HOUSING DESIGN CATALOGUE

AB SIXPLEX

Housing, Infrastructure and Communities Canada
Logement, Infrastructures et Collectivités Canada
Canada
CMHC SCHL

CMHC HOUSING DESIGN CATALOGUE
AB SIXPLEX
ARCHITECTURAL DRAWINGS

BUILDING DATA	
BUILDING FOOTPRINT	209.40m² (2,253.96ft²)
BUILDING HEIGHT	11.27m (37'- 0")
STOREYS	3 STOREY
NUMBER OF UNITS	6
UNIT SUMMARY	
UNIT 1	2 BEDROOM, 1 BATHROOM, ACCESSIBLE READY
UNIT 1(ALT)	1 BEDROOM, 1 BATHROOM, ENHANCED ACCESSIBILITY
UNIT 2	2 BEDROOM, 1 BATHROOM
UNIT 3	1 BEDROOM, 1 BATHROOM
UNIT 4	1 BEDROOM, 1 BATHROOM
UNIT 5	3 BEDROOM, 2 BATHROOM
UNIT 6	3 BEDROOM, 2 BATHROOM

ARCHITECTURAL SHEET LIST	
000	TITLE SHEET
A000	COVER SHEET
A003	ASSEMBLIES SCHEDULE
A004	OPENINGS SCHEDULE
A005	FIRE RATING DETAILS
A006	TYP. DETAILS
A007	TYP. DETAILS
A008	TYP. DETAILS
A009	TYP. DETAILS
A010	SITE PLAN & CODE MATRIX
A101	MAIN FLOOR PLAN - ACCESSIBLE READY
A101a	MAIN FLOOR PLAN - ENHANCED ACCESSIBILITY
A102	SECOND FLOOR PLAN
A103	THIRD FLOOR PLAN
A104	ROOF PLAN
A200	ELEVATIONS
A201	ELEVATIONS
A300	SECTIONS
A301	SECTIONS

ABBREVIATIONS

ABBREVIATIONS MAY OR MAY NOT INCLUDE PERIOD PUNCTUATION.
ABBREVIATIONS APPLY TO ARCHITECTURAL DOCUMENTS ONLY.

ARCH	ARCHITECTURAL
BF	BARRIER FREE
C/C	CENTRE TO CENTRE
CL	CENTER LINE
CIV	CIVIL
DIA	DIAMETER
DIM	DIMENSION
DWG	DRAWING
ELEC	ELECTRICAL
ELEV	ELEVATION
EQ	EQUAL
GEOTECH	GEOTECHNICAL
GWB	GYPSUM WALL BOARD
FFE	FINISH FLOOR ELEVATION
FRR	FIRE RESISTANCE RATING
FD	FLOOR DRAIN
HR	HOUR
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
NBC (AE)	NATIONAL BUILDING CODE (ALBERTA EDITION)
N/A	NOT APPLICABLE
NTS	NOT TO SCALE
O/C	ON CENTRE
RM	ROOM
R/O	ROUGH OPENING
RWL	RAIN WATER LEADER
SCH	SCHEDULE
SF	SQUARE FEET
SIM	SIMILAR
SM	SQUARE METER
SPEC	SPECIFICATION
STC	SOUND TRANSMISSION CLASS
STRUC	STRUCTURAL
TBD	TO BE DETERMINED
T/O	TOP OF
T&G	TONGUE & GROOVE
TYP	TYPICAL
U/S	UNDERSIDE
W/C	WASHROOM

ANNOTATION LEGEND

ASSEMBLY TAGS

- IW# — INTERIOR PARTITION TAG
- R# — ROOF TAG
- F# — FLOOR TAG

(REFER TO ASSEMBLIES SCHEDULES)

TAGS

- D## — DOOR TAG *REFER TO DOOR SCHEDULE*
- W## / ### AFF — WINDOW TAG *REFER TO WINDOW SCHEDULE*
- XYZ-# — MATERIAL TAG
- ## — KEYNOTES *REFER TO SHEET SPECIFIC KEYNOTE SCHEDULE*

DRAWING TAGS

- 1 / A101 (SIM) — DETAIL NUMBER / DRAWING SHEET NUMBER
- 1 / A101 (SIM) — BUILDING SECTION NUMBER / DRAWING SHEET NUMBER
- 1 / A101 / 1 — EXTERIOR ELEVATION NUMBER / DRAWING SHEET NUMBER
- 0 — GRID BUBBLE
- SPOT ELEVATION (ABOVE FINISH FLOOR)
- ROOM NAME — ROOM TAG
- CENTRELINE

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DISCLAIMER

This design was created for use solely as part of the CMHC Housing Design Catalogue. It is a sample of standardized housing design, reflecting general design intention only and does not incorporate any elements of other information specific to any location or project. This design is provided for illustrative purposes only and must not be used for construction or permitting purposes. In using this design, you are responsible for your compliance with the Terms and Conditions, including but not limited to engaging the services of a Qualified Professional.

NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

COVER SHEET

AB Sixplex 01

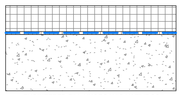
PROJECT NO: 241058

SCALE: As indicated

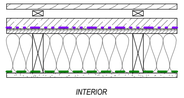
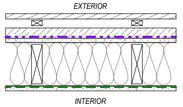
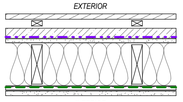
SHEET NO:

A000

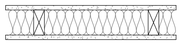
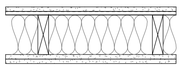
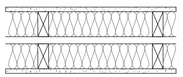
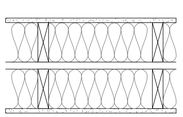
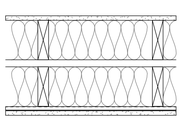
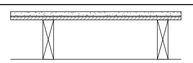
N - FOUNDATION WALL ASSEMBLIES

TYPE	DIAGRAM	DESCRIPTION	PERFORMANCE
N1		**FOUNDATION** /AR PARGING CEMENT COATING 4" (51mm) BELOW GRADE RIGID INSULATION 1/8" (10mm) DRAINAGE AND PROTECTION BOARD /AR FOUNDATION DAMP PROOFING 1' (200mm) GRADE BEAM (REFER TO STRUCTURAL)	R-VALUE: MIN. R 18.32 / MIN RSI 3.22

W - EXTERIOR WALL ASSEMBLIES

TYPE	DIAGRAM	DESCRIPTION	PERFORMANCE
W1		**EXTERIOR ENVELOPE WALL** 19mm (3/4") LIGHT-WEIGHT CLADDING PLACE HOLDER 19mm (3/4") WOOD STRAPPING @ 400mm O/C (38mm WIDE MINIMUM) 25mm (1") RIGID INSULATION VAR AIR BARRIER, VAPOR PERMEABLE 16mm (5/8") EXTERIOR GRADE PLYWOOD 140mm (5 1/2") WOOD STUD FRAMING (REFER TO STRUCTURAL) C/W 140mm (5 1/2") STUD CAVITY IN-FILL INSULATION VAR VAPOR CONTROL BARRIER 16mm (5/8") GYPSUM BOARD	R-VALUE: MIN. R 34.64 / MIN RSI 6.1 INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36 STUD CAVITY INSULATION AND RIGID INSULATION TO BE NON COMBUSTIBLE
W2		**EXTERIOR ENVELOPE WALL - NON-COMBUSTIBLE** 3/4" (19mm) NON-COMBUSTIBLE LIGHT-WEIGHT CLADDING PLACE HOLDER 1/2" (13mm) VENTED CAVITY W/ METAL Z-GIRTS @ 400mm O/C 1" (25mm) RIGID INSULATION VAR AIR BARRIER, VAPOR PERMEABLE 5/8" (16mm) NON-COMBUSTIBLE EXTERIOR SHEATHING 5 1/2" (140mm) METAL STUD FRAMING (REFER TO STRUCTURAL) C/W 5 1/2" (140mm) STUD CAVITY IN-FILL INSULATION VAR VAPOR CONTROL BARRIER 5/8" (16mm) GYPSUM BOARD, TYPE X	R-VALUE: MIN. R 34.64 / MIN RSI 6.1 FRR: 1HR FRR BASED ON EW2a AS PER NBC (AE) 9.10.3.1.-A INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36 STUD CAVITY INSULATION AND RIGID INSULATION TO BE NON COMBUSTIBLE
W3		**EXTERIOR ENVELOPE WALL - NON-COMBUSTIBLE** 3/4" (19mm) NON-COMBUSTIBLE LIGHT-WEIGHT CLADDING PLACE HOLDER 1/2" (13mm) VENTED CAVITY W/ METAL Z-GIRTS @ 400mm O/C 1" (25mm) RIGID INSULATION VAR AIR BARRIER, VAPOR PERMEABLE 5/8" (16mm) NON-COMBUSTIBLE EXTERIOR SHEATHING 5 1/2" (140mm) METAL STUD FRAMING (REFER TO STRUCTURAL) C/W 5 1/2" (140mm) STUD CAVITY IN-FILL INSULATION VAR VAPOR CONTROL BARRIER 1/2" (13mm) RESILIENT FURRING CHANNELS @ 406mm O/C 5/8" (16mm) GYPSUM BOARD, TYPE X	R-VALUE: MIN. R 34.64 / MIN RSI 6.1 FRR: 2HR FRR BASED ON EW6b AS PER NBC (AE) 9.10.3.1.-A INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36 STUD CAVITY INSULATION AND RIGID INSULATION TO BE NON COMBUSTIBLE

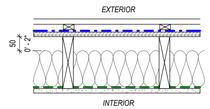
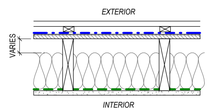
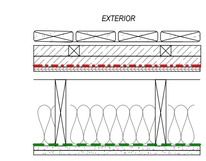
P - INTERIOR PARTITION ASSEMBLIES

TYPE	DIAGRAM	DESCRIPTION	PERFORMANCE
P1		**2x4 INTERIOR PARTITION** 5/8" (16mm) GYPSUM BOARD 3 1/2" (89mm) WOOD STUD FRAMING @ 406mm O/C 5/8" (16mm) GYPSUM BOARD	FRR: N/A STC: N/A
P1a		**2x4 INTERIOR PARTITION W/ BATTS** 5/8" (16mm) GYPSUM BOARD 3 1/2" (89mm) WOOD STUD FRAMING @ 406mm O/C C/W 3 1/2" (89mm) ACOUSTIC BATT IN-FILL INSULATION 5/8" (16mm) GYPSUM BOARD	FRR: N/A STC: 34
P2		**2x6 INTERIOR PARTITION - BETWEEN UNIT & STAIRS, RATED** 5/8" (16mm) GYPSUM BOARD, TYPE X 1/2" (13mm) RESILIENT FURRING CHANNELS @ 406mm O/C 5 1/2" (140mm) WOOD STUD FRAMING @ 61/4"/10mm O/C C/W 5 1/2" (140mm) ACOUSTIC BATT IN-FILL INSULATION 5/8" (16mm) GYPSUM BOARD, TYPE X 5/8" (16mm) GYPSUM BOARD, TYPE X	FRR: 1HR STC: 51 FRR BASED ON W1a AS PER NBC (AE) 9.10.3.1.-A
P3		**2x4 DEMISING WALL - NON-LOAD BEARING, RATED** 5/8" (16mm) GYPSUM BOARD, TYPE X 3 1/2" (89mm) WOOD STUD FRAMING @ 406mm O/C C/W 3 1/2" (89mm) ACOUSTIC BATT IN-FILL INSULATION 1" (25mm) AIR SPACE 3 1/2" (89mm) WOOD STUD FRAMING @ 406mm O/C C/W 3 1/2" (89mm) ACOUSTIC BATT IN-FILL INSULATION 5/8" (16mm) GYPSUM BOARD, TYPE X	FRR: 1HR STC: 57 FRR BASED ON W1a AS PER NBC (AE) 9.10.3.1.-A
P4		**2x6 DEMISING WALL - LOAD BEARING, RATED** 5/8" (16mm) GYPSUM BOARD, TYPE X 5 1/2"(140mm) WOOD STUD FRAMING (REFER TO STRUCTURAL) C/W 5 1/2" (140mm) ACOUSTIC BATT IN-FILL INSULATION 1" (25mm) AIR SPACE 5 1/2" (140mm) WOOD STUD FRAMING (REFER TO STRUCTURAL) C/W 5 1/2" (140mm) ACOUSTIC BATT IN-FILL INSULATION 5/8" (16mm) GYPSUM BOARD, TYPE X	FRR: 1HR STC: 61 FRR BASED ON W1a AS PER NBC (AE) 9.10.3.1.-A
P4a		**2x6 DEMISING WALL - LOAD BEARING, RATED** 5/8" (16mm) GYPSUM BOARD, TYPE X 5 1/2"(140mm) WOOD STUD FRAMING (REFER TO STRUCTURAL) C/W 5 1/2" (140mm) ACOUSTIC BATT IN-FILL INSULATION 1" (25mm) AIR SPACE 5 1/2" (140mm) WOOD STUD FRAMING (REFER TO STRUCTURAL) C/W 5 1/2" (140mm) ACOUSTIC BATT IN-FILL INSULATION 1/2" (13mm) RESILIENT FURRING CHANNELS @ 406mm O/C 5/8" (16mm) GYPSUM BOARD, TYPE X	FRR: 2HR STC: 61 FRR BASED ON W16b AS PER NBC (AE) 9.10.3.1.-A
P5		**PLUMBING CHASE** 5/8" (16mm) GYPSUM BOARD 1/2" (13mm) PLYWOOD SHEATHING (REFER TO STRUCTURAL) 3 1/2" (89mm) WOOD STUD FRAMING @ 406mm O/C	FRR: N/A STC: N/A

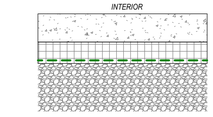
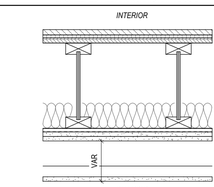
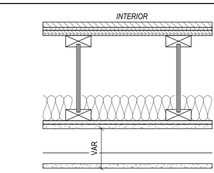
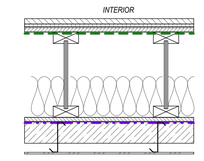
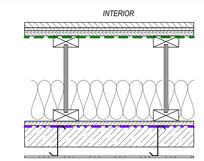
ASSEMBLY GENERAL NOTES

1. ALL LOAD BEARING WALLS SUPPORTING A RATED FLOOR ASSEMBLY SHALL HAVE A FIRE RESISTANCE RATING NOTLESS THAN THE SUPPORTED FLOOR ABOVE AS PER NBC(AE) 9.10.8.3.
2. 16MM (5/8") GYPSUM BOARD, TYPE X TO BE USED ON LOAD BEARING WALLS (SEE STRUCTURAL) TO PROVIDE FRR.
3. ALL WALL AND FLOOR ASSEMBLIES REQUIRED TO BE A FIRE SEPARATION SHALL BE CONSTRUCTED AS A CONTINUOUSBARRIER AGAINST THE SPREAD OF FIRE AND SMOKE AS PER NBC(AE) 9.10.9.2..
4. ALL PENETRATIONS THROUGH A REQUIRED FIRE SEPARATION TO MEET REQUIREMENTS OF NBC(AE) 9.10.9.6.
5. ALL PIPING PENETRATIONS THROUGH A RATED ASSEMBLY OR A MEMBRANE THAT FORMS PART OF A RATED ASSEMBLYTO CONFORM TO NBC(AE) 9.10.9.7.
6. ALL OPENINGS FOR ELECTRICAL OR SIMILAR OUTLET BOXES IN RATED ASSEMBLIES TO CONFORM TO NBC(AE) 9.10.9.8.
7. RECESSED LIGHTING FIXTURES SHALL NOT BE LOCATED IN INSULATED CEILINGS UNLESS THE FIXTURES ARE DESIGNED FOR SUCH INSTALLATIONS AS PER NBC(AE) 9.34.1.4.
8. **STRUCTURAL SLAB:** EFFECTIVE THERMAL RESISTANCE OF AN UNHEATED FLOOR ABOVE FROSTLINE IN CONTACT WITHGROUND WITH A HRV FOR CLIMATE ZONE 7A: MINIMUM EFFECTIVE THERMAL RESISTANCE RSI 1.8 . . REFER TO NBC(AE) 9.36.
9. **WALLS:** EFFECTIVE THERMAL RESISTANCE OF ABOVE-GROUND OPAQUE ASSEMBLIES WITHA HRV IN CLIMATE ZONE 7A: RSI 6.1 . REFER TO NBC(AE) 9.36.
10. **ROOFS:** EFFECTIVE THERMAL RESISTANCE OF ABOVE-GROUND OPAQUE ASSEMBLIES WITH A HRVIN CLIMATE ZONE 7A: RSI 6.5 . REFER TO NBC(AE) 9.36.
11. FOAMED PLASTICS TO BE THERMALLY PROTECTED AS PER NBC(AE) 9.10.17.10.
12. ROOFING MATERIAL AND INSTALLATION AS PER NBC(AE) 9.26.2.
13. VAPOUR BARRIER AS PER NBC(AE) 9.27.
14. INSULATION AS PER NBC(AE) 9.25.2.1.
15. CLADDING AS PER NBC(AE) 9.25.4.
16. WHERE CLOSED CELL SPRAY INSULATION ACTS AS VAPOUR CONTROL, ENSURE SUFFICIENT QUANTITY TO MEETNBC(AE) 9.25.4.2.(8).

R - ROOF ASSEMBLIES

TYPE	DIAGRAM	DESCRIPTION	PERFORMANCE
R1		**EXTERIOR ENVELOPE ROOF - VAULTED CEILING** 5/8" (16mm) ROOFING PLACEHOLDER 3/4" (19mm) VENTED CAVITY W/ WOOD FURRING VAR ROOF MEMBRANE 5/8" (16mm) EXTERIOR GRADE PLYWOOD VAR WOOD ROOF FRAMING (REFER TO STRUCTURAL) LEAVING VENTILATION GAP . MIN 50mm(2") 5 1/2" (140mm) STUD CAVITY IN-FILL INSULATION VAR VAPOR CONTROL BARRIER 5/8" (16mm) GYPSUM BOARD	R-VALUE: MIN. R 36.91 / MIN RSI 6.5 INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36 STUD CAVITY INSULATION AND RIGID INSULATION TO BE NON COMBUSTIBLE
R2		**EXTERIOR ENVELOPE ROOF - PRE FABRICATED ROOF TRUSS** 5/8" (16mm) ROOFING PLACEHOLDER 3/4" (19mm) VENTED CAVITY W/ WOOD FURRING VAR ROOF MEMBRANE 5/8" (16mm) EXTERIOR GRADE PLYWOOD VAR PRE FABRICATED ROOF TRUSS (REFER TO STRUCTURAL) 1 1/2" (140mm) STUD CAVITY IN-FILL INSULATION VAR VAPOR CONTROL BARRIER 5/8" (16mm) GYPSUM BOARD	R-VALUE: MIN. R 36.91 / MIN RSI 6.5 INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36 STUD CAVITY INSULATION AND RIGID INSULATION TO BE NON COMBUSTIBLE
R3		**TERRACE ROOF** 1/2" (38mm) WOOD DECKING /2" (13mm) VENTED CAVITY W/ PLASTIC SHIMS 1/2" (38mm) PRESSURE TREATED WOOD FRAMING PERPENDICULAR TO DIRECTION OF SLOPE C/W 1 1/2" (38mm) RIGID INSULATION 1/2" (38mm) PRESSURE TREATED WOOD FRAMING IN DIRECTION OF SLOPE C/W 1 1/2" (38mm) RIGID INSULATION /AR ROOF MEMBRANE, 2 PLY MOD-BIT /8" (16mm) EXTERIOR GRADE PLYWOOD /AR CANTED WOOD SLEEPERS, MIN 2% SLOPE /AR ENGINEERED WOOD JOIST OR I-JOIST (REFER TO STRUCTURAL) C/W 5 1/2" (140mm) STUD CAVITY IN-FILL INSULATION VAR VAPOR CONTROL BARRIER /8" (16mm) GYPSUM BOARD, TYPE X /8" (16mm) GYPSUM BOARD, TYPE X	R-VALUE: MIN. R 36.91 / MIN RSI 6.5 FRR: 1HR AS PER NBC (AE)3.3.1.1 FRR BASED ON F4b AS PER NBC (AE) 9.10.3.1.-B INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36 STUD CAVITY INSULATION AND RIGID INSULATION TO BE NON COMBUSTIBLE

F - FLOOR ASSEMBLIES

TYPE	DIAGRAM	DESCRIPTION	PERFORMANCE
F1		**SLAB ON GRADE** /AR CAST-IN-PLACE CONCRETE SLAB-ON-GRADE, REFER TO STRUCTURAL 3" (76mm) BELOW GRADE RIGID INSULATION VAR VAPOR CONTROL BARRIER 8" (200mm) FREE-DRAINING GRANULAR BASE	R-VALUE: MIN. R 13.82 / MIN RSI 2.43 INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36
F2		**WOOD FRAMED FLOOR, RATED** 3/4" (19mm) FLOOR FINISH 3/8" (10mm) RUBBER UNDERLAY 3/4" (19mm) T&G PLYWOOD SUBFLOOR, SCREWED & GLUED VAR ENGINEERED WOOD JOIST OR I-JOIST (REFER TO STRUCTURAL) 6" (152mm) ACOUSTIC BATT IN-FILL INSULATION 1/2" (13mm) RESILIENT FURRING CHANNELS @ 600mm O/C 5/8" (16mm) INTERIOR GYPSUM BOARD, TYPE X 5/8" (16mm) INTERIOR GYPSUM BOARD, TYPE X VAR WOOD FRAMED WITH GYPSUM BOARD BULKHEAD/SUSPENDED CEILING AT MECH DUCTS, REFER TO MECHANICAL	FRR: 1HR AS PER NBC (AE)3.3.1.1 STC: 54 IIC: 48 FRR BASED ON F6b AS PER NBC (AE) 9.10.3.1.-B
F3		**WOOD FRAMED FLOOR** 3/4" (19mm) FLOOR FINISH 1/4" (10mm) RUBBER UNDERLAY 3/4" (19mm) T&G PLYWOOD SUBFLOOR, SCREWED & GLUED VAR ENGINEERED WOOD JOIST OR I-JOIST (REFER TO STRUCTURAL) 3 1/2" (89mm) ACOUSTIC BATT IN-FILL INSULATION 1/2" (13mm) RESILIENT FURRING CHANNELS 5/8" (16mm) INTERIOR GYPSUM BOARD VAR WOOD FRAMED WITH GYPSUM BOARD BULKHEAD/SUSPENDED CEILING AT MECH DUCTS, REFER TO MECHANICAL	FRR: N/A STC: N/A IIC: N/A
F4		**EXTERIOR ENVELOPE SOFFIT** 1/4" (19mm) FLOOR FINISH 1/8" (10mm) RUBBER UNDERLAY 1/4" (19mm) T&G PLYWOOD SUBFLOOR, SCREWED & GLUED VAR VAPOR BARRIER /AR ENGINEERED WOOD JOIST OR I-JOIST (REFER TO STRUCTURAL) 5 1/2" (140mm) STUD CAVITY IN-FILL INSULATION (R-24.0) /8" (16mm) EXTERIOR GRADE PLYWOOD /AR AIR BARRIER, VAPOR PERMEABLE 3" (76mm) RIGID INSULATION (R-12.8) /AR VENTED CAVITY W/ METAL Z-GIRTS 1/4" (6mm) METAL SOFFIT	R-VALUE: MIN. R 10.22 / MIN RSI 1.8 INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36
F5		**EXTERIOR ENVELOPE SOFFIT, RATED** 1/4" (19mm) FLOOR FINISH 1/8" (10mm) RUBBER UNDERLAY 1/4" (19mm) T&G PLYWOOD SUBFLOOR, SCREWED & GLUED AR VAPOR BARRIER VAR ENGINEERED WOOD JOIST OR I-JOIST (REFER TO STRUCTURAL) 5 1/2" (140mm) STUD CAVITY IN-FILL INSULATION (R-24.0) /8" (16mm) EXTERIOR GRADE GYPSUM BOARD, TYPE X /8" (16mm) EXTERIOR GRADE GYPSUM BOARD, TYPE X /AR AIR BARRIER, VAPOR PERMEABLE 3" (76mm) RIGID INSULATION (R-12.8) /AR VENTED CAVITY W/ METAL Z-GIRTS 1/4" (6mm) METAL SOFFIT	R-VALUE: MIN. R 10.22 / MIN RSI 1.8 FRR: 1HR AS PER NBC (AE)3.3.1.1 FRR BASED ON F4b AS PER NBC (AE) 9.10.3.1.-B INSULATION R/RSI VALUES TO BE SPECIFIED PER PROJECT LOCATION AS PER NBC(AE) 9.36 STUD CAVITY INSULATION AND RIGID INSULATION TO BE NON COMBUSTIBLE

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MEMBRANE LEGEND

- AIR BARRIER, VAPOUR PERMEABLE
- BUTYL TAPE TRANSITION MEMBRANE
- ROOF MEMBRANE
- ROOF MEMBRANE, 2-PLY MOD-BIT
- VAPOUR CONTROL BARRIER
- FOUNDATION DAMP PROOFING
- PRE-FIN METAL FLASHING

INSULATION LEGEND

- RIGID INSULATION
- BELOW GRADE RIGID INSULATION
- MINERAL WOOL, BATT

NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

ASSEMBLIES SCHEDULE

AB Sixplex 01

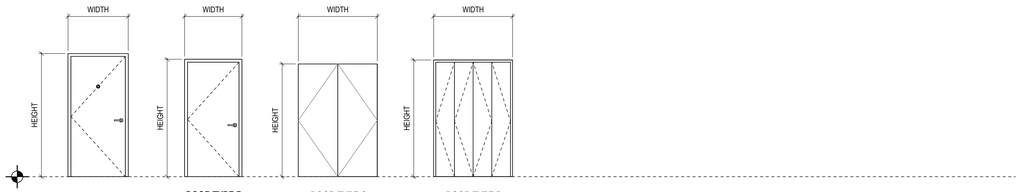
PROJECT NO: 241058

SCALE: 1 : 10

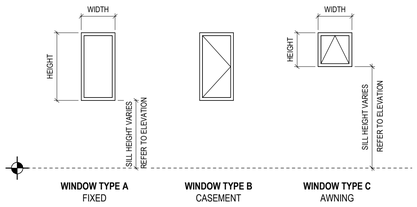
SHEET NO:

A003

DOOR TYPES



WINDOW TYPES



DOOR, WINDOW & SKYLIGHT GENERAL NOTES

1. WINDOWS AND DOORS TO CONFORM TO REQUIREMENTS OF NBC(AE) 9.7.3 AND NBC(AE) 9.7.4
2. MAXIMUM U-VALUE FOR WINDOWS TO CONFORM TO ABC TABLE NBC(AE) 9.7.3.3 AND NBC(AE) 9.36.2.7-A
3. ALL OPERABLE WINDOWS WITH A SILL HEIGHT OR OPERABLE SECTION LESS THAN 900mm ABOVE FINISHED FLOOR AND 1800mm ABOVE THE FLOOR OR GROUND ON THE OTHER SIDE OF THE WINDOW SHALL BE PROTECTED BY A SWING LIMITER RESTRICTING THE SWING TO NOT MORE THAN 100mm EITHER VERTICALLY OR HORIZONTALLY PER NBC(AE) 9.8.8.1.5.
4. ALL GLASS TO MEET MATERIAL STANDARDS PER NBC(AE) 9.6.1.2
5. ALL SIDELIGHTS OR GLAZING AT INDOOR/ENTRIES TO DWELLING UNITS TO BE TEMPERED OR LAMINATED PER NBC(AE) 9.6.1.4
6. MINIMUM REQUIRED THERMAL CHARACTERISTIC OF FENESTRATION AND DOORS HAS BEEN SHOWN AS CLIMATE ZONE 7A: MAX. U-VALUE 2.0 . PROFESSIONAL DESIGNER TO REVISE AS REQUIRED FOR SITE CONDITION. MIN.
7. ALL PRINCIPAL ENTRANCE DOORS, EXIT DOORS OR DOORS TO SUITES INCLUDING EXTERIOR DOORS TO DWELLING UNITS SHALL BE OPERABLE FROM THE INSIDE WITHOUT KEYS AND DOOR RELEASE HARDWARE; SHALL BE GRASPABLE WITH ONE HAND; AND INSTALLED AT 900mm ABOVE FINISHED FLOOR PER NBC(AE) 9.9.6.7.
8. ALL EXTERIOR DOORS TO HAVE INSULATED CORE & INSTALLED WITH WEATHERSTRIPPING.
9. EACH BEDROOM TO HAVE AT LEAST ONE WINDOW OR EXTERIOR DOOR IN COMPLIANCE WITH NBC(AE) 9.9.10.1. FOR EGRESS WINDOWS OR DOORS FOR BEDROOMS.
10. DOORS, DAMPERS, AND OTHER CLOSURES IN FIRE SEPARATIONS TO BE INSTALLED AS PER NBC(AE) 9.10.13.
11. DOOR STOP REQUIRED AS PER NBC(AE) 9.10.13.16.
12. FLAME-SPREAD RATING OF ALL WINDOWS TO CONFORM TO NBC(AE) 9.10.17.1
13. REFER TO NBC(AE) 9.7.2.2 FOR ADDITIONAL REQUIREMENTS FOR WINDOWS & DOORS.
14. ALL GLAZING SHOWN AS TRIPLE

DOOR SCHEDULE

TAG	TYPE	METRIC SIZE (mm)		IMPERIAL SIZE (FT'-IN")		FIRE RATING	COMMENTS
		WIDTH	HEIGHT	WIDTH	HEIGHT		
DA01	DOOR TYPE A	965	2349	3'-2"	7'-8 1/2"	N/A	DOOR VIEWER AS PER NBC(AE) 9.7.2.1
DA02	DOOR TYPE A	965	2349	3'-2"	7'-8 1/2"	3/4HR	DOOR VIEWER AS PER NBC(AE) 9.7.2.1 RATING AS PER NBC(AE)9.10.13.2.
DB01	DOOR TYPE B	914	2032	3'-0"	6'-8"	N/A	
DB02	DOOR TYPE B	813	2032	2'-8"	6'-8"	N/A	
DB03	DOOR TYPE B	711	2032	2'-4"	6'-8"	N/A	
DD01	DOOR TYPE D	1000	2032	3'-3 3/8"	6'-8"	N/A	
DD02	DOOR TYPE D	1400	2032	4'-7 1/8"	6'-8"	N/A	
DD03	DOOR TYPE D	1600	2032	5'-3"	6'-8"	N/A	
DD04	DOOR TYPE D	2000	2032	6'-6 3/4"	6'-8"	N/A	
DD05	DOOR TYPE D	1800	2032	5'-10 7/8"	6'-8"	N/A	

WINDOW SCHEDULE

TAG	TYPE	METRIC SIZE (mm)		IMPERIAL SIZE (ft'-in")		COMMENTS
		WIDTH	HEIGHT	WIDTH	HEIGHT	
WA01	WINDOW TYPE A	600	600	1'-11 5/8"	1'-11 5/8"	
WA03	WINDOW TYPE A	1200	2000	3'-11 1/4"	6'-6 3/4"	
WB01	WINDOW TYPE B	600	600	1'-11 5/8"	1'-11 5/8"	
WB02	WINDOW TYPE B	600	1200	1'-11 5/8"	3'-11 1/4"	EGRESS CLEARANCES AS PER NBC(AE) 9.9.10
WB03	WINDOW TYPE B	600	2000	1'-11 5/8"	6'-6 3/4"	
WC01	WINDOW TYPE C	600	1400	1'-11 5/8"	4'-7 1/8"	
WC02	WINDOW TYPE C	1200	1400	3'-11 1/4"	4'-7 1/8"	
WC03	WINDOW TYPE C	600	2000	1'-11 5/8"	6'-6 3/4"	
WC04	WINDOW TYPE C	600	500	1'-11 5/8"	1'-7 11/16"	
WC05	WINDOW TYPE B	600	1500	1'-11 5/8"	4'-11 1/16"	

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT
OR CONSTRUCTION

SHEET TITLE:

OPENINGS SCHEDULE

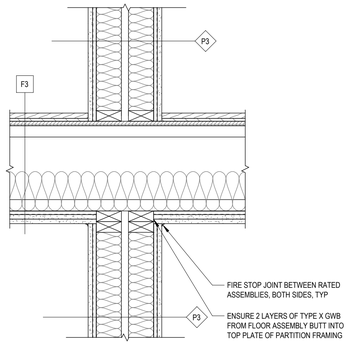
AB Sixplex 01

PROJECT NO: 241058

SCALE: 1 : 50

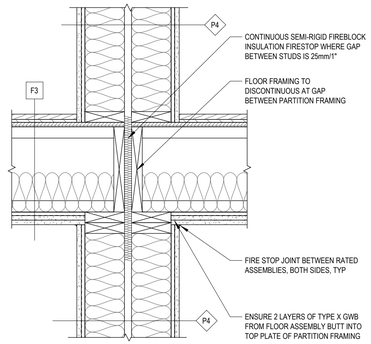
SHEET NO:

A004



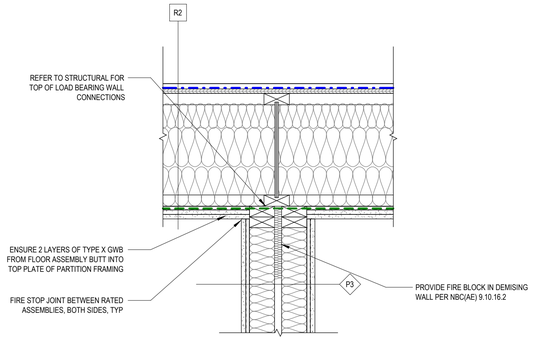
1 A005 SECTION - FIRE SEPARATION, NON-LOAD BEARING WALL TO FLOOR

1 : 10



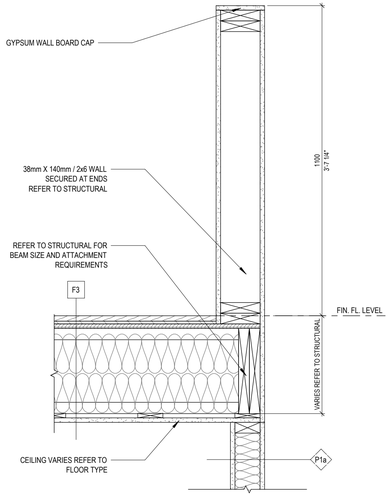
2 A005 SECTION - FIRE SEPARATION, LOAD BEARING WALL TO FLOOR

1 : 10



3 A005 SECTION - FIRE SEPARATION, LOAD BEARING WALL TO RATED ROOF

1 : 10



4 A005 SECTION - TYP. INTERIOR GUARD

1 : 10

5 A005 SECTION - FIRE SEPARATION, PARTITION & BULKHEAD TO FLOOR

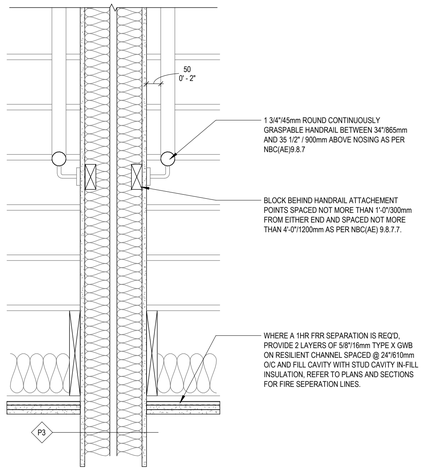
1 : 10

6 A005 SECTION - FIRE SEPARATION, RATED FLOOR, NON-LOAD BEARING PARTITION

1 : 10

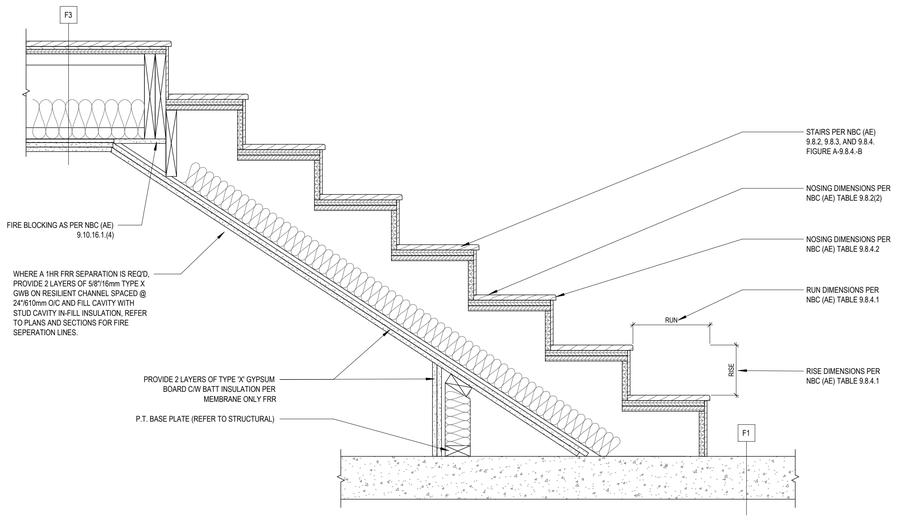
7 A005 SECTION - FIRE SEPARATION, LOAD BEARING WALL TO FLOOR @ STAIRWELL

1 : 10



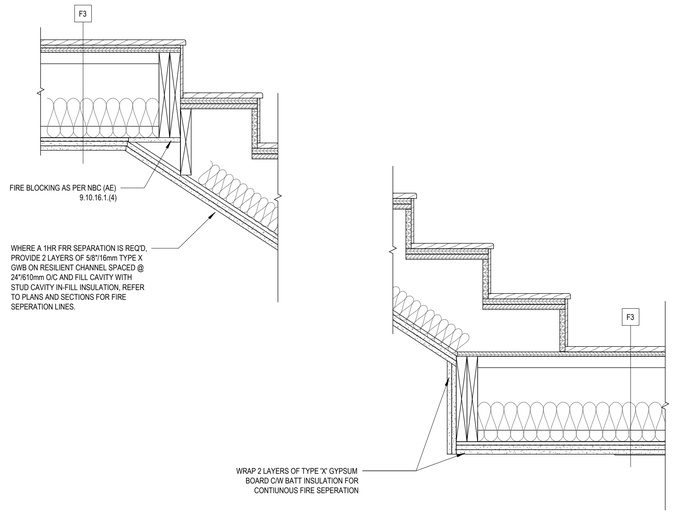
8 A005 SECTION - FIRE SEPARATION, STAIR 02

1 : 10



9 A005 SECTION - FIRE SEPARATION, STAIR

1 : 10



10 A005 SECTION - FIRE SEPARATION, UPPER STAIRS

1 : 10

NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

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SHEET TITLE:

FIRE RATING DETAILS

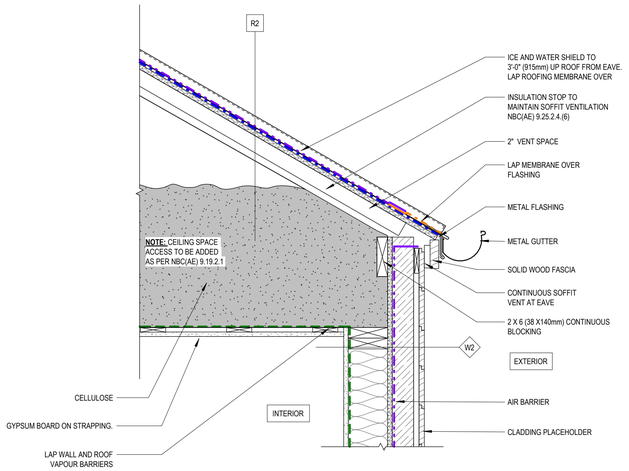
AB Sixplex 01

PROJECT NO: 241058

SCALE: 1 : 10

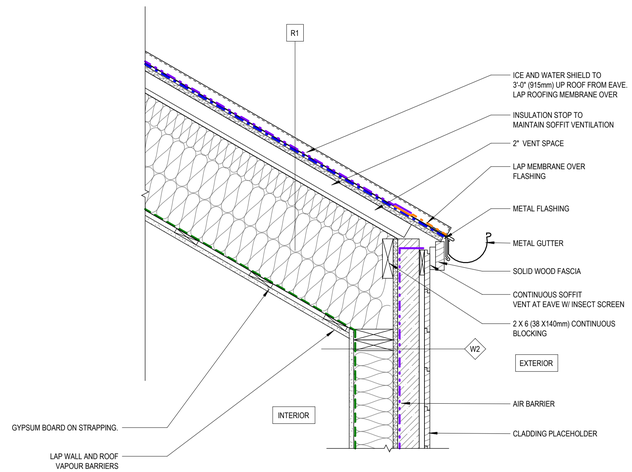
SHEET NO:

A005



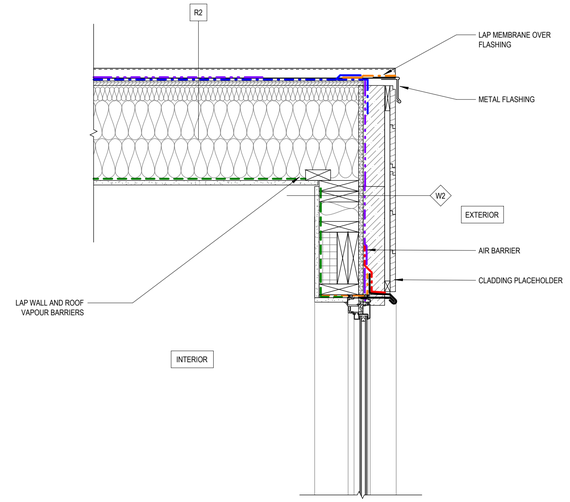
1 A006 SECTION DETAIL - TYP. R2 EAVE W/ GUTTER

1 : 10



2 A006 SECTION DETAIL - R2 TYP. EAVE W/ GUTTER

1 : 10



3 A006 SECTION DETAIL - ROOF RIDGE

1 : 10

CMHC SCHL

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MEMBRANE LEGEND

- AIR BARRIER, VAPOUR PERMEABLE
- AIR BARRIER, NON-VAPOUR PERMEABLE
- TRANSITION MEMBRANE
- THROUGH-WALL FLASHING
- VAPOUR CONTROL BARRIER
- FOUNDATION DAMP PROOFING
- PRE-FIN METAL FLASHING

INSULATION LEGEND

- MINERAL WOOL, SEMI-RIGID
- EXTRUDED POLYSTYRENE
- EXPANDED POLYISOCYANURATE
- SPRAY FOAM
- MINERAL WOOL, BATT

NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

TYP. DETAILS

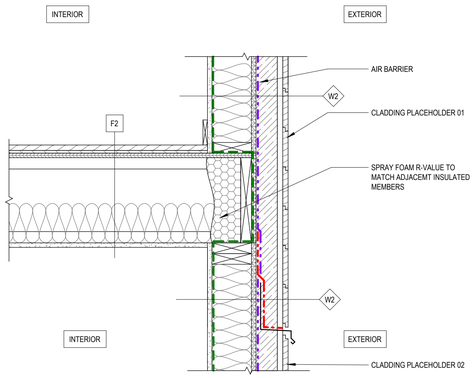
AB Sixplex 01

PROJECT NO: 241058

SCALE: As indicated

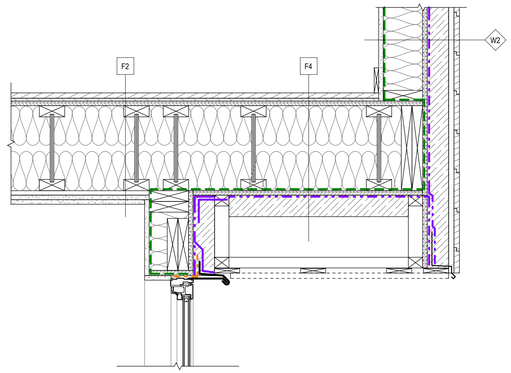
SHEET NO:

A006



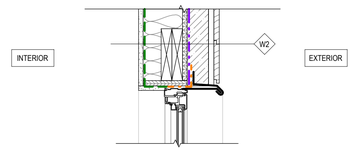
1 A007 SECTION - TYP. THRU WALL FLASHING AT FLOOR

1 : 10



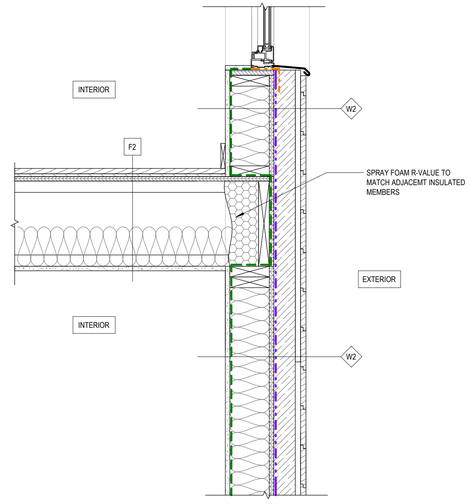
2 A007 SECTION - TYP. WINDOW SOFFIT DETAIL

1 : 10



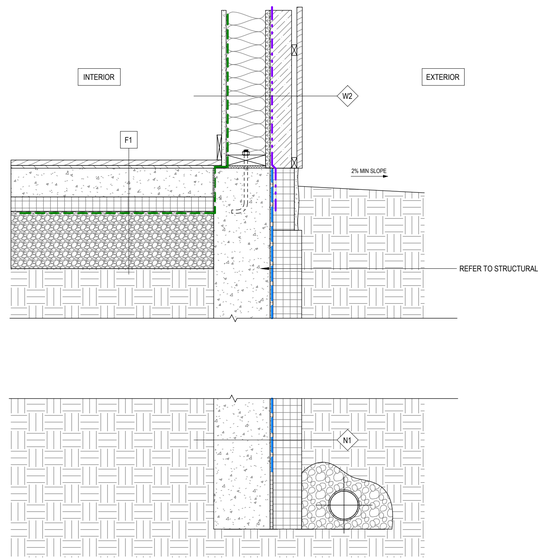
3 A007 SECTION DETAIL - TYP. EAVE & WINDOW HEAD

1 : 10



4 A007 SECTION DETAIL - TYP. FLOOR TO WALL & WINDOW SILL

1 : 10



5 A007 SECTION DETAIL - TYP. FOUNDATION DETAIL

1 : 10

CMHC SCHL

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MEMBRANE LEGEND

- AIR BARRIER, VAPOUR PERMEABLE
- AIR BARRIER, NON-VAPOUR PERMEABLE
- TRANSITION MEMBRANE
- THROUGH-WALL FLASHING
- VAPOUR CONTROL BARRIER
- FOUNDATION DAMP PROOFING
- PRE-FIN METAL FLASHING

INSULATION LEGEND

- MINERAL WOOL, SEMI-RIGID
- EXTRUDED POLYSTYRENE
- EXPANDED POLYISOCYANURATE
- SPRAY FOAM
- MINERAL WOOL, BATT

NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

TYP. DETAILS

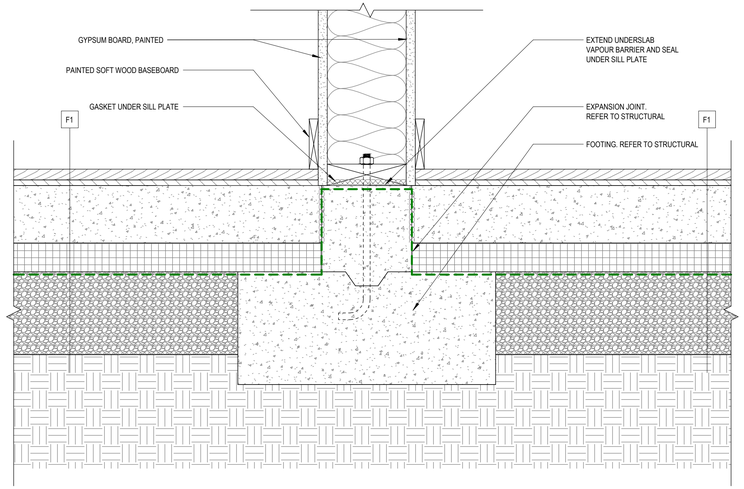
AB Sixplex 01

PROJECT NO: 241058

SCALE: As indicated

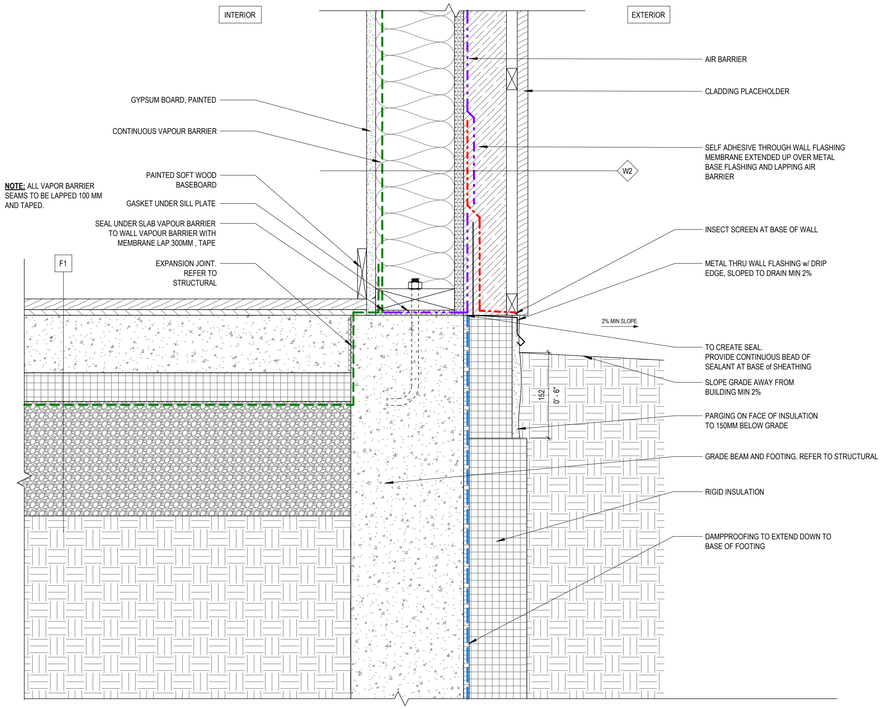
SHEET NO:

A007



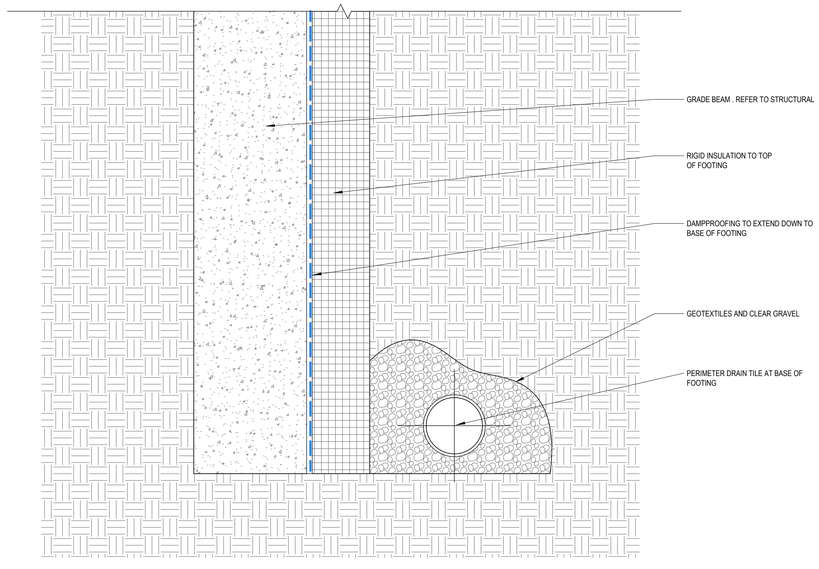
1 A008 SECTION DETAIL - TYP. STRIP FOOTING

1 : 5



2 A008 SECTION DETAIL - SECTION - TYP. FOOTING

1 : 5



3 A008 SECTION DETAIL - SECTION - TYP. WALL TO FOUNDATION

1 : 5

CMHC SCHL

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MEMBRANE LEGEND

- AIR BARRIER, VAPOUR PERMEABLE
- AIR BARRIER, NON-VAPOUR PERMEABLE
- TRANSITION MEMBRANE
- THROUGH-WALL FLASHING
- VAPOUR CONTROL BARRIER
- FOUNDATION DAMP PROOFING
- PRE-FIN METAL FLASHING

INSULATION LEGEND

- MINERAL WOOL, SEMI-RIGID
- EXTRUDED POLYSTYRENE
- EXPANDED POLYISOCYANURATE
- SPRAY FOAM
- MINERAL WOOL, BATT

1	2025-02-21	Issued as Prototypical Drawing

NO.	DATE	DESCRIPTION

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

TYP. DETAILS

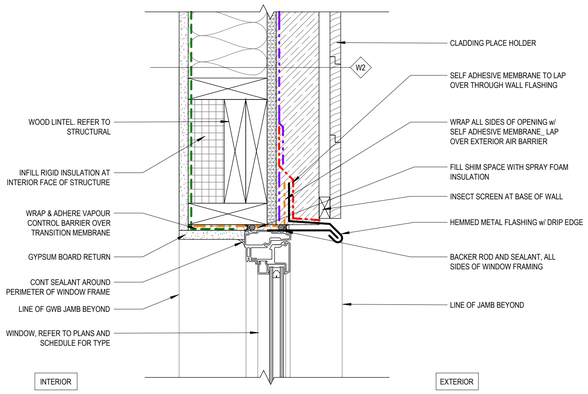
AB Sixplex 01

PROJECT NO: 241058

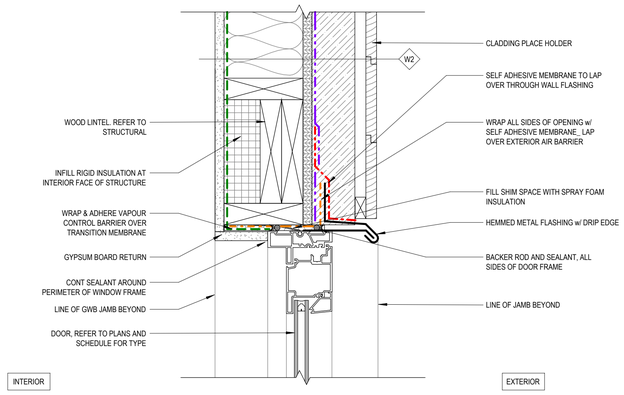
SCALE: As indicated

SHEET NO:

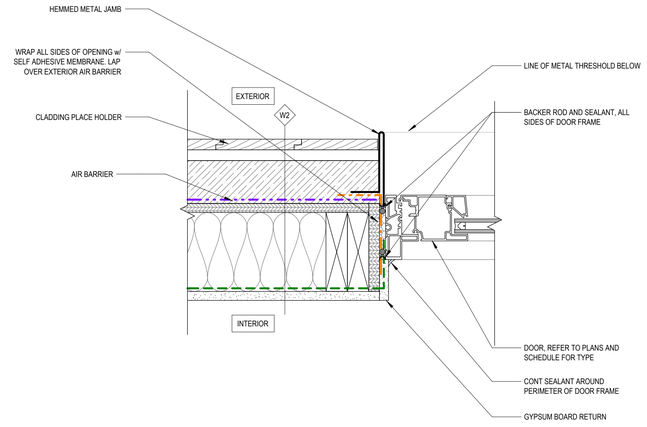
A008



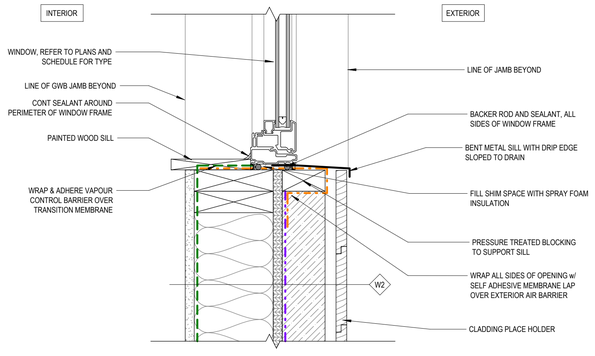
1 A009 SECTION DETAIL - TYP. WINDOW HEAD
1 : 5



2 A009 SECTION DETAIL - TYP. EXT. DOOR HEAD
1 : 5



3 A009 PLAN - TYP. EXTERIOR DOOR JAMB
1 : 5



4 A009 SECTION DETAIL - TYP. WINDOW SILL
1 : 5

5 A009 SECTION DETAIL - TYP. EXT. DOOR THRESHOLD
1 : 5

6 A009 PLAN - TYP. WINDOW JAMB
1 : 5

CMHC SCHL

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MEMBRANE LEGEND

- AIR BARRIER, VAPOUR PERMEABLE
- AIR BARRIER, NON-VAPOUR PERMEABLE
- TRANSITION MEMBRANE
- THROUGH-WALL FLASHING
- VAPOUR CONTROL BARRIER
- FOUNDATION DAMP PROOFING
- PRE-FIN METAL FLASHING

