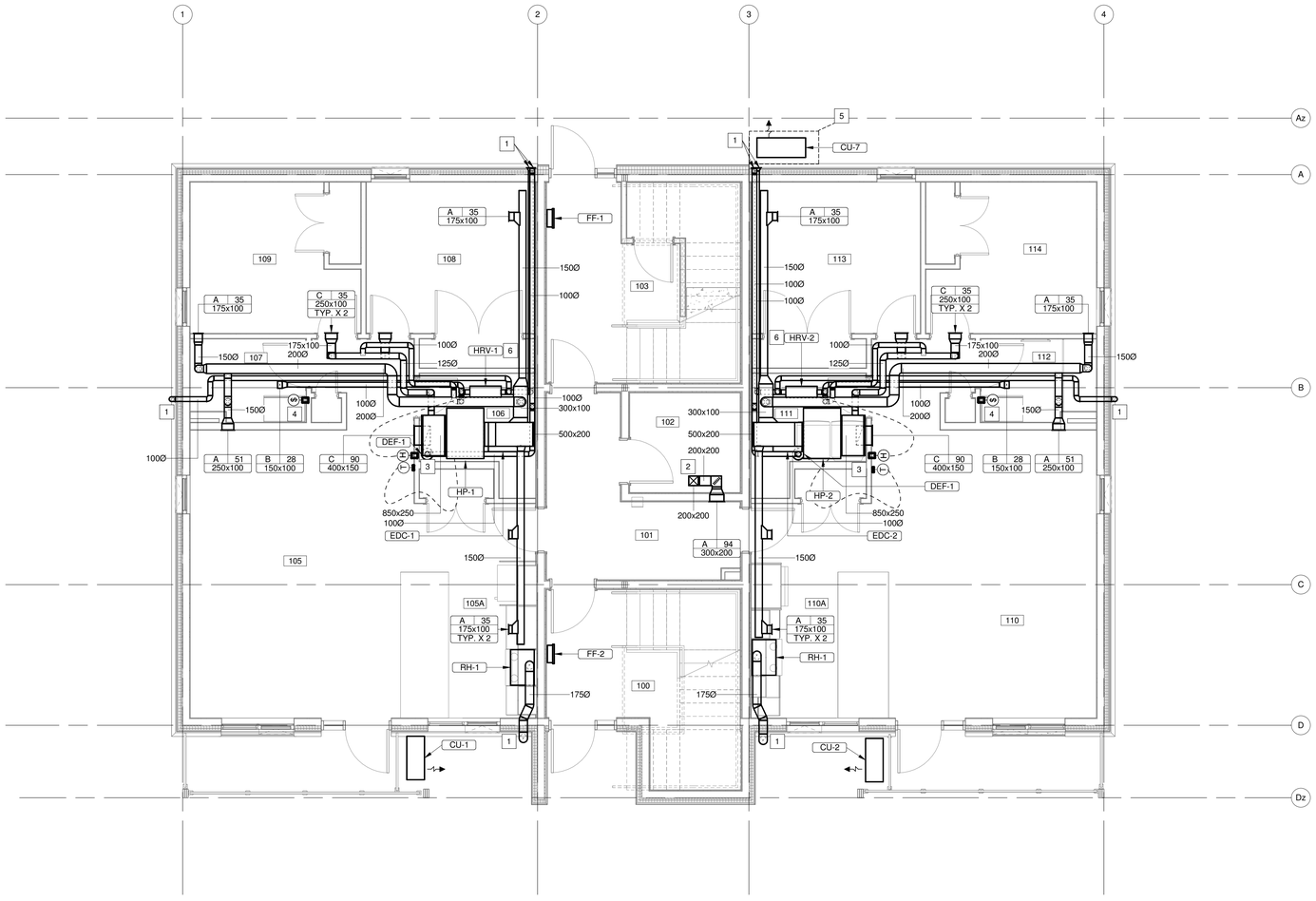
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HVAC GENERAL NOTES

A REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT GRILLE/DIFFUSER LOCATIONS.
B BRANCH DUCTS TO GRILLES/DIFFUSERS TO MATCH NECK SIZE UNLESS OTHERWISE NOTED.
C ALL NEW DUCT ELBOWS TO BE RADIUS TYPE. WHERE NECESSARY, CONTRACTOR MAY SUBSITUTE MITERED ELBOWS WITH TURNING VANES.
D INSTALLED HEIGHT OF FIELD CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CSA B651:23. CONTROL DEVICES SHALL BE MOUNTED AT A HEIGHT OF 1100 MM (TO THE DEVICE CENTERLINE) ABOVE THE FINISHED FLOOR. COORDINATE EXACT MOUNTING HEIGHT WITH OTHER TRADES TO HAVE CONSISTENT HEIGHT.
E ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 250 PA. UNLESS NOTED OTHERWISE.
F PROVIDE MANUAL BALANCING DAMPER IN ALL TERMINAL DUCT BRANCHES AND IN LOCATIONS SHOWN ON PLANS. FOR BRANCH DUCTS ABOVE GYPSUM CEILINGS, PROVIDE ROOM ADJUSTABLE DAMPER AT THE GRILLE/DIFFUSER.

KEYNOTES

1 PROVIDE WEATHER HOOD WITH BIRDSCREEN
2 PROVIDE FLOOR MOUNTED FIRE DAMPER
3 PROVIDE DUCT CONNECTION FOR FUTURE DRYER INSTALLATION. DRYER N.I.C.
4 PROVIDE OVERRIDE SWITCH WITH TIMER FOR HRV EXHAUST
5 PROVIDE 100MM THICK HOUSEKEEPING PAD
6 BALANCE HRV TO 28 L/S



1 LEVEL 1 HVAC PLAN
406 SCALE: 1 : 50

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NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	CT

SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET: LEVEL 1 HVAC PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT:
PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 406 - B

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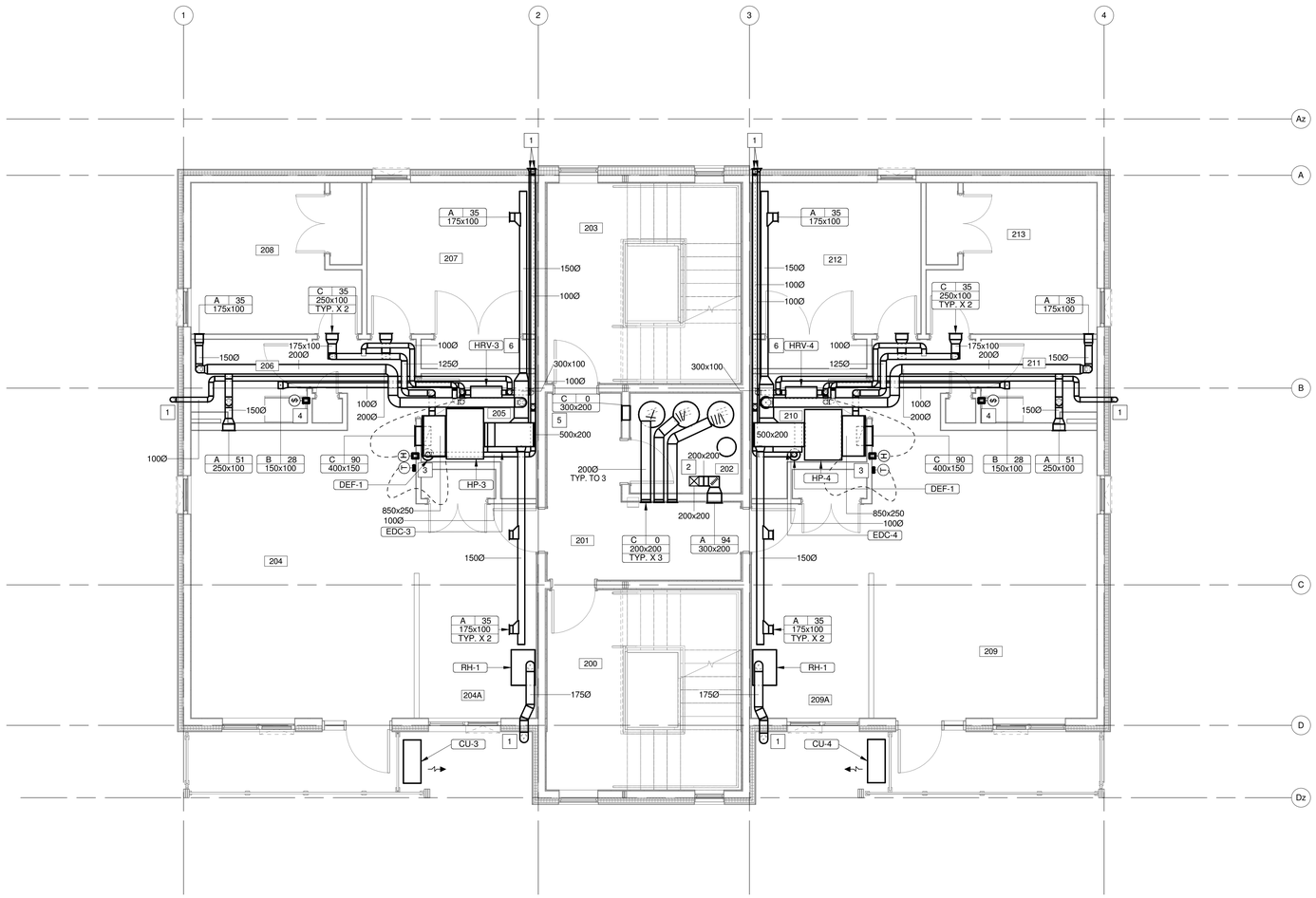
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HVAC GENERAL NOTES

A REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT GRILLE/DIFFUSER LOCATIONS.
B BRANCH DUCTS TO GRILLES/DIFFUSERS TO MATCH NECK SIZE UNLESS OTHERWISE NOTED.
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D INSTALLED HEIGHT OF FIELD CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CSA B651:23. CONTROL DEVICES SHALL BE MOUNTED AT A HEIGHT OF 1100 MM (TO THE DEVICE CENTERLINE) ABOVE THE FINISHED FLOOR. COORDINATE EXACT MOUNTING HEIGHT WITH OTHER TRADES TO HAVE CONSISTENT HEIGHT.
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F PROVIDE MANUAL BALANCING DAMPER IN ALL TERMINAL DUCT BRANCHES AND IN LOCATIONS SHOWN ON PLANS. FOR BRANCH DUCTS ABOVE GYPSUM CEILINGS, PROVIDE ROOM ADJUSTABLE DAMPER AT THE GRILLE/DIFFUSER.

KEYNOTES

1 PROVIDE WEATHER HOOD WITH BIRDSCREEN
2 PROVIDE FLOOR MOUNTED FIRE DAMPER
3 PROVIDE DUCT CONNECTION FOR FUTURE DRYER INSTALLATION. DRYER N.I.C.
4 PROVIDE OVERRIDE SWITCH WITH TIMER FOR HRV EXHAUST
5 TRANSFER DUCT TO BE LOCATED HIGH LEVEL
6 BALANCE HRV TO 28 L/S



1 LEVEL 2 HVAC PLAN
407 SCALE: 1 : 50

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NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	CT

SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET: LEVEL 2 HVAC PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT:
PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 407 - B

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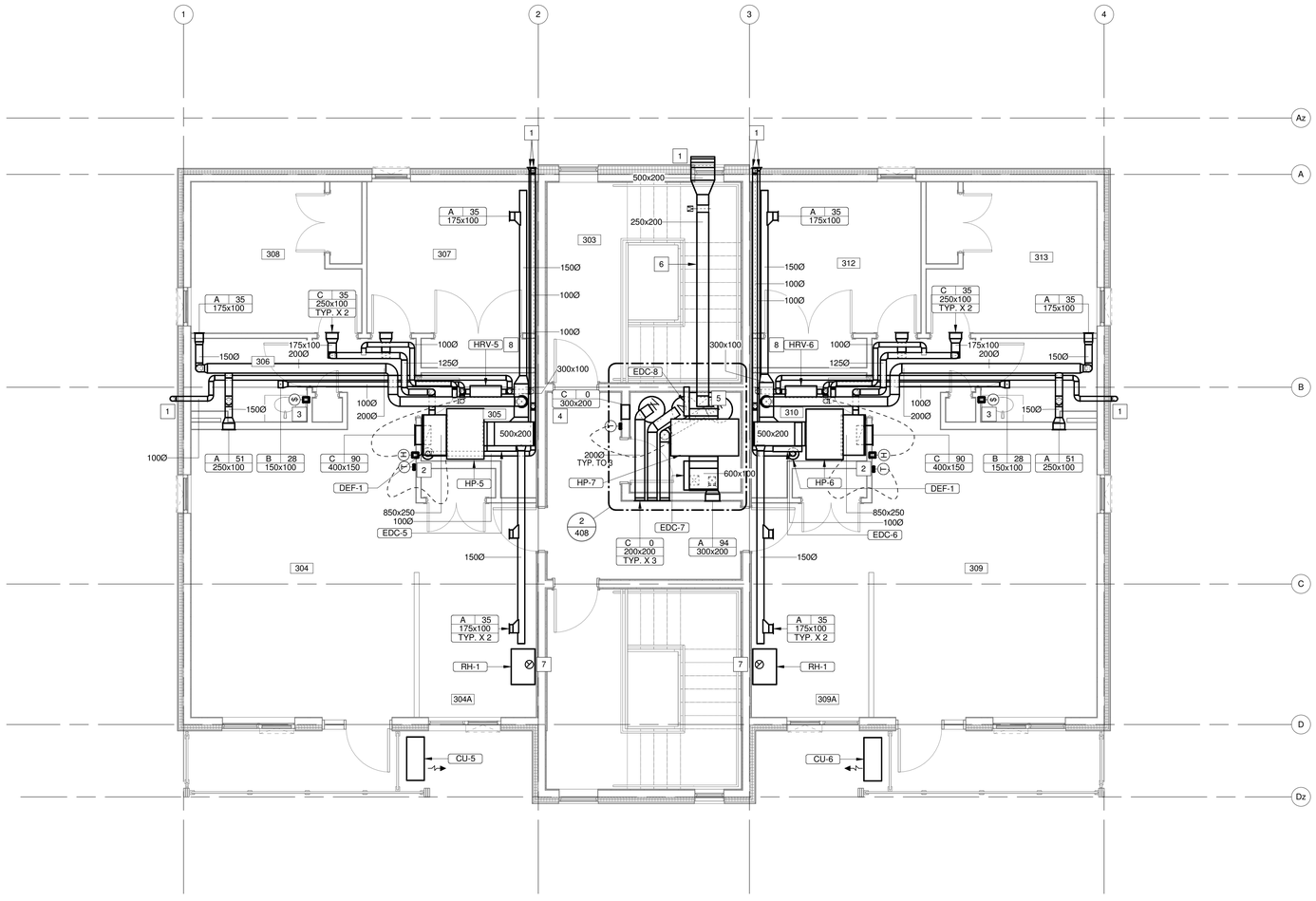
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HVAC GENERAL NOTES

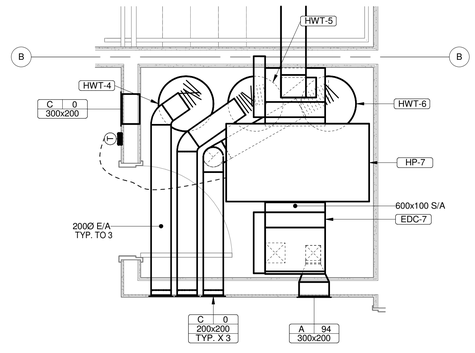
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KEYNOTES

1 PROVIDE WEATHER HOOD WITH BIRDSCREEN
2 PROVIDE DUCT CONNECTION FOR FUTURE DRYER INSTALLATION. DRYER N.I.C.
3 PROVIDE OVERRIDE SWITCH WITH TIMER FOR HRV EXHAUST
4 TRANSFER DUCT TO BE LOCATED HIGH LEVEL
5 PROVIDE FLOOR MOUNTED FIRE DAMPER
6 DUCTING TO RUN THROUGH THE ATTIC SPACE
7 175MM RANGE HOOD DUCT TO ROOF
8 BALANCE HRV TO 28 L/S



1 / 408 LEVEL 3 HVAC PLAN
SCALE: 1 : 50



2 / 408 LEVEL 3 MECHANICAL ROOM BLOW UP
1 : 25

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LICENSED PROFESSIONAL ENGINEER 2025-01-24 C. J. TAIT 100595866 PROVINCE OF ONTARIO

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	CT

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET
LEVEL 3 HVAC PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT
PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 408 - B

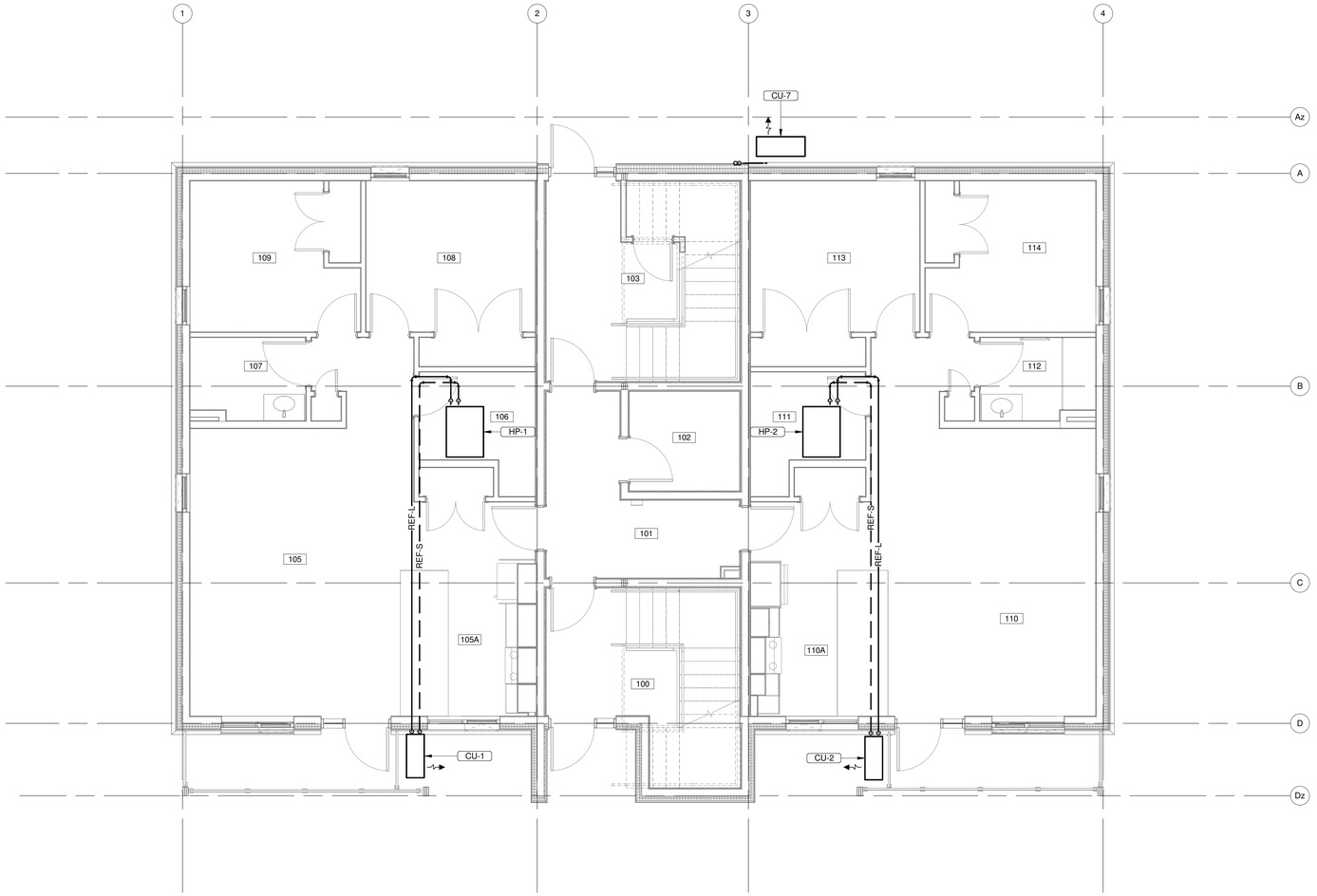
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HVAC GENERAL NOTES

A REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT GRILLE/DIFFUSER LOCATIONS.
B BRANCH DUCTS TO GRILLES/DIFFUSERS TO MATCH NECK SIZE UNLESS OTHERWISE NOTED.
C ALL NEW DUCT ELBOWS TO BE RADIUS TYPE. WHERE NECESSARY, CONTRACTOR MAY SUBSITUTE MITERED ELBOWS WITH TURNING VANES.
D INSTALLED HEIGHT OF FIELD CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CSA B651:23. CONTROL DEVICES SHALL BE MOUNTED AT A HEIGHT OF 1100 MM (TO THE DEVICE CENTERLINE) ABOVE THE FINISHED FLOOR. COORDINATE EXACT MOUNTING HEIGHT WITH OTHER TRADES TO HAVE CONSISTENT HEIGHT.
E ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 250 PA. UNLESS NOTED OTHERWISE.
F PROVIDE MANUAL BALANCING DAMPER IN ALL TERMINAL DUCT BRANCHES AND IN LOCATIONS SHOWN ON PLANS. FOR BRANCH DUCTS ABOVE GYPSUM CEILINGS, PROVIDE ROOM ADJUSTABLE DAMPER AT THE GRILLE/DIFFUSER.



1 409 LEVEL 1 REFRIGERANT PIPING PLAN
SCALE: 1 : 50

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LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ

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PROVINCE OF ONTARIO

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SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET: LEVEL 1 REFRIGERANT PIPING PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

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HVAC GENERAL NOTES

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1 410 LEVEL 2 REFRIGERANT PIPING PLAN
SCALE: 1 : 50

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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET
LEVEL 2 REFRIGERANT PIPING PLAN

PRODUCTION	REVIEWED	REVU	
DESIGNED | ÉTUDIÉ: JG			DES O | AGENT CONC
DRAWN | DESSINÉ: JG			PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT			DES MGR | GÉST CONC
COORDINATION			FIRE | INCENDIE

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PF NUMBER | NO. DP: ZKN99
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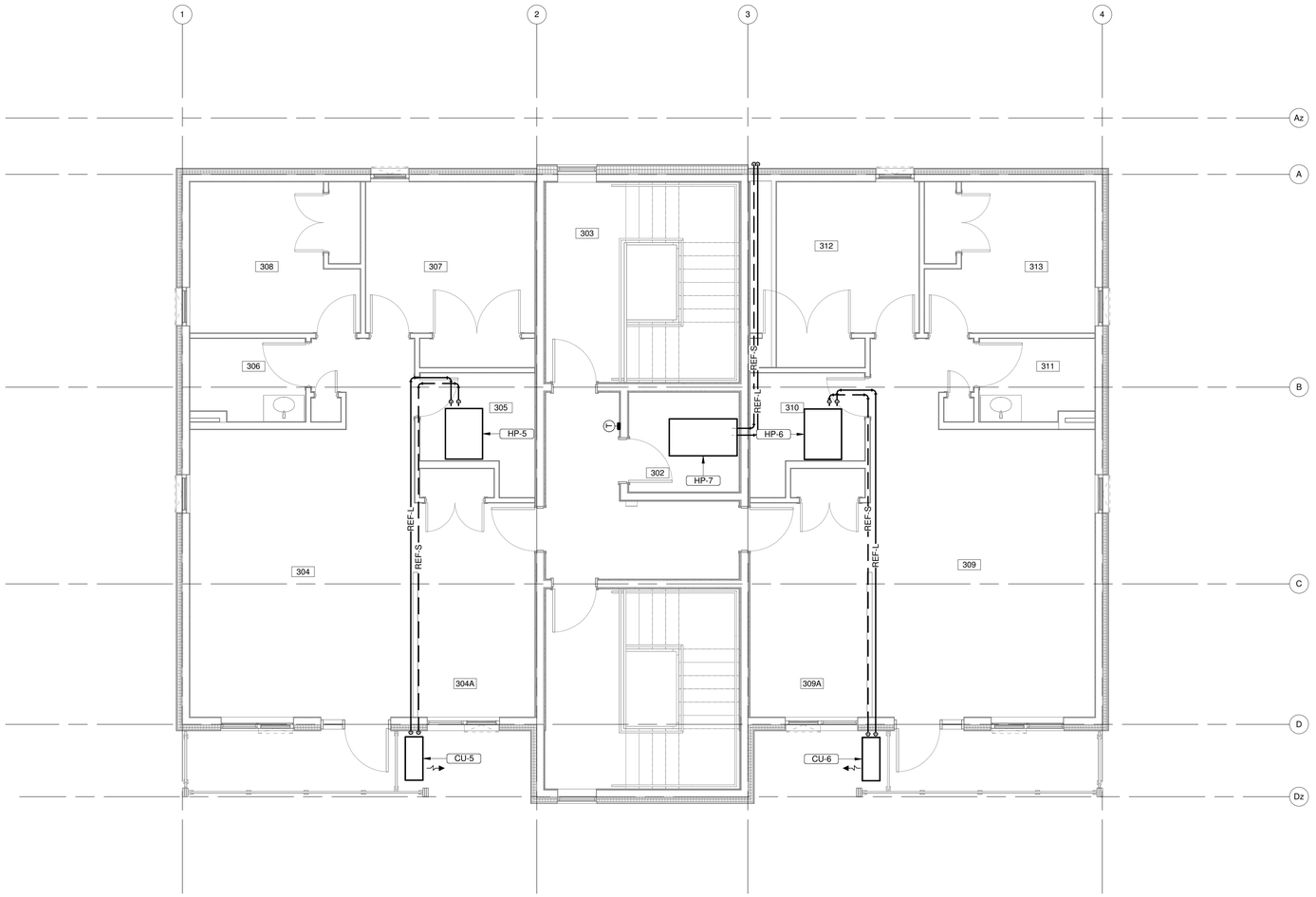
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1 411 LEVEL 3 REFRIGERANT PIPING PLAN
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SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET: LEVEL 3 REFRIGERANT PIPING PLAN

PRODUCTION	REVIEWED | REVU	
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DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

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PF NUMBER | NO. DP: ZKN99
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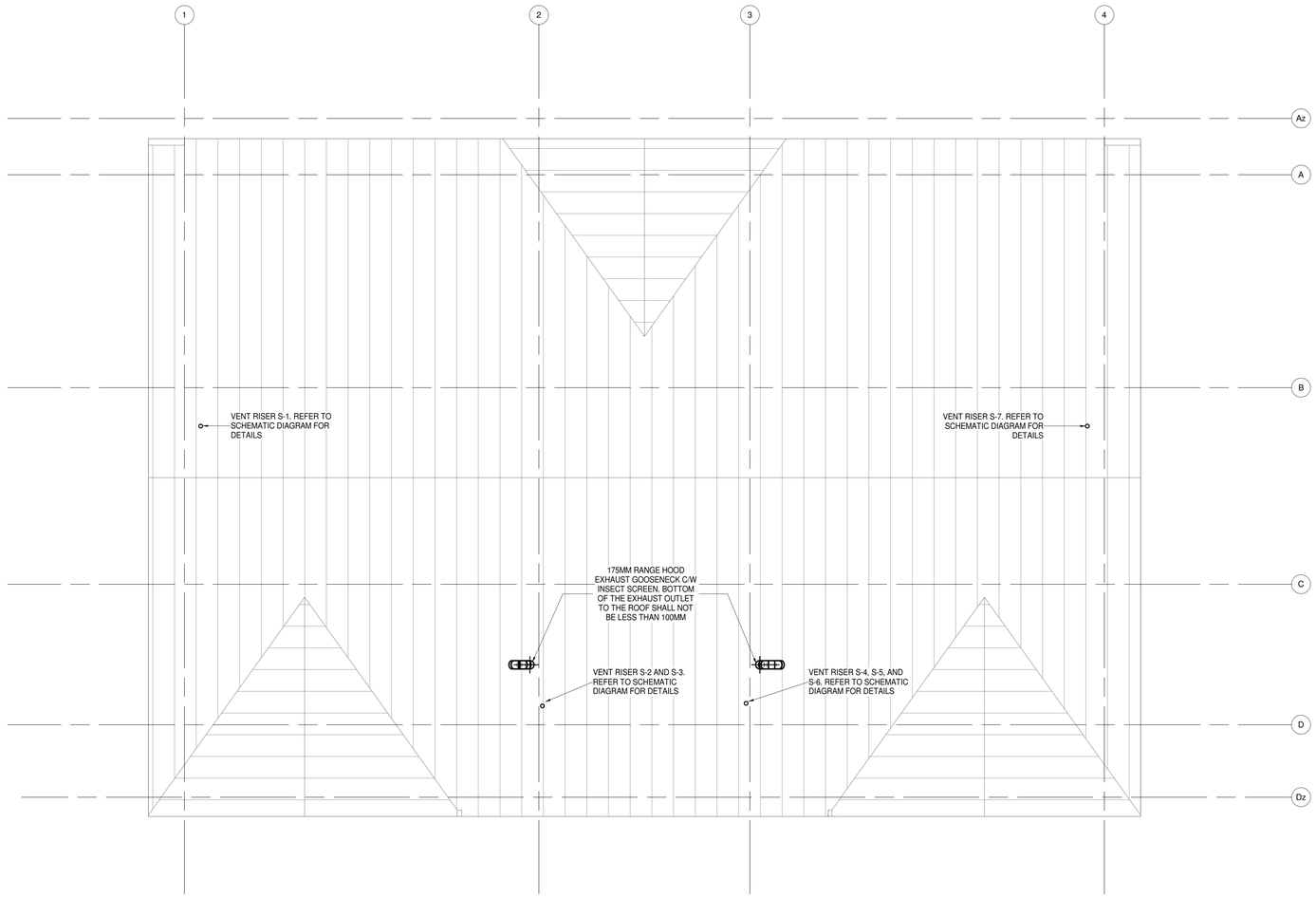
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PLUMBING GENERAL NOTES

A PROVIDE SANITARY VENT PIPING IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE REQUIREMENTS AND THE EXACT PIPE ROUTING ON SITE.
B WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.
C PROVIDE CLEANOUT IN ACCESSIBLE LOCATION AT THE BASE OF ALL PLUMBING RISERS.
D REFER TO SPECIFICATION FOR RUNOUT SIZES TO FIXTURES. PROVIDE SHUTOFF VALVES AT ALL FIXTURES AND EQUIPMENT.
E INSTALL AUTOMATIC TRAP PRIMER ON ALL FLOOR DRAINS
F INSTALL DEVICES TO PREVENT WATER HAMMER ON BRANCH SUPPLIES TO GROUPS OF FIXTURES AND ALL FAST-CLOSING FIXTURES (WASHING MACHINES, DISHWASHERS, ETC.).

