

PROJECT INFORMATION:

PROJECT: RPC CHURCHILL UNIT REDEVELOPMENT
LOCATION: SASKATOON, SASKATCHEWAN
PWGSC #: R.082215.001

2015 NATIONAL BUILDING CODE REVIEW:

CHURCHILL UNIT BUILDING - NBC REVIEW:

BUILDING INFORMATION: CHURCHILL UNIT
 BUILDING AREA UNLIMITED
 ONE STOREY
 NON COMBUSTIBLE CONSTRUCTION
 SPRINKLERED
 ROOF DOES NOT HAVE A FIRE RESISTANCE RATING
 MAJOR OCCUPANCY: B1 DETENTION OCCUPANCY

- THE BUILDING IS CLASSIFIED AS GROUP B, DIVISION 1 AND WILL ABIDE BY NATIONAL BUILDING CODE 3.2.2.37 GROUP B, DIVISION 1 UP TO 3 STOREYS, SPRINKLERED. 1)C) THE BUILDING AREA, IF 2 STOREY, BUILDING AREA NOT MORE THAN 12 000 M². 2) THE BUILDING SHALL BE OF NON-COMBUSTIBLE CONSTRUCTION AND A) FLOOR ASSEMBLIES SHALL BE FIRE SEPARATIONS WITH FIRE-RESISTANCE RATING NOT LESS THAN 1 HR, B) MEZZANINES SHALL HAVE A FIRE RESISTANCE RATING NOT LESS THAN 1 HR, AND C) LOABEARING WALLS, COLUMNS AND ARCHES SHALL HAVE A FIRE RESISTANCE RATING NOT LESS THAN THAT REQUIRED FOR THE SUPPORTED ASSEMBLY.