INSULATION LEGEND

- MINERAL WOOL, SEMI-RIGID
- EXTRUDED POLYSTYRENE
- EXPANDED POLYISOCYANURATE
- SPRAY FOAM
- MINERAL WOOL, BATT

NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

TYP. DETAILS

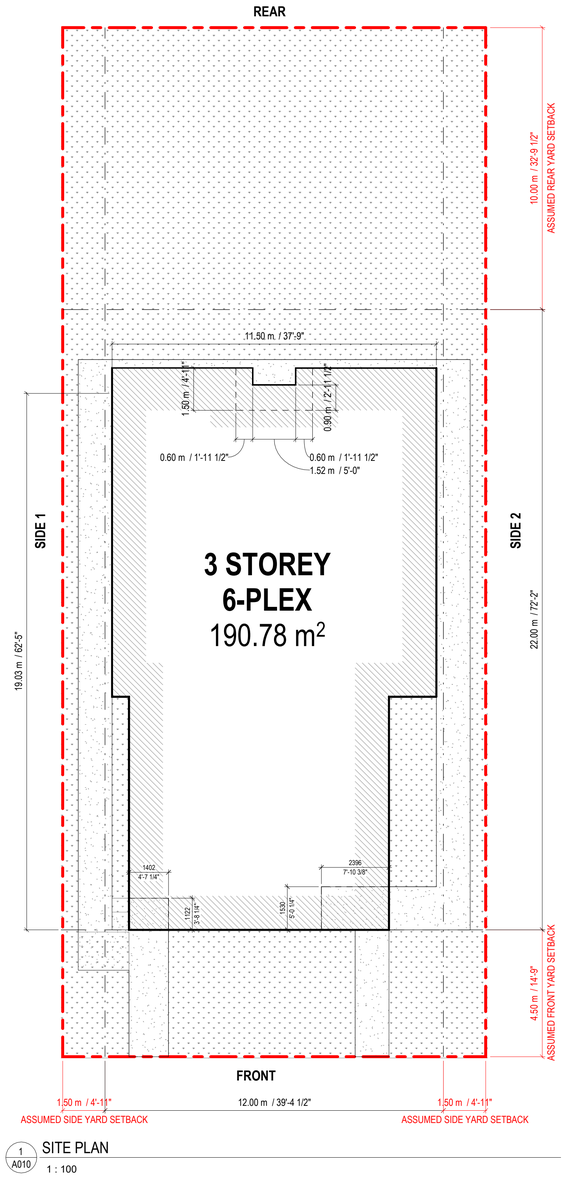
AB Sixplex 01

PROJECT NO: 241058

SCALE: As indicated

SHEET NO:

A009



1 A010 SITE PLAN

1 : 100

SITE DATA

ADDRESS	N/A
LOT & PLAN NO.	N/A
ZONING	N/A
	EXISTING
LOT AREA	547.50 m²
BUILDING AREA	209.38 m²
COVERAGE	38.2%
LANDSCAPED OPEN SPACE	338.12 m²
SOFTSCAPE AREA	270.5m² (49.4%)
HARDSCAPE AREA	72.1 m² (13.2%)
PARKING SPOTS	-
SETBACKS	REQUIRED
FRONT	ASSUMED 4.50 m
SIDE	ASSUMED 1.50 m
REAR	ASSUMED 10.00 m
SIDE	ASSUMED 1.50 m
BUILDING DEPTH	19.03M

SITE PLAN GENERAL NOTES

1. SITE DESIGN TO CONFORM TO FIREFIGHTING ACCESS REQUIREMENTS AS PER NBC(AE) 9.10.20.3.
2. GRADE TO BE SLOPED AWAY FROM BUILDING AS PER NBC(AE) 9.14.6.1
3. DOWNSPOUT TO CONFORM TO NBC(AE) 9.26.18.2.
4. SITE DESIGN TO CONFORM TO BARRIER FREE REQUIREMENTS AS PER NBC(AE) 3.8.1.1. FOR ACCESS TO BARRIER FREE UNITS
5. ENTRANCE TO BARRIER FREE UNIT TO CONFORM TO NBC(AE) 3.8.1.2. AND NBC(AE) 3.8.3.3.
6. EXTERIOR WALKS THAT FORM PART OF A BARRIER-FREE PATH OF TRAVEL TO CONFORM FOR NBC(AE) 3.8.3.2.
7. SITE DESIGN TO CONFORM TO CSA/ASC B651 FOR ACCESS TO CSA/ASC B652 ENHANCED ACCESSIBILITY UNITS

SITE LEGEND

- ASSUMED PROPERTY LINE
- SETBACK
- BUILDING
- SOFTSCAPE
- HARDSCAPE

ALBERTA BUILDING CODE DATA MATRIX

PART 9 - HOUSING AND SMALL BUILDINGS

								NBC(AE) REFERENCE
BUILDING CODE VERSION	NATIONAL BUILDING CODE 2023 ALBERTA EDITION			ELEVENTH EDITION 2023				
PROJECT TYPE	NEW CONSTRUCTION RESIDENTIAL OCCUPANCY							[A] 1.3.3.3.
MAJOR OCCUPANCY CLASSIFICATION	**GROUP / DIVISION:**	**DESCRIPTION:**		**USE:**				9.10.2.
	C	2 STOREY 4 DWELLING BUILDING		RESIDENTIAL				
SUPERIMPOSED MAJOR OCCUPANCIES	NO							9.10.2.3.
BUILDING AREA (m²)	**DESCRIPTION:**			**TOTAL (m²):**				[A] 1.4.1.2.
	NEW CONSTRUCTION			209.38				
GROSS AREA (m²)	**FLOOR LEVEL:**	**DESCRIPTION:**		**TOTAL (m²):**				[A] 1.4.1.2.
	GROUND FLOOR	3 RESIDENTIAL UNITS		193.43				
	SECOND FLOOR	3 RESIDENTIAL UNITS		209.38				
	THIRD FLOOR	2 RESIDENTIAL UNIT		89.24				
	TOTAL (m²):			492.05				
BUILDING HEIGHT	3	STOREYS ABOVE GRADE		11.101 m ABOVE AVERAGE GRADE				[A] 1.4.1.2. AND 9.10.4.
	0	STOREYS BELOW GRADE						
***NUMBER OF STREETS**	TBC							9.10.20
SPRINKLER SYSTEM	NOT REQUIRED	PROVIDED: N/A						9.10.8.2.
FIRE ALARM SYSTEM	NOT REQUIRED	TYPE PROVIDED: N/A						9.10.18
***WATER SUPPLY IS ADEQUATE**								
CONSTRUCTION TYPE	**PERMITTED:**	COMBUSTIBLE		**CONSTRUCTION: NEW CONSTRUCTION**				9.10.6
	PROPOSED:	COMBUSTIBLE		SLAB ON GRADE. WOOD FRAMED CONSTRUCTION				
POST-DISASTER BUILDING	NO							[A] 1.3.3.3.
OCCUPANT LOAD	**FLOOR LEVEL:**	**UNIT #**	**OCCUPANCY TYPE:**	**BASED ON:**	**OCCUPANT LOAD (PERSONS):**			3.1.17(1)b AND 9.9.1.3.(2)
	GROUND FLOOR	UNIT 1	RESIDENTIAL	2 SLEEPING ROOMS	4			
	GROUND FLOOR	UNIT 1 - ALT	RESIDENTIAL	1 SLEEPING ROOMS	2			
	GROUND FLOOR	UNIT 3	RESIDENTIAL	1 SLEEPING ROOMS	2			
	GROUND FLOOR	UNIT 4	RESIDENTIAL	1 SLEEPING ROOMS	2			
	SECOND FLOOR	UNIT 2	RESIDENTIAL	2 SLEEPING ROOMS	4			
	SECOND FLOOR	UNIT 5	RESIDENTIAL	1 SLEEPING ROOM	2			
	SECOND FLOOR	UNIT 6	RESIDENTIAL	1 SLEEPING ROOM	2			
	THIRD FLOOR	UNIT 5	RESIDENTIAL	2 SLEEPING ROOM	4			
	THIRD FLOOR	UNIT 6	RESIDENTIAL	2 SLEEPING ROOM	4			
BARRIER-FREE DESIGN	REQUIRED							9.5.2.
HAZARDOUS SUBSTANCES	NO							9.10.1.3.(4)
REQUIRED FIRE RESISTANCE RATINGS	**HORIZONTAL ASSEMBLY:**		**RATING:**	**SUPPORTING ASSEMBLY:**				9.10.8. AND 9.10.9.16 (3)
	FLOORS EXCEPT CRAWLSPACE:		1 HR	1 HR				
***SPATIAL SEPARATION**	**WALL:**	**EBF AREA (m²):**	**LD (m):**	**% OPENINGS MAX**	**% PROVIDED**	**RATING:**	**CONSTRUCTION TYPE:**	**CLADDING TYPE:** 9.10.15.
	FRONT (SOUTH)	60.5	4.50	8.0%	7.8%	N/A	TBC	TBC
	REAR (NORTH)	35.9	6.00	80.0%	23.4%	N/A	TBC	TBC
	SIDE 1 (EAST)	102.5	1.50	8.0%	2.7%	1 HR	TBC	TBC
	SIDE 2 (WEST)	101.4	1.50	8.0%	3.9%	1 HR	TBC	TBC
	UNIT 2 IS A SECONDARY SUITE TO UNIT 1, UNIT 5 IS SECONDARY SUITE TO UNIT 3, AND UNIT 6 IS SECONDARY SUITE TO UNIT 4							
PLUMBING FIXTURE REQUIREMENTS	A KITCHEN SINK, LAVATORY, BATHTUB OR SHOWER SHALL BE PROVIDED FOR EVERY DWELLING UNIT							9.31.
NOTES	01 ALL REFERENCES ARE TO DIVISION B OF THE NATIONAL BUILDING CODE UNLESS PRECEDED BY [A] FOR DIVISION A .							

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

SITE PLAN & CODE MATRIX

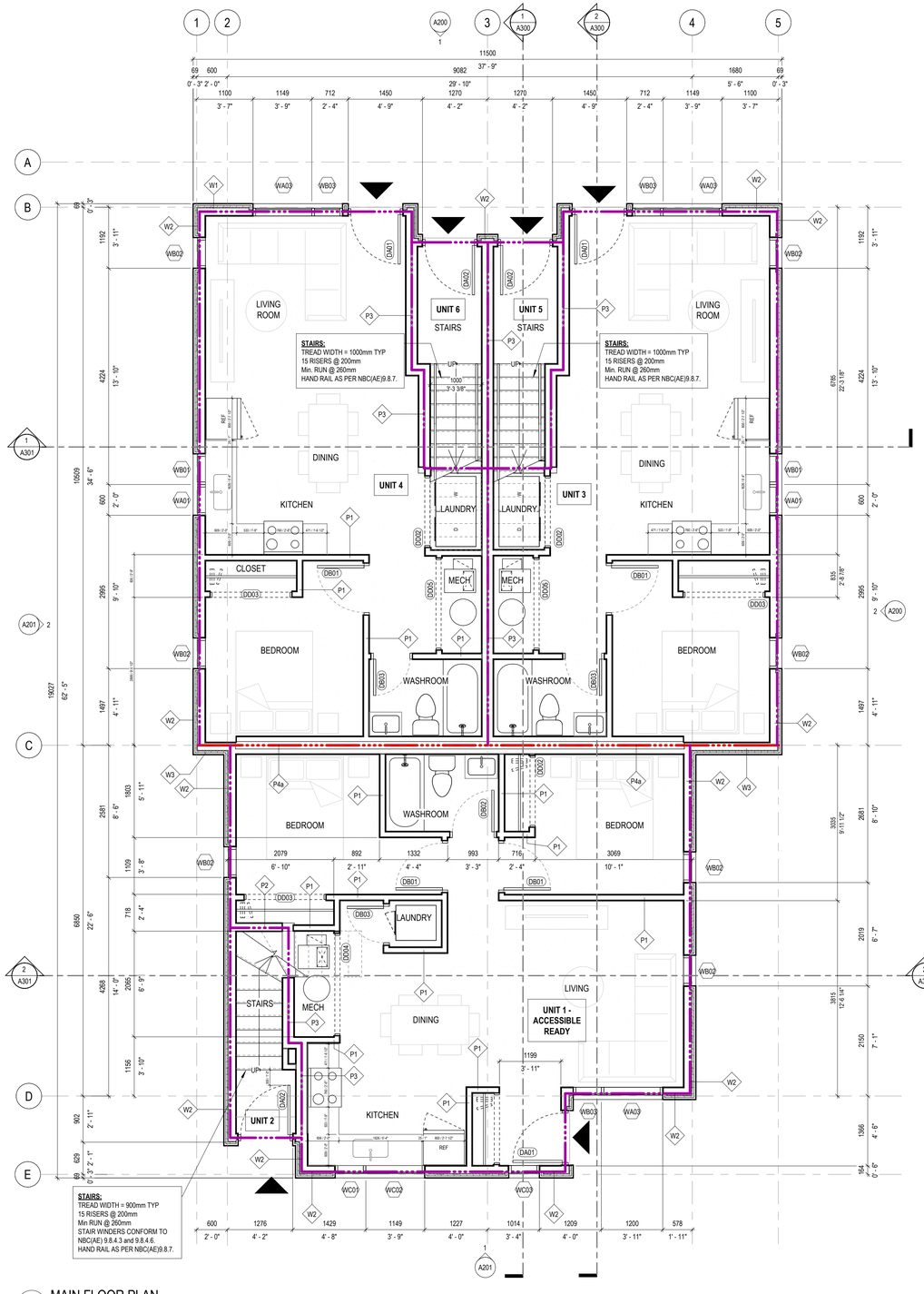
AB Sixplex 01

PROJECT NO: 241058

SCALE: As indicated

SHEET NO:

A010



1 A101 MAIN FLOOR PLAN

1 : 50

FLOOR PLAN GENERAL NOTES

1. ALL DIMENSIONS ARE TAKEN TO THE FINISH FACE OF THE INTERIOR PARTITIONS AND EXTERIOR WALLS, UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS AT EXTERIOR WINDOWS AND DOORS ARE TAKEN TO THE OUTSIDE EDGE OF THE FRAME, UNLESS NOTED OTHERWISE.
3. LOCATE ROUGH OPENINGS OF INTERIOR DOORS 100mm FROM INSIDE FACE IF INTERSECTING PARTITION, UNLESS NOTED OTHERWISE.
4. CLOSET DOORS TO BE CENTERED ALONG INTERIOR CLOSET WIDTH, UNLESS NOTED OTHERWISE.
5. ALL DROPPED CEILINGS AND BULKHEADS FOR MECHANICAL TO PROVIDE MIN 2100mm CLEAR BELOW .
6. MIN CEILING HEIGHTS AS PER ABC TABLE 9.5.3.1
   BATHROOMS & HALLWAYS=2100mm
   BEDROOM = 2100mm
   LIVING/DINING/KITCHEN = 2100mm
7. REFER TO LANDSCAPE DOCUMENTS FOR EXTERIOR HARDSCAPE AND PLANTING ELEMENTS, AND PAVING TERMINATION DETAILS ADJACENT TO THE BUILDING.

FIRE SEPARATION LEGEND

	1 HOUR F.R.R.
	2 HOUR F.R.R.

FLOOR PLAN LEGEND

	FLOOR MOUNTED TOILET
	PRE-FAB TUB
	KITCHEN SINK
	WASHROOM SINK
	WASHER
	DRYER
	DOMESTIC HOT WATER
	AIR HANDLER
	RANGE, TYPICAL
	REFRIGERATOR
	CLOSET COAT ROD

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

MAIN FLOOR PLAN - ACCESSIBLE READY

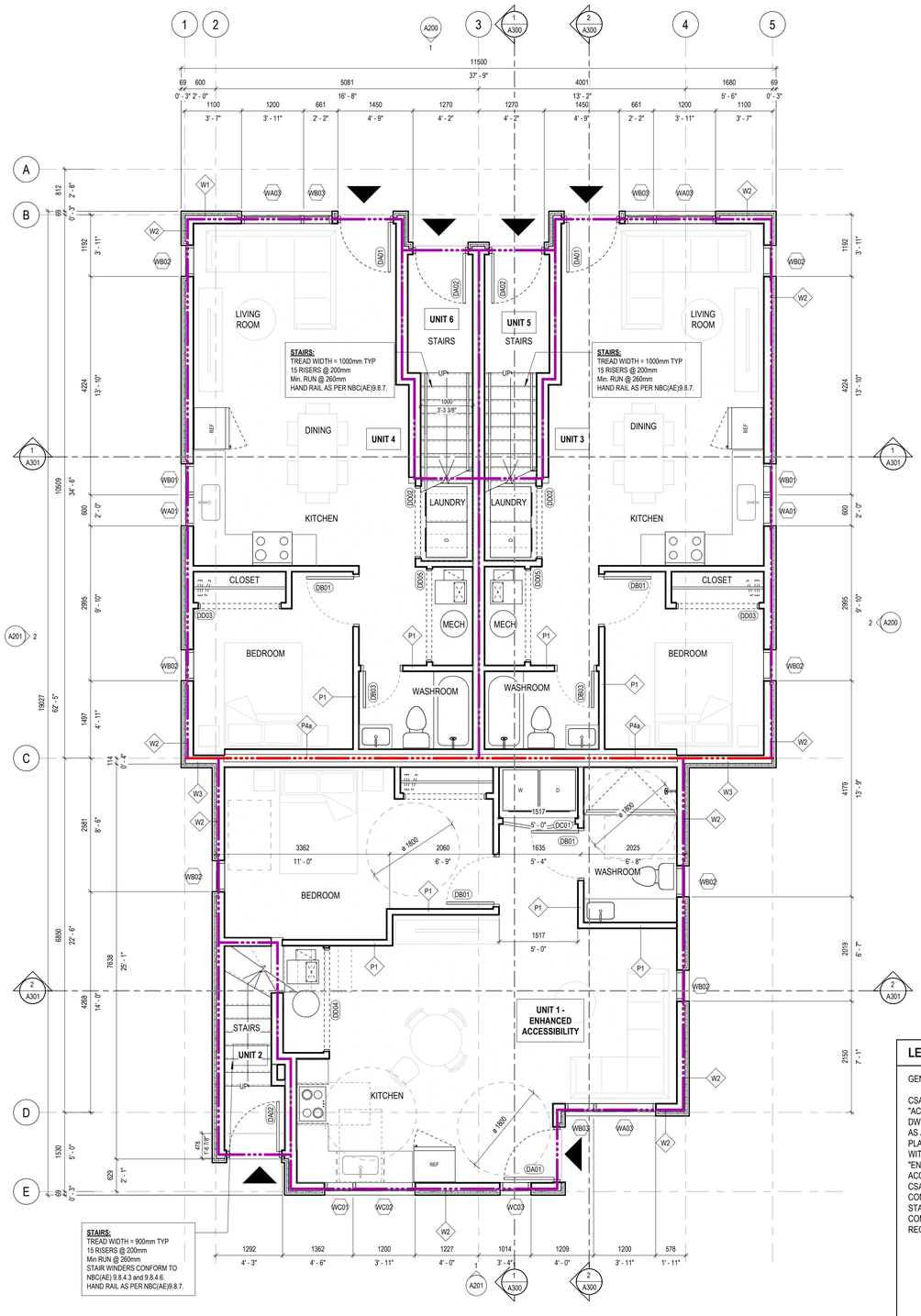
AB Sixplex 01

PROJECT NO: 241058

SCALE: 1 : 50

SHEET NO:

A101



1 A101a MAIN FLOOR PLAN - ENHANCED ACCESSIBILITY

1 : 50

FLOOR PLAN GENERAL NOTES

1. ALL DIMENSIONS ARE TAKEN TO THE FINISH FACE OF THE INTERIOR PARTITIONS AND EXTERIOR WALLS, UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS AT EXTERIOR WINDOWS AND DOORS ARE TAKEN TO THE OUTSIDE EDGE OF THE FRAME, UNLESS NOTED OTHERWISE.
3. LOCATE ROUGH OPENINGS OF INTERIOR DOORS 100mm FROM INSIDE FACE IF INTERSECTING PARTITION, UNLESS NOTED OTHERWISE.
4. CLOSET DOORS TO BE CENTERED ALONG INTERIOR CLOSET WIDTH, UNLESS NOTED OTHERWISE.
5. ALL DROPPED CEILINGS AND BULKHEADS FOR MECHANICAL TO PROVIDE MIN 2100mm CLEAR BELOW .
6. MIN CEILING HEIGHTS AS PER ABC TABLE 9.5.3.1
   BATHROOMS & HALLWAYS=2100mm
   BEDROOM = 2100mm
   LIVING/DINING/KITCHEN = 2100mm
7. REFER TO LANDSCAPE DOCUMENTS FOR EXTERIOR HARDSCAPE AND PLANTING ELEMENTS, AND PAVING TERMINATION DETAILS ADJACENT TO THE BUILDING.

FIRE SEPARATION LEGEND

	1 HOUR F.R.R.
	2 HOUR F.R.R.

FLOOR PLAN LEGEND

	FLOOR MOUNTED TOILET
	PRE-FAB TUB
	KITCHEN SINK
	WASHROOM SINK
	WASHER
	DRYER
	DOMESTIC HOT WATER
	AIR HANDLER
	RANGE, TYPICAL
	REFRIGERATOR
	CLOSET COAT ROD

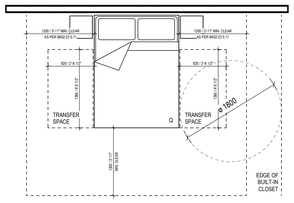
DOOR SCHEDULE - ENHANCED ACCESS

TAG	TYPE	METRIC SIZE (mm)		IMPERIAL SIZE (FT'-IN")		FIRE RATING	COMMENTS
		WIDTH	HEIGHT	WIDTH	HEIGHT		
DA01	DOOR TYPE A	965	2349	3'-2"	7'-8 1/2"	N/A	DOOR VIEWER AS PER NBC(AE) 9.7.2.1
DA02	DOOR TYPE A	965	2349	3'-2"	7'-8 1/2"	3/4HR	DOOR VIEWER AS PER NBC(AE) 9.7.2.1 RATING AS PER NBC(AE)9.10.13.2.
DB01	DOOR TYPE B	914	2032	3'-0"	6'-8"	N/A	
DB02	DOOR TYPE B	813	2032	2'-8"	6'-8"	N/A	
DB03	DOOR TYPE B	711	2032	2'-4"	6'-8"	N/A	
DC01	DOOR TYPE C	1400	2000	4'-7 1/8"	6'-6 3/4"	N/A	
DD01	DOOR TYPE D	1000	2032	3'-3 3/8"	6'-8"	N/A	
DD02	DOOR TYPE D	1400	2032	4'-7 1/8"	6'-8"	N/A	
DD03	DOOR TYPE D	1600	2032	5'-3"	6'-8"	N/A	
DD04	DOOR TYPE D	2000	2032	6'-6 3/4"	6'-8"	N/A	
DD05	DOOR TYPE D	1800	2032	5'-10 7/8"	6'-8"	N/A	

BEDROOMS (B652:23 5.11)

REFER TO B652:23 5.11 BEDROOMS FOR ADDITIONAL REQUIREMENTS:

1. CLEAR SPACE AND TRANSFER SPACES AROUND BED
2. ELECTRICAL REQUIREMENTS IN BEDROOMS



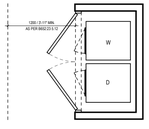
THE BED SHALL HAVE A 1200mm ACCESSIBLE PATH ON THREE SIDES AND PROVIDE A TURNING RADIUS OF 1800mm WHERE A BEDROOM CONTAINS A BUILT-IN CLOSET

LAUNDRY (B652:23 5.12)

REFER TO B652:23 5.12 LAUNDRY FOR ADDITIONAL REQUIREMENTS:

1. APPLIANCE REQUIREMENTS
2. CLOSET DOORS SHALL ALLOW FULL ACCESS TO SIDE-BY-SIDE UNITS
3. STORAGE AND ACCESSORY REQUIREMENTS

WASHER AND DRYER



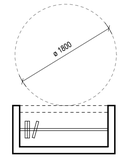
WASHER AND DRYER AS PER B652:23 5.12 KITCHENS

CLEAR SPACE AS PER B652:23 5.12 LAUNDRY

CLOSETS (B652:23 5.13)

REFER TO B652:23 5.13 CLOSETS FOR ADDITIONAL REQUIREMENTS:

1. SHELVES, HANGING ROD HEIGHTS AND STORAGE REQUIREMENTS



1800mm MIN. TURNING RADIUS IN FRONT OF BEDROOM CLOSET AS PER B652:23 5.11 BEDROOMS

LEGEND

GENERAL NOTE:

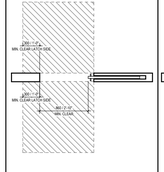
CSA/ASC B652:23 - "ACCESSIBLE DWELLINGS," WAS USED AS A GUIDE FOR SPACE PLANNING PURPOSES WITHIN UNIT(S) LABELED "ENHANCED ACCESSIBILITY - CSA/ASC B652". CONSULT THE STANDARD FOR A COMPLETE SET OF REQUIREMENTS.

DOORS AND DOORWAYS (B652:23 5.7)

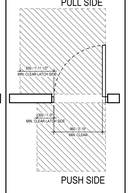
REFER TO B652:23 5.7 DOORS AND DOORWAYS FOR ADDITIONAL REQUIREMENTS:

1. DOOR WIDTH AND CLEARANCE REQUIREMENTS
2. POWER DOOR OPERATOR REQUIREMENTS

SLIDING DOOR



SWINGING DOOR

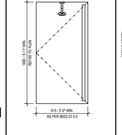


BATHROOMS (B652:23 5.9)

REFER TO B652:23 5.9 BATHROOM(S) FOR ADDITIONAL REQUIREMENTS:

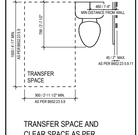
1. WALL REINFORCING BACKING AND GRAB BARS
2. VANITY AND ACCESSORY REQUIREMENTS
3. WASHROOM ILLUMINATION REQUIREMENTS

ROLL-IN SHOWER



WHEN SHOWER IS USED AS PART OF THE TURNING RADIUS, THE SHOWER TO REMAIN UNOBSTRUCTED, HAVE A SLOPE LESS THAN 2% AND BE CONSTRUCTED AS A WET ROOM.

TOILET



TRANSFER SPACE AND CLEAR SPACE AS PER B652:23 5.9

BLOCKING BESIDE TOILET FOR GRAB BAR AS PER B652:23 5.9

GRAB RAILS AS PER B652:23 5.9.11 GRAB BARS

BATHROOM SINK

WASHROOM SINK AS PER B652:23 5.9 BATHROOM(S)

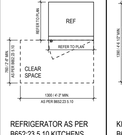
CLEAR SPACE BELOW AS PER B652:23 5.9 BATHROOM(S)

KITCHEN (B652:23 5.10)

REFER TO B652:23 5.10 KITCHENS FOR ADDITIONAL REQUIREMENTS:

1. MIN. REQ COUNTER SPACE BETWEEN COOKTOP AND SINK NOT LESS THAN 820mm
2. ADDITIONAL KITCHEN FIXTURE AND APPLIANCE REQUIREMENTS
3. ELECTRICAL REQUIREMENTS IN KITCHEN
4. ADDITIONAL CABINETRY AND SPACE PLANNING REQUIREMENTS

REFRIGERATOR



REFRIGERATOR AS PER B652:23 5.10 KITCHENS

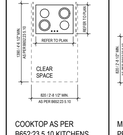
CLEAR SPACE IN FRONT AS PER B652:23 5.10 KITCHENS

KITCHEN SINK

KITCHEN SINK AS PER B652:23 5.10 KITCHENS

CLEAR SPACE BELOW AS PER B652:23 5.10 KITCHENS

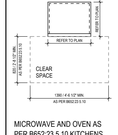
COOKTOP



COOKTOP AS PER B652:23 5.10 KITCHENS

CLEAR SPACE BELOW AS PER B652:23 5.10 KITCHENS

MICROWAVE



MICROWAVE AND OVEN AS PER B652:23 5.10 KITCHENS

CLEAR SPACE IN FRONT AS PER B652:23 5.10 KITCHENS

NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

MAIN FLOOR PLAN - ENHANCED ACCESSIBILITY

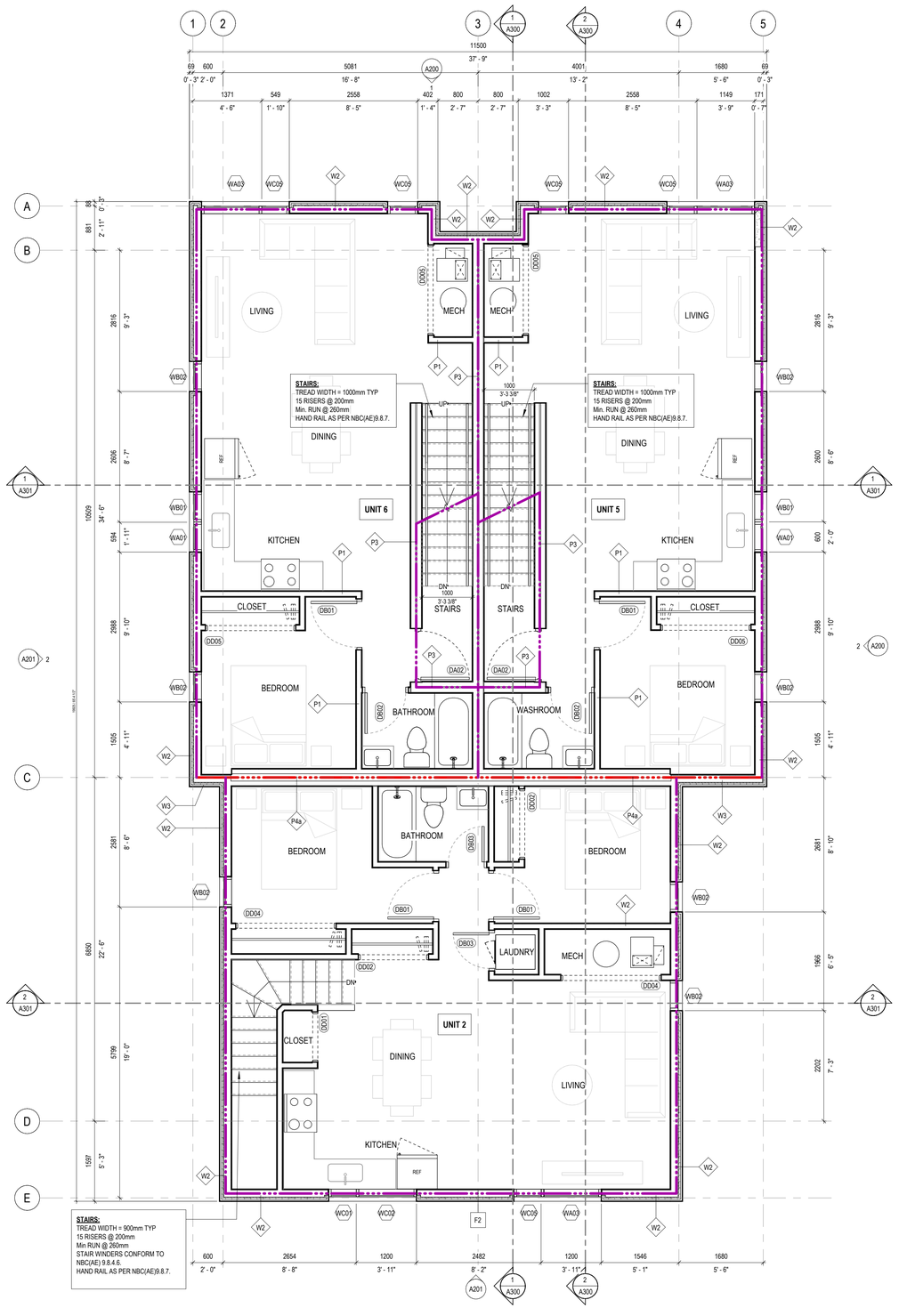
AB Sixplex 01

PROJECT NO: 241058

SCALE: 1 : 50

SHEET NO:

A101a



1 SECOND FLOOR PLAN
A102
1 : 50

FLOOR PLAN GENERAL NOTES

1. ALL DIMENSIONS ARE TAKEN TO THE FINISH FACE OF THE INTERIOR PARTITIONS AND EXTERIOR WALLS, UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS AT EXTERIOR WINDOWS AND DOORS ARE TAKEN TO THE OUTSIDE EDGE OF THE FRAME, UNLESS NOTED OTHERWISE.
3. LOCATE ROUGH OPENINGS OF INTERIOR DOORS 100mm FROM INSIDE FACE IF INTERSECTING PARTITION, UNLESS NOTED OTHERWISE.
4. CLOSET DOORS TO BE CENTERED ALONG INTERIOR CLOSET WIDTH, UNLESS NOTED OTHERWISE.
5. ALL DROPPED CEILINGS AND BULKHEADS FOR MECHANICAL TO PROVIDE MIN 2100mm CLEAR BELOW .
6. MIN CEILING HEIGHTS AS PER ABC TABLE 9.5.3.1
   BATHROOMS & HALLWAYS=2100mm
   BEDROOM = 2100mm
   LIVING/DINING/KITCHEN = 2100mm
7. REFER TO LANDSCAPE DOCUMENTS FOR EXTERIOR HARDSCAPE AND PLANTING ELEMENTS, AND PAVING TERMINATION DETAILS ADJACENT TO THE BUILDING.

FIRE SEPARATION LEGEND

	1 HOUR F.R.R.
	2 HOUR F.R.R.

FLOOR PLAN LEGEND

	FLOOR MOUNTED TOILET
	PRE-FAB TUB
	KITCHEN SINK
	WASHROOM SINK
W	WASHER
D	DRYER
	DOMESTIC HOT WATER
	AIR HANDLER
	RANGE, TYPICAL
REF	REFRIGERATOR
	CLOSET COAT ROD

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT
OR CONSTRUCTION

SHEET TITLE:

SECOND FLOOR PLAN

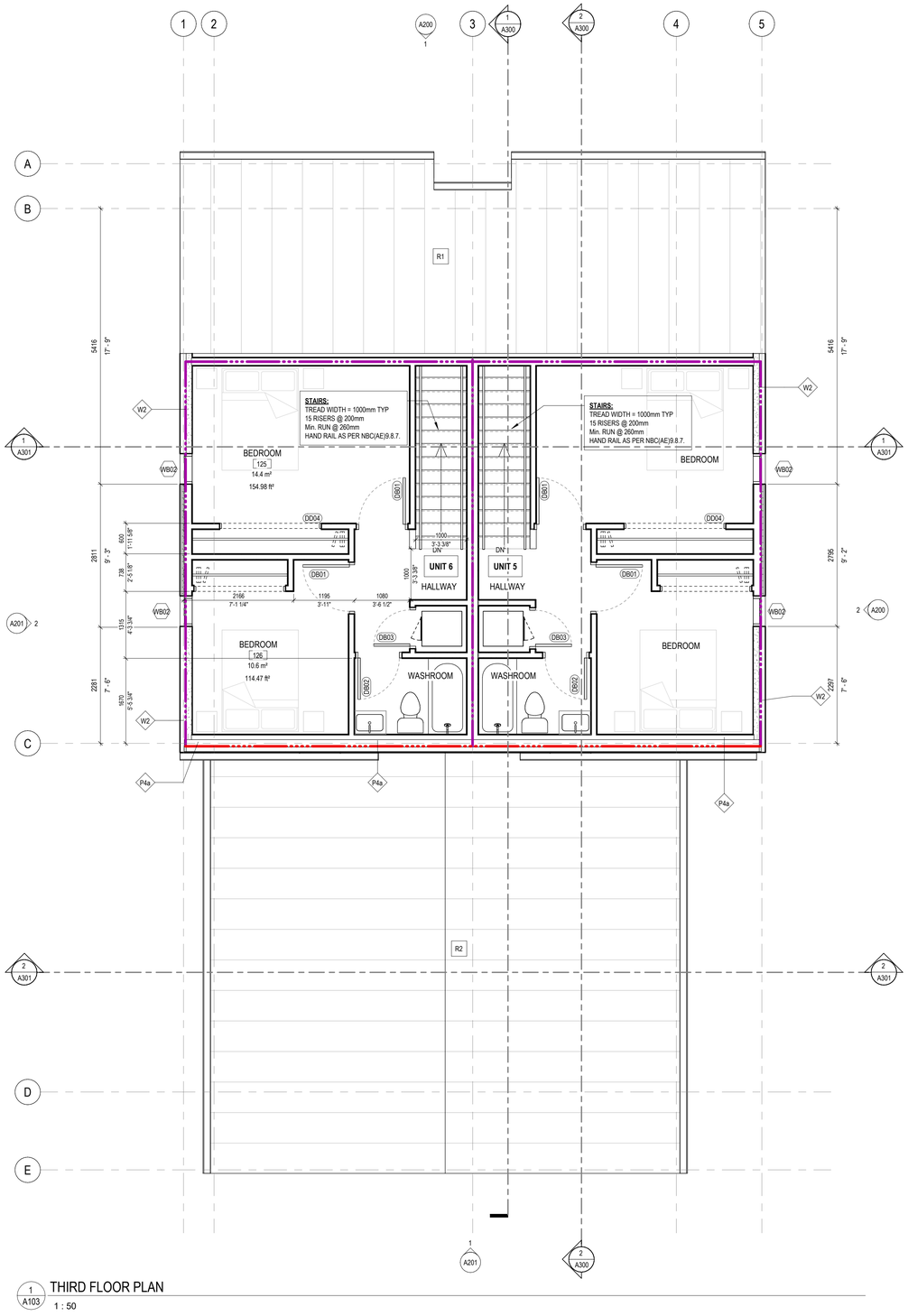
AB Sixplex 01

PROJECT NO: 241058

SCALE: 1 : 50

SHEET NO:

A102



FLOOR PLAN GENERAL NOTES

1. ALL DIMENSIONS ARE TAKEN TO THE FINISH FACE OF THE INTERIOR PARTITIONS AND EXTERIOR WALLS, UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS AT EXTERIOR WINDOWS AND DOORS ARE TAKEN TO THE OUTSIDE EDGE OF THE FRAME, UNLESS NOTED OTHERWISE.
3. LOCATE ROUGH OPENINGS OF INTERIOR DOORS 100mm FROM INSIDE FACE IF INTERSECTING PARTITION, UNLESS NOTED OTHERWISE.
4. CLOSET DOORS TO BE CENTERED ALONG INTERIOR CLOSET WIDTH, UNLESS NOTED OTHERWISE.
5. ALL DROPPED CEILINGS AND BULKHEADS FOR MECHANICAL TO PROVIDE MIN 2100mm CLEAR BELOW .
6. MIN CEILING HEIGHTS AS PER ABC TABLE 9.5.3.1
   BATHROOMS & HALLWAYS=2100mm
   BEDROOM = 2100mm
   LIVING/DINING/KITCHEN = 2100mm
7. REFER TO LANDSCAPE DOCUMENTS FOR EXTERIOR HARDSCAPE AND PLANTING ELEMENTS, AND PAVING TERMINATION DETAILS ADJACENT TO THE BUILDING.

FIRE SEPARATION LEGEND

	1 HOUR F.R.R.
	2 HOUR F.R.R.

FLOOR PLAN LEGEND

	FLOOR MOUNTED TOILET
	PRE-FAB TUB
	KITCHEN SINK
	WASHROOM SINK
	WASHER
	DRYER
	DOMESTIC HOT WATER
	AIR HANDLER
	RANGE, TYPICAL
	REFRIGERATOR
	CLOSET COAT ROD

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

THIRD FLOOR PLAN

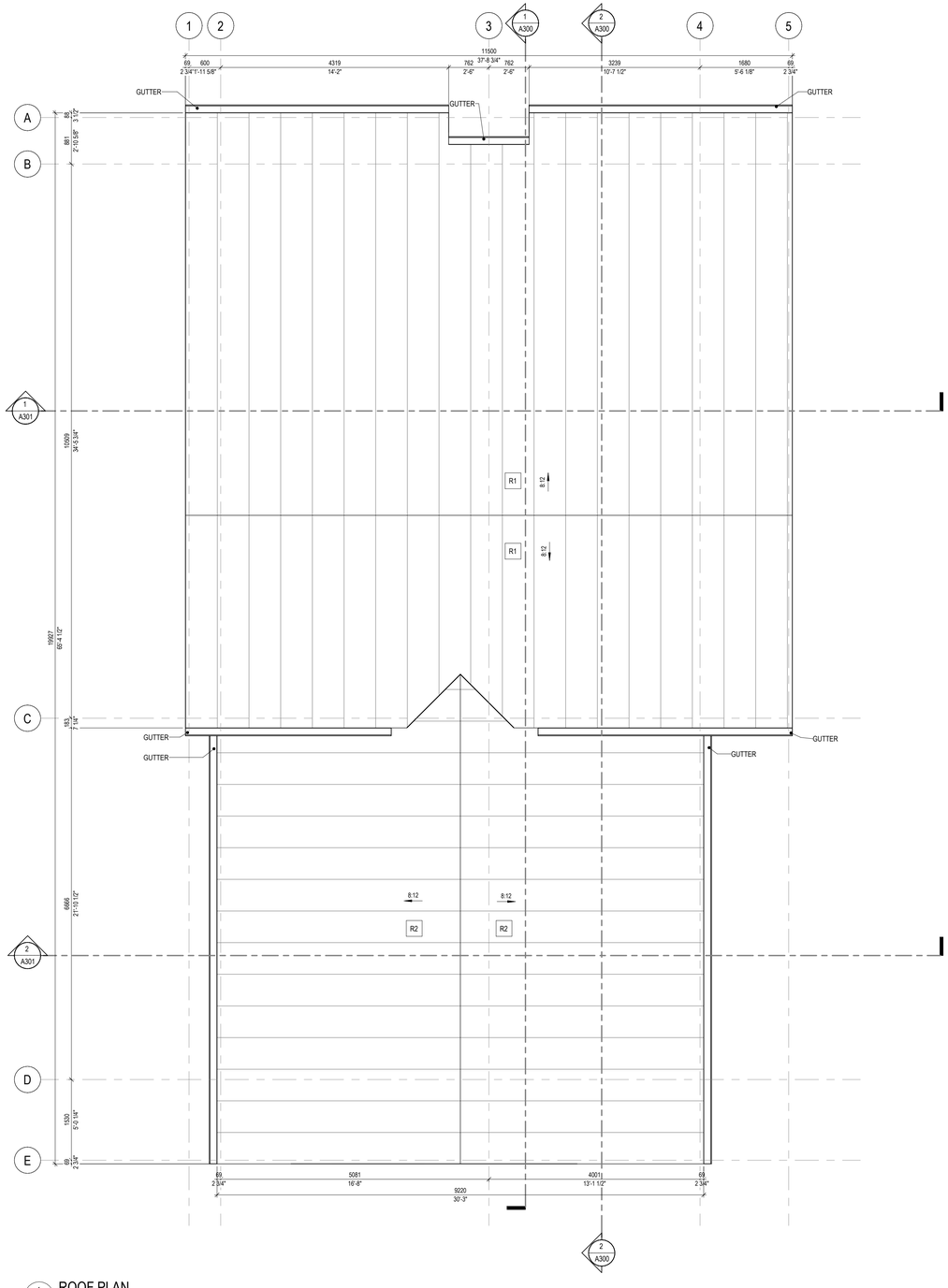
AB Sixplex 01

PROJECT NO: 241058

SCALE: 1 : 50

SHEET NO:

A103



1 ROOF PLAN
A104
1 : 50

ROOF PLAN GENERAL NOTES

1. ALL ROOFING TYPES TO COMPLY WITH REQUIRED MINIMUM SLOPES AS PER ABC(AE) 9.26.3 AND MANUFACTURER REQUIREMENTS FOR SPECIFIED ROOFING TYPES
2. ALL ROOFS, GUTTERS AND TROUGHS HAVE POSITIVE SLOPE TO DRAIN.
3. ROOF VENTING TO COMPLY WITH 9.19.1.2

CMHC SCHL

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1	2025-02-21	Issued as Prototypical Drawing

NO.	DATE	DESCRIPTION

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

ROOF PLAN

AB Sixplex 01

PROJECT NO: 241058

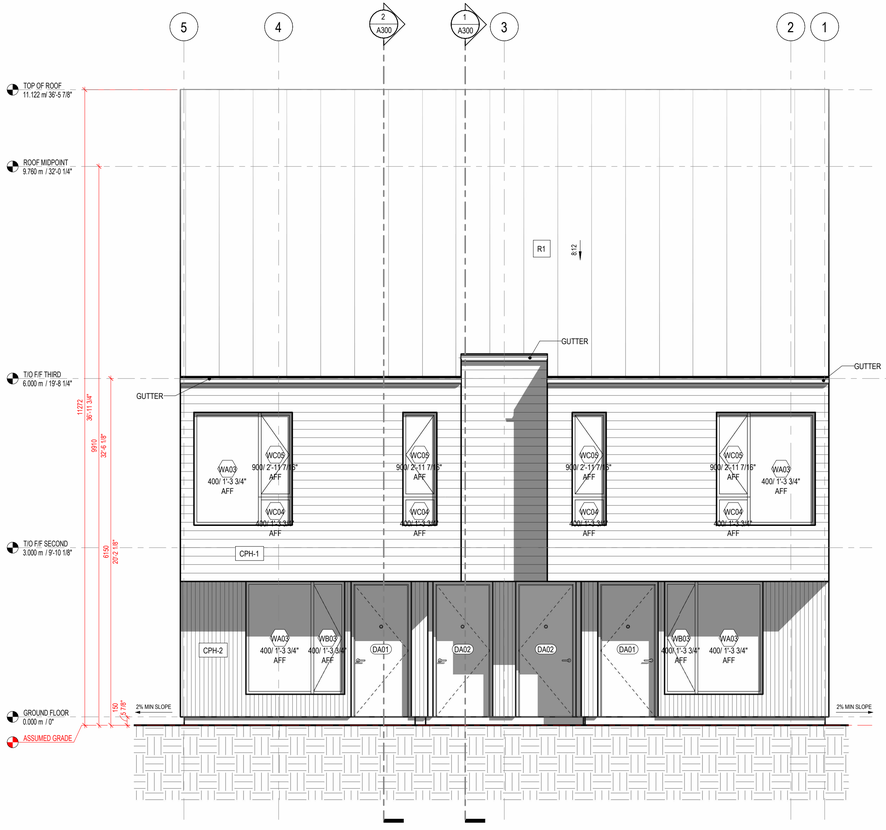
SCALE: 1 : 50

SHEET NO:

A104

ELEVATION MATERIAL SCHEDULE	
TAG	MATERIAL
CPH-1	CLADDING PLACEHOLDER, TYPE 1
CPH-2	CLADDING PLACEHOLDER, TYPE 2

NOTE: CLADDING FINISHES WITHIN 200MM OF GRADE ARE TO BE MOISTURE RESISTANT



1 A200 BUILDING ELEVATION - REAR

1 : 50

2 A200 BUILDING ELEVATION - SIDE 1

1 : 50

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

ELEVATIONS

AB Sixplex 01

PROJECT NO: 241058

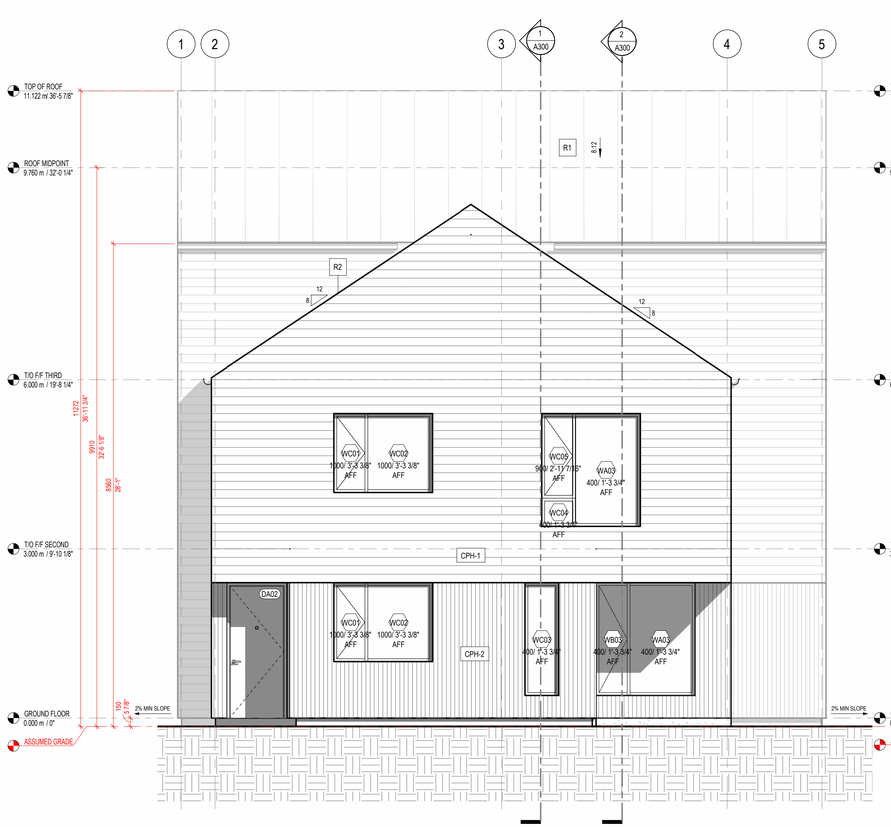
SCALE: 1 : 50

SHEET NO:

A200

ELEVATION MATERIAL SCHEDULE	
TAG	MATERIAL
CPH-1	CLADDING PLACEHOLDER, TYPE 1
CPH-2	CLADDING PLACEHOLDER, TYPE 2

NOTE: CLADDING FINISHES WITHIN 200MM OF GRADE ARE TO BE MOISTURE RESISTANT



1 A201 BUILDING ELEVATION - FRONT

1 : 50

2 A201 BUILDING ELEVATION - SIDE 2

1 : 50

NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

ONTARIO, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

ELEVATIONS

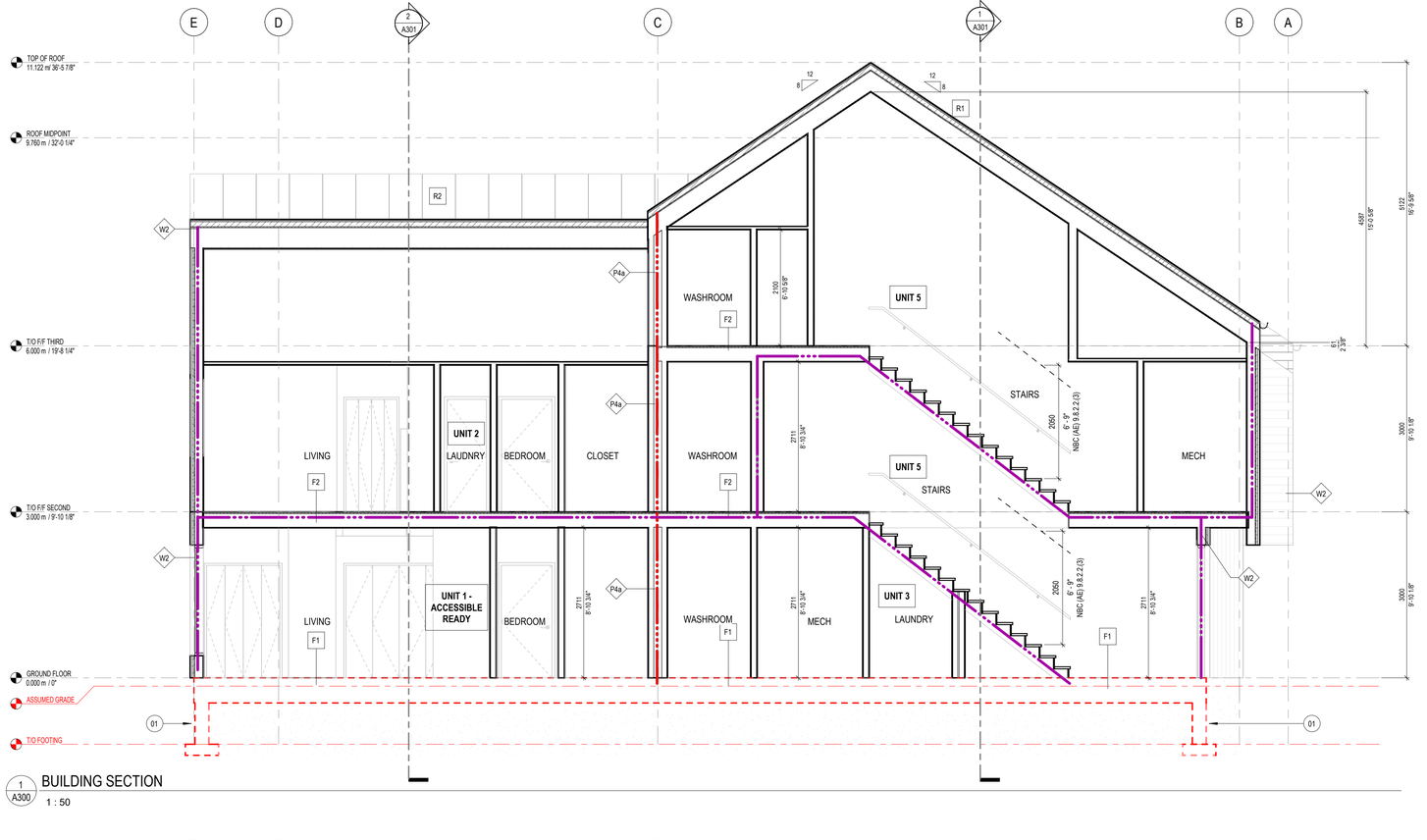
AB Sixplex 01

PROJECT NO: 241058

SCALE: 1 : 50

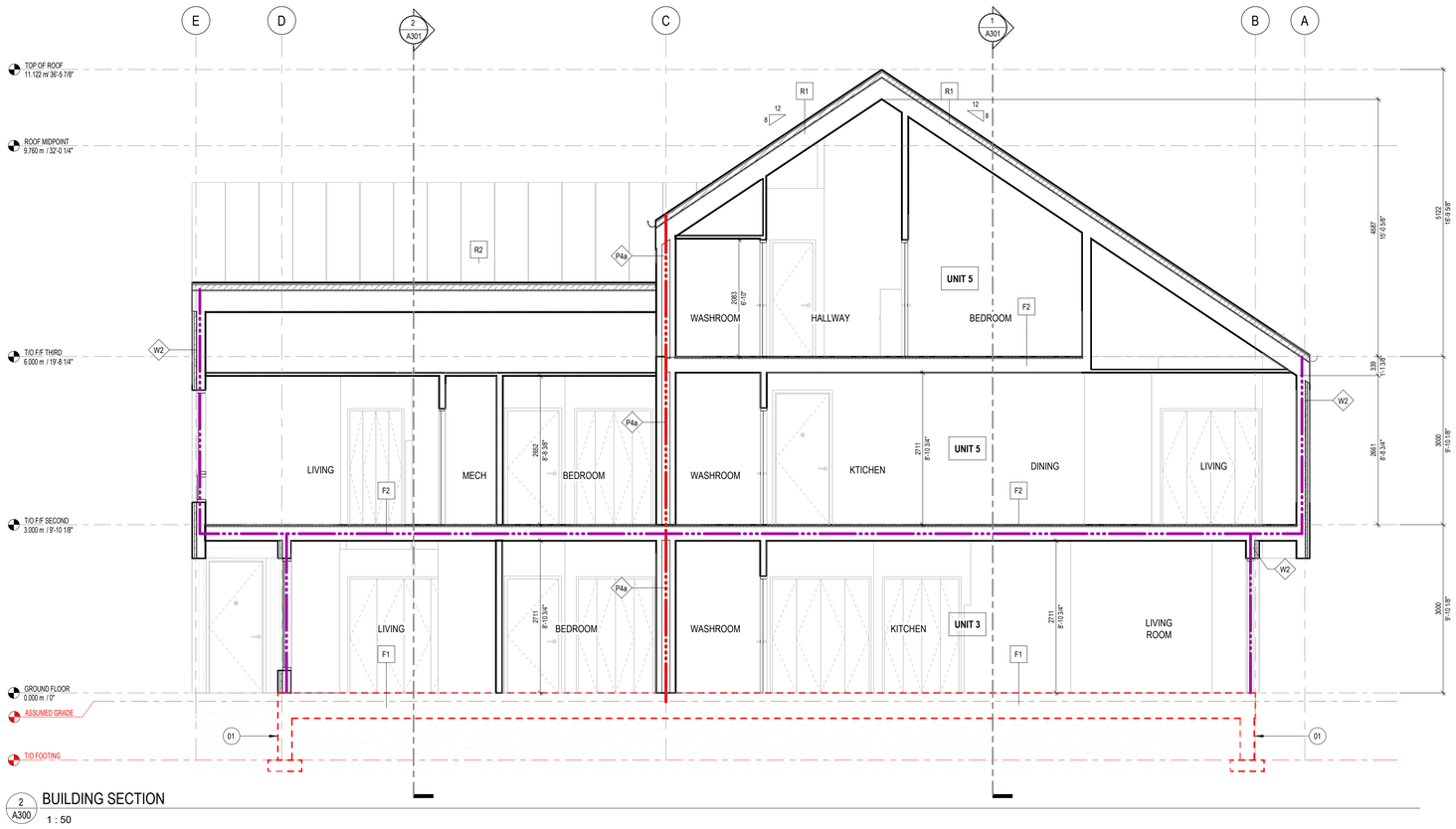
SHEET NO:

A201



1 A300 BUILDING SECTION

1 : 50



2 A300 BUILDING SECTION

1 : 50

SECTION KEYNOTES

01 FOUNDATIONS: ASSUMED, REFER TO STRUCTURAL DRAWINGS

FIRE SEPARATION LEGEND

1HR

2HR

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NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

SECTIONS

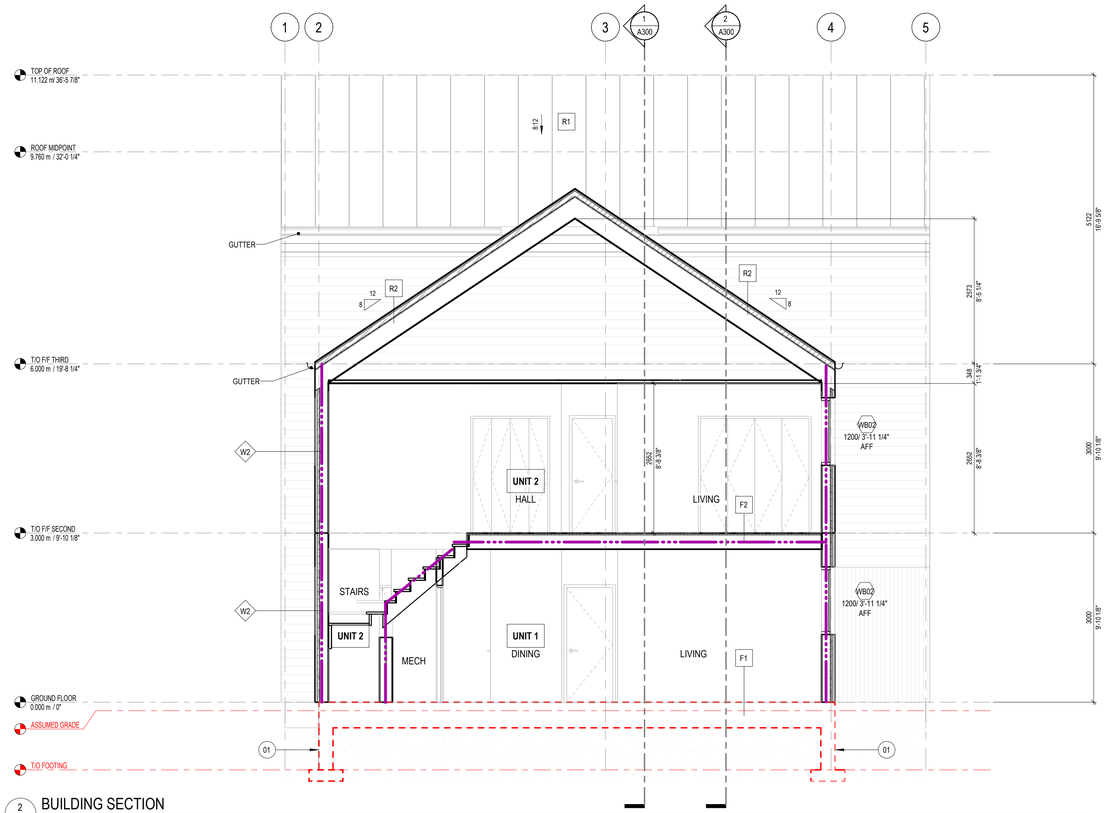
AB Sixplex 01

PROJECT NO: 241058

SCALE: 1 : 50

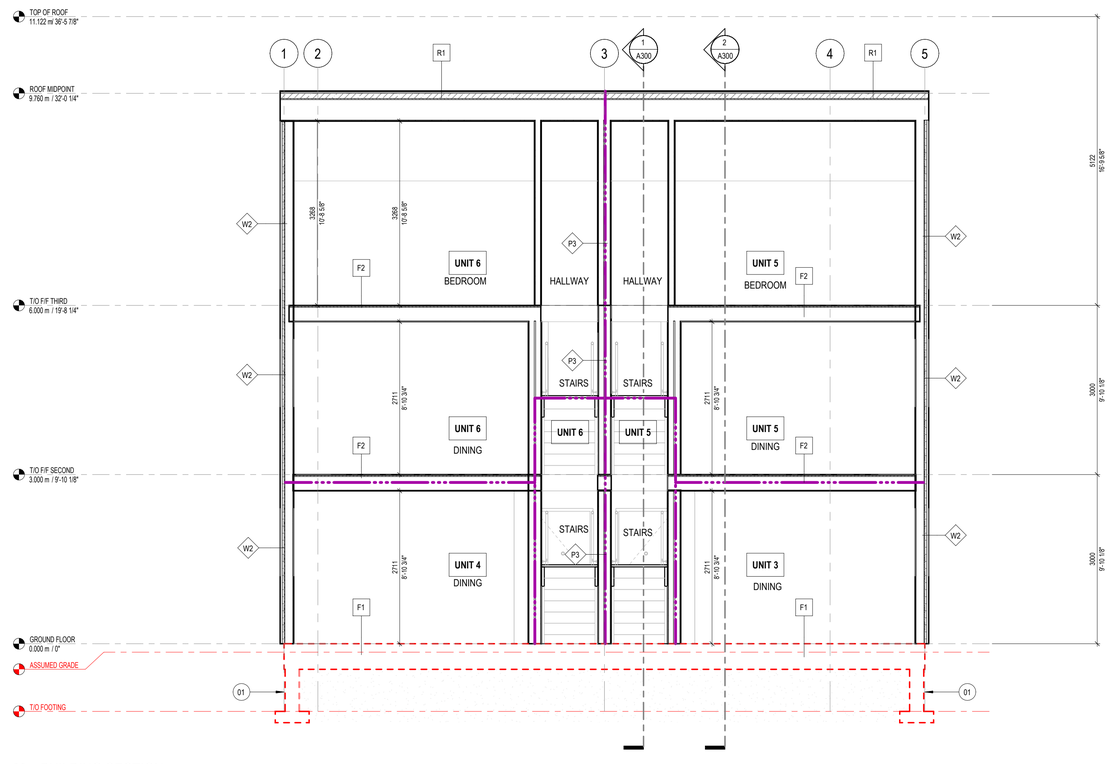
SHEET NO:

A300



2 A301 BUILDING SECTION

1 : 50



1 A301 BUILDING SECTION

1 : 50

SECTION KEYNOTES

01 FOUNDATIONS: ASSUMED, REFER TO STRUCTURAL DRAWINGS

FIRE SEPARATION LEGEND

1HR

2HR

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NO.	DATE	DESCRIPTION
1	2025-02-21	Issued as Prototypical Drawing

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

SECTIONS

AB Sixplex 01

PROJECT NO: 241058

SCALE: 1 : 50

SHEET NO:

A301

CMHC HOUSING DESIGN CATALOGUE
SIXPLEX 01
STRUCTURAL DRAWINGS

STRUCTURAL DRAWING LIST	
DWG. No.	DRAWING NAME
S000	COVER SHEET
S101	TYPICAL NOTES
S102	TYPICAL DETAILS
S103	TYPICAL DETAILS
S104	TYPICAL DETAILS
S105	STRUCTURAL SPECIFICATIONS
S201	FOUNDATION PLAN
S301	FRAMING PLANS
S302	FRAMING PLANS
S303	BUILDING SECTIONS
S401	TYPICAL FOUNDATION SECTIONS
S501	TYPICAL FLOOR SECTIONS
S601	TYPICAL ROOF SECTIONS

STRUCTURAL ABBREVIATIONS

A.B.	ANCHOR BOLT
ALT.	ALTERNATE
ANCH'S.	ANCHORS
APPROX.	APPROXIMATELY
ARCH.	ARCHITECTURAL
B.P.L.	BASE PLATE
BLK.	BLOCK
BM.	BEAM
BOT.	BOTTOM
BT.PL.	BENT PLATE
C/W	COMPLETE WITH
C.J.	CONTROL JOINT
CL.	CENTER LINE
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
DET.	DETAIL
DIA. OR Ø	DIAMETER
DIM.	DIMENSION
DJ	DOUBLE JOIST
DO	DITTO
DP.	DEEP
DWG.	DRAWING
E.F.	EACH FACE
ELEC.	ELECTRICAL
E.S.	EACH SIDE
E.W.	EACH WAY
EA.	EACH
ELEV.	ELEVATION
EQ.	EQUAL
EXIST.	EXISTING
F/F	FINISHED FLOOR
FDN.	FOUNDATION
ft.	FOOT
FTG.	FOOTING
Ga	GAUGE
GB.	GRADE BEAM
GALV.	GALVANIZED
GRD.	GRADE
HORZ.	HORIZONTAL
H.D.	HEAVY DUTY
H.D.G.	HOT DIPPED GALVANIZED
H.P.	HIGH POINT
HT.	HEIGHT
in.	INCH
I.D.	INSIDE DIAMETER
kN.	KILONEWTON
kPa.	KILOPASCAL
L	ANGLE
LG.	LONG
L.P.	LOW POINT
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MAX.	MAXIMUM
MECH.	MECHANICAL
MID.	MIDDLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
m	METRE
mm	MILLIMETRE
MPa	MEGAPASCAL
N.T.S.	NOT TO SCALE
No.	NUMBER
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
PL.	PLATE
psf.	POUNDS PER SQUARE FOOT
psi.	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
R.C.	REINFORCED CONCRETE
R.D.	ROOF DRAIN
R.O.	ROUGH OPENING
REF.	REFERENCE
REINF.	REINFORCED
REQ'D.	REQUIRED
RTU	ROOF TOP UNIT
SECT.	SECTION
S.O.G.	SLAB ON GRADE
S.S.	STAINLESS STEEL
STL.	STEEL
STRUCT.	STRUCTURAL
T.&B.	TOP AND BOTTOM
T/O	TOP OF
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
U/S	UNDERSIDE
VERT.	VERTICAL
W/	CONNECTION WITH
W.P.	WORKING POINT
W.W.M.	WELDED WIRE MESH
@	SPACED AT

CMHC SCHL

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2	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING

NO.	DATE	DESCRIPTION

PROJECT:

CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

COVER SHEET

AB Sixplex 01

PROJECT NO: 02500462

SCALE: 1 : 20

SHEET NO:

S000

GENERAL STRUCTURAL NOTES

1. READ STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, LANDSCAPE, MECHANICAL AND ELECTRICAL DRAWINGS.
2. CHECK AND VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS BEFORE COMMENCING WITH WORK.
3. DRAWINGS SHOW COMPLETED STRUCTURE ONLY. TEMPORARY SUPPORT AND BRACING FOR CONSTRUCTION LOADING CONDITIONS IS THE RESPONSIBILITY OF THE CONTRACTOR.
4. DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED "ISSUED FOR CONSTRUCTION".
5. READ THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS.
6. GENERAL CONTRACTOR TO VERIFY AND MARK ALL UNDERGROUND LINES AND RE-ENSURE THAT NEW FOUNDATION LOCATIONS DO NOT INTERFERE WITH ANY UNDERGROUND UTILITY LINES.
7. VERIFY AND LOCATE ALL EXISTING FOUNDATIONS AND COORDINATE WITH THE LOCATIONS OF NEW FOUNDATIONS PRIOR TO COMMENCING WITH WORK.
8. ANY CLARIFICATIONS IN REGARDS TO STRUCTURAL DRAWINGS CONTACT THE ENGINEER ON RECORD.

SITE REVIEW

1. NOTIFY THE ENGINEER 48 HOURS IN ADVANCE FOR REVIEW OF THE FOLLOWING:

CONCRETE REINFORCEMENT	BEFORE EACH POUR
WOOD FRAMING	BEFORE COVERING UP

ENGINEERING SITE REVIEWS WILL BE REQUIRED IN ORDER TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE PLANS AND SUPPORTING DOCUMENTS. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO BUILD THE WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.

SHOP DRAWINGS REVIEWS WILL BE REQUIRED FOR THIRD PARTY WORK. THE REVIEW IS NOT AN APPROVAL OF THE DESIGN, DETAILS AND DIMENSIONS INHERENT IN THE DESIGNS SUBMITTED BY OTHERS. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS OR FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.

BUILDING CODE AND STANDARDS

- NATIONAL BUILDING CODE - 2023 ALBERTA EDITION
- ALBERTA INFRASTRUCTURE TECHNICAL DESIGN REQUIREMENTS, VERSION 7 (AUGUST 2022)
- CSA A23.1-14 CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION
- CSA S16 DESIGN OF STEEL STRUCTURES
- CSA A23.3 DESIGN OF CONCRETE STRUCTURES
- CSA S304 DESIGN OF MASONRY STRUCUTURES
- CSA S136 NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS

DESIGN LOADS

UNLESS NOTED OTHERWISE LOADS NOTED BELOW ARE SPECIFIED LOADS. LOADS ARE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION

NOTE:

THIS PROTOTYPE HAS BEEN PREPARED BASED ON THE CONDITIONS SPECIFIC TO EDMONTON. ALL LOAD CONSIDERATIONS MUST BE REVIEWED AND VERIFIED BASED ON THE EXACT LOCATION OF EACH PROJECT. THE STRUCTURAL DESIGN MUST ADHERE TO THE LATEST ASSESSMENTS, BUILDING CODES, AND GEOTECHNICAL REPORTS APPLICABLE TO THE SITE.

1. LATERAL LOADS FROM WIND

• WIND LOADS:

REFERENCE WIND PRESSURE (q 1/10)	0.36 kPa
REFERENCE WIND PRESSURE (q 1/50)	0.45 kPa
INTERNAL PRESSURE CATEGORY	2
ULS IMPORTANCE FACTOR	1 (HIGH IMPORTANCE)
SLS IMPORTANCE FACTOR	0.75 (HIGH IMPORTANCE)
WIND INTERSTOREY DRIFT LIMIT	H/500

(WHERE H IS THE HEIGHT OF THE STOREY)

• EARTHQUAKE LOADS:

SITE CLASSIFICATION CLASS D-XD (ASSUMED, BASED ON EDMONTON AREA).

Sa (0.2, Xc)	0.199
Sa (0.5, Xc)	0.167
Sa (1.0, Xc)	0.0917
Sa (2.0, Xc)	0.048
Sa (5.0, Xc)	0.024
Sa (10.0, Xc)	0.0146
PGA (Xc)	0.126
PGV (Xc)	0.104
SEISMIC CATEGORY	SC1
ULS IMPORTANCE FACTOR	1
Rd =	3
Ro =	1.7
SEISMIC INTERSTORY DEFLECTION LIMIT	0.01 hs (FOR POST-DISASTER) 0.02 hs (FOR HIGH IMPORTANCE) 0.025 hs (FOR NORMAL IMPORTANCE)

(WHERE hs IS THE INTERSTORY HEIGHT OF THE STRUCTURE)

• LATERAL LOADS FROM WIND AND EARTHQUAKE ARE RESISTED BY SHEAR WALLS. DIAPHRAGM ACTION OF THE ROOF AND THE FLOOR PLATES IS USED TO TRANSFER LATERAL LOADS HORIZONTALLY TO THE BRACING SYSTEM.

2. FLOOR LOADS

DEAD LOAD
(SPECIFIED DEAD LOADS HAVE INCORPORATED A SUPERIMPOSED DEAD LOAD OF 1.0 kPa FOR PARTITION LOADS)

MAIN FLOOR	1.7 kPa
SECOND FLOOR	1.7 kPa

LIVE LOAD

MAIN FLOOR	1.9 kPa
SECOND FLOOR	1.9 kPa

OTHER LOADS:
- FLOOR JOISTS ABOVE MECHANICAL ROOM TO BE DESIGNED FOR AN ADDITIONAL BOTTOM CHORD LIVE LOAD OF 10 psf.
- BULK HEADS 10 psf. REFER TO ARCH. DRAWINGS FOR LOCATIONS.
- MISCELLANEOUS LOADS SHOWN DIRECTLY ON THE PLANS.
- WATER LINE LOADS SEE THIS DRAWING.

3. ROOF LOADS

DEAD LOAD	1.2 kPa
LIVE LOAD	1.46kPa
SNOW LOAD	
Ss	1.7 kPa
S	1.46 kPa+ SNOW PILING
RAIN LOAD	
Sr	0.1 kPa
ULS IMPORTANCE FACTOR	1
SLS IMPORTANCE FACTOR	0.9
RAIN	97mm (ONE DAY RAIN)

OTHER LOADS:
- ALLOW FOR ADDITIONLAL 75 psf SNOW PILING IN ALL VALLEYS. SNOW PILING TO BE TAPERED TO REGULAR ROOF SNOW LOAD AT 3000mm EACH SIDE OF VALLEYS.
- WIND UPLIFT LOADS- TRUSS SUPPLIER TO DESIGN ROOF TRUSSES FOR WIND UPLIFT ACCORDING TO THE LATEST BUILING CODE.
- BULK HEADS 10 psf. REFER TO ARCH. DRAWINGS FOR LOCATIONS.
- MISCELLANEOUS LOADS SHOWN DIRECTLY ON THE PLANS.
- WATER LINE LOADS SEE THIS DRAWING.

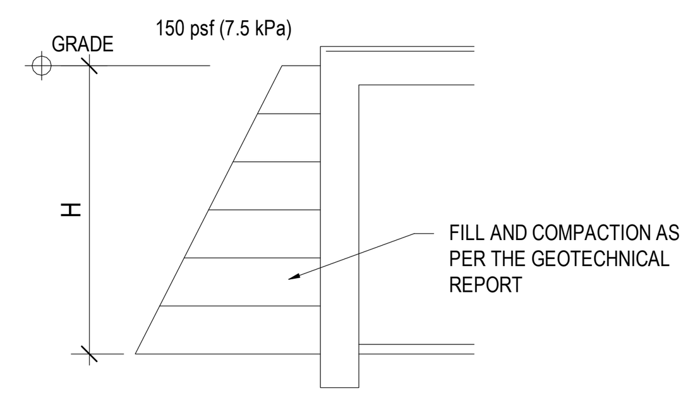
4. TEMPORARY CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN PARAMETERS AND SHALL NOT BE APPLIED BEFORE THE STRUCTURE HAS SUFFICIENT STRENGTH AND STABILITY.

NON-STRUCTURAL ELEMENTS

1. NON-STRUCTURAL ELEMENTS TO BE DESIGNED BY OTHERS.
2. EXAMPLES OF NONSTRUCTURAL ELEMENTS INCLUDE, BUT ARE NOT LIMITED TO:
   A. ARCHITECTURAL COMPONENTS SUCH AS GUARDRAILS, HANDRAILS, LADDER, FLAG POSTS, AWNINGS, CEILINGS, MILLWORK ETC.
   B. LANDSCAPE ELEMENTS SUCH AS BENCHES, LIGHT POSTS, PLANTERS, ETC.
   C. CLADDING, GLAZING, WINDOW MULLIONS, PARTITION WALLS.
   D. ARCHITECTURAL PRECAST, PRECAST CLADDING.
   E. SKYLIGHTS.
   F. MECHANICAL AND ELECTRICAL EQUIPMENT, COMPONENTS AND THEIR ATTACHMENT DETAILS.
   G. WINDOW WASHING EQUIPMENT AND THEIR ATTACHMENTS.
   H. ESCALATORS, ELEVATORS AND CONVEYING SYSTEMS.
   I. BRICK OR BLOCK VENEERS AND THEIR ATTACHMENTS.
   J. NON STRUCTURAL CONCRETE TOPPINGS.
3. SHOP DRAWINGS FOR NON STRUCTURAL ELEMENTS WHICH MAY AFFECT THE PRIMARY STRUCTURAL SYSTEM SHALL BE SUBMITTED TO ENGINEER ON RECORD (E.O.R.). THESE DRAWINGS WILL BE REVIEWED ONLY FOR THE EFFECT OF THE ELEMENT ON THE PRIMARY STRUCTURAL SYSTEM.
4. PERIMETER STEEL FRAMING ABOVE WINDOWS IN STEEL STUD WALLS HAS BEEN DESIGNED TO L/240 TOTAL LOAD DEFLECTION - U.N.O.
5. ROOF BEAMS AND JOISTS HAVE BEEN DESIGNED TO L/240 TOTAL LOAD DEFLECTION - U.N.O.
6. FLOOR BEAMS AND JOISTS HAVE BEEN DESIGNED TO L/360 TOTAL LOAD DEFLECTION - U.N.O.
7. EXPECTED SLAB ON GRADE MOVEMENT TO BE +/- 1". CONFIRM WITH GEOTECHNICAL REPORT.

GEOTECHNICAL NOTES

1. GEOTECHNICAL EVALUATION OF THE SITE WILL BE REQUIRED PRIOR TO COMENCING WITH THE PREPARATION OF DRAWINGS AND / OR CONSTRUCTION. EOR TO REVIEW THE GEOTECHNICAL REPORT AND REVISE THE FOUNDATIONS ACCORDINGLY.
2. REFER TO FOUNDATION PLAN FOR ADDITIONAL NOTES REGARDING THE APPLICABLE FOUNDATION SYSTEM.
3. LATERAL SOIL PRESSURE ON WALLS INCLUDING SURCHARGE SHALL BE AS FOLLOWS. UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT.
4. ALL BACKFILL MATERIALS AND BACKFILL INSTALLATION SHALL BE REVIEWED BY A GEOTECHNICAL ENGINEER TO ENSURE COMPLIANCE WITH THE RECOMMENDATIONS AS NOTED IN THE GEOTECHNICAL REPORT.
5. EXCAVATION REQUIREMENTS SHALL BE REVIEWED AND APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PROCEEDING WITH WORK.
6. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR DAMP PROOFING OR WATER STOP REQUIREMENTS.
7. FOR GROUND ELEVATIONS AND DRAINAGE SLOPES, SEE ARCHITECTURAL DRAWINGS.



0.6 x (19.6 kN/m³ x H + 12.0 kPa)

(SCREW PILES) FOUNDATION

1. SCREW PILES SHALL BE DESIGNED BY THE PILING CONTRACTOR FOR THE LOADS INDICATED ON DRAWINGS AND SHALL BE DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
2. PROVIDE APPROPRIATE NUMBER OF SHOP DRAWINGS FOR ALL PILES. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA RESPONSIBLE FOR THE DESIGN OF ALL PILES.
3. INSTALLATION OF PILES SHALL BE UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER RESPONSIBLE FOR PRODUCING THE GEOTECHNICAL REPORT. PROVIDE AN ACCURATE REPORT AT COMPLETION OF WORK WITH ALL PILE LOGS. FINAL REPORT SHALL BE SIGNED AND SEALED BY THE GEOTECHNICAL ENGINEER SUPERVISING THE INSTALLATION. PROVIDE SCHEDULES A, B, AND C AS REQUIRED BY THE LOCAL AUTHORITIES AND COPIES TO ENGINEER OF RECORD.
4. PILING CONTRACTOR TO ADVISE GENERAL CONTRACTOR TO THE NUMBER OF PILES REQUIRED IN ALL LOCATIONS, AS PILE CAPS MAY BE REQUIRED. COORDINATE WITH THE GENERAL CONTRACTOR PRIOR TO TENDER CLOSING.
5. GENERAL CONTRACTOR TO ALLOW FOR PILE CAPS AS ADVISED BY PILING CONTRACTOR.
6. VERIFY AND MARK ALL UNDERGROUND LINES AND RE-ENSURE THAT NEW PILE LOCATIONS DO NOT INTERFERE WITH ANY UNDERGROUND UTILITY LINES.
7. PROVIDE MINIMUM PILE SHAFT DIAMETER OF 200mm TYP. ALL SIM. LOCATIONS.

CONCRETE FORMWORK

FORM WORK TO CONFORM TO THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS.

1. REFER TO ARCHITECTURAL DRAWINGS FOR CHAMFERS ON CORNERS OF COLUMNS, BEAMS AND WALLS. USE 19mm x 19mm FORMED CHAMFERS ON EXPOSED CORNERS UNLESS OTHERWISE SHOWN ON DRAWINGS / ARCHITECTURAL DRAWINGS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. VOID FORM MATERIALS SHALL BE DYNAVOID (40144) OR EQUIVALENT U.N.O.
3. REBAR SHALL BE FREE OF RESIDUAL CEMENT PASTE AND FORM OIL.
4. FOR ADDITIONAL NOTES AND REQUIREMENTS SEE SPECIFICATIONS.

CONCRETE

1. CONCRETE TO CONFORM TO THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS BEING NORMAL WEIGHT MEETING THE FOLLOWING REQUIREMENTS / THE REQUIREMENTS IN THE SPECIFICATIONS.
2. ADMIXTURES CONTAINING CALCIUM CHLORIDE ARE NOT PERMITTED.
3. SUPERPLASTICIZING ADMIXTURE IS PERMITTED TO ALLOW PUMPING OR IMPROVE SURFACE FINISHING OF CONCRETE. SUPERPLASTICIZING TO BE IN STRICT ACCORDANCE WITH THE CONCRETE SUPPLIER'S RECOMMENDATIONS.
4. FOR FLOOR SLABS, DESIGN THE CONCRETE MIXTURE WITH AGGREGATE GRADING AND WATER TO CEMENTING MATERIALS RATIO THAT MINIMIZES SHRINKAGE.
5. REJECT ALL CONCRETE WHEN TIME BETWEEN BATCHING AND PLACING EXCEEDS TWO HOURS.
6. DO NOT ADD WATER TO THE CONCRETE ON SITE UNLESS AUTHORIZED BY THE CONCRETE SUPPLIER.
7. PROTECT CONCRETE FROM ADVERSE WEATHER CONDITIONS IN ACCORDANCE WITH THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS.
8. FOR ADDITIONAL NOTES AND REQUIREMENTS SEE SPECIFICATIONS.

CONCRETE STRENGTH AND MIX SPECIFICATIONS

EXPOSURE CLASS	USE	CEMENT TYPE	MIN. STRENGTH	SLUMP	MAX. AGG. SIZE	WC RATIO	AIR ENTRAINMENT	MAX. FLY ASH CONTENT (%)
S-2	GRADE BEAMS	HS	32 MPa @ 28 DAYS	80mm ± 20mm	3/4" (19mm)	0.45	4% - 7%	-
N	INTERIOR SLABS ON GRADE	GU	25 MPa @ 28 DAYS	80mm ± 20mm	3/4" (19mm)	0.55	NONE REQUIRED	-
C-1	STOOPS (STRUCTURAL OR ON GRADE)	GU	35 MPa @ 28 DAYS	80mm ± 20mm	3/4" (19mm)	0.40	5% - 8%	-
C-2	SIDEWALKS	GU	32 MPa @ 28 DAYS	80mm ± 20mm	3/4" (19mm)	0.40	5% - 8%	-

REINFORCEMENT FOR CONCRETE

1. REINFORCED CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION 9 AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS.
2. REINFORCING STEEL: BILLET-STEEL CONFORMING TO THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS. ALL REINFORCING SHALL BE GRADE 400. USE GRADE 400W WHERE WELDING IS NOTED.
3. BENDING, CUTTING AND PLACING OF REINFORCING STEEL SHALL CONFORM TO THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS.
4. WELDING SHALL CONFORM TO THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS.
5. MINIMUM REINFORCEMENT AS PER THE MINIMUM REQUIREMENTS NOTED BELOW.
6. REBAR SHALL BE FREE OF RESIDUAL CEMENT PASTE AND FORM OIL.
7. CONCRETE COVER TO REINFORCING STEEL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW THAT RESULTS IN THE GREATER AMOUNT OF COVER.

CONCRETE COVER SCHEDULE

	FIRE RESISTANCE RATING (SEE ARCHITECTURAL DRAWINGS) UP TO
	2 HRS.
GRADE BEAMS	50mm
SLAB ON GRADE	
SINGLE-LAYER REINFORCEMENT	PLACE REINFORCEMENT AT MID DEPTH

* **COVER IS TO PRIMARY REINFORCEMENT, NOT TO STIRRUPS OR TIES**
* * **APPLIES TO NORMAL EXPOSURE ONLY**

CONTRACTOR TO CONFIRM FIRE RATING REQUIREMENTS FOR ALL CONCRETE ELEMENTS WITH ARCHITECTURAL DRAWINGS.
CONTRACTOR TO ENSURE CLEAR COVER REQUIREMENTS AS PER THE CONCRETE COVER SCHEDULE ARE MET.

8. SUBMIT TO ENGINEER ON RECORD (E.O.R.) FOR REVIEW THE LOCATIONS OF ALL SLEEVES AND OPENINGS NOT SHOWN ON THE DRAWINGS. ENGINEER ON RECORD (E.O.R.) WILL PROVIDE STRUCTURAL DETAILS UPON REQUEST.
9. SLEEVES SHALL NOT BE PLACED HORIZONTALLY ALONG OR VERTICALLY THROUGH BEAMS UNLESS AUTHORIZED BY ENGINEER ON RECORD (E.O.R.)

MINIMUM REQUIREMENTS

UNLESS OTHERWISE NOTED ON DRAWINGS

BAR EMBEDMENT AND LAP SPLICE TABLE

BAR SIZE	TENSION		COMPRESSION	
	EMBEDMENT LENGTH	LAP SPLICE LENGTH	EMBEDMENT LENGTH	LAP SPLICE LENGTH
10M	16" (400mm)	20" (500mm)	8" (200mm)	12" (300mm)
15M	24" (600mm)	30" (750mm)	12" (300mm)	18" (450mm)
20M	30" (750mm)	40" (1000mm)	16" (400mm)	24" (600mm)
25M	48" (1200mm)	62" (1550mm)	20" (500mm)	30" (750mm)
30M	58" (1450mm)	74" (1850mm)	24" (600mm)	36" (900mm)
35M	60" (1500mm)	86" (2150mm)	28" (700mm)	42" (1050mm)

TABLE NOTES:
1. BASED ON NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS.
2. NORMAL DENSITY CONCRETE OF STRENGTH AT LEAST 25 MPa.
3. ENCLOSED BY MINIMUM STIRRUPS OR TIES.
4. CLEAR COVER AT LEAST 1.0 X BAR DIAMETER.
5. CLEAR SPACING AT LEAST 1.4 X BAR DIAMETER.
6. INCREASE LENGTHS TO 1.31 X LENGTH LISTED FOR EPOXY COATED REINFORCING.

MINIMUM SLAB ON GRADE REINFORCEMENT TABLE U.N.O. ON DRAWINGS

SLAB THICKNESS	SLABS ON GRADE
≤ 4" (100mm)	10M @ 14" (350mm)
≤ 5" (130mm)	10M @ 12" (300mm)
≤ 6" (150mm)	10M @ 12" (300mm)
≤ 7" (175mm)	10M @ 11" (275mm)
≤ 8" (200mm)	10M @ 10" (250mm)
≤ 9" (225mm)	10M @ 10" (250mm)
≤ 10" (250mm)	10M @ 10" (250mm)
≤ 12" (300mm)	10M @ 10" (250mm)

TABLE NOTES:
1. MINIMUM THICKNESS OF SLABS ON GRADE IS 4" (100mm).

WOOD FRAMING

1. ALL WORK TO BE IN ACCORDANCE WITH ABC 2023, CSA O86-19 AND REFERENCED DOCUMENTS.
2. LUMBER USED FOR FRAMING TO CONFORM TO CSA O141. ANY LUMBER NOT GRADE MARKED WILL BE REJECTED.
3. SHEATHING USED FOR WALLS, FLOORS AND ROOF: DOUGLAS FIR PLYWOOD (DFP) TO CSA O121; CANADIAN SOFTWOOD PLYWOOD (CSP) TO CSA O151; OSB TO CSA O325. SHEATHING SHALL REMAIN DRY, WATER DAMAGED SHEATHING SHALL BE REMOVED AND REPLACED AT THE COST OF THE CONTRACTOR.
4. MINIMUM MATERIALS AND GRADES TO BE USED (**UNLESS SPECIFIED OTHERWISE ON DRAWINGS**):

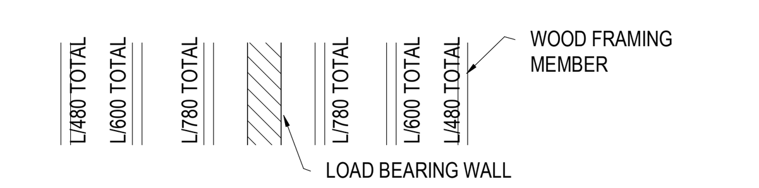
WALL STUDS	SPF No.1/No.2
WALL PLATES	SPF No.1/No.2
BUILT-UP COLUMNS	SPF No.1/No.2
LUMBER BUILT-UP BEAMS & JOISTS	SPF No.1/No.2
FLAT ROOF SHEATHING	18mm DFP or CSP
SLOPED ROOF SHEATHING	16mm DFP or CSP
FLOOR SHEATHING	18mm OSB (PANEL MARK: 2R48/2RF24 or 1F24)
EXTERIOR WALL SHEATHING	11mm OSB (PANEL MARK: 1R24/2F16)
INTERIOR SHEAR WALL SHEATHING	11mm OSB (PANEL MARK: 2R32/2F16)
CORRIDOR SHEAR WALL SHEATHING	11mm OSB (PANEL MARK: 1R24/2F16)

5. MINIMUM FRAMING REQUIREMENTS (UNLESS SPECIFIED OTHERWISE ON DRAWINGS):
   - **WOOD STUDS WALLS** - 38x140 @ 400mm O/C. C/W. 10mm THICK OSB. PROVIDE BLOCKING AT ALL HORIZONTAL SHEATHING JOINTS.
   - **BUILT-UP COLUMNS** - 4-38x140 (2 CRIPPLES & 2 KING STUDS) EACH SIDE OF ALL OPENINGS IN 38x140 WALLS, 4-38x89 (2 CRIPPLES & 2 KING STUDS) EACH SIDE OF ALL OPENINGS IN 38x89 WALLS.
   - **BUILT-UP BEAMS** - 3-38x235 ABOVE ALL OPENINGS IN 38x140 WALLS, 2-38x235 ABOVE ALL OPENINGS IN 38x89 WALLS.
6. FLOOR AND FLAT ROOF SHEATHING TO BE T.&G. UNLESS NOTED OTHERWISE ON DRAWINGS. FLOOR SHEATHING TO BE GLUED AND NAILED TO FLOOR TRUSSES OR JOISTS. ROOF SHEATHING TO BE NAILED TO ROOF TRUSSES OR JOISTS.
7. FLOOR SHEATHING TO BE CONTINUOUS OVER ALL PARTY WALLS (DO NOT CUT THE SHEATHING AT 25mm AIR GAP).
8. MINIMUM NAILING OF SHEATHING ON EXTERIOR WALLS, ROOFS AND FLOORS (UNLESS NOTED OTHERWISE ON DRAWINGS):
   - 63mm NAILS @ 150mm O/C. PERIMETER AND SUPPORTED SHEET EDGES.
   - 63mm NAILS @ 300mm O/C. INTERMEDIATE (STAPLES ARE NOT PERMITTED).
9. MINIMUM NAIL DIAMETERS TO BE USED (UNLESS NOTED OTHERWISE ON PLANS). CONTRACTOR TO ENSURE THAT PNEUMATIC NAILING DEVICES ALSO USE NAILS MEETING THE SPECIFIED REQUIREMENTS:
   - 63mm NAILS WITH 3mm DIAMETER
   - 76mm NAILS WITH 3.5mm DIAMETER
10. LUMBER BUILT-UP BEAMS AND COLUMNS TO BE NAILED AS PER TYPICAL DETAILS.
11. ALL WOOD COLUMNS AND CRIPPLES TO BE CONTINUOUS TO FOUNDATIONS WITH BLOCKING IN JOIST SPACE. BLOCKING TO MATCH COLUMN SIZE, MATERIAL AND GRADE.
12. PROVIDE JOIST BLOCKING BETWEEN JOISTS AT ALL LOAD-BEARING WALLS, DROPPED BEAMS/HEADERS, AND AT SUPPORTS FOR CANTILEVERED JOISTS. ADDITIONAL SQUASH BLOCKS MAY BE REQUIRED BY JOIST SUPPLIER.
13. PROVIDE CONTINUOUS CROSS BRIDGING BETWEEN FLOOR LUMBER JOISTS AT 2100mm O/C. ALONG THE SPAN OF THE JOIST.
14. LUMBER EXPOSED TO THE EXTERIOR TO BE PRESSURE TREATED TYP. LUMBER IN CONTACT WITH CONCRETE/MASONRY TO BE PRESSURE TREATED OR OTHERWISE PROTECTED FROM DECAY BY 0.05MM POLYETHYLENE FILM OR TYPE S ROLL ROOFING AS PER CL 9.23.2.3.1 OF NBCC 2023-AE.
15. ONLY STAINLESS-STEEL FASTENERS ARE PERMITTED WITH STAINLESS STEEL CONNECTORS. ONLY GALVANIZED STEEL FASTENERS ARE PERMITTED WITH GALVANIZED STEEL CONNECTORS. TYPE 304 OR 316 STAINLESS STEEL FASTENERS AND CONNECTORS MUST BE USED WITH PRESSURE TREATED WOOD IN HIGH EXPOSURE ENVIRONMENTS SUCH AS EXPOSURE TO OCEAN SALT AIR, LARGE BODIES OF WATER, FUMES AND FERTILIZERS.
16. NAILS AND SPIKES TO BE IN ACCORDANCE WITH THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS.
17. BOLTS TO BE GRADE 'A' LOW CARBON STEEL CONFORMING TO THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS.
18. FRAMING ANCHORS TO BE SIMPSON STRONG TIES OR APPROVED EQUAL.
19. TRUSS BEARING ANCHORS TO BE DESIGNED AND SUPPLIED BY THE TRUSS SUPPLIER.
20. STAIR STRINGER SIZE AND CONNECTION TO SUPPORTING FRAMING BY OTHERS. PROVIDE SIGNED AND SEALED SHOP DRAWINGS PRIOR TO FABRICATION. STAIRS ONLY SERVING A SINGLE DWELLING UNIT MAY BE CONSTRUCTED AS PER NBCC2023-AE CL 9.8.9.4
21. ALL LUMBER JOIST-TO-BEAM/LEDGER CONNECTIONS TO BE ACHIEVED WITH METAL HANGERS PRE-APPROVED BY ENGINEER. JOIST HANGERS TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATION. IMPROPERLY INSTALLED NAILS INTO HANGERS WILL BE REJECTED BY THE ENGINEER, AT THE COST OF THE CONTRACTOR. MINIMUM HANGERS FOR LUMBER JOISTS TO BE USED (**UNLESS SPECIFIED OTHERWISE ON DRAWINGS**):

JOIST SIZE	L < 1800mm	1800mm ≤ 2400mm	2400mm ≤ 3000mm
38x140	JUS26 / LUS26	-	-
38x184	JUS26 / LUS26	JUS26 / LUS26	-
38x235	JUS28 / LUS28	JUS28 / LUS28	JUS28 / LUS28
38x286	JUS210 / LUS210	JUS210 / LUS210	JUS210 / LUS210

WOOD TRUSSES

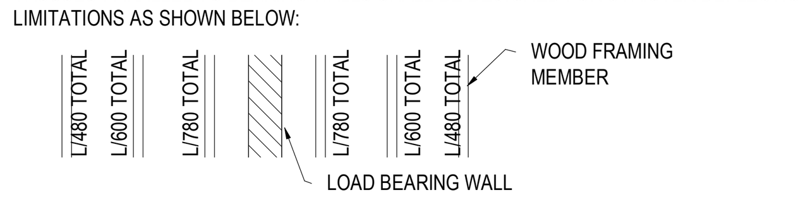
1. WOOD TRUSSES SHALL BE DESIGNED AND FABRICATED BY THE TRUSS SUPPLIER. TRUSSES SHALL BE ABLE TO WITHSTAND THE LOADS INDICATED UNDER "DESIGN LOADS" ACCOUNTING FOR ALL STACKING LOADS.
2. TRUSS SPACING NOTED ON PLANS IS MAXIMUM ALLOWABLE. REDUCED SPACING MAY BE CONSIDERED ONCE APPROVED BY THE STRUCTURAL ENGINEER.
3. DESIGN OF TRUSSES TO CONFORM TO STANDARDS NOTED IN PROJECT SPECIFICATIONS.
4. LIMIT ROOF DEFLECTIONS TO L/240 FOR TOTAL LOADS AND L/360 FOR LIVE LOADS.
5. LIMIT FLOOR DEFLECTIONS TO L/360 FOR TOTAL LOADS AND L/480 FOR LIVE LOADS.
6. FLOOR TRUSSES SHALL BE DESIGNED TO COMPLY WITH VIBRATION PERFORMANCE CRITERIA AS PER CSA O86-19.
7. ALL WOOD TRUSS CONNECTIONS AND HARDWARE INCLUDING ROOF WIND UPLIFT TIE-DOWNS TO BE PROVIDED BY THE SUPPLIER.
8. METAL CONNECTORS TO CONFORM TO STANDARDS NOTED IN PROJECT SPECIFICATIONS.
9. THE ENGINEER RESPONSIBLE FOR THE TRUSS DESIGN SHALL SPECIFY SQUASH BLOCK REQUIREMENTS ACCOUNTING FOR THE GRAVITY STACKING LOADS.
10. THE ENGINEER RESPONSIBLE FOR THE TRUSS DESIGN SHALL REVIEW AND CONFIRM THAT THE PROVIDED TRUSS BEARING CONDITIONS ARE ADEQUATE FOR THE SPECIFIED TRUSS TYPES AND NOTIFY THE ENGINEER ON RECORD IF ANY CHANGES ARE TO BE MADE TO THE BEARING CONDITIONS.
11. LONG SPAN TRUSSES PARALLEL TO BEARING WALLS SHALL BE DESIGNED FOR STRICTER DEFLECTION LIMITATIONS AS SHOWN BELOW:



12. SUBMIT APPROPRIATE NUMBER OF SHOP DRAWINGS TO ENGINEER ON RECORD (E.O.R.) INCLUDING A LAYOUT FOR ALL WOOD TRUSSES PRIOR TO FABRICATION. ALL SHOP DRAWINGS AND LAYOUTS TO BE SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA RESPONSIBLE FOR THE DESIGN OF ALL TRUSSES.
13. THE ENGINEER RESPONSIBLE FOR THE TRUSS DESIGN SHALL INSPECT TRUSSES ONCE INSTALLED AND PROVIDE ENGINEER ON RECORD (E.O.R.) WITH P.ENG. SIGNED WRITTEN VERIFICATION OF INSTALLATION.
14. DESIGN BRACING, BRIDGING, FRAMED OPENINGS, CAMBERS AND CONNECTIONS IN ACCORDANCE WITH THE NATIONAL BUILDING CODE - 2023 ALBERTA EDITION AND STANDARDS AS NOTED IN THE PROJECT SPECIFICATIONS TO SAFELY CARRY ALL LOADS INDICATED ON THE DRAWINGS.

WOOD I-JOISTS

1. I-JOISTS SHALL BE DESIGNED AND FABRICATED BY THE I-JOIST SUPPLIER. I-JOISTS SHALL BE ABLE TO WITHSTAND THE LOADS INDICATED UNDER "DESIGN LOADS" ACCOUNTING FOR ALL STACKING LOADS.
2. I-JOIST SPACING NOTED ON PLANS IS MAXIMUM ALLOWABLE. REDUCED SPACING MAY BE CONSIDERED ONCE APPROVED BY THE STRUCTURAL ENGINEER.
3. DESIGN OF I-JOISTS TO CONFORM TO STANDARDS NOTED IN PROJECT SPECIFICATIONS.
4. LIMIT ROOF DEFLECTIONS TO L/240 FOR TOTAL LOADS AND L/360 FOR LIVE LOADS.
5. LIMIT FLOOR DEFLECTIONS TO L/360 FOR TOTAL LOADS AND L/480 FOR LIVE LOADS.
6. FLOOR I-JOISTS SHALL BE DESIGNED TO COMPLY WITH VIBRATION PERFORMANCE CRITERIA AS PER CSA O86-19.
7. ALL WOOD I-JOISTS CONNECTIONS AND HARDWARE INCLUDING ROOF WIND UPLIFT TIE-DOWNS TO BE PROVIDED BY THE SUPPLIER.
8. METAL CONNECTORS TO CONFORM TO STANDARDS NOTED IN PROJECT SPECIFICATIONS.
9. THE ENGINEER RESPONSIBLE FOR THE I-JOIST DESIGN SHALL SPECIFY SQUASH BLOCK REQUIREMENTS ACCOUNTING FOR THE GRAVITY STACKING LOADS.
10. THE ENGINEER RESPONSIBLE FOR THE I-JOIST DESIGN SHALL REVIEW AND CONFIRM THAT THE PROVIDED I-JOIST BEARING CONDITIONS ARE ADEQUATE FOR THE SPECIFIED I-JOIST TYPES. NOTIFY THE ENGINEER ON RECORD IF ANY CHANGES ARE TO BE MADE TO THE SPECIFIED BEARING CONDITIONS.
11. TRUSSES PARALLEL TO BEARING WALLS SHALL BE DESIGNED FOR STRICTER DEFLECTION LIMITATIONS AS SHOWN BELOW:



12. SUBMIT APPROPRIATE NUMBER OF SHOP DRAWINGS TO ENGINEER ON RECORD (E.O.R.) INCLUDING A LAYOUT FOR ALL WOOD I-JOISTS PRIOR TO FABRICATION. ALL SHOP DRAWINGS AND LAYOUTS TO BE SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA RESPONSIBLE FOR THE DESIGN OF ALL I-JOISTS.
13. THE ENGINEER RESPONSIBLE FOR THE I-JOIST DESIGN SHALL INSPECT I-JOISTS ONCE INSTALLED AND PROVIDE ENGINEER ON RECORD (E.O.R.) WITH P.ENG. SIGNED WRITTEN VERIFICATION OF INSTALLATION.
14. ALL HOLES IN I-JOISTS TO BE APPROVED / REVIEWED BY THE SUPPLIER.

CMHC SCHL

NO.	DATE	DESCRIPTION
2	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING

PROJECT:

CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

TYPICAL NOTES

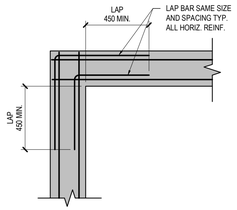
AB Sixplex 01

PROJECT NO: 02500462

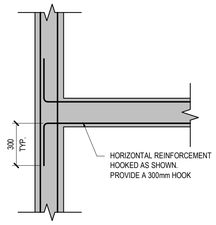
SCALE: 1 : 20

SHEET NO:

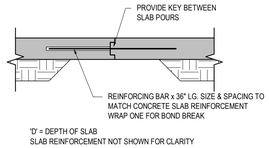
S101



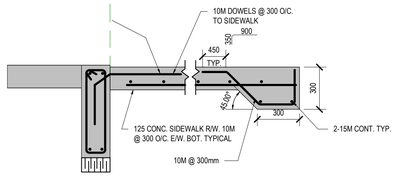
TYPICAL LAPPING AT CORNERS
-TYPICAL WALLS AND GRADE BEAMS



TYPICAL CORNER BARS AT INTERSECTING WALLS AND GRADE BEAMS

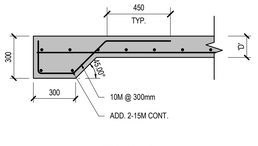


TYPICAL CONCRETE SLAB ON GRADE POUR BREAK (FLOOR JOINT)



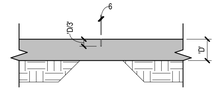
TYPICAL CONCRETE SIDEWALK DETAIL

FOR EXTENT OF SIDEWALK - SEE ARCHITECTURAL DRAWINGS.



'D' = DEPTH OF SLAB

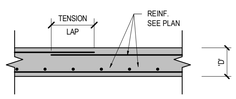
TYPICAL CONCRETE SLAB THICKENING



'D' = DEPTH OF SLAB

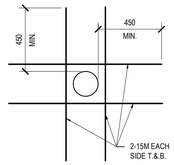
- SLAB REINFORCEMENT NOT SHOWN FOR CLARITY
- SPACING OF MOVEMENT JOINTS NOT TO EXCEED:
  - 2400 - 3000 FOR 100mm THICK SLABS
  - 3000 - 4000 FOR 130mm THICK SLABS
  - 3600 - 4600 FOR 150mm THICK SLABS
  - 3600 - 4600 FOR 175mm THICK SLABS
  - 4600 - 6000 FOR 200mm THICK SLABS
- NO SAWCUTS IN STRUCTURAL SLABS TYPICAL.

TYPICAL SAWCUT FOR CONCRETE SLAB ON GRADE



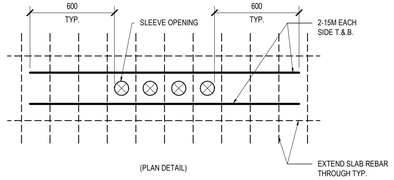
'D' = DEPTH OF SLAB / WIDTH OF WALL

TYPICAL REINFORCEMENT LAP IN WALLS AND SLABS UNLESS NOTED OTHERWISE



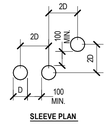
(PLAN DETAIL)

REINFORCEMENT AROUND SLEEVES WITH DIAMETERS LARGER THAN 100mm



(PLAN DETAIL)

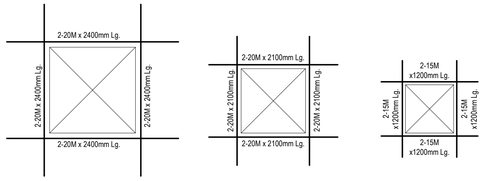
ADDITIONAL SLAB REINFORCEMENT WITH FOUR OR MORE SLEEVES



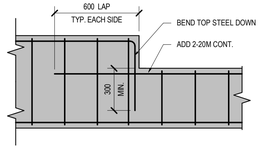
SLEEVE PLAN

- SPACING OF SLEEVES THROUGH FLAT SLABS AND WALLS TO BE NO LESS THAN INDICATED ABOVE.
- MAX. SLEEVE DIAMETER 100mm
- MAINTAIN CLEAR DISTANCE OF 600mm MIN. FROM FACE OF COLUMNS

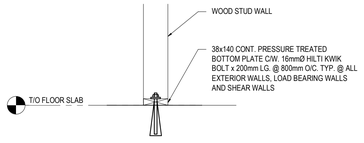
TYPICAL SPACING OF SLEEVES IN / THROUGH SLABS, BEAMS AND OR CONCRETE WALLS



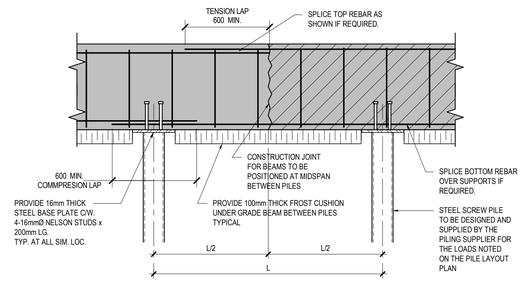
TYPICAL REINFORCEMENT FOR OPENINGS IN SLABS AND / OR CONCRETE WALLS



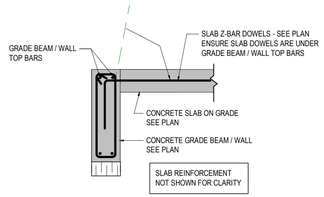
CHANGE IN GRADE BEAM HEIGHT DETAIL



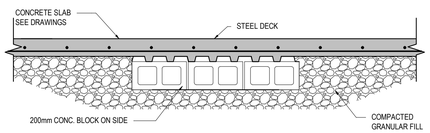
TYP. WOOD STUD WALL TO CONCRETE DETAIL



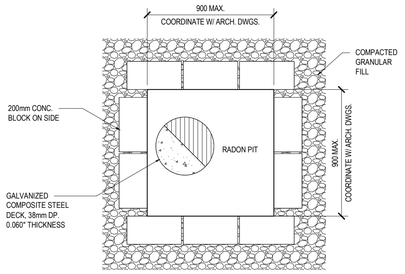
TYPICAL GRADE BEAM SPLICE DETAIL



TYPICAL SLAB ON GRADE TO GRADE BEAM / WALL Z-BAR DOWEL



SECTION VIEW



PLAN VIEW

TYPICAL RADON PIT DETAIL

1. COORDINATE LOCATION TO AVOID HIGHLY LOADED AREAS (EG. RACKING, HIGH TRAFFIC ZONES, POINT LOADS)
2. SEE ARCH. DWGS. FOR NUMBER, EXTENT AND LOCATIONS OF PITS

CMHC SCHL

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NO.	DATE	DESCRIPTION
2	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING

PROJECT:

CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

TYPICAL DETAILS

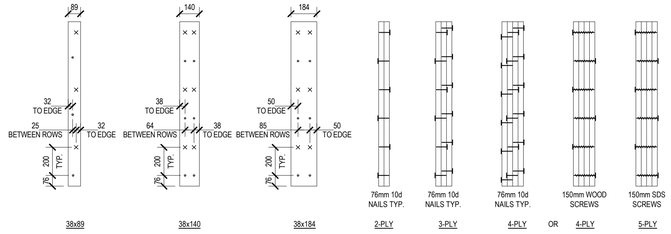
AB Sixplex 01

PROJECT NO: 02500462

SCALE: 1 : 20

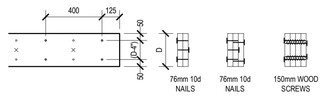
SHEET NO:

S102



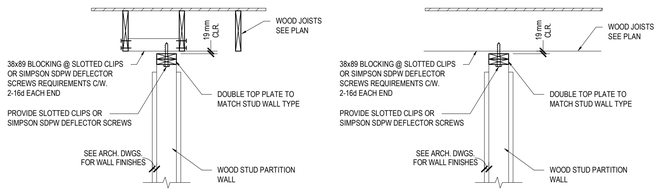
BUILT-UP COLUMN NAILING PATTERN

1. BUILT-UP STRUCUTRAL COMPOSITE LUMBER (LVL, LSL) COLUMNS TO BE FASTENED AS PER MANUFACTURER'S REQUIREMENTS

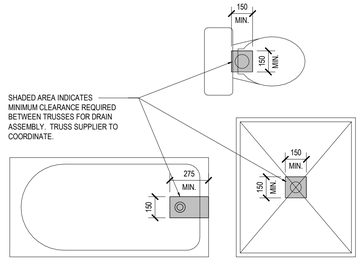


BUILT-UP BEAM NAILING PATTERN

1. BUILT-UP STRUCUTRAL COMPOSITE LUMBER (LVL, LSL) COLUMNS TO BE FASTENED AS PER MANUFACTURER'S REQUIREMENTS

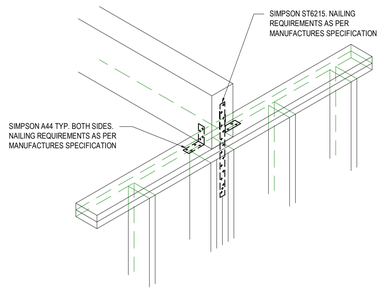


WOOD STUD PARTITION WALL DETAIL

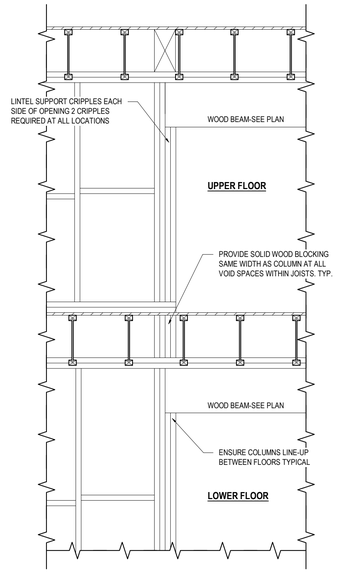


FRAMING REQUIREMENTS UNDER TUBS AND SHOWERS

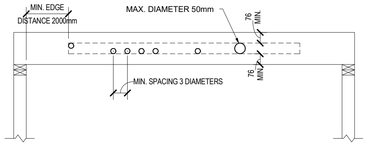
(SEE ARCHITECTURAL DRAWINGS FOR TUB AND SHOWER LOCATIONS)



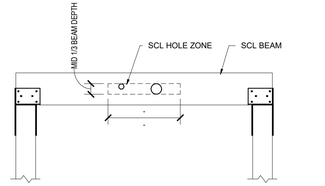
TYPICAL WOOD BEAM TO WOOD COLUMN WITHIN STUD WALL CONNECTION (WALL PERPENDICULAR TO BEAM)



TYPICAL COLUMN BLOCKING BETWEEN FLOORS



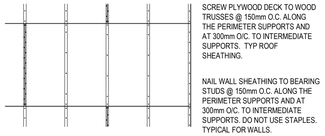
ALLOWABLE HOLES IN DIMENSIONAL LUMBER JOISTS



NOTES:

1. ALLOWED HOLE ZONE SUITABLE FOR LVL BEAM WITH UNIFORM LOAD ONLY
2. ROUND HOLES ONLY
3. NO HOLES IN CANTILEVER
4. NO HOLES IN LVL BEAM IN PLANK ORIENTATION
5. MAXIMUM ROUND HOLE SIZE: 50mm DIA.