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1/412 MECHANICAL ROOF PLAN
SCALE: 1 : 50

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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET: MECHANICAL ROOF PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT:
PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 412 - B

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PLUMBING GENERAL NOTES

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B WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.

C PROVIDE CLEANOUT IN ACCESSIBLE LOCATION AT THE BASE OF ALL PLUMBING RISERS.

D REFER TO SPECIFICATION FOR RUNOUT SIZES TO FIXTURES. PROVIDE SHUTOFF VALVES AT ALL FIXTURES AND EQUIPMENT.

E INSTALL AUTOMATIC TRAP PRIMER ON ALL FLOOR DRAINS

F INSTALL DEVICES TO PREVENT WATER HAMMER ON BRANCH SUPPLIES TO GROUPS OF FIXTURES AND ALL FAST-CLOSING FIXTURES (WASHING MACHINES, DISHWASHERS, ETC.).

KEYNOTES

1 WATER LINE FROM BELOW

2 DOUBLE CHECK VALVE ASSEMBLY

3 CONNECT CLOTHES WASHER WATER LINE TO PRE-MANUFACTURED VALVE BOX

4 PROVIDE 13MM VALVED DCW CONNECTION IN WALL MOUNTED OUTLET BOX FOR FUTIRE CONNECTION TO FRIDGE WATER DISPENSER. INSTALL WELL ABOVE BASEBOARD.

5 PROVIDE SHUT OFF VALVES C/W TAG AND TO BE LOCATED IN MECHANICAL ROOM

6 WATER LINE FOR KITCHEN SINK AND DISHWASHER. PROVIDE CAPPED Y CONNECTION UNDER SINK ABOVE TRAP AND 9.5MM VALVED FITTING ON HOT WATER SUPPLY FOR FUTURE DISHWASHER CONNECTION.

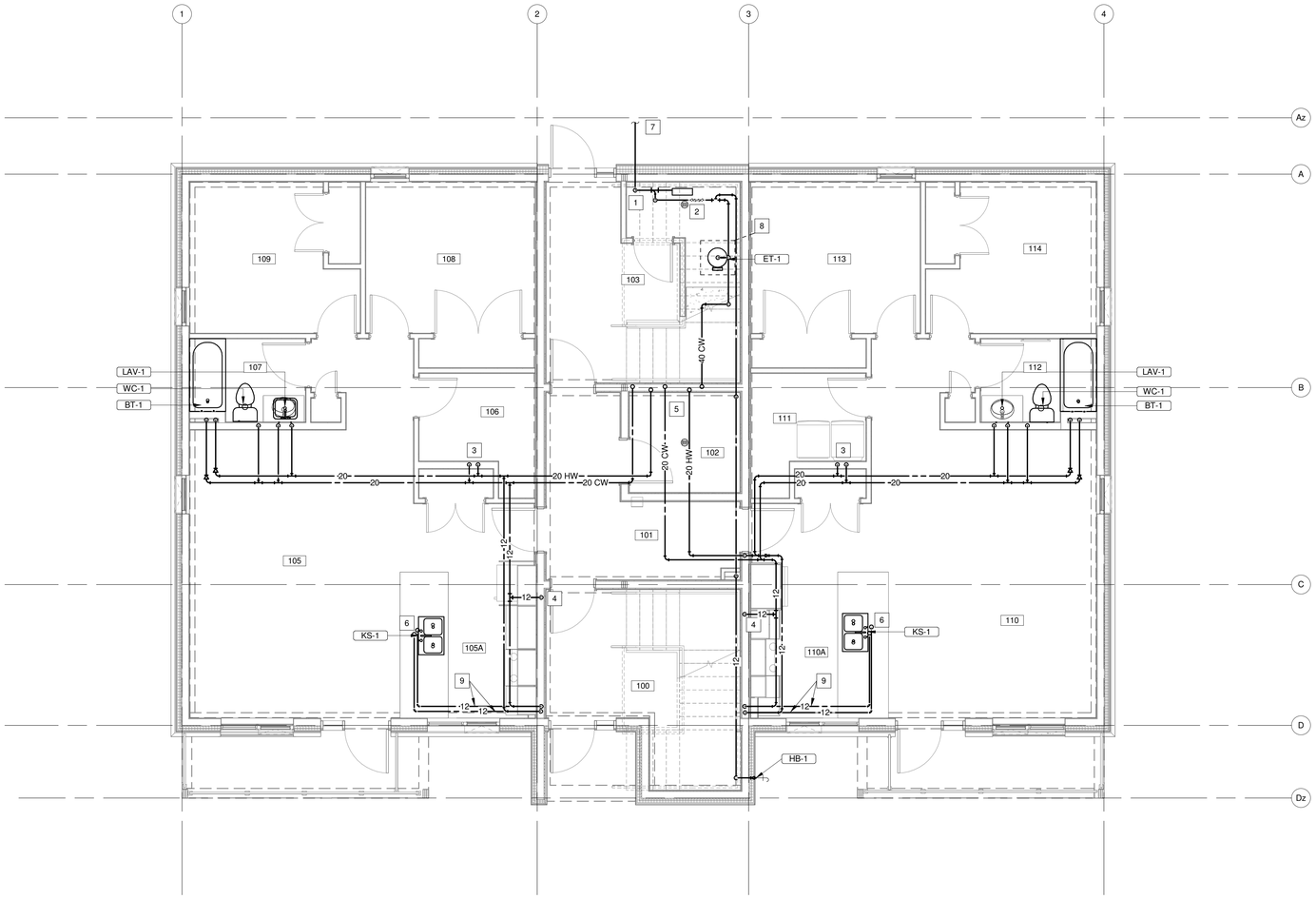
7 WATER LINE INTO BUILDING. REFER TO CIVIL FOR CONTINUATION.

8 HOUSEKEEPING PAD

9 PIPING TO RUN BELOW SLAB

PLUMBING FIXTURE SCHEDULE

LABEL	DESCRIPTION	PIPE SIZES TO FIXTURES (mm)		
		DCW	DHW	DRAIN
WC-1	WATER CLOSET	13	-	80
LAV-1	LAVATORY	13	13	32
CW-1	CLOTHES WASHER	13	13	50
DW-1	DISHWASHER	-	13	40
KS-1	KITCHEN SINK	13	13	40
BT-1	BATHTUB	13	13	40
FFD-1	FUNNEL FLOOR DRAIN	-	-	50
FD-1	FLOOR DRAIN	-	-	50
HB-1	HOSE BIBB	13	-	-
FR-1	FRIDGE	13	-	-



1 413 LEVEL 1 PLUMBING PLAN

SCALE: 1 : 50

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KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER
MECHANICAL

DATE
2025/01/24

SUBJECT | SUJET
LEVEL 1 PLUMBING PLAN

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CHECKED | VÉRIFIÉ: JG		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

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PLUMBING GENERAL NOTES

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KEYNOTES

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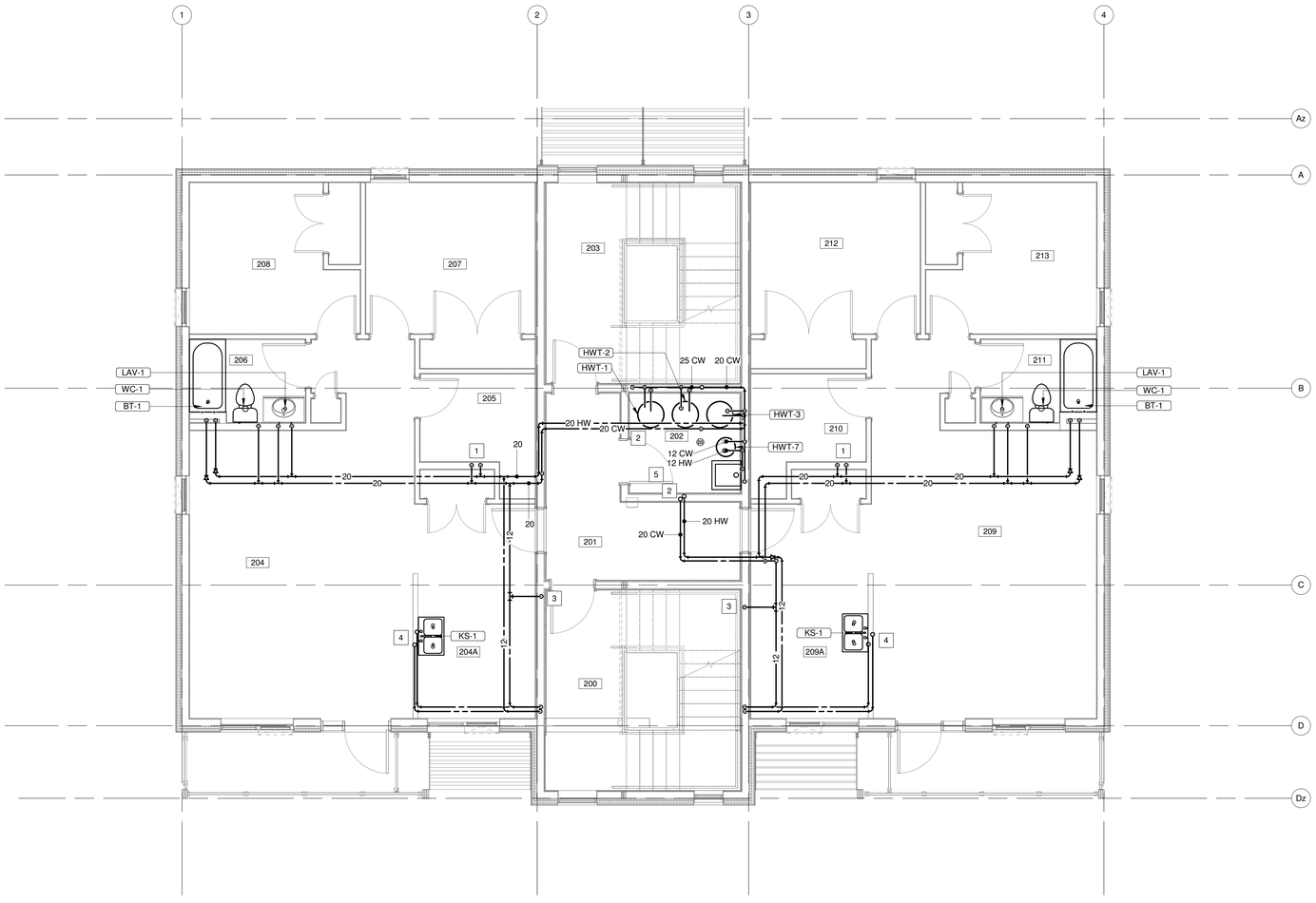
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5 PROVIDE TRAP PRIMER ON DOMESTIC COLD WATER FEED TO JANITOR SINK. CONNECT TO ALL FLOOR DRAINS.

PLUMBING FIXTURE SCHEDULE

LABEL	DESCRIPTION	PIPE SIZES TO FIXTURES (mm)		
		DCW	DHW	DRAIN
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CW-1	CLOTHES WASHER	13	13	50
DW-1	DISHWASHER	-	13	40
KS-1	KITCHEN SINK	13	13	40
BT-1	BATHTUB	13	13	40
JS-1	JANITOR SINK	13	-	40
FD-1	FLOOR DRAIN	-	-	50
FR-1	FRIDGE	13	-	-



1 414 LEVEL 2 PLUMBING PLAN
SCALE: 1 : 50

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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET
LEVEL 2 PLUMBING PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT
PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 414 - B

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PLUMBING GENERAL NOTES

A PROVIDE SANITARY VENT PIPING IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE REQUIREMENTS AND THE EXACT PIPE ROUTING ON SITE.

B WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.

C PROVIDE CLEANOUT IN ACCESSIBLE LOCATION AT THE BASE OF ALL PLUMBING RISERS.

D REFER TO SPECIFICATION FOR RUNOUT SIZES TO FIXTURES. PROVIDE SHUTOFF VALVES AT ALL FIXTURES AND EQUIPMENT.

E INSTALL AUTOMATIC TRAP PRIMER ON ALL FLOOR DRAINS

F INSTALL DEVICES TO PREVENT WATER HAMMER ON BRANCH SUPPLIES TO GROUPS OF FIXTURES AND ALL FAST-CLOSING FIXTURES (WASHING MACHINES, DISHWASHERS, ETC.).

KEYNOTES

1 CONNECT CLOTHES WASHER WATER LINE TO PRE-MANUFACTURED VALVE BOX

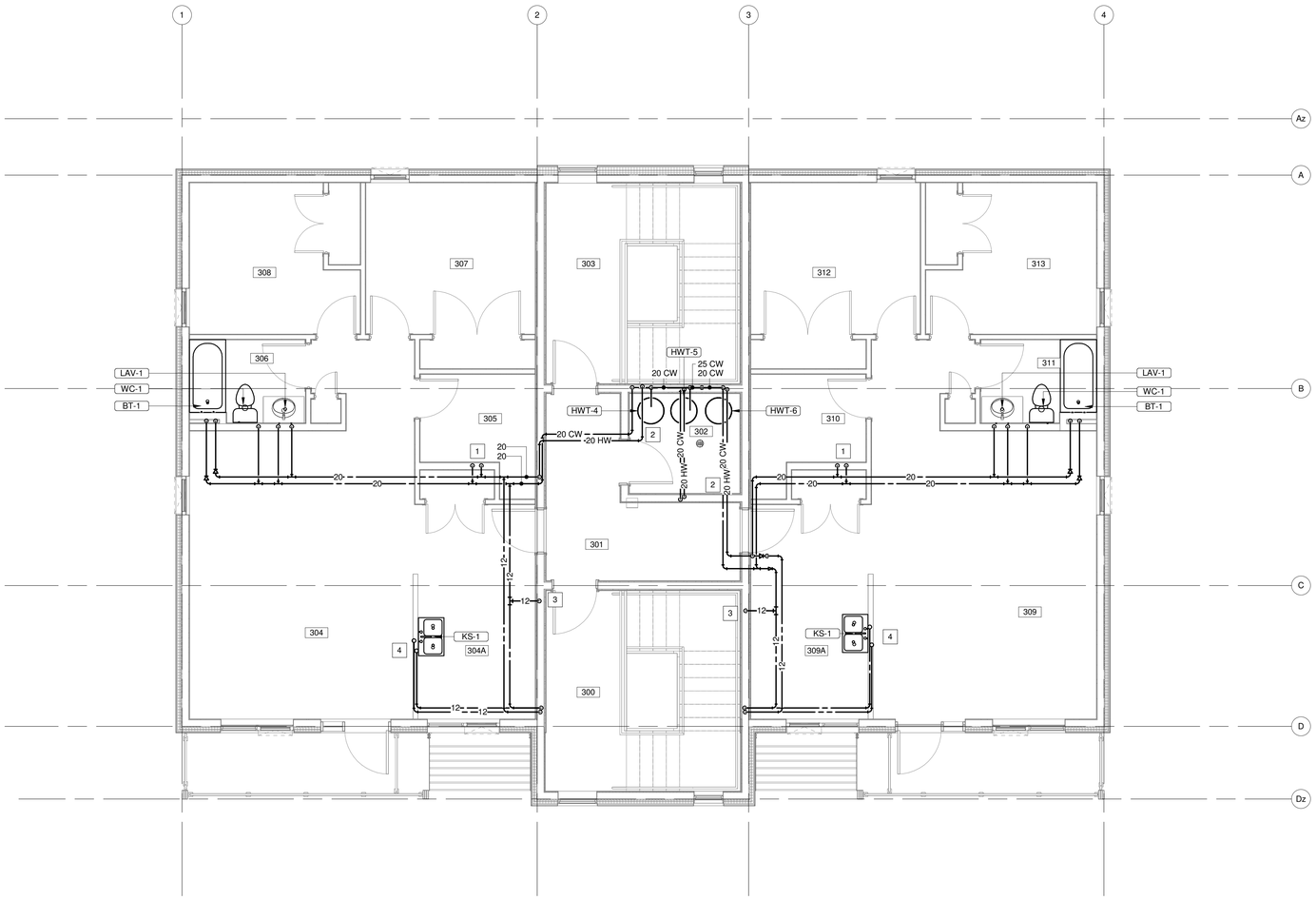
2 PROVIDE SHUT OFF VALVES C/W TAG AND TO BE LOCATED IN MECHANICAL ROOM

3 PROVIDE 13MM VALVED DCW CONNECTION IN WALL MOUNTED OUTLET BOX FOR FUTIRE CONNECTION TO FRIDGE WATER DISPENSER. INSTALL WELL ABOVE BASEBOARD.

4 WATER LINE FOR KITCHEN SINK AND DISHWASHER. PROVIDE CAPPED Y CONNECTION UNDER SINK ABOVE TRAP AND 9.5MM VALVED FITTING ON HOT WATER SUPPLY FOR FUTURE DISHWASHER CONNECTION.

PLUMBING FIXTURE SCHEDULE

LABEL	DESCRIPTION	PIPE SIZES TO FIXTURES (mm)		
		DCW	DHW	DRAIN
WC-1	WATER CLOSET	13	-	80
LAV-1	LAVATORY	13	13	32
CW-1	CLOTHES WASHER	13	13	50
DW-1	DISHWASHER	-	13	40
KS-1	KITCHEN SINK	13	13	40
BT-1	BATHTUB	13	13	40
JS-1	JANITOR SINK	13	-	40
FD-1	FLOOR DRAIN	-	-	50



1 415 LEVEL 3 PLUMBING PLAN
SCALE: 1 : 50

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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER
MECHANICAL

DATE
2025/01/24

SUBJECT | SUJET
LEVEL 3 PLUMBING FLOOR PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT

PF NUMBER | NO. DP
ZKN99

DWG. NO. | NO. DESSIN
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PLUMBING GENERAL NOTES

A PROVIDE SANITARY VENT PIPING IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE REQUIREMENTS AND THE EXACT PIPE ROUTING ON SITE.

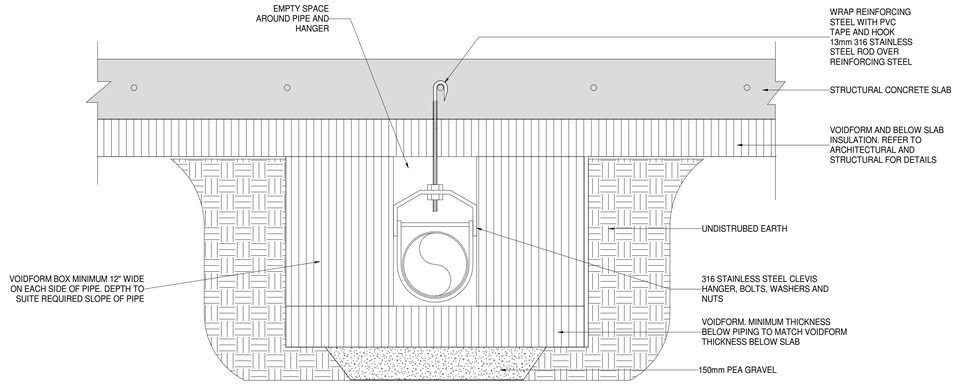
B WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.

C PROVIDE CLEANOUT IN ACCESSIBLE LOCATION AT THE BASE OF ALL PLUMBING RISERS.

D REFER TO SPECIFICATION FOR RUNOUT SIZES TO FIXTURES. PROVIDE SHUTOFF VALVES AT ALL FIXTURES AND EQUIPMENT.

E INSTALL AUTOMATIC TRAP PRIMER ON ALL FLOOR DRAINS

F INSTALL DEVICES TO PREVENT WATER HAMMER ON BRANCH SUPPLIES TO GROUPS OF FIXTURES AND ALL FAST-CLOSING FIXTURES (WASHING MACHINES, DISHWASHERS, ETC.).



3/416 BELOW SLAB PIPING DETAIL
NOT TO SCALE

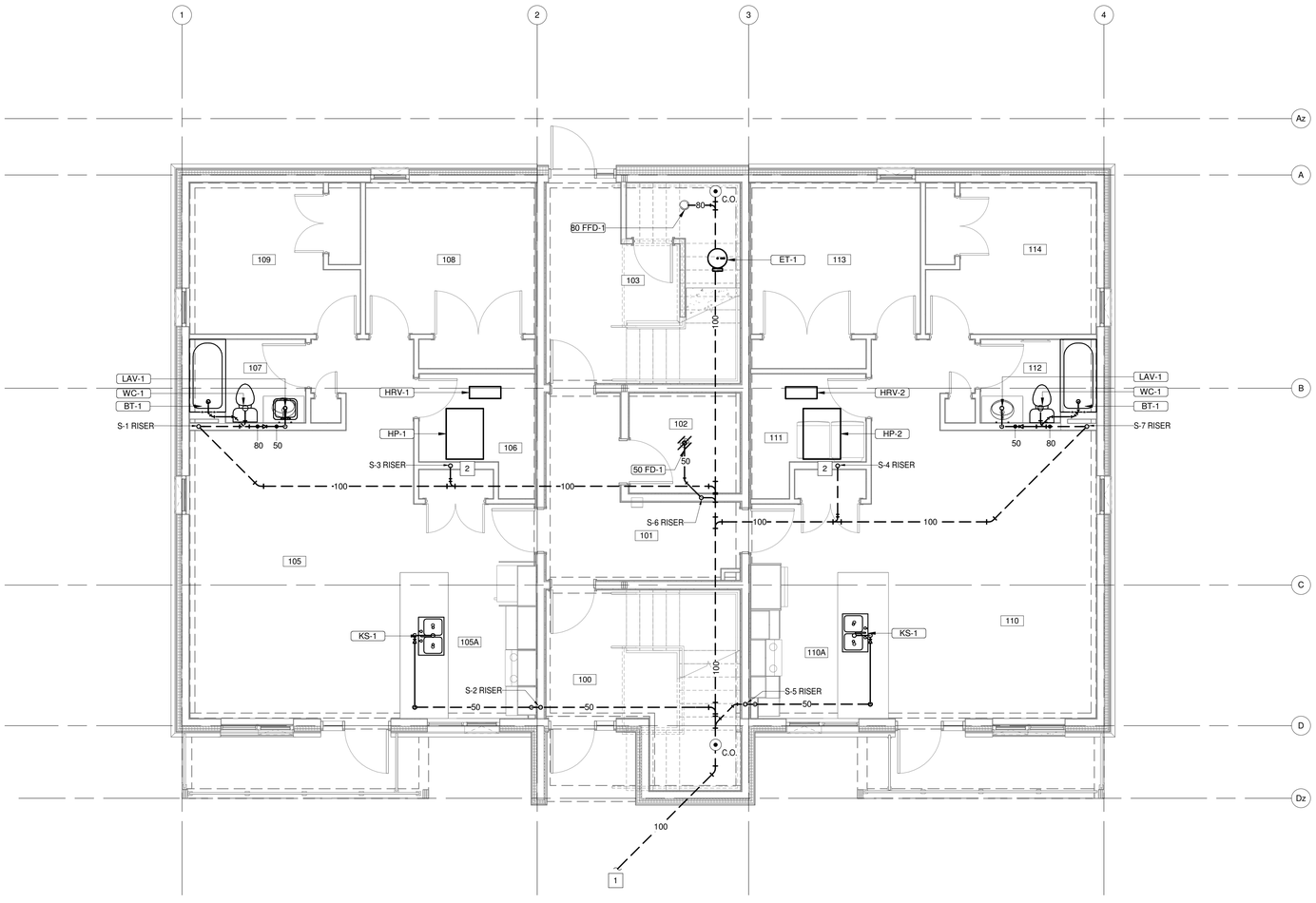
KEYNOTES

1 REFER TO CIVIL FOR CONTINUATION

2 CONNECT THE HEAT PUMP AND HRV CONDENSATE DRAIN TO THE LAUNDRY DRAIN PIPE. REFER TO 1/405 FOR DETAILS

PLUMBING FIXTURE SCHEDULE

LABEL	DESCRIPTION	PIPE SIZES TO FIXTURES (mm)		
		DCW	DHW	DRAIN
WC-1	WATER CLOSET	13	-	80
LAV-1	LAVATORY	13	13	32
CW-1	CLOTHES WASHER	13	13	50
DW-1	DISHWASHER	-	13	40
KS-1	KITCHEN SINK	13	13	40
BT-1	BATHTUB	13	13	40
FFD-1	FUNNEL FLOOR DRAIN	-	-	50
FD-1	FLOOR DRAIN	-	-	50
HB-1	HOSE BIBB	13	-	-
FR-1	FRIDGE	13	-	-



1/416 LEVEL 1 DRAINAGE PLAN
SCALE: 1 : 50

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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET
LEVEL 1 DRAINAGE PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: CT		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: JG		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT
PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 416 - B

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PLUMBING GENERAL NOTES

A PROVIDE SANITARY VENT PIPING IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE REQUIREMENTS AND THE EXACT PIPE ROUTING ON SITE.

B WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.