THE CHURCHILL NBC REVIEW

- SERVICE ROOM: 3.6.2.1 B) A FUEL FIRED APPLIANCE SHALL BE LOCATED IN A SERVICE ROOM SEPARATED FROM THE REMAINDER OF THE BUILDING BY FIRE SEPARATIONS HAVING A FRR OF 1 HR. (TO UNDERSIDE ROOF DECK.)
- 3.6.2.3. A SERVICE ROOM MAY CONTAIN ELECTRICAL.
- 3.6.2.6. THE DOOR TO A SERVICE ROOM MAY SWING IN. IT MAY SWING OUT IF IT OPENS ONTO A CORRIDOR
- 3.3.1.2.1) JANITOR ROOMS TO HAVE A FIRE SEPARATION BUT NO FRR IS REQUIRED IF THE FLOOR IS SPRINKLERED THROUGHOUT.
- 3.2.4.10 FIRE DETECTORS: FIRE DETECTORS ARE NOT REQUIRED WITHIN FLOOR AREAS THAT ARE SPRINKLERED THROUGHOUT.
- 3.2.4.1 FIRE ALARM SYSTEM SHALL BE INSTALLED IN A BUILDING IN WHICH AN AUTOMATIC SPRINKLER SYSTEM IS INSTALLED.
- 3.2.4.3 TYPE OF FIRE ALARM SYSTEMS: THE FIRE ALARM SYSTEM FOR THIS BUILDING MAY BE A SINGLE OR 2 STAGE SYSTEM
- 3.4.2.1 MINIMUM NUMBER OF EXITS: 3.4.2.1.2) EVERY FLOOR AREA INTENDED FOR OCCUPANCY SHALL BE SERVED BY AT LEAST 2 EXITS.
- 3.4.2.5 1)C) MAXIMUM TRAVEL DISTANCE TO AN EXIT : 45M
- 3.3.1.9. CORRIDORS: (1) THE MINIMUM WIDTH OF A PUBLIC CORRIDOR SHALL BE 1100MM, (2) EXCEPT FOR A DEAD END CORRIDOR THAT IS ENTIRELY WITHIN A SUITE OR AS PERMITTED BY SENTENCES 3.3.3.3.(1), A DEAD END CORRIDOR IS PERMITTED PROVIDED IT IS NOT MORE THAN 6M LONG.
- 3.3.1.11. DOOR SWINGS: (1) EXCEPT AS PERMITTED BY 3.3.1.12, A DOOR THAT OPENS INTO A CORRIDOR OR OTHER FACILITY PROVIDING ACCESS TO EXIT FROM A ROOM NOT LOCATED WITHIN A SUITE SHALL SWING ON A VERTICAL AXIS. (3) EVERY DOOR THAT DIVIDES A CORRIDOR THAT IS NOT WHOLLY CONTAINED WITHIN A SUITE SHALL SWING ON A VERTICAL AXIS IN THE DIRECTION OF TRAVEL TO THE EXIT. (4) IF A PAIR OF DOORS IS INSTALLED IN A CORRIDOR THAT PROVIDES ACCESS TO EXIT IN BOTH DIRECTIONS, THE DOORS SHALL SWING IN OPPOSITE DIRECTIONS, WITH THE DOOR ON THE RIGHT HAND SIDE SWINGING IN THE DIRECTION OF TRAVEL TO THE EXIT.
- 3.3.1.12. SLIDING DOORS: (2) IN A GROUP B, DIVISION 1 OCCUPANCY, OR IN AN IMPEDED EGRESS ZONE IN OTHER OCCUPANCIES, SLIDING DOORS USED IN AN ACCESS TO EXIT NEED NOT CONFORM TO SENTENCE 1 AND ARTICLE 3.1.11
- 3.3.1.13 DOOR AND DOOR HARDWARE: (6) AN EGRESS DOOR IN AN ACCESS TO EXIT SERVING A CONTAINED USE AREA OR AN IMPEDED EGRESS ZONE IS PERMITTED TO BE EQUIPPED WITH LOCKING DEVICES THAT CAN BE RELEASED EITHER LOCALLY OR REMOTELY IN CONFORMANCE WITH SENTENCE (7) OR (8). (7) LOCAL LOCKING DEVICES PERMITTED BY SENTENCE (6) SHALL BE OPERABLE BY A KEY FROM BOTH SIDES OF THE DOOR. (8) CONTROLS FOR THE REMOTE RELEASE OF DOOR LOCKING DEVICES PERMITTED BY SENTENCE (6) SHALL BE LOCATED IN AN AREA READILY AVAILABLE TO SECURITY PERSONNEL. (9) LOCKING DEVICES PERMITTED BY SENTENCE (6) THAT ARE ELECTRONICALLY OPERATED SHALL BE A) DESIGNED TO OPERATE ON EMERGENCY POWER, AND B) CAPABLE OF MANUAL RELEASE BY SECURITY PERSONNEL
- 3.3.1.23. OBSTRUCTIONS: 1) NO OBSTRUCTION SHALL BE PERMITTED IN ANY OCCUPANCY THAT WOULD RESTRICT THE WIDTH OF A NORMAL MEANS OF EGRESS FROM ANY PART OF A FLOOR AREA TO LESS THAN 750MM UNLESS AN ALTERNATIVE MEANS OF EGRESS IS PROVIDED ADJACENT TO, ACCESSIBLE FROM, AND PLAINLY VISIBLE FROM THE OBSTRUCTED MEANS OF EGRESS.
- 3.3.3.3.(1) EXCEPT AS PROVIDED IN SENTENCE (2), A CORRIDOR SERVING RESIDENTS' SLEEPING ROOMS SHALL HAVE NO DEAD END PORTION
- 3.3.3.3.(2) CORRIDORS ARE PERMITTED TO HAVE DEAD-END PORTIONS, WHERE THE AREA SERVED BY THE DEAD END PORTION HAS A SECOND AND SEPARATE MEANS OF EGRESS
- 3.3.3.7 CONTAINED USE AREAS: 2) A CONTAINED USE AREA SHALL BE SEPARATED FROM THE REMAINDER OF THE BUILDING BY A FIRE SEPARATION HAVING A FIRE RESISTANCE RATING NOT LESS THAN 1 HR. 3) THE BUILDING IS SPRINKLERED THROUGHOUT, 5) A CORRIDOR SERVING A CONTAINED USE AREA SHALL HAVE NO DEAD-END PORTION UNLESS THE AREA SERVED BY THE DEAD END PORTION HAS A SECOND AND SEPARATE MEANS OF EGRESS.