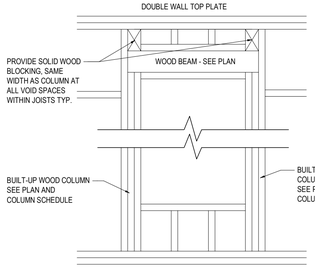
STRUCTURAL COMPOSITE ALLOWABLE FIELD LUMBER (SCL) MODIFICATION



SCREW PLYWOOD DECK TO WOOD TRUSSES @ 150mm O.C. ALONG THE PERIMETER SUPPORTS AND AT 300mm O/C. TO INTERMEDIATE SUPPORTS. TYP ROOF SHEATHING.

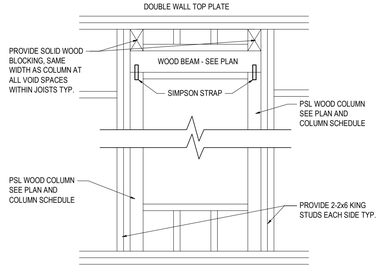
NAIL WALL SHEATHING TO BEARING STUDS @ 150mm O.C. ALONG THE PERIMETER SUPPORTS AND AT 300mm O/C. TO INTERMEDIATE SUPPORTS. DO NOT USE STAPLES. TYPICAL FOR WALLS.

PLYWOOD SHEATHING NAILING REQUIREMENTS



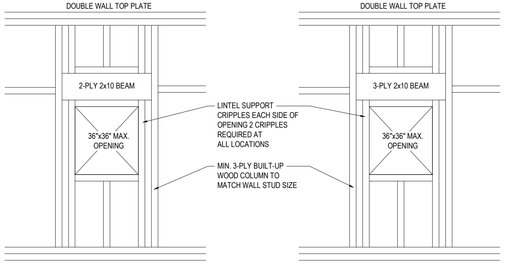
TYPICAL OPENING AT EXTERIOR WINDOW OR PATIO AT MAIN FLOOR (BUILT-UP COLUMN)

- 2 CRIPPLES
- COORDINATE SIZE AND LOCATION(S) OF OPENING WITH ARCHITECTURAL DRAWINGS TYPICAL



TYPICAL OPENING AT EXTERIOR WINDOW OR PATIO AT MAIN FLOOR (PSL COLUMN)

- COORDINATE SIZE AND LOCATION(S) OF OPENING WITH ARCHITECTURAL DRAWINGS TYPICAL

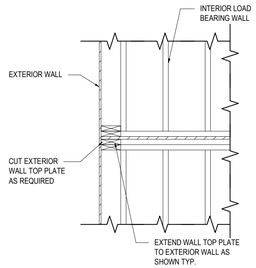


MECHANICAL DUCT OPENINGS IN 2x4 WALLS

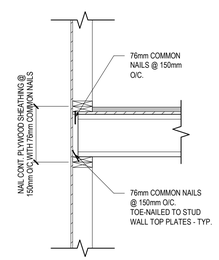
MECHANICAL DUCT OPENINGS IN 2x6 WALLS

TYPICAL STUD WALL OPENING AT MECHANICAL DUCTS

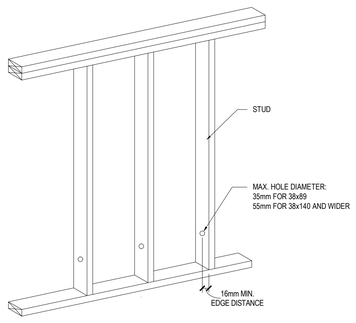
- COORDINATE SIZE AND LOCATION(S) OF OPENING WITH MECHANICAL DRAWINGS TYPICAL



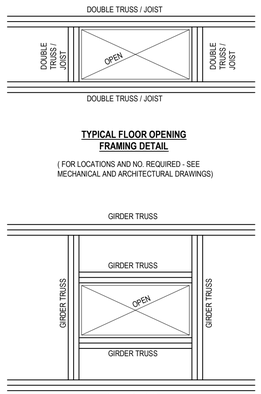
INTERIOR LOAD BEARING WALL TO EXTERIOR WALL DETAIL



NAILING REQUIREMENTS FOR WOOD I-JOISTS AT EXTERIOR WALLS



DRILLING DETAIL FOR WALL STUDS

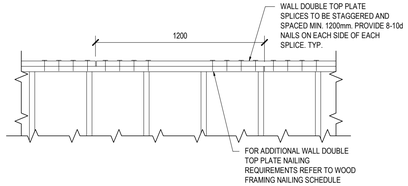


TYPICAL FLOOR OPENING FRAMING DETAIL

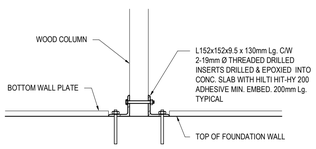
(FOR LOCATIONS AND NO. REQUIRED - SEE MECHANICAL AND ARCHITECTURAL DRAWINGS)

TYPICAL ROOF OPENING FRAMING DETAIL

(FOR LOCATIONS AND NO. REQUIRED - SEE MECHANICAL AND ARCHITECTURAL DRAWINGS)

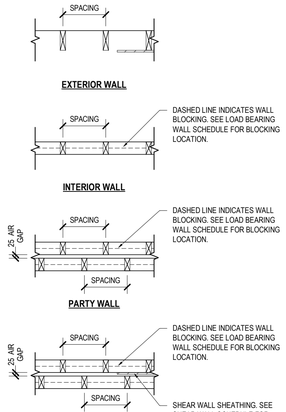


TYPICAL WALL TOP PLATE SPLICE CONNECTION



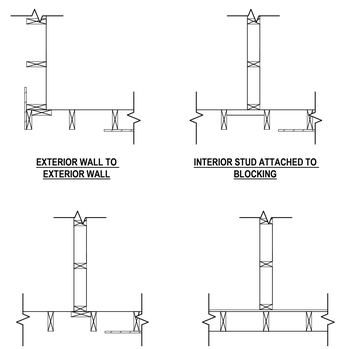
WOOD COLUMN TO FOUNDATION WALL CONNECTION

(EXCEPT BUILT-UP COLUMNS)



LOAD-BEARING WALL CONSTRUCTION DETAILS

1. SEE FRAMING NAILING SCHEDULE AND / OR SHEAR WALL SCHEDULE FOR NAILING REQUIREMENTS



EXTERIOR WALL TO EXTERIOR WALL

INTERIOR STUD ATTACHED TO BLOCKING

INTERIOR STUD ATTACHED TO STUD

INTERIOR STUD ATTACHED AFTER DRYWALL INSTALLATION

WALL TO WALL CONNECTION DETAILS

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PROJECT:

CMHC HOUSING CATALOGUE

ALBERTA, CANADA

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SHEET TITLE:

TYPICAL DETAILS

AB Sixplex 01

PROJECT NO: 02500462

SCALE: 1 : 20

SHEET NO:

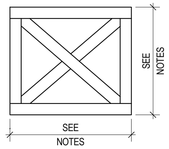
S103

MINIMUM TRUSS/JOIST SQUASH BLOCKING TABLE	
LEVEL	MINIMUM REQUIREMENTS
2ND FLOOR FRAMING	ONE EACH SIDE
3RD FLOOR FRAMING	ONE EACH SIDE
4TH FLOOR FRAMING	ONE PER TRUSS/JOIST
ROOF FRAMING	NONE

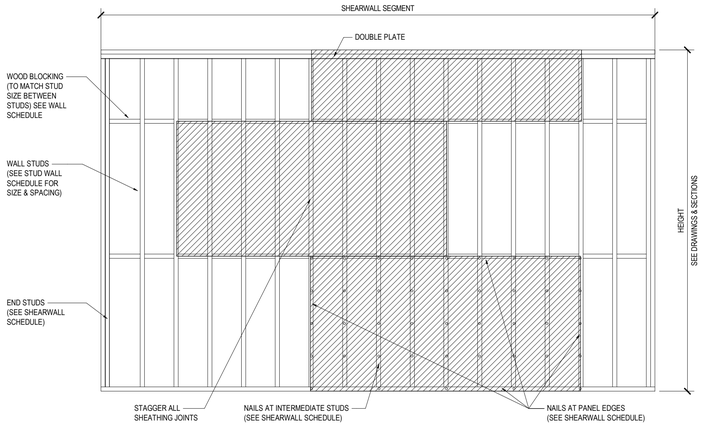
1. ADDITIONAL SQUASH BLOCKS MAY BE REQUIRED AS PER TRUSS JOIST MANUFACTURER'S RECOMMENDATIONS

SHEAR KEY TABLE	
WALL TYPE	MINIMUM REQUIREMENTS
EXTERIOR WALLS	3 PER SUITE
CORRIDOR WALLS	3 PER SUITE
LOAD BEARING PARTY WALLS	3 PER WALL EQUALLY SPACED
INTERIOR LOAD BEARING WALLS	3 PER SUITE

ADDITIONAL SHEAR KEYS MAY BE REQUIRED AS PER TRUSS SUPPLIERS MANUFACTURER'S RECOMMENDATIONS



TYPICAL SHEAR KEY



SHEARWALL NAILING -ELEVATION VIEW

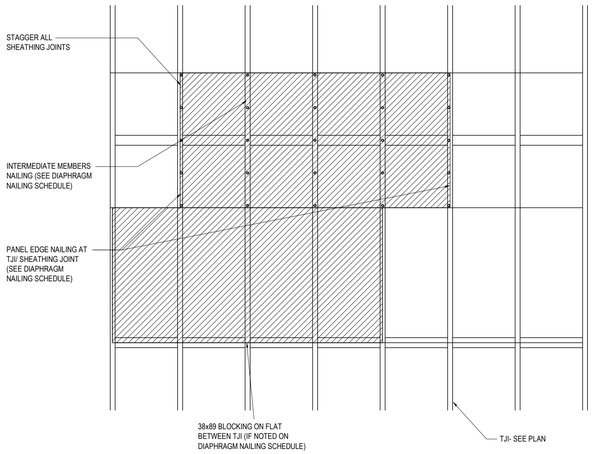
NOTE:
IF THE STRUCTURAL SHEATHING IS PLACED VERTICALLY, PROVIDE WALL BLOCKING AS SHOWN IN WALL SCHEDULE.

SHEAR WALL AND DIAPHRAGM NOTES:

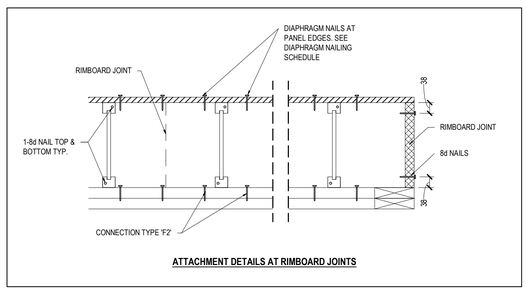
1. ALL NAILS TO BE COMMON WIRE NAILS BY LENGTH AND SPACING NOTED.
2. WHERE NAILS ARE SPACED 50mm ON CENTER, STUDS AND BLOCKING AT ADJOINING PANEL EDGES TO BE DOUBLED AND NAILED TOGETHER WITH 2-10d NAILS @ 150mm O/C. NAILS AT PANEL EDGES TO BE STAGGERED.
3. HOLDOWNS TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION.
4. SHEAR WALL BOTTOM PLATES TO BE CONNECTED TO CONCRETE WITH 16mmØ HILTI KWIK BOLT 1 CS ANCHORS @ 600mm O/C. C/W. 100mmm EMBED. ANCHORS TO BE INSTALLED MIN. 89mm FROM FACE TO CONCRETE.
5. WALL SHEATHING PANELS TO BE STAGGERED AND PLACED HORIZONTALLY. PROVIDE BLOCKING AT ALL HORIZONTAL SHEATHING JOINTS.
6. FLOOR/ ROOF SHEATHING TO BE INSTALLED WITH STRONG AXIS AT RIGHT ANGLES TO JOISTS/ TRUSSES.
7. FLOOR/ ROOF SHEATHING TO BE CONTINOUS ABOVE PARTY WALLS (SHEATHING CANNOT BE CUT FOR IMPROVED ACOUSTICS).
8. NAILS TO BE PLACED NOT LESS THAN 9.5mm FROM FRAMING EDGES AND SHALL NOT BE OVEDRIVEN.
9. A MINIMUM OF 3mm GAP TO BE LEFT BETWEEN ADJACENT WALL AND FLOOR/ ROOF SHEATHING PANELS.
10. FOR LOAD - BEARING WALLS THAT ARE NOT SHEAR WALLS, WALL-TO -FLOOR CONNECTION DETAILS TO MATCH 6TH FLOOR FRAMING FOR ALL FLOORS.
11. RIMBOARD THICKNESS INDICATED IN SHEAR WALL SCHEDULES ARE MIN. REQUIRED AND APPLY TO SHEAR WALLS ONLY. AT OTHER LOCATIONS, RIM BOARD THICKNESS CAN BE REDUCED AS PER FLOOR SUPPLIER'S SHOP DRAWINGS BUT CANNOT BE LESS THAN 32mm.

WOOD FRAMING NAILING SCHEDULE	MIN. LENGTH OF NAILS	MIN. NUMBER OF NAILS / MAX. NAIL SPACING
WALL STUDS TO WALL TOP / BOTTOM PLATES - TOE NAILS	2 1/2"	4
WALL STUDS TO WALL TOP / BOTTOM PLATES - END NAILS	3 1/4"	2
WALL DOUBLE TOP / BOTTOM PLATES	3"	24" O/C
BOTTOM WALL PLATE OR SOLE PLATE TO FLOOR JOISTS, RIM JOISTS OR BLOCKING - EXTERIOR WALLS	3 1/4"	6" O/C
BOTTOM WALL PLATE OR SOLE PLATE TO FLOOR JOISTS, RIM JOISTS OR BLOCKING - INTERIOR WALLS	3 1/4"	16" O/C
DOUBLED STUDS AT OPENINGS, WALL ENDS	3"	12" O/C
WALL BLOCKING TO WALL STUDS - TOE NAILS	2 1/2"	2 EACH SIDE
LUMBER JOISTS OR BLOCKING TO WALL TOP PLATES - TOE NAILS	3"	2 EACH SIDE
RIM BOARD TO WALL TOP PLATES - TOE NAILS	3 1/4"	6" O/C
JOISTS BLOCKING TO LUMBER JOISTS - END NAILS	3"	2 EACH SIDE
DOOR / WINDOW HEADERS TO STUDS - TOE NAILS	3 1/4"	3 EACH SIDE

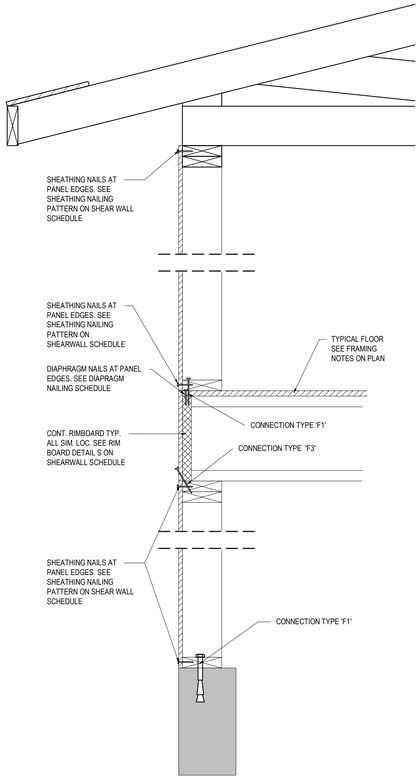
1. REFER TO SHEARWALL SCHEDULE ON DWG. SX.X FOR ADDITIONAL NAILING REQUIREMENTS AT SHEARWALL LOCATIONS.



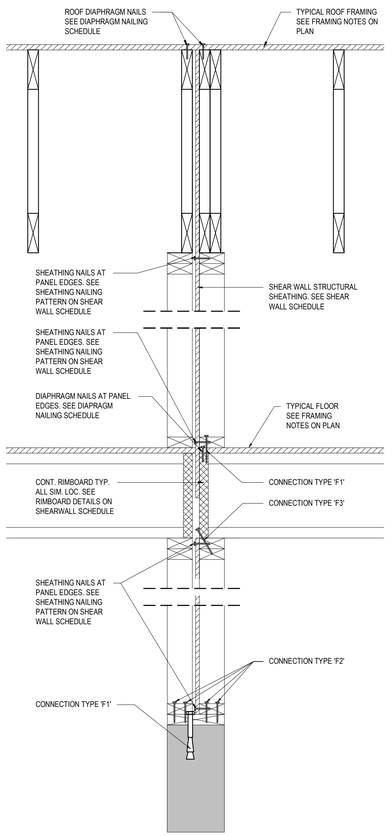
DIAPHRAGM NAILING -PLAN VIEW



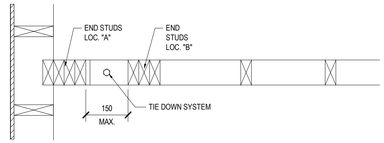
ATTACHMENT DETAILS AT RIMBOARD JOINTS



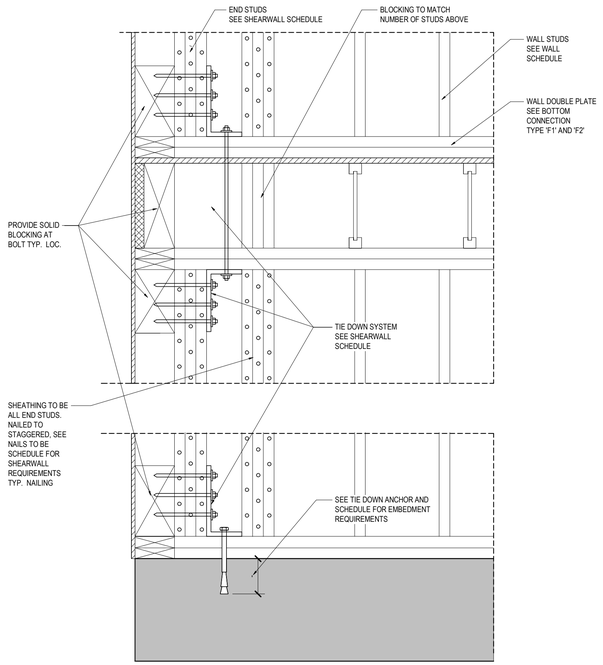
EXTERIOR WALL SHEAR WALL



PARTY WALL SHEAR WALL



PLAN VIEW



TIE-DOWN SYSTEM - HOLDOWNS AT EACH END OF A SHEARWALL

CMHC SCHL

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TYPICAL DETAILS

AB Sixplex 01

PROJECT NO: 02500462

SCALE: As indicated

SHEET NO:

S104

SECTION 031100   CONCRETE FORMWORK

1. CONCRETE FORMWORK SHALL CONFORM WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS:
   - NATIONAL BUILDING CODE - 2019 ALBERTA EDITION
   - CSA A23.1 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION"
   - CSA S269.1 "FALSEWORK AND FORMWORK"
2. THE DESIGN OF CONCRETE FORMWORK AND ADEQUATE SHORING SYSTEMS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

1. CONSTRUCT FORMWORK TO MAINTAIN THE FOLLOWING MAXIMUM TOLERANCES UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE DRAWINGS.
   - DEVIATION FROM HORIZONTAL AND VERTICAL LINES 3/8" (10mm) IN 66 ft (20m).
   - DEVIATION OF BUILDING DIMENSIONS NOT MORE THAN 3/16" (5mm).
   - DEVIATION OF CROSS SECTIONAL DIMENSIONS OF COLUMNS OR BEAMS +/- 1/8" (3mm).

SECTION 032000   CONCRETE REINFORCEMENT

1. CONCRETE REINFORCEMENT SHALL CONFORM WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS:
   - ACI SP-66 "ACI DETAILING MANUAL"
   - CSA A23.1 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION"
   - CSA G40.20 "GENERAL REQUIREMENTS FOR ROLLED OR WELDED STRUCTURAL QUALITY STEEL"
   - CSA G30.15-M1983 "WELDED DEFORMED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT"
   - CAN/CSA G30.18 "CARBON STEEL BARS FOR CONCRETE REINFORCEMENT"
   - CAN/CSA W186 "WELDING OF REINFORCING BARS FOR CONCRETE CONSTRUCTION"
   - ASTM A775 "EPOXY-COATED STEEL REINFORCING BARS"
2. SUBMIT SHOP DRAWINGS FOR ALL REINFORCING STEEL.
3. REINFORCING STEEL TO CSA G30.18 400 MPA YIELD GRADE SPECIAL LOW ALLOY DEFORMED BILLET STEEL FOR WELDING, WITH EQUIVALENT CARBON CONTENT NOT EXCEEDING 0.5 AND/OR FOR BENDING WHERE BENDING RADIUS IS SMALLER THAN RECOMMENDED STANDARDS.
4. SHOP BEND BARS COLD. IDENTIFY STEEL. HOOKS, BENDS, CAPS AND SIMILAR DETAILS TO ACI DETAILING MANUAL 315.
5. CLEAN REINFORCEMENT TO CSA A23.1.
6. CONCRETE COVER TO BE PROVIDED AS FOLLOWS, UNLESS NOTED OTHERWISE ON THE DRAWINGS. USE THE GREATER VALUE OF COVER IN THIS SPECIFICATION OR ON THE DRAWINGS.
7. LAP HORIZONTAL STEEL IN ACCORDANCE WITH CSA A23.1.
8. PROVIDE ADDITIONAL REINFORCEMENT TO THAT INDICATED ON DRAWINGS AS FOLLOWS:
   - 2-15M VERTICALS AT ENDS OF WALLS.
   - 2-15M HORIZONTALS ABOVE AN OPENINGS IN WALLS. EXTEND REINFORCEMENT 18" (450mm) BEYOND EDGE OF OPENING ON EACH SIDE.
   - PROVIDE CORNER BARS TO ALL CORNERS AND INTERSECTIONS.

SECTION 033000   CAST-IN-PLACE CONCRETE

1. CAST-IN-PLACE CONCRETE SHALL CONFORM WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS:
   - NATIONAL BUILDING CODE - 2019 ALBERTA EDITION
   - CAN/CSA-A5 "PORTLAND CEMENT"
   - CAN/CSA-A8 "MASONRY CEMENT"
   - CSA A23.1 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION"
   - CSA A23.2 "TEST METHODS AND STANDARD PRACTICES FOR CONCRETE"
   - CSA A23.3 "DESIGN OF CONCRETE STRUCTURES"
   - CAN 3-266.2-M78 "CHEMICAL ADMIXTURES FOR CONCRETE"
   - CSA A283 "QUALIFICATIONS CODE FOR CONCRETE TESTING LABORATORIES"
   - CAN A266.1-M78 "AIR-ENTRAINING ADMIXTURES FOR CONCRETE"
2. TO ENSURE THAT THE REQUIRED CONCRETE STRENGTHS ARE BEING ACHIEVED, TESTING SHALL BE PERFORMED BY A RECOGNIZED TESTING LABORATORY AS FOLLOWS:
   - ONE SET OF THREE (3) STANDARD TEST SPECIMENS, TO BE MADE FOR EACH CLASS OF CONCRETE IN ANY ONE DAY POUR OF MORE THAN 5 CUBIC METERS. FOR POURS OF MORE THAN 60 CUBIC METERS, ONE SET PER EACH 60 CUBIC METERS.
   - ONE ADDITIONAL STANDARD TEST SPECIMEN TO BE MADE DURING COLD WEATHER.
   - CONCRETE TO BE SAMPLED AT THE POINT OF DEPOSIT OF THE CONCRETE.
   - FOR EACH SET OF TEST SPECIMENS A SLUMP TEST AND ENTRAINED AIR TEST IS TO BE INCLUDED.
3. CONCRETE REQUIREMENTS:
   - READY MIX CONCRETE TO ASTM C94 (LATEST VERSION).
   - REFER TO CONCRETE SCHEDULE FOR MIX REQUIREMENTS.
   - AGGREGATES TO CSA A23.1 AND ASTM C330-17A MAXIMUM SIZE 3/4" (20mm) COARSE AGGREGATE.
4. CONCRETE WORK TO BE WITHIN THE TOLERANCE LISTED BELOW:
   - VARIATION OF THE LINEAR BUILDING LINES LESS THAN 3/16" (5mm).
   - VARIATION OF GROSS SECTIONS OF THICKNESS OF SLABS +/- 1/4" (6mm).
   - VARIATION FROM LEVEL OR FROM GRADES INDICATED FOR SURFACES OF SLAB SHALL NOT EXCEED UNDER A 3m STRAIGHT EDGE IMMEDIATELY AFTER TROWELLING.
5. CONDUITS, PIPES AND SLEEVES IN CONCRETE:
   - ACCURATELY LOCATE AND SET IN PLACE ITEMS WHICH ARE TO BE CAST DIRECTLY INTO CONCRETE.
   - COORDINATE WORK WITH OTHER TRADES.
   - PLACEMENT OF CONDUITS, SLEEVES, ETC. SHALL NOT IMPAIR THE STRUCTURAL STRENGTH OF STRUCTURE. CENTER LINE SPACING TO BE NOT LESS THAN 3 CONDUIT DIAMETERS. CENTER LINE SPACING BETWEEN PARALLEL CONDUITS AND REINFORCEMENT TO BE 3 CONDUIT DIAMETERS
   - SLEEVES OR CONDUITS THROUGH COLUMNS NOT ALLOWED.
   - SLEEVES THROUGH BEAMS NOT ALLOWED.
   - DO NOT PLACE SLEEVES NEXT TO COLUMNS. MAINTAIN SLEEVES 4 ft (1200mm) MINIMUM DISTANCE AWAY FROM FACE OF COLUMN.
   - SPACING OF SLEEVES THROUGH SLABS TO BE 2 TIMES THE DIAMETERS MINIMUM.
6. SUPPORT SLAB BOTTOM REINFORCEMENT ON SLAB BOLSTERS TO MAINTAIN CONCRETE PROTECTION AS REQUIRED.
7. SLAB POURS SHALL NOT EXCEED 8500 FT2/.
8. LAYOUT CONSTRUCTION JOINTS PRIOR TO PLACEMENT OF CONCRETE. CONSTRUCTION JOINTS ARE TO BE REVIEWED AND APPROVED BY THE CONSULTANT.
9. HOOKS ON COLUMNS SHALL BEND 135°.
10. DO NOT REMOVE FORMWORK BEFORE CONCRETE HAS REACHED 75% OF SPECIFIED 28 DAY STRENGTH.
11. CURING:
    - CONCRETE CURING TO CSA A23.1.
    - BASIC CURING: KEEP CONCRETE SURFACE CONTINUOUSLY MOIST UNTIL CONCRETE TEMPERATURE DUE TO HYDRATION HAS PEAKED AND DROPPED SEVERAL DEGREES, OR FOR THREE DAYS AT A MINIMUM TEMPERATURE OF 10°C.
    - ADDITIONAL CURING: IMMEDIATELY FOLLOWING BASIC CURING AND BEFORE THE CONCRETE HAS DRIED, CURE FOR AN ADDITIONAL FOUR DAYS, MAINTAINING THE TEMPERATURE OF THE AIR IN CONTACT WITH THE CONCRETE ABOVE 10°C.
    - ACCEPTABLE CURING METHODS:
      - PONDING OR CONTINUOUS SPRINKLING.
      - ABSORPTIVE MAT OR FABRIC KEPT CONTINUOUSLY WET.
      - DAMP SAND, EARTH, OR SIMILAR MOIST MATERIAL.
      - CONTINUOUS STEAM VAPOUR MIST BATH NOT EXCEEDING 70°C.
      - CURING COMPOUND.
      - WATERPROOF PAPER OR PLASTIC FILM.
      - OTHER MOISTURE-RETAINING METHOD APPROVED BY THE CONSULTANT.
      - FORMS IN CONTACT WITH CONCRETE SURFACE.
    - DO NOT USE CURING COMPOUNDS ON CONCRETE SURFACES, WHICH ARE EXPECTED TO RECEIVE TOPPING, HARDENER, OR OTHER TYPE OF BONDED FINISH UNLESS APPROVED BY THE CONSULTANT.
    - PROTECT FRESHLY PLACED AND CONSOLIDATED CONCRETE AGAINST DAMAGE OR DEFACEMENT FROM ADVERSE WEATHER CONDITIONS.
    - EXPOSED CONCRETE WALKING SURFACES NOT TO RECEIVE AN INTEGRAL HARDENER: COAT WITH CURING COMPOUND OR CURING METHOD THAT PROVIDES PERMANENT SEAL.
    - IN AREAS WITH AN EXPOSED CONCRETE FLOOR SURFACE, APPLY THE HARDENER AND DUST-PROOFING AGENT STRICTLY TO THE MANUFACTURER'S INSTRUCTIONS.
    - SUBMIT PROPOSED METHODS OF PROTECTION AND CURING WHEN AIR TEMPERATURE IS AT OR ABOVE 25°C OR AT OR BELOW 5°C, OR LIKELY TO BE SO WITH 24 HOURS OF PLACING TIME.
    - WATER FOR CURING SHALL BE CLEAN AND FREE FROM MATERIALS THAT WILL CAUSE STAINING OR DISCOLORATION OF THE CONCRETE.
    - IF DAMP SAND, EARTH OR SIMILAR MOIST MATERIAL IS UTILIZED FOR HORIZONTAL SURFACES, SPREAD 2" (50mm) OVER THE ENTIRE SURFACE AND KEEP SATURATED WITH WATER.
    - FOR VERTICAL SURFACES SUCH AS WALLS, COLUMNS, PIERS, LOOSEN THE FORMS, LEAVE FORM IN PLACE.
    - IF MOIST CURING IS NOT USED, THEN SPRAYED CURING COMPOUNDS ARE TO BE USED.
      - CURING COMPOUNDS TO BE OF THE LIQUID MEMBRANE TYPE FOR CURING CONCRETE AND SHALL BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.
      - CURING COMPOUNDS USED FOR EXPOSED CONCRETE MUST NOT DISCOLOR THE CONCRETE, NOR BE SUCH AS TO PROHIBIT THE SUBSEQUENT APPLICATION OF PAINT, TILES, PARGING OR OTHER COATINGS.
      - FOR HORIZONTAL SURFACES, AFTER THE COMPLETION OF FINISHING OPERATIONS AND IMMEDIATELY AFTER THE DISAPPEARANCE OF SURFACE MOISTURE, APPLY THE SPRAYED CURING COMPOUND.

SECTION 316223 SCREW PILES

1. SCREW PILES SHALL CONFORM WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS:
   - ASTM A36/A36M "CARBON STRUCTURAL STEEL".
   - ASTM A252 "WELDED AND SEAMLESS STEEL PIPE PILES"
   - ASTM D1143/D1143M-07E1 "TEST METHODS FOR DEEP FOUNDATIONS UNDER STATIC AXIAL COMPRESSIVE LOAD".
   - CAN/CSA-G40.20/G40.21 "GENERAL REQUIREMENTS FOR ROLLED OR WELDED STRUCTURAL QUALITY STEEL/STRUCTURAL QUALITY STEEL".
   - CSA W47.1 "CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL".
   - CSA W48 "FILLER METALS AND ALLIED MATERIALS FOR METAL ARC WELDING".
   - CSA W59 "WELDED STEEL CONSTRUCTION (METAL ARC WELDING)".
2. DESIGN REQUIREMENTS:
   - DESIGN PILES FOR THE LOADING SHOWN ON DRAWINGS.
   - DESIGN COMPONENTS AND CONNECTIONS NECESSARY TO RESIST ALL LOADS INDICATED ON DRAWINGS.
   - PILE DESIGN SHALL BE SIGNED AND SEALED BY A P.ENG DESIGNATED IN THE PROVINCE OF ALBERTA.
   - ALL HELICAL PILES TO BE DESIGNED BY THE SUPPLIER FOR A MINIMUM 75 YEAR OPERATIONAL LIFE. REVIEW OF THE GEOTECHNICAL EVALUATION IS INCUMBENT UPON THE HELICAL PILES SUPPLIER
3. SHOP DRAWINGS:
   - INCLUDE THE FOLLOWING INFORMATION:
     - PILE LAYOUT.
     - TYPE OF PILE.
     - PILE LOADS.
     - GRADE AND DETAILS OF STEEL.
     - ELEVATION OF PILE BASES.
     - ELEVATION OF TOP OF PILE CAPS.
     - CONNECTION OF TOP OF SCREW PILE TO CONCRETE PIER.
   - SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA.
4. QUALITY ASSURANCE
   - PERFORM WORK IN ACCORDANCE WITH REQUIREMENTS OF CSA G40.21, UNLESS INDICATED OTHERWISE HEREIN.
   - **SUPERVISION**: PILINGS ARE TO BE INSTALLED UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER RESPONSIBLE FOR PRODUCING THE GEOTECHNICAL REPORT, RETAINED AND PAID FOR BY THE CONTRACTOR, AND APPROVED BY THE CONSULTANT.
   - INSPECTION OF CAP PLATES AND WELDED ANCHORS:
     - MATERIALS AND WORKMANSHIP WILL BE SUBJECT TO INSPECTION AND TESTING BY AN INDEPENDENT INSPECTION AND TESTING FIRM CERTIFIED IN ACCORDANCE WITH CSA W178.1, RETAINED AND PAID FOR BY THE CONTRACTOR AND APPROVED BY THE CONSULTANT.
     - TESTING CONDUCTED TO CSA W59 AND CAN/CSA S16.1 STANDARDS, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
       a. VISUAL EXAMINATION OF ALL WELDS AND WORKMANSHIP THAT ARE READILY ACCESSIBLE (100%).
       b. RANDOM MAGNETIC PARTICLE TESTING OF SELECTED FIELD WELDS OF ALL COMPONENTS (10% OF CONNECTIONS)
       c. BOLT SPECIFICATIONS, GRADED AND FASTENING VERIFICATION (10% OF CONNECTIONS)
       d. REVIEW OF DRAWINGS, WELDING PROCEDURES, WELDING CERTIFICATIONS, DATA SHEETS AND WELDING CONSUMABLES STORAGE (FIELD)
       e. CONFIRM ACCEPTABILITY OF PRIMER COATS
       f. TRACKING OF ALL NOTED DEFICIENCIES, TIMELY FAXING OF TECHNICAL REPORTS TO AL RELEVANT PARTIES, IMMEDIATE CORRESPONDENCE OF IMPORTANT ISSUES TO THE ENGINEER OF RECORD, AND A FINAL SUMMARY REPORT INCLUDING ALL RETAINED DOCUMENTATION, THE FINAL PROJECT STATUS
     - BY AN INDEPENDENT INSPECTION AND TESTING FIRM TO SUBMIT TO THE CONSULTANT, A FINAL REPORT   CERTIFYING ALL WELDS AND CONNECTIONS, INCLUDING CONFIRMATION THAT REQUIRED REPAIRS HAVE BEEN COMPLETED. THIS REPORT MUST BE SUBMITTED UNDER THE SEAL AND SIGNATURE OF A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA
     - DAMAGE: MAKE GOOD ALL AREAS DAMAGED IN CONNECTION WITH THE CONTRACT REGARDLESS OF THE LIMITS OF THE CONTRACT AS SHOWN ON THE DRAWINGS.
5. MATERIALS
   - PLATES: GRADE 350W
   - PIPE:

ASTM 252	YIELD STRENGTH	TENSILE STRENGTH
(GRADE 2)	250 MPA	414 MPA
(GRADE 3)	310 MPA	455 MPA

   - PLATE (HELIX) AND PILE CAPS:

CSA G40.21	YIELD STRENGTH	TENSILE STRENGTH
ASTM A36	245 MPA	414 MPA
ASTM 44W	310 MPA	414 MPA

   - HELIX(S) SHALL HAVE A MINIMUM THICKNESS OF 1/2" (12.7mm) AND SHALL BE ASTM A36/A36M OR G40.21, GRADE 350W MATERIAL.
   - PIPE SPLICING SHALL BE FULL STRENGTH COMPLETE PENETRATION GROOVE WELDS OR THE COMBINATION OF A COLLAR AND CONTINUOUS FILLET WELD ON EACH END OF THE COLLAR TO ENSURE CONTINUITY OF PIPE.
   - HELIX(S) SHALL BE WELDED TO THE PIPE SECTION USING A CONTINUOUS FILLET WELD ON BOTH SIDES OF THE HELIX TO PIPE CONNECTION.
   - WELDING PROCEDURES AND WELDER QUALIFICATION: TO CSA W59 AND CSA 47.1.
   - WELDING ELECTRODES: TO CSA W48.1, E7018 CLASSIFICATION FOR STICK WELDING AND E4802-6-CH CLASSIFICATION FOR WIRE FEED WELDING.
   - SCREW PILES USED FOR PILING SHALL BE IN ACCORDANCE WITH ASTM A252 GRADE 2 OR 3 OR A106 GRADE B OR C.
   - PILES SHALL HAVE A MINIMUM 8"x8"x5/8" (200x200x16mm) PLATE WELDED TO TOP OF PILE.
   - PILES SHALL BE INSTALLED TO MINIMUM DEPTH AS SHOWN IN THE SHOP DRAWINGS AND TO A TORQUE VALUE NECESSARY TO ACHIEVE THE DESIGN LOADS SPECIFIED IN THE PILE SCHEDULE.
   - MINIMUM REQUIREMENTS FOR STEEL PIPE SCREW PILES ARE AS FOLLOWS UNLESS NOTED OTHERWISE.

PILE DIAMETER (mm)	MIN. WALL THICK (mm)
114.3	6.02
139.7	6.99
168.3	7.11
219.1	6.71
273.1	9.27

   - POSITION OF PILES SHOULD BE CONSIDERED SATISFACTORY PROVIDING THE FOLLOWING CONDITIONS ARE MET:
   - PILES TOPS ARE LOCATED WITHIN 1" (25mm) OF THE POSITION SPECIFIED ON THE DRAWINGS.
   - PILES ARE WITHIN 2% INCLINATION FROM THE VERTICAL OR SPECIFIED INCLINATION.
   - THE PILES, AS PLACED, ARE NOT STRUCTURALLY DAMAGED.
   - CHANGES OR REPAIRS OF STRUCTURAL DAMAGE DUE TO IMPROPER PLACEMENT OF PILES SHALL BE MADE AS DIRECTED BY THE ENGINEER SUPERVISING THE PILES INSTALLATION AND AT THE CONTRACTORS EXPENSE.
   - SCREW PILE INSTALLATION RECORDS FOR ALL PILES SHALL BE PROVIDED TO THE ENGINEER ON RECORD.
6. SOILS REPORT
   - REFER TO SOILS REPORT, WHICH IS ASSOCIATED WITH THIS SPECIFICATION.

SECTION 06 17 33 WOOD I-JOISTS

Part 1   GENERAL

1. REFERENCES
   - NATIONAL BUILDING CODE – 2019 ALBERTA EDITION
   - CSA O86: ENGINEERING DESIGN IN WOOD.
   - NLGA 14: STANDARD GRADING RULES FOR CANADIAN LUMBER.
   - CSA O121: DOUGLAS FIR PLYWOOD.
   - CSA O151: CANADIAN SOFTWOOD PLYWOOD.
   - CSA-O325: CONSTRUCTION SHEATHING.
   - ASTM D5055: STANDARD SPECIFICATION FOR ESTABLISHING AND MONITORING STRUCTURAL CAPACITIES OF PREFABRICATED WOOD I-JOISTS.
   - ISO/IEC 17065: CONFORMITY ASSESSMENT - REQUIREMENTS FOR BODIES CERTIFYING PRODUCTS, PROCESSES AND SERVICES.
   - CSA O122 SERIES: CSA STANDARDS FOR WOOD ADHESIVES

2. DESIGN REQUIREMENTS
   - DESIGN WOOD I-JOISTS, BRACING, BLOCKING, BRIDGING, FRAMED OPENINGS, AND CONNECTIONS IN ACCORDANCE WITH CSA O86 TO SAFELY CARRY ALL LOADS INDICATED ON DRAWINGS INCLUDING MECHANICAL AND OTHER EQUIPMENT NOT NOTED.
   - LIMIT ROOF LIVE LOAD DEFLECTION TO L/360 AND FLOOR LIVE LOAD DEFLECTION TO L/480.
   - LIMIT ROOF TOTAL LOAD DEFLECTION TO L/240 AND FLOOR TOTAL DEFLECTION TO L/360.

3. DELIVERY, STORAGE, AND PROTECTION
   - STORAGE AND HANDLING REQUIREMENTS:
     - STORE MATERIALS ON RAISED SUPPORTS. COVER MATERIALS WITH WATERPROOF COVERING. PROVIDE ADEQUATE AIR CIRCULATION AND VENTILATION.
     - PROTECT I-JOISTS FROM WEATHER AND STORE THEM ON JOB SITE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PROVIDE BEARING SUPPORTS AND BRACINGS TO PREVENT BENDING OR OVERTURNING DURING TRANSIT AND STORAGE.

4. SHOP DRAWINGS
   - SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION:
     - CLEARLY INDICATE THE TYPE OF PRODUCT, LAYOUT, DESIGN LOADS INCLUDING SNOW DRIFT DIAGRAM, SHOP APPLIED FINISHES, SHOP AND ERECTION DETAILS, INCLUDING CUTS, HOLES, FASTENINGS, BEARING CONDITIONS AND CONNECTION HARDWARE. ALSO, QUANTITY OF ALL MEMBER TYPES, CONNECTIONS AND ACCESSORIES, AS WELL AS ALL BRACING, BLOCKING AND FRAMING ACCESSORIES REQUIRED FOR INSTALLATION.
     - SHOP DRAWINGS TO BEAR A STAMP OF QUALIFIED ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA.
   - I-JOIST PLACEMENT AND LAYOUT DRAWING:
     - SUBMIT I-JOIST LAYOUT DRAWING(S) FOR APPROVAL.
     - INDICATE THE LOCATION OF EACH I-JOIST AND GIRDER BY USING THE IDENTIFICATION NUMBER.
     - IDENTIFY ALL WALLS THAT WERE TAKEN AS BEARING WALLS.
     - INDICATE THE HANGER TYPE TO BE USED FOR CONNECTING I-JOISTS TO GIRDER JOISTS AND BEAMS.

5. **QUALITY ASSURANCE**
   - MEET OR EXCEED REQUIREMENTS OF CSA O86-19.
   - DESIGN STRUCTURAL MEMBERS UNDER DIRECT SUPERVISION OF A PROFESSIONAL STRUCTURAL ENGINEER EXPERIENCED IN DESIGN OF THIS WORK AND LICENSED IN THE PROVINCE WHERE THE PROJECT IS LOCATED.

Part 2   PRODUCTS

1. MATERIALS
   - FLANGE MATERIALS: SAWN LUMBER GRADED IN ACCORDANCE WITH NLGA OR SCL QUALIFIED BY TESTING AS SPECIFIED IN ASTM D5055.
   - STRUCTURAL WEB PANELS: WEBS SHALL BE MANUFACTURED FROM STRUCTURAL PANELS MEETING THE REQUIREMENTS OF CSA O121, CSA O151, CSA O153, OR CSA O325.
   - ADHESIVES: WOOD I-JOISTS SHALL BE MANUFACTURED USING A CLASS OF ADHESIVES MEETING THE REQUIREMENTS OF CSA O112.6 OR CSA O112.7. ALTERNATIVE ADHESIVES SHALL MEET THE REQUIREMENTS OF CSA O112.9 OR CSA O112.10.
   - STEEL FOR CONNECTIONS: TYPE 350W.
   - GALVANIZING FOR STEEL CONNECTIONS: HOT DIP GALVANIZING TO CAN/CSA G164.

2. **FABRICATION**
   - DO NO COMMENCE WITH FABRICATION OF I-JOISTS UNTIL SHOP DRAWINGS HAVE BEEN APPROVED.
   - FABRICATE I-JOISTS IN ACCORDANCE WITH THE REVIEWED SHOP DRAWINGS.
   - ENSURE ALL MEMBERS ARE ACCURATELY CUT TO LENGTH, ANGLE, AND TRUE TO LINE TO ENSURE TIGHT JOINTS.
   - ACCURATELY PLACE ALL CONNECTORS TO LOCATION INDICATED ON THE APPROVED SHOP DRAWINGS.

Part 3   EXECUTION

1. ERECTION
   - ERECT MEMBERS IN ACCORDANCE WITH REVIEWED SHOP DRAWINGS.
   - COORDINATE I-JOIST INSTALLATION WITH WORK OF OTHER TRADES FOR PROPER TIME AND SEQUENCE TO AVOID CONSTRUCTION DELAYS.
   - COMPLY WITH MANUFACTURER'S PRODUCT DATA, INCLUDING PRODUCT TECHNICAL BULLETINS, PRODUCT CATALOG INSTALLATION INSTRUCTIONS AND PRODUCT CARTON INSTRUCTIONS, FOR INSTALLATION.
   - INSTALL I-JOISTS PLUMB, LEVEL AND AS INDICATED.
   - FASTEN JOISTS TO SUPPORTING FRAMING AS RECOMMENDED BY THE I-JOIST MANUFACTURER AND HANGER MANUFACTURER.
   - PROVIDE TEMPORARY BRACING AS RECOMMENDED BY THE MANUFACTURER TO HOLD JOISTS IN POSITION UNTIL PERMANENTLY SECURED.
   - CUT OPENINGS IN JOIST WEBS ONLY AS ALLOWED BY THE MANUFACTURER.
   - PROVIDE A MINIMUM 40 MM GAP BETWEEN NON-LOAD BEARING PARTITION WALLS BELOW AND THE BOTTOM CHORD OF I-JOISTS TO ALLOW FOR DEFLECTIONS.

2. **FIELD QUALITY CONTROL**
   - OBTAIN WRITTEN REPORT FROM MANUFACTURER VERIFYING COMPLIANCE OF WORK, IN HANDLING, INSTALLING, PROTECTING AND CLEANING OF PRODUCT.
   - SUBMIT MANUFACTURER'S FIELD SERVICES CONSISTING OF PRODUCT USE RECOMMENDATIONS AND PERIODIC SITE VISITS FOR INSPECTION OF PRODUCT INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
   - ENSURE MANUFACTURER'S REPRESENTATIVE PRESENT BEFORE AND DURING CRITICAL PERIODS OF INSTALLATION.
   - FIELD PROTECTION: IF REQUESTED, GIVE ADEQUATE ADVANCE NOTICE TO CONSULTANT OF PROPOSED ERECTION SCHEDULES. CONSULTANT SHALL CONDUCT INSPECTIONS DURING PROGRESS OF THE ERECTION OPERATION AS PROJECT MAY WARRANT.
   - FIELD SERVICES BY THE CONSULTANT OR THEIR REPRESENTATIVE DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO CARRY OUT THE WORK AS SHOWN IN THE CONTRACT DOCUMENTS.

SECTION 06 10 00 WOOD FRAMING

1. WOOD FRAMING SHALL CONFIRM WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS:
   - NATIONAL BUILDING CODE – 2019 ALBERTA EDITION
   - CSA O86: ENGINEERING DESIGN IN WOOD.
   - NLGA: STANDARD GRADING RULES FOR CANADIAN LUMBER.
   - CSA O141: SOFTWOOD LUMBER.
   - CSA O121: DOUGLAS FIR PLYWOOD.
   - CSA O151: CANADIAN SOFTWOOD PLYWOOD.
   - CSA-O325: CONSTRUCTION SHEATHING.
   - CSA B111: WIRE NAILS, SPIKES AND STAPLES.
   - ASME B18.2.1: SQUARE, HEX, HEAVY HEX, AND ASKEW HEAD BOLTS AND HEX, HEAVY HEX, HEX FLANGE, LOBED HEAD, AND LAG SCREWS.
   - ASTM A307: STANDARD SPECIFICATION FOR CARBON STEEL BOLTS AND STUDS, 60 000 psi TENSILE STRENGTH.
   - GS-11: PAINTS AND COATINGS.
2. QUALITY ASSURANCE
   - MATERIAL SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF NATIONAL BUILDING CODE – ALBERTA EDITION.
   - LUMBER SHALL BE GRADED AND STAMPED BY AN AGENCY CERTIFIED BY CANADIAN LUMBER STANDARDS ADMINISTRATIVE BOARD.
   - PLYWOOD SHALL BE GRADED AND STAMPED IN ACCORDANCE WITH APPLICABLE CSA STANDARDS.
   - PANEL PRODUCTS SHALL BE MARKED WITH A RECOGNIZED, VISIBLE GRADE STAMP.
3. DELIVERY, STORAGE, AND HANDLING
   - PROTECT LUMBER AND OTHER PRODUCTS FROM DAMPNESS BOTH DURING AND AFTER DELIVERY AT SITE.
   - PILE LUMBER IN STACKS IN SUCH MANNER AS TO PROVIDE AIR CIRCULATION AROUND SURFACES OF EACH PIECE.
   - STACK PLYWOOD AND OTHER BOARD PRODUCTS SO AS TO PREVENT WARPING.
   - LOCATE STACKS ON WELL DRAINED AREAS, SUPPORTED AT LEAST 6 INCHES ABOVE GRADE AND COVER WITH WELL-VENTILATED SHEDS HAVING FIRMLY CONSTRUCTED OVER HANGING ROOF WITH SUFFICIENT END WALL TO PROTECT LUMBER FROM DRIVING RAIN.
   - DO NOT STORE SEASONED MATERIALS IN WET OR DAMP AREAS.
   - PROTECT EDGES AND CORNERS OF SHEET MATERIALS FROM DAMAGE DURING HANDLING AND STORAGE.
4. PRODUCT MATERIALS
   - LUMBER:
     - GRADES: USE CLS GRADE MARKED LUMBER CONFORMING TO THE STANDARD GRADING RULES FOR CANADIAN LUMBER PUBLISHED BY THE NATIONAL LUMBER GRADES AUTHORITY.
     - LUMBER FOR STRUCTURAL LIGHT FRAMING: TO CAN/CSA 0141, NO.1/NO.2, SURFACE-DRY, GRADED AND STAMPED IN ACCORDANCE WITH CURRENT NATIONAL LUMBER GRADES AUTHORITY (NLGA) STANDARD GRADING RULES FOR CANADIAN LUMBER. EACH PIECE OF LUMBER MUST BEAR GRADE MARK, STAMP, OR OTHER IDENTIFYING MARKS INDICATING GRADES OF MATERIAL, AND RULES OR STANDARDS UNDER WHICH PRODUCED. ANY LUMBER NOT GRADE MARKED WILL BE REJECTED.
     - MOISTURE CONTENT: MAXIMUM 19% AT TIME OF INSTALLATION.
     - FINGER JOINTED LUMBER IS NOT ACCEPTABLE.
     - FRAMING AND BOARD LUMBER: IN ACCORDANCE WITH ABC AND AS SPECIFIED IN SCHEDULES.
     - FURRING, BLOCKING, NAILING STRIPS, GROUNDS, ROUGH BUCKS, CANTS, CURBS FASCIA BACKING AND SLEEPERS: S4S, "STANDARD" OR BETTER GRADE FOR BOARD, POST AND TIMBER SIZES, "STANDARD" LIGHT FRAMING OR BETTER FOR DIMENSION SIZES.
   - PANEL PRODUCTS:
     - CANADIAN SOFTWOOD PLYWOOD: MANUFACTURED AND IDENTIFIED IN ACCORDANCE WITH CSA O151, THICKNESS AS INDICATED ON DRAWINGS.
     - DOUGLAS FIR PLYWOOD: MANUFACTURED AND IDENTIFIED IN ACCORDANCE WITH CSA O121, THICKNESS AS INDICATED ON DRAWINGS.
     - ORIENTED STRAND BOARD (OSB): OSB PANELS TO CSA O325, THICKNESS AS INDICATED ON DRAWINGS. GRADE STAMP SHALL INDICATE SPAN RATING.
     - ADHESIVES FOR STRESS JOINTS FOR STRUCTURAL PANELS SHALL MEET THE REQUIREMENTS OF CSA O112.7.
   - FASTENINGS AND HARDWARE:
     - NAILS AND SPIKES: TO CSA B111.
     - WOOD SCREWS: TO ASME B18.2.1.
     - LAG SCREWS: TO ASME B18.2.1.
     - BOLTS TO ASTM A307.
     - SPLIT RING CONNECTORS: HOT ROLLED CARBON STEEL, SAE 1010, IN ACCORDANCE WITH SAE HANDBOOK.
     - SHEAR PLATE CONNECTORS: PRESSED STEEL TYPE: HOT ROLLED CARBON STEEL, SAE 1010, IN ACCORDANCE WITH SAE HANDBOOK; MALLEABLE IRON TYPE: TO ASTM A47/A47M, GRADE 350.
     - SIDE PLATES: TO ASTM A36 AND/OR CSA G40.20/G40.21.
     - DRIFT PINS: TO ASTM A307.
     - TIMBER RIVETS: HOT DIPPED GALVANIZED, TO ASTM A36 AND/OR CSA G40.20/G40.21.
     - LUMBER JOIST HANGERS: U-SHAPED JOIST HANGERS WITH 50 MM LONG SEAT AND 32 MM WIDE NAILING FLANGES AT LEAST 85% OF JOIST DEPTH.
   - STEEL FOR CONNECTIONS: TO CSA-G40.20/G40.21, GRADE 300W.
   - GALVANIZING FOR STEEL CONNECTIONS: HOT DIP GALVANIZING TO CAN/CSA G164.
5. PRESERVATIVE TREATMENT:
   - USE PRESSURE PRESERVATIVE TREATED WOOD FOR FOLLOWING COMPONENTS: FASCIA BACKING, ROOF CURBS, ROOF NAILERS, SLEEPERS ON ROOF DECK, WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY, WOOD IN DIRECT CONTACT WITH SOIL MATERIALS.
6. ERECTION EXECUTION:
   - INSTALL MEMBERS TRUE TO LINE, LEVELS AND ELEVATIONS. SPACE UNIFORMLY.
   - CONSTRUCT CONTINUOUS MEMBERS FROM PIECES OF LONGEST PRACTICABLE LENGTH.
   - INSTALL BLOCKING TO FACILITATE INSTALLATION OF FINISHING MATERIALS, FIXTURES, SPECIALTY ITEMS AND TRIM.
   - BRACE AND ANCHOR MEMBERS UNTIL PERMANENTLY SECURED BY STRUCTURE.
   - MAKE ADEQUATE PROVISIONS FOR ERECTION STRESSES.
   - INSTALL WOOD PLATES WHERE INDICATED. ERECT PLUMB AND TRUE. RIGIDLY SUPPORT AND SECURELY ANCHOR TO MASONRY, CONCRETE, AND METAL STUD FRAMING.
   - PROVIDE AND INSTALL WOOD STRAPPING OR FURRING INDICATED ON DRAWINGS.
   - STRAPPING: SHIMMED OUT PLUMB, SQUARE AND TRUE TO LINE. USE 19 MM X 64 MM AT 406 MM O.C., UNLESS INDICATED OTHERWISE.
   - INSTALL AT LEAST ONE ROW OF SOLID BLOCKING TO WOOD STUD WALLS NOT MORE THAN 2440 MM HIGH, TWO ROWS IF OVER 2440 MM HIGH.
   - INSTALL BLOCKING BEHIND ALL SHEATHING AND WALLBOARD JOINTS, AND WHERE REQUIRED FOR ITEMS TO BE FIXED TO WALLS.
   - INSTALL ROOF AND WALL SHEATHING WITH PANEL END JOINTS LOCATED ON SOLID BEARING, STAGGERED AT LEAST 800mm.
   - FASTEN ROOF/FLOOR AND WALL SHEATHING PANELS USING COMMON SPIRAL OR ANNULAR GROOVED NAILS SPACED 150 MM O.C. ALONG EDGES AND 300 MM O.C. ALONG INTERMEDIATE SUPPORTS. USE OF STAPLES IS NOT ACCEPTABLE.
7. FIELD QUALITY CONTROL:
   - FIELD PROTECTION: IF REQUESTED, GIVE ADEQUATE ADVANCE NOTICE TO CONSULTANT OF PROPOSED ERECTION SCHEDULES. CONSULTANT SHALL CONDUCT INSPECTIONS DURING PROGRESS OF THE ERECTION OPERATION AS PROJECT MAY WARRANT.
   - FIELD SERVICES BY THE CONSULTANT OR THEIR REPRESENTATIVE CONSISTS OF PERIODIC VISITS TO THE SITE TO FAMILIARIZE HIMSELF GENERALLY WITH THE PROGRESS AND QUALITY OF WORK AND TO DETERMINE IN GENERAL IF IT IS PROGRESSING ACCORDING TO THE CONTRACT DOCUMENTS, AND THE NECESSARY PAPERWORK RELATED TO THESE SERVICES.
   - FIELD SERVICES BY THE CONSULTANT OR THEIR REPRESENTATIVE DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO CARRY OUT THE WORK AS SHOWN IN THE CONTRACT DOCUMENTS.