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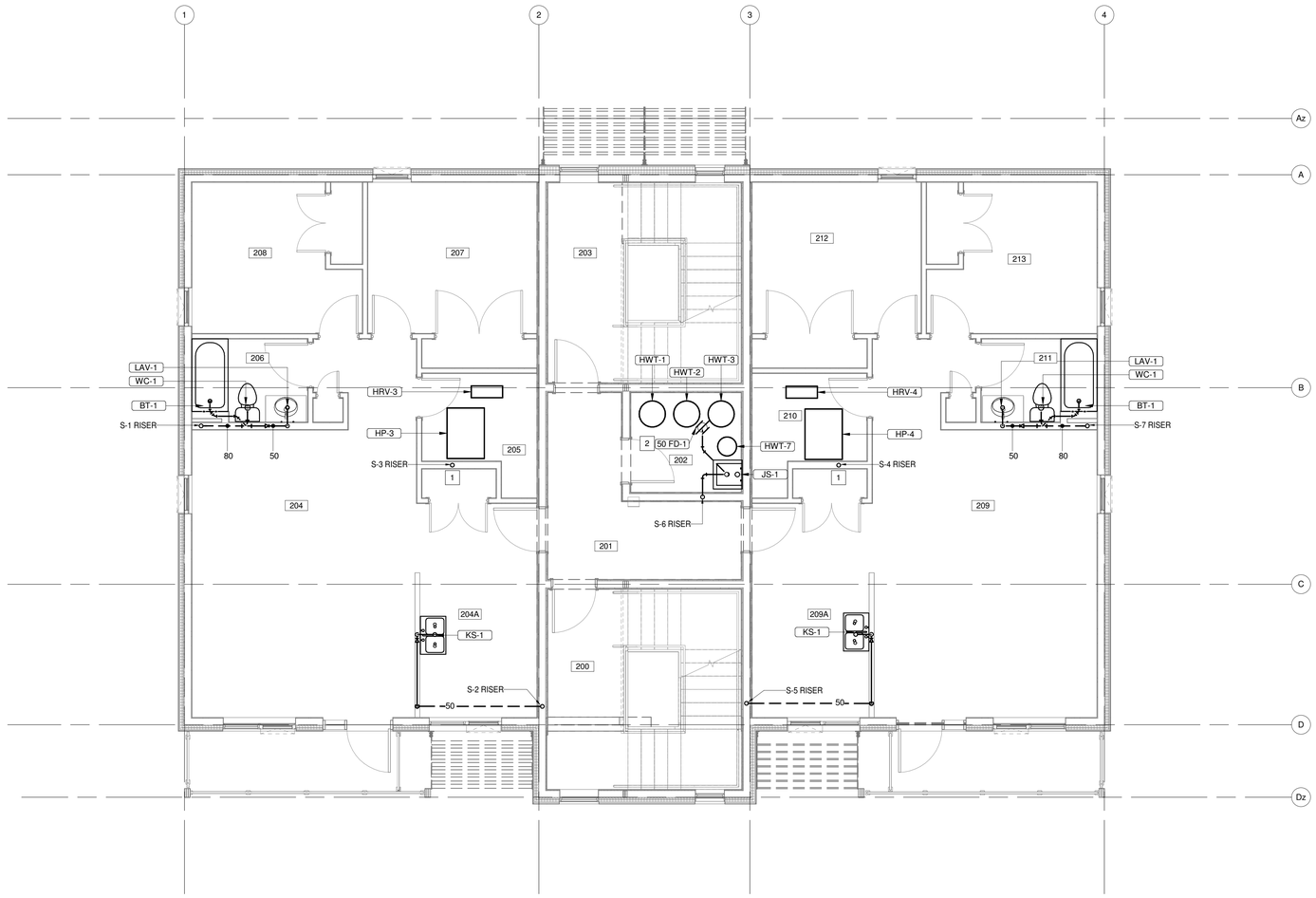
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KEYNOTES

1 CONNECT THE HEAT PUMP AND HRV CONDENSATE DRAIN TO THE LAUNDRY DRAIN PIPE. REFER TO 1/405 FOR DETAILS.

2 CONNECT THE DOMESTIC WATER TANK CONDENSATE DRAIN TO THE LAUNDRY DRAIN PIPE. REFER TO 1/404 AND 2/404 FOR DETAILS



1 LEVEL 2 DRAINAGE PLAN
417 SCALE: 1 : 50

PLUMBING FIXTURE SCHEDULE

LABEL	DESCRIPTION	PIPE SIZES TO FIXTURES (mm)		
		DCW	DHW	DRAIN
WC-1	WATER CLOSET	13	-	80
LAV-1	LAVATORY	13	13	32
CW-1	CLOTHES WASHER	13	13	50
DW-1	DISHWASHER	-	13	40
KS-1	KITCHEN SINK	13	13	40
BT-1	BATHTUB	13	13	40
JS-1	JANITOR SINK	13	-	40
FFD-1	FUNNEL FLOOR DRAIN	-	-	50
FR-1	FRIDGE	13	-	-

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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER
MECHANICAL

DATE
2025/01/24

SUBJECT | SUJET
LEVEL 2 DRAINAGE PLAN

PRODUCTION	REVIEWED	REVU	
DESIGNED	ÉTUDIÉ		DES O | AGENT CONC
JG			
DRAWN	DESSINÉ		PRO MGR | GÉST PROJ
JG			
CHECKED	VÉRIFIÉ		DES MGR | GÉST CONC
CT			
COORDINATION			FIRE | INCENDIE

WBS NUMBER | NO. SRT

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PLUMBING GENERAL NOTES

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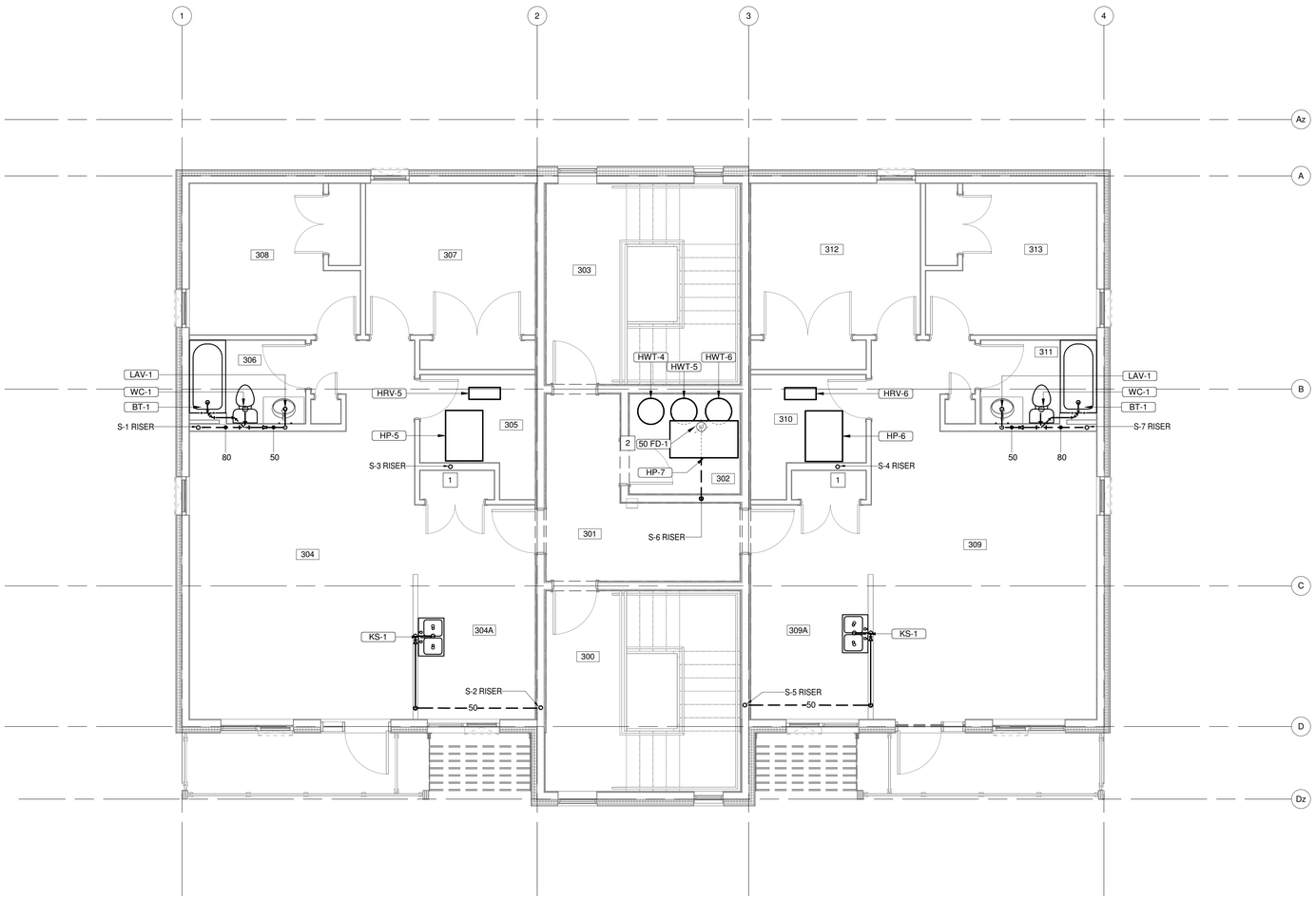
KEYNOTES

1 CONNECT THE HEAT PUMP AND HRV CONDENSATE DRAIN TO THE LAUNDRY DRAIN PIPE. REFER TO DETAILS 1/405

2 CONNECT THE HEAT PUMP AND DOMESTIC WATER TANK TO THE NEAREST FLOOR DRAIN. REFER TO 1/404 FOR DETAILS

PLUMBING FIXTURE SCHEDULE

LABEL	DESCRIPTION	PIPE SIZES TO FIXTURES (mm)		
		DCW	DHW	DRAIN
WC-1	WATER CLOSET	13	-	80
LAV-1	LAVATORY	13	13	32
CW-1	CLOTHES WASHER	13	13	50
DW-1	DISHWASHER	-	13	40
KS-1	KITCHEN SINK	13	13	40
BT-1	BATHTUB	13	13	40
JS-1	JANITOR SINK	13	-	40
FFD-1	FUNNEL FLOOR DRAIN	-	-	50



1 LEVEL 3 DRAINAGE PLAN
418 SCALE: 1 : 50

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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER
MECHANICAL

DATE
2025/01/24

SUBJECT | SUJET
LEVEL 3 DRAINAGE PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT

PF NUMBER | NO. DP
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FIRE PROTECTION GENERAL NOTES

A THIS CONTRACTOR SHALL PREPARE HYDRAULIC CALCULATIONS BASED UPON THE CONFIGURATION OF THE ACTUAL SYSTEM DESIGN AS SHOWN ON THIS CONTRACTOR'S SHOP DRAWINGS.

B COORDINATE PHASING AND LOCATION OF SPRINKLER WORK WITH OTHER TRADES PRIOR TO STARTING WORK.

C THIS LAYOUT IS ONLY INTENDED TO SHOW HEAD TYPE AND GENERAL INTENT. CONTRACTOR SHALL INCLUDE AND PROVIDE ALL ADDITIONAL SPRINKLER HEADS,PIPING, EQUIPMENT AND OTHER APPARATUS AS REQUIRED BY CODES TO INSTALL ACOMPLETE WORKING FIRE PROTECTION SYSTEM

D PROVIDE A COMPLETE FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE FLOOR PLAN AND CEILING TYPES INCLUDING MAINS, BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONSC, THE AUTHORITY HAVING JURISDICTION, NFPA, AND FACTORY MUTUAL.

E THE SPRINKLER SYSTEM SHALL BE DESIGNED BASED UPON ACTUAL WATER FLOW TEST DATA OBTAINED AT OR NEAR THE JOB SITE.

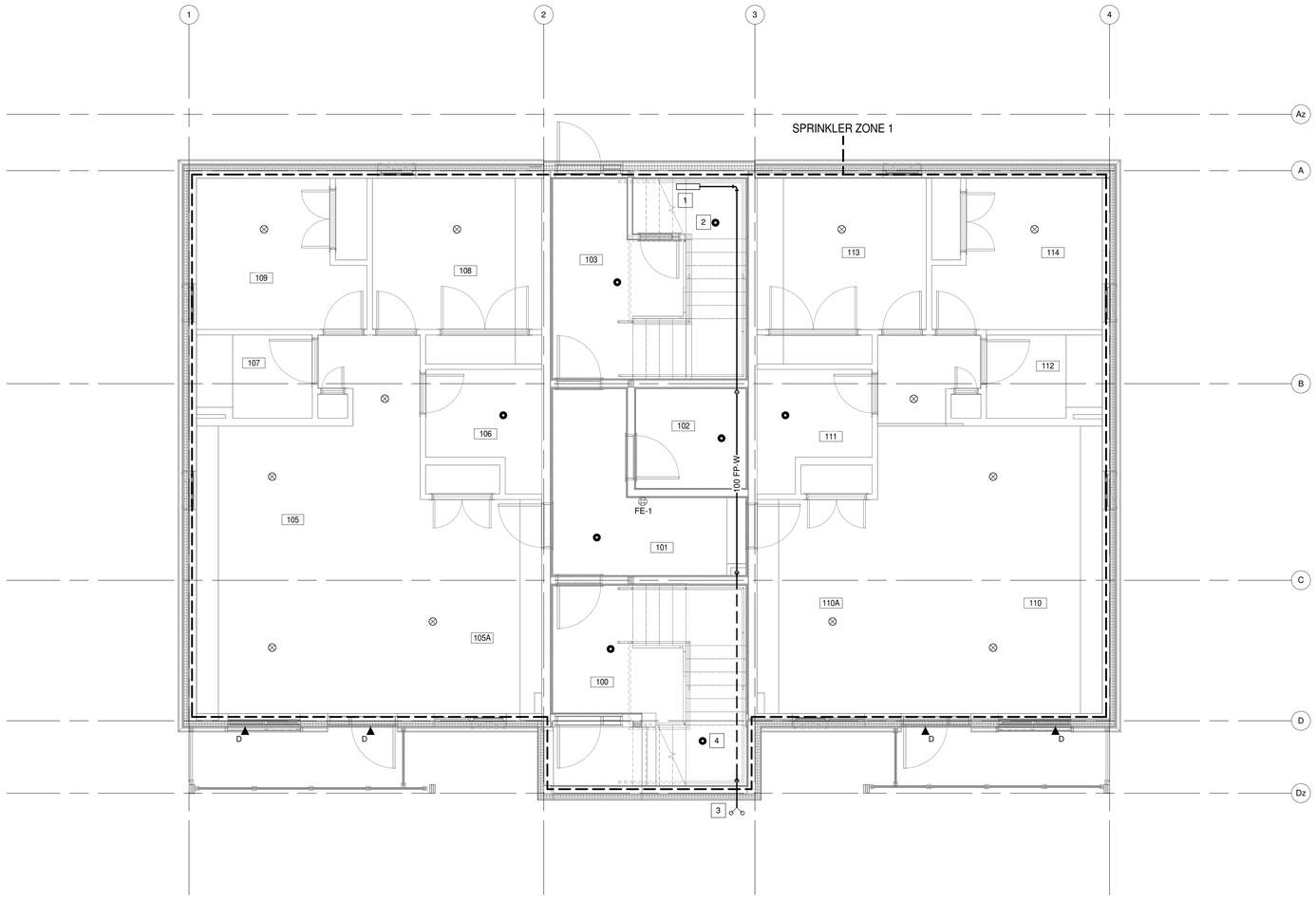
F ROUTE SPRINKLER PIPING SUCH THAT IT DOES NOT RUN ABOVE ELECTRICAL PANELS, SWITCHGEAR, OR SIMILAR EQUIPMENT. SPRINKLER MAINS SHALL NOT RUN THROUGH ELECTRICAL OR COMMUNICATION ROOMS. SPRINKLER HEADS IN THESE ROOMS SHALL BE SERVED BY A DEDICATED BRANCH LINE FOR EACH ROOM.

G DIVISION 21 CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR PROPER INSTALLATION OF THE FIRE PROTECTION SYSTEMS ALARM DEVICES INVOLVED WITH FIRE SPRINKLER SYSTEM.

H ALL SPRINKLER SYSTEM PIPING SHALL BE CONCEALED IN OCCUPIED SPACES, UNLESS NOTED OTHERWISE. WRITTEN AUTHORIZATION SHALL BE OBTAINED PRIOR TO EXPOSING ANY PIPING IN OCCUPIED SPACES.

J FIRE PROTECTION SYSTEM SHALL BE DESIGNED AS PER NATIONAL BUILDING CODE OF CANADA 2020, NFPA 13R, AND FMD 4003 STANDARDS

NOTE: SIDEWALL AND PENDENT SPRINKLERS IN DWELLING UNITS TO BE CONCEALED RESIDENTIAL TYPE.



1 / 419 LEVEL 1 FIRE PROTECTION PLAN
SCALE: 1 : 50

KEYNOTES

1 VALVE STATION LOCATION FOR LEVEL 1. ALL CONTROL VALVES, ALARMS, AND SUPERVISORY SWITCHES SHALL BE LOCATED NO MORE THAN 2100MM ABOVE FINISHED FLOOR.

2 SPRINKLER TO BE LOCATED INSIDE WATER SERVICE ROOM

3 FIRE DEPARTMENT CONNECTION

4 SPRINKLER TO BE LOCATED BELOW THE STAIRCASE LANDING

OCCUPANCY HAZARD CLASSIFICATION SCHEDULE - LEVEL 1

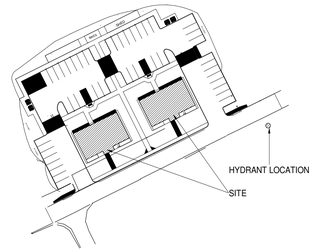
LOCATION			OCCUPANCY	SYSTEM
ROOM NUMBER	ROOM NAMES	ROOM AREA	HAZARD	TYPE
100	SOUTH STAIRWELL	14.14 m2	LH	WET
101	CORRIDOR	10.43 m2	LH	WET
102	ELECTRICAL ROOM	5 m2	OH1	WET
103	NORTH STAIRWELL	9.65 m2	LH	WET
104	WATER SERVICE	6.65 m2	LH	WET
105	LIVING ROOM & KITCHEN	45.53 m2	OH1	WET
106	LAUNDRY/ MECH	5 m2	OH1	WET
107	BATHROOM	4.31 m2	LH	N/A
108	PRIMARY BEDROOM	13.13 m2	LH	WET
109	BEDROOM	11.43 m2	LH	WET
110	LIVING ROOM & KITCHEN	45.53 m2	OH1	WET
111	LAUNDRY/ MECH	5 m2	OH1	WET
112	BATHROOM	4.31 m2	LH	N/A
113	PRIMARY BEDROOM	13.13 m2	LH	WET
114	BEDROOM	11.43 m2	LH	WET
N/A	BALCONY	6 m2	LH	WET

NOTE:
OH1 - ORDINARY HAZARD 1
LH - LIGHT HAZARD

HYDRANT FLOW DATA

STATIC PRESSURE	RESIDUAL PRESSURE	FLOW RATE
427 KPA	338 KPA	5697 LPM

NOTE:
FLOW DATA IS FROM HISTORICAL HYDRANT TESTS. CONTRACTOR TO OBTAIN UPDATED FLOW DATA IN ACCORDANCE WITH NFPA 291 PRIOR TO SUBMITTING SHOP DRAWINGS



2 / 419 HYDRANT LOCATION - KINGSTON
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385 St. Mary Avenue
Winnipeg, MB R3C 0N1
T 204 989 0102
F 204 989 0094
www.republicarchitecture.ca

LICENSED PROFESSIONAL ENGINEER
2025-01-24
C. J. TAIT
100595866
PROVINCE OF ONTARIO

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	CT

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET
LEVEL 1 FIRE PROTECTION PLAN

PRODUCTION	REVIEWED	REVU	
DESIGNED | ÉTUDIÉ: JG			DES O | AGENT CONC
DRAWN | DESSINÉ: JG			PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT			DES MGR | GÉST CONC
COORDINATION			FIRE | INCENDIE

WBS NUMBER | NO. SRT
PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 419 - B

Canada

BORDER LAST UPDATED 2010-08-20

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FIRE PROTECTION GENERAL NOTES

A THIS CONTRACTOR SHALL PREPARE HYDRAULIC CALCULATIONS BASED UPON THE CONFIGURATION OF THE ACTUAL SYSTEM DESIGN AS SHOWN ON THIS CONTRACTOR'S SHOP DRAWINGS.

B COORDINATE PHASING AND LOCATION OF SPRINKLER WORK WITH OTHER TRADES PRIOR TO STARTING WORK.

C THIS LAYOUT IS ONLY INTENDED TO SHOW HEAD TYPE AND GENERAL INTENT. CONTRACTOR SHALL INCLUDE AND PROVIDE ALL ADDITIONAL SPRINKLER HEADS,PIPING, EQUIPMENT AND OTHER APPARATUS AS REQUIRED BY CODES TO INSTALL ACOMPLETE WORKING FIRE PROTECTION SYSTEM

D PROVIDE A COMPLETE FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE FLOOR PLAN AND CEILING TYPES INCLUDING MAINS, BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONSC, THE AUTHORITY HAVING JURISDICTION, NFPA, AND FACTORY MUTUAL.

E THE SPRINKLER SYSTEM SHALL BE DESIGNED BASED UPON ACTUAL WATER FLOW TEST DATA OBTAINED AT OR NEAR THE JOB SITE.

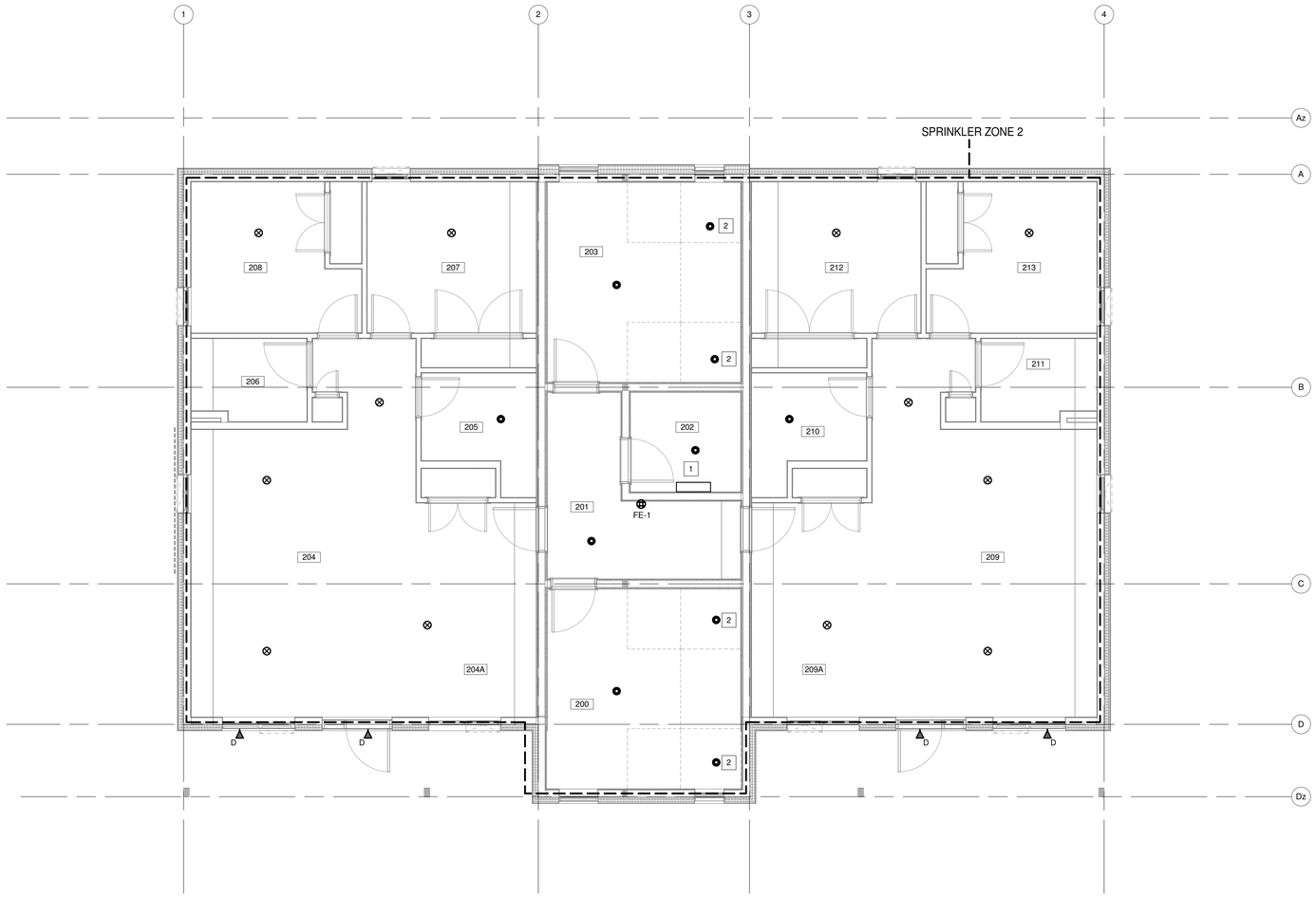
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G DIVISION 21 CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR PROPER INSTALLATION OF THE FIRE PROTECTION SYSTEMS ALARM DEVICES INVOLVED WITH FIRE SPRINKLER SYSTEM.

H ALL SPRINKLER SYSTEM PIPING SHALL BE CONCEALED IN OCCUPIED SPACES, UNLESS NOTED OTHERWISE. WRITTEN AUTHORIZATION SHALL BE OBTAINED PRIOR TO EXPOSING ANY PIPING IN OCCUPIED SPACES.

J FIRE PROTECTION SYSTEM SHALL BE DESIGNED AS PER NATIONAL BUILDING CODE OF CANADA 2020, NFPA 13R, AND FMD 4003 STANDARDS

NOTE: SIDEWALL AND PENDENT SPRINKLERS IN DWELLING UNITS TO BE CONCEALED RESIDENTIAL TYPE



1 LEVEL 2 FIRE PROTECTION PLAN
420 SCALE: 1 : 50

KEYNOTES

1 VALVE STATION LOCATION FOR LEVEL 2. ALL CONTROL VALVES, ALARMS, AND SUPERVISORY SWITCHES SHALL BE LOCATED NO MORE THAN 2100MM ABOVE FINISHED FLOOR.

2 SPRINKLER TO BE LOCATED BELOW THE STAIRCASE LANDING

OCCUPANCY HAZARD CLASSIFICATION SCHEDULE - LEVEL 2

LOCATION		ROOM AREA	OCCUPANCY HAZARD	SYSTEM TYPE
ROOM TAG	ROOM NAME			
200	SOUTH STAIRWELL	17.74 m2	LH	WET
201	CORRIDOR	10.43 m2	LH	WET
202	MECH/ STORAGE	5 m2	OH1	WET
203	NORTH STAIRWELL	17.17 m2	LH	WET
204	LIVING ROOM & KITCHEN	45.53 m2	OH1	WET
205	LAUNDRY/ MECH	5 m2	OH1	WET
206	BATHROOM	4.31 m2	LH	N/A
207	PRIMARY BEDROOM	13.13 m2	LH	WET
208	BEDROOM	11.43 m2	LH	WET
209	LIVING ROOM & KITCHEN	45.53 m2	OH1	WET
210	LAUNDRY/ MECH	5 m2	OH1	WET
211	BATHROOM	4.31 m2	LH	N/A
212	PRIMARY BEDROOM	13.13 m2	LH	WET
213	BEDROOM	11.43 m2	LH	WET
N/A	BALCONY	6 m2	LH	WET

NOTE:
OH1 - ORDINARY HAZARD 1
LH - LIGHT HAZARD

HYDRANT FLOW DATA

STATIC PRESSURE	RESIDUAL PRESSURE	FLOW RATE
427 KPA	338 KPA	5697 LPM

NOTE:
FLOW DATA IS FROM HISTORICAL HYDRANT TESTS. CONTRACTOR TO OBTAIN UPDATED FLOW DATA IN ACCORDANCE WITH NFPA 291 PRIOR TO SUBMITTING SHOP DRAWINGS

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Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER: MECHANICAL
DATE: 2025/01/24

SUBJECT | SUJET
LEVEL 2 FIRE PROTECTION PLAN

PRODUCTION	REVIEWED	REVU	
DESIGNED | ÉTUDIÉ: JG			DES O | AGENT CONC
DRAWN | DESSINÉ: JG			PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT			DES MGR | GÉST CONC
COORDINATION			FIRE | INCENDIE

WBS NUMBER | NO. SRT:
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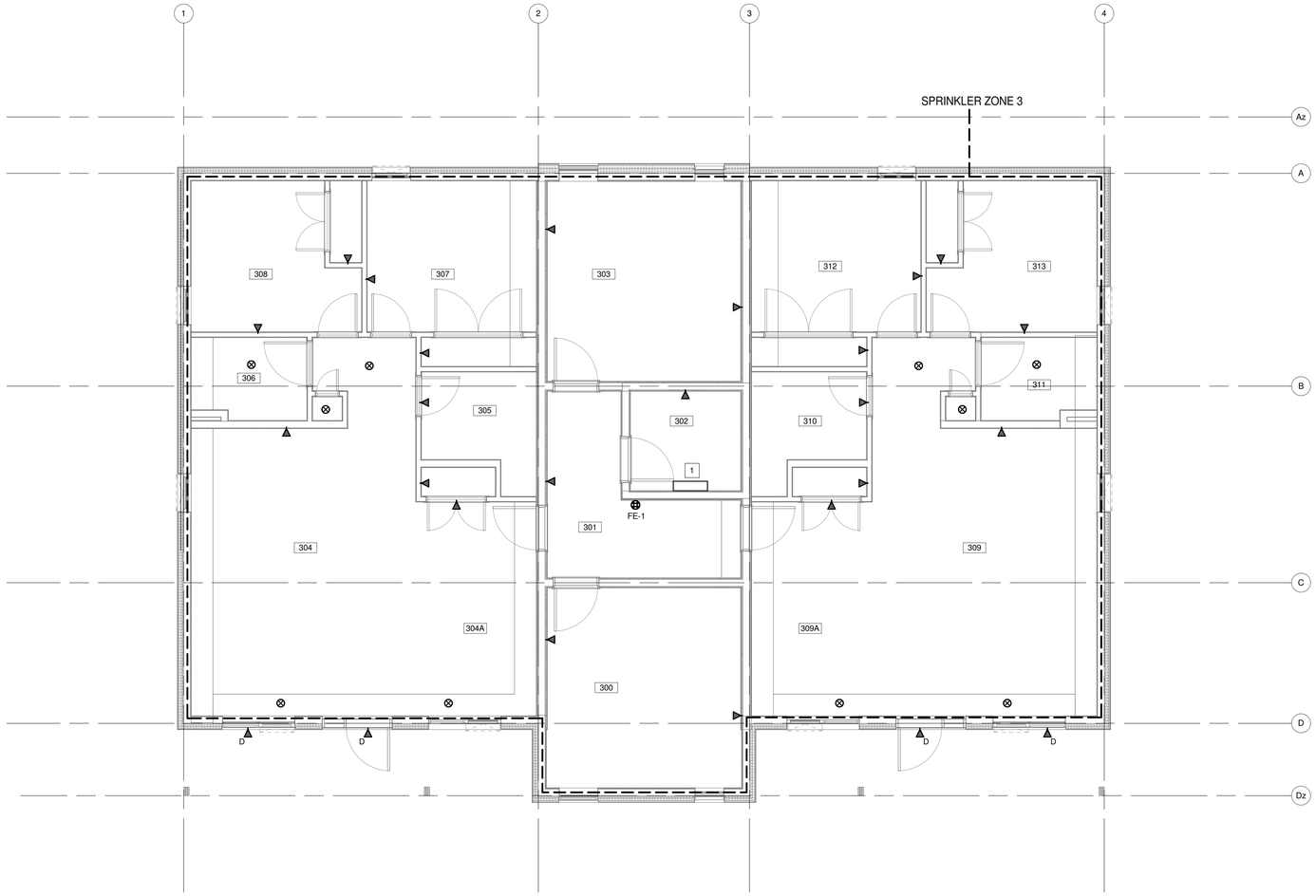
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NOTE: SIDEWALL AND PENDENT SPRINKLERS IN DWELLING UNITS TO BE CONCEALED RESIDENTIAL TYPE. SPRINKLER PIPING FOR THIS FLOOR IS RUN IN THE FLOOR CAVITY THEN UP THE WALLS (EXCEPT FOR WHERE THERE ARE BULKHEADS)



1 421 LEVEL 3 FIRE PROTECTION PLAN
SCALE: 1 : 50

KEYNOTES

1 VALVE STATION LOCATION FOR LEVEL 3. ALL CONTROL VALVES, ALARMS, AND SUPERVISORY SWITCHES SHALL BE LOCATED NO MORE THAN 2100MM ABOVE FINISHED FLOOR.