NEW EXTERIOR WALLS

IMAGE (NTS)	TAG	DESCRIPTION (mm)	FIRE RATING ULC DESIGN No.	STC RATING	REMARKS
EXTERIOR WALL TYPES					
	W1	NEW INSULATED BLOCK WALL WITH BRICK: -102 mm SEALED SOLID CONCRETE BLOCK WALL SECURITY WALL 16mm GAP -HORIZONTAL AND VERTICAL BRICK TIES @ 400MM O.C. -194 mm CONCRETE BLOCK WALL NEW SELF ADHERING SBS AIR/VAPOUR RAIN BARRIER MEMBRANE AND ADHESIVE -75mm RIGID INSULATION (R18) -25mm AIR SPACE -90mm BRICK VENEER- NOTE: TO MATCH EXISTING		STC 50(MIN)	SECURE CONSTRUCTION 3: ALL HOLLOW CONCRETE BLOCK HAVING ALL HOLLOW CONCRETE FILLED AND VERTICALLY REINFORCED AT 400mm MIN. WALL SHALL EXTEND AND BE SECURED TO THE STRUCTURAL CEILING ABOVE
	W2	NEW INSULATED BLOCK WALL WITH METAL CLADDING BELOW WINDOWS: -102 mm SEALED SOLID CONCRETE BLOCK WALL SECURITY WALL 16mm GAP -HORIZONTAL AND VERTICAL BRICK TIES @400 O.C. -194 mm CONCRETE BLOCK WALL SELF ADHERING SBS AIR/VAPOUR RAIN BARRIER MEMBRANE AND ADHESIVE -75mm RIGID INSULATION (R18) -GALVANIZED 18 GA. Z-GIRTS @ 400 O.C. -22mm GALVANIZED FURRING CHANNELS @ 400 O.C. -38 PREFINISHED METAL SIDING PANELS		STC 50(MIN)	SECURE CONSTRUCTION 3: ALL HOLLOW CONCRETE BLOCK HAVING ALL HOLLOW CONCRETE FILLED AND VERTICALLY REINFORCED AT 400mm MIN. WALL SHALL EXTEND AND BE SECURED TO THE STRUCTURAL CEILING ABOVE
	W3	EXISTING EXTERIOR WALL WITH NEW INTERIOR CONCRETE BLOCK: -102 mm NEW SEALED SOLID BLOCK WALL SECURITY WALL 16mm GAP -HORIZONTAL AND VERTICAL BRICK TIES @ 400 O.C. -EXISTING 194 mm CONCRETE BLOCK WALL -EXISTING SELF ADHERING SBS AIR/VAPOUR RAIN BARRIER MEMBRANE AND ADHESIVE -EXISTING 75mm RIGID INSULATION (R18) -EXISTING 25mm AIR SPACE -EXISTING 90mm BRICK VENEER		STC 50(MIN)	SECURE CONSTRUCTION 3: ALL HOLLOW CONCRETE BLOCK HAVING ALL HOLLOW CONCRETE FILLED AND VERTICALLY REINFORCED AT 400mm MIN. WALL SHALL EXTEND AND BE SECURED TO THE STRUCTURAL CEILING ABOVE

CEILING TYPES

IMAGE (NTS)	TAG	DESCRIPTION (mm)	FIRE RATING ULC DESIGN No.	STC RATING	REMARKS
CEILING TYPES					
	C1	EXISTING ROOF STRUCTURE TO REMAIN, ADD: - 90mm STEEL TRACK, aa T8D - 90mm STEED STUDS @ 400 O.C., ga T8D (STEEL STUD FRAMING DEPTH TO BE COORDINATED WITH MECH/ELEC CONSULTANTS) - 19mm DIAMOND FLAT MESH 13ga (SECURED W/ NON-REMOVABLE SCREWS) - 12.5mm PLYWOOD - 16mm ABUSE RESISTANT GYPSUM WALL BOARD			SECURE CONSTRUCTION 2 STEEL STUD FRAMING TO BE CONFIRMED ON SITE.

EXISTING WALLS

IMAGE (NTS)	TAG	DESCRIPTION (mm)	FIRE RATING ULC DESIGN No.	STC RATING	REMARKS
EXISTING WALL TYPES * ALL EXISTING WALLS TO BE CONFIRMED AT DEMOLISHING STAGE					
	EW1	INSULATED BLOCK WALL WITH BRICK: 194 mm SEALED BLOCK WALL SELF ADHERING SBS AIR/VAPOUR RAIN BARRIER MEMBRANE AND ADHESIVE 75mm RIGID INSULATION (R18) 25mm AIR SPACE 90mm BRICK VENEER NOTE: PROVIDE BRICK TIES MAX 400 mm VERTICALLY & 800 mm HORIZONTALLY- TYP @ ALL BRICK		STC 50(MIN)	MEETS SECURE CONSTRUCTION 1 EXISTING WALL SURFACE TO BE REPAIRED & REPAINTED AS PER EXISTING, OR NEW AS PER FINISH DRAWING
	EW2	-194mm CONCRETE BLOCK		STC 50	MEETS SECURE CONSTRUCTION 1 EXISTING WALL SURFACE TO BE REPAIRED & REPAINTED AS PER EXISTING, OR NEW AS PER FINISH DRAWING
	EW3	-194mm CONCRETE BLOCK -16mm ABUSE RESISTANT DRYWALL ON BOTH SIDES		STC 50	MEETS SECURE CONSTRUCTION 1 EXISTING WALL SURFACE TO BE REPAIRED & REPAINTED AS PER EXISTING, OR NEW AS PER FINISH DRAWING
	EW4	-194mm CONCRETE BLOCK -16mm GYPSUM WALLBOARD -31 x 92 METAL STUDS @ 400 O/C 16mm ABUSE RESISTANT GYPSUM WALLBOARD		STC 50(MIN)	MEETS SECURE CONSTRUCTION 1 EXISTING WALL SURFACE TO BE REPAIRED & REPAINTED AS PER EXISTING, OR NEW AS PER FINISH DRAWING
	EW5	-16mm ABUSE RESISTANT GYPSUM WALLBOARD -90mm STEEL STUDS @ 400 O.C. -16mm ABUSE RESISTANT GYPSUM WALLBOARD ASSEMBLY TO U/S CEILING SYSTEM			EXISTING WALL SURFACE TO BE REPAIRED & REPAINTED AS PER EXISTING, OR NEW AS PER FINISH DRAWING