SECTION 061723 PARALLAM

1. PARALLAM SHALL CONFORM WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS:
   - ASTM A123/A123M "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS".
   - ASTM F3125/F3125M-15A "STANDARD SPECIFICATION FOR HIGH STRENGTH STRUCTURAL BOLTS, STEEL AND ALLOY STEEL, HEAT TREATED, 120 ksi (830 MPa) AND 150 ksi (1040 MPa) MINIMUM TENSILE STRENGTH, INCH AND METRIC DIMENSIONS".
   - CAN/CSA O86:14 "ENGINEERING DESIGN IN WOOD".
   - ASTM D2559-12AE1 - STANDARD SPECIFICATION FOR ADHESIVES FOR BONDED STRUCTURAL WOOD PRODUCTS FOR USE UNDER EXTERIOR EXPOSURE CONDITIONS.
   - CAN/CSA S16 "DESIGN OF STEEL STRUCTURES".
   - CSA W47.1-09 "CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL".
   - CANADIAN CONSTRUCTION MATERIALS CENTER (CCMC) EVALUATION 13132-R - TJI SERIES JOISTS.
2. DESIGN
   - DESIGN CONNECTIONS NOT INDICATED ON DRAWINGS BUT NECESSARY FOR COMPLETION OF THE WORK IN ACCORDANCE WITH CAN/CSA O86.1 AND CAN/CSA S16.
   - LIMIT ROOF BEAM DEFLECTIONS TO L/240 TOTAL LOAD AND L/360 LIVE LOAD
   - LIMIT FLOOR BEAM DEFLECTIONS TO L/360 TOTAL AND L/480 LIVE LOAD.
3. SHOP DRAWINGS
   - INDICATE STRESS GRADE, SERVICE GRADE AND APPEARANCE GRADES, SHOP APPLIED FINISHES, CAMBER, CUTS, LEDGERS, HOLES AND CONNECTION DETAILS.
   - EACH ERECTION AND SHOP DRAWING SHALL BEAR THE STAMP AND SIGNATURE OF A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA.
4. QUALITY ASSURANCE
   - STEEL FABRICATOR PERFORMING WELDING OF STEEL CONNECTION SHALL BE CERTIFIED IN ACCORDANCE WITH CSA W47.1.
   - DESIGN STRUCTURAL MEMBERS UNDER DIRECT SUPERVISION OF A PROFESSIONAL STRUCTURAL ENGINEER EXPERIENCED IN DESIGN OF THIS WORK AND LICENSED AT THE PLACE WHERE THE PROJECT IS LOCATED.
5. DELIVERY, STORAGE, AND PROTECTION
   - WRAP MEMBERS WITH AN OPAQUE, MOISTURE RESISTANT WRAPPING PRIOR TO LEAVING PLANT.
   - USE PADDED, NON-MARRING SLINGS FOR HANDLING MEMBERS.
   - PROTECT CORNERS WITH WOOD BLOCKING
   - STORE MEMBERS SUPPORTED OFF THE GROUND AND SEPARATED WITH STRAPPING, TO ALLOW AIR TO CIRCULATED AROUND ALL THE FACES OF MEMBERS.
   - MAINTAIN PROTECTION OF MEMBERS UNTIL PERMANENT WEATHER PROTECTION IS INSTALLED, THEN COMPLETELY REMOVE PROTECTIVE WRAPPINGS.
6. MATERIALS
   - MATERIALS SHALL COMPLY WITH NES REPORT NO. NER-200 OR CCMC REPORT 13132-R.
   - STEEL FOR CONNECTIONS: GRADE 350W.
   - BOLTS FOR STEEL CONNECTIONS TO ASTM F3125/F3125M.
   - GALVANIZING FOR STEEL CONNECTIONS: HOT DIP GALVANIZING TO ASTM A123/A123M.
   - ADHESIVES: TO ASTM D2559, WATERPROOF TYPE.
   - WOOD SEALER: MANUFACTURER'S STANDARD CLEAR SEALER.
7. FABRICATION
   - PARALLAM SHALL BE MANUFACTURED IN A PLANT APPROVED FOR FABRICATION BY THE BUILDING CODE AND UNDER THE SUPERVISION OF AN APPROVED THIRD PARTY INSPECTION AGENCY.
   - CAMBER FOR JOISTS SPANNING OVER 5 METRES: 1.5 TO 2 TIMES DEAD LOAD DEFLECTION.
   - FABRICATE CONNECTION HARDWARE TO APPLICABLE REQUIREMENTS OF SECTION 055000.
   - TAG AND MARK MEMBERS AND CONNECTIONS AS IDENTIFIED ON SHOP DRAWINGS. AFFIX GRADE LABELS. LOCATE MARKS AND LABELS AT LOCATIONS CONCEALED AFTER INSTALLATION.
8. INSTALLATION
   - ERECT MEMBERS IN ACCORDANCE WITH REVIEWED ERECTION DRAWINGS.
   - BRACE AND ANCHOR MEMBERS UNTIL PERMANENTLY SECURED BY STRUCTURE.
   - FIT MEMBERS CLOSELY AND ACCURATELY TO OTHER MEMBERS AND OTHER ASSEMBLIES.
   - OBTAIN CONSULTANT'S APPROVAL PRIOR TO FIELD CUTTING OR ALTERING OF MEMBERS. IF APPROVED, APPLY FACTORY SEALER TO CUT SURFACES.

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PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

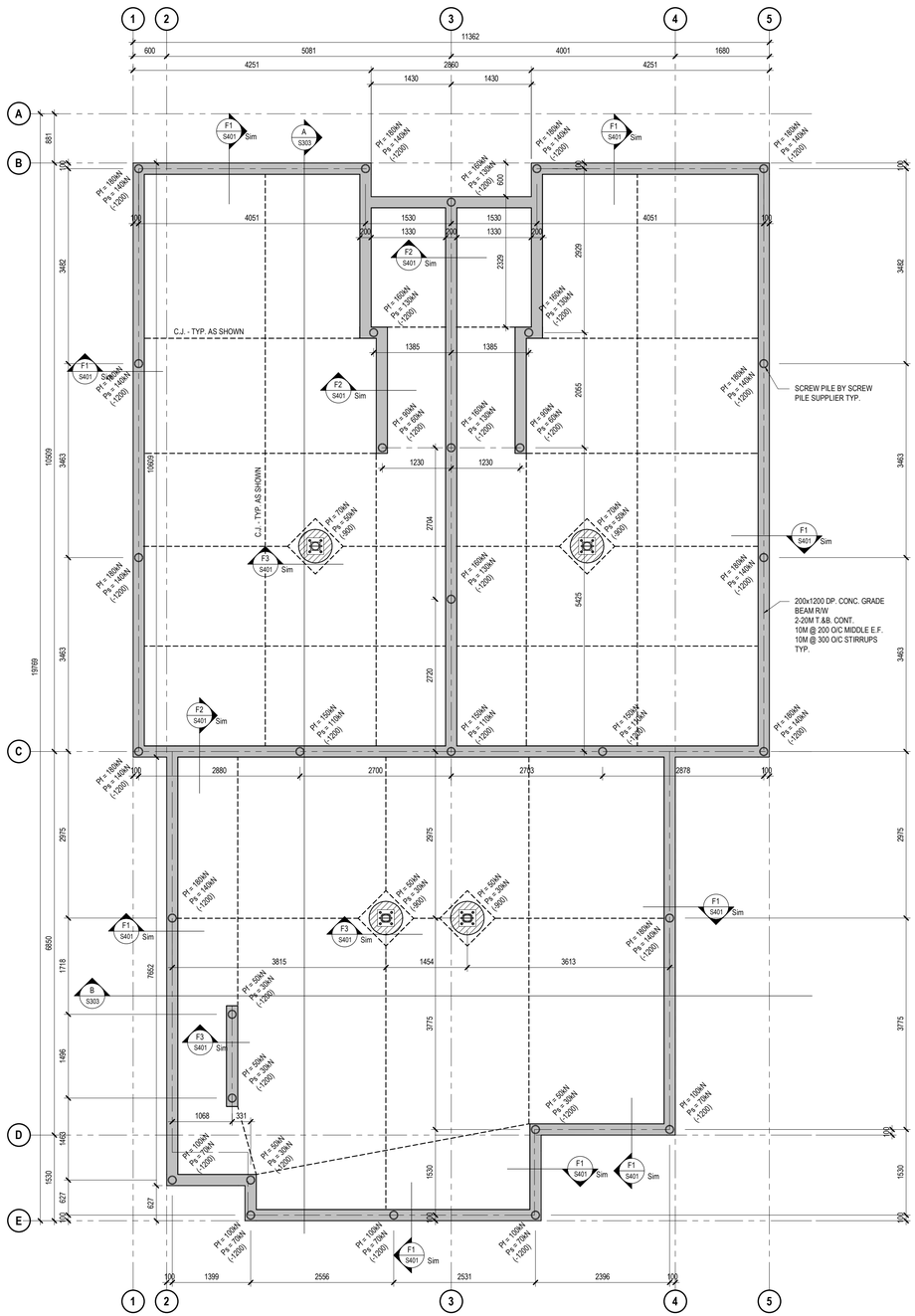
NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:
STRUCTURAL SPECIFICATIONS

AB Sixplex 01

PROJECT NO: 02500462
SCALE: 1 : 16

SHEET NO:
S105



FOUNDATION PLAN

1 : 50

FOUNDATION PLAN NOTES (PILES)

1. SEE DRAWINGS ON S100 SERIES FOR GENERAL NOTES & TYPICAL DETAILS.
2. LEAVE GRADE BEAM FORMS INTACT UNTIL CONCRETE HAS REACHED 70% OF ITS SPECIFIED STRENGTH.
3. C.J. ON PLAN INDICATES CONTROL JOINT. FILL JOINTS WITH WATERPROOF SEALANT. CONTROL JOINTS ARE NOT TO BE PLACED IN STRUCTURAL SLABS. VERIFY WITH ARCH. DWGS. FOR TILE FLOOR LAYOUT PATTERNS BEFORE COMMENCING WITH WORK.
4. T/O CONCRETE SLAB ELEVATION = 0.000 U.N.O. IS SHOWN ON PLAN AS THUS: T/O SLAB XXX
5. T/O PILE ELEVATION U.N.O. IS SHOWN ON PLAN AS THUS: Pf = kips Ps = kips (XX-XX')
6. SLOPE SLAB TO DRAINS AS PER ARCHITECTURAL AND MECHANICAL DRAWINGS. MAINTAIN FULL SLAB THICKNESS THROUGHOUT.
7. CONCRETE SLAB ON GRADE TO CONSIST OF 130mm THICK CONCRETE SLAB R/W, 10M @ 300 EACH WAY MIDDLE, ON SOIL GAS IMPERMEABLE MEMBRANE / VAPOUR BARRIER (15 mil) ON RADON ROCK ON COMPACTED GRANULAR FILL TYP. U.N.O. ON PLAN. COORDINATE AND CONFIRM THE ABOVE WITH ARCHITECTURAL, MECHANICAL AND GEOTECHNICAL REPORT. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
8. FOR FLOOR CURBS, TRENCHES AND MISCELLANEOUS DETAILS SEE ARCHITECTURAL AND MECHANICAL DRAWINGS. FOR LOCATION OF ALL SIDEWALKS AND / OR CONCRETE STOOPS SEE ARCHITECTURAL DRAWINGS.
9. PROVIDE BLOCKOUT IN GRADE BEAMS AT DOORWAYS TYP. SHOWN ON PLAN AS THUS:
10. ENSURE ALL GRADE BEAMS ARE TEMPORARILY BRACED AND LATERALLY SUPPORTED.
13. PILE MINIMUM SIZE SHALL BE 400mmØ AND REINFORCEMENT SHALL BE 4-15M VERTICAL FULL LENGTH. PROVIDE 10M @ 300mm O/C. TIES.
14. UNLESS NOTED OTHERWISE ON DRAWINGS, PROVIDE 4-15M x 1200mm LG. DOWELS AT ALL PILE TO GRADE BEAM LOCATIONS AND 6-15M x 1200mm LG. DOWELS AT ALL PILE TO CONCRETE PIER LOCATIONS.
15. UNLESS NOTED OTHERWISE PROVIDE 1200mm LONG DOWELS FROM PILES TO MATCH SIZE AND NUMBER OF VERTICAL REINFORCEMENT IN CONCRETE COLUMNS ABOVE.
16. PROVIDE A FULL TENSION SPLICE AT ALL LAPS IN SLAB REBAR.
17. REFER TO ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATIONS OF SLAB DEPRESSIONS. MAINTAIN FULL SLAB THICKNESS THROUGHOUT.
18. PROTECT SUBGRADE FROM WEATHER ELEMENTS BEFORE, DURING AND AFTER SLAB ON GRADE IS POURED. PROVIDE ADEQUATE PROTECTION TO MAINTAIN SUBGRADE TEMPERATURE ABOVE 5°C.

IMPORTANT NOTE:
CONTROL JOINTS ARE NOT TO BE PLACED IN STRUCTURAL SLABS.

SUBGRADE / SUB-BASE PREPARATION FOR GRADE SUPPORTED FLOOR SLABS

1. THE CONTRACTOR SHALL REVIEW AND FOLLOW THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT FOR PREPARATION / PROTECTION OF SUBGRADE / SUB-BASE. PREPARATION OF THE SUB-GRADE / SUB-BASE AND NEW FILL REQUIREMENTS SHALL BE REVIEWED AND APPROVED BY A GEOTECHNICAL ENGINEER WITHIN 24 HOURS PRIOR TO POURING CONCRETE.
2. REMOVE ALL ORGANIC TOPSOIL, FILL AND OTHER DELETERIOUS MATERIAL FROM THE BUILDING SLAB AREA. DEPTHS OF TOP SOIL AND FILL MAY VARY THROUGHOUT THE SITE GEOTECHNICAL ENGINEER TO REVIEW AND ADVISE.
3. FOLLOWING THE SUBCUTTING OF THE ORGANIC TOPSOIL AND FILL LAYERS, THE GRADE SHALL BE COMPACTED AND ANY SOFT SOILS BE IDENTIFIED AND ROLL PROOFED PRIOR TO PLACEMENT OF THE NEW BACKFILL. GEOTECHNICAL ENGINEER TO ADVISE CONTRACTOR ACCORDINGLY.
4. NEW ENGINEERED FILL SHALL BE COMPACTED AS PER THE GEOTECHNICAL REPORT. FILL MATERIAL SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
5. PROVIDE 15 mil POLYETHYLENE VAPOUR BARRIER WITH TAPED JOINTS TO THE UNDERSIDE OF SLAB ON GRADE. LAP ALL JOINTS 200mm (8") MIN.
6. PROTECT SUBGRADE FROM WEATHER ELEMENTS BEFORE, DURING AND AFTER SLAB ON GRADE IS POURED. PROVIDE ADEQUATE PROTECTION TO MAINTAIN SUBGRADE TEMPERATURE ABOVE 5°C.
7. SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

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NO.	DATE	DESCRIPTION
2	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING

PROJECT:

CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

FOUNDATION PLAN

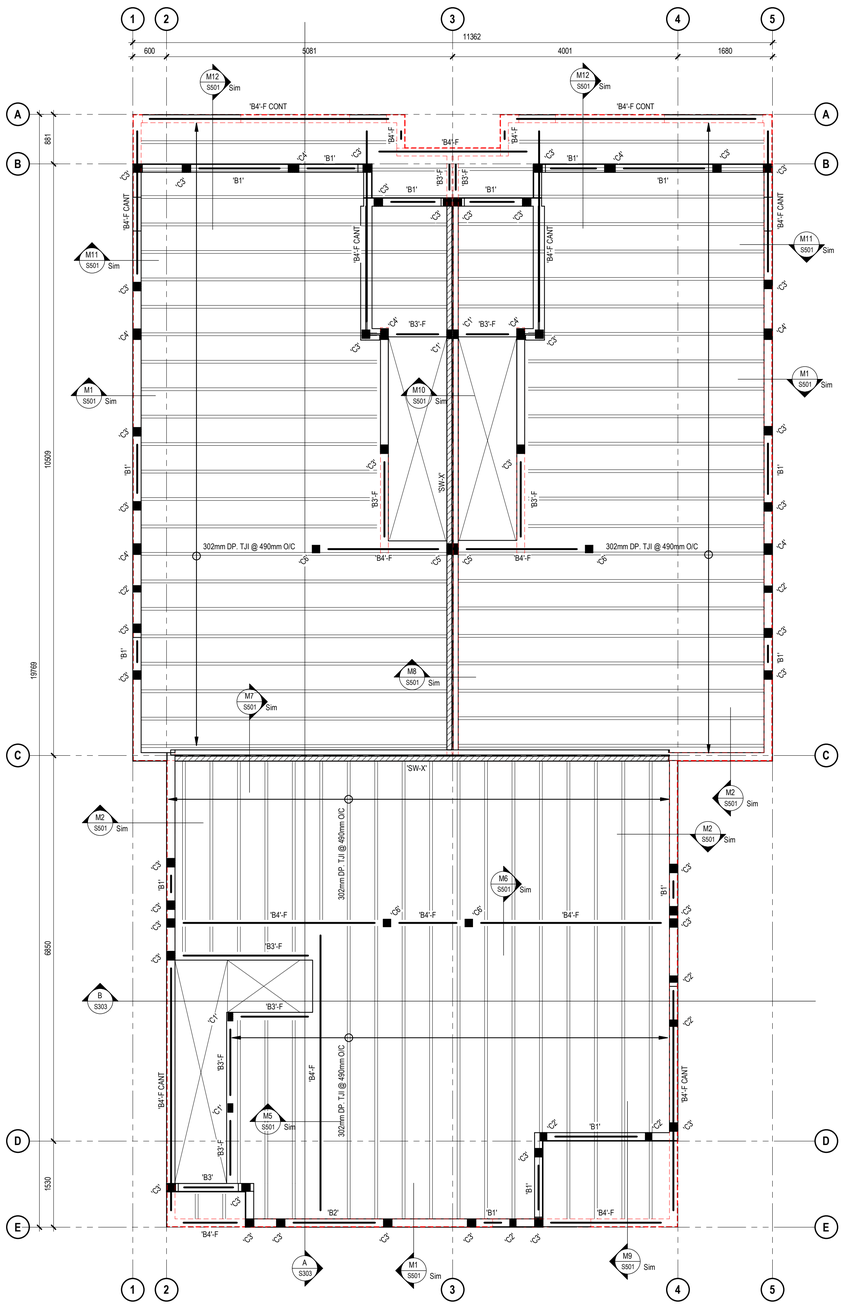
AB Sixplex 01

PROJECT NO: 02500462

SCALE: As indicated

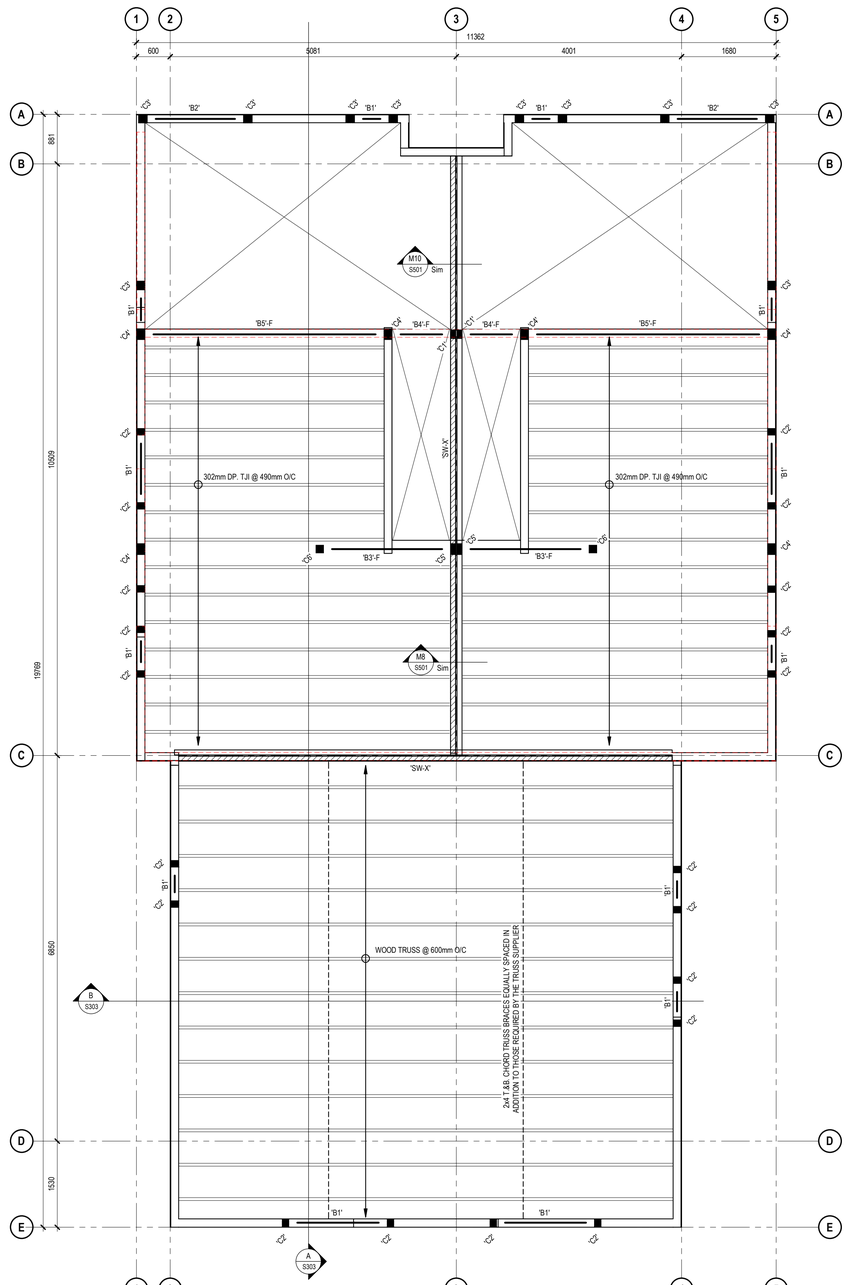
SHEET NO:

S201



2ND FLOOR FRAMING PLAN

1 : 50



3RD FLOOR AND LOW ROOF FRAMING PLAN

1 : 50

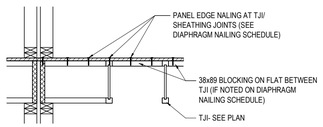
WOOD BEARING WALL SCHEDULE

WALL TYPE	SECOND FLOOR FRAMING (MAIN FLOOR WALLS)	THIRD FLOOR FRAMING (SECOND FLOOR WALLS)	ROOF FRAMING (THIRD FLOOR WALLS)	GRADE
EXTERIOR WALLS	2x6 @ 400mm O/C C/W 10mm OSB SHEATHING PROVIDE BLOCKING @ SHEATHING JOINTS	2x6 @ 400mm O/C C/W 10mm OSB SHEATHING PROVIDE BLOCKING @ SHEATHING JOINTS	2x6 @ 400mm O/C C/W 10mm OSB SHEATHING PROVIDE BLOCKING @ SHEATHING JOINTS	SPF No.2 OR BETTER
LOAD BEARING PARTY / SHEAR WALLS (EACH WALL)	2x4 @ 300mm O/C C/W MID-HEIGHT BLOCKING (EACH WALL) AT SHEAR WALLS, PROVIDE 10mm OSB SHEATHING ON ONE SIDE AND BLOCKING AT ALL HORIZONTAL SHEATHING JOINTS.	2x4 @ 400mm O/C C/W MID-HEIGHT BLOCKING (EACH WALL) AT SHEAR WALLS, PROVIDE 10mm OSB SHEATHING ON ONE SIDE AND BLOCKING AT ALL HORIZONTAL SHEATHING JOINTS.	N/A	SPF No.2 OR BETTER
STAIRWELL WALLS	2x6 @ 400mm O/C. C/W 2 ROWS OF BLOCKING	2x6 @ 400mm O/C. C/W MID HEIGHT BLOCKING	N/A	SPF No.2 OR BETTER
INTERIOR WALLS (WT1)	N/A	N/A	2x4 @ 400mm O/C C/W MID-HEIGHT BLOCKING	SPF No.2 OR BETTER

1. ALL WALL TYPES ARE TYPICAL UNLESS NOTED OTHERWISE.
2. WALLS TYPES INDICATED REPRESENT BEARING WALLS BELOW.
3. WALL VERTICAL ALIGNMENT TO BE WITHIN 13mm OVER ENTIRE HEIGHT OF BUILDING TYPICAL ALL LOAD BEARING WALLS.
4. ALL TOP & BOTTOM CONT. PLATES TO BE SPF No.2.

DIAPHRAGM NAILING SCHEDULE (FLOOR / ROOF SHEATHING)

LEVEL	SHEATHING TYPE	FASTENER TYPE	FASTENER SPACING		BLOCKED
			PANEL EDGES	INTERMEDIATE MEMBERS	
ROOF FRAMING	11mm T.&G. OSB	8d COMMON WIRE NAILS (0.131"x2.5") NAILED AND GLUED	100mm	300mm	NO
3rd FLOOR FRAMING	19mm T.&G. OSB		150mm	300mm	NO
2nd FLOOR FRAMING	19mm T.&G. OSB		150mm	300mm	NO



DIAPHRAGM NAILING- ELEVATION VIEW

SHEARWALL NAILING REQUIREMENTS

LEVEL	NAIL LENGTH	OSB THICKNESS	NAIL SPACING	
			PANEL EDGES	INTERIOR STUD LOCATIONS
ROOF	64mm	10mm	100mm	250mm
3RD FLOOR	64mm	10mm	100mm	250mm
2ND FLOOR	64mm	10mm	100mm	250mm

TYPICAL WALL STUD SPACING

WALL HEIGHT	STUD SPACING	GRADE
STUDS UP TO 15'	2x6 @ 400mm O/C	SPF No.2
STUDS UP TO 18'	2-2x6 @ 400mm O/C	SPF No.2

ROOF PLAN NOTES:

1. SEE ARCH. DWGS. FOR ROOF ELEVATIONS AND ROOF SLOPES.
2. SLOPED ROOF FRAMING TO CONSIST OF 11mm OSB SHEATHING WITH H-CLIPS OVER WOOD TRUSSES UNLESS NOTED OTHERWISE ON PLAN. TRUSS SPACING NOT TO EXCEED 600mm O/C. DECREASE SPACING IF REQUIRED UPON ENGINEER'S WRITTEN APPROVAL.
3. SEE DRAWINGS S100 SERIES FOR TYPICAL NOTES, DETAILS & SPECIFICATIONS.
4. VERIFY ALL DIMENSIONS ON SITE PRIOR TO TRUSS FABRICATION.
5. ROOF TRUSSES AND ALL MISCELLANEOUS ROOF FRAMING SHALL BE DESIGNED AND SUPPLIED BY THE TRUSS SUPPLIER FOR THE LOADS STATED IN THE GENERAL NOTES UNDER "DESIGN LOADS".
6. SUPERSTRUCTURE HAS BEEN DESIGNED BASED ON THE ABOVE ROOF FRAMING. TRUSS SUPPLIER TO ADVISE THE ENGINEER ON RECORD ACCORDINGLY IF LAYOUT CHANGES AS SUPERSTRUCTURE DESIGN MAY HAVE TO BE REVISED.
7. ALL BEAMS TO BE FLUSH BEAMS, EXCEPT DOORWAY AND WINDOW HEADERS.
8. UNLESS NOTED OTHERWISE IN WALL TYPE SCHEDULE. PROVIDE MID- HEIGHT BLOCKING IN ALL LOAD BEARING WALLS.
9. UPON COMPLETION OF TRUSS INSTALLATION THE ENGINEER RESPONSIBLE FOR THE DESIGN OF THE TRUSS SHALL REVIEW THE INSTALLATION ON SITE AND CONFIRM IN WRITING THAT THEY MEET THE DESIGN PARAMETERS. FINAL REPORT MUST BE SIGNED AND SEALED BY P. ENG. REGISTERED IN THE PROVINCE OF ALBERTA.
10. EXTEND SHEAR WALLS TO U/S. OF ROOF SHEATHING, SEE ROOF SECTIONS.
11. BRACES NOTED ON FRAMING PLAN ARE IN ADDITION TO THOSE REQUIRED BY THE TRUSS SUPPLIER TYP.
12. WOOD TRUSS TO WALL, WOOD TRUSS TO TRUSS CONNECTIONS INCLUDING ALL GIRDER CONNECTIONS TO BE DESIGNED AND SUPPLIED BY THE TRUSS SUPPLIER.
13. ALLOW FOR ADDITIONAL 74 psf SNOW PILING IN ALL VALLEYS. SNOW PILING TO BE TAPERED TO REGULAR ROOF SNOW LOAD AT 3000mm EACH SIDE OF VALLEYS.
14. PROVIDE 3-2x6 COLUMN IN 2x6 WALLS AND 4-2x4 COLUMN IN 2x4 WALLS AT ALL GIRDER SUPPORT LOCATIONS U.N.O. SUCH COLUMNS TO EXTEND DOWN TO FOUNDATIONS.

WOOD FLOOR FRAMING PLAN NOTES

1. SEE ARCH. DWGS. FOR T/O FLOOR ELEVATION.
2. SEE DRAWINGS S100 SERIES FOR TYPICAL NOTES, DETAILS & SPECIFICATIONS.
3. TYPICAL FLOOR TO CONSIST OF 19mm T. & G. OSB SHEATHING OVER 302mm DP. TJI @ 490mm O/C FOR JOIST SERIES AND LAYOUT, SEE SUPPLIER'S SHOP DRAWINGS. TJI SPACING NOT TO EXCEED 490mm O/C. DECREASE SPACING IF REQUIRED UPON ENGINEER'S WRITTEN APPROVAL.
4. VERIFY ALL DIMENSIONS ON-SITE PRIOR TO JOIST FABRICATION.
5. FLOOR JOISTS SHALL BE DESIGNED AND SUPPLIED BY THE JOIST SUPPLIER FOR THE LOADS STATED IN THE GENERAL NOTES UNDER "DESIGN LOADS".
6. FOR FRAMING AROUND FLOOR OPENINGS SEE TYPICAL DETAILS.
7. ALL BEAMS TO BE FLUSH BEAMS EXCEPT DOORWAY AND WINDOW HEADERS.
8. FOR STAIRCASE FRAMING SEE ARCHITECTURAL DRAWINGS.
9. UNLESS NOTED OTHERWISE IN WALL TYPE SCHEDULE. PROVIDE MID- HEIGHT BLOCKING IN ALL LOAD BEARING WALLS.
10. JOISTS RUNNING PARALLEL TO EXTERIOR WALLS TO HAVE TJI BLOCKING INSTALLED AT 800mm O/C. TYP. UNLESS WALLS ARE BALLON FRAMED. NOT SHOWN ON PLAN FOR CLARITY, SEE FLOOR SECTIONS.
11. CONTRACTOR TO COORDINATE ALL FLOOR JOIST LOCATIONS TO AVOID CONFLICT WITH PLUMBING FIXTURE DROPS AND PLUMBING RISER LOCATIONS.
12. UPON COMPLETION OF JOIST INSTALLATION THE ENGINEER RESPONSIBLE FOR THE DESIGN OF THE JOISTS SHALL REVIEW THE INSTALLATION ON SITE AND CONFIRM IN WRITING THAT THEY MEET THE DESIGN PARAMETERS. REPORTS MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA.
13. WOOD JOIST TO WALL, WOOD JOIST TO JOIST CONNECTIONS TO BE DESIGNED AND SUPPLIED BY THE JOIST SUPPLIER TYP.
14. ADD DOUBLE JOISTS UNDER ALL POINT LOADS AT CANTILEVER LOCATIONS TYP., NOT SHOWN ON PLAN FOR CLARITY.
15. ALL COLUMNS TO BE COUPLED WITH SOLID BLOCKING THROUGH A FLOOR SYSTEM. SUCH BLOCKING TO BE OF THE SAME SIZE AS THE COLUMN ABOVE. REFER TO TYP. DETAILS.
16. WALLS SHOWN ON PLAN AS THUS: REPRESENT SHEAR WALLS.

COLUMN SCHEDULE 'C'

TYPE	SIZE	REMARKS
'C1'	4-2x4	SPF No.1/No.2 BUILT-UP
'C2'	3-2x6	SPF No.1/No.2 BUILT-UP
'C3'	4-2x6	SPF No.1/No.2 BUILT-UP
'C4'	5-2x6	SPF No.1/No.2 BUILT-UP
'C5'	5-2x4	SPF No.1/No.2 BUILT-UP
'C6'	133x133	1.8E PSL

WOOD BEAM SCHEDULE 'B'

TYPE	SIZE	REMARKS
'B1'	3-2x10	SPF, No.1/No.2 BUILT-UP
'B2'	133x241	2.2E PSL OR 2.0E LVL
'B3'	89x302	2.2E PSL OR 2.0E LVL
'B4'	133x302	2.2E PSL OR 2.0E LVL
'B5'	178x302	2.2E PSL OR 2.0E LVL

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PROJECT:

CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

FRAMING PLANS

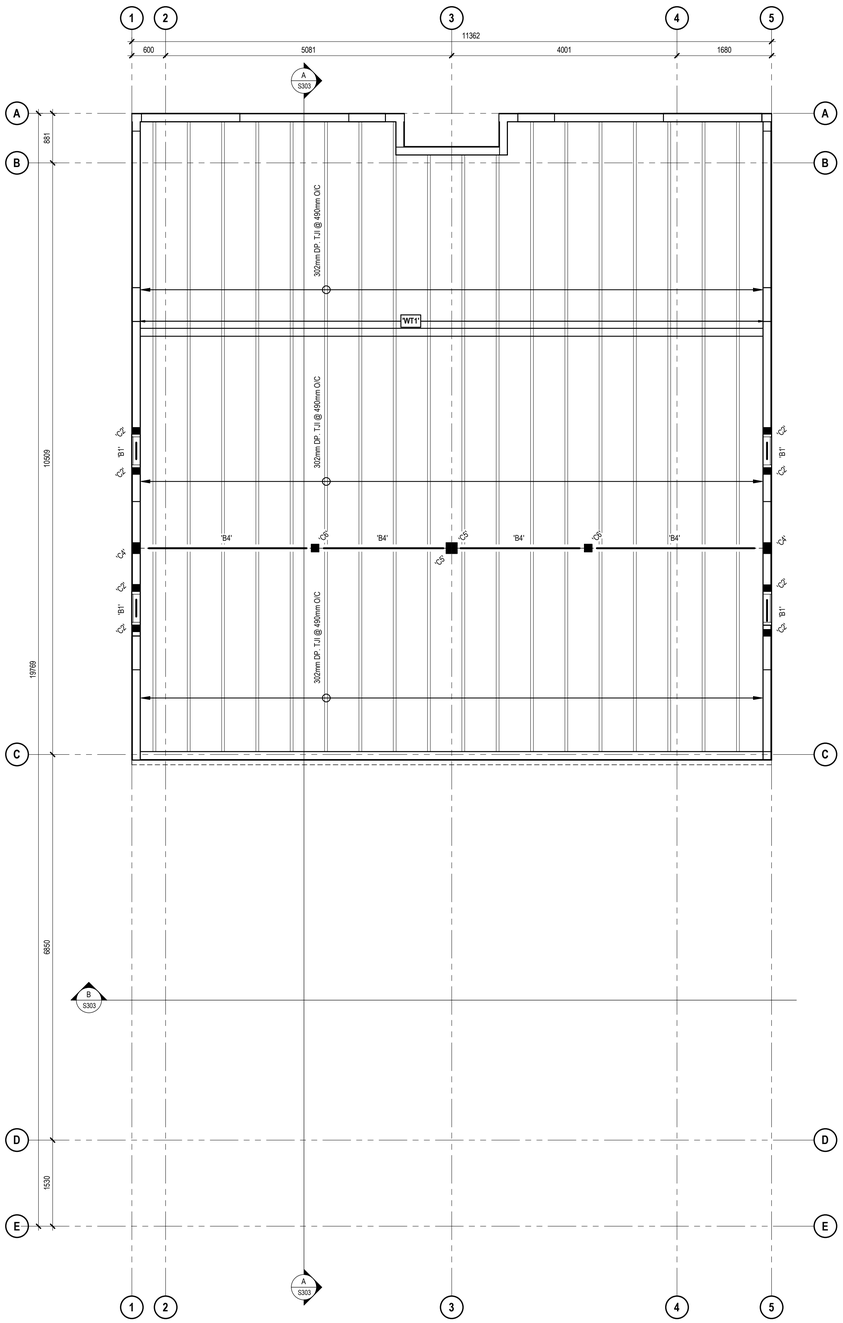
AB Sixplex 01

PROJECT NO: 02500462

SCALE: As indicated

SHEET NO:

S301



ROOF FRAMING PLAN

1 : 50

ROOF PLAN NOTES:

1. SEE ARCH. DWGS. FOR ROOF ELEVATIONS AND ROOF SLOPES.
2. SLOPED ROOF FRAMING TO CONSIST OF 11mm OSB SHEATHING WITH H-CLIPS OVER WOOD TRUSSES UNLESS NOTED OTHERWISE ON PLAN. TRUSS SPACING NOT TO EXCEED 600mm O/C. DECREASE SPACING IF REQUIRED UPON ENGINEER'S WRITTEN APPROVAL.
3. SEE DRAWINGS S100 SERIES FOR TYPICAL NOTES, DETAILS & SPECIFICATIONS.
4. VERIFY ALL DIMENSIONS ON SITE PRIOR TO TRUSS FABRICATION.
5. ROOF TRUSSES AND ALL MISCELLANEOUS ROOF FRAMING SHALL BE DESIGNED AND SUPPLIED BY THE TRUSS SUPPLIER FOR THE LOADS STATED IN THE GENERAL NOTES UNDER "DESIGN LOADS".
6. SUPERSTRUCTURE HAS BEEN DESIGNED BASED ON THE ABOVE ROOF FRAMING. TRUSS SUPPLIER TO ADVISE THE ENGINEER ON RECORD ACCORDINGLY IF LAYOUT CHANGES AS SUPERSTRUCTURE DESIGN MAY HAVE TO BE REVISED.
7. ALL BEAMS TO BE FLUSH BEAMS, EXCEPT DOORWAY AND WINDOW HEADERS.
8. UNLESS NOTED OTHERWISE IN WALL TYPE SCHEDULE. PROVIDE MID- HEIGHT BLOCKING IN ALL LOAD BEARING WALLS.
9. UPON COMPLETION OF TRUSS INSTALLATION THE ENGINEER RESPONSIBLE FOR THE DESIGN OF THE TRUSS SHALL REVIEW THE INSTALLATION ON SITE AND CONFIRM IN WRITING THAT THEY MEET THE DESIGN PARAMETERS. FINAL REPORT MUST BE SIGNED AND SEALED BY P. ENG. REGISTERED IN THE PROVINCE OF ALBERTA.
10. EXTEND SHEAR WALLS TO U/S. OF ROOF SHEATHING, SEE ROOF SECTIONS.
11. BRACES NOTED ON FRAMING PLAN ARE IN ADDITION TO THOSE REQUIRED BY THE TRUSS SUPPLIER TYP.
12. WOOD TRUSS TO WALL, WOOD TRUSS TO TRUSS CONNECTIONS INCLUDING ALL GIRDER CONNECTIONS TO BE DESIGNED AND SUPPLIED BY THE TRUSS SUPPLIER.
13. ALLOW FOR ADDITIONAL 74 psf SNOW PILING IN ALL VALLEYS. SNOW PILING TO BE TAPERED TO REGULAR ROOF SNOW LOAD AT 3000mm EACH SIDE OF VALLEYS.

COLUMN SCHEDULE 'C'

TYPE	SIZE	REMARKS
'C1'	4-2x4	SPF No.1/No.2 BUILT-UP
'C2'	3-2x6	SPF No.1/No.2 BUILT-UP
'C3'	4-2x6	SPF No.1/No.2 BUILT-UP
'C4'	5-2x6	SPF No.1/No.2 BUILT-UP
'C5'	5-2x4	SPF No.1/No.2 BUILT-UP
'C6'	133x133	1.8E PSL

WOOD BEAM SCHEDULE 'B'

TYPE	SIZE	REMARKS
'B1'	3-2x10	SPF. No.1/No.2 BUILT-UP
'B2'	133x241	2.2E PSL OR 2.0E LVL
'B3'	89x302	2.2E PSL OR 2.0E LVL
'B4'	133x302	2.2E PSL OR 2.0E LVL
'B5'	178x302	2.2E PSL OR 2.0E LVL

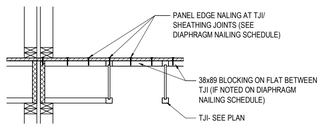
WOOD BEARING WALL SCHEDULE

WALL TYPE	SECOND FLOOR FRAMING (MAIN FLOOR WALLS)	THIRD FLOOR FRAMING (SECOND FLOOR WALLS)	ROOF FRAMING (THIRD FLOOR WALLS)	GRADE
EXTERIOR WALLS	2x6 @ 400mm O/C C/W 10mm OSB SHEATHING PROVIDE BLOCKING @ SHEATHING JOINTS	2x6 @ 400mm O/C C/W 10mm OSB SHEATHING PROVIDE BLOCKING @ SHEATHING JOINTS	2x6 @ 400mm O/C C/W 10mm OSB SHEATHING PROVIDE BLOCKING @ SHEATHING JOINTS	SPF No.2 OR BETTER
LOAD BEARING PARTY / SHEAR WALLS (EACH WALL)	2x4 @ 300mm O/C C/W MID-HEIGHT BLOCKING (EACH WALL). AT SHEAR WALLS, PROVIDE 10mm OSB SHEATHING ON ONE SIDE AND BLOCKING AT ALL HORIZONTAL SHEATHING JOINTS.	2x4 @ 400mm O/C C/W MID-HEIGHT BLOCKING (EACH WALL). AT SHEAR WALLS, PROVIDE 10mm OSB SHEATHING ON ONE SIDE AND BLOCKING AT ALL HORIZONTAL SHEATHING JOINTS.	N/A	SPF No.2 OR BETTER
STAIRWELL WALLS	2x6 @ 400mm O/C. C/W 2 ROWS OF BLOCKING	2x6 @ 400mm O/C. C/W MID HEIGHT BLOCKING	N/A	SPF No.2 OR BETTER
INTERIOR WALLS (WT1)	N/A	N/A	2x4 @ 400mm O/C C/W MID-HEIGHT BLOCKING	SPF No.2 OR BETTER

1. ALL WALL TYPES ARE TYPICAL UNLESS NOTED OTHERWISE.
2. WALLS TYPES INDICATED REPRESENT BEARING WALLS BELOW.
3. WALL VERTICAL ALIGNMENT TO BE WITHIN 13mm OVER ENTIRE HEIGHT OF BUILDING TYPICAL ALL LOAD BEARING WALLS.
4. ALL TOP & BOTTOM CONT. PLATES TO BE SPF No.2.

DIAPHRAGM NAILING SCHEDULE (FLOOR / ROOF SHEATHING)

LEVEL	SHEATHING TYPE	FASTENER TYPE	FASTENER SPACING		BLOCKED
			PANEL EDGES	INTERMEDIATE MEMBERS	
ROOF FRAMING	11mm T.&G. OSB	8d COMMON WIRE NAILS (0.131"x2.5") NAILED AND GLUED	100mm	300mm	NO
3rd FLOOR FRAMING	19mm T.&G. OSB		150mm	300mm	NO
2nd FLOOR FRAMING	19mm T.&G. OSB		150mm	300mm	NO



DIAPHRAGM NAILING- ELEVATION VIEW

SHEARWALL NAILING REQUIREMENTS

LEVEL	NAIL LENGTH	OSB THICKNESS	NAIL SPACING	
			PANEL EDGES	INTERIOR STUD LOCATIONS
ROOF	64mm	10mm	100mm	250mm
3RD FLOOR	64mm	10mm	100mm	250mm
2ND FLOOR	64mm	10mm	100mm	250mm

TYPICAL WALL STUD SPACING

WALL HEIGHT	STUD SPACING	GRADE
STUDS UP TO 15'	2x6 @ 400mm O/C	SPF No.2
STUDS UP TO 18'	2-2x6 @ 400mm O/C	SPF No.2

CMHC SCHL

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NO.	DATE	DESCRIPTION
2	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING

PROJECT:

CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

FRAMING PLANS

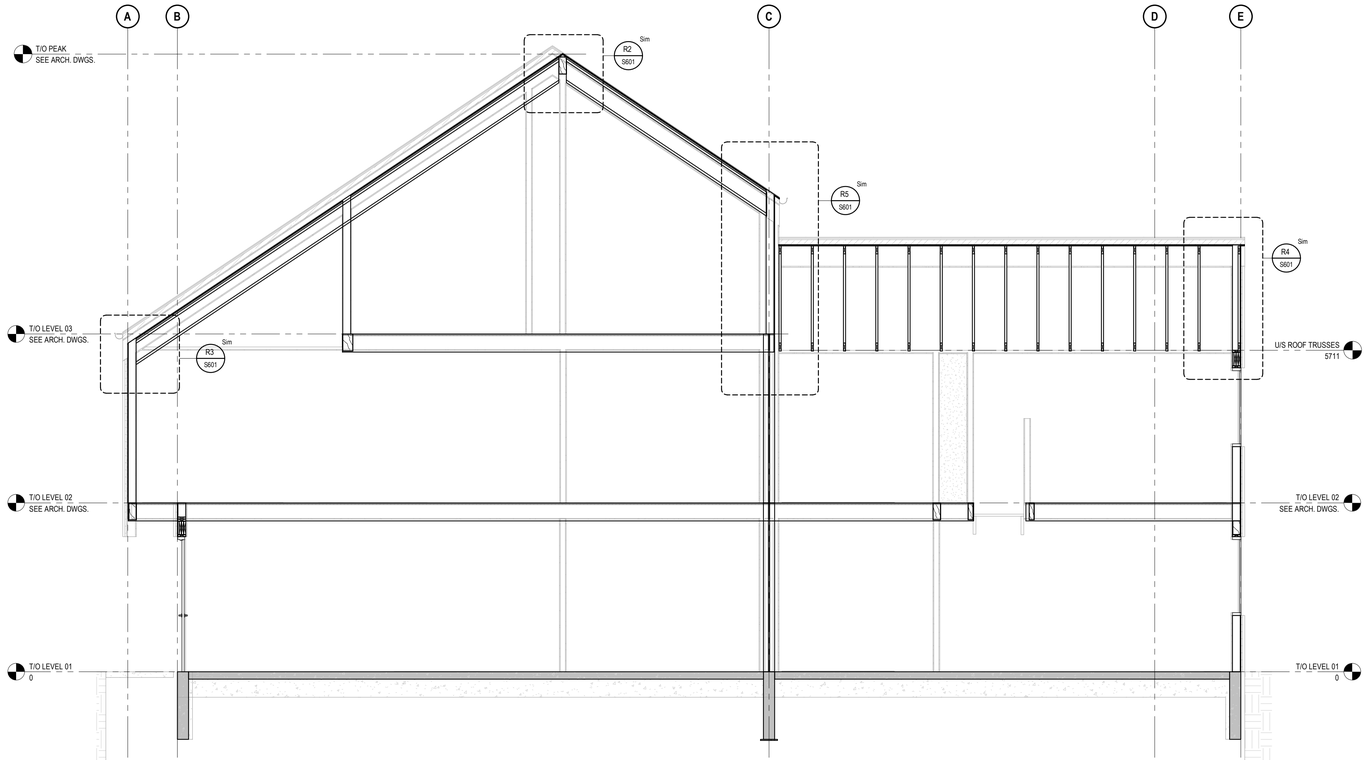
AB Sixplex 01

PROJECT NO: 02500462

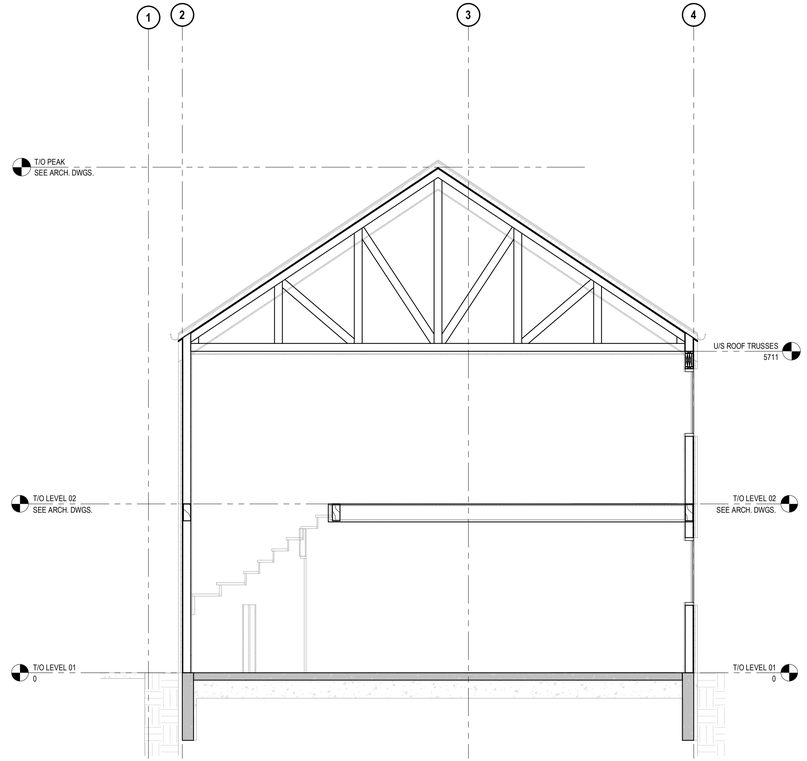
SCALE: As indicated

SHEET NO:

S302



SECTION A
1 : 50 S201



SECTION B
1 : 50 S201

CMHC SCHL

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2	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING

NO.	DATE	DESCRIPTION

PROJECT:

CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

BUILDING SECTIONS

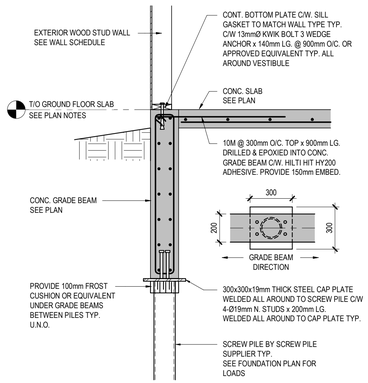
AB Sixplex 01

PROJECT NO: 02500462

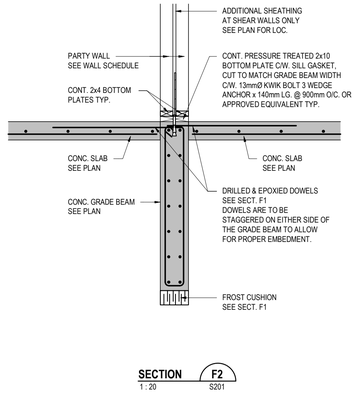
SCALE: 1 : 50

SHEET NO:

S303



SECTION F1
1 : 20 S201



SECTION F2
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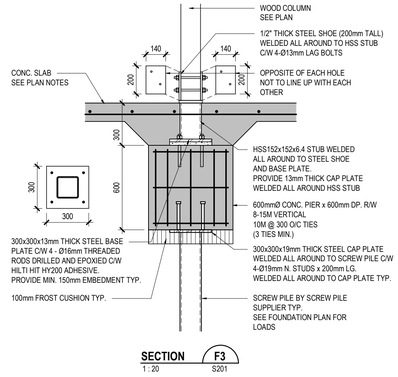

SECTION F3
1 : 20 S201

CMHC SCHL

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2	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING

NO.	DATE	DESCRIPTION

PROJECT:

CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

TYPICAL FOUNDATION SECTIONS

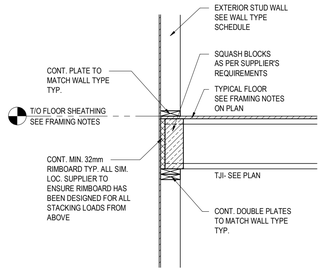
AB Sixplex 01

PROJECT NO: 02500462

SCALE: 1 : 20

SHEET NO:

S401



SECTION M1
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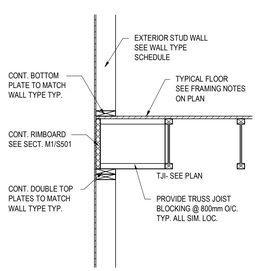

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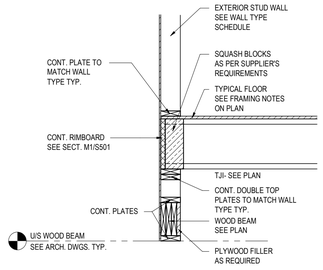

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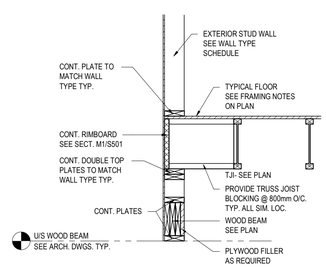

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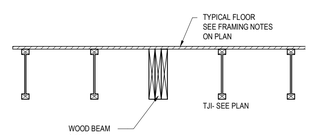

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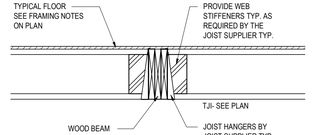

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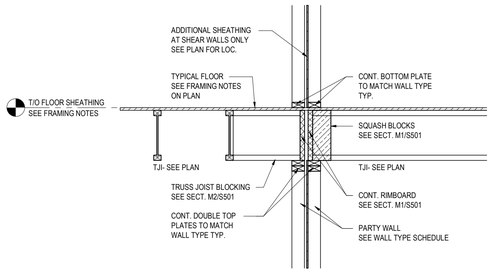

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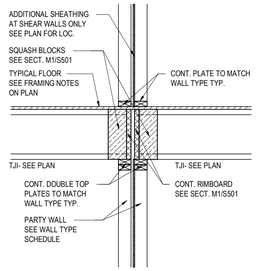
1 : 20 S301



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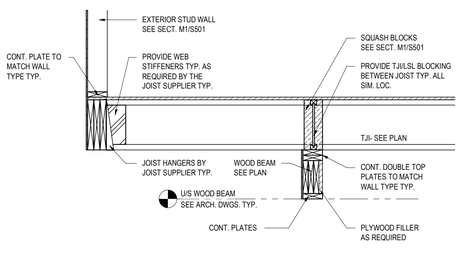
1 : 20 S301



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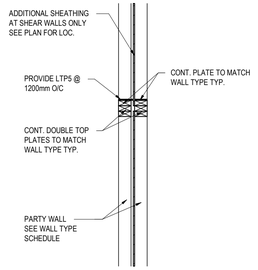
1 : 20 S301



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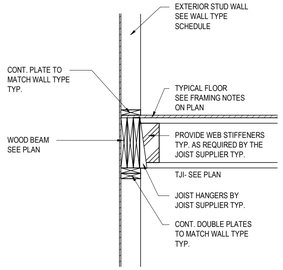
1 : 20 S301



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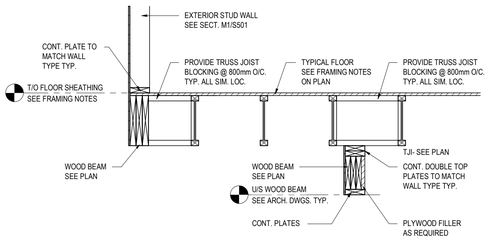
1 : 20 S301



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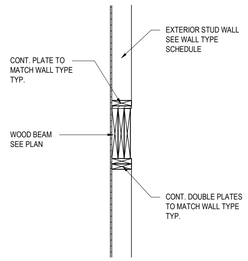

SECTION M13
1 : 20

CMHC SCHL

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2	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING

NO.	DATE	DESCRIPTION

PROJECT:

CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

TYPICAL FLOOR SECTIONS

AB Sixplex 01

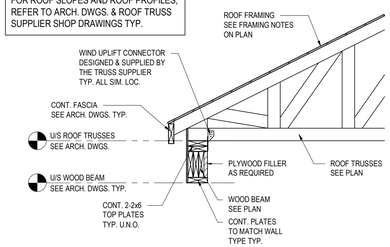
PROJECT NO: 02500462

SCALE: 1 : 20

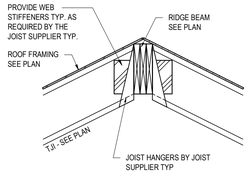
SHEET NO:

S501

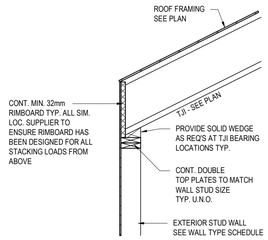
IMPORTANT NOTE:
FOR ROOF SLOPES AND ROOF PROFILES, REFER TO ARCH. DWGS. & ROOF TRUSS SUPPLIER SHOP DRAWINGS TYP.



