ADDITION & RENOVATION OF WINAKWA COMMUNITY CENTRE 980 WINAKWA ROAD, WINNIPEG

BUILDING CODE ANALYSIS SUMMARY:

Building Code Design Summary

PROJECT DESCRIPTION:

- The project entails additions to an existing recreation centre, together with renovations needed to

accommodate the additions. - The existing building constitutes an original 2-storey 460-sq.m. 1961 building with a series of additions. The 1986 addition (2-storeys, 155.6-sq.m.) was added with firewalls to separate it from earlier construction. This would have allowed the resultant two buildings to be unsprinklered under Sentence 3.2.2.14 of the 1985 NBC, while allowing each to be two storeys facing one street. That Sentence required 45-minute fire resistance rated floor and supporting assembly construction and a 45-minute fire resistance rated roof. Without the firewall, the building would have required sprinklering but no minimum fire resistance ratings under Sentence 3.2.2.13 (1985 NBC).

- The additions will roughly double the size of the building. The new construction requirements will negate the need for the firewalls and roof rating, and allow the entire complex to be treated as a single building with regard to egress and Code conformance.

- The existing building is not sprinklered. A sprinkler system will be added as part of this project, including any repairs to the existing building necessary to facilitate the work.

This summary is based on Manitoba Building Code of Canada 2006 - Division B, Part 3.

BUILDING INFORMATION:

Existing buildings:

South and west building (Includes 1961 original building and 1968, 1983 and 1989 additions) 826.5 s.m. (742.1 s.m. prior to 1986 add'n) First Storey

Building Area By Code Def'n:	2012.9 s.m. (greate	st horizontal area	above grade)
TOTAL BUILDING:	2,012.9 s.m.	358.6 s.m.	2,371.5 s.m.
TOTAL NEW:	1,031.8 s.m.	122.0 s.m.	1,152.8 s.m.
Second Floor		142.7 s.m.	
First Storey	1,000.9 s.m.		
South Addition			
First Storey	30.9 s.m.		
Front Entrance			
New Additions:			
TOTAL EXISTING:	982.1 s.m.	221.1 s.m.	1,203.2 s.m.
Second Storey		155.6 s.m.	
First Storey	155.6 s.m.		
Northeast Building (1986 Addition)			
Second Storey		77.2 s.m.	
Thist Storey	020.5 5.111	(, 12:1 billi pilo	to 1900 udd II)

PART 3 FIRE PROTECTION, OCCUPANT SAFETY AND ASSESSIBILITY

SECTION 3.1 – GENERAL

<u>3.1.2. – MAJOR OCCUPANCY CLASSIFICATION</u>

GroupA2, Assembly Major Occupancies: Subsidiary Uses: none

<u>3.1.3 – MULTIPLE OCCUPANCY REQUIREMENTS</u>

3.1.3.1 N/A.

calculations.

<u>3.1.11 – FIRE STOPS IN CONCEALED SPACES</u>

3.1.11.5.1 Attic subdivision: N/A

3.1.11.6 Crawl space subdivision: N/A.

<u>3.1.17 – OCCUPANT LOAD</u>

3.1.17.1 Occupant Load Determination

LOCATION	ROOM	Area (m ²⁾	Notes	Load Calculator	Occupant Load
West 2 nd Storey	Existing Offices (NIC)	43.9		9.3 m ² /person	5
East 2 nd Storey	Existing Meeting (NIC)	87.5	Tables & seats	0.95 m ² /person	92
South 2nd Storey	New Mechanical / Electrical Room	99.1		46 m ² /person	2
South 2 nd Storey	New A/V Room	7.9		9.3 m ² /person	1
All 2 nd Storeys	Total				100
First Storey	Existing Hall (NIC)	273.6	Tables & seats	0.95 m ² /person	288
First Storey	Existing Meeting Room (NIC)	34.3	Tables & seats	0.95 m ² /person	36
First Storey	Existing Hall Kitchen (NIC)	13.8		9.3 m ² /person	1
First Storey	Existing Equipment Storage	26.2	New size	46 m ² /person	1
First Storey	Existing Change Rooms remaining (NIC)	16.8	4 team rooms	12 / team	48
First Storey	New Storage in converted Change rooms	68.1		46 m ² /person	1
First Storey	Existing Canteen and Kitchen (NIC)	33.7		9.3 m ² /person	4
First Storey	Existing Garage (NIC)	79.1		46 m ² /person	2
First Storey	Facility Manager	12.7		9.3 m ² /person	1
First Storey	Canteen	11.7		9.3 m ² /person	1
First Storey	Multi-Purpose Room	82.2	Tables & seats	0.95 m ² /person	87
First Storey	Bar	13.8		9.3 m ² /person	1
First Storey	Referee	7.2		9.3 m ² /person	1
First Storey	Grand Hall	96.5	Lounge	1.85 m ² /person	52
First Storey	Change Rooms	23.9 each	4 team rooms	12 / Team	48
First Storey	Gymnasium	488.1	Tables & seats	0.95 m ² /person	514
First Storey	Total				1080
All Floor Areas	TOTAL				1186*