OCCUPANCY HAZARD CLASSIFICATION SCHEDULE - LEVEL 3

LOCATION		ROOM AREA	OCCUPANCY HAZARD	SYSTEM TYPE
ROOM TAG	ROOM NAME			
300	SOUTH STAIRWELL	17.71 m2	LH	WET
301	CORRIDOR	10.43 m2	LH	WET
302	MECH/STORAGE	5 m2	OH1	WET
303	NORTH STAIRWELL	17.71 m2	LH	WET
304	LIVING ROOM & KITCHEN	45.53 m2	OH1	WET
305	MECH/STORAGE	5 m2	OH1	WET
306	BATHROOM	4.31 m2	LH	N/A
307	PRIMARY BEDROOM	11.43 m2	LH	WET
308	BEDROOM	13.13 m2	LH	WET
309	LIVING ROOM & KITCHEN	45.53 m2	OH1	WET
310	MECH/STORAGE	5 m2	OH1	WET
311	BATHROOM	4.31 m2	LH	N/A
312	PRIMARY BEDROOM	13.13 m2	LH	WET
313	BEDROOM	11.43 m2	LH	WET
N/A	BALCONY	6 m2	LH	WET
N/A	CLOSET/ STORAGE	N/A	LH	WET

NOTE:
OH1 - ORDINARY HAZARD 1
LH - LIGHT HAZARD

HYDRANT FLOW DATA

STATIC PRESSURE	RESIDUAL PRESSURE	FLOW RATE
427 KPA	338 KPA	5697 LPM

NOTE:
FLOW DATA IS FROM HISTORICAL HYDRANT TESTS. CONTRACTOR TO OBTAIN UPDATED FLOW DATA IN ACCORDANCE WITH NFPA 291 PRIOR TO SUBMITTING SHOP DRAWINGS

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LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ

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KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier-4 6-Plex

TRADE | MÉTIER
MECHANICAL

DATE
2025/01/24

SUBJECT | SUJET
LEVEL 3 FIRE PROTECTION PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: JG		DES O | AGENT CONC
DRAWN | DESSINÉ: JG		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: CT		DES MGR | GÉST CONC
COORDINATION		FIRE | INCENDIE

WBS NUMBER | NO. SRT

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ZKN99

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L-KN-ZKN99 - 421 - B

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GENERAL

SYMBOL	DESCRIPTION
XX / XX-XX	DETAIL NUMBER / DETAIL SHEET
AFF	ABOVE FINISHED FLOOR
WP	WEATHER PROOF
W	WALL MOUNTED
C	CEILING MOUNTED
TL	TWIST-LOCK
E	EXISTING FIXTURE/EQUIPMENT TO REMAIN
ER	EXISTING FIXTURE/EQUIPMENT IN RELOCATED POSITION
R	EXISTING FIXTURE/EQUIPMENT TO DISCONNECTED, REMOVED
S	SURFACE MOUNTED
TYP.	TYPICAL
C/W	COMPLETE WITH
V/D	VOICE/DATA
AV	AUDIO/VISUAL
50mm	CONDUIT STUB-UP (50mm DENOTES CONDUIT SIZE)

POWER AND CONTROL

SYMBOL	DESCRIPTION
	POWER AND/OR DISTRIBUTION SURFACE MOUNTED PANEL BOARD
	POWER AND/OR DISTRIBUTION RECESSED PANEL BOARD
	FEEDER BUS-WAY
30 A 15A	PLUG-IN BUS-WAY WITH BUS PLUG 30 DENOTES SWITCH RATING, 15A DENOTES FUSE RATING
	CABLE TRAY/CABLETROUGH
	WIRE-WAY
	COMBINATION MAGNETIC STARTER
	TRANSFORMER
	MANUAL STARTER
$M	HORSEPOWER RATED MOTOR TOGGLE SWITCH
	VARIABLE FREQUENCY DRIVE
C	MAGNETIC CONTACTOR
C	COMBINATION CONTACTOR
	DISCONNECT SWITCH - NON-FUSIBLE
F	FUSED DISCONNECT SWITCH
	PUSHBUTTON STATION
SD	SMOKE DAMPER
DL	DOCK LEVELER
CP	CONTROL PANEL
J J	JUNCTION BOX: F - DENOTES FLOOR MOUNTED; C - DENOTES CEILING MOUNTED; W - DENOTES WALL MOUNTED;
P	PULL BOX
EPO	REMOTE EMERGENCY POWER OFF BUTTON
TB6	TERMINAL BOX WITH TERMINAL STRIPS

SWITCHES & CONTROLS

SYMBOL	DESCRIPTION
$	SINGLE POLE LIGHT SWITCH
$D	DIMMER SWITCH
$2ZD	LOW VOLTAGE DIMMER SWITCH 1ZD - ONE ZONE DIMMER 2ZD - TWO ZONE DIMMER 4ZD - FOUR ZONE DIMMER
$V	DIMMER SWITCH
$OSD	LOW VOLTAGE OCCUPANCY SENSOR WITH DIMMER SWITCH
$SCD	LOW VOLTAGE SCENE CONTROLLER DIMMER SWITCH
OS	OCCUPANCY SENSOR CEILING OR WALL MOUNTED
P	PHOTOCELL

RECEPTACLES

(15A, 120V UNLESS NOTED OTHERWISE)

SYMBOL	DESCRIPTION
P1-30	DUPLEX RECEPTACLE (5-15R CSA CONFIGURATION) P1-30 DENOTES RECEPTACLE WIRED TO CIRCUIT No. 30 FROM PANEL P1
	DUPLEX RECEPTACLE (5-15R CSA CONFIGURATION) MOUNTED ABOVE COUNTER
MW FR HK	DUPLEX RECEPTACLE (5-20R CSA CONFIGURATION) FOR: MW = MICROWAVE FR = FRIDGE HK = HOUSEKEEPING M = SURFACE MOUNTED FLOOR MONUMENT
	GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE (GFCI) 15 AMP, 120V
	GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE (GFCI) 20 AMP, 120V
	TWO DUPLEX RECEPTACLE (QUAD) MOUNTED C/W SINGLE COVERPLATE
L5-30R	SINGLE RECEPTACLE L5-30R DENOTES RECEPTACLE TYPE / CSA CONFIGURATION
	DUPLEX RECEPTACLE CEILING SPACE MOUNTED

SYMBOLS AND LEGEND AS APPLICABLE

OUTLET CLUSTER

(ALL FLOOR BOX TYPES WITH LETTER DESIGNATION TO BE SUITABLE FOR NON-RAISED FLOOR INSTALLATION. ALL FLOOR BOXES WITH "1" APPENDED TO TYPE TO BE SUITABLE FOR RAISED FLOOR INSTALLATION.)

SYMBOL	DESCRIPTION
A A1	4-GANG FLUSH FLOOR MOUNTED BOX C/W 2-15AMP, 120V DUPLEX RECEPTACLES, 1 V/D OUTLETS AND 1 SPACES
B B1	4-GANG FLUSH FLOOR MOUNTED BOX C/W 1-15AMP, 120V DUPLEX RECEPTACLE, 1 V/D OUTLETS, AND 2 SPACES
C C1	1-15AMP 120V DUPLEX RECEPTACLE, 1 V/D OUTLETS, AND 2 SPACES
FA FB FC	SYSTEM FURNITURE POWER/COMMUNICATIONS CONNECTION BOX FA DENOTES WALL MOUNTED FB DENOTES FLOOR MOUNTED FC DENOTES CEILING MOUNTED
	SYSTEM FURNITURE SERVICE POLE
	DIRECT CONNECTION TO EQUIPMENT NOTED ADO = AUTOMATIC DOOR OPERATOR
EF 1	MECHANICAL OR ELECTRICAL EQUIPMENT / TAG NUMBER

AC - AIR CONDITIONING UNIT	HV - HEATING AND VENTILATING UNIT
ACC - AIR COOLED CONDENSER UNIT	DHW - HOT WATER TANK
AHU - AIR HANDLING UNIT	MAU - MAKE UP AIR UNIT
B - BOILER	P - PUMP
C - COMPRESSOR	PH - PREHEAT COIL
CH - CHILLIER	RF - RETURN AIR FAN
CU - CONDENSER UNIT	RCP- RE-CIRCULATION PUMP
DH - DOOR HEATER	RH - RE-HEAT COIL AND FAN
EPP - EXCESS PRESSURE PUMP	SF - SUPPLY FAN
FCU - FAN COIL UNIT	UH - UNIT HEATER
EF - EXHAUST FAN	V - VENTILATING UNIT
FF - ELECTRIC FORCE-FLOW HEATER	VAV - VARIABLE AIR VOLUME BOX
H - HUMIDIFIER	ELEV- ELEVATOR

4-GANG DEVICE BOX ON SURFACE MOUNTED LOW PROFILE 4-CHANNEL RACEWAY C/W

LIGHTING

SYMBOL	DESCRIPTION
T1 A1-30.1 T1 A1-30.1	LUMINARIES - CEILING OR PENDANT MOUNTED T1 DENOTES LUMINARIES TYPE A1-30 DENOTES LIGHTING PANELBOARD E1, CIRCUIT No. 30, SWITCH No. 1
	LIGHTING FIXTURE ON NORMAL POWER CIRCUIT
	LUMINARIES - WALL MOUNTED
	LIGHTING FIXTURE ON EMERGENCY POWER CIRCUIT
	WALL MOUNTED LUMINARIES ON EMERGENCY POWER CIRCUIT
	COLUMN/POLE MOUNTED LUMINARIES
	LIGHT TRACK, LENGTH AS SHOWN ON THE DRAWINGS
	TRACK MOUNTED LUMINRIES
	STEP LIGHT
NL	DENOTES NIGHT LIGHT
	EXIT SIGN - CEILING MOUNTED, SINGLE AND DOUBLE FACE SHADED SIDE(S) DENOTES LIGHTED FACE(S) C/W WITH DIRECTIONAL ARROWS AS INDICATED
	EXIT SIGN - WALL MOUNTED
	CEILING MOUNTED COMBINATION EXIT SIGN & EMERGENCY LIGHTS
	WALL MOUNTED COMBINATION EXIT SIGN & EMERGENCY LIGHTS
	EMERGENCY BATTERY UNIT WITH 2 INTEGRAL HEADS AND DEDICATED SINGLE RECEPTACLE
	DOUBLE REMOTE EMERGENCY LIGHTING HEADS
	SINGLE REMOTE EMERGENCY LIGHTING HEAD
	REMOTE MOUNTED EMERGENCY BATTERY UNIT AND DEDICATED SINGLE RECEPTACLE
	EMERGENCY BATTERY UNIT WITH 2 INTEGRAL HEADS, HARD WIRED

TELEPHONE AND COMMUNICATIONS

SYMBOL	DESCRIPTION
	DATA OUTLET
	VOICE OUTLET
TV	COMMUNICATION (VOICE/DATA) OUTLET. SLASH DENOTES MOUNTED ABOVE COUNTER TV = TELEVISION OUTLET WIFI = WIRELESS ACCESS POINT DS = DIGITAL SIGN RECESSED OUTLET BOX
1G	SINGLE GANG OUTLET BOX FOR AV SYSTEM
2G	2-GANG OUTLET BOX FOR AV SYSTEM
3G	3-GANG OUTLET BOX FOR AV SYSTEM
4G	4-GANG OUTLET BOX FOR AV SYSTEM
	DATA GATHERING PANEL
	COMMUNICATION SYSTEM CABLE TRAY (T): T4 DENOTES 4" WIDE TRAY, T8 - 8" WIDE TRAY, T12 - 12" WIDE TRAY, T18 - 18" WIDE TRAY, T20 - 20" WIDE TRAY.
	SINGLE GANG OUTLET BOX C/W CONDUIT AS SHOWN ON DRAWINGS.

SYMBOLS AND LEGEND AS APPLICABLE

CLOCK - PROGRAMMED

SYMBOL	DESCRIPTION
1	INDICATING CLOCK-NUMBER DENOTES CLOCK TYPE
P	PROGRAMMED BELL

FIRE ALARM

SYMBOL	DESCRIPTION
	FIRE ALARM PANEL
ANN	REMOTE ANNUNCIATOR
GCC	GRAPHIC COMMAND CENTER
FTP	FIRE ALARM TERMINAL PANEL
FA ZONE FA-2-1	FIRE ALARM ZONE NUMBER
S R	AREA SMOKE DETECTOR R DENOTES BELOW RAISED FLOOR
DGP	WALL OR FLOOR SURFACE MOUNTED RACEWAY LENGTH AND TYPE AS SHOWN ON THE DRAWINGS
DCC	DISPLAY AND CONTROL CENTER
TP	TERMINAL PANEL
F	FLAME DETECTOR
ID	DUCT SMOKE DETECTOR
H	HEAT DETECTOR
CS	COMBINATION HEAT AND SMOKE DETECTOR
P	POST INDICATOR VALVE
FS	FLOW SWITCH
Y	SUPERVISED VALVE
PS	PRESSURE SWITCH
IR	INFRA RED DETECTOR
S	SMOKE DETECTOR
A	SMOKE ALARM DETECTOR
F F	FIRE ALARM SPEAKER (CEILING AND WALL MOUNTED)
F/S F/S	FIRE ALARM SPEAKER/STROBE (CEILING AND WALL MOUNTED)
S	FIRE ALARM STROBE
F/S C	FIRE ALARM BELL (C DENOTES CEILING MOUNTED)
F C	FIRE ALARM HORN (C DENOTES CEILING MOUNTED)
F/S C	FIRE ALARM HORN/STROBE (C DENOTES CEILING MOUNTED)
	FIRE ALARM MANUAL PULL STATION,
R	END OF LINE DEVICE
H	FIREMAN'S HANDSET
M	ACTIVE FIELD DEVICE - MONITOR MODULE
C	ACTIVE FIELD DEVICE - CONTROL MODULE
R	FIRE ALARM RELAY
FDNE	FIRE DO NOT ENTER
ZI	ZONE ISOLATOR
IAM	INDIVIDUAL ADDRESSABLE MODULE

GROUNDING

SYMBOL	DESCRIPTION
	GROUND ROD
	GROUND ROD INSPECTION WELL
	GROUND BUS
	GROUNDING CONNECTION
A/G	BURIED GROUND CABLE GROUND CABLE - ABOVE GRADE
2	GROUND CABLE PIGTAIL - EXPOSED FOR FUTURE CONNECTION 2 DENOTES LENGTH, M

SINGLE LINE DIAGRAM

SYMBOL	DESCRIPTION
	GROUND CONNECTION
SPD	SURGE PROTECTIVE DEVICE
	DELTA/WYE TRANSFORMER CONNECTION WITH NEUTRAL OF WYE RESISTANCE GROUNDED
	DELTA/WYE WITH SOLID NEUTRAL GROUND TRANSFORMER CONNECTION
	DISTRIBUTION TRANSFORMER

SYMBOLS AND LEGEND AS APPLICABLE

SYMBOL	DESCRIPTION
S	LOW VOLTAGE CIRCUIT BREAKER LETTER DENOTES THE FOLLOWING: S - SHUNT TRIP UV - UNDER VOLTAGE TRIP G - GROUND RELAY TRIP E - ELECTRICALLY OPERATED
30A	LOW VOLTAGE DISCONNECT SWITCH NUMBER DENOTES AMPERE RATING
15A	FUSE NUMBER DENOTES FUSE RATING
1	MAGNETIC MOTOR STARTER NUMBER DENOTES STARTER SIZE
RP-1A1 225A 3Ø, 4W 120/208V	PANEL
	TRANSFER SWITCH
G	GENERATOR
	BUSWAY
10HP	MOTOR

METERING AND PROTECTION DEVICES

SYMBOL	DESCRIPTION
GF	GROUND FAULT MONITOR
kW	kW METER
Hz	FREQUENCY METER
51	RELAY DEVICE NUMBER (FOR DEFINITION SEE ANSI STANDARD C37.2)
V	VOLTMETER
A	AMMETER
K	KEY INTERLOCK
	CONTROL TRANSFORMER
400:5 3	CURRENT TRANSFORMER (CT) (400:5 DENOTES CT RATIO, NUMBER DENOTES QUANTITY)

SECURITY AND DOOR HARDWARE

SYMBOL	DESCRIPTION
J	JUNCTION BOX
RX	REQUEST TO EXIT
CR	CARD READER
PB	HANDICAP PUSH BUTTON
DO	DOOR OPERATOR
DS	ELECTRIC DOOR STRIKE
DC	DOOR CONTACT
KP	I/A KEYPAD
PS	24VDC POWER SUPPLY
GL	ELECTRIC GATE LOCK
DM	MOTION DETECTOR
DL	ELECTROMAGNETIC DOOR LOCK
IC	INTERCOM STATION
	ALARM SOUNDER
D	DURESS BUTTON
	STROBE INDICATOR
	PUSH TO LOCK BUTTON
	ASSISTANCE REQUESTED DISPLAY
	OCCUPIED SIGNAL LIGHT
	SECURITY CCTV CAMERA

SYMBOLS AND LEGEND AS APPLICABLE

Sheet List	
Sheet Number	**Sheet Name**
L-KN-ZKN99 - 500 - B	DRAWING LIST & LEGENDS
L-KN-ZKN99 - 501 - B	MAIN FLOOR PLAN
L-KN-ZKN99 - 502 - B	SECOND FLOOR PLAN
L-KN-ZKN99 - 503 - B	THIRD FLOOR PLAN
L-KN-ZKN99 - 504 - B	TYPICAL SUITE LAYOUT
L-KN-ZKN99 - 505 - B	FIRE ALARM RISER
L-KN-ZKN99 - 506 - B	DISTRIBUTION SINGLE LINE
L-KN-ZKN99 - 507 - B	COMMUNICATION SYSTEMS DETAILS
L-KN-ZKN99 - 508 - B	ELECTRICAL SITE PLAN, NOTES AND DETAILS

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T 204 989 0102
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S. J. STOOPS
100502277
2025-JAN-24
PROVINCE OF ONTARIO

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	F.H

SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier 4 6-Plex

TRADE | MÉTIER: ELECTRICAL

DATE: 2025/01/24

SUBJECT | SUJET: DRAWING LIST & LEGENDS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: F.H		DES O | AGENT CONC
DRAWN | DESSINÉ: F.H		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: S.R		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

WBS NUMBER | NO. SRT:

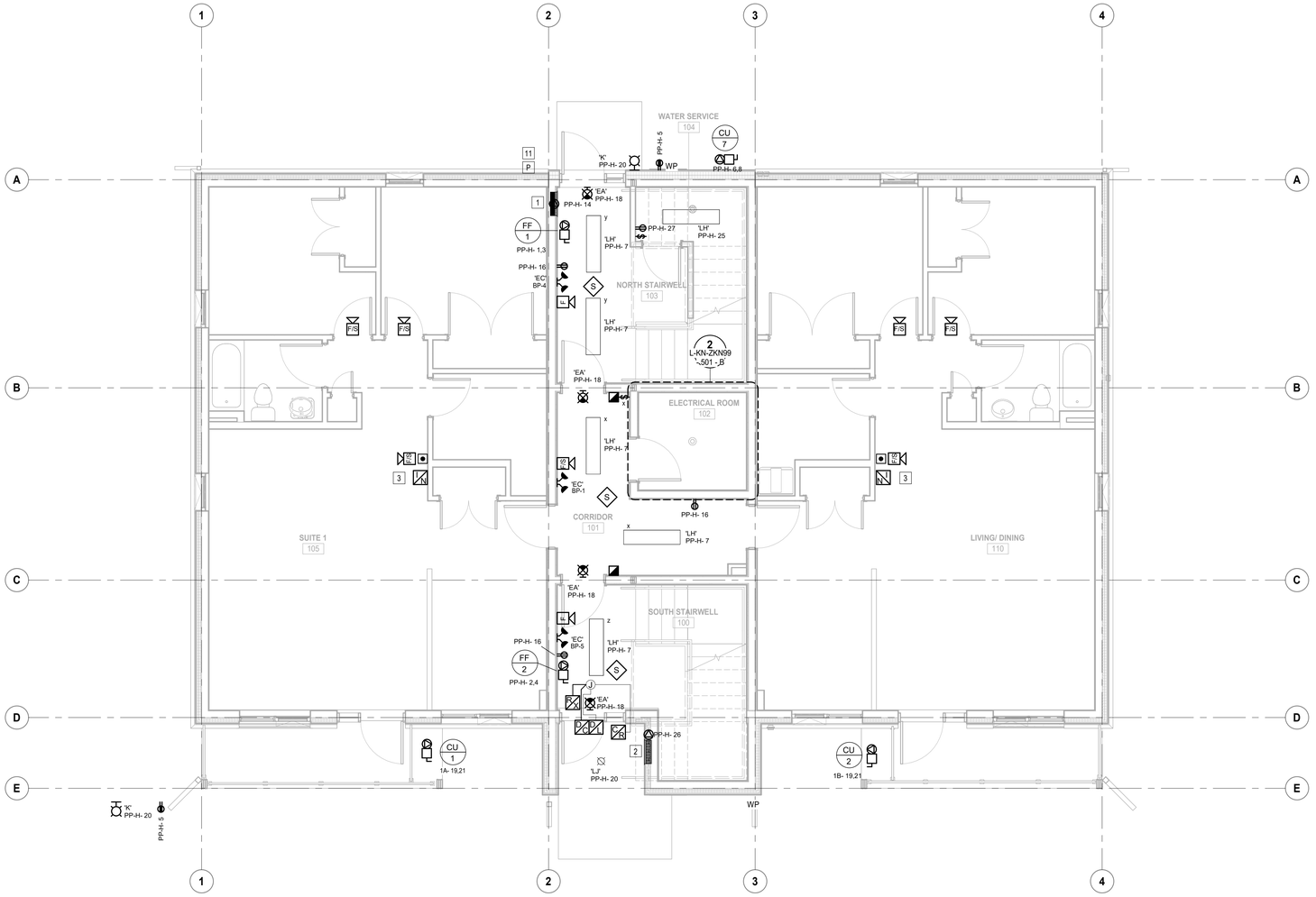
PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 500 - B

Canada

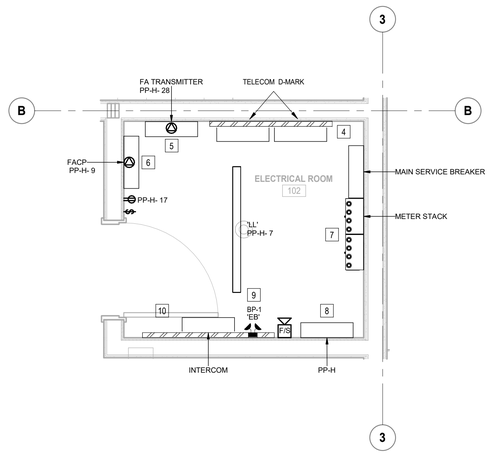
BORDER LAST UPDATED 2010-08-20

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1 L-KN-ZKN99 -501 -B MAIN FLOOR - LIGHTING AND SYSTEMS PLAN

SCALE: 1 : 50



2 L-KN-ZKN99 -501 -B ELECTRICAL ROOM 102 PLAN

SCALE: 1 : 25

NECB POWER DENSITY SCHEDULE (SPACE-BY-SPACE)

SPACE NUMBER	SPACE NAME	SPACE AREA (m2)	NECB SPACE TYPE	LIGHTING DENSITY (W/m2)	LIGHTING LOAD (W)	TOTAL ALLOWABLE WATTAGE (W)	PRESCRIBED DENSITY (W/m2)	LEVEL
LEVEL 1								
100	FRONT STAIRWELL	14 m²	STAIRWELL	2.52 W/m²	35 W	86 W	6.20 W/m²	LEVEL 1
101	CORRIDOR	10 m²	CORRIDOR/TRANSITION - OTHER	6.82 W/m²	70 W	73 W	7.10 W/m²	LEVEL 1
102	ELECTRICAL ROOM	5 m²	ELECTRICAL/MECHANICAL	5.11 W/m²	25 W	23 W	4.60 W/m²	LEVEL 1
103	REAR STAIRWELL	10 m²	STAIRWELL	6.92 W/m²	70 W	63 W	6.20 W/m²	LEVEL 1
104	WATER SERVICE	6 m²	ELECTRICAL/MECHANICAL	5.83 W/m²	35 W	29 W	4.60 W/m²	LEVEL 1
LEVEL 2								
200	FRONT STAIRWELL	17 m²	STAIRWELL	4.06 W/m²	70 W	107 W	6.20 W/m²	LEVEL 2
201	CORRIDOR	10 m²	CORRIDOR/TRANSITION - OTHER	6.82 W/m²	70 W	73 W	7.10 W/m²	LEVEL 2
202	MECH / STORAGE ROOM	5 m²	ELECTRICAL/MECHANICAL	5.11 W/m²	25 W	23 W	4.60 W/m²	LEVEL 2
203	REAR STAIRWELL	17 m²	STAIRWELL	4.23 W/m²	70 W	103 W	6.20 W/m²	LEVEL 2
LEVEL 3								
300	FRONT STAIRWELL	17 m²	STAIRWELL	8.12 W/m²	140 W	107 W	6.20 W/m²	LEVEL 3
301	CORRIDOR	10 m²	CORRIDOR/TRANSITION - OTHER	6.82 W/m²	70 W	73 W	7.10 W/m²	LEVEL 3
302	MECH / STORAGE ROOM	5 m²	ELECTRICAL/MECHANICAL	5.11 W/m²	25 W	23 W	4.60 W/m²	LEVEL 3
303	REAR STAIRWELL	17 m²	STAIRWELL	8.14 W/m²	140 W	107 W	6.20 W/m²	LEVEL 3
					810 W	887 W		

BUILDING EXTERIOR LIGHTING POWER DENSITY SCHEDULE

EXTERIOR APPLICATION	LIGHTING ZONE	BASIC SITE ALLOWANCE (W)	TOTAL DOOR WIDTH (m)	LIGHTING POWER ALLOWANCE (W/m)	TOTAL POWER (W)	ALLOWED POWER (W)
EXTERIOR ENTRANCES AND EXTERIOR EXITS - PEDESTRIAN AND VEHICULAR ENTRANCES AND EXITS - NORTH	2	400	2M	46	35	492

REFERRAL NOTES:

1. FIRE ALARM REMOTE ANNUNCIATOR PANEL, REFER TO SPECIFICATIONS AND FIRE ALARM DETAILS, DRAWING E504.
2. DOOR INTERCOM PANEL AS SPECIFIED. PROVIDE 120V CONNECTION. REFER TO DOOR INTERCOM SYSTEM SCHEMATIC 2/L-KN-ZKN99 - 507 - B.
3. SUITE RECESSSED WALL INTERCOM STATION CONNECTED TO FRONT ENTRANCE INTERCOM PANEL. REFER TO DOOR INTERCOM SYSTEM SCHEMATIC 2/L-KN-ZKN99 - 507 - B.
4. EQUIPMENT PLYWOOD FOR BUILDING TELEPHONE AND CABLE TELEVISION DEMARCATION EQUIPMENT. REFER TO COMMUNICATIONS RISER DETAIL, 1/L-KN-ZKN99 - 506 - B
5. FIRE ALARM SYSTEM TRANSMITTER. REFER TO SPECIFICATIONS AND FIRE ALARM DETAILS, DRAWING L-KN-ZKN99 - 505 - B.
6. FIRE ALARM CONTROL PANEL. REFER TO SPECIFICATIONS AND FIRE ALARM DETAILS, DRAWING L-KN-ZKN99 - 505 - B.
7. METER STACK, REFER TO MAIN SERVICE SCHEMATIC 1/L-KN-ZKN99 - 506 - B.
8. PANEL 'H', REFER TO PANEL SCHEDULE ON DRAWING L-KN-ZKN99 - 506 - B AND MAIN SERVICE SCHEMATIC 1/L-KN-ZKN99 - 506 - B.
9. BATTERY PACK BP1, RATED MINIMUM OF 36 WATTS.
10. DOOR INTERCOM SYSTEM EQUIPMENT PLYWOOD. REFER TO DOOR INTERCOM SYSTEM SCHEMATIC 2/L-KN-ZKN99 - 507 - B.
11. PHOTOCELL LOCATION. DEVICE SHALL BE MOUNTED AT 3000mm ABOVE GRADE AND AIMED NORTH.