SECTION R1
1 : 20



SECTION R2
1 : 20 S303



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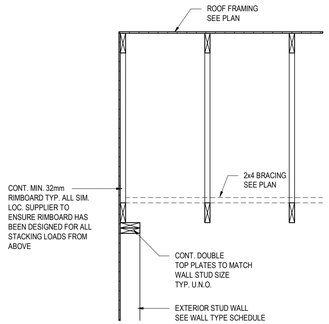
1 : 20 S303



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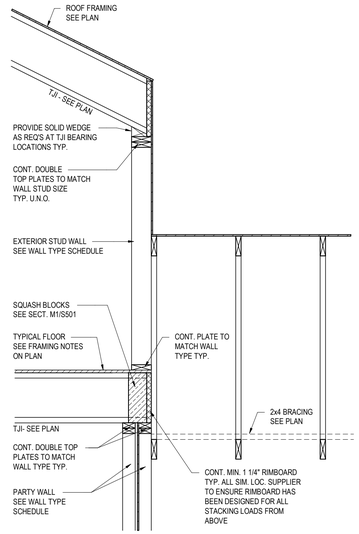

SECTION R5
1 : 20 S303

CMHC SCHL

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2	2025-02-19	ISSUED FOR PROTOTYPICAL DRAWING

NO.	DATE	DESCRIPTION

PROJECT:
CMHC HOUSING CATALOGUE

ALBERTA, CANADA

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:
TYPICAL ROOF SECTIONS

AB Sixplex 01

PROJECT NO: 02500462
SCALE: 1 : 20

SHEET NO:
S601

CMHC HOUSING DESIGN CATALOGUE

AB SIXPLEX

MECHANICAL DRAWINGS

MECHANICAL SHEET LIST 6 PLEX 01	
NO.	SHEET NAME
M000	MECHANICAL COVER SHEET
M001	MECHANICAL LEGENDS
M100	FOUNDATION PLAN
M101	GROUND FLOOR PLUMBING PLAN
M102	SECOND FLOOR PLUMBING PLAN
M103	THIRD FLOOR PLUMBING PLAN
M201	GROUND FLOOR VENTILATION PLAN
M202	SECOND FLOOR VENTILATION PLAN
M203	THIRD FLOOR VENTILATION PLAN
M300	MECHANICAL SCHEMATICS & DETAILS
M400	MECHANICAL SCHEDULES
M500	MECHANICAL SPECIFICATIONS

CMHC SCHL

1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING

NO.	DATE	DESCRIPTION

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

Project Address

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

MECHANICAL COVER SHEET

AB Sixplex

PROJECT NO: 024-07-769

SCALE:

SHEET NO:

M000

MECHANICAL LEGEND

NOTE: SOME SYMBOL REFERENCES MAY NOT BE USED ON THIS PROJECT

LINETYPES

	CONTROLS WIRING
—SAN—	SANITARY PIPING
—STM—	STORM PIPING
----V----	SANITARY VENT BRANCH PIPING
----V---►	SANITARY VENT UP TO NEXT LEVEL
----V---◄	SANITARY VENT UP THROUGH ROOF
— — —	DOMESTIC COLD WATER PIPING
— - - —	DOMESTIC HOT WATER PIPING
— - - - —	DOMESTIC HOT WATER RECIRC. PIPING
—G—	NATURAL GAS PIPING
—C—	CONDENSATE PIPING
—RS—	REFRIGERANT SUPPLY PIPING
—RR—	REFRIGERANT RETURN PIPING

PLUMBING

	PIPE FLOW ARROW
	PIPE CAP
	PIPE CONNECTION
	PIPE DROP
	PIPE RISE
	PIPE TEE (BELOW)
	PIPE TEE (ABOVE)
	SANITARY P-TRAP
	RUNNING P-TRAP
	HEAT TRACING
	FLOOR DRAIN
	ROOF DRAIN
	HOSE BIBB
—HCO	CLEANOUT
G—HBCO	BUILDING CLEANOUT
GM	GAS METER
WM	WATER METER
	THRUST BLOCK

CONTROLS

CO	CO = CARBON MONOXIDE
	THERMOSTAT (COVER/NO COVER)
$ $	WALL SWITCH (ON-OFF/VARIABLE)

TAGS

TYPE — S - 1 NECK (mm) — 200ø FLOW (L/s) — 120	DIFFUSER/GRILLE TAG
DETAIL NUMBER — 1 DRAWING NUMBER — MX	DRAWING REFERENCE
DETAIL NUMBER — 1 DRAWING NUMBER — MX	SECTION/ELEVATION REFERENCE
P-1	EQUIPMENT TAG
1	KEYNOTE REFERENCE

VENTILATION

	OUTDOOR AIR DUCT UP/DOWN
	SUPPLY AIR DUCT UP/DOWN
	RETURN AIR DUCT UP/DOWN
	EXHAUST AIR DUCT UP/DOWN
	ROUND DUCT UP/DOWN
	ACOUSTIC DUCT INSULATION
	BALANCING DAMPER
BD	BD = BACKDRAFT DAMPER
FD	FD = FIRE DAMPER
SD	SD = SMOKE DAMPER
	SIDEWALL GRILLE
	SQUARE DIFFUSER C/W TAKEOFF AND BALANCING DAMPER
	ROUND DIFFUSER C/W TAKEOFF AND BALANCING DAMPER
	TURNING VANES

FIRE PROTECTION

	FIRE EXTINGUISHER

SCHEMATICS

	HOSE END WITH CAP & CHAIN FOR DRAINING
	FLEX PIPE CONNECTION
	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
BFP	BACKFLOW PREVENTER
	NORMALLY OPEN BACKWATER VALVE
	CIRCUIT BALANCING/MEASURMENT VALVE
	CHECK VALVE
	ISOLATION VALVE
	MANUAL BALANCING VALVE
	PRESSURE/TEMPERATURE PORT
	PRESSURE REGULATING VALVE
	SOLENOID VALVE
	UNION
AS	AIR SEPARATOR
AAV	AIR VENT - AUTOMATIC
MAV	AIR VENT - AUTOMATIC
	CARTRIDGE FILTER
	PUMP
	WYE STRAINER C/W BALL VALVE, CAP & CHAIN
	PRESSURE SAFETY VALVE
	PRESSURE GAUGE C/W ISOLATION
	TEMPERATURE GAUGE
TS	TS = TEMPERATURE SWITCH
	CENTRIFUGAL FAN

ABBREVIATIONS

BT	BATHTUB
CO	CLEANOUT
CP	CONDENSATE PUMP
CU	CONDENSING UNIT
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DWH	DOMESTIC WATER HEATER
ERV	ENERGY RECOVERY VENTILATOR
ET	EXPANSION TANK
F/A	"FROM ABOVE"
F/B	"FROM BELOW"
FD	FLOOR DRAIN
FN	FURNACE
GSV	GAS SHUTOFF VALVE
HB	HOSE BIBB
LAV	LAVATORY
NC	"NORMALLY CLOSED"
NO	"NORMALLY OPEN"
P	PUMP
PRV	PRESSURE REDUCING VALVE
RD	ROOF DRAIN
RH	KITCHEN RANGE HOOD
SH	SHOWER
SK	SINK
T/A	"TO ABOVE"
T/B	"TO BELOW"
UNO	"UNLESS NOTED OTHERWISE"
UTR	"UP THROUGH ROOF"
WC	WATER CLOSET

SITE-SPECIFIC DESIGN REQUIREMENTS

ALL SITE-SPECIFIC ELEMENTS TO BE REVIEWED & DESIGNED BY THE RESPONSIBLE DESIGN PROFESSIONAL ISSUING THE DRAWINGS FOR PERMIT & CONSTRUCTION AT THE LOCATION DETERMINED. THIS INCLUDES:

1 SITE SERVICING: INCOMING WATER, GAS, SANITARY & STORM SEWER CONNECTIONS TO BE CONFIRMED FOR SITE.

2 ENERGY EFFICIENCY: ISSUING DESIGN PROFESSIONAL TO REVIEW & CONFIRM ALL RELEVENT SITE DATA INCLUDING CLIMATE ZONE, HEATING/COOLING DEGREE DAYS, ORIENTATION, ADJACENT BUILDINGS (ROW HOUSING), MECHANICAL SYSTEM, ENVELOPE & GLAZING PERFORMANCE IN ORDER TO ACCURATELY DETERMINE:

i. EQUIPMENT SIZING: FURNACE, AIR CONDITIONING, AND/OR HEAT PUMP CAPACITIES & ASSOCIATED DUCT SIZING TO BE DESIGNED & REVIEWED BY THE ISSUING DESIGN PROFESSIONAL IN ACCORDANCE WITH THE LOCAL CLIMATIC CONDITIONS AS OUTLINED ABOVE.

CMHC SCHL

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1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING

NO.	DATE	DESCRIPTION

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

Project Address

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

MECHANICAL LEGENDS

AB Sixplex

PROJECT NO: 024-07-769

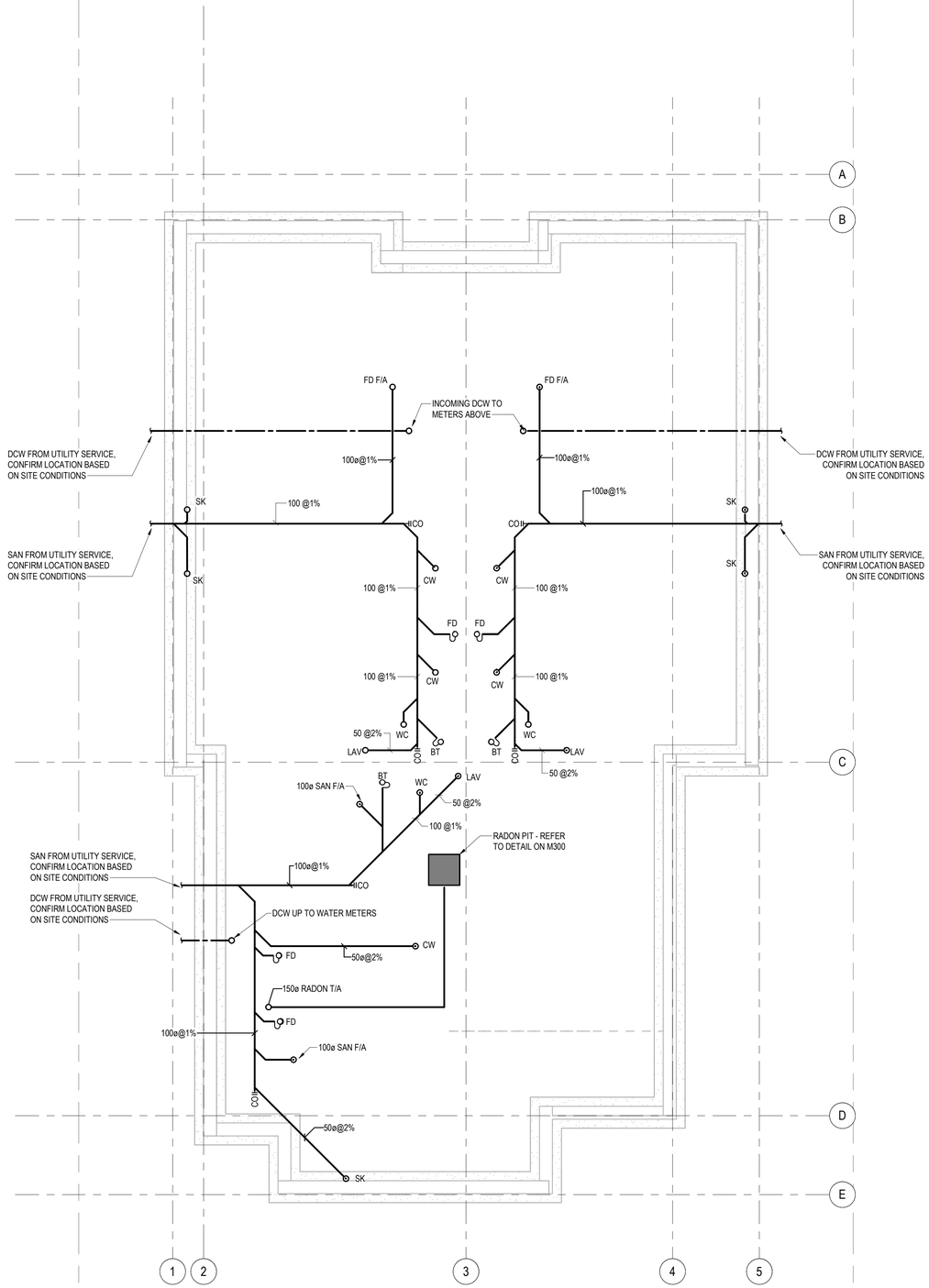
SCALE: 1 : 1

SHEET NO:

M001

FOUNDATION GENERAL NOTES

1 CONNECT RAIN WATER LEADERS TO UNDERGROUND STORM SERVICE WHERE REQUIRED BY LOCAL CODE.



1 M100 **FOUNDATION TYPE C**

SCALE: 1 : 50

0 1250 2500

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NO.	DATE	DESCRIPTION
1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

Project Address

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

FOUNDATION PLAN

AB Sixplex

PROJECT NO: 024-07-769

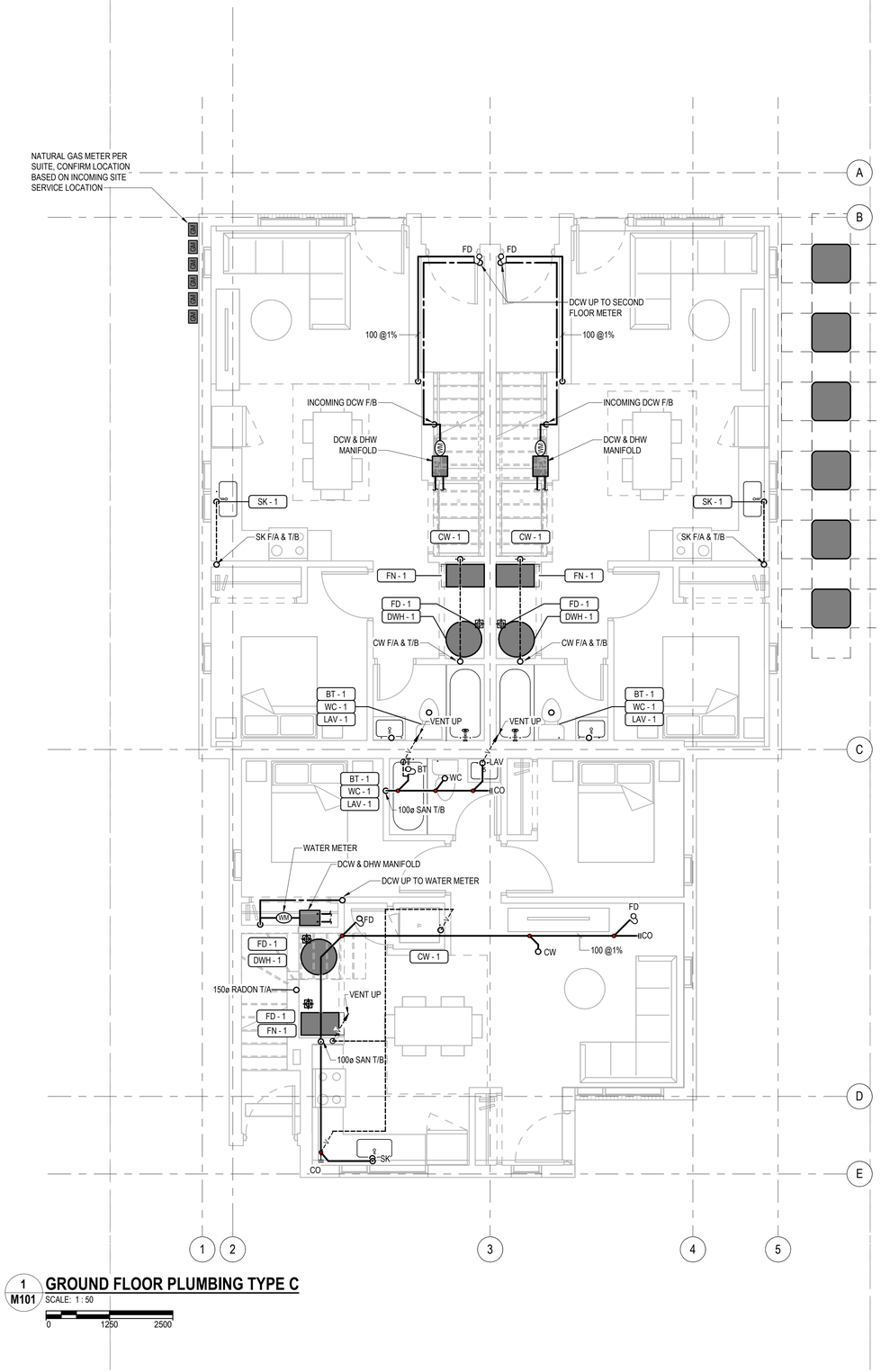
SCALE: 1 : 50

SHEET NO:

M100

PLUMBING GENERAL NOTES

1. RUN INDIVIDUAL DOMESTIC HOT WATER AND COLD WATER LINES TO ALL PLUMBING FIXTURES AS REQUIRED.
2. NATURAL GAS METERS TO BE LOCATED A MINIMUM OF 3.0M AWAY FROM ANY OPERABLE WINDOWS OR DOORS.
3. INSTALL NATURAL GAS PIPING FROM THE UTILITY METER TO ALL GAS-FIRED APPLIANCES IN ACCORDANCE WITH CSA B149.1.



1 / M101 GROUND FLOOR PLUMBING TYPE C

SCALE: 1 : 50

0 1250 2500

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

Project Address

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

GROUND FLOOR PLUMBING PLAN

AB Sixplex

PROJECT NO: 024-07-769

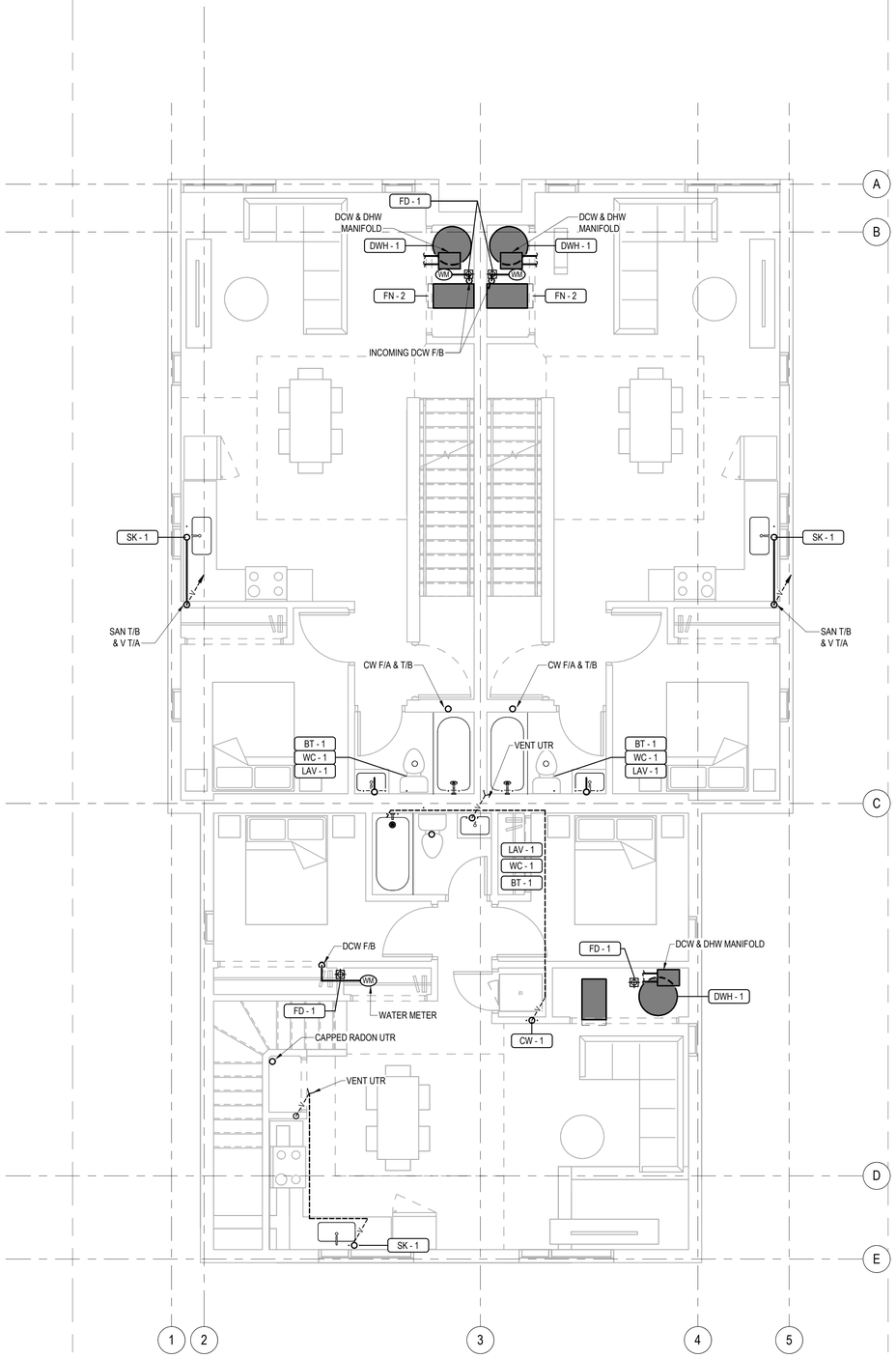
SCALE: 1 : 50

SHEET NO:

M101

PLUMBING GENERAL NOTES

1. RUN INDIVIDUAL DOMESTIC HOT WATER AND COLD WATER LINES TO ALL PLUMBING FIXTURES AS REQUIRED.
2. NATURAL GAS METERS TO BE LOCATED A MINIMUM OF 3.0M AWAY FROM ANY OPERABLE WINDOWS OR DOORS.
3. INSTALL NATURAL GAS PIPING FROM THE UTILITY METER TO ALL GAS-FIRED APPLIANCES IN ACCORDANCE WITH CSA B149.1.



1 M102 **SECOND FLOOR PLUMBING TYPE C**

SCALE: 1 : 50

0 1250 2500

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

Project Address

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

SECOND FLOOR PLUMBING PLAN

AB Sixplex

PROJECT NO: 024-07-769

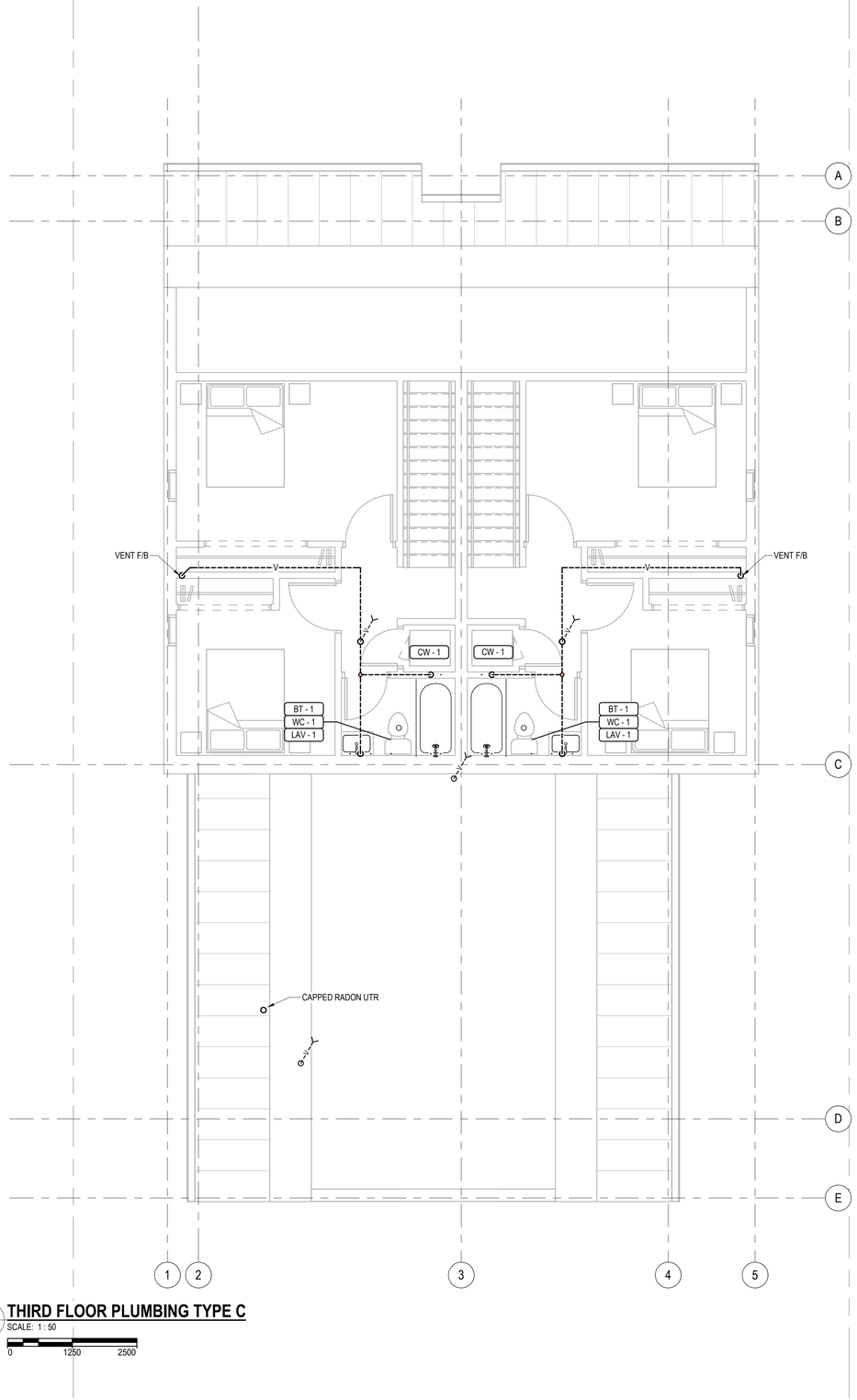
SCALE: 1 : 50

SHEET NO:

M102

PLUMBING GENERAL NOTES

1. RUN INDIVIDUAL DOMESTIC HOT WATER AND COLD WATER LINES TO ALL PLUMBING FIXTURES AS REQUIRED.
2. NATURAL GAS METERS TO BE LOCATED A MINIMUM OF 3.0M AWAY FROM ANY OPERABLE WINDOWS OR DOORS.
3. INSTALL NATURAL GAS PIPING FROM THE UTILITY METER TO ALL GAS-FIRED APPLIANCES IN ACCORDANCE WITH CSA B149.1.



1 M103 **THIRD FLOOR PLUMBING TYPE C**

SCALE: 1 : 50

0 1250 2500

CMHC SCHL

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1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING

NO.	DATE	DESCRIPTION

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

Project Address

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

THIRD FLOOR PLUMBING PLAN

AB Sixplex

PROJECT NO: 024-07-769

SCALE: 1 : 50

SHEET NO:

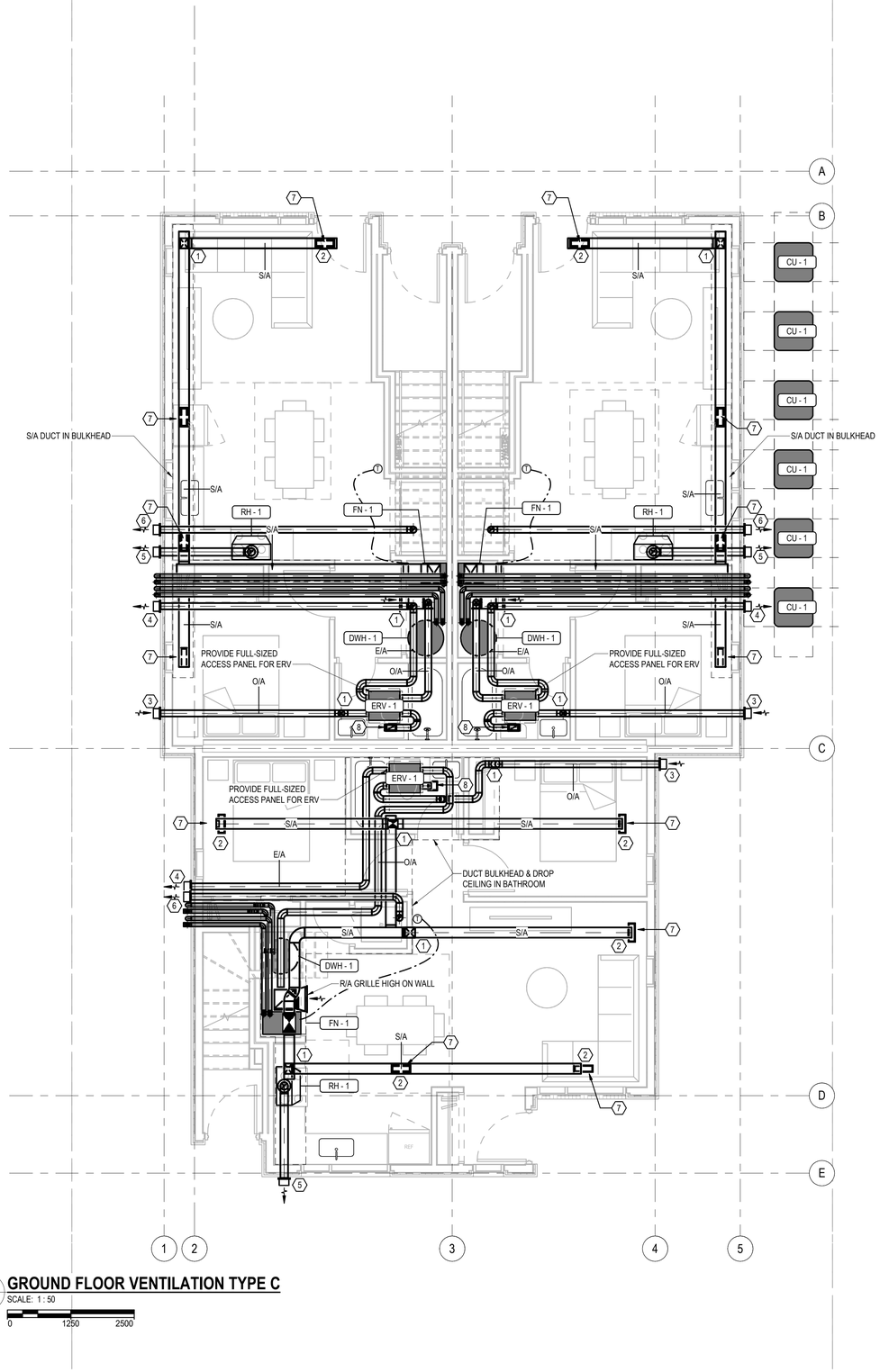
M103

VENTILATION GENERAL NOTES

1 SUPPLY AIR GRILLES TO BE COMPLETE WITH INTEGRAL OPPOSED-BLADE DAMPER FOR BALANCING.

M201 KEYNOTES

1 PROVIDE FIRE DAMPER AT DUCT PENETRATION INTO RATED JOIST SPACE
2 PROVIDE FIRE STOP FLAP AT GRILLES IN RATED CEILING
3 ERV O/A INTAKE - MAINTAIN MINIMUM 1800 CLEARANCE FROM ALL EXHAUSTS/VENTS
4 ERV E/A OUTLET
5 RH-1 E/A OUTLET
6 LAUNDRY E/A OUTLET
7 S/A GRILLE (CEILING)
8 BATHROOM E/A GRILLE



1 M201 **GROUND FLOOR VENTILATION TYPE C**
SCALE: 1 : 50
0 1250 2500

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING

PROJECT:
CMHC HOUSING DESIGN CATALOGUE

Project Address

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:
GROUND FLOOR VENTILATION PLAN

AB Sixplex

PROJECT NO: 024-07-769
SCALE: 1 : 50

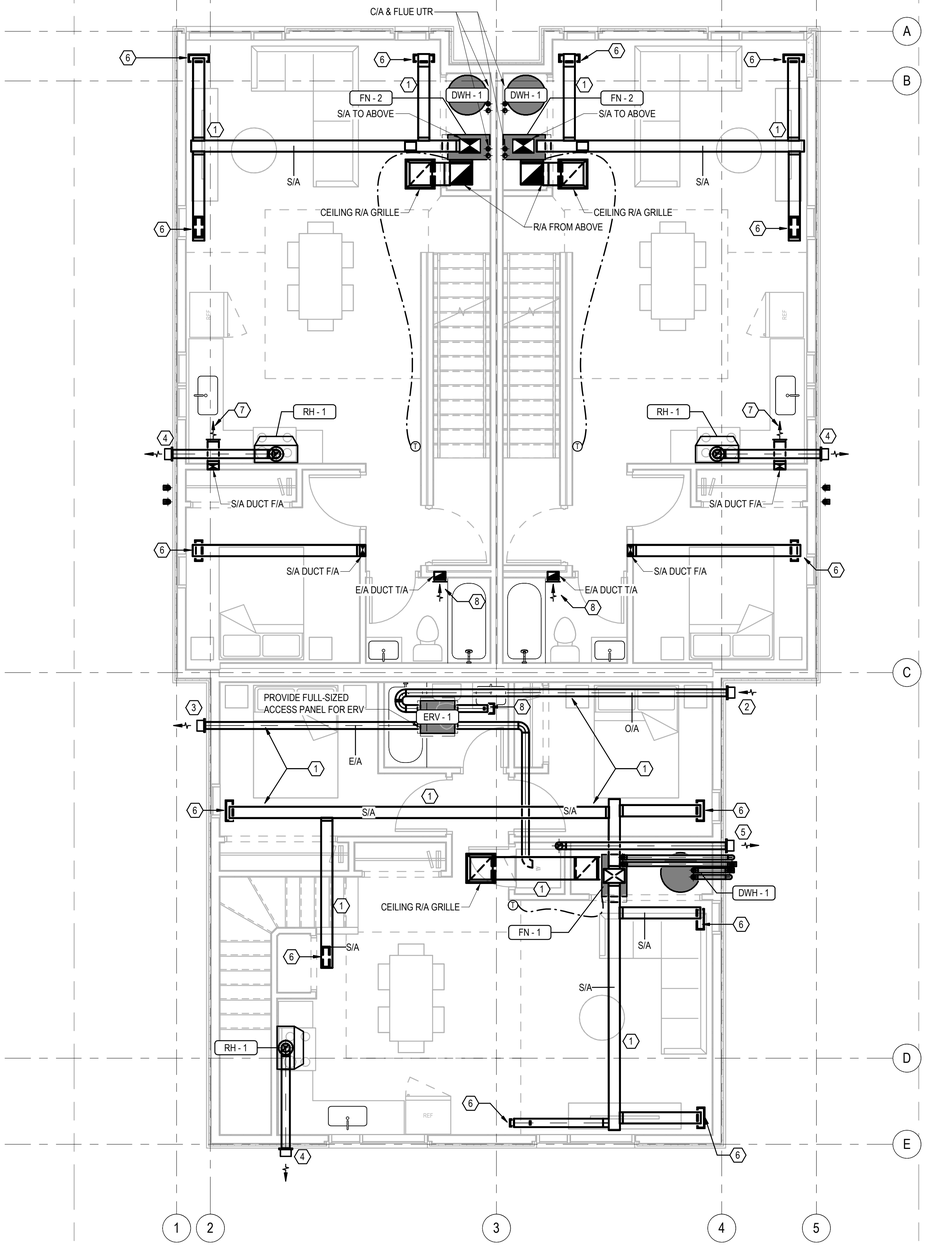
SHEET NO:
M201

VENTILATION GENERAL NOTES

1 SUPPLY AIR GRILLES TO BE COMPLETE WITH INTEGRAL OPPOSED-BLADE DAMPER FOR BALANCING.

M202 KEYNOTES

1 INSULATE ALL DUCTS RUN IN ATTIC
2 ERV O/A INTAKE - MAINTAIN MINIMUM 1800 CLEARANCE FROM ALL EXHAUSTS/VENTS
3 ERV E/A OUTLET
4 RH-1 E/A OUTLET
5 LAUNDRY E/A OUTLET
6 S/A GRILLE (CEILING)
7 S/A GRILLE (WALL)
8 BATHROOM E/A GRILLE



1 M202 **SECOND FLOOR VENTILATION TYPE C**
SCALE: 1 : 50
0 1250 2500

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING

PROJECT:
CMHC HOUSING DESIGN CATALOGUE

Project Address

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:
SECOND FLOOR VENTILATION PLAN

AB Sixplex

PROJECT NO: 024-07-769
SCALE: 1 : 50

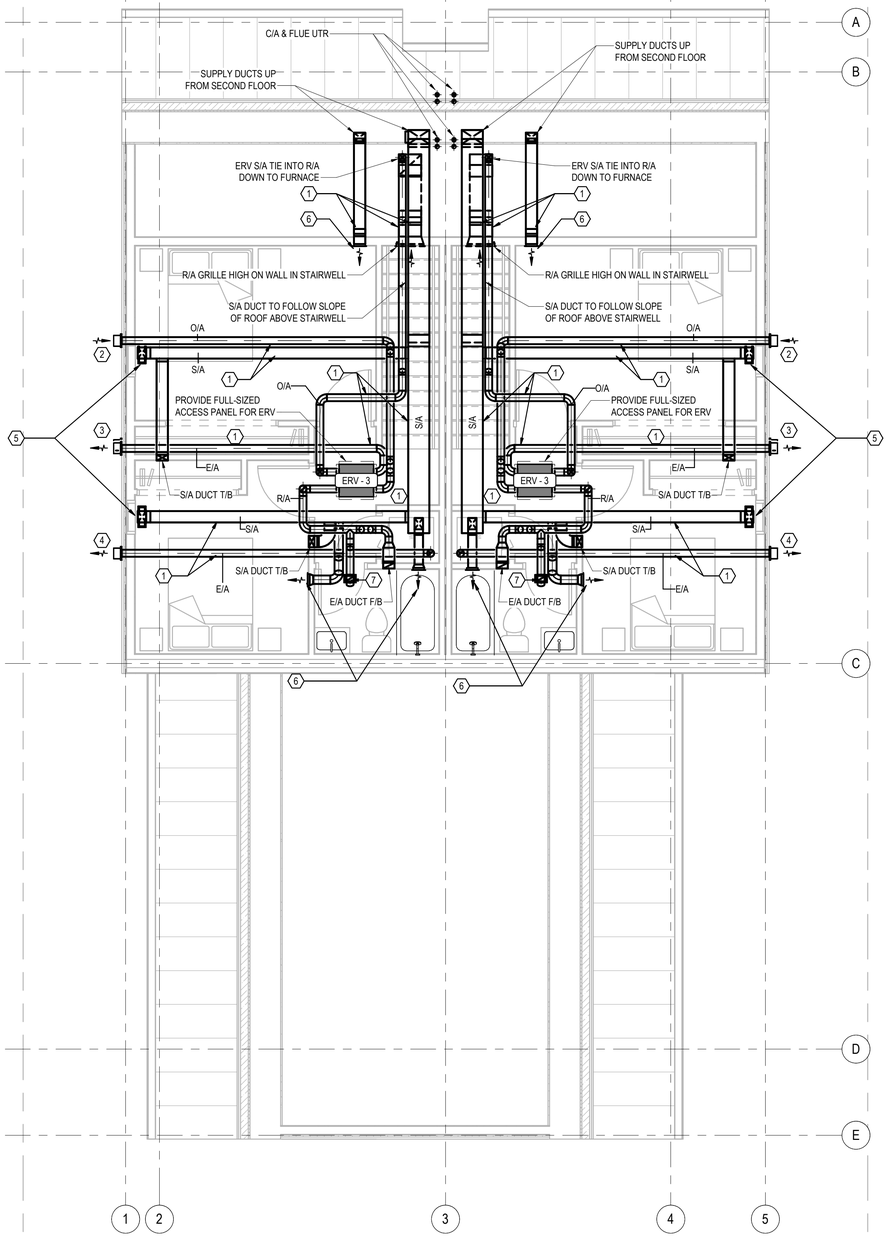
SHEET NO:
M202

VENTILATION GENERAL NOTES

1 SUPPLY AIR GRILLES TO BE COMPLETE WITH INTEGRAL OPPOSED-BLADE DAMPER FOR BALANCING.

M203C KEYNOTES

1 INSULATE ALL DUCTS RUN IN ATTIC
2 ERV O/A INTAKE - MAINTAIN MINIMUM 1800 CLEARANCE FROM ALL EXHAUSTS/VENTS
3 ERV E/A OUTLET
4 LAUNDRY E/A OUTLET
5 S/A GRILLE (CEILING)
6 S/A GRILLE (WALL)
7 BATHROOM E/A GRILLE



1 M203 **THIRD FLOOR VENTILATION TYPE C**
SCALE: 1 : 50
0 1250 2500

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING

PROJECT:
CMHC HOUSING DESIGN CATALOGUE

Project Address

NOT FOR PERMIT OR CONSTRUCTION

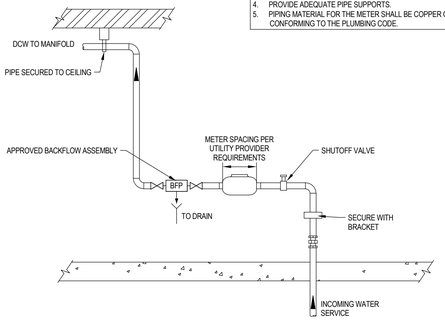
SHEET TITLE:
THIRD FLOOR VENTILATION PLAN

AB Sixplex

PROJECT NO: 024-07-769
SCALE: 1 : 50

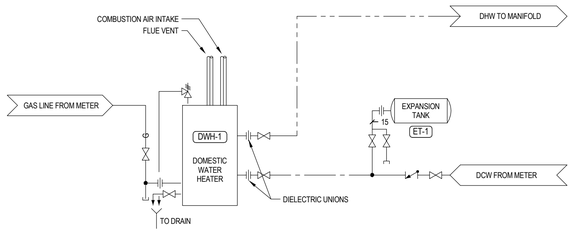
SHEET NO:
M203

GENERAL NOTES:
1. SPACE FOR METER INSTALLATION TO BE AS REQUIRED BY UTILITY PROVIDER.
2. APPROVED BACKFLOW ASSEMBLY, APPROPRIATE FOR THE HAZARD CLASSIFICATION MUST BE INSTALLED WITHIN 3m OF SERVICE ENTRY.
3. PROVIDE A SUITABLE SITE FOR THE WATER METER AT A HORIZONTAL SETTING, WITHIN 2m OF POINT OF ENTRY FOR THE WATER SERVICE CONNECTION INSIDE THE BUILDING.
4. PROVIDE ADEQUATE PIPE SUPPORTS.
5. PIPING MATERIAL FOR THE METER SHALL BE COPPER OR STAINLESS STEEL CONFORMING TO THE PLUMBING CODE.



TYPICAL WATER METER INSTALLATION

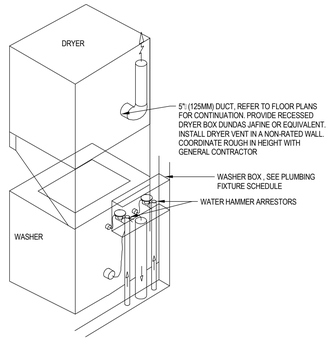
SCALE: N.T.S



TYPICAL DOMESTIC WATER HEATER INSTALLATION

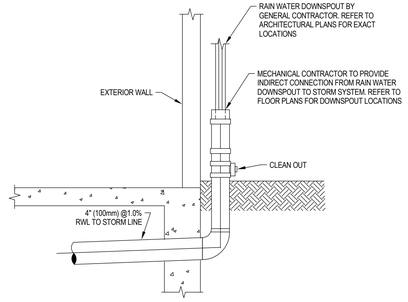
SCALE: N.T.S

NOTE:
HOSE CONNECTIONS SHALL BE DONE BY MECHANICAL CONTRACTOR



TYPICAL WASHER & DRYER ROUGH-IN DETAIL

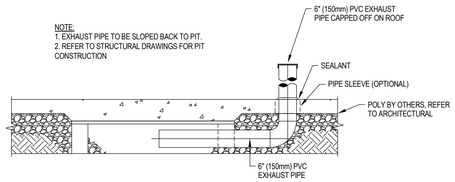
SCALE: N.T.S



DOWNSPOUT DETAIL

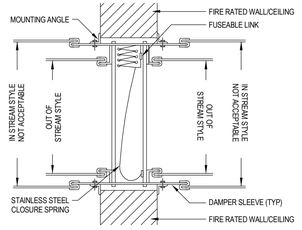
SCALE: N.T.S

NOTE:
1. EXHAUST PIPE TO BE SLOPED BACK TO PIT.
2. REFER TO STRUCTURAL DRAWINGS FOR PIT CONSTRUCTION



RADON SUCTION PIT PIPING DETAIL

SCALE: N.T.S



NOTES:

1) PROVIDE MINIMUM 8"x8" (200x200mm) ACCESS DOOR TO SERVICE FIRE DAMPER

2) IN-STREAM STYLE FIRE DAMPERS ARE NOT ACCEPTABLE.

3) MOUNTING ANGLES SHALL BE MIN. 1½"x1½" (38x38mm) 14 GAUGE FASTENED TO DAMPER SLEEVES WITH NO. 10 BOLTS OR SCREWS, ½" (13mm) LONG WELDS, OR 3/16" (5mm) RIVETS. MIN. 2 CONNECTIONS PER SIDE AND TOP AND BOTTOM OF DAMPER WALLS.

MOUNTING ANGLES FOR GALVANIZED DAMPERS 50"W X 60"H (1270x1525mm) OR 60"W X 50"H (1525x1270mm) AND LESS CAN BE A MINIMUM OF 1½"x1½" (38x38mm) X 16 GAUGE. MAXIMUM FASTENER SPACING OF 16 GAUGE MOUNTING ANGLES IS 12" (300mm) CENTER TO CENTER

MOUNTING ANGLES ARE NOT TO BE FASTENED OR WELDED TOGETHER AT CORNERS OF DAMPER.

MOUNTING ANGLE TO OVERLAP FIRE RATED WALL MIN. 1" (25mm) ON ALL FOUR SIDES.

4) DUCT TO DAMPER SLEEVE CONNECTIONS SHALL BE BREAKAWAY STYLE.
FOR SQUARE DUCTWORK THE FOLLOWING CONNECTIONS ARE ACCEPTABLE:
PLAIN OR HEMMED OR STANDING S-SLIP, REINFORCED STANDING S-SLIP, INSIDE SLIP JOINT, DOUBLE S-SLIP, BREAKAWAY DUCTMATE TYPE, AND ONLY 4" (100mm) WIDE DRAWBAND CONNECTION IS ACCEPTABLE FOR ROUND OR OVAL DUCTWORK.

DUCT TO SLEEVE CONNECTIONS SHALL BE EQUAL TO OR LESS THAN SLEEVE THICKNESS. SHOULD ANY OTHER DUCT TO SLEEVE CONNECTIONS BE USED, SLEEVE SHALL BE MIN. 16 GAUGE FOR DAMPERS UP TO 36" WIDE BY 24" (600mm) HIGH AND 14 GAUGE FOR ANY DAMPER EXCEEDING 36" WIDE OR 24" (600mm) HIGH.

ALL CONNECTIONS AND SLEEVE GAUGE REQUIREMENTS ARE DEPICTED IN THE SMACNA FIRE, SMOKE AND RADIATION DAMPER INSTALLATION GUIDE.

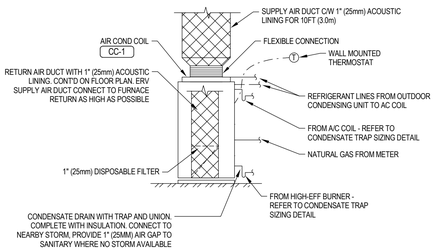
5) DAMPER SLEEVES SHALL BE 10 TO 26 GAUGE STEEL IF FIELD SUPPLIED.

DAMPER SLEEVES ARE NOT TO EXTEND FURTHER THAN 6" (150mm) BEYOND THE FIRE RATED WALL OR PARTITION UNLESS THE DAMPER IS EQUIPPED WITH A FACTORY INSTALLED ACCESS DOOR. THE DAMPER SLEEVE CAN EXTEND 16" (405mm) BEYOND THE WALL ON ONE SIDE WHEN SLEEVE CONTAINS A FACTORY INSTALLED ACCESS DOOR.

6) FOR WALL OPENINGS, INDIVIDUAL DAMPER JOINING AND OTHER SPECIAL REQUIREMENTS REFER TO THE MANUFACTURER'S INSTALLATION/OPERATION MANUAL.

FIRE DAMPER DETAIL

SCALE: N.T.S



GAS FURNACE WITH AIR COND COIL DETAIL

SCALE: N.T.S

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

Project Address

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

MECHANICAL SCHEMATICS & DETAILS

PROJECT NO: 024-07-769

SCALE:

SHEET NO:

M300

BASE OPTION - PRIMARY GAS-FIRED FURNACE WITH AIR CONDITIONING

FURNACE SCHEDULE

TAG	AFUE (%)	BLOWER MOTOR TYPE	GAS VALVE TYPE	FUEL	COOLING COIL	NOTES
FN-1	96.3	VARIABLE SPEED ECM	2-STAGE	NATURAL GAS	CC-1	1,2
FN-2	96.3	VARIABLE SPEED ECM	2-STAGE	NATURAL GAS	CC-2	1,2

NOTES:
1. FURNACE TO BE SUPPLIED WITH 24V 7-DAY PROGRAMMABLE THERMOSTAT WITH FAN-ON MODE
2. ALL CONDENSING APPLIANCES: INTAKE AND FLUE PIPING TO BE RUN INDEPENDENTLY TO EXTERIOR OF BUILDING, OBSERVE REQUIRED SPACING PER MANUFACTURER AND CODE REQUIREMENTS. CONCENTRIC VENT KITS NOT ACCEPTABLE. PIPE PENETRATIONS TO EXTERIOR TO BE C/W BIRDSCREEN, NO PIPE CAP TO BE PROVIDED FOR VENT PIPING. PROVIDE CONDENSATE NEUTRALIZATION KIT FOR ALL CONDENSATE DRAINAGE POINTS. INSTALL CONDENSATE NEUTRALIZER C/W BYPASS WHERE REQUIRED.

CONDENSING UNIT SCHEDULE

TAG	COMPRESSOR STAGES	REFRIGERANT	SERVES	SEER
CU-1	1	R410A	FN-X	17.0

ENERGY RECOVERY VENTILATOR SCHEDULE

TAG	LOCATION	TYPE	SENSIBLE EFFICIENCY (%)	SUPPLY FAN			EXHAUST FAN			ELECTRICAL (V/Ph/Hz)	NOTES
				AIRFLOW (CFM)	MOTOR (HP)	ESP (in.W.G.)	AIRFLOW (CFM)	MOTOR (HP)	ESP (in.W.G.)		
ERV-1	1-BEDROOM UNITS	ENTHALPY CORE	67.0	45	FRAC	0.40	45	FRAC	0.40	120/1/60	1,2
ERV-2	2-BEDROOM UNITS	ENTHALPY CORE	67.0	50	FRAC	0.40	50	FRAC	0.40	120/1/60	1,2
ERV-3	3-BEDROOM UNITS	ENTHALPY CORE	67.0	60	FRAC	0.40	60	FRAC	0.40	120/1/60	1,2
ERV-4	4-BEDROOM UNITS	ENTHALPY CORE	67.0	75	FRAC	0.40	75	FRAC	0.40	120/1/60	1,2

NOTES:
1. ERV CONTROL:
ERV CENTRAL SWITCH (ON/OFF) FOR LOW SPEED LOCATED AND LABELLED AS "VENTILATION FAN" LOCATED BESIDE FN T'STAT
PROVIDE TIMER SWITCHES IN ALL WASHROOMS.
2. PROVIDE BACKDRAFT DAMPERS ON FRESH AIR AND EXHAUST AIR DUCTS

COOLING COIL SCHEDULE

TAG	SERVES	CONDENSING UNIT	REFRIGERANT	SEER	NOTES
CC-1	FN-1	CU-1	R410A	17.0	1,2
CC-2	FN-2	CU-1	R410A	17.0	1,2

NOTES:
1. PROVIDE INDIRECT CONNECTION TO DRAIN
2. COIL TO BE HEAT RESISTANT

DOMESTIC WATER HEATER SCHEDULE (GAS)

TAG	LOCATION	ENERGY FACTOR	NOTES
DWH-1	WATER HEATER CLOSET	0.7	1,2,3

NOTES:
1. LOCATE FLOOR DRAIN IN WATER HEATER ROOM NEAR T&P VALVE
2. ALL CONDENSING APPLIANCES: INTAKE AND FLUE PIPING TO BE RUN INDEPENDENTLY TO EXTERIOR OF BUILDING, OBSERVE REQUIRED SPACING PER MANUFACTURER AND CODE REQUIREMENTS. CONCENTRIC VENT KITS NOT ACCEPTABLE. PIPE PENETRATIONS TO EXTERIOR TO BE C/W BIRDSCREEN, NO PIPE CAP TO BE PROVIDED FOR VENT PIPING. PROVIDE CONDENSATE NEUTRALIZATION KIT FOR ALL CONDENSATE DRAINAGE POINTS. INSTALL CONDENSATE NEUTRALIZER C/W BYPASS WHERE REQUIRED.
3. PROVIDE DRAIN PAN.

FAN SCHEDULE

TAG	TYPE	FUNCTION	LOCATION	AIR CAPACITY (CFM)	ESP (in.W.C.)	MOTOR (HP)	SOUND LEVEL (SONES)	ELECTRICAL (V/Ph/Hz)	DRIVE
RH-1	UNDER CABINET	RANGE HOOD	KITCHEN (TYPICAL)	100	0.25	FRAC	6.5	115/1/60	DIRECT

PLUMBING FIXTURE PIPE SIZE SCHEDULE

TAG	DCW		DHW		DRAIN		VENT		DRAIN UNDERGROUND	
	in	mm	in	mm	in	mm	in	mm	in	mm
WC (TANK)	½	15	-	-	3	75	1½	40	3	75
LAV	½	15	½	15	1½	40	1¼	30	2	50
SK	½	15	½	15	1½	40	1¼	30	2	50
SH	½	15	½	15	2	50	1½	40	2	50
BT	½	15	½	15	1½	40	1¼	30	2	50
FD	-	-	-	-	4	100	1½	40	4	100
HB	¾	20	-	-	-		-	-	-	-
CW (DOM.)	½	15	½	15	2	50	1½	40	2	50

NOTES:
1. REFER TO MANUFACTURER'S SPECIFICATIONS

ALTERNATE OPTION 1 - PRIMARY COLD-CLIMATE AIR SOURCE HEATPUMP WITH SUPLEMENTARY GAS HEATING

FURNACE SCHEDULE

TAG	AFUE (%)	BLOWER MOTOR TYPE	GAS VALVE TYPE	FUEL	HEATING/COOLING COIL	NOTES
FN-1	96.3	VARIABLE SPEED ECM	2-STAGE	NATURAL GAS	HP-1	1,2,3
FN-2	96.3	VARIABLE SPEED ECM	2-STAGE	NATURAL GAS	HP-2	1,2,3

NOTES:
1. FURNACE TO BE SUPPLIED WITH 24V 7-DAY PROGRAMMABLE THERMOSTAT WITH FAN-ON MODE
2. ALL CONDENSING APPLIANCES: INTAKE AND FLUE PIPING TO BE RUN INDEPENDENTLY TO EXTERIOR OF BUILDING, OBSERVE REQUIRED SPACING PER MANUFACTURER AND CODE REQUIREMENTS. CONCENTRIC VENT KITS NOT ACCEPTABLE. PIPE PENETRATIONS TO EXTERIOR TO BE C/W BIRDSCREEN, NO PIPE CAP TO BE PROVIDED FOR VENT PIPING. PROVIDE CONDENSATE NEUTRALIZATION KIT FOR ALL CONDENSATE DRAINAGE POINTS. INSTALL CONDENSATE NEUTRALIZER C/W BYPASS WHERE REQUIRED.
3. PRIMARY HEATING TO BE PROVIDED BY HEAT PUMPS HP-1/2, GAS HEATING TO BE SECOND-STAGE HEAT.