NEW PARTITIONS

IMAGE (NTS)	TAG	DESCRIPTION (mm)	FIRE RATING ULC DESIGN No.	STC RATING	REMARKS
PARTITION TYPES					
	P1	-194mm CONCRETE BLOCK (EXPOSED GAPS IN JOINTS TO BE CAULKED WITH EPOXY GROUT)		STC 50	SECURE CONSTRUCTION 3: ALL HOLLOW CONCRETE BLOCK HAVING ALL HOLLOW CONCRETE FILLED AND VERTICALLY REINFORCED AT 400mm MIN. WALL SHALL EXTEND AND BE SECURED TO THE STRUCTURAL CEILING ABOVE
	P2	-194mm CONCRETE BLOCK		STC 50	SECURE CONSTRUCTION 2: ALL HOLLOW CONCRETE BLOCK HAVING ALL HOLLOW CONCRETE FILLED AND VERTICALLY REINFORCED AT 400mm MIN. WALL SHALL EXTEND AND BE SECURED TO THE STRUCTURAL CEILING ABOVE
	P3	-194mm CONCRETE BLOCK		STC 50	SECURE CONSTRUCTION 1 WALL SHALL EXTEND AND BE SECURED TO THE STRUCTURAL CEILING ABOVE
	P4	FILL OPENINGS IN EXISTING WALL WITH: -16mm ABUSE RESISTANT GYPSUM WALLBOARD -194mm CONCRETE BLOCK -16mm ABUSE RESISTANT GYPSUM WALLBOARD	0 HOUR	STC 50	REMOVE EXISTING DOOR FRAME, WINDOW GLAZING & FRAME FILL OPENING WITH MATERIAL TO MATCH EXISTING WALL CONSTRUCTION. MAKE READY FOR NEW WALL FINISHES TO MATCH EXISTING. WALL SHALL EXTEND AND BE SECURED TO THE STRUCTURAL CEILING ABOVE
	P5	-16mm FIBRE REINFORCED TYPE 'X' GYPSUM WALLBOARD -31 x 92 METAL STUDS @ 400 O/C FILL CAVITY WITH SOUND ATTENUATION BATTS -2.59mm EXPANDED STEEL MESH (50 MAX. OPENING) SECURED W/ NON-REMOVABLE SCREWS 2 LAYERS OF 16mm ABUSE RESISTANT GYPSUM WALLBOARD		STC 52	SECURE CONSTRUCTION 1 INSTALL MESH ON THE NEW VIDEO COURTROOM SIDE OF ROOM WALL SHALL EXTEND AND BE SECURED TO THE STRUCTURAL CEILING ABOVE
	P6	EXISTING WALL CONSTRUCTION INTERIOR WALL SURFACE (PROGRAM ROOM & NEW VIDEO COURTROOM) TO ADD: -12.5mm PLYWOOD (SECURED TO EXISTING STUD WALL) -2.59mm EXPANDED STEEL MESH (50 MAX. OPENING) SECURED W/ NON-REMOVABLE SCREWS 16mm ABUSE RESISTANT GYPSUM WALLBOARD			WALL SHALL EXTEND AND BE SECURED TO THE STRUCTURAL CEILING ABOVE
	P7	-16mm ABUSE RESISTANT GYPSUM WALLBOARD -90mm STEEL STUDS @ 400 O.C. -16mm ABUSE RESISTANT GYPSUM WALLBOARD			ASSEMBLY AND FINISH TO MATCH EXISTING WALL WALL SHALL EXTEND AND BE SECURED TO THE STRUCTURAL CEILING ABOVE
	P8	-140mm CONCRETE BLOCK			SECURE CONSTRUCTION 3: ALL HOLLOW CONCRETE BLOCK HAVING ALL HOLLOW CONCRETE FILLED AND VERTICALLY REINFORCED AT 400mm MIN. WALL SHALL EXTEND AND BE SECURED TO THE STRUCTURAL CEILING ABOVE

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Client client

CORRECTIONAL SERVICES CANADA

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Designed by Comp: pm

Drawn by MW, RH

Approved by Approved: pm

PWGSC Project Manager Administrateur de Projets TPSSG

EH

Drawing title Titre du dessin

CHURCHILL UNIT REDEVELOPMENT

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CHURCHILL UNIT INFORMATION AND CONSTRUCTION ASSEMBLIES

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