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NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	F.H

SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier 4 6-Plex

TRADE | MÉTIER: ELECTRICAL

DATE: 2025/01/24

SUBJECT | SUJET: MAIN FLOOR PLAN

PRODUCTION	REVIEWED	REVU	
DESIGNED	ÉTUDIÉ: F.H		DES O | AGENT CONC
DRAWN	DESSINÉ: F.H		PRO MGR | GÉST PROJ
CHECKED	VÉRIFIÉ: S.R		DES MGR | GÉST CONC
COORDINATION: REPUBLIC			FIRE | INCENDIE

WBS NUMBER | NO. SRT:

PF NUMBER | NO. DP: ZKN99

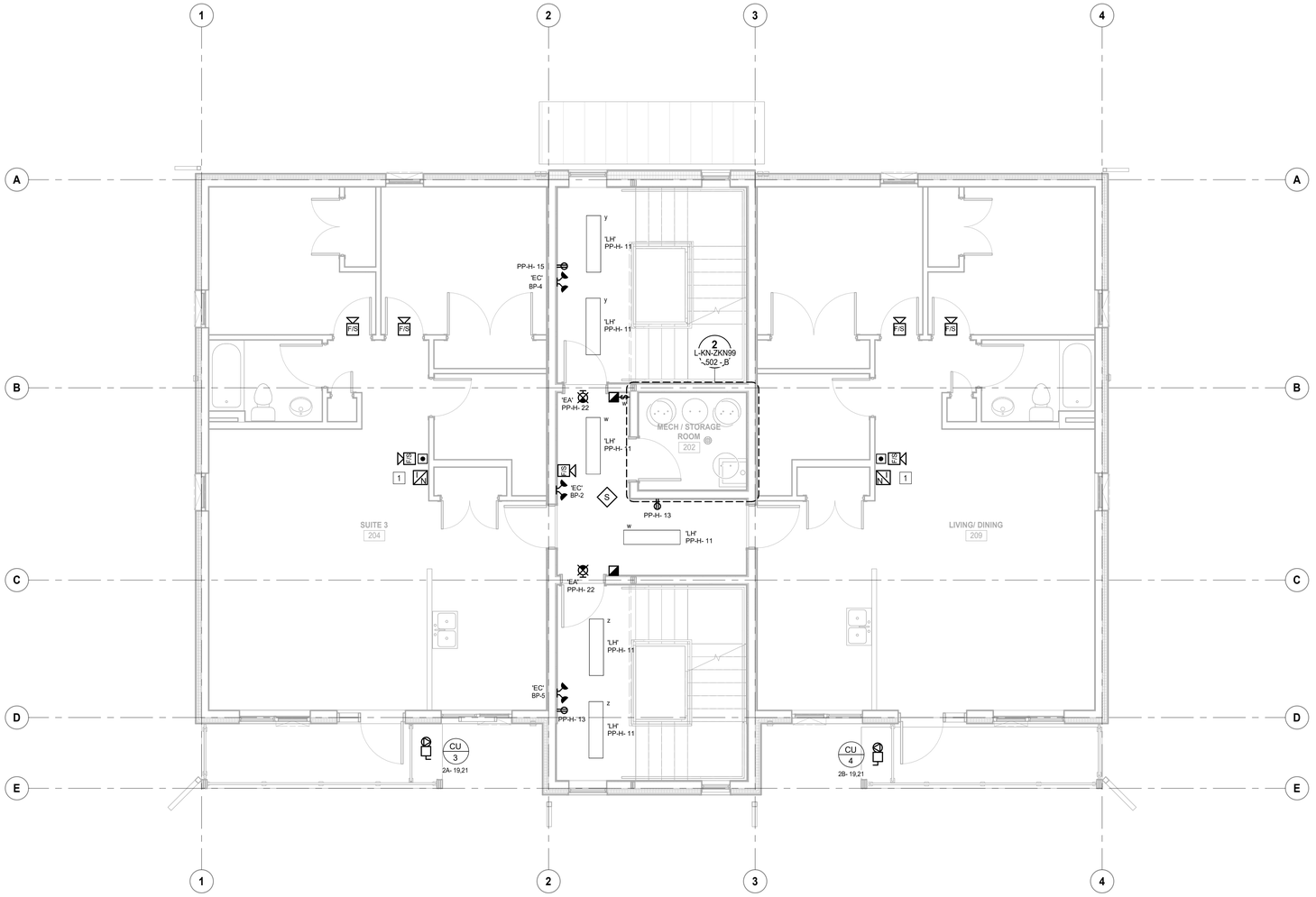
DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 501 - B

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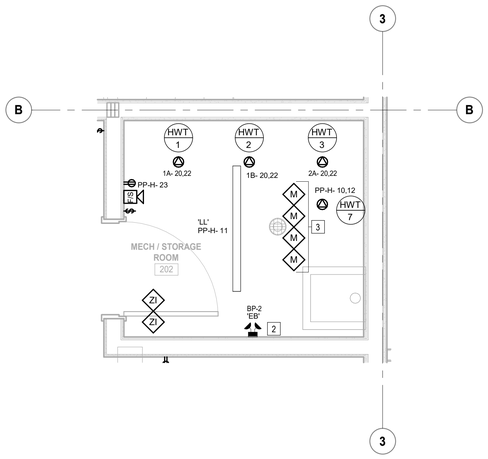
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1 L-KN-ZKN99 -502 - B SECOND FLOOR - LIGHTING AND SYSTEMS PLAN

SCALE: 1 : 50



2 L-KN-ZKN99 -502 - B MECH / STORAGE ROOM 202 PLAN

SCALE: 1 : 25

REFERRAL NOTES:

1. SUITE RECESSSED WALL INTERCOM STATION CONNECTED TO FRONT ENTRANCE INTERCOM PANEL. REFER TO DOOR INTERCOM SYSTEM SCHEMATIC 2/L-KN-ZKN99 - 507 - B.
2. BATTERY PACK BP3, RATED MINIMUM OF 36 WATTS.
3. MODULES FOR CONNECTION TO TAMPER AND FLOW SWITCHES FOR SPRINKLER TREE FOR ZONES 3 AND 4.

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SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER
ELECTRICAL

DATE
2025/01/24

SUBJECT | SUJET
SECOND FLOOR PLAN

PRODUCTION	REVIEWED	REVU	
DESIGNED | ÉTUDIÉ F.H			DES O | AGENT CONC
DRAWN | DESSINÉ F.H			PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ S.R			DES MGR | GÉST CONC
COORDINATION REPUBLIC			FIRE | INCENDIE

WBS NUMBER | NO. SRT

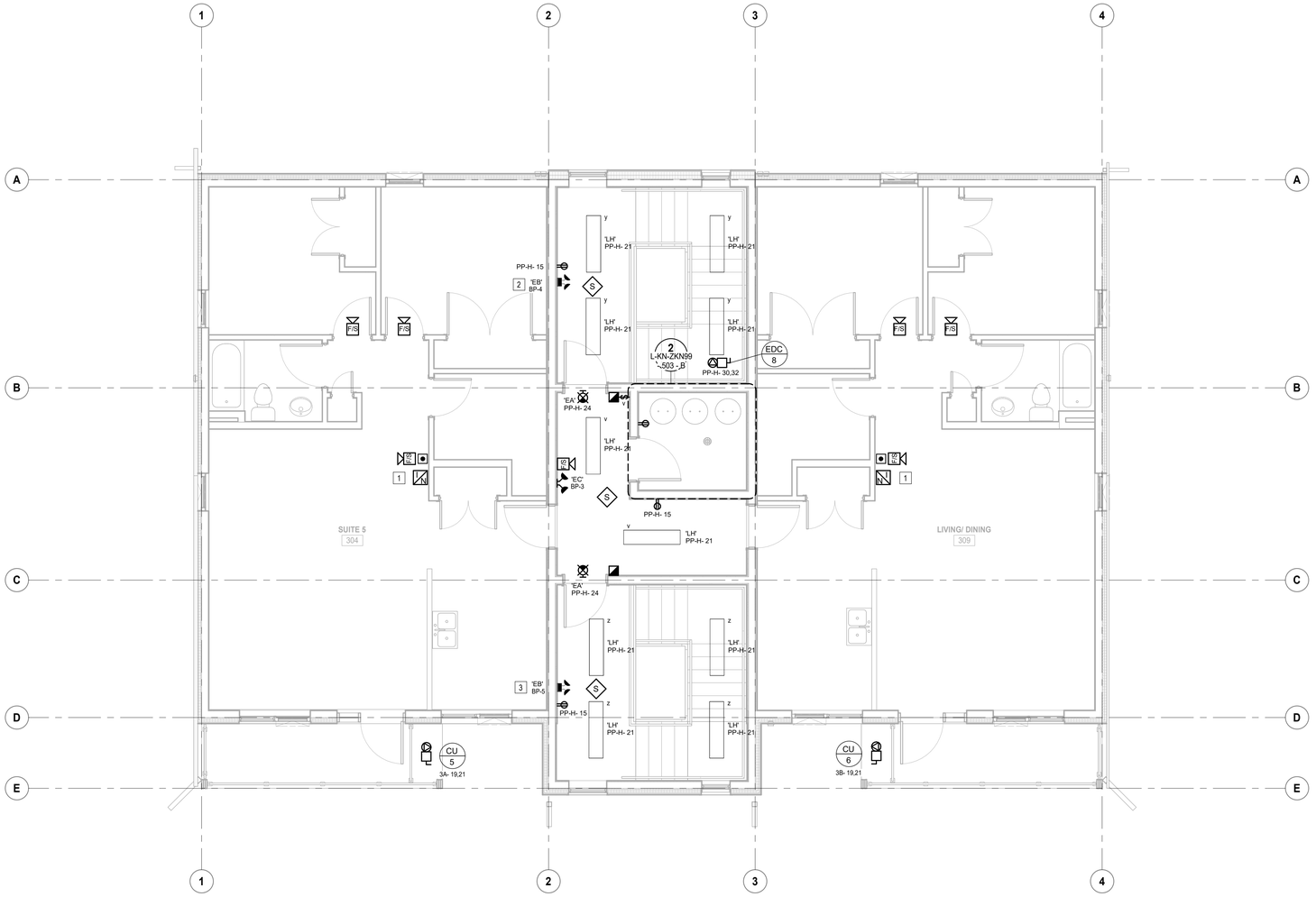
PF NUMBER | NO. DP
ZKN99

DWG. NO. | NO. DESSIN
L-KN-ZKN99 - 502 - B

Canada

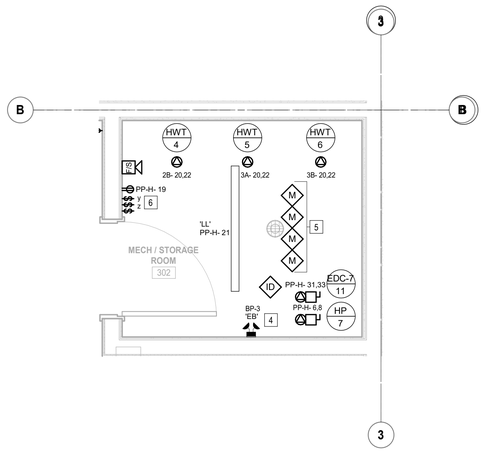
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1 L-KN-ZKN99 -503 - B THIRD FLOOR - LIGHTING AND SYSTEMS PLAN

SCALE: 1 : 50



2 L-KN-ZKN99 -503 - B MECH / STORAGE ROOM 302 PLAN

SCALE: 1 : 25

REFERRAL NOTES:

1. SUITE RECESSSED WALL INTERCOM STATION CONNECTED TO FRONT ENTRANCE INTERCOM PANEL. REFER TO DOOR INTERCOM SYSTEM SCHEMATIC 2/L-KN-ZKN99 - 507 - B.
2. BATTERY PACK BP4, RATED MINIMUM OF 72 WATTS.
3. BATTERY PACK BP5, RATED MINIMUM OF 72 WATTS.
4. BATTERY PACK BP3, RATED MINIMUM OF 36 WATTS.
5. MODULES FOR CONNECTION TO TAMPER AND FLOW SWITCHES FOR SPRINKLER TREE FOR ZONES 3 AND 4.
6. SWITCHES FOR STAIRWELL LIGHT FIXTURES. PROVIDE LAMACOID LABEL FOR EACH SWITCH 'NORTH STAIRWELL LIGHTS AND SOUTH STAIRWELL LIGHTS' INDICATING FUNCTION OF EACH.

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SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier 4 6-Plex

TRADE | MÉTIER: ELECTRICAL

DATE: 2025/01/24

SUBJECT | SUJET: THIRD FLOOR PLAN

PRODUCTION	REVIEWED	REVU	
DESIGNED | ÉTUDIÉ: F.H			DES O | AGENT CONC
DRAWN | DESSINÉ: F.H			PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: S.R			DES MGR | GÉST CONC
COORDINATION: REPUBLIC			FIRE | INCENDIE

WBS NUMBER | NO. SRT:

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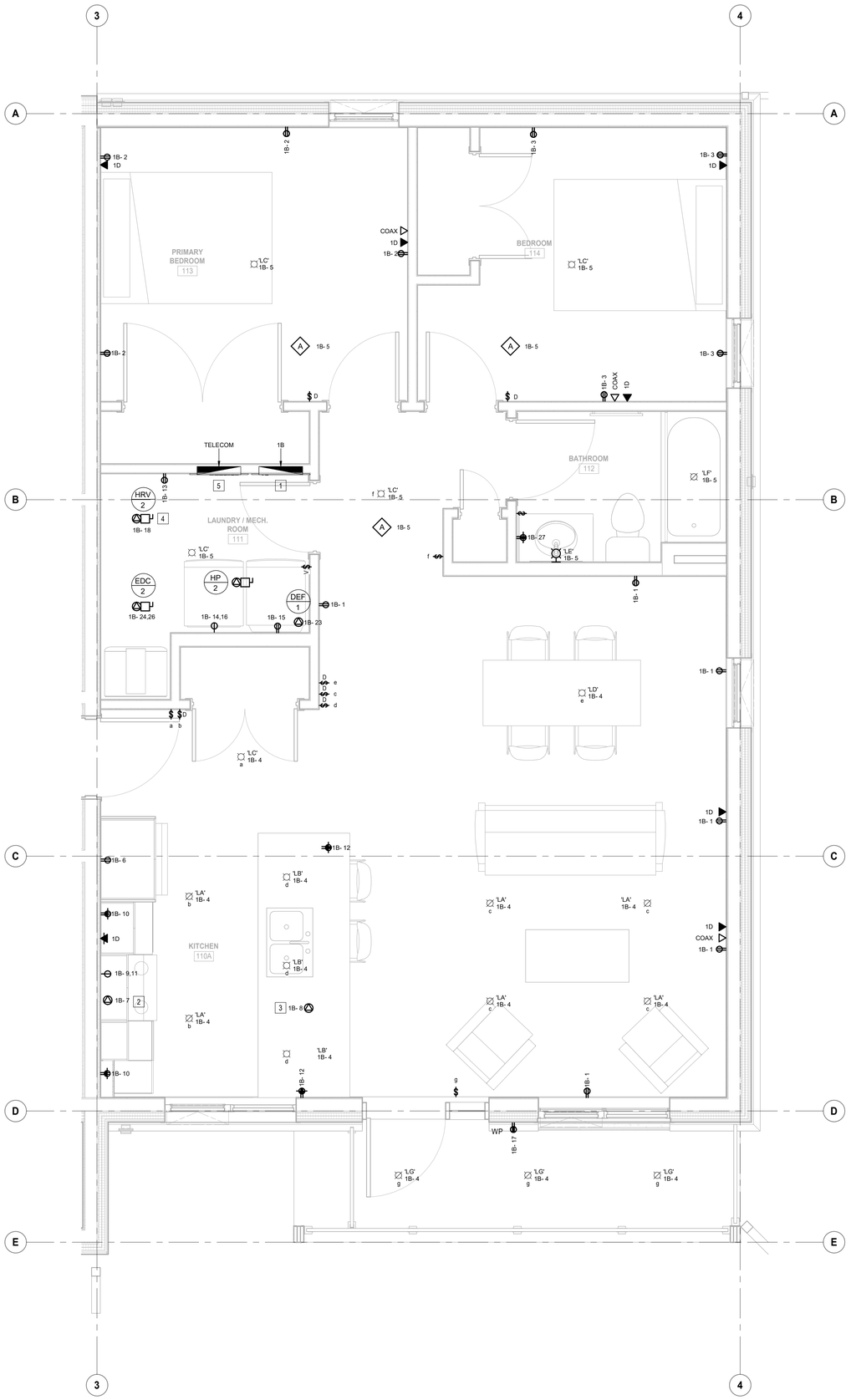
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REFERRAL NOTES:

1. SUITE ELECTRICAL PANEL, REFER TO PANEL SCHEDULE 1B.
2. PROVIDE 120V CONNECTION TO RANGE HOOD. INSTALL MECHANICAL CONTRACTOR SUPPLIED UNIT. SUPPLY AND INSTALL REQUIRED LAMPS. CONFIRM LAMP STYLE AND QUANTITY WITH MECHANICAL CONTRACTOR AND ACTUAL UNIT SUPPLIED.
3. PROVIDE A 120V CONNECTION FOR FUTURE DISHWASHER. MAKE CONECTION WITH LIQUID TIGHT FLEXIBLE METALLIC CONDUIT.
4. PROVIDE A 120V RECEPTACLE, RECESSED INTO UNDERSIDE OF CEILING, FOR HRV UNIT, COORDINATE LOCATION WITH MECHANICAL.
5. SUITE COMMUNICATIONS DISTRIBUTION BOX. REFER TO COMMUNICATIONS RISER DETAIL 1/L-KN-ZKN99 - 506 - B.
6. INSTALL RECEPTACLE IN GABLE END OF MILLWORK 150mm BELOW COUNTER TOP. REFER TO ARCHITECTURAL MILLWORK DETAILS AND MILLWORK SHOP DRAWINGS FOR DEVICE PLACEMENT.
7. BATTERY PACK BP3, RATED MINIMUM OF 36 WATTS.
8. MODULES FOR CONNECTION TO TAMPER AND FLOW SWITCHES FOR SPRINKLER TREE FOR ZONES 3 AND 4.
9. SWITCHES FOR STAIRWELL LIGHT FIXTURES. PROVIDE LAMACOID LABEL FOR EACH SWITCH 'NORTH STAIRWELL LIGHTS AND SOUTH STAIRWELL LIGHTS' INDICATING FUNCTION OF EACH.

BRANCH PANEL: 1B

LOCATION: LAUNDRY / MECH. ROOM 111
SUPPLY FROM:
MOUNTING: Flush
ENCLOSURE: NEMA 1 Indoor

VOLTS: 120/208 Single
PHASES: 1
WIRES: 3

A.I.C. RATING: 10kA
MAINS TYPE: LUGS
BUS RATING: 225 A
MCB RATING: 200 A

NOTES:

CKT	LG	CIRCUIT DESCRIPTION	TRIP	POLE	A (VA)		B (VA)		POLE	TRIP	CIRCUIT DESCRIPTION	LG	CKT
1		GNRL. RECEPT.	15 A	1	900	450			1	15 A	BEDROOM RECEPT.		2
3		BEDROOM RECEPT.	15 A	1			600	840	1	15 A	GNRL. LIGHTING		4
5		GNRL. LIGHTING	15 A	1	330	1200			1	15 A	FRIDGE RECEPT.		6
7		RANGE HOOD RECEPT.	15 A	1			600	1200	1	15 A	FUTURE DISHWASHER RECEPT.		8
9		RANGE RECEPT.	40 A	2	2400	300			1	20 A	O/C KITCHEN RECEPT.		10
11							2400	300	1	20 A	GFCI O/C KITCHEN RECEPT		12
13		GNRL. RECEPT.	15 A	1	150	2400			1	15 A	HRV		14
15		WASHER RECEPT.	15 A	1			1200	2400	2	30 A	DRYER RECEPT.		16
17		EXTERIOR GFCI RECEPT.	15 A	1	150	240			1	15 A	HRV		18
19		CU-2	15 A	2			1961	2250	2	30 A	HWT-2		20
21					1961	2250							22
23		DEF-1	15 A	1			100	2000	2	25 A	EDC-2		24
25		PARKING LEVEL 1 SUITE EV CHARGER	20 A	1	1900	2000							26
27		BATH GFCI O/C RECEPT.	15 A	1			150	0	1	20 A	PARKING LEVEL 1 SUITE EV CHARGER		28
29		SPARE	15 A	1	0	0			1	15 A	SPARE		30
				LOAD:	16631 VA		16001 VA						
				AMPS:	159 A		154 A						

LEGEND (LG):
A - ARC FAULT BREAKER, E - EXISTING BREAKER, EL - EXISTING LOAD AND BREAKER, G - GROUND FAULT BREAKER, L - LOCKED-ON BREAKER, S - SHUNT TRIP BREAKER

NOTES:
PANEL C/W 200A-2P MAIN BREAKER. TYPICAL SCHEDULE FOR ALL SUITES. PROVIDE AND INSTALL ARC FAULT CIRCUIT INTERRUPTER BREAKERS ON CIRCUITS FEEDING RECEPTACLES AND ALL GENERAL CIRCUITS AS REQUIRED BY CEC. ADJUST BREAKER SPACES AS REQUIRED TO ACCOMMODATE AFCI AND GFCI BREAKERS. BREAKER SIZE FOR FUTURE SOLAR SYSTEM TO BE CONFIRMED AT TIME OF SYSTEM INSTALLATION. MAIN BREAKER AND SOLAR BREAKER WITHIN PANEL SHALL BE CAPABLE OF REVERSE FEED.

PANEL TOTALS	
TOTAL CONN. LOAD:	32632 VA
TOTAL CONN.:	157 A

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SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier 4 6-Plex

TRADE | MÉTIER: ELECTRICAL
DATE: 2025/01/24

SUBJECT | SUJET: TYPICAL SUITE LAYOUT

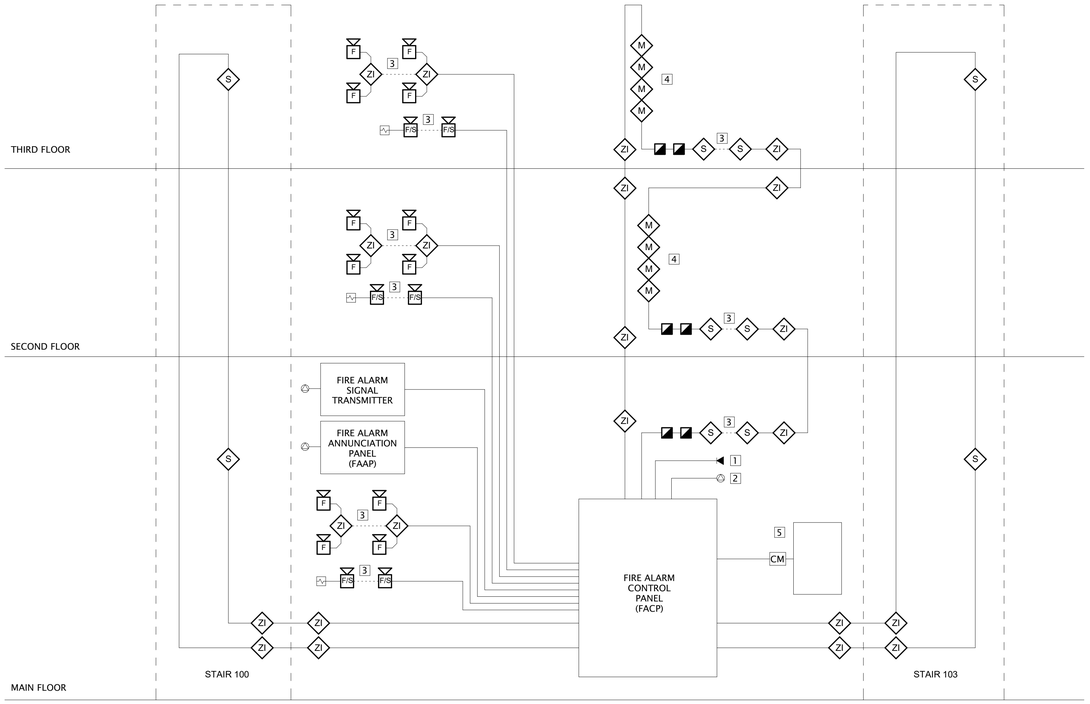
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CHECKED | VÉRIFIÉ: S.R		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

WBS NUMBER | NO. SRT:
PF NUMBER | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 504 - B

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1 L-KN-ZKN99 505 - B
FIRE ALARM RISER DIAGRAM
SCALE: N.T.S

REFERRAL NOTES:

1. 2- CAT6 CONNECTIONS TO TELEPHONE FOR FIRE ALARM MONITORING.
2. 120V POWER CONNECTION.
3. REFER TO DRAWINGS FOR DEVICE QUANTITIES.

   CONFIRM LOCATIONS AND QUANTITIES OF SPRINKLER DEVICES WITH SPRINKLER VENDOR.
4. BOOSTER PANELS AS REQUIRED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETE THE APPLICABLE VOLTAGE DROP CALCULATIONS WHEN DETERMINING WHETHER THE BOOSTER PANELS REQUIRED. ADDITIONALLY THIS SHOULD BE COORDINATED WITH THE VENDOR AND MANUFACTURERS REQUIRES REQUIREMENTS AND INCLUDED, IF NECESSARY, IN THE TENDER PRICING.