CONDENSING UNIT SCHEDULE

TAG	COMPRESSOR STAGES	REFRIGERANT	SERVES	SEER
CU-1	1	R410A	FN-X	17.0

NOTES:
1. OUTDOOR UNIT C/W ULTRA-LOW AMBIENT KIT, RATED TO -40°C/F

ENERGY RECOVERY VENTILATOR SCHEDULE

TAG	LOCATION	TYPE	SENSIBLE EFFICIENCY (%)	SUPPLY FAN			EXHAUST FAN			ELECTRICAL (V/Ph/Hz)	NOTES
				AIRFLOW (CFM)	MOTOR (HP)	ESP (in.W.G.)	AIRFLOW (CFM)	MOTOR (HP)	ESP (in.W.G.)		
ERV-1	1-BEDROOM UNITS	ENTHALPY CORE	67.0	45	FRAC	0.40	45	FRAC	0.40	120/1/60	1,2
ERV-2	2-BEDROOM UNITS	ENTHALPY CORE	67.0	50	FRAC	0.40	50	FRAC	0.40	120/1/60	1,2
ERV-3	3-BEDROOM UNITS	ENTHALPY CORE	67.0	60	FRAC	0.40	60	FRAC	0.40	120/1/60	1,2
ERV-4	4-BEDROOM UNITS	ENTHALPY CORE	67.0	75	FRAC	0.40	75	FRAC	0.40	120/1/60	1,2

NOTES:
1. ERV CONTROL:
ERV CENTRAL SWITCH (ON/OFF) FOR LOW SPEED LOCATED AND LABELLED AS "VENTILATION FAN" LOCATED BESIDE FN T'STAT
PROVIDE TIMER SWITCHES IN ALL WASHROOMS.
2. PROVIDE BACKDRAFT DAMPERS ON FRESH AIR AND EXHAUST AIR DUCTS

HEAT PUMP SCHEDULE

TAG	SERVES	OUTDOOR UNIT	REFRIGERANT	HEATING	COOLING	ELECTRICAL (V/Ph/Hz)	NOTES
				HSPF	SEER		
HP-1	FN-1	CU-1	R410A	9.0	17.0	208/1/60	1 TO 4
HP-2	FN-2	CU-1	R410A	9.0	17.0	208/1/60	1 TO 4

NOTES:
1. OUTDOOR UNIT C/W ULTRA-LOW AMBIENT KIT, RATED TO -40°C/F
2. INDOOR UNIT PROVIDE DRAIN PAN FOR HEAT PUMP, DRAIN TO BE TILTED TOWARD DRAIN POINT AND PROVIDED WITH TRAPPED, INDIRECT CONNECTION TO SANITARY
3. PROVIDE 24V 7-DAY PROGRAMMABLE THERMOSTAT C/W FAN-ON MODE
4. COIL TO BE HEAT RESISTANT

DOMESTIC WATER HEATER SCHEDULE (GAS)

TAG	LOCATION	ENERGY FACTOR	NOTES
DWH-1	WATER HEATER CLOSET	0.7	1,2,3

NOTES:
1. LOCATE FLOOR DRAIN IN WATER HEATER ROOM NEAR T&P VALVE
2. ALL CONDENSING APPLIANCES: INTAKE AND FLUE PIPING TO BE RUN INDEPENDENTLY TO EXTERIOR OF BUILDING, OBSERVE REQUIRED SPACING PER MANUFACTURER AND CODE REQUIREMENTS. CONCENTRIC VENT KITS NOT ACCEPTABLE. PIPE PENETRATIONS TO EXTERIOR TO BE C/W BIRDSCREEN, NO PIPE CAP TO BE PROVIDED FOR VENT PIPING. PROVIDE CONDENSATE NEUTRALIZATION KIT FOR ALL CONDENSATE DRAINAGE POINTS. INSTALL CONDENSATE NEUTRALIZER C/W BYPASS WHERE REQUIRED.
3. PROVIDE DRAIN PAN.

FAN SCHEDULE

TAG	TYPE	FUNCTION	LOCATION	AIR CAPACITY (CFM)	ESP (in.W.C.)	MOTOR (HP)	SOUND LEVEL (SONES)	ELECTRICAL (V/Ph/Hz)	DRIVE
RH-1	UNDER CABINET	RANGE HOOD	KITCHEN (TYPICAL)	100	0.25	FRAC	6.5	115/1/60	DIRECT

PLUMBING FIXTURE PIPE SIZE SCHEDULE

TAG	DCW		DHW		DRAIN		VENT		DRAIN UNDERGROUND	
	in	mm	in	mm	in	mm	in	mm	in	mm
WC (TANK)	½	15	-	-	3	75	1½	40	3	75
LAV	½	15	½	15	1½	40	1¼	30	2	50
SK	½	15	½	15	1½	40	1¼	30	2	50
SH	½	15	½	15	2	50	1½	40	2	50
BT	½	15	½	15	1½	40	1¼	30	2	50
FD	-	-	-	-	4	100	1½	40	4	100
HB	¾	20	-	-	-		-	-	-	-
CW (DOM.)	½	15	½	15	2	50	1½	40	2	50

NOTES:
1. REFER TO MANUFACTURER'S SPECIFICATIONS

NO.	DATE	DESCRIPTION
1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING

PROJECT:
CMHC HOUSING DESIGN CATALOGUE

Project Address

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:
MECHANICAL SCHEDULES

PROJECT NO: 024-07-769
SCALE:

SHEET NO:
M400

A. GENERAL REQUIREMENTS

1. Include all labour, material and equipment required for the installation, testing and placing into operation complete mechanical systems in accordance with the plans and specifications. Installation to conform with all applicable codes and standards and to the satisfaction of the authorities having jurisdiction.
2. Contract documents are diagrammatic only. They are to establish scope, material, and quality. They are not detailed installation drawings. Minor details usually not shown or specified, and any incidental accessories required for proper installation of the system, are to be included in the work. Pipes and ductwork shall be installed in such a way as to conserve head room and interfere as little as possible with free use of the space through which they pass. All pipes and ductwork which are to be concealed shall be installed neatly and closely to the building structure so that the necessary furring can be kept as small as possible. Supply all miscellaneous metals, such as anchor bolts, expansion bolts, hanger inserts, angles, bars, plates, brackets that are related to the mechanical system installation.
3. Be responsible for the establishment of all grades and elevations in connection with mechanical equipment, ductwork, piping, drains, etc.
4. Follow the recommended installation details and procedures for all equipment as found in suppliers technical data, supplemented by details given herein by these specifications or the drawings. Where indicated in the equipment schedules, include for a factory trained service technicians attendance on the site to participate in the start up and commissioning, including controls verification, certify the installation, verify the performance, provide maintenance and operating instructions and submit a report.

B. PIPING

1. Contractor to coordinate the building system installation with the site work. Be responsible for setting grades and confirm all elevations prior to installation.
2. Hangers and supports shall secure pipe in place, maintain grade by adjustment, provide for expansion and appear neat. Install supports of strength and rigidity to suit loading without unduly stressing the structure. Hangers for piping shall be adjustable ring or clevis type. Steel for ferrous piping and copper for copper piping. Trapeze type hangers may be used where several pipes run at the same elevation. Provide isolation between copper pipe and steel hangers. Use of perforated band strap hangers is not acceptable in non-combustible construction. Use of perforated band strap hangers is acceptable in wood frame construction for Code Group 'C' residential projects. Perforated band strap hangers shall only be permitted to support individual pipes by wrapping around the pipe, secured with a bolt, and securely fastened to the building structure. Provide C-Clamp for fastening hangers to joist or install hanger rods in roof structure as approved by the Consultant. Pipe hangers shall be spaced at maximum intervals as noted in the local building code according to pipe material and size. Pipe under the building in the fill shall be supported continuously, by bedding in sand. For piping below structural slabs on grade, provide stainless steel hangers.
3. Piping - the following specification indicates the piping and fittings that may be utilized for the project. The Contractor shall submit manufacturer shop drawings for the piping and fittings proposed for use on the project. Contractor to confirm specific manufacturer, application, and installation requirements and warranty limitations prior to selecting and installing a particular product. Contractor to ensure all materials are in accordance with the applicable code requirements relating to material flame spread and smoke development, use of combustible materials, and use of materials in and penetrating fire-rated assemblies.

   a) Plumbing drainage, venting, water, and natural gas piping:
   Materials and application permitted for use on this project shall be in strict accordance with the applicable plumbing, and gas codes that govern the project installation permits. PEX piping to be chlorine resistant MDC 5.

   b) Refrigerant:

ACR copper	Wrought copper, Brazed Cast copper, Brazed

   c) Equipment Drains & Overflows:

Galvanized steel, Schedule 40, ASTM A53 only	Galvanized, Screwed Cast brass
Copper water tube, Type M, drawn temper	Wrought copper, bronze, Soldered 50-50 tin-antimony

4. Provide and set cleanouts for house drains in all straight runs of sewers, at the end of all branches, at the base of all riser lines, on all exposed or accessible traps (except water closets) further at the entry of the building at all points in the system where so indicated or called for, or where necessary to remove obstruction. Provide brass ring and cover to suit floor finish. Install cleanouts in accessible locations.
5. Provide DCW, DHW, & Sanitary connections to all plumbing fixtures as listed in the Plumbing Fixture Pipe Size Schedule.
6. Every fixture shall have its own isolation valves, trap and vent in accordance with local plumbing regulations. All vents shall extend to a minimum of 6" (150 mm) above finished roof.
7. Sleeves shall be provided by the Mechanical Contractor for all pipes passing through fire-rated walls and floors, and potentially wet floors. Sleeves shall be standard weight steel pipe or 18 gauge (1.2 mm) galvanized steel.
8. Provide roof and floor drains where indicated on drawings and as per equipment schedules.
9. Isolate steel and copper pipe with dielectric couplings. Where bronze bodied valves isolate steel and copper pipe, no insulated couplings are required.
10. Provide valves in accordance with the following schedule, valve to be manufactured and certified for the service application.

Function	Type	Size	Remarks
Isolation	Ball	Up to 3"(75mm)	Cast bronze, full port, seals to suit application, solder or threaded ends

11. Install all piping to allow for expansion and contraction. Provide flexible pipe connections, expansion joints and compensators, pipe loops, swing joints, and offsets.
12. Provide backflow prevention devices in conformance with CSA B64 and local Codes on all hose connections and on all domestic water connections where required.
13. Where required by Authorities, ensure that all service water lines over 1½" (40 mm) are flushed and cleaned and that a sample is submitted to a certified Lab for bacterial testing. Send copy of test results to the Consultant.
14. Flush all domestic water piping within the building for sufficient time to remove all contaminants.
15. Provide a minimum of 2% slope of pipe on sanitary and storm drainage piping, unless noted otherwise on drawings.
16. Test all piping systems in accordance with industry standards. Hydro test all liquid systems; air or nitrogen test gas systems. Test to minimum 1½ times operation pressure for a minimum of 2 hours, or as required by code.
17. On all domestic systems equip low points with 20 mm (3/4") drains consisting of a ball valve and hose nipple.
18. Protect all metal pipes from contact with corrosive material.

C. DUCTWORK

1. Provide all venting and chimneys from all gas fired equipment, as required in accordance with CSA standards for the applicable venting category and local codes. Provide venting materials required to suit the specific equipment application, as per manufacturer's venting guidelines.
2. Ducts shall be constructed of galvanized sheet metal sufficiently braced to prevent rattling or leaking. Duct systems shall be complete of sizes shown. If not shown, of sizes required to produce capacity of equipment installed. Properly support ducts with galvanized hangers. Gauges, joints, bracing and hangers shall be in accordance with the SMACNA Manual latest edition. Medium velocity and exposed round ductwork to be spiral lock seam type only. Ductwork in interior exposed areas intended to be painted shall be satin finish.
3. Low velocity insulated flexible ductwork shall be equal to Thermaflex Type M-KC. Connect air outlets to low pressure ducts with 36" (900 mm) maximum length of stretched flexible duct. Hold in place with caulking compound and strap or clamp. Do not kink or pinch cross sectional area. Where low pressure ducts are connected to fan equipment, terminal boxes or any other apparatus, a screwed or bolted flexible gasket joint shall be provided between the ductwork and the equipment, minimum 2" (50 mm) wide.
4. Provide all necessary anchors and guides to permit free expansion and contraction of ducts. Hangers and supports for covered ducts shall not injure or pierce the insulation.
5. Duct sizes shown on the drawings are inside clear dimensions. If ducts are acoustically lined, the outside size shall be increased accordingly. All ducts shall be complete within themselves and no single partition between ducts will be accepted.
6. Unless noted otherwise, provide birdscreen on all open ended ducts to the following sizes:

Open Ended Duct Application	Birdscreen Size in.(mm)
Exterior exhaust outlets (gooseneck or wall hood)	1 (25)
Exterior intakes	2 (50)
Interior open ended ducts	1 (25)

7. All laps shall be smooth and in the direction of air flow. Sheet metal screws shall be accepted on low pressure ductwork only.
8. Unless otherwise indicated, all tees, bends and elbows shall be constructed with a radius of not less than 1½ times the width of the duct on centerline.
9. All rectangular ducts shall be constructed by breaking the corners and grooving longitudinal seams using the Pittsburgh-seam or other approved airtight seam. All elbow and transformation pieces shall be constructed using Pittsburgh corner seams or double seam corners. All slips shall not be less than one gauge heavier than the duct material and flange joints may be considered as girth reinforcing. Open corners will not be accepted. All ductwork joints shall be sealed with approved type products based on SMACNA manual for each pressure class. Duct tape as a sealing method is not acceptable.
10. Provide balancing dampers c/w indicators at all points on supply and return and exhaust systems where branches are taken from larger ducts, also where indicated on the drawings and required for proper air balance.
11. Provide ULC labeled and approved fire dampers at all points where ductwork penetrates fire rated assemblies. Fire dampers to be curtain type. Provide dampers suitable for the application (vertical or horizontal) and rating. Static or dynamic type as required. Provide approved fire stop flaps where outlets penetrate a membrane ceiling forming part of a fire rated assembly. Dampers are to be installed according to the manufacturer's instructions.
12. Wall hoods to be aluminum. Back draft dampers to be provided for exhaust wall hoods. Refer to drawings for duct connection sizes.

D. INSULATION

1. Provide insulation for ducts and piping as specified below and in accordance with TIAC guidelines.
2. All insulating material, flexible connectors, combustible coverings, etc., shall have flame spread ratings and smoke development classification not exceeding current code requirements.
3. Provide canvas recovery jacket on all indoor exposed insulation. Aluminum or PVC recovery in wet areas or when exposed to the elements or subject to damage. Foil-faced vapour insulation on supply ducts, cold ducts and cold pipes.
4. Provide insulation to the following standards throughout the building:

Duct Service & Equipment		Insulation in.(mm)
Outdoor Air Intake, Combustion Air, Relief Air		2 (50)
Exhaust Duct (within 10' (3 m) of exterior openings)		1 (25)
Ducts exposed to outdoors		2 (50)
Acoustic Lining	(minimum, where indicated on plans)	1 (25)
	(where indicated & noted on plans)	2 (50)

Piping Service & Equipment	Nominal Sizes	Insulation in.(mm)
Storm Sewer & Vents (minimum 6' (2 m) section from roof and entire horizontal to first vertical drop)	All Sizes	1 (25)
Domestic Cold Water	All Sizes	1 (25)
Domestic Hot Water & Recirculation	2 (50) and smaller	1 (25)
	2½ (65) and larger	1½ (40)
Refrigerant (Armaflex insulation)	All Sizes	½ (15)

E. CONTROLS AND INTERFACE WITH THE ELECTRICAL CONTRACTOR

Supply the Electrical Contractor with information necessary to accurately locate motors and any control devices that require wiring by the Electrical Contractor. Coordinate with the Electrical Contractor the electrical requirements for all mechanical equipment. Confirm the voltage and phase with the Electrical Contractor prior to ordering of equipment and submission of shop drawings. Be responsible for any additional electrical costs resulting from alternative mechanical equipment being supplied. Provide the Electrical Contractor with a motor list based on the coordinated electrical connection requirements and the shop drawings. Include in the motor list a complete inventory of all equipment and systems that require electrical connections. Include the equipment tag number, location, motor HP or kW, voltage, phase, starter and control requirements and interlocks. The Engineers design motor list can be made available, for information purposes only, upon request.

1. All electric/electronic controls devices by the Mechanical Contractor and/or their sub-trades. All conduit & wiring by the Electrical Contractor:
   - Mechanical Contractor or their sub-contractors or equipment suppliers to provide all control devices. Wiring of low and line voltage related to the mechanical controls to be by the Electrical Contractor.
   - Provide shop drawings c/w product data for all devices, valve and damper schedules, wiring schematics and operational description for all equipment that is provided with automatic control.
   - Devices and control equipment to be as detailed below or as specified in the equipment schedules.
   - Mechanical Contractor to verify the operation of all systems and equipment. Calibrate all control devices.

NO.	DATE	DESCRIPTION
1	2025-02-21	ISSUED AS PROTOTYPICAL DRAWING

PROJECT:

CMHC HOUSING DESIGN CATALOGUE

Project Address

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

MECHANICAL SPECIFICATIONS

PROJECT NO: 024-07-769

SCALE:

SHEET NO:

M500

CMHC HOUSING DESIGN CATALOGUE

AB SIXPLEX

ELECTRICAL DRAWINGS

ACCESSIBILITY - GENERAL NOTES

1. THE FOLLOWING REQUIREMENTS ARE REFERENCED FROM CSA B652 - ACCESIBILTY STANDARDS CANADA (ASC).

2. CLAUSE 4.3.3-b)-ii - PARKING AND GARAGES:

a) ILLUMINATION IS TO BE PROVIDED FOR ANY EXTERIOR MOTION SENSOR CONTROLS.
b) WHERE VISUAL DISPLAYS ARE REQUIRED TO BE READ, DISPLAYS ARE REQUIRED TO BE ILLUMINATED TO ACHIEVE A MINIMUM OF 200LX ON SIGNAGE.
c) WHERE DISPLAYS ARE NOT REQUIRED TO BE READ OR BACKLIGHTING HAS BEEN ACHIEVED, ILLUMINATION BETWEEN 50LX AN 100LX IS NECESSARY ON SIGNAGE.

3. CLAUSE 4.3.5.1-b) - GENERAL - OPERATING CONTROLS:

a) WHERE VISUAL DISPLAYS ARE REQUIRED TO BE READ, DISPLAYS ARE REQUIRED TO BE ILLUMINATED TO ACHIEVE A MINIMUM OF 200LX ON SIGNAGE.
b) WHERE DISPLAYS ARE NOT REQUIRED TO BE READ OR BACKLIGHTING HAS BEEN ACHIEVED, ILLUMINATION BETWEEN 50LX AN 100LX IS NECESSARY ON SIGNAGE.

4. CLAUSE 4.3.5.1-e) - GENERAL ILLUMINATION: MINIMUM LIGHTING LEVELS (4.8), REFER TO THE FOLLOWING REQUIREMENTS:

a) GENERAL ILLUMINATION: 50LX AT FLOOR LEVEL
b) KITCHEN BUILT-IN: 300LX, COUNTER-TOP: 750LX
c) ADULT BEDROOM: 100-300LX, READING DESK: 500LX
d) CHILD BEDROOM: 500LX, READING DESK: 800LX
e) BATHROOM: 300LX, MIRROR (VERTICAL): 300-700LX
f) LIVING ROOM: 300LX, READING: 500LX
g) FAMILY ROOM / THEATRE: 300LX (150LX FOR TV VIEWING), READING / TABLE: 500LX
h) LAUNDRY / UTILITY: 200LX, COUNTERTOP: 300LX
i) DINING ROOM: 200LX
j) HALLWAY, STAIRS: 100-500LX
k) HOME OFFICE: 500LX, DESK / READING: 800LX
l) GARAGE: 500LX, WORKTABLE: 750LX
m) WORKSHOP: 800LX, BENCH: 1100LX
n) EXTERIOR PERIMETER: 50LX

5. CLAUSE 4.3.5.2 - DOORS:

a) DOOR HARDWARE - ROUGH-IN ELECTRICAL TO BE PROVIDED FOR FUTURE INSTALLATION OF A POWER ASSISTED DOOR AT THE BATHROOM, MAIN ENTRANCE AND GARAGE ENTRANCE.
b) CONTROLS FOR POWER-ASSISTED DOORS SHOULD BE LOCATED ALONG THE ACCESSIBLE PATH OF TRAVEL, CLEARLY VISIBLE BEFORE REACHING THE DOOR, ADJACENT TO A CLEAR FLOOR AREA OF 820X1390mm AND BETWEEN 600-1500mm FROM LATCH EDGE OF DOOR.

6. CLAUSE 5.9.6 - BATHROOM ILLUMINATION - MINIMUM REQUIREMENTS:

a) BATHROOM: 300LX
b) MIRROR TASK LIGHTING: 300-700LX, BE MOUNTED BETWEEN 300-500mm PERPENDICULAR TO THE MIRROR SIDE, AND AT 1000-1700mm.
c) BE DIMMABLE BETWEEN 50LX AND 300LX.
d) SHOWER OR BATHUB LIGHTING SHALL HAVE AS A MINIMUM, ONE FIXTURE CENTERED IN THE CEILING.

7. CLAUSE 5.9.8 - BATHROOM:

2xGFCI REQUIRED:
a) NEXT TO THE SINK 150mm FROM THE FRONT EDGE OF FRONT FACE OF THE VANITY AND
b) NEXT TO THE TOILET 150mm FROM THE FRONT EDGE AND 300-600mm AFF.

8. CLAUSE 5.10.5 - KITCHEN:

OPERATING CONTROLS SHALL BE:
a) ACCESSIBLE
b) SWITCHES AND OUTELTS INSTALLED ON FRONT FACES OF COUNTERS
c) INCLUDED IN SIDE WALL OUTLETS
d) WHERE PROVIDED, RANGE HOODS OPERABLE FROM SEATED POSITION

9. CLAUSE 5.11.5 - BEDROOM:

ELECTRICAL:
a) SHALL BE ACCESSIBLE
b) PROVIDE AT LEAST ONE SWITCH BESIDE BED AT A HEIGHT BETWEEN 550-650mm AFF.
c) HAVE TWO WALLS WITH A MINIMUM OF TWO QUAD RECEPTACLES PER WALL
d) HAVE OUTLETS PLACED AT A MINIMUM 600mm FROM THE CORNER OF THE ROOM AND A MAXIMUM DISTANCE OF 2080mm BETWEEN EACH

10. CLAUSE 5.11.6 - BEDROOM:

OUTLET CONNECTIONS:
a) ONE OUTLET FOR COMPUTER NETWORK AT A HEIGHT BETWEEN 400-1100mm AFF, LESS THAN 600mm HORIZONTALLY FROM BED EDGE AND IN A LOCATOIN WHERE ACCESS IS NOT IMPEDED BY FURNITURE.

11. CLAUSE 5.14 - HOME AUTOMATION:

a) USER INTERFACE, PROVIDE MINIMUM 200LX WHERE READING IS NECESSARY.

12. CLAUSE 5.16 - ALERT & SIGNAL DEVICES:

a) EMERGENCY ALERT AND SIGNAL DEVICES SHALL BE EQUIPPED TO PROVIDE BOTH VISUAL AND AUDIBLE SIGNALS.

ELECTRICAL SYMBOL LEGEND

NOTE: SOME SYMBOL REFERENCES MAY NOT BE PART OF THIS PROJECT

LIGHTING

	LINE VOLTAGE SWITCH		RECESSED MOUNTED LIGHT FIXTURE
	WALL MOUNT OCCUPANCY SENSOR SWITCH		SURFACE MOUNTED LIGHT FIXTURE
	CEILING MOUNT OCCUPANCY SENSOR		SUSPENDED LIGHT FIXTURE
#	LOW VOLTAGE SWITCH, # INDICATES BUTTONS		STRIP LIGHT FIXTURE
	CEILING MOUNT EXIT SIGN, LINE DENOTES FACE		WALL MOUNTED LINEAR LIGHT FIXTURE
	WALL MOUNT EXIT SIGN, LINE DENOTES FACE		WALL MOUNTED LIGHT FIXTURE
	EXIT SIGN C/W EMERGENCY HEADS		SURFACE MOUNTED LIGHT FIXTURE
	REMOTE EMERGENCY HEADS		RECESSED DOWNLIGHT
	BATTERY PACK C/W EMERGENCY HEADS		PENDANT MOUNT LIGHT FIXTURE
	HATCH INDICATES EMERGENCY FIXTURE		TRACK LIGHT, NO. OF HEADS AS PER PLANS
A CCT a / Z1 900AFF	FIXTURE TYPEMARKER CIRCUIT SWITCH ID / LIGHTING CONTROL ZONE MOUNTING HEIGHT / SUSPENSION LENGTH		STRIP LIGHT FIXTURE ILLUMINATED BOLLARD POLE MOUNTED LIGHT FIXTURE

LIGHTING SYMBOL ANNOTATIONS:

PEC	PHOTOELECTRIC CELL	D	DIMMER
TC	TIMECLOCK	DT	DUAL TECHNOLOGY
NL	NIGHTLIGHT (UN-SWITCHED)	VAC	VACANCY SENSOR (MANUAL ON, AUTO OFF)
3	3-WAY	EM	FIXTURE POWERED FROM EMERGENCY SOURCE
LV	LOW VOLTAGE	EM#	EMERGENCY BATTERY PACK I.D.

POWER

	DUPLEX RECEPTACLE		SPECIAL RECEPTACLE
	QUAD RECEPTACLE		JUNCTION BOX
	GFI RECEPTACLE		PAC POLE
	SPLIT FED RECEPTACLE		MOTOR
	HALF SWITCHED RECEPTACLE		DISCONNECT SWITCH
	ISOLATED GROUND RECEPTACLE	MS VFD	MAGNETIC STARTER / VFD
	PEDESTAL MOUNTED RECEPTACLE	SPD	SURGE PROTECTION DEVICE

POWER SYMBOL ANNOTATIONS:

T	T-SLOT (20A)	TR	TAMPER RESISTANT
WP	WEATHERPROOF	U	USB CHARGER

DISTRIBUTION

	SURFACE MOUNTED PANELBOARD		UTILITY METER STACK
	RECESSED MOUNTED PANELBOARD		UTILITY METER
	COMMUNICATIONS BACKBOARD		GROUND BAR
	LOW TENSION PANEL / CABINET		TRANSFORMER

DISTRIBUTION SYMBOL ANNOTATIONS:

MDP	MAIN DISTRIBUTION PANEL	LVRC	LOW VOLTAGE RELAY PANEL
CDP	CENTRAL DISTRIBUTION PANEL	CB	COMMUNICATIONS BACKBOARD
MCC	MOTOR CONTROL CENTER	TX	TRANSFORMER

LOW TENSION

	DATA NETWORK JACK	WAP	WIRELESS ACCESS POINT PROVIDE DATA DROP IN CEILING SPACE
	TELEPHONE JACK		
	COMBINATION TELEPHONE / DATA JACK		PUSHBUTTON
	TELEVISION COAX OUTLET		UP / DOWN / STOP PUSHBUTTON
	HDMI OUTLET		CEILING MOUNTED SPEAKER
B C	DOORBELL BUZZER / DOORBELL CHIME	K	WALL MOUNTED SPEAKER
T	THERMOSTAT	CO2 HD	CO_2 / NO SENSORS

LOW TENSION SYMBOL ANNOTATIONS:

\# NUMBER INDICATES QUANTITY OF CABLES / DROPS AT EACH LOCATION

FIRE ALARM

F	HORN	FT	HEAT DETECTOR - FIXED TEMPERATURE
F #	HORN STROBE		HEAT DETECTOR - RATE OF RISE
F #	STROBE		SMOKE DETECTOR
F	MANUAL STATION	A	SMOKE ALARM (120V)
F	SPEAKER	AC	SMOKE ALARM CO2 COMBINIATION
F #	SPEAKER STROBE		END OF LINE RESISTOR
	ELECTROMAGNETIC DOOR HOLD OPEN	??	FIRE ALARM MODULE
	FIRE ALARM PANEL		FIRE PHONE

FIRE ALARM SYMBOL ANNOTATIONS:

#	CANDELA RATING FOR STROBE	MM	MONITORING MODULE
FACP	FIRE ALARM CONTROL PANEL	CM	CONTROL MODULE
FAAP	FIRE ALARM ANNUNCIATOR PANEL	FS	FLOW SWITCH
IM	ISOLATOR MODULE	TS	TAMPER SWITCH

SECURITY

	MOTION SENSOR	??	SECURITY DEVICE
V	VISUAL INDICATOR LIGHT		SECURITY CAMERA (CAT6 OUTLET)

SECURITY SYMBOL ANNOTATIONS:

CR	CARD READER	KP	KEY PAD
ES	ELECTRIC STRIKE	GB	GLASS BREAK
DC	DOOR CONTACT / DOOR POSITION SWITCH	ML	MAGNETIC LOCK
RTX	REQUEST TO EXIT	EC	ELECTRONIC CLOSER

ANNOTATIONS

	UNDERGROUND / UNDERSLAB CONDUIT	#	KEY NOTE
	OVERHEAD / SURFACE MOUNT CONDUIT		DOT ABOVE ANY SYMBOL INDICATES ABOVE COUNTER MOUNTING HEIGHT
	CONDUIT STUB		
1 E##	DRAWING REFERENCE		SQUARE AROUND ANY SYMBOL INDICATES FLOOR MOUNT DEVICE
1 EX	SECTION REFERENCE		CIRCLE AROUND ANY SYMBOL INDICATES CEILING MOUNT DEVICE
X#	SINGLE LINE DIAGRAM WIRE TAG, Y = WYE, D = DELTA CONFIGURATION		

ELECTRICAL SHEET LIST

CMHC SCHL

NO.	DATE	DESCRIPTION
1	03/26/25	ISSUED AS PROTOTYPICAL DRAWING

PROJECT:

CMHC HOUSING CATALOGUE

Enter address here

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SHEET TITLE:

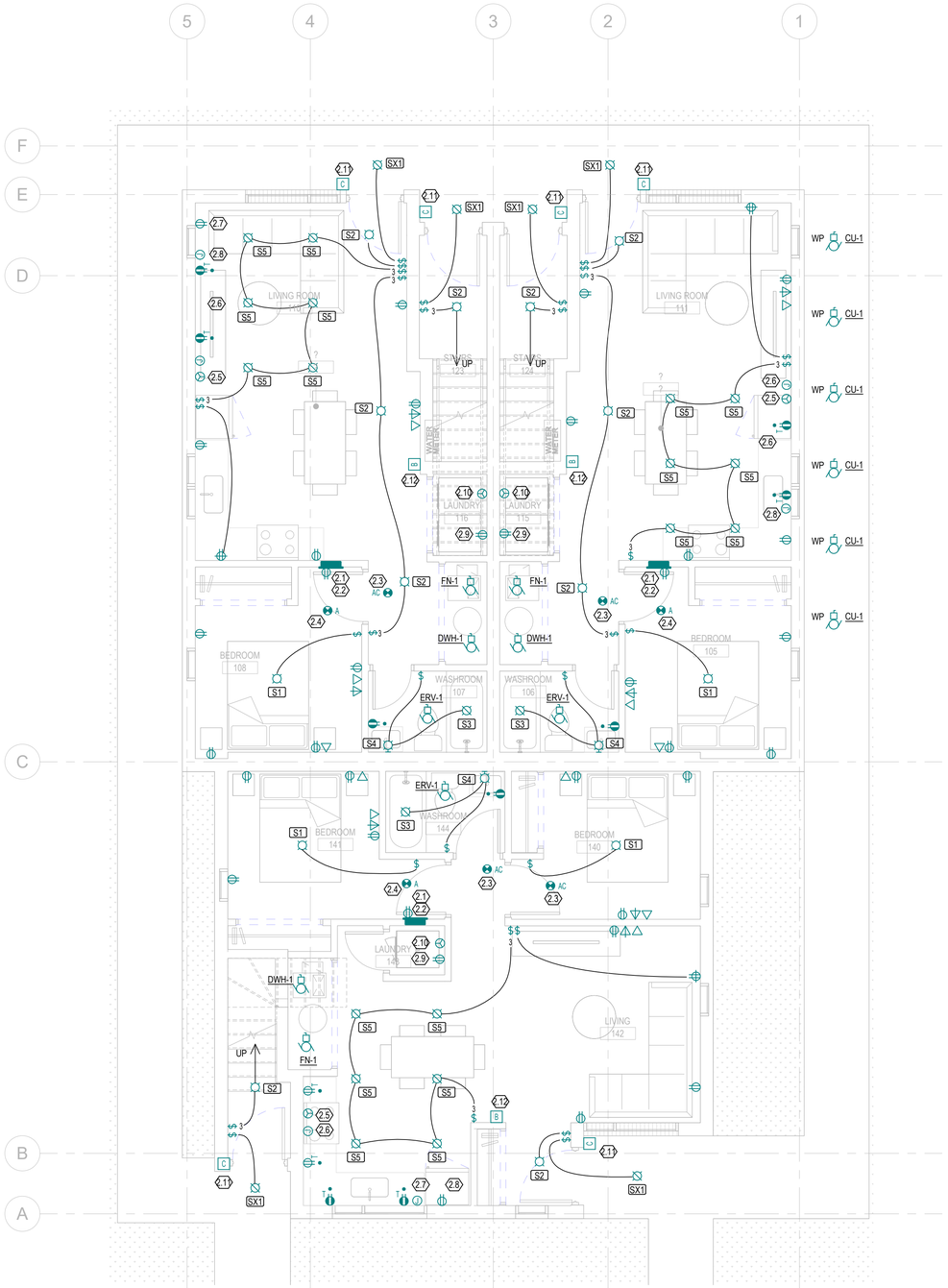
AB SIXPLEX - COVER PAGE

PROJECT NO: Project Number

SCALE: 1 : 1

SHEET NO:

E100



MAIN FLOOR PLAN - OPTION 1

SCALE: 1 : 50

GENERAL SUITE NOTES

1 PROVIDE ARC FAULT BREAKERS FOR ALL RECEPTACLES IN RESIDENTIAL SUITES IN ACCORDANCE WITH CEC 26-658.
2 PROVIDE TAMPER RESISTANT RECEPTACLES IN EACH SUITE TO CEC 26-706.
3 PROVIDE GROUND FAULT CIRCUIT INTERRUPTION FOR RECEPTACLES WITHIN 1.5m OF ANY SINK OR WASHBASIN AND FOR EXTERIOR PATIOS.
4 TO PREVENT SOUND TRANSMISSION BETWEEN ROOMS, PROVIDE HORIZONTAL SEPARATION OF AT LEAST 1 STUD SPACE FOR RECESSED WALL JUNCTION BOXES IN SUITE WALLS WHEN THE JUNCTION BOXES ARE INSTALLED ON EITHER SIDE OF THE WALL.
5 PROVIDE MOLDABLE FIRE RESISTANT PUTTY PADS (3M FIRE BARRIER OR EQUAL) IN SUITE PARTY WALLS WHEN JUNCTION BOXES ARE INSTALLED WITHIN THE SAME STUD SPACE ON EITHER SIDE OF THE WALL. WHERE PRACTICAL, EFFORT SHOULD BE MADE TO AVOID PLACING JUNCTION BOXES IN THE SAME STUD SPACE. CONFIRM WITH ENGINEER.
6 PROVIDE RECEPTACLES IN SUITES WITH APPROPRIATE SPACING IN ACCORDANCE WITH SECTION 26 OF THE CEC WHETHER SHOWN CORRECTLY ON THE DRAWINGS OR NOT. ALLOW FOR ADDITIONAL RECEPTACLES AS REQUIRED. NO EXTRAS WILL BE PERMITTED FOR NOT COMPLYING WITH CEC SPACING REQUIREMENTS.
7 PROVIDE SWITCHES FOR BEDROOMS, KITCHENS, LIVING ROOMS, UTILITY ROOMS, DINING ROOMS, LAUNDRY ROOMS, BATHROOMS, HALLWAYS, STORAGE ROOMS, FRONT ENTRY, BALCONY ON THE LATCH SIDE OF THE DOOR. CONFIRM DOOR SWING ON SITE PRIOR TO ROUGH IN. INSTALL WITHIN 50mm OF THE DOOR, PROVIDE ADDITIONAL BLOCKING IF REQUIRED.
8 BALCONY LIGHT FIXTURES TO BE ALIGNED IN A VERTICAL LINE BETWEEN FLOORS FROM GROUND FLOOR TO HIGHEST FLOOR IF POSSIBLE. REFER TO ARCHITECTURAL ELEVATIONS.
9 ALL SUITE LIGHT SWITCHES AND RECEPTACLES TO BE DECORA STYLE, RESIDENTIAL GRADE.
10 REFER TO LATEST MECHANICAL ENGINEER'S PLANS FOR THERMOSTAT AND HUMIDISTAT LOCATIONS. REFER TO SPECIFICATIONS.
11 REFER TO LATEST MECHANICAL ENGINEER'S PLANS FOR VENTILATION EQUIPMENT OR HEATING/ COOLING EQUIPMENT ELECTRICAL REQUIREMENTS (FURNACES, FAN COILS, CONDENSING UNITS, RADIATOR ZONE VALVES ETC), CONNECT ALL MECHANICAL HEATING/ COOLING EQUIPMENT. CONTACT ENGINEER IF DISCREPANCIES EXIST.
12 CONFIRM EXACT PLACEMENT OF LIGHT FIXTURES WITH OWNER.
13 PROVIDE SUITE PATIO RECEPTACLE NEAR BBQ GAS CONNECTION IF POSSIBLE. COORDINATE WITH MECHANICAL TRADE AND RELOCATE IF REQUIRED.
14 ALL SUITE TELEPHONE AND DATA JACKS TO BE CAT6 TO ALLOW FOR PATCHING FOR USE AS EITHER TELEPHONE OR DATA.

KEYNOTES - SUITES

2.1	SUITE PANEL; PANEL TO BE FLUSH MOUNTED C/W HINGED SMOOTH COVER.
2.2	SUITE COMMUNICATION CABINET; SUPPLIED BY UTILITY, INSTALLED BY ELECTRICAL CONTRACTOR C/W HINGED SMOOTH COVER. INCLUDE NETWORK PATCH PANEL MODULE, 6 PORT VOICE/DATA MODULE, CATV SPLITTER, TELEPHONE MODULE AND RECEPTACLE. HOME RUN TELEPHONE, CATV AND DATA LINES TO THIS LOCATION.
2.3	SMOKE/CO ALARM - PROVIDE AND INSTALL 120V DETECTOR C/W BATTERY BACKUP AND MANUAL SILENCE BUTTON. WHERE MULTIPLE ALARMS ARE SHOWN WITHIN EACH SUITE, INTERLOCK SUCH THAT ALL UNITS WILL ALARM TOGETHER.
2.4	SMOKE ALARMS - PROVIDE AND INSTALL A 120V C/W BATTERY BACK UP. WHERE MULTIPLE ALARMS ARE SHOWN WITHIN EACH SUITE, INTERLOCK SUCH THAT ALL DEVICES WILL ALARM TOGETHER INCLUDING COMBINATION CO ALARMS. BATTERY TO BE TYPE 'A'. ALL SUITE SMOKE ALARMS AND OR CO DETECTORS TO BE WIRED WITH LIGHTING ON NON ARCH FAULT CIRCUIT.
2.5	RANGE; PROVIDE AND INSTALL 40A, 240V (OR 208V), 1 PHASE RECEPTACLE AT MAXIMUM 130mm AFF TO CENTER OF BOX.
2.6	FAN HOOD; PROVIDE INSTALLATION OF RANGE HOOD FAN / LIGHTS.
2.7	DISHWASHER - PROVIDE ELECTRICAL INSTALLATION FOR A DISHWASHER. COORDINATE INSTALLATION WITH APPLIANCE SUPPLIER.
2.8	REFRIGERATOR; PROVIDE DEDICATED RECEPTACLE.
2.9	WASHING MACHINE - PROVIDE DEDICATED 120V CIRCUIT FOR CLOTHES WASHER.
2.10	DRYER - PROVIDE AND INSTALL 30A, 208V (OR 240V), 1 PHASE RECEPTACLE.
2.11	CHIME - PROVIDE ROUGH IN FOR A DOOR CHIME NUTONE LA11WH. PROVIDE ALL WIRING AND ACCESSORIES FOR COMPLETE OPERATION INCLUDING (BUT NOT LIMITED TO) 16V TRANSFORMER, WHITE LIGHTED PUSHBUTTON(S) ETC.
2.12	DOOR BUZZER (CHIME) - PROVIDE AND INSTALL A DOOR CHIME NUTONE LA11WH. PROVIDE ALL WIRING AND ACCESSORIES FOR COMPLETE OPERATION INCLUDING (BUT NOT LIMITTED TO 16V TRANSFORMER, WHITE LIGHTED EXTERIOR DOOR PUSHBUTTON.

TYPICAL SUITE PANEL

DESCRIPTION	BRKR	CCT	CCT	BRKR	DESCRIPTION
LIGHTING & POWER	15A	1	2	40A	RANGE
LIGHTING & POWER	15A	3	4		
LIGHTING & POWER	15A	5	6	30A	DRYER
LIGHTING & POWER	15A	7	8		
LIGHTING & POWER	15A	9	10	15A	WASHER
KITCHEN	20A	11	12	20A	ERV-1 OR 2
KITCHEN	20A	13	14		
KITCHEN	20A	15	16	20A	CU-1
MICROWAVE	15A	17	18		
DISHWASHER	15A	19	20	15A	FN-1
FRIDGE	15A	21	22	15A	DWH-1
	15A	23	24	15A	
	15A	25	26	15A	
	15A	27	28	15A	
	15A	29	30	15A	
	15A	31	32	15A	
	15A	33	34	15A	
SPARE	15A	35	36	15A	SPARE
SPARE	15A	37	38	15A	SPARE
SPARE	15A	39	40	15A	SPARE
SPARE	15A	41	42	15A	SPARE

NOTES:
- DO NOT EXCEED 10 DEVICES PER CIRCUIT.
- REFER TO MECH SHOP DRAWINGS OR LATEST PLANS FOR ELECTRICAL REQUIREMENTS OF HVAC & AC EQUIPMENT.
- PANEL TO BE 24 CCT (48 MINI BREAKERS) EQUIPPED WITH 100A RATED BUS, 1 PHASE, 120/240V.
- PROVIDE ARC FAULT BREAKERS FOR ALL RECEPTACLES IN RESIDENTIAL SUITES IN ACCORDANCE WITH CEC 26-658.

CMHC SCHL

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1	03/26/25	ISSUED AS PROTOTYPICAL DRAWING

NO.	DATE	DESCRIPTION

PROJECT:

CMHC HOUSING CATALOGUE

Enter address here

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SHEET TITLE:

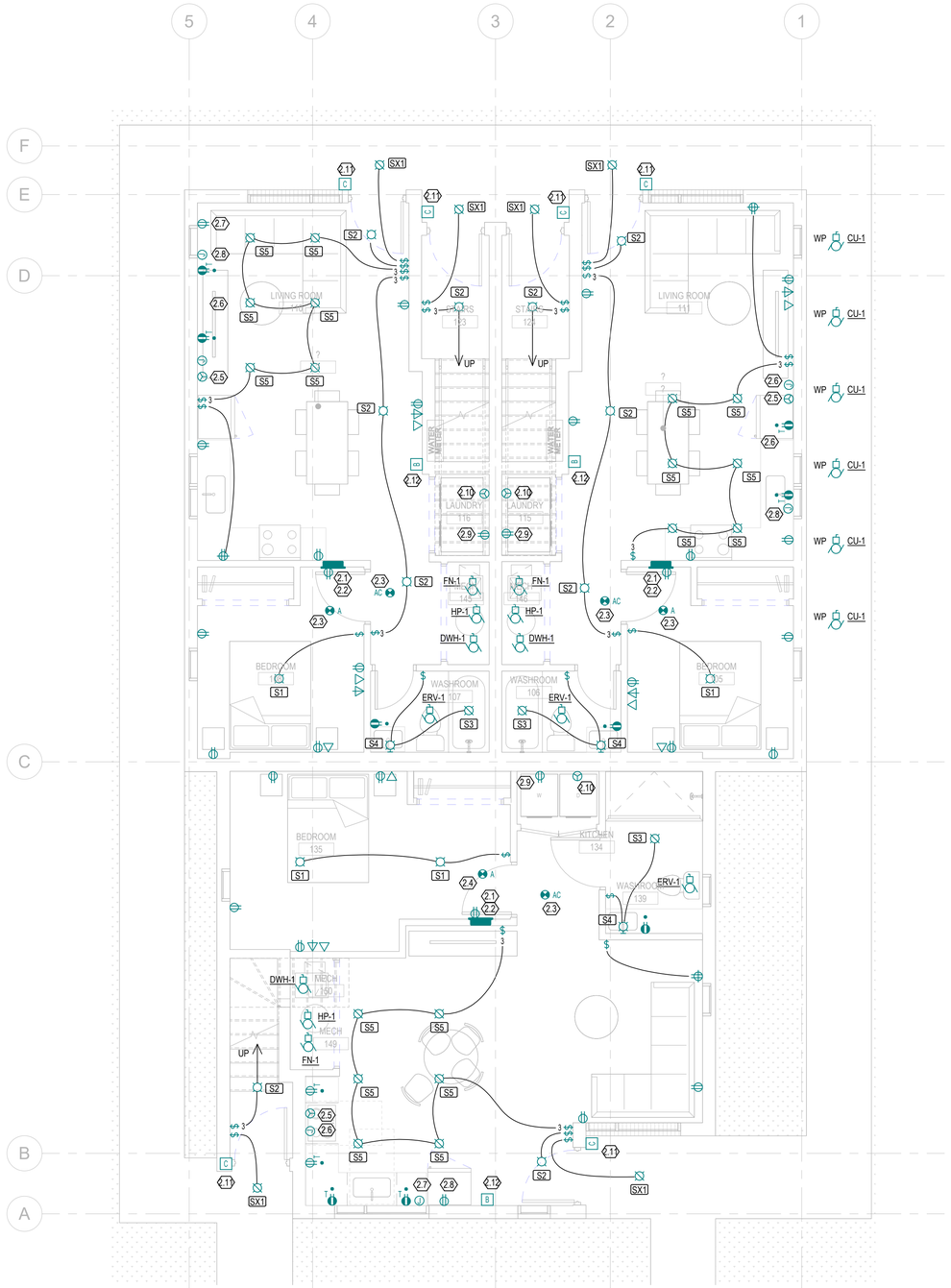
AB SIXPLEX - MAIN FLOOR PLAN - OPTION 1

PROJECT NO: Project Number

SCALE: As indicated

SHEET NO:

E201A



MAIN FLOOR PLAN - OPTION 2

SCALE: 1 : 50

GENERAL SUITE NOTES

1. PROVIDE ARC FAULT BREAKERS FOR ALL RECEPTACLES IN RESIDENTIAL SUITES IN ACCORDANCE WITH CEC 26-658.
2. PROVIDE TAMPER RESISTANT RECEPTACLES IN EACH SUITE TO CEC 26-706.
3. PROVIDE GROUND FAULT CIRCUIT INTERRUPTION FOR RECEPTACLES WITHIN 1.5m OF ANY SINK OR WASHBASIN AND FOR EXTERIOR PATIOS.
4. TO PREVENT SOUND TRANSMISSION BETWEEN ROOMS, PROVIDE HORIZONTAL SEPARATION OF AT LEAST 1 STUD SPACE FOR RECESSED WALL JUNCTION BOXES IN SUITE WALLS WHEN THE JUNCTION BOXES ARE INSTALLED ON EITHER SIDE OF THE WALL.
5. PROVIDE MOLDABLE FIRE RESISTANT PUTTY PADS (3M FIRE BARRIER OR EQUAL) IN SUITE PARTY WALLS WHEN JUNCTION BOXES ARE INSTALLED WITHIN THE SAME STUD SPACE ON EITHER SIDE OF THE WALL. WHERE PRACTICAL, EFFORT SHOULD BE MADE TO AVOID PLACING JUNCTION BOXES IN THE SAME STUD SPACE. CONFIRM WITH ENGINEER.
6. PROVIDE RECEPTACLES IN SUITES WITH APPROPRIATE SPACING IN ACCORDANCE WITH SECTION 26 OF THE CEC WHETHER SHOWN CORRECTLY ON THE DRAWINGS OR NOT. ALLOW FOR ADDITIONAL RECEPTACLES AS REQUIRED. NO EXTRAS WILL BE PERMITTED FOR NOT COMPLYING WITH CEC SPACING REQUIREMENTS.
7. PROVIDE SWITCHES FOR BEDROOMS, KITCHENS, LIVING ROOMS, UTILITY ROOMS, DINING ROOMS, LAUNDRY ROOMS, BATHROOMS, HALLWAYS, STORAGE ROOMS, FRONT ENTRY, BALCONY ON THE LATCH SIDE OF THE DOOR. CONFIRM DOOR SWING ON SITE PRIOR TO ROUGH IN. INSTALL WITHIN 50mm OF THE DOOR, PROVIDE ADDITIONAL BLOCKING IF REQUIRED.
8. BALCONY LIGHT FIXTURES TO BE ALIGNED IN A VERTICAL LINE BETWEEN FLOORS FROM GROUND FLOOR TO HIGHEST FLOOR IF POSSIBLE. REFER TO ARCHITECTURAL ELEVATIONS.
9. ALL SUITE LIGHT SWITCHES AND RECEPTACLES TO BE DECORA STYLE, RESIDENTIAL GRADE.
10. REFER TO LATEST MECHANICAL ENGINEER'S PLANS FOR THERMOSTAT AND HUMIDISTAT LOCATIONS. REFER TO SPECIFICATIONS.
11. REFER TO LATEST MECHANICAL ENGINEER'S PLANS FOR VENTILATION EQUIPMENT OR HEATING/ COOLING EQUIPMENT ELECTRICAL REQUIREMENTS (FURNACES, FAN COILS, CONDENSING UNITS, RADIATOR ZONE VALVES ETC), CONNECT ALL MECHANICAL HEATING/ COOLING EQUIPMENT. CONTACT ENGINEER IF DISCREPANCIES EXIST.
12. CONFIRM EXACT PLACEMENT OF LIGHT FIXTURES WITH OWNER.
13. PROVIDE SUITE PATIO RECEPTACLE NEAR BBQ GAS CONNECTION IF POSSIBLE. COORDINATE WITH MECHANICAL TRADE AND RELOCATE IF REQUIRED.
14. ALL SUITE TELEPHONE AND DATA JACKS TO BE CAT6 TO ALLOW FOR PATCHING FOR USE AS EITHER TELEPHONE OR DATA.

KEYNOTES - SUITES

2.1	SUITE PANEL; PANEL TO BE FLUSH MOUNTED C/W HINGED SMOOTH COVER.
2.2	SUITE COMMUNICATION CABINET; SUPPLIED BY UTILITY, INSTALLED BY ELECTRICAL CONTRACTOR C/W HINGED SMOOTH COVER. INCLUDE NETWORK PATCH PANEL MODULE, 6 PORT VOICE/DATA MODULE, CATV SPLITTER, TELEPHONE MODULE AND RECEPTACLE. HOME RUN TELEPHONE, CATV AND DATA LINES TO THIS LOCATION.
2.3	SMOKE/CO ALARM - PROVIDE AND INSTALL 120V DETECTOR C/W BATTERY BACKUP AND MANUAL SILENCE BUTTON. WHERE MULTIPLE ALARMS ARE SHOWN WITHIN EACH SUITE, INTERLOCK SUCH THAT ALL UNITS WILL ALARM TOGETHER.
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2.5	RANGE; PROVIDE AND INSTALL 40A, 240V (OR 208V), 1 PHASE RECEPTACLE AT MAXIMUM 130mm AFF TO CENTER OF BOX.
2.6	FAN HOOD; PROVIDE INSTALLATION OF RANGE HOOD FAN / LIGHTS.
2.7	DISHWASHER - PROVIDE ELECTRICAL INSTALLATION FOR A DISHWASHER. COORDINATE INSTALLATION WITH APPLIANCE SUPPLIER.
2.8	REFRIGERATOR; PROVIDE DEDICATED RECEPTACLE.
2.9	WASHING MACHINE - PROVIDE DEDICATED 120V CIRCUIT FOR CLOTHES WASHER.
2.10	DRYER - PROVIDE AND INSTALL 30A, 208V (OR 240V), 1 PHASE RECEPTACLE.
2.11	CHIME - PROVIDE ROUGH IN FOR A DOOR CHIME NUTONE LA11WH. PROVIDE ALL WIRING AND ACCESSORIES FOR COMPLETE OPERATION INCLUDING (BUT NOT LIMITED TO) 16V TRANSFORMER, WHITE LIGHTED PUSHBUTTON(S) ETC.
2.12	DOOR BUZZER (CHIME) - PROVIDE AND INSTALL A DOOR CHIME NUTONE LA11WH. PROVIDE ALL WIRING AND ACCESSORIES FOR COMPLETE OPERATION INCLUDING (BUT NOT LIMITTED TO 16V TRANSFORMER, WHITE LIGHTED EXTERIOR DOOR PUSHBUTTON.

TYPICAL SUITE PANEL

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LIGHTING & POWER	15A	5	6	30A	DRYER
LIGHTING & POWER	15A	7	8		
LIGHTING & POWER	15A	9	10	15A	WASHER
KITCHEN	20A	11	12	20A	ERV-1
KITCHEN	20A	13	14		
KITCHEN	20A	15	16	20A	CU-1
MICROWAVE	15A	17	18		
DISHWASHER	15A	19	20	15A	FN-1
FRIDGE	15A	21	22	15A	DWH-1
	15A	23	24	30A	HP-1
	15A	25	26		
	15A	27	28	15A	
	15A	29	30	15A	
	15A	31	32	15A	
	15A	33	34	15A	
SPARE	15A	35	36	15A	SPARE
SPARE	15A	37	38	15A	SPARE
SPARE	15A	39	40	15A	SPARE
SPARE	15A	41	42	15A	SPARE

NOTES:
- DO NOT EXCEED 10 DEVICES PER CIRCUIT.
- REFER TO MECH SHOP DRAWINGS OR LATEST PLANS FOR ELECTRICAL REQUIREMENTS OF HVAC & AC EQUIPMENT.
- PANEL TO BE 24 CCT (48 MINI BREAKERS) EQUIPPED WITH 100A RATED BUS, 1 PHASE, 120/240V.
- PROVIDE ARC FAULT BREAKERS FOR ALL RECEPTACLES IN RESIDENTIAL SUITES IN ACCORDANCE WITH CEC 26-658.