SECTION 3.2. – BUILDING FIRE SAFETY

<u></u>		0010011			<u>.</u>
3.2.1.1,(4)	the building is c	onsidered a	zanines is greater than as two-storeys in build		g floor area, therefore
3.2.2.9 3.2.2.10		wo streets (fire fighter access via	a parking lot, compli	ance by Civil)
3.2.2.14 3.2.2.56	Roof top enclos		pplicable Increased Area, Spri	nklarad	
5.2.2.50			mbustible or non-cor		on.
	(2)(a) - Floors to	o be fire sep	parations, and if of co		
	minimum 45 -m		sistance rating. ombustible constructi	ion to have minimur	n 45-minite fire
	resistance rating				II 45-IIIIIIte IIIe
			blies supporting asse		
	fire resistance ra		ble or if of combustib	ble construction, have	e minimum 45-minite
	- Roofs require		stance rating.		
<u>3.2.3. – SPA</u>	TIAL SEPARATI	ON AND E	EXPOSURE PROTEC	CTION	
3.2.3.1	Table 3.2.3.1.C:	:			
	North - no limi				
	East - no limit South - no limit	it (faces par it (faces pla			
	West - no limi	it (faces pla	ygrounds and public	lane)	
3.2.3.8 3.2.3.14.(3)			to exterior walls. all – no protection rec	uired as building is	sprinklarad
	-				spinikiered.
			<u>N SYSTEMS (</u> Comp	•	1 171 - 1 1
3.2.4.1.(12) 3.2.4.3			ed as building is sprin larm system may be j		
3.2.4.7.(2)	Automatic fire a	alarm notifi	cation to fire departm	ient required - comp	liance by Electrical.
3.2.4.8	Annunciator rec	uired unles	s entire building is or	ne zone - compliance	
3.2.4.9 3.2.4.10			ired - compliance by mpliance by Electrica		orage rooms
5.2.4.10			s, janitor rooms)		orage rooms,
3.2.4.11			in exit stair shafts - c		
3.2.4.12			ystem required upon nore than one suite or		
	and Mechanical	•		•	
3.2.4.16	Manual fire alar compliance by I		ions required at every	exit and principle en	ntrance to building –
<u>3.2.5. – PRO</u>	VISIONS FOR F	RE FIGHT	ING		
3.2.5.1			gs - N/A (building is		
3.2.5.3			ng is less than 3 store	• /	
3.2.5.4 3.2.5.5.(1)			d to building face wit n 15-m of principal e		
3.2.5.5.(2)			ravel from fire hydrai		ng's principal
3.2.5.8	Standpipe syste		0-m. (Existing compl ired.	nes).	
3.2.5.13			nce by Mechanical.	ompliance by Mech	aniaal
3.2.5.17 3.2.7 LIGH		-	required per NFC - c POWER SYSTEMS		
3.2.7.3			ed in exits, principle		
	rooms – compli	ance by Ele	ectrical.		
3.2.7.4 3.2.7.8			l for emergency light l for fire alarm systen		
SECTION 3	.3. – SAFETY W	<u>ITHIN FL</u>	OOR AREAS		
3.3.1.5(1) 3.3.1.6			gress required from al within a room or suite		
	3.4.2.5.(1) (f).			-	-
3.3.1.7.(1) 3.3.1.21.(3)			e path of travel is pro trated from remainder		
SECTION 3	•				
3.4.2.1.(1)		to be served	l by at least 2 exits. (West and South Mez	zanines exempt by
3.4.2.3.(1)(b)	3.4.2.1.(2)(b).) Least distance b	oetween exi	ts - ½ maximum diag	gonal of floor area. b	ut not less than 9-m.
3.4.2.5.(1)	Maximum trave	el distance t	to an exit is 30-m.	,	
3.4.2.6. 3.4.3.2.(1):	Principal entran Exit Widths:	ce to be de	signed as an exit.		
	Occupant Load	No. of	Exit Doors Capacity	Exit Stairs Capacity	Notes
Location	(see 3.1.17 above)	Exits 8 (11	(6.1-mm/person) Required: 3,324.6-mm	(8-mm/person) N/A	
	1086	doors)	Provided: 9,296-mm	Demine le 46 mm	
Location First Storey Exist. West	1086 5	1	Required: 30.5-mm	Required: 46-mm	
Location First Storey		,	Required: 30.5-mm Existing: 823-mm Required: 561.2-mm	Required: 46-mm Existing: 800-mm Required: 846.4-mm	Existing stairs at 9.2-mm person Existing stairs at 9.2-mm
Location First Storey Exist. West Second Storey	5	1	Existing: 823-mm	Existing: 800-mm	person