GENERAL NOTES:

A. REFER TO PLAN DRAWINGS FOR FIRE ALARM DEVICE LOCATIONS AND QUANTITIES.

B. REFER TO MECHANICAL DRAWINGS AND LOCATIONS OF ALL SPRINKLER FLOW AND TAMPER SWITCHES. COORDINATE EXACT REQUIREMENTS WITH FIRE SPRINKLER VENDOR.

C. COORDINATE DUCT SMOKE LOCATIONS WITH MECHANICAL DRAWINGS.

D. REFER TO CONTROL MATRIX FOR SEQUENCE OF OPERATIONS.

E. THE FIRE ALARM SYSTEM SHALL COMPLY WITH ALL ULC S524 AND ABC 2019 CODE REQUIREMENTS.

F. FIRE ALARM IS SINGLE STAGE.

G. THE INTENT OF THIS DIAGRAM IS TO SHOW THE GENERAL CONFIGURATION OF THE FIRE ALARM SYSTEM. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL COMPONENTS TO FURNISH A COMPLETE AND FUNCTIONING SYSTEM.

H. THIS DIAGRAM INDICATES ONE CONFIGURATION METHOD OF THE FIRE ALARM SYSTEM. ALTERNATE CONFIGURATIONS ARE ACCEPTABLE PROVIDED IT
   a. MEETS APPLICABLE CODE REQUIREMENTS AND
   b. AN UPDATED RISER IS PROVIDED IN THE SHOP DRAWING REVIEW PACKAGE

I. PLACEMENT OF ISOLATION, CONTROL MODULES, AND END OF LINE RESISTORS ARE NOT SHOWN ON THE FLOOR PLANS AND IT IS UP TO THE CONTRACTOR TO DECIDE BASED ON THEIR WIRE ROUTING. DEVICES TO BE INSTALLED AS REQUIRED PER S524.

J. FIRE ALARM RISER DOES NOT INDICATE ALL DEVICES REFER TO PLAN DRAWINGS FOR FINAL DEVICE COUNT.

K. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE PANELS PROPERLY SIZED TO ACCOMMODATE THE NUMBER OF DEVICES REQUIRED FOR THE FIRE ALARM SYSTEM.

L. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THE PANEL FITS IN THE SPACE ALLOCATED PRIOR TO PERFORMING ANY WORK. IE. ROUGH IN, CABLE PULLING.

M. CHANGES IN DESIGN AND SAVING PROPOSALS ARE NOT CONSIDERED PRIOR TO TENDER CLOSE. ONLY ALTERNATE MATERIAL REQUESTS.

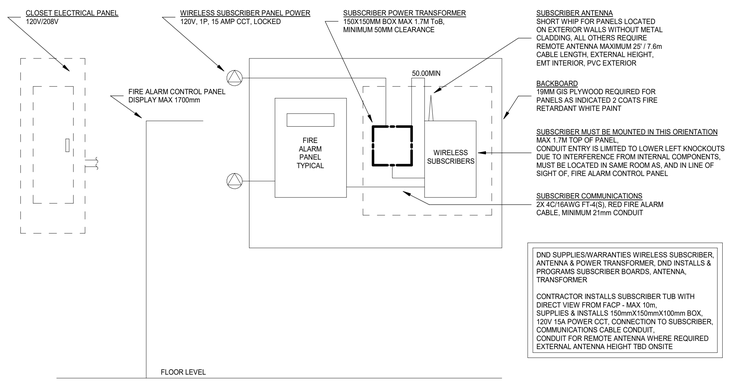
N. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE ISOLATION MODULE WHERE A FIRE SEPARATION IS PROVIDE AS PER CAN/ULC S524. REFER TO ARCHITECTURAL DRAWING FOR FIRE SEPARATION.

O. FIRE ALARM SYSTEM EMERGENCY POWER TO HAVE A MINIMUM RUNTIME FOR 60 MINUTES.

2 L-KN-ZKN99 505 - B
MAIN FLOOR - FIRE ALARM ZONING PLAN
SCALE: 1 : 100

3 L-KN-ZKN99 505 - B
2ND FLOOR - FIRE ALARM ZONING PLAN
SCALE: 1 : 100

4 L-KN-ZKN99 505 - B
3RD FLOOR - FIRE ALARM ZONING PLAN
SCALE: 1 : 100



5 L-KN-ZKN99 505 - B
TYPICAL FIRE ALARM PANEL LAYOUT
SCALE: N.T.S.

FIRE ALARM OPERATIONS MATRIX	FACP / ANNUNCIATOR ALARM	FACP / ANNUNCIATOR TROUBLE	FACP / ANNUNCIATOR SUPERVISORY	ACTIVATE ALARM TO MONITORING STATION	ACTIVATE TROUBLE TO MONITORING STATION	ACTIVATE SUPERVISORY TO MONITORING STATION	ELEVATOR RECALL - PRIMARY	ELEVATOR RECALL - ALTERNATE FLOOR	ELEVATOR SHUNT TRIP / SHUT DOWN	HORN / STROBE ACTIVATION	ACTIVATE FIRE HAT	MUA SHUT DOWN	FIRE/SMOKE DAMPER
SMOKE DETECTOR	✓			✓						✓			
PULL STATION	✓			✓						✓			
ANY SPRINKLER FLOW SWITCH	✓			✓									
ANY SPRINKLER TAMPER SWITCH	✓		✓			✓							
HEAT DETECTOR	✓			✓						✓			
DUCT SMOKE DETECTORS WITH SHUTDOWN RELAY	✓			✓						✓		✓	

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LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ

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385 St. Mary Avenue
Winnipeg, MB R3C 0N1
T 204 989 0102
F 204 989 0094
www.republicarchitecture.ca

LICENSED PROFESSIONAL ENGINEER
S. J. STOOPS
100502277
2025-JAN-24
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NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	F.H

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: ELECTRICAL
DATE: 2025/01/24

SUBJECT | SUJET
FIRE ALARM RISER

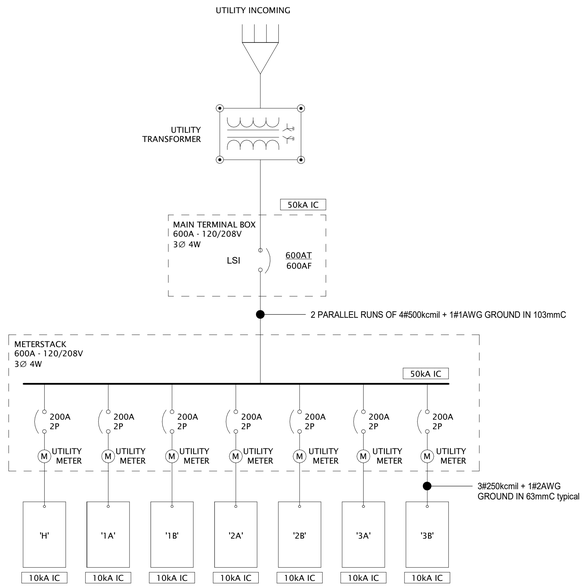
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COORDINATION: REPUBLIC		FIRE | INCENDIE

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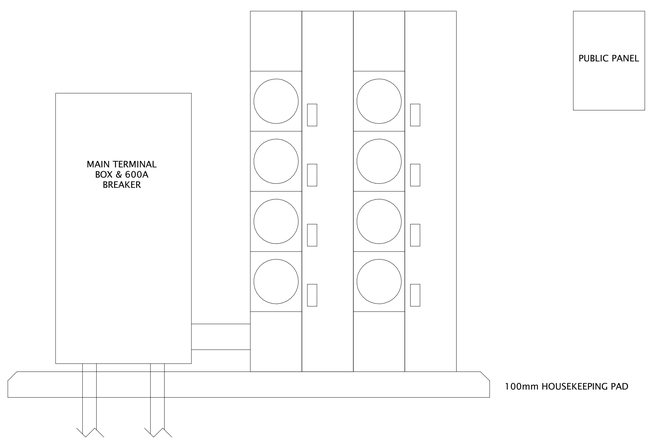
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1 L-KN-ZKN99 506 - B SINGLE LINE DIAGRAM

SCALE: N.T.S.



2 L-KN-ZKN99 506 - B MAIN SERVICE ELEVATION

SCALE: N.T.S.

GENERAL NOTES:

1. THE POWER DISTRIBUTION SYSTEM IS A SERIES RATED SYSTEM . ALL ELECTRICAL EQUIPMENT AND OVER CURRENT DEVICES SHALL BE THE RECOGNIZED COMPONENTS OF AN APPROVED SERIES RATED COMBINATION.
2. ALL EQUIPMENT IN WHICH THE LOWER RATED OVER CURRENT DEVICES ARE INSTALLED SHALL BE CLEARLY MARKED WITH SERIES COMBINATION INTERRUPTING RATING SAME AS THE FULLY RATED INTEGRAL MAIN OR UPSTREAM DEVICE. (NOT LESS THAN THE RATING AS SHOWN ON THE DRAWING).
3. ALL OVER CURRENT DEVICES SHALL BE MARKED IN A CONSPICUOUS AND LEGIBLE MANNER TO INDICATE THAT THEY MUST ONLY BE REPLACED WITH COMPONENTS OF THE SAME TYPE AND RATING .

BRANCH PANEL: PP-H

LOCATION: ELECTRICAL ROOM 102
SUPPLY FROM:
MOUNTING: SURFACE
ENCLOSURE: Type 2

VOLTS: 120/208 Single
PHASES: 1
WIRES: 3

A.I.C. RATING: 10 kA
MAINS TYPE: LUGS
BUS RATING: 225 A
MCB RATING: 200 A

NOTES:

CKT	LG	CIRCUIT DESCRIPTION	TRIP	POLE	A (VA)		B (VA)		POLE	TRIP	CIRCUIT DESCRIPTION	LG	CKT
1		FF-1	15 A	2	1727	360			2	15 A	FF-2		2
3							1727	360					4
5		EXTERIOR GFCI RECEPT.	15 A	1	300	4336			2	25 A	CU-7		6
7		MAIN FLOOR LIGHTING	15 A	1			197	4336					8
9		FIRE ALARM CONTROL PANEL	15 A	1	250	1500			2	20 A	HWT-7		10
11		SECOND FLOOR LIGHTING	15 A	1			232	1500					12
13		HK RECEPT.	15 A	1	300	250			1	15 A	FIRE ALARM ANNUNCIATION PANEL		14
15		HK RECEPT.	15 A	1			450	450	1	15 A	HK RECEPT.		16
17		SERVICE RECEPT.	15 A	1	150	20			1	15 A	MAIN FLOOR EXIT SIGNAGE		18
19		SERVICE RECEPT.	15 A	1			150	120	1	15 A	EXTERIOR LIGHTING		20
21		THIRD FLOOR EXIT SIGNAGE	15 A	1	372	10			1	15 A	SECOND FLOOR EXIT SIGNAGE		22
23		SERVICE RECEPT.	15 A	1			150	10	1	15 A	THIRD FLOOR EXIT SIGNAGE		24
25		SERVICE ROOM LIGHTING	15 A	1	35	250			1	15 A	INTERCOM		26
27		GNRL. RECEPT.	15 A	1			0	250	1	15 A	FA TRANSMITTER POWER TRANSFORMER		28
29		EXTERIOR LIGHTING	20 A	1	400	8996			2	65 A	EDC-8		30
31		EDC-7	65 A	2			8996	8996					32
33					8996								34
35													36
37													38
39		SPARE	15 A	1			0	0	1	15 A	SPARE		40
41		SPARE	15 A	1	0	0			1	15 A	SPARE		42
				LOAD:	28252 VA		27924 VA						
				AMPS:	271 A		269 A						

LEGEND (LG):
A - ARC FAULT BREAKER, E - EXISTING BREAKER, EL - EXISTING LOAD AND BREAKER, G - GROUND FAULT BREAKER, L - LOCKED-ON BREAKER, S - SHUNT TRIP BREAKER

NOTES:
PROVIDE LOCK ON DEVICES FOR BREAKERS FEEDING EXIT LIGHTING, FIRE ALARM SYSTEM AND FIRE ALARM SYSTEM MONITORING EQUIPMENT.

PANEL TOTALS	
TOTAL CONN. LOAD:	56176 VA
TOTAL CONN.:	270 A

MECHANICAL EQUIPMENT SCHEDULE (TYPICAL TO EACH BUILDING)

NO.	DESCRIPTION	LOCATION	PH.	KW	VOLTS	AMPS	FEED	CONDUIT	BREAKER	DISC	STARTER	NOTES
FCU-1/CU-1	Heat pump	EXTERIOR	1		208	MCA 10.9	2#12	21mm	15-2P	WP BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES
FCU-2/CU-2	Heat pump	EXTERIOR	1		208	MCA 10.9	2#12	21mm	15-2P	WP BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES
FCU-3/CU-3	Heat pump	EXTERIOR	1		208	MCA 10.9	2#12	21mm	15-2P	WP BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES
FCU-4/CU-4	Heat pump	EXTERIOR	1		208	MCA 10.9	2#12	21mm	15-2P	WP BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES
FCU-5/CU-5	Heat pump	EXTERIOR	1		208	MCA 10.9	2#12	21mm	15-2P	WP BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES
FCU-6/CU-6	Heat pump	EXTERIOR	1		208	MCA 10.9	2#12	21mm	15-2P	WP BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES
FCU-7/CU-7	Heat pump	EXTERIOR	1		208	MCA 20.1	2#10	21mm	25-2P	WP BY ELEC	BY MECH	RUN POWER FEED TO HP-7
HRV-1	heat recovery ventilator	SUITE LAUNDRY	1	0.13	120	FLA 2	2#12		15-1P	BY ELEC	BY MECH	
HRV-2	heat recovery ventilator	SUITE LAUNDRY	1	0.13	120	FLA 2	2#12		15-1P	BY ELEC	BY MECH	
HRV-3	heat recovery ventilator	SUITE LAUNDRY	1	0.13	120	FLA 2	2#12		15-1P	BY ELEC	BY MECH	
HRV-4	heat recovery ventilator	SUITE LAUNDRY	1	0.13	120	FLA 2	2#12		15-1P	BY ELEC	BY MECH	
HRV-5	heat recovery ventilator	SUITE LAUNDRY	1	0.13	120	FLA 2	2#12		15-1P	BY ELEC	BY MECH	
HRV-6	heat recovery ventilator	SUITE LAUNDRY	1	0.13	120	FLA 2	2#12		15-1P	BY ELEC	BY MECH	
HWT-1	Domestic water heater	ROOM 202	1	4.5	208		2#10	21mm	30-2P	BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES CONNECT TO MECHANICAL CONTRACTOR SUPPLIED AND INSTALLED STARTER.
HWT-2	Domestic water heater	ROOM 202	1	4.5	208		2#10	21mm	30-2P	BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES CONNECT TO MECHANICAL CONTRACTOR SUPPLIED AND INSTALLED STARTER.
HWT-3	Domestic water heater	ROOM 202	1	4.5	208		2#10	21mm	30-2P	BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES CONNECT TO MECHANICAL CONTRACTOR SUPPLIED AND INSTALLED STARTER.
HWT-4	Domestic water heater	ROOM 302	1	4.5	208		2#10	21mm	30-2P	BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES CONNECT TO MECHANICAL CONTRACTOR SUPPLIED AND INSTALLED STARTER.
HWT-5	Domestic water heater	ROOM 302	1	4.5	208		2#10	21mm	30-2P	BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES CONNECT TO MECHANICAL CONTRACTOR SUPPLIED AND INSTALLED STARTER.
HWT-6	Domestic water heater	ROOM 302	1	4.5	208		2#10	21mm	30-2P	BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES CONNECT TO MECHANICAL CONTRACTOR SUPPLIED AND INSTALLED STARTER.
HWT-7	Domestic water heater	ROOM 202	1	3	208		2#12	21mm	20-2P	BY ELEC	BY MECH	
EDC-1	Electric duct coil	SUITE LAUNDRY	1	4.0	208		2#10		25-2P	BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES CONNECT TO MECHANICAL CONTRACTOR SUPPLIED AND INSTALLED STARTER.
EDC-2	Electric duct coil	SUITE LAUNDRY	1	4.0	208		2#10		25-2P	BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES CONNECT TO MECHANICAL CONTRACTOR SUPPLIED AND INSTALLED STARTER.
EDC-3	Electric duct coil	SUITE LAUNDRY	1	4.0	208		2#10		25-2P	BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES CONNECT TO MECHANICAL CONTRACTOR SUPPLIED AND INSTALLED STARTER.
EDC-4	Electric duct coil	SUITE LAUNDRY	1	4.0	208		2#10		25-2P	BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES CONNECT TO MECHANICAL CONTRACTOR SUPPLIED AND INSTALLED STARTER.
EDC-5	Electric duct coil	SUITE LAUNDRY	1	4.0	208		2#10		25-2P	BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES CONNECT TO MECHANICAL CONTRACTOR SUPPLIED AND INSTALLED STARTER.
EDC-6	Electric duct coil	SUITE LAUNDRY	1	4.0	208		2#10		25-2P	BY ELEC	BY MECH	CIRCUIT TO SUITE ELEC. PANEL THAT IT SERVES CONNECT TO MECHANICAL CONTRACTOR SUPPLIED AND INSTALLED STARTER.
EDC-7	Electric duct coil	ROOM 302	1	10.5	208		2#6	35mm	65-2P	BY ELEC	BY MECH	
EDC-8	Electric duct coil	REAR STAIRWELL 103	1	10.5	208		2#6	35mm	65-2P	BY ELEC	BY MECH	
FF-1	Force Flow Heater	REAR STAIRWELL 103	1	2	208		2#12	21mm	15-1P	BY ELEC	BY MECH	
FF-2	Force Flow Heater	FRONT STAIRWELL 100	1	4	208		2#10	21mm	25-2P	BY ELEC	BY MECH	
RH-1 (6 nos)	Range Hood	SUITE KITCHEN	1		120		2#12		15-1P	BY ELEC	BY MECH	
DEF-1 (6nos)	Dryer Exhaust Fan	SUITE LAUNDRY	1	0.078	120		2#12		15-1P	BY ELEC	BY MECH	

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REPUBLIC ARCHITECTURE INC
385 St. Mary Avenue
Winnipeg, MB R3C 0N1
T 204 989 0102
F 204 989 0094
www.republicarchitecture.ca

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S. J. STOOPS
100502277
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NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	F.H

SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier 4 6-Plex

TRADE | MÉTIER: ELECTRICAL
DATE: 2025/01/24

SUBJECT | SUJET: DISTRIBUTION SINGLE LINE

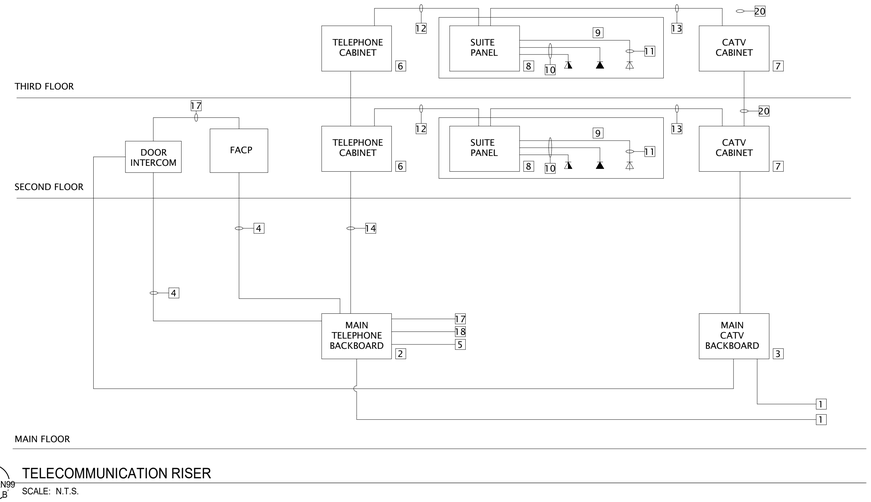
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COORDINATION: REPUBLIC		FIRE | INCENDIE

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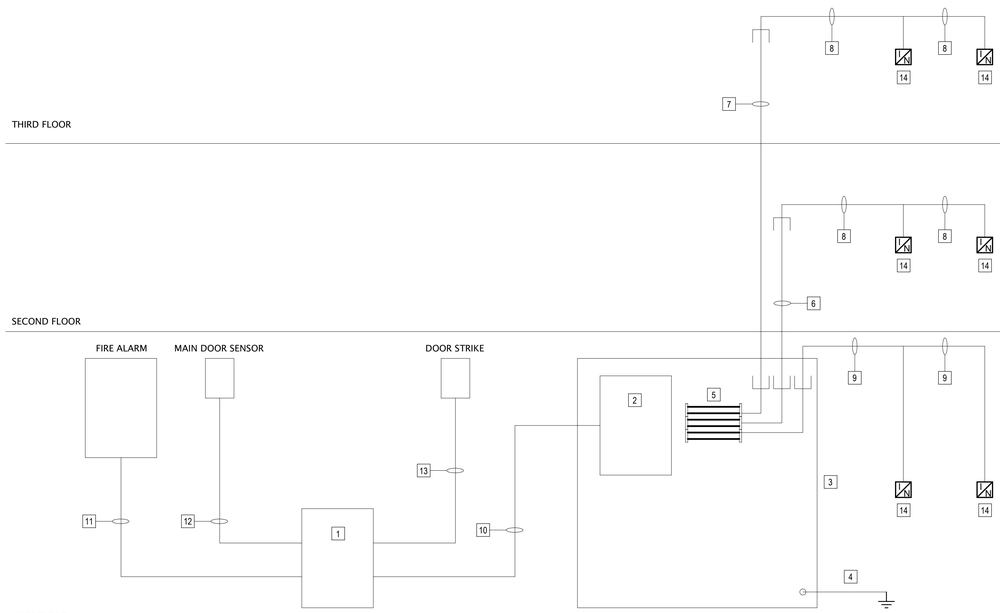


1 L-KN-ZKN99 -507- B TELECOMMUNICATION RISER

SCALE: N.T.S.

GENERAL NOTES:

1. TELECOMMUNICATION CONDUITS TO EDGE OF PROPERTY RUN IN SAME TRENCH AS UTILITY. SUPPLY AND INSTALL 4-103mm FOR FUTURE INTERNET AND VOICE CABLING.
2. MAIN TELEPHONE BACKBOARD MOUNTED ON A FIRE RETARDANT PLYWOOD BACKBOARD WITH #6 AWG TO BUILDING GROUND. PAINT FINISH PER ARCH, COLOUR IN ROOM FINISHES.
3. MAIN CATV BACKBOARD MOUNTED ON A FIRE RETARDANT PLYWOOD BACKBOARD WITH #6 AWG TO BUILDING GROUND.
4. 53mm CONDUIT C/W 2 CAT 6 CABLES.
5. 53mm CONDUIT, C/W PULL STRING TO SECURITY RISER.
6. WALL MOUNTED CABINET SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. USED AS A PULLBOX, NO TERMINATIONS.
7. CATV BACKBOARD MOUNTED ON A FIRE RETARDANT PLYWOOD BACKBOARD WITH #6 AWG TO BUILDING GROUND.
8. TELECOMMUNICATION DISTRIBUTION PANEL INSTALLED IN EACH SUITE. SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR.
9. TYPICAL CONNECTIONS FOR VOICE, VOICE/DATA AND TELEVISION OUTLETS.
10. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL CAT 6 CABLING FROM DISTRIBUTION BOX TO EACH DESIGNATED OUTLET FOR PHONE AND CABLE. INSTALL AS PER MANUFACTURERS SPECIFICATIONS. TEST FOR CONTINUITY AND LABEL EACH SUITE ACCORDINGLY.
11. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL RG6 COAX CABLE FROM THE DISTRIBUTION BOX TO THE DESIGNATED TELEVISION OUTLETS.
12. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL CONDUIT, IN SLAB, C/W WITH PULL STRING FOR CAT6. ALL TERMINATIONS AND TESTING TO BE COMPLETED BY TELECOM VENDOR AT THE DISTRIBUTION BOX AND MAIN TELEPHONE BACK BOARD. CAT5E SUPPLIED BY TELECOM VENDOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
13. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL CONDUIT, IN SLAB, C/W WITH PULLSTRING FOR COAX. COAX SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. CABLE TO MATCH VENDOR SPECIFICATIONS. ALL TERMINATIONS AND TESTING TO BE COMPLETED BY CABLE VENDOR AT THE DISTRIBUTION BOX AND MAIN CATV BACKBOARD.
14. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL CONDUIT C/W 100 PAIR CABLE. TERMINATION TO BE COMPLETED IN THE BIX BOX ON PARKADE 1'S ELECTRICAL ROOM.
15. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL CONDUIT FOR CAT6. ELECTRICAL CONTRACTOR TO PULL EACH FIBRE CABLE TO LOCKABLE CABINET IN THE RESPECTIVE RISER CLOSET. TELECOM VENDOR TO SUPPLY TEST AND TERMINATE CAT6 AT EACH END.
16. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL CONDUIT, C/W PULL STRING, FOR COAX. RG11 COAX CABLE SUPPLIED AND INSTALLED BY CABLE VENDOR.
17. 53mm CONDUIT, C/W PULL STRING TO FIRE ALARM RISER.
18. 53mm CONDUIT, C/W PULL STRING TO ELEVATORS.
19. SUPPLY AND INSTALL CONNECTION TO FIRE ALARM SYSTEM. WHEN FIRE ALARM SYSTEM IS ACTIVATED DOOR SECURITY SHALL RELEASE.
20. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL 103mm CONDUIT C/W CATV RISER CABLE. TERMINATIONS TO BE MADE AT CATV BOX IN MAIN ELECTRICAL ROOM AND RISER ROOMS.



2 L-KN-ZKN99 -507- B DOOR INTERCOM SYSTEM SCHEMATIC

SCALE: N.T.S.

GENERAL NOTES:

1. EXTERIOR ENTRANCE CONTROL UNIT AS SPECIFIED.
2. NSL CONTROL UNIT MOUNTED IN MAIN FLOOR ELECTRICAL ROOM FOR SUITE INTERCOM STATIONS.
3. 1220mm x 1220mm x 21mm G1S INTERCOM PLYWOOD C/W TWO COATS GREY PAINT IN MAIN FLOOR ELECTRICAL ROOM.
4. #6 TO BUILDING GROUND BUS LOCATED WITHIN ROOM.
5. WALL MOUNT IDC/IDC VOICE CONNECTORS FOR INTERCOM AS SPECIFIED.
6. 27mm CONDUIT RUN FROM MAIN FLOOR ELECTRICAL ROOM TO SECOND FLOOR FOR ROUTING OF SECOND FLOOR INTERCOM STATION CABLING BACK TO INTERCOM PLYWOOD.
7. 27mm CONDUIT RUN FROM MAIN FLOOR ELECTRICAL ROOM TO THIRD FLOOR FOR ROUTING OF THIRD FLOOR INTERCOM STATION CABLING BACK TO INTERCOM PLYWOOD.
8. CAT 5E CABLE FROM INDIVIDUAL ROOM INTERCOM STATION, RUN THROUGH CEILING SPACE IN CABLE HOOKS TO CONDUIT LOCATED IN ELECTRICAL ROOM AND DOWN TO MAIN FLOOR ELECTRICAL ROOM AND TERMINATED ON WALL MOUNT IDC/IDC CONNECTORS.
9. CAT 5E CABLE FROM INDIVIDUAL ROOM INTERCOM STATION, RUN THROUGH CEILING SPACE IN CABLE HOOKS TO WALL MOUNT IDC/IDC CONNECTORS FOR INTERCOM LOCATED IN NORTH ELECTRICAL ROOM.
10. CAT 5E CABLE IN 21mm CONDUIT FROM LOBBY CONTROL UNIT TO INTERCOM NSL UNIT LOCATED IN MAIN FLOOR ELECTRICAL ROOM.
11. RUN 2#22 IN 16mm CONDUIT TO FIRE ALARM PANEL FOR FIRE ALARM OVERRIDE OF ELECTRIC STRIKE.
12. RUN 2#22 IN 16mm CONDUIT TO SENSOR AT CONTROLLED DOOR.
13. RUN 2#18 IN 16mm CONDUIT TO DOOR STRIKE.
14. INDIVIDUAL SUITE INTERCOM STATION AS SPECIFIED (TYPICAL) LOCATED IN EACH SUITE. REFER TO FLOOR PLANS FOR LOCATIONS AND NUMBER.