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NO.	DATE	DESCRIPTION
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PROJECT:

CMHC HOUSING CATALOGUE

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SHEET TITLE:

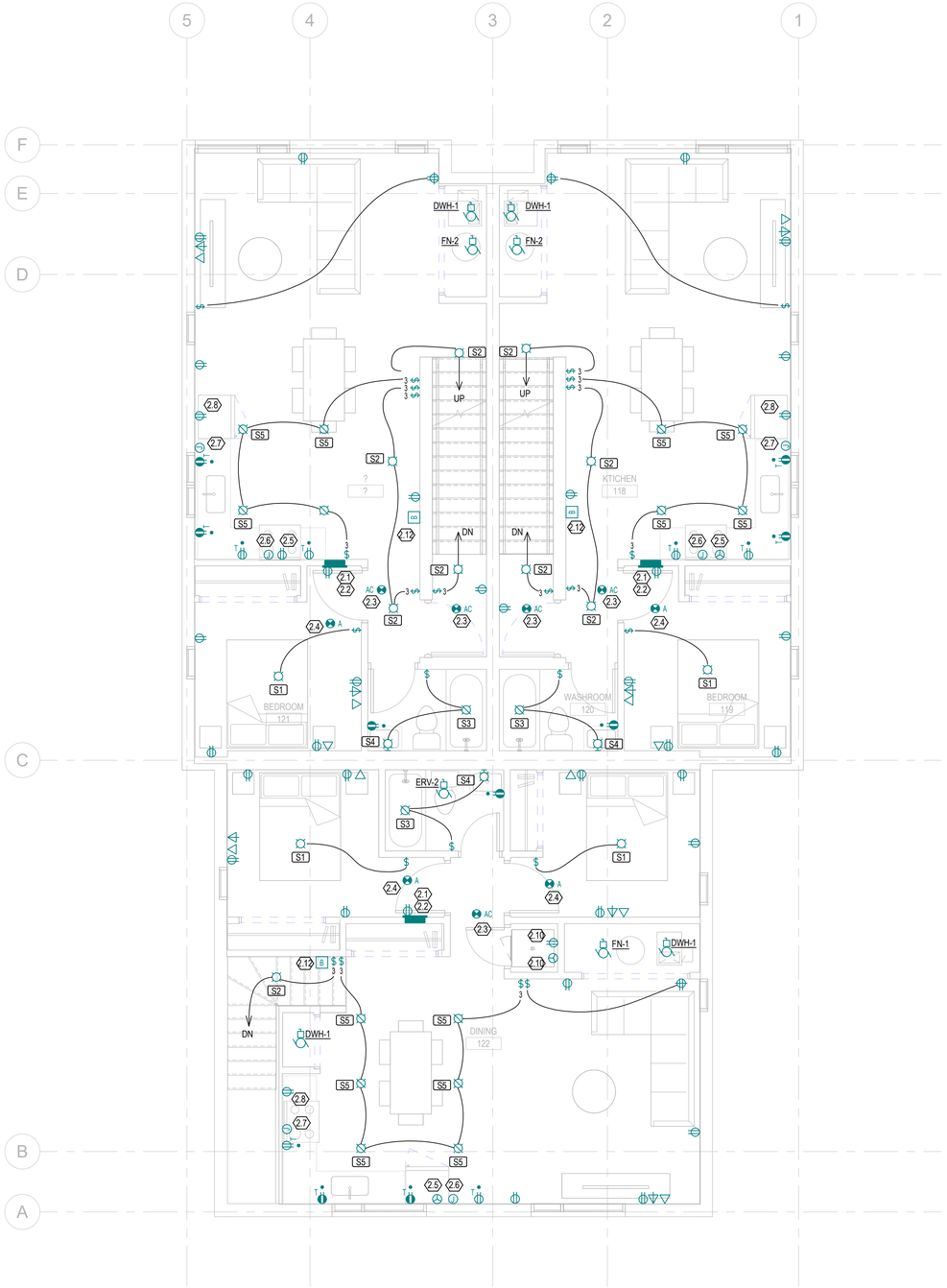
AB SIXPLEX - MAIN FLOOR PLAN - OPTION 2

PROJECT NO: Project Number

SCALE: As indicated

SHEET NO:

E201B



SECOND FLOOR PLAN

SCALE: 1 : 50

GENERAL SUITE NOTES

1. PROVIDE ARC FAULT BREAKERS FOR ALL RECEPTACLES IN RESIDENTIAL SUITES IN ACCORDANCE WITH CEC 26-658.
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3. PROVIDE GROUND FAULT CIRCUIT INTERRUPTION FOR RECEPTACLES WITHIN 1.5m OF ANY SINK OR WASHBASIN AND FOR EXTERIOR PATIOS.
4. TO PREVENT SOUND TRANSMISSION BETWEEN ROOMS, PROVIDE HORIZONTAL SEPARATION OF AT LEAST 1 STUD SPACE FOR RECESSED WALL JUNCTION BOXES IN SUITE WALLS WHEN THE JUNCTION BOXES ARE INSTALLED ON EITHER SIDE OF THE WALL.
5. PROVIDE MOLDABLE FIRE RESISTANT PUTTY PADS (3M FIRE BARRIER OR EQUAL) IN SUITE PARTY WALLS WHEN JUNCTION BOXES ARE INSTALLED WITHIN THE SAME STUD SPACE ON EITHER SIDE OF THE WALL. WHERE PRACTICAL, EFFORT SHOULD BE MADE TO AVOID PLACING JUNCTION BOXES IN THE SAME STUD SPACE. CONFIRM WITH ENGINEER.
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8. BALCONY LIGHT FIXTURES TO BE ALIGNED IN A VERTICAL LINE BETWEEN FLOORS FROM GROUND FLOOR TO HIGHEST FLOOR IF POSSIBLE. REFER TO ARCHITECTURAL ELEVATIONS.
9. ALL SUITE LIGHT SWITCHES AND RECEPTACLES TO BE DECORA STYLE, RESIDENTIAL GRADE.
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KEYNOTES - SUITES

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2.5	RANGE; PROVIDE AND INSTALL 40A, 240V (OR 208V), 1 PHASE RECEPTACLE AT MAXIMUM 130mm AFF TO CENTER OF BOX.
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TYPICAL SUITE PANEL

DESCRIPTION	BRKR	CCT	CCT	BRKR	DESCRIPTION
LIGHTING & POWER	15A	1	2	40A	RANGE
LIGHTING & POWER	15A	3	4		
LIGHTING & POWER	15A	5	6	30A	DRYER
LIGHTING & POWER	15A	7	8		
LIGHTING & POWER	15A	9	10	15A	WASHER
KITCHEN	20A	11	12	20A	ERV-2 OR 3
KITCHEN	20A	13	14		
KITCHEN	20A	15	16	20A	CU-1
MICROWAVE	15A	17	18		
DISHWASHER	15A	19	20	15A	FN-1
FRIDGE	15A	21	22	15A	DWH-1
	15A	23	24	15A	
	15A	25	26	15A	
	15A	27	28	15A	
	15A	29	30	15A	
	15A	31	32	15A	
	15A	33	34	15A	
SPARE	15A	35	36	15A	SPARE
SPARE	15A	37	38	15A	SPARE
SPARE	15A	39	40	15A	SPARE
SPARE	15A	41	42	15A	SPARE

NOTES:
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- REFER TO MECH SHOP DRAWINGS OR LATEST PLANS FOR ELECTRICAL REQUIREMENTS OF HVAC & AC EQUIPMENT.
- PANEL TO BE 24 CCT (48 MINI BREAKERS) EQUIPPED WITH 100A RATED BUS, 1 PHASE, 120/240V.
- PROVIDE ARC FAULT BREAKERS FOR ALL RECEPTACLES IN RESIDENTIAL SUITES IN ACCORDANCE WITH CEC 26-658.

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PROJECT:

CMHC HOUSING CATALOGUE

Enter address here

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

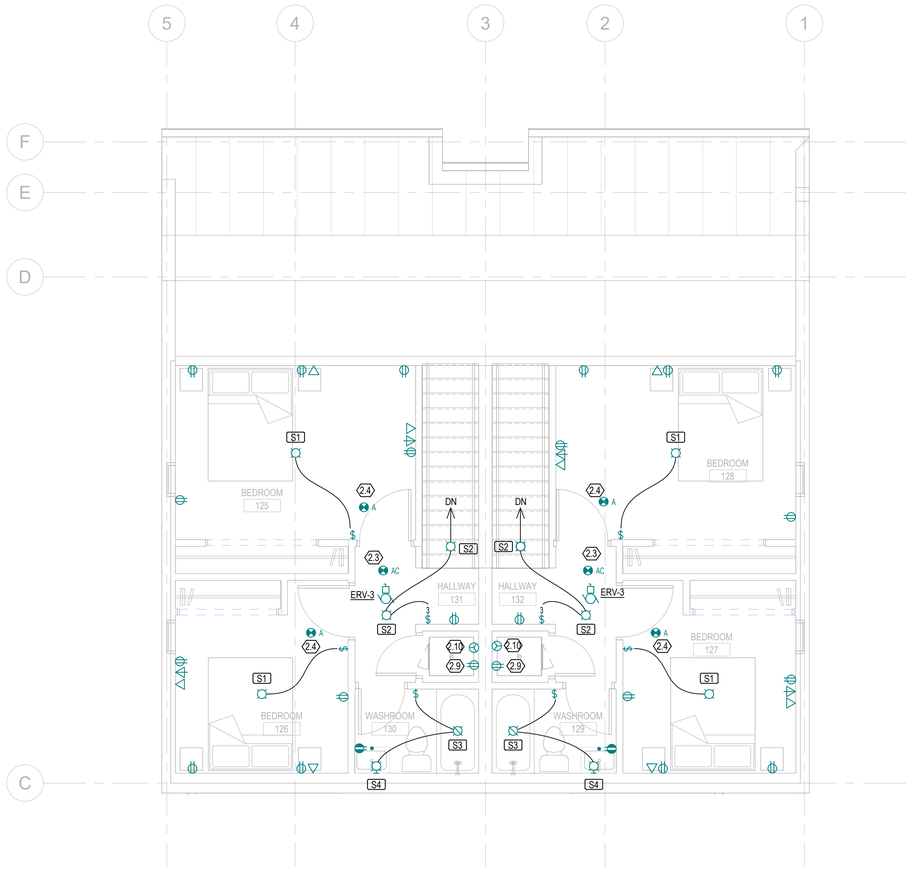
AB SIXPLEX - SECOND FLOOR PLAN

PROJECT NO: Project Number

SCALE: As indicated

SHEET NO:

E202



THIRD FLOOR PLAN

SCALE: 1 : 50

GENERAL SUITE NOTES

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4. TO PREVENT SOUND TRANSMISSION BETWEEN ROOMS, PROVIDE HORIZONTAL SEPARATION OF AT LEAST 1 STUD SPACE FOR RECESSED WALL JUNCTION BOXES IN SUITE WALLS WHEN THE JUNCTION BOXES ARE INSTALLED ON EITHER SIDE OF THE WALL.
5. PROVIDE MOLDABLE FIRE RESISTANT PUTTY PADS (3M FIRE BARRIER OR EQUAL) IN SUITE PARTY WALLS WHEN JUNCTION BOXES ARE INSTALLED WITHIN THE SAME STUD SPACE ON EITHER SIDE OF THE WALL. WHERE PRACTICAL, EFFORT SHOULD BE MADE TO AVOID PLACING JUNCTION BOXES IN THE SAME STUD SPACE. CONFIRM WITH ENGINEER.
6. PROVIDE RECEPTACLES IN SUITES WITH APPROPRIATE SPACING IN ACCORDANCE WITH SECTION 26 OF THE CEC WHETHER SHOWN CORRECTLY ON THE DRAWINGS OR NOT. ALLOW FOR ADDITIONAL RECEPTACLES AS REQUIRED. NO EXTRAS WILL BE PERMITTED FOR NOT COMPLYING WITH CEC SPACING REQUIREMENTS.
7. PROVIDE SWITCHES FOR BEDROOMS, KITCHENS, LIVING ROOMS, UTILITY ROOMS, DINING ROOMS, LAUNDRY ROOMS, BATHROOMS, HALLWAYS, STORAGE ROOMS, FRONT ENTRY, BALCONY ON THE LATCH SIDE OF THE DOOR. CONFIRM DOOR SWING ON SITE PRIOR TO ROUGH IN. INSTALL WITHIN 50mm OF THE DOOR, PROVIDE ADDITIONAL BLOCKING IF REQUIRED.
8. BALCONY LIGHT FIXTURES TO BE ALIGNED IN A VERTICAL LINE BETWEEN FLOORS FROM GROUND FLOOR TO HIGHEST FLOOR IF POSSIBLE. REFER TO ARCHITECTURAL ELEVATIONS.
9. ALL SUITE LIGHT SWITCHES AND RECEPTACLES TO BE DECORA STYLE, RESIDENTIAL GRADE.
10. REFER TO LATEST MECHANICAL ENGINEER'S PLANS FOR THERMOSTAT AND HUMIDISTAT LOCATIONS. REFER TO SPECIFICATIONS.
11. REFER TO LATEST MECHANICAL ENGINEER'S PLANS FOR VENTILATION EQUIPMENT OR HEATING/ COOLING EQUIPMENT ELECTRICAL REQUIREMENTS (FURNACES, FAN COILS, CONDENSING UNITS, RADIATOR ZONE VALVES ETC), CONNECT ALL MECHANICAL HEATING/ COOLING EQUIPMENT. CONTACT ENGINEER IF DISCREPANCIES EXIST.
12. CONFIRM EXACT PLACEMENT OF LIGHT FIXTURES WITH OWNER.
13. PROVIDE SUITE PATIO RECEPTACLE NEAR BBQ GAS CONNECTION IF POSSIBLE. COORDINATE WITH MECHANICAL TRADE AND RELOCATE IF REQUIRED.
14. ALL SUITE TELEPHONE AND DATA JACKS TO BE CAT6 TO ALLOW FOR PATCHING FOR USE AS EITHER TELEPHONE OR DATA.

KEYNOTES - SUITES

2.3	SMOKE/CO ALARM - PROVIDE AND INSTALL 120V DETECTOR C/W BATTERY BACKUP AND MANUAL SILENCE BUTTON. WHERE MULTIPLE ALARMS ARE SHOWN WITHIN EACH SUITE, INTERLOCK SUCH THAT ALL UNITS WILL ALARM TOGETHER.
2.4	SMOKE ALARMS - PROVIDE AND INSTALL A 120V C/W BATTERY BACK UP. WHERE MULTIPLE ALARMS ARE SHOWN WITHIN EACH SUITE, INTERLOCK SUCH THAT ALL DEVICES WILL ALARM TOGETHER INCLUDING COMBINATION CO ALARMS. BATTERY TO BE TYPE 'A'. ALL SUITE SMOKE ALARMS AND OR CO DETECTORS TO BE WIRED WITH LIGHTING ON NON ARCH FAULT CIRCUIT.
2.9	WASHING MACHINE - PROVIDE DEDICATED 120V CIRCUIT FOR CLOTHES WASHER.
2.10	DRYER - PROVIDE AND INSTALL 30A, 208V (OR 240V), 1 PHASE RECEPTACLE.

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	03/26/25	ISSUED AS PROTOTYPICAL DRAWING

PROJECT:

CMHC HOUSING CATALOGUE

Enter address here

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

AB SIXPLEX - THIRD FLOOR PLAN

PROJECT NO: Project Number

SCALE: 1 : 50

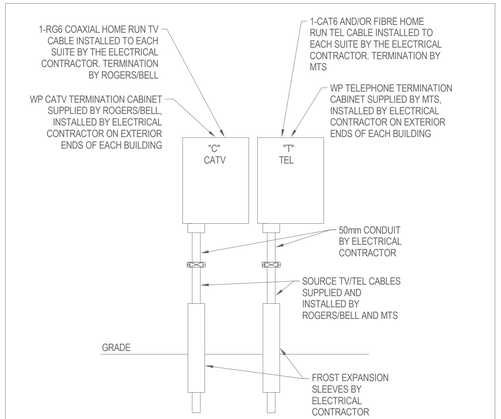
SHEET NO:

E203

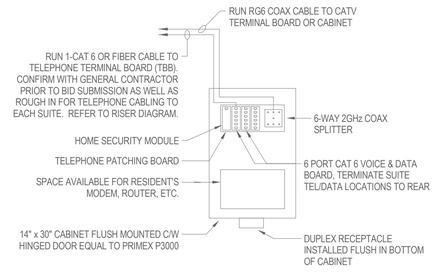
LIGHTING FIXTURE SCHEDULE

NOTES:
EQUIVALENT FIXTURES ARE ACCEPTABLE UPON APPROVAL OF ENGINEER AND INTERIOR DESIGNER.
REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR EXACT FIXTURE LOCATIONS AND MOUNTING HEIGHTS.
LIGHT FIXTURES AND LAMPS TO HAVE A COLOR TEMPERATURE OF 3500~4000K UNLESS NOTED OTHERWISE.

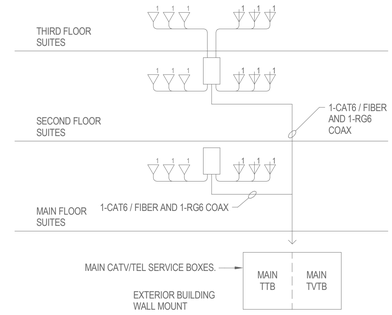
TYPE	MANUFACTURER	MODEL NUMBER	VOLTAGE	WATTAGE	LAMP	MOUNTING	DESCRIPTION
INTERIOR							
S1	BY CONTRACTOR	BY CONTRACTOR	120 V	21 VA	1815 LUMEN LED	SURFACE MOUNT	13" DIAMETER, WHITE FINISH, DIMMING
S2	BY CONTRACTOR	BY CONTRACTOR	120 V	15 VA	1300 LUMEN LED	SURFACE MOUNT	10" DIAMETER, WHITE FINISH, DIMMING
S3	BY CONTRACTOR	BY CONTRACTOR	120 V	10 VA	784 LUMEN LED	RECESSED	4" LED WET LISTED DOWNLIGHT, PHASE DIMMABLE SPRING CLIP MOUNTED C/W UNIVERSAL MOUNTING PLATE.
S4	BY CONTRACTOR	BY CONTRACTOR	120 V	30 VA	- LUMEN LED	WALL MOUNT	WALL MOUNT VANITY, TRIAC DIMMABLE, 3xMED BASE E26 SCREW-IN LAMPS.
S5	BY CONTRACTOR	BY CONTRACTOR	120 V	10 VA	650 LUMEN LED	RECESSED	4" RECESSED LED OPEN DOWNLIGHT - REGRESSED BAFFLE, SPRING CLIP C/W UNIVERSAL MOUNTING PLATE
SX1	BY CONTRACTOR	BY CONTRACTOR	120 V	23 VA	784 LUMEN LED	RECESSED	4" LED WET LISTED DOWNLIGHT, PHASE DIMMABLE SPRING CLIP MOUNTED C/W UNIVERSAL MOUNTING PLATE.



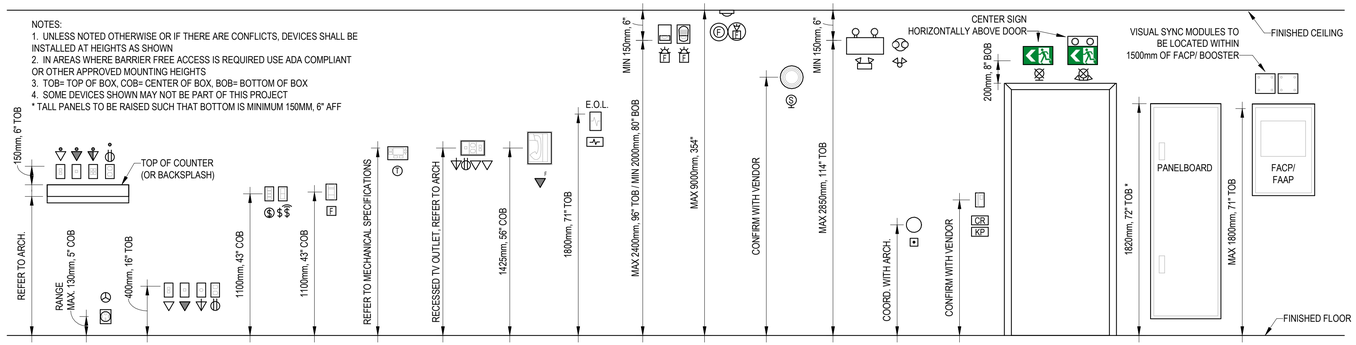
TELEPHONE / CATV SERVICES (TYPICAL)
SCALE: N.T.S.



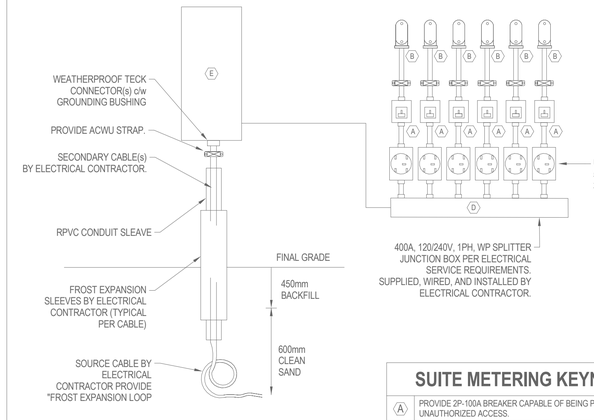
SUITE COMMUNICATIONS CABINET
SCALE: N.T.S.



TOWNHOME TELEPHONE RISER
SCALE: N.T.S.



TYPICAL MOUNTING HEIGHTS
SCALE: N.T.S.



SUITE METERING KEYNOTES

(A)	PROVIDE 2P-100A BREAKER CAPABLE OF BEING PROTECTED FROM UNAUTHORIZED ACCESS.
(B)	SUITE FEEDER CABLE c/w 3#1 XL CU, RUN THROUGH MAIN FLOOR JOIST SPACE TO MAIN SUITE PANEL's.
(D)	PROVIDE UTILITY LOCKABLE SPLITTER CABINET.
(E)	PROVIDE WEATHERPROOF, SERVICE RATED FUSIBLE 400A, 120/240V, 1PH, 3P DISCONNECT SWITCH, c/w 400A ONE TIME FUSES.

SUITE METER WIRING TYPICAL (6 METERS)
SCALE: N.T.S.

CMHC SCHL

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NO.	DATE	DESCRIPTION
1	03/26/25	ISSUED AS PROTOTYPICAL DRAWING

PROJECT:
CMHC HOUSING CATALOGUE

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SHEET TITLE:
AB SIXPLEX - DETAILS

PROJECT NO: Project Number
SCALE: N.T.S.

SHEET NO:
E300

ELECTRICAL CONTRACTOR GENERAL REQUIREMENTS

General Requirements, Division 1, shall form part of this Division, and all instructions to bidders, General Conditions, amendments thereto, and General Requirements of that Division apply to and govern the work of this Division.

1. This section contains requirements applicable and supplementary to other Divisions, and are to be read in conjunction with those Divisions.
2. "Utility" shall hereafter mean the electrical power supply company, telephone supply company, fibre network supply company and cable TV supply company.
3. The electrical installation shall adhere to the latest edition of the Canadian Electrical Code (CEC), applicable building code, and all other codes in force by the local Authority Having Jurisdiction (AHJ).
4. Electrical drawings and these specifications are complementary to each other. Treat discrepancies between them as requirement to adhere to the most restrictive conditions. Contact Engineer 5 days prior to tender close if discrepancies or errors/omissions are found.
5. Provide all labour, materials, tools, equipment, and transportation required for the complete installation and testing of all systems described herein.
6. Obtain exact dimensions and coordinate placement of electrical equipment conduit, devices and fittings from architectural and structural drawings. Make any necessary adjustments to accommodate structural and architectural conditions without additional charge. Notify engineer prior to all significant revisions.
7. Materials are to be new, not inferior to the quality specified, and conform to standards issued by CSA, ULC, or any other Canadian standards agency.
   A. Where materials are specified by technical description, provide the best commercial qualities available for the purpose.
   B. Maintain uniformity of manufacture, type, and style within a particular group or class of equipment throughout the work.
   C. All work and materials covered by these specifications shall be subject to inspection at any and all times by the Engineer or the Owner's representative. If the inspection finds any material that does not conform to these specifications, Electrical Contractor shall, within three (3) days after being notified by the Engineer or Owner, remove the material from the premises and is not entitled to any additional charge.
9. Inform Engineer of all inspections by AHJ at least 48 hours in advance.
10. Provide all necessary measurements and assistance to Engineer on his visits to the site at any phase of the project, including after completion.
11. No deviations from the drawings shall be permitted without written permission from the Engineer.
12. Workmanship
   A. All work is to be executed in a neat and orderly manner, with all surface conduit following building lines, and concrete-embedded conduit having minimum 25% of slab thickness coverage. Coordinate with structural engineer.
   B. Keep a competent foreman on the project for its duration, unless able to provide satisfactory reasons for changing that person.
   C. Tradesmen under foreman, including specialty Electrical sub-trades, are to be competent in all aspects of work to which they are assigned. Specialty sub-trades include, but may not be limited to, audio/visual systems, voice/data infrastructure (provide copy of workers' certification by equipment manufacturer), public address, intercommunication, security/access control, and lighting control.
   D. Do not position device boxes based on Electrical drawings unless dimensions are shown. Determine placement of device boxes from Architectural drawings. If placement is not shown, consult with Architect or Engineer for clarification.
      a. Place adjacent device boxes horizontally and vertically so their centrelines align. Boxes on opposite sides of a wall are to be separated by at least one stud space, unless directed otherwise, or provide sound-deadening material between them.
      b. Locating devices 3 meters or less from position shown on drawings as directed by engineer at rough-in shall not entitle contractor to any extra charges.
13. Protect all finished and unfinished work and equipment
   A. Any damage by this contractor is to be repaired at no expense to Owner.
   B. Receive and protect electrical equipment provided by Owner.
   C. Where panels or other items are scratched, repaint entire affected surface to same finish as other sides or to voltage or system-coded colours.
   D. All newly installed equipment to be left clean and in new condition at the completion of the project.
14. Excavation, Backfilling, etc.
   A. All electrical underground work requiring excavating, trenching, etc, shall be the responsibility of the electrical contractor.
   B. All underground work to be coordinated with Utility companies and General Contractor.
   C. All trench bottoms to have 80mm of clean screen sand as base for conduits. Provide 300mm of screen sand on top of conduits prior to backfilling.
   D. Where underground conduits require protection, Provide 75mm of concrete encasement. Electrical contractor to confirm with utility companies, and local inspection department, requirements of encasement prior to backfilling.
   E. It is the responsibility of the electrical contractor to notify the inspection department prior to backfilling.
   F. Prior to commencing any work, the electrical contractor is responsible for reviewing all mechanical / electrical services including deep service to avoid any possible conflict. Refer to Mechanical and Civil drawings prior to starting work.
15. Visit site / premises before tender in order to ascertain working conditions. No extras will be paid based on site or working conditions.
16. Provide sleeves, inserts, etc, as required, to General Contractor for placement in concrete, and supervise their placement. Correct incorrect placement at own expense.
   A. X-Ray scan all concrete prior to cutting, coring, etc. Provide scan results to owner/engineer upon request. Review results with all disciplines with infrastructure that may be affected by cutting, coring, etc.
17. Remove daily debris and surplus materials resulting from this trade's work.
18. No consideration will be given to requests for extras or equipment substitution due to late ordering of material, including delays due to rejection of shop drawings.

SHOP DRAWINGS SUBMITTALS

1. All shop drawings shall be manufacturers' data sheets and information. Provide shop drawings in electronic PDF format. No facsimiles, screen captures, blank catalogue pages, or poor quality reproductions will be accepted.
2. Include only information relative to the equipment for which the shop drawing is submitted. Where equipment choices exist on cut sheets, indicate the proposed equipment with arrows or highlighting. Additionally, provide a list of the submitted equipment. Shop drawings to clearly state equipment tags/designations.
3. All shop drawings submitted to the Engineer must bear the approvals of the Contractor prior to engineer review. Work shall not proceed with items until Engineer's reviews are complete and shop drawings are returned.
4. Consultant's review will be for conformity with the design concept and requirements of any and all related construction documents, and that the materials suit the site conditions and fit in the available space
5. Supply shop drawings for at least the following items or item types:
   A. Distribution and sub-distribution panels, panelboards, disconnect switches, transformers, SPDs, circuit breakers, fuses, and their characteristics, instrument transformers, protective relays, etc., and complete fault and coordination study.
   B. Motor control equipment, including starters, contactors, overload heaters, control relays, time-delay relays, motor circuit and control fuses and breakers, pilot lights, control transformers, and selector switches.
   C. All light fixtures and controls (line/low voltage controls).
   D. All low voltage systems' components including fire alarm, structured cabling, etc.
   E. Wiring and cabling devices including receptacles, switches, floor boxes, power poles, cable tray, data racks, UPS systems, and disconnect switches.
   F. Emergency genset and transfer switch equipment (where specified).
   G. Firestopping system and details (See fire stopping section below).

ALTERNATES

1. No alternates will be allowed without written acceptance on alternate submittals from the engineer prior to close of tender.
2. The contractor remains solely responsible for ensuring that the materials meet or exceed the requirements of any and all related construction documents, and that the materials will suit the site conditions and fit in the available space.

PERMITS, CERTIFICATES, and FEES

1. Obtain, pay for, and submit all permits and necessary documents (including drawing approvals by the Electrical Inspection Authority) necessary for the electrical work to commence.
2. On completion of the work, submit a Certificate of Acceptance from the Inspection Authority to the Engineer.

FIRE STOPPING

1. The electrical contractor, in coordination with the general contractor, is responsible for the installation of all fire stopping systems relating to electrical penetrations through fire rated ceilings, wall or assemblies. The fire stopping systems utilized, shall maintain an effective barrier against the spread of flames, smoke and hot gases and shall have passed the CAN/ULC-S115 approved testing procedure.
2. The electrical contractor must provide adequate notification to the electrical engineer that firestopping has been completed to allow for field observations and reporting prior to concealment.
3. Submit shop drawings for approval, of all fire stopping system details, including but not limited to, product manufacturer's specifications, technical data for each material and CUL approved documentation.

PROGRESS CLAIMS, EXTRAS, and CREDITS

1. Immediately after award of contract, provide Engineer with an itemized schedule of the tender price, with major items, milestones, etc. as line items (examples: Mobilization, Conduit, Service Equipment, Luminaires, Wiring, Voice/Data system) shown, totaling to the quoted price. Thereafter, when submitting progress claims, this schedule shall be used, and claims shall be made based upon percentage completion of each line item. Extras or credits shall be shown added or deleted to main contract.
2. Any claim for progress or extras or offer of credit with respect to proposed electrical changes must be accompanied by a complete breakdown of labour and materials, together with explanation of any condition warranting additional consideration. Failure to supply such information will result in immediate rejection of the claim or offer.
   A. Such claim must show quantities, unit prices, labour rates and hours, suppliers' invoices, and any other substantiating documentation.
   B. All equipment and material related to a claim must be installed or stored on site in a secure and safe location.
   C. Where agreement cannot be arrived at, claims are to be dealt with under General Conditions, and proposed changes are to be enacted as directed in writing.

INSPECTIONS and TESTS

1. Before energizing any portion of the electrical system, provide and pay for testing equipment as part of this contract to perform 1000 volt megger tests (L-L, L-N, L-G) on all feeders and branch circuits, and verify that results conform to the Canadian Electrical Code, and to the satisfaction of the Inspection Authority and to the Engineer.

ENGINEER SITE OBSERVATIONS

1. Contact the Engineer for field reviews at the following stages of construction (provide 5 (five) working days notice):
   A. Rough-in
   B. Substantial Completions
   C. Completion of Deficiencies (if required)
2. The following items are to be completed prior to substantial inspection:
   A. Fire alarm verification report from manufacturer's representative and witnessing engineer's certificate to be completed. Send copies to Engineer.
   B. Connection of fire alarm system to central monitoring agency as per ULC-S561 to be complete and operational with certificate.
   C. All emergency and exit lighting to be installed, operational and fully charged as per drawings. Contractor to conduct load test prior to review.
   D. All devices not installed must have wiring terminated inside a junction box c/w cover (no exposed wiring).
   E. All electrical equipment to have covers and doors installed.
3. Failure to inform the Engineer of construction progress as described above may result in the Engineer being unable to issue an "Assurance of Professional Review and Compliance" (Schedule 'C') to the local building authority which is required for occupancy.
4. Cost for additional site reviews being required due to failure to comply with these requirements will be charged to the contractor.

AS-BUILT DRAWINGS

1. Maintain at the job site, one set of prints on which is recorded, day-by-day, all outlets, conduit, fixtures, and equipment as installed; together with any changes made to the work. Checking of progress on the preparation of the as built drawings will be carried out by the supervising Engineer regularly.
2. Dimension underground services installed relative to the structure, clearly dimension and mark, to ensure ease of locating at future date, all concealed conduits and/or other equipment.
3. Upon completion, obtain the most current floor plan from the engineer and transpose all as-built markups onto a clean set and scan to PDF.

OPERATION and MAINTENANCE MANUALS

1. Provide to the Owner electronic copy of O&M Manuals for the electrical systems and equipment in PDF format. PDF shall be organized with bookmarked chapters and sections. Manuals to include written system description and operating procedures, drawing list, maintenance and installation brochures, test certificates, start-up reports, maintenance schedules, shop drawings, warranty letter, list of subcontractors and equipment suppliers, c/w addresses and phone numbers. Instruct the Owner in the operation and maintenance of the electrical systems. A suitable deficiency holdback will be retained until the above and related contract close-out requirements are completed.

GUARANTEE/WARRANTY

1. All electrical equipment and systems installed and connected shall be guaranteed free of defective material and workmanship for a period of the greater of one year or any manufacturer offered extended warranty on specific items or systems, with time started from date of substantial completion (or system start-up, if later than substantial completion). Any defects shall be remedied without cost to Owner during this period.
2. Provide documents of guarantee/warranty in the O&M Manuals, stating commencement of warranty period. Any manufacturer's extended warranty/warranties shall be provided as part of these documents, and drawn to the Owner's notice on turnover of manuals.

IDENTIFICATION and LABELING

1. All items of new electrical equipment such as power, lighting, signal, telephone panels, disconnect switches, manual and automatic control devices, etc., shall have nameplates. These nameplates shall be, unless otherwise specified, black plastic lamacoid with engraved white lettering. Nameplates shall be neat and uniform in appearance.
2. Nameplates shall indicate the use and voltage of equipment, as specified and shown on the drawings.
   A. Panels: Voltage, phase, identification
   B. Low Voltage Panels: System name
   C. Manual Controls: Name of equipment controlled
   D. Automatic Controls: Identify as on schematic diagrams
3. Distribution panels shall have date of installation and individual nameplates indicating each circuit's use.
4. Branch circuit panelboards shall have typed circuit directories behind clear plastic, on the inside of the panel door.
5. Identify all receptacle coverplates with clear self-adhesive Mylar tape with black lettering indicating panel and circuit number (i.e. "A25"). Alternatively coverplates can be mechanically engraved.
6. All fusible disconnects and breakers with adjusted trip settings to have lamacoid label stating "MOCP: __A".
7. Identification of Panels and Junction Boxes
   A. Each panel, junction box and junction box cover shall be colour identified by system type carried.
   B. Voltage colour identification for line voltage equipment shall be as follows:

a. 120/208 V or 120/240 V	Grey	
b. 277/480 V	Maroon	
c. 347/600 V	Sand	
d. High voltage (above 750 V)	Orange	

C. System colour identification for low voltage systems equipment shall be as follows:

a.	Fire Alarm / Fire Telephone	Red	e.	Intercom	Green
b.	Security CCTV	Yellow	f.	LV Emergency Lighting	Pink
c.	Data / Telephone Wiring	Green	g.	Low Voltage Switching	Black
d.	Access Control	Yellow	h.	Nurse Call	Green

8. Conductors to be colour coded per following schedule for 120V and above:

Phase 'A'	Red
Phase 'B'	Black
Phase 'C'	Blue
Neutral	White
Ground	Green

GROUNDING and BONDING

1. Provide system ground via ground rod network in accordance with CEC Section 10 and Table 16.
2. Ground rods to be 19mm x 3000mm, install minimum of three rods spaced 3000mm apart.
3. Maximum resistance to ground shall be 20 ohms.
4. Buried grounding conductors shall be #2/0 AWG bare copper. Use approved connection method only, refer to local inspection department and utility service provider requirements.
5. Above grade grounding conductors within building shall be sized according to CEC Table 16.
6. Bond all electrically powered equipment to ground using suitable connectors. Equipment bonding conductors shall be sized according to CEC Table 16.
7. Install #12 green ground wires in all conduits.
8. Bond all cable-tray sections together as required by CEC Section 12-2208.
9. Bond incoming gas and water mains with minimum #6 AWG to main building ground.
10. Bond all pools, Jacuzzis, hot tubs and spas as per CEC section 68. Ensure all metal parts, railings, fittings, re-bar have been properly bonded to ground and inform both the electrical inspection department having jurisdiction and electrical engineer when completed to facilitate an inspection prior to concealment. Coordinate additional requirements with pool supplier.
11. Provide grounding bus bar c/w lugs at all telephone/TV backboards, communications cabinets, and data racks. Bond all wall or free standing data racks to ground with #6 green insulated ground wire.

RACEWAYS and JUNCTION BOXES

1. Conduits to consist of rigid steel, electric metallic tubing (EMT), rigid PVC, DB-2, high-density polyethylene (HDPE) Flex tubing or liquid-tight flex.
2. Minimum conduit size to be 21mm (3/4") unless specifically noted otherwise.
3. Bushings to be installed on all metallic conduit.
4. Direct buried conduits to be rigid PVC, DB-2 or high-density polyethylene (HDPE) only.
5. Conduits installed in concrete slab to be rigid PVC, EMT, DB-2 or plastic approved "Core-Flex" tubing.
6. All buried conduits to adapt to rigid PVC, EMT or rigid steel when transitioning to above ground.
7. All empty conduits to be clearly labeled on both ends and have pull cord installed.
8. Provide water-tight fittings, conduit and junction boxes for all wash bay, exterior installations and damp locations.
9. Provide explosion proof approved conduits, fittings, seals and boxes in all classified areas as required by C.E.C.
10. All EMT straps, couplings and connectors to be zinc plated steel unless otherwise specified by the engineer.
11. Raceways, junction boxes to be identified and colour coded as per Identification and Labeling section, this specification.
12. All underground conduits to be free of debris, rocks and dirt prior to installation of conductors. Pipes to be "swabbed" clean and properly capped off if installed for future use. Mark on as-built drawings, exact location of all underground conduits.
13. All conduits, junction boxes to be concealed. Confirm with engineer, where and if surface mount conduit and junction boxes will be allowed. Electrical contractor to coordinate with general contractor to provide labour force during all concrete slab and masonry installations. Use only approved mason boxes and fittings.
14. It is the responsibility of the electrical contractor to provide and install any specialty recessed fittings or plates as shown as details in the electrical drawings.
15. All interior junction boxes to be cast metal, rigid PVC, aluminum or steel. Use of PVC boxes to be approved by the engineer.
16. All conduits to be installed parallel to building lines unless otherwise stated.
17. All lighting control wiring to be in conduit in open ceilings and inaccessible ceilings. Free-air wiring is permitted in accessible dropped ceilings. See "Conductors and Cables" for FT ratings.

CONDUCTORS and CABLES

1. Minimum line voltage conductor size is #12AWG copper. All conductors to be copper unless otherwise noted. Aluminum conductors shall be acceptable for sizes 200A and larger unless noted otherwise.
2. All wiring within a plenum space must be rated FT6 unless installed in an enclosed raceway. All raceways installed in plenum space must meet the same rating.
3. Power conductors shall be RW90 X-Link, 600V insulation unless indicated otherwise.
4. Armoured Cable: To CSA C22.2 No. 51:14 (R2018). Use in concealed and dry locations only.
5. TECK 90 Cable: To CSA C22.2 No. 131 and No.174. Use where specified.
6. VFD Cable: To CSA C22.2 No. 123, use for wiring installations between VFD and motor terminals.
   A. Conductor: Stranded copper with industrial-grade 1000V XLP insulation.
   B. Full size copper ground conductors
   C. Foil/braid shield or dual spiral copper tape shielding
7. Non-Metallic Sheathed Cable: to CSA C22.2 No. 48-M90 and as follows:
   A. Insulation: PVC/MD90, 300V insulation
8. Control Cable for Class 2 Circuits to be copper, 300V insulation, rated 75°C.
9. Teck 90 Cable/VFD cable installation
   A. Provide protection for exposed cables where subject to damage. Cables prohibited to penetrate concrete slabs without sleeving.
   B. Support horizontal runs on cable tray or channels c/w spacers and clamps.
   C. Support vertical runs on channels c/w spacers and clamps.
   D. Support cables minimum one diameter apart. Maintain equal spacing across supports.
   E. Utilize only approved tech connectors and fittings when terminating cables.
10. Installation
   A. A grounding conductor shall be installed in conduits and ducts, as specified in the Canadian Electrical Code, whether or not it is shown on the drawings.
   B. All line voltage wiring in non-combustible buildings to be installed in conduit with the exceptions of flexible armoured cable in following circumstances or as noted otherwise:
      a. Wiring to luminaries from main conduit runs may not exceeding 4 meters (excluding vertical drops to suspended fixtures) in accessible ceiling areas up to 5 light fixtures may be daisy chained using flexible armoured cable.
      b. Horizontal wiring within walls not to exceed 5 meters. Vertical wiring from ceiling to be conduit only.
   C. All low voltage wiring in non-combustible buildings permitted to be installed free air with appropriate cable support (maximum spacing 5'). For wall and inaccessible ceiling spaces provide conduit raceway.
   D. Neutral conductors to be fully rated. De-rating of any neutral conductors is not acceptable.

MECHANICAL EQUIPMENT and CONTROLS

1. Line and low voltage wiring to be the responsibility of the electrical contractor, coordinate equipment requirements with mechanical contractor. Electrical contractor to supply and install conduit, wiring, fittings, supports, low voltage transformers, etc. for a complete installation. Devices by mechanical, installed by electrical. Electrical contractor to obtain approved mechanical shop drawings to confirm equipment requirements prior to install.
2. Install disconnect switches at all motors. Horsepower rated, suitable for environment encountered.
3. Manual motor Starter: CSA-C22.2 No. 14, NEMA 1, AC general-purpose Class A, manually operated, full voltage controller with overload element, auxiliary contact and toggle operator.
4. The electrical trade shall provide magnetic motor starters, as per CEC, for all three phase motors, excluding mechanical equipment supplied with integral motor protection, whether shown in the motor schedule or not. Size heaters to FLA of equipment and starter's manufacturers value.
5. Refer to mechanical drawings for control requirements.
6. Provide 120 volt control circuits for control transformers. Confirm locations and quantities with Mechanical Contractor.
7. Confirm motor load, voltage, and phase of all equipment with Mechanical Contractor prior to rough-in and ordering of equipment.
8. Refer to mechanical drawings for scope of mechanical control wiring when a building management system (BMS) is specified and coordinate with mechanical contractor.
9. Control equipment, time clocks, gas detector systems, summer switches, etc. to be supplied by the mechanical trade, wired, installed and connected by the electrical trade. Confirm operation interlocks required and wire for damper motors, air proving switches etc.
10. Provide fire alarm shut down interlocks, duct detectors, stairwell HVAC, MUA and exhaust requirements as shown on the drawings.
11. Provide room switches for all exhaust fans whether shown on drawings or not, unless fan control requirements are provided by mechanical drawings, engineer or building owner.
12. Refer to power riser drawing when motor control centres (MCC's) have been specified for panel bussing size, voltage and breaker/starters requirements.
13. All roof top mounted mechanical equipment to have a dedicated weatherproof, GFCI, 20A, t-slot service receptacle within 7.5 meters. Service receptacle to be mounted at a minimum of 750mm above the roof surface on pedestal meeting the requirements of rule 26-710.
14. Confirm proper operation of mechanical equipment/systems with mechanical contractor prior to final inspection.
15. Electrical contractor to perform the following checks prior to starting any motor loads:
   A. Confirm motor nameplate data with motor starter heater overloads, setting of MOCPs and fuse sizes (where applicable)
   B. Verify shaft rotation with mechanical contractor
   C. Ensure disconnects are installed and accessible
   D. Confirm labeling of disconnects and starters

WIRING DEVICES

1. Device Boxes
   A. Install all outlet boxes flush with the finished surface where conduit is concealed.
   B. Where outlets occur in walls or ceilings containing vapour barrier, the electrical trade shall install molded "poly-vapour" hats, to maintain the integrity of the vapour barrier.
   C. Minimum 100mm square box size for all devices in new construction c/w single or double gang plaster ring as required.
   D. Locate above accessible ceilings or unfinished areas. Coordinate with general contractor in areas where access hatches are required to maintain accessibility.
   E. Support boxes independent from conduit.
   F. Owner reserves the right to modify final location of outlets prior to rough-in with no change to contract price, considering the distance does not exceed 3m from original indicated location.
   G. Back to back outlet box installations are to maintain at least one stud space separation in walls.
   H. Back to back outlet boxes are not permitted to share horizontal conduit between boxes, individual vertical conduit installations are required between rooms.
2. Receptacles
   A. White decorator specification grade, equivalent to those manufactured by Pass & Seymour 26242. Receptacles shall be impact resistant thermoplastic.
   B. Suite receptacles shall be residential grade, white finish decorator style. Tamper resistant receptacles equal to Pass & Seymour 885TRW to be installed where required as per CEC section 26-712.
   C. GFCI receptacles shall be specification grade equivalent to those manufactured by Pass & Seymour 1595.
   D. All receptacles shall be of the same manufacturer and finish throughout.
   E. All receptacles to be tamper-resistant as per CEC 26-706 in the following areas: child care facilities, guest rooms and suites of hotels and motels, preschool and elementary education facilities, and dwelling units.
   F. USB charger receptacles shall be specification grade capable of minimum 3.1A charging capability, equal to Pass & Seymour TR5262USB.
3. Switches
   A. Rated 15 amperes 120/277 or 347 volts AC, white specification grade, decorator style, equivalent to those manufactured by Pass & Seymour 2601W or 2624347W. Switches shall be impact resistant thermoplastic.
   B. Suite switches shall be residential grade, white finish decorator style.
   C. All switches shall be of the same manufacturer and finish throughout.
4. Dimmers
   A. Dimmers to be electronic decorator style c/w on/off control rated for the load it controls.
   B. Dimmers controlling luminaires shall be rated as compatible with the specified light fixture.
5. Line Voltage Occupancy Sensors
   A. Ceiling Mounted Occupancy Sensors
      a. Sensor shall be passive infrared (PIR) or dual technology (DT) as indicated on drawing. Provide a minimum coverage of 2000 square feet, 360°. Dual technology sensors to include microphonic or ultrasonic detection in addition to PIR.
      b. Manual time adjustment of 30 seconds to 20 minutes. Set time adjustment to 15 minutes during installation.
      c. Where multiple sensors are servicing the same area, the sensors shall be wired in such a manner as to turn all light fixtures on when motion is detected from any of the sensors.
      d. Adjustable sensitivity.
      e. Acceptable manufacturers: Leviton, Watt Stopper, Lutron, Eaton, Sensorswitch or approved equivalent.
   B. Wall Mounted Occupancy Sensors
      a. Sensor shall be passive infrared (PIR) or dual technology (DT) as indicated on drawing. Providing a minimum 900 square foot coverage, 180°. Dual technology sensors to include microphonic or ultrasonic detection in addition to PIR.
      b. Sensor shall be c/w light fixture compatible dimming for locations as indicated on drawings.
      c. Provide a 2 pole sensor when 2 unique circuits are connected to the sensor as indicated on drawings.
      d. Adjustable operating mode of either vacancy (manual-on) or occupancy (auto-on). Set operating mode to occupancy during installation unless otherwise noted.
      e. Adjustable time delay of 30 seconds to 30 minutes. Set time adjustment to 15 minutes during installation.
      f. Adjustable sensitivity.
      g. Acceptable manufacturers: Leviton, Watt Stopper, Lutron, Eaton, Sensorswitch or approved equivalent.
6. Cover Plates
   A. Surface mounted devices shall be fitted with a metal, galvanized cover plate, with rolled edges in service rooms.
   B. Weatherproof in-use coverplates to be equal to Hubbell low-profile, extra-duty, ML500G series.
   C. All flush switches and receptacles shall be fitted with standard size, nylon commercial grade covers with colour to match device. Covers shall have beveled edge. Covers shall fit tight to the wall and to the wiring devices.
7. Mounting Heights
   A. Unless otherwise noted, or if there are conflicts, devices shall be installed above finished floor levels as per Typical Mounting Heights detail on drawings.
   B. In locations where barrier free access is required, use ADA compliant or other approved mounting heights.
8. Barrier Free access pushbutton locations to be coordinated with the Architect. Refer to architectural drawings for locations. Provide 120V, 15A power to each operator. Utilize emergency power if available.

LIGHTING

1. Installation of all light fixtures to be coordinated with general contractor. The electrical contractor is responsible for providing any necessary back boxes, flush trim ring, plaster rings and bolt patterns as needed prior to fixture installation.
2. Refer to electrical drawings and fixture schedule for fixture catalogue numbers, manufacturer, lamp requirements and installation notes.
3. The electrical contractor to allow for all surface mounted fixtures to be suspended at engineers request.
4. Recessed fixtures in fire rated ceilings or assemblies to be installed in coordination with the general contractor and installed in a manner to maintain the integrity of the fire rating. Utilize fire rated back boxes or housings where necessary.
5. Storage of light fixtures on site to be the responsibility of both the general and electrical contractor. Fixtures to be stored in a safe, secure place free from damage. No extras will be issued for damaged or missing fixtures.
6. LED Fixtures: LED modules shall be replaceable without replacement of the entire luminaire. LED luminaires shall be rated for a minimum operational life of 50,000 hours based on an average of 10 hours per operation cycle at a temperature of 25°C. Lumen output depreciation shall be less than 30% over the life of the LED. LED luminaires shall be rated to operate at 60Hz with a power factor of 0.9 or greater and THD of less than 10% over the entire load range of 0-100%.
7. Emergency lighting to be energized upon loss of power of lighting circuit within each occupied area.
8. Exit signage to be circuited from dedicated circuit or local area self contained emergency circuit.
9. All exit signage and emergency lighting locations to be coordinated with other trades prior to rough-in. All devices to be clearly visible. Contractor to relocate devices as required.

POWER DISTRIBUTION

1. Notify utility company prior to commencing work on site. Installation to be provided in accordance to utility and local jurisdiction requirements. Submit drawings and specifications to the utility if requested.
2. Confirm service entry point with utility prior to trenching.
3. The main distribution panelboard (MDP) to be solid neutral design, floor mounted, free standing. Refer to single line diagram and confirm voltage, amperage, etc. Provide Eaton Pow-R-Line PRL4 or approved equal and shall be constructed in accordance to the latest CSA C22.2 No. 29 standards.
4. Utility metering section to be barriered internally from other sections, of size required by the utility for C/T & P/T equipment. Supply and install all appropriate meter sockets, meter cabinets, C/T's and P/T's to utility company requirements. Where a loose C/T cabinet is utilized for 400A it must be solidly bussed. For services greater than 400A a loose C/T cabinet is not permitted (solidly bussed MDP required).
5. Interrupting capacity chart for bracing purposes. All downstream equipment shall be series rated. A major city network connected interrupting capacity shall be 100kA (regardless of voltage and amperage). Otherwise refer to the following:

Main Breaker	120/208V	347/600V
0-200A	25kA	14kA
201-800A	42kA	22kA
801-1200A	65kA	25kA
1201-2000A	65kA	42kA
2001-3000A	85kA	48kA

6. Main breaker shall be molded case electronic solid state design sized as indicated in the single line diagram with an interrupting capacity to match the main distribution. Provide ground fault protection if 2000A or larger at 208V, or 1000A or larger at 480V or 600V.
7. Distribution breakers shall be molded case sized as indicated on the single line diagram with an interrupting capacity to match the main distribution.
8. Provide 100mm (4") housekeeping pad for all floor mounted equipment. Coordinate supply and installation with general contractor.
9. Acceptable manufacturers: Eaton, Schneider, or Siemens
10. A coordination / fault study to be completed by Englobe Corp. which shall be carried by the Electrical Contractor (refer to Single Line Diagram or contact Englobe Corp.). Alternatively, the distribution vendor can provide this study stamped by a licensed Engineer of Alberta and bear all responsibility. Contractor / vendor to revise distribution equipment as required by this study. This study shall try to limit available the maximum arch flash levels <8CAL/CM2 yet allow for best possible coordination of breakers. Contractor or vendor to set all breaker / relay settings as per the study. Equipment shall not be ordered prior to the study being completed.

PANELBOARDS

1. All panelboards shall be by one manufacturer meet CSA C22.2 No. 29 and shall be of the bolt-on circuit breaker type. Residential suite panelboards shall be Stab-Lok breaker type with arc fault breakers as required to latest CEC.
2. Panelboards shall consist of dead-front assemblies of code gauge steel metal enclosures c/w door, latch, lock, and keys. Locks shall be keyed alike. Panels shall be factory painted. Refer to "IDENTIFICATION and LABELING". Unused breaker space to be c/w blank plates. Drip hoods are required on all surface mounted equipment.
3. Panelboard main bus shall be of plated copper or aluminum; amperage as indicated on the single line diagram. Main lugs shall be suitable for either copper or aluminum feeder conductors.
4. Circuit breakers shall be molded case, bolt-on 10,000A RMS symmetrical interrupting capacity or higher where required. (Switching duty if required.)
5. Panelboards installed in finished areas to be flush mounted, with smooth lockable doors.
6. Multi-pole breakers shall have common tripping elements operated by a single handle.
7. The circuit numbering on both single and double tub panels shall be consecutive, with odd numbers on the left and even numbers on the right. Two (2) sets of identical numbers on double tub panels will not be accepted. Install typed directories in panelboard door cardholder.
8. Panels to be ordered with breakers pre-installed. Include minimum of 5 spare 15A single pole breakers in each 120/208V branch circuit panelboard whether shown or not on the panel schedule.

Measure individual phase loading to ensure panelboard loads are balanced. Revise circuit designations as required.

STRUCTURED CABLING

1. The structured cabling system described herein, shall consist of all outlets, conduit, cables, connectors, terminations and panels as required to provide a complete and operational voice and data distribution system.
2. Provide terminated telephone tie cable from the demarcation point to location of the PBX if the PBX is located remote from the demarcation. Confirm with the Owner's representative.
3. Supply and install a complete cable distribution system to Category 6 Standards to support both voice and data communication systems. Cable installer shall be certified Siemon, Belden, Tyco, Hubbell, Wirewerks, Leviton, Systimax or engineer approved alternate. Installation shall conform to EIA/TIA 568C Standards. All terminations and testing shall be completed per vendor's installation and testing practices. Contractor to include test results from an approved tester with O&M manual.
4. All wiring to be rated FT6 unless installed in an enclosed raceway. All raceways installed in plenum space must meet the same rating.
5. All data cables shall be terminated to RJ45 Category 6 patch panels and RJ45 jacks. Allow minimum 20% space capacity on all patch panels. Maximum individual patch panel capacity to be 48 ports. RJ45 Jacks shall be of punch down style and wired to T568A wiring scheme. Voice cable and jack shall be white and data cable & jacks shall be blue.
6. Cat6 network drops with male termination (typically used for security camera, wireless access points, etc) to be terminated with modular plug terminated link as per TIA 568-2.D.
7. Data cable runs are not to exceed 90m in length as per TIA. Verify all lengths prior to rough-in.
8. Provide 2 metres spare cable coiled at each end.
9. All voice cables shall utilize Cat 6 cabling and be terminated on wall mounted BIX block. If VOIP telephone system is being used all telephone drops to be treated the same as data and terminated on patch panels.
10. All cables and outlets shall be labeled per TIA standards. Confirm labeling convention with Engineer/Owner.
11. Provide two (2) factory assembled patch cables (2 metres and 3 metres) for each data run. Cable shall be of stranded wire construction with molded, snagless boots. Confirm colours and lengths with owner.
12. Up to 4 port wall faceplates are acceptable. Colour to be white.

TELEVISION SYSTEM

1. The television system described herein, shall consist of all outlets, conduit, cables, splitters, connectors, terminations and backboards / sub-panels as required by local CATV service utility, to provide a complete and operational TV distribution system.
2. Materials:
   A. All coaxial cables shall be of 75-ohm impedance with a return loss of 20 dB from 5 MHz to 1 GHz.
   B. Cables shall be RG-6, Belden 1530 AP, or RG-11, Belden 1530 AP , (plenum rated) or approved equal.
   C. Maximum distance for RG-6 cabling shall not exceed 90m.
   D. All cabling, connectors, plates and terminations shall be the responsibility of the electrical contractor.
   E. All connectors shall be of a one piece construction and attached via a compression, hex crimp, for a permanent connection.
   F. All passive equipment, (couplers, splitters etc.) shall pass 5 - 1000 MHz or greater transmission.
4. Installation:
   A. All cabling to TV outlets shown on the drawings to be "home-run" back to main service or sub-panel distribution.
   B. For residential, apartment or hotel suites, provide minimum 1 - home run cable back to main service from each suite and individual cables out to each outlet via a splitter system. Looping outlets together not permitted. Identify both ends of each cable as to suite location or number.
   C. All cables to be installed in conduit unless otherwise stated on the drawings or permitted by the engineer.
   D. All wiring be rated FT6 unless installed in an enclosed raceway. All raceways installed in plenum space must meet the same rating.
   E. Refer to the electrical drawings for television system layout and details.

NO.	DATE	DESCRIPTION
1	03/26/25	ISSUED AS PROTOTYPICAL DRAWING

PROJECT:

CMHC HOUSING CATALOGUE

Enter address here

NOT FOR PERMIT OR CONSTRUCTION

SHEET TITLE:

AB SIXPLEX - SPECIFICATION

PROJECT NO: Project Number

SCALE: N.T.S.

SHEET NO:

E301