

SEMI-RIGID BOARD INSULATION:

- 1. MATERIAL: 176KG/M³ DENSITY MINERAL FIBER BOARD (ROXUL COMPONDBOARD 110 OR EQUIVALENT).
- 2. FASTEN RIGID INSULATION AND SHEATHING WITH FLAT DISK CONCRETE ANCHORS, SPACING AS PER MANUFACTURER’S WRITTEN INSTRUCTIONS.
- 3. HILOAD 60 RIGID INSULATION (FOAMBOARD).

BATT INSULATION:

- 1. MATERIAL: MINERAL FIBRE BATT INSULATION (ROXUL SAFENSOUND OR FIRESAFE OR EQUIVALENT).
- 2. INSTALL BETWEEN ALL STUDS AND RAFTERS WITH NO GAPS AS PER MANUFACTURER’S WRITTEN INSTRUCTIONS.

DOORS:

- 1. EXTERIOR DOORS: 45MM STEEL DOOR, 18 GAUGE, WITH POLYURETHANE INSULATION FILL. FINISH COLOUR TO MATCH ROOFING SYSTEM.
- 2. EXTERIOR FRAME: 16 GAUGE PRESSED STEEL FRAME, BATT INSULATION FILL, FIX TO WALL WITH A MINIMUM OF 4 X 6.35MM TAPCON ANCHORS (MIN. EMBEDMENT = 45MM) PER JAMB (FINISH TO MATCH DOORS).
- 3. REFER TO SPECIFICATIONS FOR DOOR HARDWARE.

ROLL UP DOORS:

- 1. CHI 6202 SERIES ROLL UP DOOR OR APPROVED EQUAL, C/W TRACKS, GUIDES, BARS AND MOTORIZED OPERATOR WITH CONTROLS & CHAIN BACKUP. MINIMUM 0.9MM THCK (20ga) GALVANIZED INTERLOCKING SLATS C/W FOAM INSULATION AND BACKUP SLATS, DESIGNED FOR CITY OF WINNIPEG WINDLOADS. PREFINISHED MANUFACTURER COLOUR TO BE SELECTED. MINIMUM 20,000 CYCLE SPRINGS. 5 YEAR WARRANTY.

FINISH:

- 1. REFER TO SPECIFICATIONS FOR PAINT FINISHES AND FORMULAE.
- 2. PAINT SCHEDULE (OR AS APPROVED BY THE CONTRACT ADMINISTRATOR):

MARK	FORMULA	LOCATION
PT – 1	MPI EXT 6.4B–ALKYD GR (SEMI GLOSS) FINISH PREMIUM GRADE	ALL INT. PLYWOOD
PT – 2	MPI EXT 5.1D–ALKYD G5 (SEMI GLOSS) FINISH PREMIUM GRADE	METAL FABRICATIONS, LIFTING DEVICES
PT – 3	MPI EXT 3.1A–LATEX G5 (SEMI GLOSS) FINISH PREMIUM GRADE	ALL INT. CONCRETE WALLS & CEILINGS

CAULKING:

- 1. CAULKING: CLEAR SILICON.
- 2. BACKER: ETHAFOAM SB, OVERSIZED 30%.

STRUCTURAL STEEL:

- 1. ALL STRUCTURAL STEEL ANGLES AND PLATES TO BE IN ACCORDANCE WITH CSA G40.21 GRADE 300W, ALL OTHER MEMBERS TO BE GRADE 350W UNLESS OTHERWISE NOTED.
- 2. DETAILING, FABRICATION AND ERECTION TO BE IN ACCORDANCE WITH CSA–S16.
- 3. ALL WELDING TO CONFORM TO CSA W47.1 & W59.
- 4. INSTALL ANCHORS IN ACCORDANCE WITH MANUFACTURES INSTRUCTIONS.
- 5. WELDING SHOPS TO BE CERTIFIED TO DIVISION 1 OR 2 OF CSA W47.1 BY THE CANADIAN WELDING BUREAU. ALL WELDING TO BE PERFORMED BY CWB CERTIFIED WELDERS.
- 6. ALL LIGHT GAUGE STEEL SHALL BE IN ACCORDANCE WITH CSA S136.