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LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ

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385 St. Mary Avenue
Winnipeg, MB R3C 0N1
T 204 989 0102
F 204 989 0094
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LICENSED PROFESSIONAL ENGINEER
S. J. STOOPS
100502277
2025-JAN-24
PROVINCE OF ONTARIO

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	F.H

SCALE | ÉCHELLE
AS NOTED

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ON

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER: ELECTRICAL
DATE: 2025/01/24

SUBJECT | SUJET
COMMUNICATION SYSTEMS DETAILS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ: F.H		DES O | AGENT CONC
DRAWN | DESSINÉ: F.H		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ: S.R		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

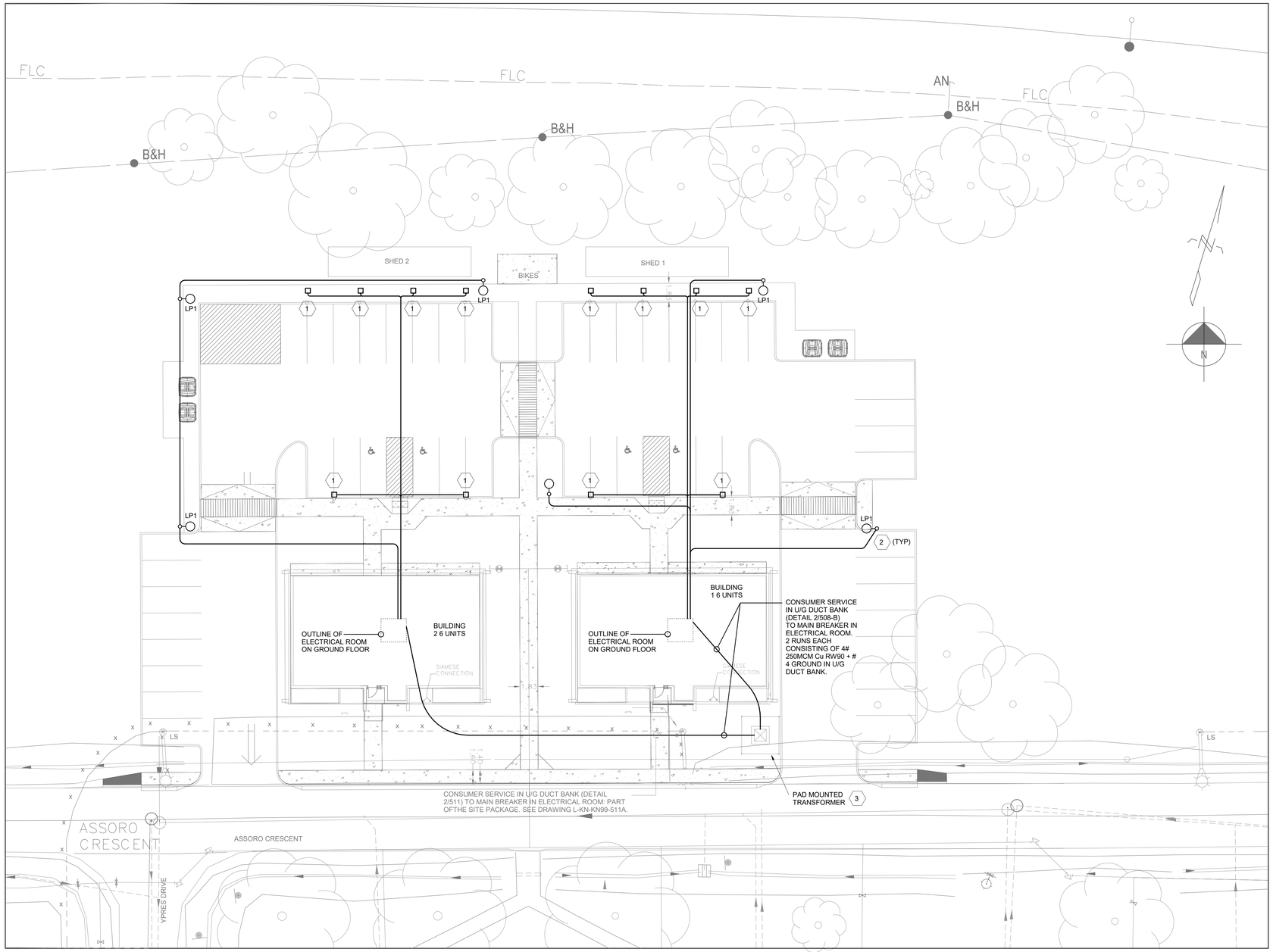
WBS NUMBER | NO. SRT
PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 507 - B

Canada

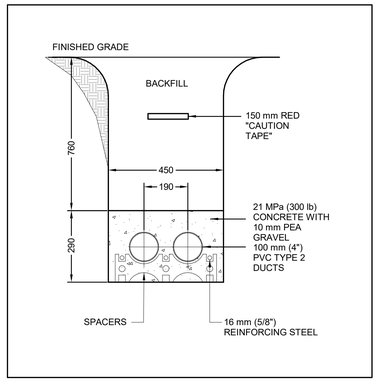
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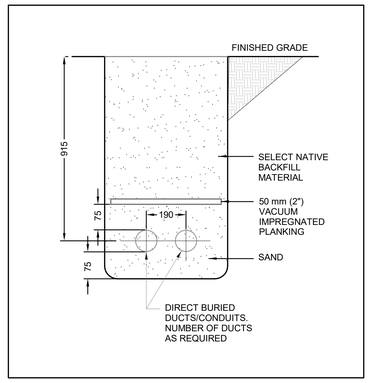


KEY NOTES

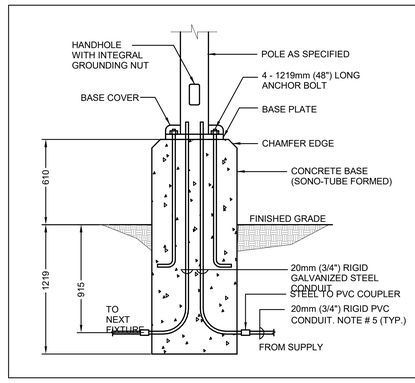
1. PARKING PEDESTAL MOUNTED GFCI RECEPTACLES FOR LEVEL 1 EV CHARGER AND VEHICLE HEATING (TOTAL 2 PER PEDESTAL). RECEPTACLES TO BE FED FROM SUIT PANELS. SEE DETAIL 5/508-B FOR PEDESTAL AND RECEPTACLES INSTALLATION.
2. LIGHTING FIXTURE TYPE LP1 TO BE CONNECTED TO BUILDING HOUSE PANEL
3. FOR ALL WORK ASSOCIATED WITH PAD MOUNTED TRANSFORMER, PRIMARY DUCT BANK, INCOMING COMMUNICATION SERVICE AND STREET LIGHTING SEE PACKAGE A DRAWINGS L-KN-KN99-510-A AND L-KN-KN99-511-A.



2 508-B N.T.S **UNDERGROUND DUCT BANK**



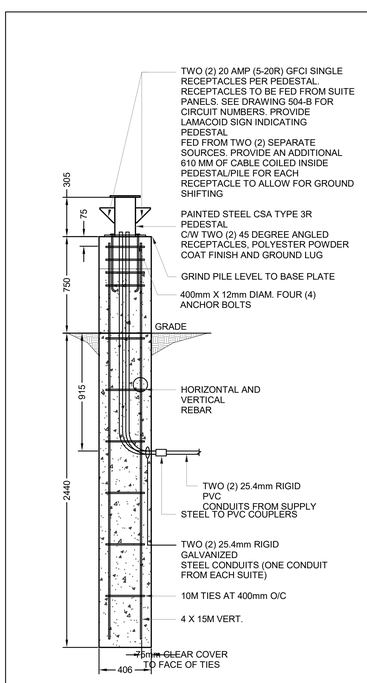
3 508-B N.T.S **UNDERGROUND DUCTS**



4 508-B N.T.S **LIGHTING POST BASE DETAIL**

GENERAL NOTES

1. THE SUPPLY AND INSTALLATION OF PRODUCTS FOR, AND THE COORDINATION AND COOPERATION WITH THE SUPPLY AUTHORITY, INCLUDING OBTAINING THEIR STANDARDS WITH DRAWINGS TO ENSURE INSTALLATION IS IN ACCORDANCE WITH REQUIREMENTS, IS A REQUIREMENT OF THIS CONTRACT.
2. ELECTRICAL CONTRACTOR TO VERIFY ON SITE EXACT LOCATION OF ALL EXISTING UNDERGROUND SERVICES PRIOR TO EXCAVATION FOR NEW INCOMING SERVICES INSTALLATION. CARRY OUT ALL TRENCH EXCAVATION IN STRICT CONFORMITY WITH ALL APPLICABLE ACTS AND BYLAWS. ELECTRICAL CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGE CAUSED BY THEIR COMPANY TO THE EXISTING UNDERGROUND SERVICES SUCH AS BUT NOT LIMITED TO HIGH VOLTAGE, TELEPHONE, CABLE TV, GAS, COLD WATER, SPRINKLER, SEWER, STORM, ETC.



NOTES:

1. CONCRETE AND REBAR REQUIREMENTS ARE:
   a. F'C 28 DAY 25 MPA
   b. REINFORCING TO CSA G30.18
   c. GRADE 400 FOR VERTICAL BARS AND TIES.
2. VERTICAL REINFORCING TO BE FULL LENGTH OF PILE.
3. PILES TO BE INSTALLED IN UNDISTURBED MATERIAL IF SAND, WATER, SLOUGHING OR CONDITIONS ARE ENCOUNTERED. CONTACT CONSULTANT PRIOR TO PROCEEDING.
4. USE SONOTUBE FORMS ABOVE GRADE AND 300 mm BELOW GRADE.
5. GRIND OF GROUT TOP OF PILE TO GIVE A FLAT, LEVEL FINISHED SURFACE.
6. COLOR TO BE SELECTED DURING SHOP DRAWINGS STAGE. PEDESTAL SHALL BE CLEANED, PHOSPHATED, PRIMED AND POLYESTER POWDER COATED.

5 508-B N.T.S **DOUBLE PARKING PEDESTAL**

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LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ

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385 St. Mary Avenue
Winnipeg, MB R3C 0N1
T 204 989 0102
F 204 989 0094
www.republicarchitecture.ca

LICENSED PROFESSIONAL ENGINEER
S. J. STOOPS
100502277
2025-JAN-24
PROVINCE OF ONTARIO

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	F.H

SCALE | ÉCHELLE: AS NOTED

LOCATION | EMPLACEMENT: Canadian Forces Base (CFB) KINGSTON, ON

PROJECT | PROJET: Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier 4 6-Plex

TRADE | MÉTIER: ELECTRICAL

DATE: 2025/01/24

SUBJECT | SUJET: ELECTRICAL SITE PLAN, NOTES AND DETAILS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ		DES O | AGENT CONC
DRAWN | DESSINÉ: F.H		PRO MGR | GÉST PROJ
CHECKED | VÉRIFIÉ		DES MGR | GÉST CONC
COORDINATION: REPUBLIC		FIRE | INCENDIE

WBS NUMBER | NO. SRT:

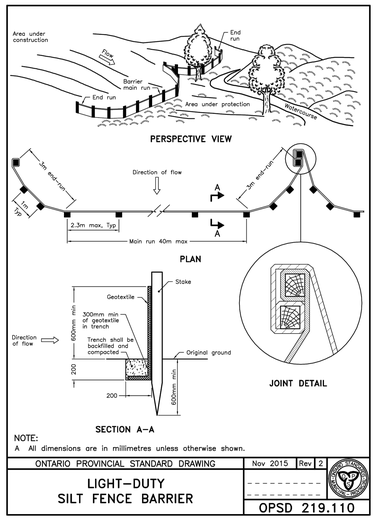
PF NUMBER | NO. DP: ZKN99

DWG. NO. | NO. DESSIN: L-KN-ZKN99 - 508 - B

Canada

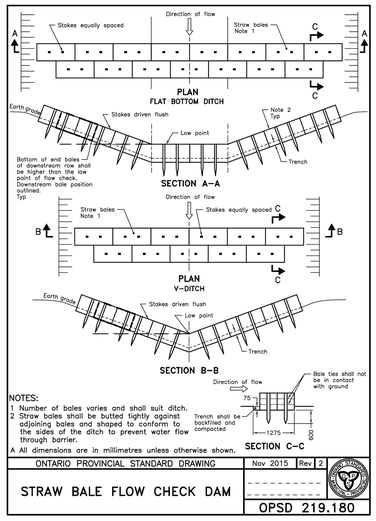
BORDER LAST UPDATED 2010-08-20

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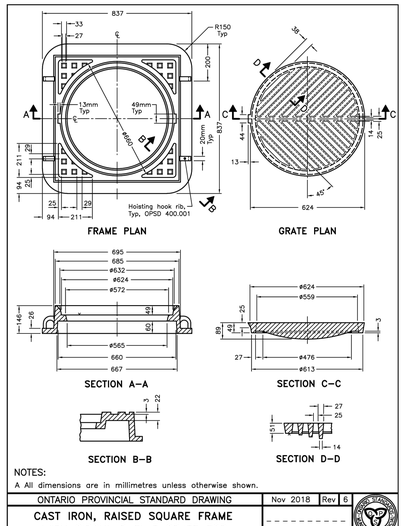
NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev 2
LIGHT–DUTY SILT FENCE BARRIER		OPSD 219.110



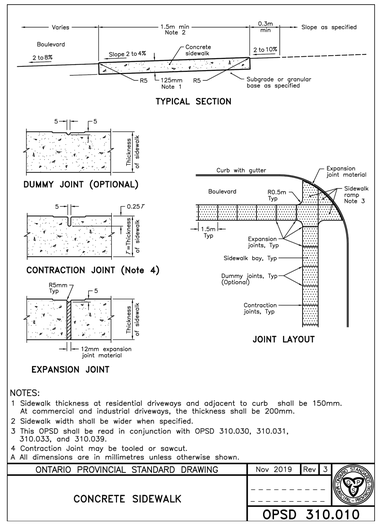
NOTES:
1 Number of bales varies and shall suit ditch.
2 Straw bales shall be butted tightly against adjoining bales and shaped to conform to the sides of the ditch to prevent water flow through barrier.
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev 2
STRAW BALE FLOW CHECK DAM		OPSD 219.180



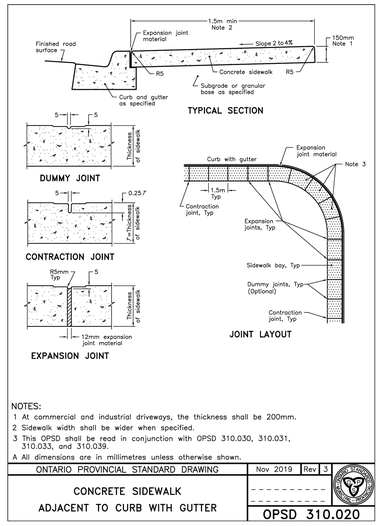
NOTES:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2018	Rev 6
CAST IRON, RAISED SQUARE FRAME WITH CIRCULAR FLAT GRATE FOR CATCH BASINS, HERRING BONE OPENINGS		OPSD 400.070



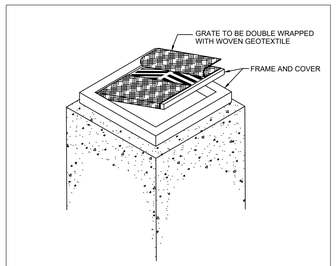
NOTES:
1 Sidewalk thickness at residential driveways and adjacent to curb shall be 150mm. At commercial and industrial driveways, the thickness shall be 200mm.
2 Sidewalk width shall be wider when specified.
3 This OPSD shall be read in conjunction with OPSD 310.030, 310.031, 310.033, and 310.039.
4 Contraction joint may be tooled or sawcut.
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2019	Rev 3
CONCRETE SIDEWALK		OPSD 310.010



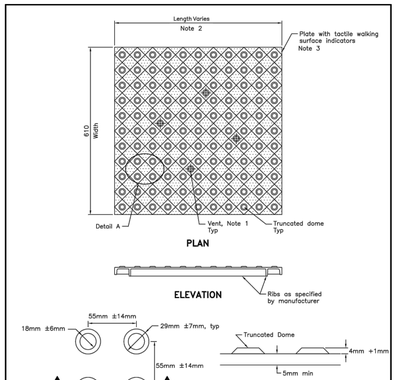
NOTES:
1 At commercial and industrial driveways, the thickness shall be 200mm.
2 Sidewalk width shall be wider when specified.
3 This OPSD shall be read in conjunction with OPSD 310.030, 310.031, 310.033, and 310.039.
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2019	Rev 3
CONCRETE SIDEWALK ADJACENT TO CURB WITH GUTTER		OPSD 310.020



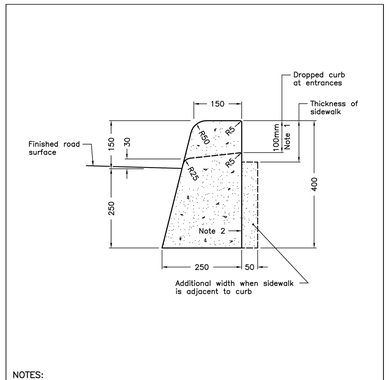
FILTER CLOTH BETWEEN FRAME AND COVER DETAIL

N.T.S.



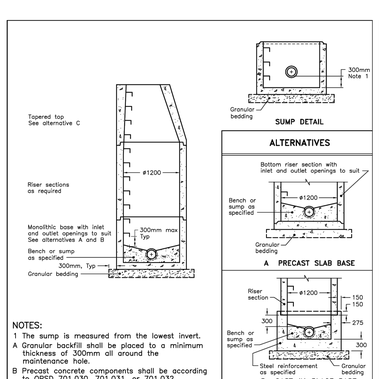
NOTES:
1 Vents shall be as specified by the manufacturer.
2 Length of plate may be increased to suit the curb depression width.
3 Material of plate shall be as specified in Contract Documents.
A Adjacent cast iron plates shall be permanently connected using a locking mechanism and any hardware shall be hot dipped galvanized.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2019	Rev 1
CONCRETE SIDEWALK RAMPS TACTILE WALKING SURFACE INDICATORS COMPONENT		OPSD 310.039



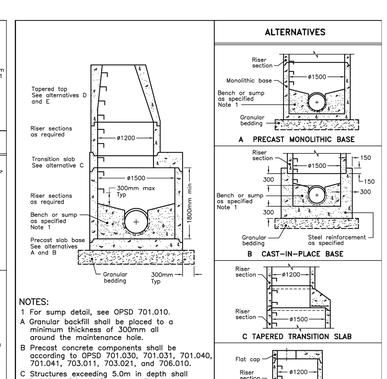
NOTES:
1 When sidewalk is continuously adjacent, the dropped curb at entrances shall be reduced to 75mm.
2 For slipforming procedure a 5% batter is acceptable.
A Treatment at entrances shall be according to OPSD 351.010.
B Outlet treatment shall be according to the OPSD 610 Series.
C The transition from one curb type to another shall be a minimum length of 3.0m, except in conjunction with guide rail where it shall be according to the OPSD 900 Series.
D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2012	Rev 2
CONCRETE BARRIER CURB		OPSD 600.110



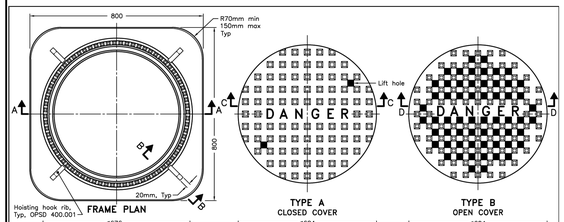
NOTES:
1 The sump is measured from the lowest invert.
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
B Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
C Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020.
D Pipe support according to OPSD 708.020.
E For benching and pipe opening details, see OPSD 701.021.
F For adjustment unit and frame installation, see OPSD 704.010.
G All dimensions are nominal.
H All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 5
PRECAST CONCRETE MAINTENANCE HOLE 1200mm DIAMETER		OPSD 701.010



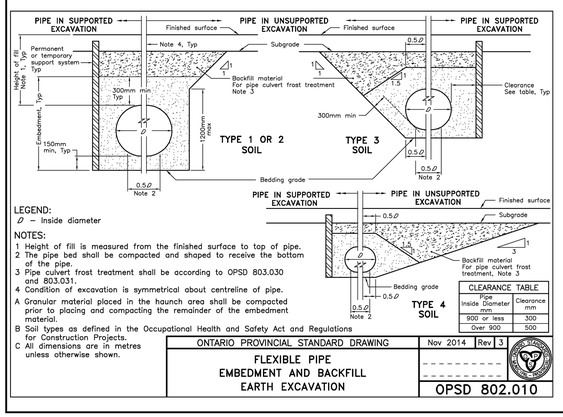
NOTES:
1 For sump detail, see OPSD 701.010.
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
B Precast concrete components shall be according to OPSD 701.030, 701.031, 701.040, 701.041, 703.011, 703.021, and 706.010.
C Structures exceeding 5.0m in depth shall include safety platform according to OPSD 404.020 or 404.021.
D Pipe support shall be according to OPSD 708.020.
E For benching and pipe opening details, see OPSD 701.021.
F For adjustment unit and frame installation, see OPSD 704.010.
G All dimensions are nominal.
H All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 5
PRECAST CONCRETE MAINTENANCE HOLE 1500mm DIAMETER		OPSD 701.011



NOTES:
A Covers shall be Type A or Type B, as specified.
B All dimensions are in millimetres unless otherwise shown.

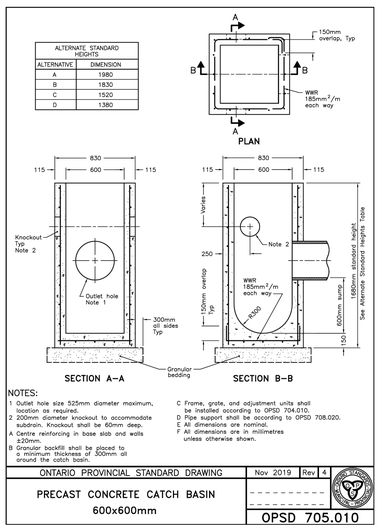
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2018	Rev 4
CAST IRON, SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES		OPSD 401.010



LEGEND:
D – Inside diameter

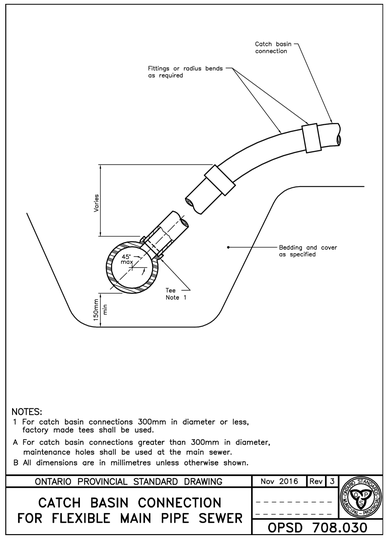
NOTES:
1 Height of fill is measured from the finished surface to top of pipe.
2 The pipe bed shall be compacted and shaped to receive the bottom of the pipe.
3 Pipe culvert frost treatment shall be according to OPSD 803.030 and 803.031.
4 Condition of excavation is symmetrical about centreline of pipe.
A Granular material placed in the haunch area shall be compacted prior to placing and compacting the remainder of the embedment material.
B Soil types as defined in the Occupational Health and Safety Act and Regulations for Construction Projects.
C All dimensions are in metres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 3
FLEXIBLE PIPE EMBEDMENT AND BACKFILL EARTH EXCAVATION		OPSD 802.010



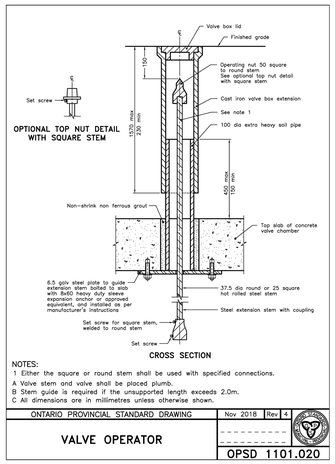
NOTES:
1 Outlet hole size 525mm diameter maximum, location as required.
2 200mm diameter knockout to accommodate subdrain. Knockout shall be 60mm deep.
A Centre reinforcing in base slab and walls ±20mm.
B Granular backfill shall be placed to a minimum thickness of 300mm all around the catch basin.
C Frame, grate, and adjustment units shall be installed according to OPSD 704.010.
D Pipe support shall be according to OPSD 708.020.
E All dimensions are nominal.
F All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2019	Rev 4
PRECAST CONCRETE CATCH BASIN 600x600mm		OPSD 705.010



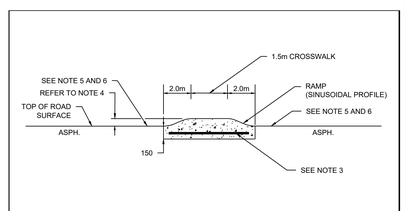
NOTES:
1 For catch basin connections 300mm in diameter or less, factory made tees shall be used.
A For catch basin connections greater than 300mm in diameter, maintenance holes shall be used at the main sewer.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2016	Rev 3
CATCH BASIN CONNECTION FOR FLEXIBLE MAIN PIPE SEWER		OPSD 708.030



NOTES:
1 Either the square or round stem shall be used with specified connections.
A Valve stem and valve shall be placed plumb.
B Stem guide is required if the unsupported length exceeds 2.0m.
C All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2018	Rev 4
VALVE OPERATOR		OPSD 1101.020



SINUSOIDAL PROFILE DIMENSION TABLE: TYPICAL CROSSWALK 80mm

DISTANCE(m)	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875	1.000	1.125	1.250	1.375	1.500	1.625	1.750	1.875	2.000
FINISHED HEIGHT(mm)	0	1	3	7	12	18	25	32	40	48	55	62	68	73	77	79	80

NOTES:
1. CONCRETE TO BE 35MPA WITH ACCELERATOR.
2. REFER TO SINUSOIDAL PROFILE TABLE FOR TOP OF PAVEMENT PROFILE.
3. MINIMUM REINFORCEMENT SHALL BE WIRE MESH 150mm x 150mm MW9.1 x MW9.1, PLACED 50mm MINIMUM FROM BOTTOM.
4. CROSSWALK HEIGHT SHALL BE 80mm.
5. ALL EDGES TO BE ROUTED AND SEALED WITH HOT RUBBERIZED ASPHALT JOINT SEALING COMPOUND.
6. JOINT TREATMENT AND TIE-INS PER CONTRACT DOCUMENTS.

N.T.S.