3.4.3.2.(8)(d)	Minimum width of stairs -
3.4.3.4.	Headroom clearance minin
3.4.4.1.	Fire-resistance rating of ex
3.4.5.1.	Exit Signs required at all e
	Exit lights to be on emerge

3.2.2. – BUILDING SIZE AND CONSTRUCTION RELATIVE TO OCCUPANCY

3.4.3.2.(8) Minimum width of exits: Corridors, ramps - 1100-mm - 900-mm (1100-mm provided).

imums: Exits - 2100 mm, Doorways - 2030 mm. xit separations: minimum 45-minutes.

exit doors and required to be visible along all accesses to exit. gency power system. Compliance by Electrical.

SECTION 3.6. – SERVICE FACILITIES

3.6.2.1.(1) Service rooms containing fuel-fired appliances to be fire-rated to 1-hour (Applicable to

- new second floor mechanical/electrical room.) 3.6.2.1.(6) Electrical service rooms containing transformer to be fire-rated to 1-hour (Applicable to renovated first storey electrical room and new second floor mechanical/ electrical room.) 3.6.2.5. Combustible refuse storage room protection – Not Applicable.
- 3.6.2.7. Electrical Equipment Vault protection – Not Applicable.
- Emergency Power Installation rooms protection Not Applicable. 3.6.2.8.

3.6.3.1. Vertical service spaces protection – Not Applicable.

<u>3.6.5 - AIR DUCT AND PLENUM SYSTEMS</u> - Compliance by Mechanical

SECTION 3.7. – HEALTH REQUIREMENTS

3.7.2.2. Water Closets required in building:

(Plum	bı	ng and fixtures	s b	y Mecha	nical)					
Occupant Load (per programmatic assigned load)		Unisex Washrooms Provided		Male WCs Req'd	Exist.	New	Femal e WCs Req'd	Exist.	New	Notes
700 less 10 for existing Unisex WC = 690 (345/sex)		1		6	5	4	11	5	6	Per 3.7.2.2.(6) (Table 3.7.2.2.A)

<u>SECTION 3.8. – BARRIER-FREE DESIGN</u>

3.8.1.2.	The main entrance (and at least 50% of all public entrances) to be barrier-free and designed to 3.8.3.3.
2015	6
3.8.1.5.	Operator controls (switches, thermostats, etc) intended for use by occupants to be
	accessible to wheelchair users, operable with one hand, and mounted at between 400 and
	1200 AFF - compliance by Mechanical & Electrical.
3.8.2.1.	Barrier-free path of travel required to all areas, except for the service rooms and spaces,
	janitor rooms.
3.8.2.2	Barrier free path of travel required to parking area - compliance by Civil.
3.8.2.3	Barrier free washrooms are required on each floor to which BF access provided.
3.8.3.3.(5)	Principal entrance does requires power door operator(s). (Group A building with area
51015151(5)	greater than 500-sm.)
3.8.3.12.	Universal toilet rooms to have no internal dimension of less than 1700-mm, provide an
5.6.5.12.	*
	open space at least 1500-mm in diameter, and provide space for wheelchair beside toilet
	(minimum 875 clear). (Existing washroom to remain.)
3.8.3.16.	If drinking fountains provided, at least one to be barrier free – compliance by
	Mechanical.
NOTE:	Additional barrier free requirements to be met to suit City of Winnipeg universal design
	guidelines.
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PART 5 ENVIRONMENTAL SEPARATION

Building to comply with all Environmental Separation requirements of this Part.