SHOP WELDED CONNECTIONS:

- 1. ALL SHOP WELDING SHALL CONFORM TO CSA W59. CONTRACTOR TO BE CERTIFIED IN ACCORDANCE WITH W47.1, DIVISION 1 OR 2. ALL WELDERS TO BE CWB CERTIED FOR THE REQUIRED WELDS.
- 2. ALL WELDS TO BE CONTINUOUS FILLET OR GROOVE SEAL WELDS. GROOVE WELDS TO BE DETAILED AS FULL PENETRATION WELDS WITH BACKER PLATE.

DESIGN OF BOLTED CONNECTIONS:



- 1. DESIGN ALL BOLTED CONNECTIONS IN ACCORDANCE WITH CSA–S16 AND THE CISC CODE OF STANDARD PRACTICE FOR STRUCTURAL STEEL USING HIGH STRENGTH BOLTS (MIN. 16MM Ø A325M)
- 2. ALL CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE STEEL FABRICATOR. CONNECTION CONFIGURATIONS SHALL (IN GENERAL) CONFORM WITH THE DETAILS PROVIDED. THE STEEL FABRICATOR SHALL ADVISE THE ENGINEER IN WRITING WHEN DEVIATION FROM THE APPROVED CONNECTION CONFIGURATION DETAILS IS REQUIRED.
- 3. OVERSIZED HEAVY DUTY 60MM DIA. X 5MM THICK HARDENED PLATE WASHERS REQUIRED AT ALL SLOTTED/BOLTED CONNECTION LOCATIONS.

FIELD ANCHORING:

- 1. LOCATE EXISTING REINFORCING IN THE CONCRETE ELEMENTS TO RECEIVE POST–FACTO ANCHORAGE AND POSITION HOLES FOR THE NEW ANCHORS CLEAR OF THE EXISTING REINFORCING.
- 2. DRILL HOLES INTO THE EXISTING CONCRETE ADVANCING THE DRILL BIT TO FULL DEPTH OF REQUIRED ANCHORAGE. IF REINFORCEMENT IS ENCOUNTERED, TERMINATE DRILLING THE HOLE AND RELOCATE THE ANCHORAGE CLEAR OF THE REINFORCING. USE A STANDARD HARDENED CARBIDE TIPPED CONCRETE BIT, DO NOT USE A CORE DRILL THAT CAN INTERCEPT AND CUT THE EXISTING REINFORCING – EXCEPT WHERE NOTED.
- 3. ADVISE THE CONTRACT ADMINISTRATOR IMMEDIATELY IF THE REQUIRED ANCHORAGE HOLE LOCATIONS CANNOT BE FIELD ADJUSTED TO CLEAR THE EXISTING REINFORCING AND AWAIT FURTHER INSTRUCTIONS. THE SITE ENGINEER WILL REVIEW THE SITUATION AND MAKE A DETERMINATION REGARDING HOW BEST TO INSTALL THE ANCHORS, GIVEN THE ACTUAL POSITIONS OF THE REINFORCING ENCOUNTERED.
- 4. ALL ANCHORS MUST BE INSTALLED PER MANUFACTURER’S WRITTEN INSTRUCTIONS.



**ENGINEERS  
GEOSCIENTISTS  
MANITOBA**  
Certificate of Authorization  
**AtkinsRéalis Canada Inc.**  
**No. 4489**

				 <div>148 Nature Park Way, Winnipeg, Manitoba Canada R3P 0X7 204-786-8080</div>		ENGINEER'S SEAL	 <div><b>THE CITY OF WINNIPEG</b> WATER AND WASTE DEPARTMENT</div>													
				DESIGNED BY: K. KOTYK						CHECKED BY: F. MARSHALL										
				DRAWN BY: B. DICKSON			APPROVED BY: V. ELIMBAN													
				SCALE: N.T.S.			ISSUED FOR CONSTRUCTION BY: M. SKINNER													
				DATE: 2023–10–04			DATE: 2025/04/30													
00		ISSUED FOR TENDER AND CONSTRUCTION		2025/04/30		KK		FM		CONSULTANT NO.: 694715		CITY DRAWING NUMBER <b>1–0650M–S0023</b>			SHEET <b>002</b>		REV. <b>00</b>		SIZE <b>A1</b>	
NO.		REVISIONS		DATE		DESIGN		CHECK												