CONCRETE RAISED CROSSWALK	DETAIL #1

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LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ
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Ainley GROUP
CONSULTING ENGINEERS PLANNERS
2724 Fenton Road
Ottawa, Ontario
K1T 3T7
Telephone: (613) 822-1052
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A. AL-FARAJ
100569923
JAN 24, 2025
PROVINCE OF ONTARIO

NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	JX

SCALE | ECHELLE
1:200

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ONTARIO

PROJECT | PROJET
Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier 4 6-Plex

TRADE | MÉTIER	DATE
6	2024/10/25

SUBJECT | SUJET
DETAILS

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ JX	XX | XX	DES O | AGENT CONC
DRAWN | DESSINÉ JX		PROJ MGR | GEST PROJ
CHECKED | VÉRIFIÉ AAF/JX		DES MGR | GEST CONC
COORDINATION		FIRE | INCENDIE

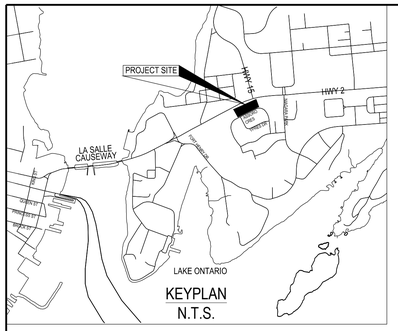
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PF NO. | NO. DP ZKN99

DWG. NO. | NO. DESSIN
L - KN - ZKN99 - 601 - B

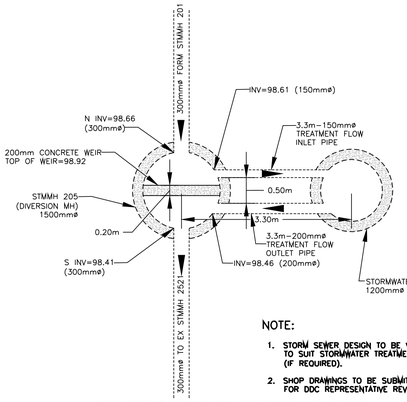
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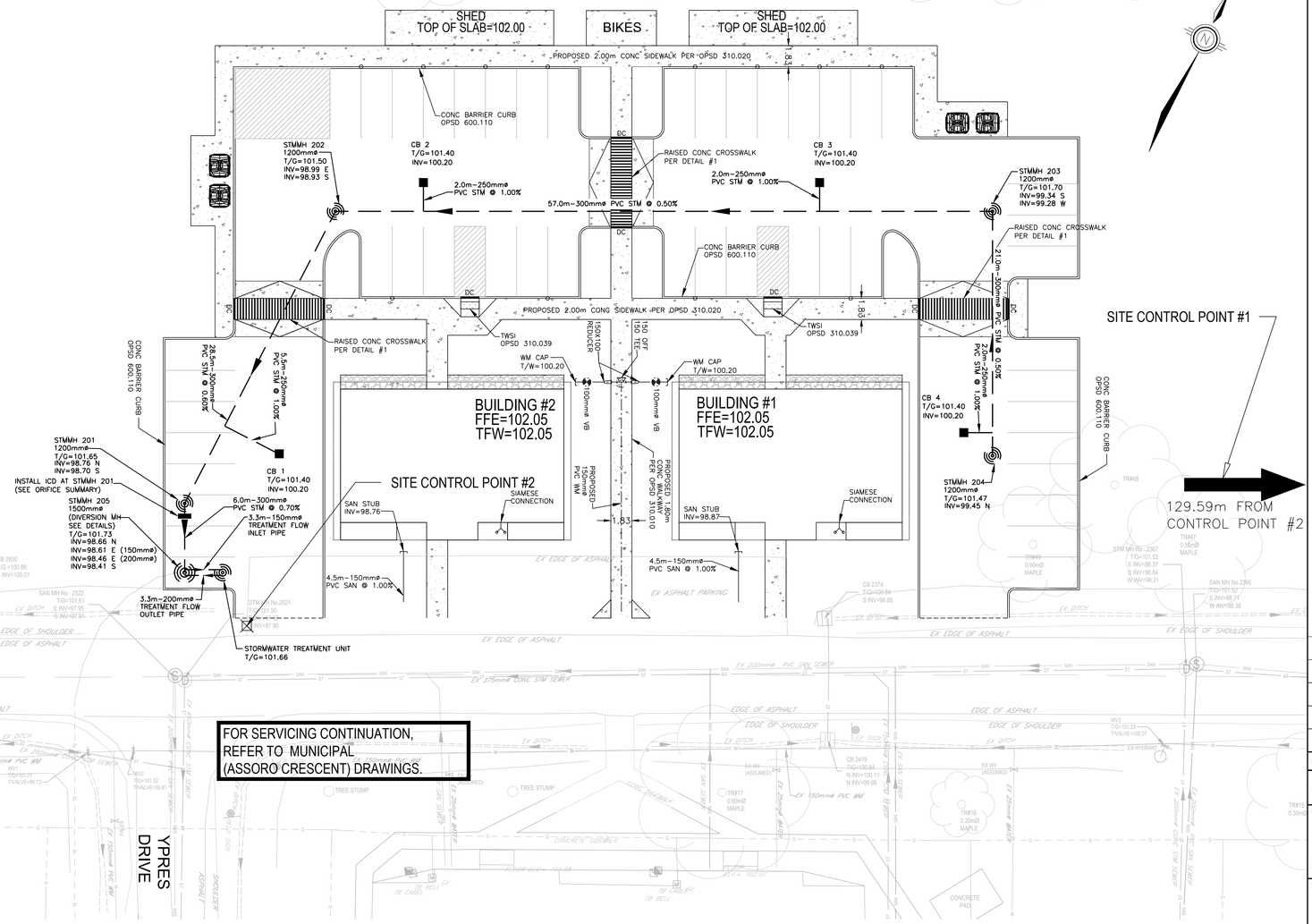
KEYPLAN
N.T.S.



NOTE:

1. STORM SEWER DESIGN TO BE VERIFIED/ADJUSTED TO SUIT STORMWATER TREATMENT UNIT SELECTED (IF REQUIRED).
2. SHOP DRAWINGS TO BE SUBMITTED FOR DDC REPRESENTATIVE REVIEW.

DIVERSION MH (STMMH 205) &
STORMWATER TREATMENT UNIT DETAILS
N.T.S.



LEGEND

- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- EXISTING STORM SEWER
- EXISTING FENCE
- EXISTING HYDRO POLE/LIGHT STANDARD
- EXISTING CATCHBASIN
- EXISTING GASMAIN
- EXISTING UNDERGROUND HYDRO
- EXISTING UH FA
- EXISTING UT COM
- EXISTING HYDRANT
- EXISTING V&vB, V&vC
- PROPOSED CATCHBASIN
- PROPOSED STORM MANHOLE
- PROPOSED STORM SEWER
- CB 1 — CATCHBASIN NUMBER
- T/G=101.25 — TOP OF GRATE ELEVATION FOR CATCH BASINS

STORM MAINTENANCE HOLE DATA

NO.	NORTHING	EASTING	COVER	STRUCTURE	ELEVATION				
					T/GRATE	N INV.	E INV.	S INV.	W INV.
STMMH 201	4899402.4232	383436.3810	401.010 TYPE "A"	701.010	101.65	98.76	---	98.70	---
STMMH 202	4899430.9634	383436.7722	401.010 TYPE "A"	701.010	101.50	---	98.99	98.93	---
STMMH 203	4899456.4409	383487.8037	401.010 TYPE "A"	701.010	101.70	---	---	99.34	99.28
STMMH 204	4899437.4644	3834972777	401.010 TYPE "A"	701.010	101.47	99.45	---	---	---
STMMH 205	4899397.0551	383439.0611	401.010 TYPE "A"	701.011	101.73	98.66	98.61 98.46	98.41	---
JF4-1-1	4899398.5290	383442.0134	---	---	101.66	---	---	---	98.61 98.46

NOTE:

1. THE SPECIFIED COORDINATES OF CB AND MH ARE AT THE CENTER OF STRUCTURE.

CATCH BASIN CONNECTION

LOCATION	DIA. (mm)	TYPE	LENGTH (m)	INVERT ELEVATIONS		NOTE
				UPSTR	DOWNSTR	
CB 1 - MAIN (300mmØ)	250	PVC SDR35	5.5	100.20	100.14	---
CB 2 - MAIN (300mmØ)	250	PVC SDR35	2.0	100.20	100.18	---
CB 3 - MAIN (300mmØ)	250	PVC SDR35	2.0	100.20	100.18	---
CB 4 - MAIN (300mmØ)	250	PVC SDR35	2.0	100.20	100.18	---

CATCH BASIN DATA

NO.	NORTHING	EASTING	COVER	STRUCTURE	ELEVATION		
					T/G	INV.	CITY STANDARD DWG
CB 1	4899409.9209	383441.7982	400.070	705.010	101.40	100.20	---
CB 2	4899436.6077	383442.4827	400.070	705.010	101.40	100.20	---
CB 3	4899451.9733	383473.2602	400.070	705.010	101.40	100.20	---
CB 4	4899438.1425	383494.1566	400.070	705.010	101.40	100.20	---

SURVEY NOTES:

1. EXISTING SITE PLAN INFORMATION COMPLETED BY FIELD SURVEY ON AUGUST 1, 2019 BY AINLEY GROUP AND FROM GIS DATA DERIVED FROM DND GIS MAPPING. CONDITIONS MAY DIFFER THAN THOSE SHOWN.
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3. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING SERVICES PRIOR TO ANY CONSTRUCTION.
4. COORDINATES INDICATED REFERENCE UTM NAD83 HORIZONTAL DATUM WITH UTM ZONE 18N USED FOR MAP PROJECTION.
5. ELEVATIONS INDICATED REFERENCE CGVD28 VERTICAL DATUM.
6. ELEVATIONS ARE IN METERS (m).
7. SITE CONTROL POINTS:

1. 110, MAGNAIL IN ASPHALT
   N: 4899453.576
   E: 383561.713
   Z: 101.343
2. 111, MAG NAIL IN ASPHALT
   N: 4899395.328
   E: 383445.956
   Z: 101.585
3. CONCRETE MONUMENT 98, SOUTH END OF PARK ON ASSORO CRESCENT
   N: 4899458.426
   E: 383563.750
   Z: 101.765

8. CONTRACTOR TO CONFIRM HORIZONTAL AND VERTICAL SURVEY CONTROL PRIOR TO CONSTRUCTION. DISCREPANCIES SHALL BE REPORTED TO DCC REPRESENTATIVE IMMEDIATELY.
9. THIS MAP IS A GRAPHICAL REPRESENTATION OF PROPERTY BOUNDARIES WHICH APPROXIMATE THE SIZE, CONFIGURATION AND LOCATION OF PROPERTIES. IT IS NOT A BOUNDARY SURVEY AND IT IS NOT INTENDED TO BE USED FOR LEGAL DESCRIPTION OR TO CALCULATE EXACT DIMENSIONS OR AREA.

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100569923
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NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	JX

SCALE | ÉCHELLE
1:200

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ONTARIO

PROJECT | PROJET
Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier 4 6-Plex

TRADE | MÉTIER	DATE
6	2024/10/25

SUBJECT | SUJET
SITE SERVICING PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ JX	XX | XX	DES O | AGENT CONC
DRAWN | DESSINÉ JX		PROJ MGR | GEST PROJ
CHECKED | VÉRIFIÉ AAF/JX		DES MGR | GEST CONC
COORDINATION		FIRE | INCENDIE

WBS NO. | NO. OTP: PF NO. | NO. DP: ZKN99

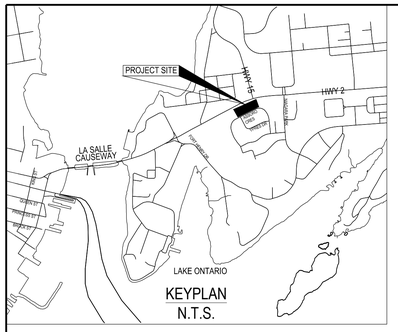
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Sheet 2 of 5



ALL LANDSCAPED AREAS TO BE REINSTATED WITH 150mm DEPTH OF TOPSOIL AND SOD

STOCKPILE TOPSOIL ON SITE FOR LATER USE AS DIRECTED BY DCC REPRESENTATIVE.
DISPOSE EXCESS TOPSOIL AS DIRECTED BY DCC REPRESENTATIVE.
SOIL MANAGEMENT TO BE IN ACCORDANCE WITH 01 35 43.1 ENVIRONMENTAL PROTECTION.

SHED TOP OF SLAB=102.00

SHED TOP OF SLAB=102.00

BUILDING #2 FFE=102.05 TFW=102.05

BUILDING #1 FFE=102.05 TFW=102.05

STMMH 202 1200mmø T/G=101.50

STMMH 201 1200mmø T/G=101.65

STMMH 205 1500mmø (DIVERSION MH SEE DETAILS) T/G=101.73

STMMH 203 1200mmø T/G=101.70

STMMH 204 1200mmø T/G=101.47

CB 1 T/G=101.40

CB 2 T/G=101.40

CB 3 T/G=101.40

CB 4 T/G=101.40

BH 1 EL=101.85 ROCK EL=101.10

BH 2 EL=102.53 ROCK EL=97.68

BH 3 EL=102.26 ROCK EL=100.71

BH 4 EL=102.68 ROCK EL=97.48

BH 5 EL=101.70 NO ROCK

PH 1 EL=102.53 ROCK EL=98.82

PH 2 EL=102.15 ROCK EL=96.45

SITE CONTROL POINT #1

SITE CONTROL POINT #2

129.59m FROM CONTROL POINT #2

SIAMESE CONNECTION

60cm WIDE SOLID WHITE STOP BAR

STOP

RA-1 SIGN (WITH POST)

STORMWATER TREATMENT UNIT T/G=101.66

RAMP

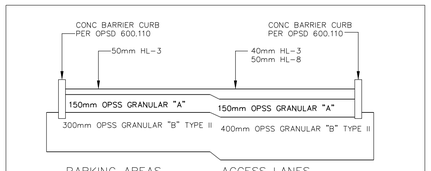
ASSORO CRESCENT

YPRES DRIVE

FOR GRADING CONTINUATION, REFER TO MUNICIPAL (ASSORO CRESCENT) DRAWINGS.

LEGEND

- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- EXISTING STORM SEWER
- EXISTING FENCE
- EXISTING HYDRO POLE/LIGHT STANDARD
- EXISTING CATCHBASIN
- EXISTING GASMAIN
- EXISTING UNDERGROUND HYDRO
- EXISTING UH FA
- EXISTING UT COM
- EXISTING HYDRANT
- EXISTING V&VB, V&VC
- PROPOSED CATCHBASIN
- PROPOSED STORM MANHOLE
- CB 1 — CATCHBASIN NUMBER
- T/G=101.25 — TOP OF GRATE ELEVATION FOR CATCH BASINS
- 101.67 — PROPOSED GRADE
- 2.0% — DIRECTION AND SLOPE
- 101.80 — PROPOSED CONCRETE APRON GRADE
- OVERLAND FLOW ROUTE
- H.P. — RIDGE LINE
- HEAVY DUTY ASPHALT PAVEMENT
- TOPSOIL & SOD



(REFER TO GEOTECHNICAL INVESTIGATION REPORT PREPARED BY AINLEY GROUP DATED NOVEMBER 5, 2019)

BOREHOLE DATA

ID	TOP OF GRADE ELEVATION (masl)	BEDROCK ELEVATION (masl)	GROUNDWATER ELEVATION (masl)
BH1	101.85	101.10	NE
BH2	102.53	97.68	102.23
BH3	102.26	100.71	NE
BH4	102.68	97.48	NE
BH5	101.70	NE	NE
PH1	102.53	98.82	NE
PH2	102.15	96.45	NE

SURVEY NOTES:

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NO.	DATE	REVISION	APPR.
1	2025/01/24	ISSUED FOR TENDER	JX

SCALE | ÉCHELLE
1:200

LOCATION | EMPLACEMENT
Canadian Forces Base (CFB)
KINGSTON, ONTARIO

PROJECT | PROJET
Canadian Forces Housing Agency (CFHA) Apartment Buildings Tier 4 6-Plex

TRADE | MÉTIER: 6
DATE: 2024/10/25

SUBJECT | SUJET
SITE GRADING AND DRAINAGE PLAN

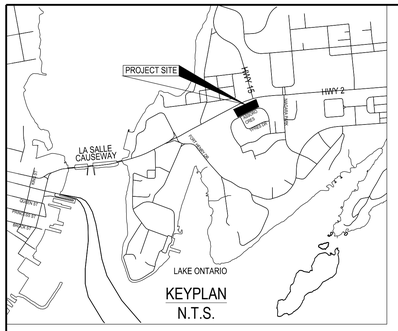
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DESIGNED | ÉTUDIÉ: JX	XX | XX	DES O | AGENT CONC
DRAWN | DESSINÉ: JX		PROJ MGR | GEST PROJ
CHECKED | VÉRIFIÉ: AAF/JX		DES MGR | GEST CONC
COORDINATION		FIRE | INCENDIE

WBS NO. | NO. OTP
PF NO. | NO. DP: ZKN99
DWG. NO. | NO. DESSIN: L - KN - ZKN99 - 603 - B

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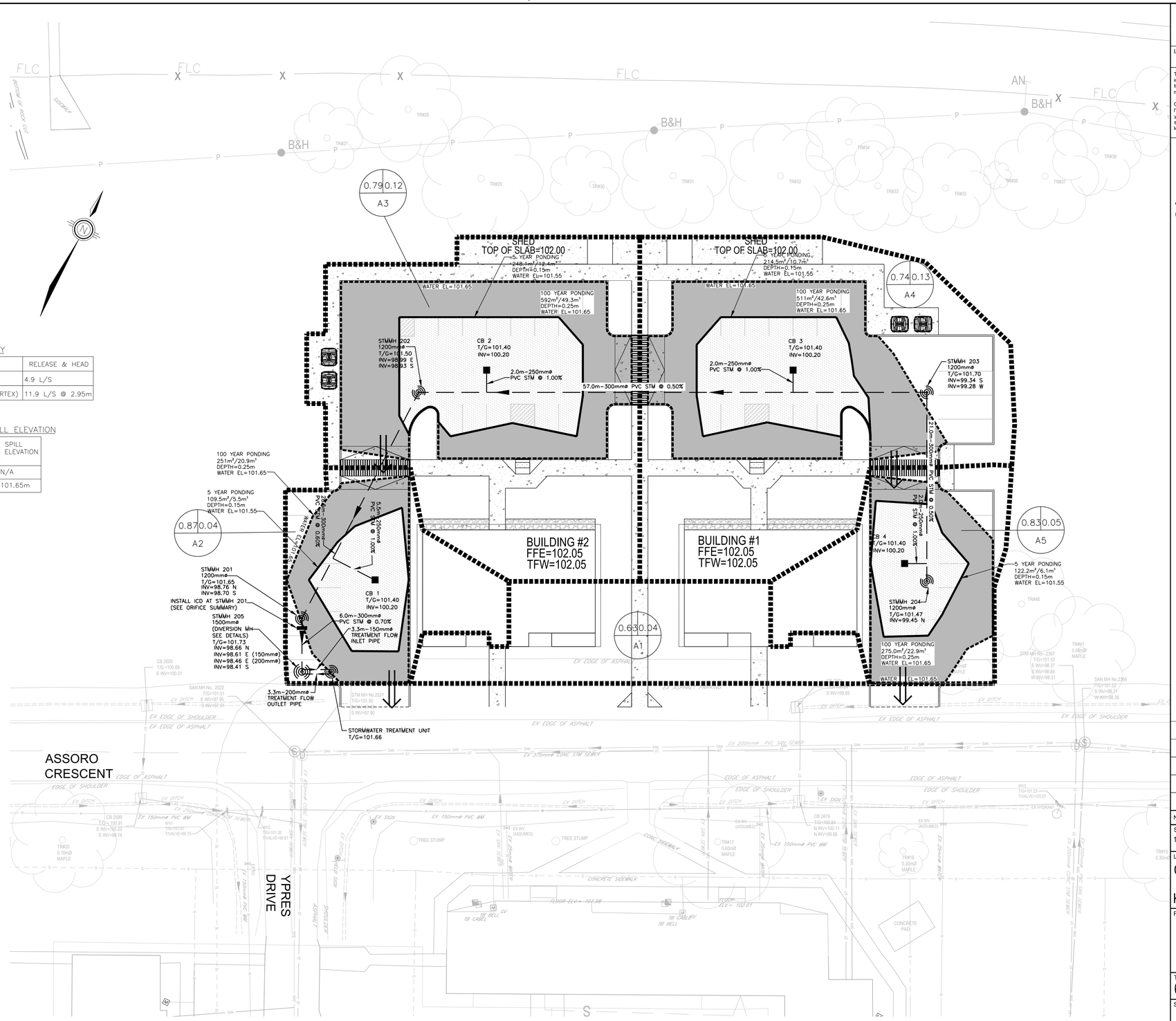
AREA NO	LOCATION	TYPE	RELEASE & HEAD
A1	STREET	FREE FLOW	4.9 L/S
A2, A3, A4 & A5	STMMH 201	ORIFICE (VERTICAL VORTEX)	11.9 L/S @ 2.95m

100 YEAR PONDING VOLUME, DEPTH & SPILL ELEVATION

AREA NO	100 YEAR SURFACE PONDING VOLUME	PONDING DEPTH	SPILL ELEVATION
A1	N/A	N/A	N/A
A2, A3, A4 & A5	135.7m³	0.25m	101.65m

LEGEND

- STORM DRAINAGE AREA
- OVERLAND DRAINAGE DIRECTION
- RUNOFF COEFFICIENT
- AREA (ha)
- AREA NUMBER
- 5 YEAR PONDING AREA
- 100 YEAR PONDING AREA



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SCALE | ÉCHELLE
1:200

LOCATION | EMPLACEMENT
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KINGSTON, ONTARIO

PROJECT | PROJET
Canadian Forces Housing Agency
(CFHA) Apartment Buildings
Tier 4 6-Plex

TRADE | MÉTIER	DATE
6	2024/10/25

SUBJECT | SUJET
STORMWATER MANAGEMENT PLAN

PRODUCTION	REVIEWED | REVU	
DESIGNED | ÉTUDIÉ JX	XX | XX	DES O | AGENT CONC
DRAWN | DESSINÉ JX		PROJ MGR | GEST PROJ
CHECKED | VÉRIFIÉ AAF/JX		DES MGR | GEST CONC
COORDINATION		FIRE | INCENDIE

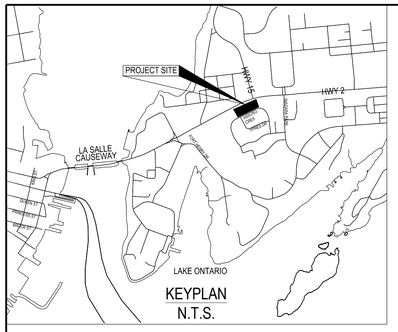
WBS NO. | NO. OTP	PF NO. | NO. DP
	ZKN99

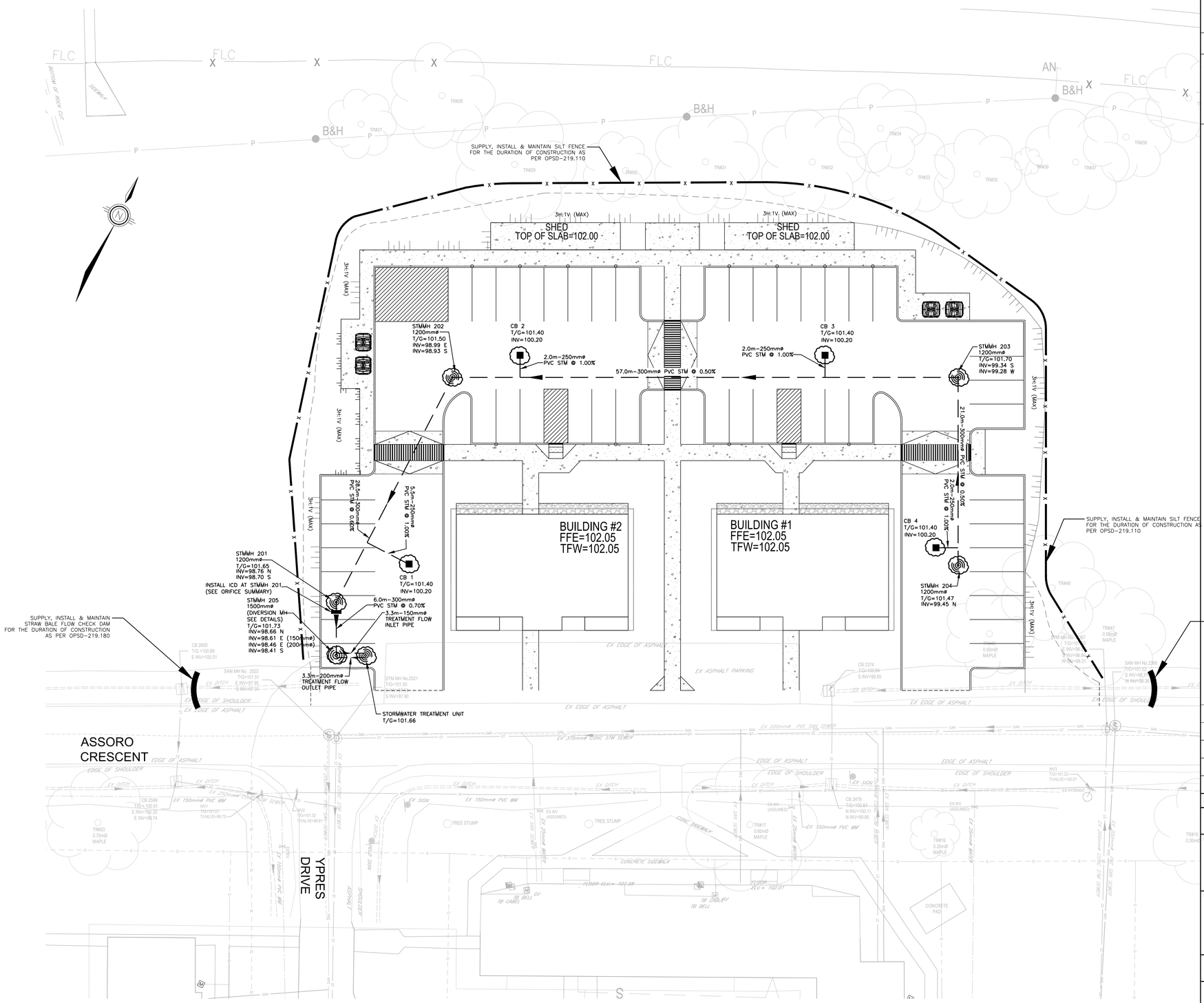
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L - KN - ZKN99 - 604 - B

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BORDER LAST UPDATED 2016-08-30

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SUPPLY, INSTALL & MAINTAIN SILT FENCE FOR THE DURATION OF CONSTRUCTION AS PER OPSD-219.110
SHED
TOP OF SLAB=102.00
SHED
TOP OF SLAB=102.00
3H:1V (MAX)
STMH 202
1200mmø
T/G=101.50
INV=98.99 E
INV=98.93 S
CB 2
T/G=101.40
INV=100.20
2.0m-250mmø
PVC STM @ 1.00%
57.0m-300mmø PVC STM @ 0.50%
CB 3
T/G=101.40
INV=100.20
2.0m-250mmø
PVC STM @ 1.00%
STMH 203
1200mmø
T/G=101.70
INV=99.34 S
INV=99.28 W
21.0m-300mmø PVC STM @ 0.50%
2.0m-250mmø
PVC STM @ 1.00%
CB 4
T/G=101.40
INV=100.20
STMH 204
1200mmø
T/G=101.47
INV=99.45 N
BUILDING #2
FFE=102.05
TFW=102.05
BUILDING #1
FFE=102.05
TFW=102.05
28.5m-300mmø
PVC STM @ 0.82%
5.5m-250mmø
PVC STM @ 1.00%
CB 1
T/G=101.40
INV=100.20
STMH 201
1200mmø
T/G=101.65
INV=98.76 N
INV=98.70 S
INSTALL ICD AT STMMH 201
(SEE ORIFICE SUMMARY)
STMH 205
1500mmø
(DIVERSION MH
SEE DETAILS)
T/G=101.73
INV=98.66 N
INV=98.61 E (150mmø)
INV=98.46 E (200mmø)
INV=98.41 S
6.0m-300mmø
PVC STM @ 0.70%
3.3m-150mmø
TREATMENT FLOW
INLET PIPE
3.3m-200mmø
TREATMENT FLOW
OUTLET PIPE
STORMWATER TREATMENT UNIT
T/G=101.66
SUPPLY, INSTALL & MAINTAIN STRAW BALE FLOW CHECK DAM FOR THE DURATION OF CONSTRUCTION AS PER OPSD-219.180
SUPPLY, INSTALL & MAINTAIN SILT FENCE FOR THE DURATION OF CONSTRUCTION AS PER OPSD-219.110
SUPPLY, INSTALL & MAINTAIN STRAW BALE FLOW CHECK DAM FOR THE DURATION OF CONSTRUCTION AS PER OPSD-219.180
ASSORO CRESCENT
YPRES DRIVE
EX EDGE OF ASPHALT
EX ASPHALT PARKING
EX DITCH
EDGE OF SHOULDER
EDGE OF ASPHALT
CONCRETE SIDEWALK
CONCRETE PAD
TREE STUMP
EX 150mmø PVC WM
EX 375mmø CONC STM SEWER
EX 200mmø PVC SAN SEWER
EX 250mmø PVC STM SEWER
EX 300mmø PVC STM SEWER
EX 450mmø CONC STM SEWER
EX 525mmø CONC STM SEWER
EX 600mmø CONC STM SEWER
EX 750mmø CONC STM SEWER
EX 900mmø CONC STM SEWER
EX 1050mmø CONC STM SEWER
EX 1200mmø CONC STM SEWER
EX 1350mmø CONC STM SEWER
EX 1500mmø CONC STM SEWER
EX 1800mmø CONC STM SEWER
EX 2100mmø CONC STM SEWER
EX 2400mmø CONC STM SEWER
EX 2700mmø CONC STM SEWER
EX 3000mmø CONC STM SEWER
EX 3300mmø CONC STM SEWER
EX 3600mmø CONC STM SEWER
EX