(Compliance required by all disciplines.) * * * * *

BUILDING PROJECT SIGN OFF	SIGNATURE	DATE
Community Centre President		
General Council of Winnipeg Community Centre		
Manager of Building Services, Planning, Property and Development Department		
Manager of Recreation Services, Community Service Department		
Manager of Parks and Open Space, Public Works Department		
Director of Planning, Property and Development		
Director of Community Services		

DRAWING LIST A

GENERAL
G0.1 TITLE SHEET, INDEX, BLDG CODE ANALYSIS SUMMARY G1.0 SURVEY PLAN - EXISTING
CIVIL C01 CIVIL WORKS
ARCHITECTURAL A0.1 SCHEDULES A1.1 SITE PLAN
A2.0 EXISTING FLOOR PLAN & DEMOLITION A2.1 MAIN FLOOR PLAN A2.2 SECOND FLOOR PLAN
A2.3 ROOF PLANS A2.4 COURTS GAME LINE LAYOUT A3.1 MAIN FLOOR REFLECTED CEILING PLAN
A3.2 SECOND FLOOR REFLECTED CEILING PLAN A4.1 BUILDING ELEVATIONS
A4.2 BUILDING ELEVATIONS EIFS PATTERN A5.1 BUILDING SECTIONS A5.2 BUILDING SECTIONS
A6.1 WALL SECTIONS A6.2 WALL SECTIONS A6.3 WALL SECTIONS
A6.4 WALL SECTIONS A6.5 DETAIL SECTIONS A6.6 DETAIL SECTIONS
A7.1 PLAN DETAILS A8.1 STAIR PLAN, SECTIONS & DETAILS A9.1 INTERIOR ELEVATION
A9.2 INTERIOR ELEVATION A10.1 MILLWORK DETAILS
STRUCTURAL S1.1 GENERAL NOTES
S1.2 TYPICAL DETAILS S2.1 FOUNDATION PLAN S2.2 MAIN FLOOR FRAMING PLAN
S2.3 LOW ROOF/MEZZ FRAMING PLAN S2.4 ROOF FRAMING PLAN S5.1 SECTIONS
MECHANICAL M/E-1.0 NEW & RENOVATION SITE PLAN
M/E-1.1 NEW & RENOVATION DETAILS M-1.2 EXISTING BUILDING MECH. & PLUMBING DEMOLITION PLAN M-2.1 HVAC MAIN FLOOR
M-2.2 HVAC 2ND FLOOR M-3.1 SANITARY PIPING SCHEMATIC MAIN FLOOR M-3.2 SANITARY PIPING SCHEMATIC 2nd FLOOR
M-3.3 CLEAR WATER WASTE LAYOUT SCHEMATIC M-3.4 VENT PIPING SCHEMATIC MAIN FLOOR M-3.5 VENT PIPING SCHEMATIC 2nd FLOOR
M-3.6 DOMESTIC WATER SCHEMATIC MAIN FLOOR M-3.7 DOMESTIC WATER SCHEMATIC 2ND FLOOR M-3.8 PLUMBING DETAILS
M-4.1 EQUIPMENT SCHEDULE M-4.2 EQUIPMENT SCHEDULE M-5.1 FIRE PROTECTION MAIN FLOOR SPRINKLER
M-5.2 FIRE PROTECTION 2ND FLOOR SPRINKLER
E-1.2 EXISTING LIGHT DISTRIBUTION E-1.3 EXISTING POWER DISTRIBUTION E-1.4 EXISTING LIFE SAFETY
E-1.5 EXISTING ELECTRICAL DISTRIBUTION & PANELS E-2.1 NEW & RENOVATION - POWER & SYSTEMS E-2.2 NEW & RENOVATION - POWER & SYSTEMS
E-2.3 NEW & RENOVATION - SECURITY & ACCESS E-2.4 NEW & RENOVATION - SECURITY & ACCESS E-3.1 NEW & RENOVATION - LIGHTING DISTRIBUTION
E-3.2 NEW & RENOVATION - LIGHTING DISTRIBUTION E-3.3 LIGHTING DETAILS E-4.1 PANELS & SCHEDULES
E-4.2 SCHEDULES
ARCHITECTS
CALNITSKY ASSOCIATES ARCHITECTS INC 124 Nassau St North, Winnipeg, MB R3L 2H1
<u>CIVIL</u>
MMM Group 111-93 Lombard Avenue, Winnipeg, MB R3B 3B1
LDA STRUCTURAL ENGINEERS Lavergne Draward & Associates 402-138 Portage Ave East, Winnipeg, MB R3C 0A1
MECHANICAL
PE PharmEng Technology 4-703 Corydon Ave, Winnipeg, MB R3M 0W4
ELECTRICAL
PE PharmEng Technology 4-703 Corydon Ave, Winnipeg, MB R3M 0W4

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