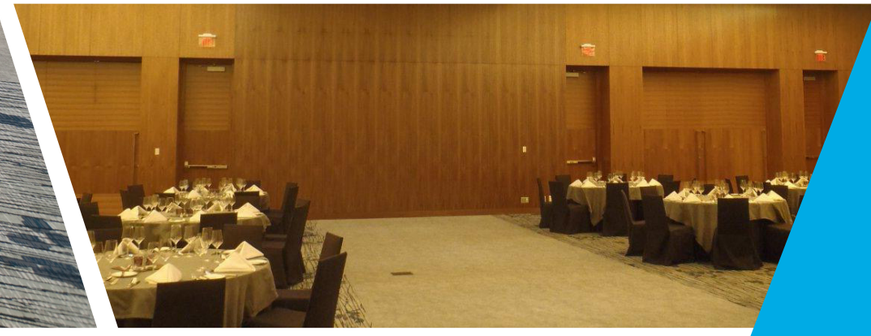
Since 1991, Skyfold® has revolutionized the industry for acoustic operable walls by moving up – literally! With the launch of the Skyfold® Classic™ 60 in October 2013, Skyfold® has done it again by setting the highest industry standards with an acoustic rating of 60 STC (Rw 59) on a fully functional wall. Acoustic test for panels 66STC (Rw 64).

SKYFOLD®
CLASSIC™ 60

ACOUSTICALLY SUPERIOR
SPACE SAVING DESIGN
FAST AND QUIET
LIGHTWEIGHT
FLEXIBILITY
RELIABILITY
ECONOMICAL
AESTHETIC

Skyfold® is a vertically folding retractable acoustic wall system that stores in the ceiling when not in use. This electric system is deployed by a turnkey / push button operation and provides for excellent acoustic rating up to STC 60 (RW59) and can be used in just about any location that requires room space division. Unlike conventional operable walls, Skyfold® is fully automatic and does not require manual labor reducing operation and maintenance costs. Skyfold® does not take up valuable floor space for storage pockets and does not require wall or floor tracks. A light weight system, with only a dead load exerted on the structure, Skyfold® systems save on structural steel requirements and are ideally suited for new or retrofit projects.

SKYFOLD®
dormakaba Group



PROJECT:

HOSPITALITY – RENOVATION

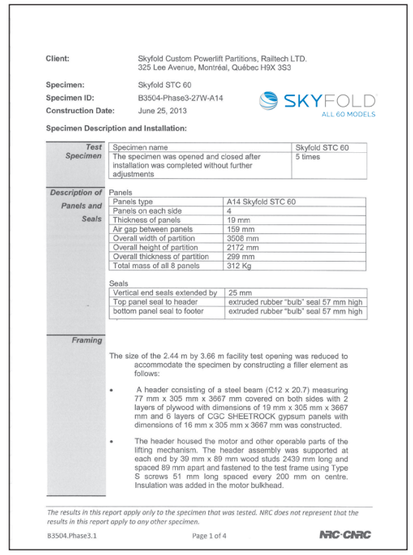
DESIGN CHALLENGE:

Merging two ballrooms, meeting acoustic requirements

Capturing back-of-house hotel space for front-of-house use is no easy feat. A brainstorming session for increasing floor area and flexibility of the function rooms led to the ingenious expansion opportunity, opening up the walls to a shared service corridor and kitchen to expand the hotel's popular ballrooms.

Two ballrooms – one large and one small – were originally separated by the corridor's fixed walls. The new layout called for demolishing the walls to make it one very large space.

The Skyfold acoustic vertical retractable wall system was installed at the midpoint of the former. In this way, the five star hotel gained the flexibility - in under 3 minutes - of having a supersized ballroom with the wall up – or, with the system deployed, two back-to-back function spaces, each now about 1m wider. The 300mm thick Skyfold retractable wall that meets and exceeds the required level of acoustical performance.



Client: Skyfold Custom Powerlift Partitions, Railtech LTD.
325 Lee Avenue, Montréal, Québec H9X 3S3

Specimen: Skyfold STC 60
Specimen ID: B3504-Phase3-27W-A14
Construction Date: June 25, 2013

SKYFOLD ALL 60 MODELS

Specimen Description and Installation:

Test Specimen	Specimen name	Skyfold STC 60
	The specimen was opened and closed after installation was completed without further adjustments	5 times

Description of Panels and Seals

Panels

Panels type	A14 Skyfold STC 60
Panels on each side	4
Thickness of panels	19 mm
Air gap between panels	159 mm
Overall width of partition	3506 mm
Overall height of partition	2172 mm
Overall thickness of partition	299 mm
Total mass of all 8 panels	312 Kg

Seals

Vertical end seals extended by	25 mm
Top panel seal to header	extruded rubber "bulb" seal 57 mm high
bottom panel seal to footer	extruded rubber "bulb" seal 57 mm high

Framing

The size of the 2.44 m by 3.66 m facility test opening was reduced to accommodate the specimen by constructing a filler element as follows:

- A header consisting of a steel beam (C12 x 20.7) measuring 77 mm x 305 mm x 3667 mm covered on both sides with 2 layers of plywood with dimensions of 19 mm x 305 mm x 3667 mm and 6 layers of CGC SHEETROCK gypsum panels with dimensions of 16 mm x 305 mm x 3667 mm was constructed.
- The header housed the motor and other operable parts of the lifting mechanism. The header assembly was supported at each end by 39 mm x 89 mm wood studs 2439 mm long and spaced 89 mm apart and fastened to the test frame using Type S screws 51 mm long spaced every 200 mm on centre. Insulation was added in the motor bulkhead.

The results in this report apply only to the specimen that was tested. NRC does not represent that the results in this report apply to any other specimen.

NRC·CNRC

SKYFOLD®

PROJECT:

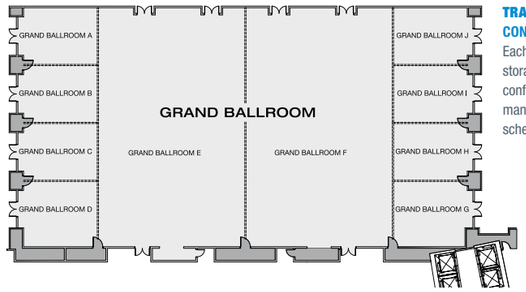
MULTIFUNCTION BALLROOM – NEW BUILD

DESIGN CHALLENGE:

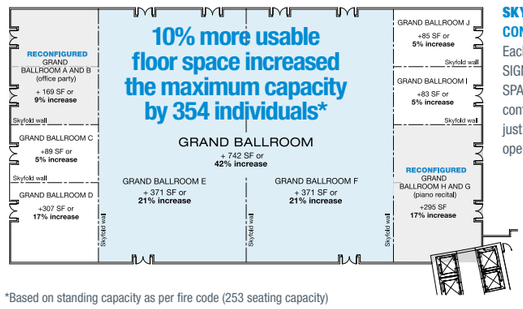
Increase in usable floor space, quick configuration of spaces

Moving on from traditional wall designs that take up floor space for storage pockets, the architects found Skyfold a perfect solution to meet the client's requirements of maximum floor space to increase seating capacity.

Skyfold's flexibility in adapting to various configurations in minutes to be used as a conference or smaller meeting spaces.

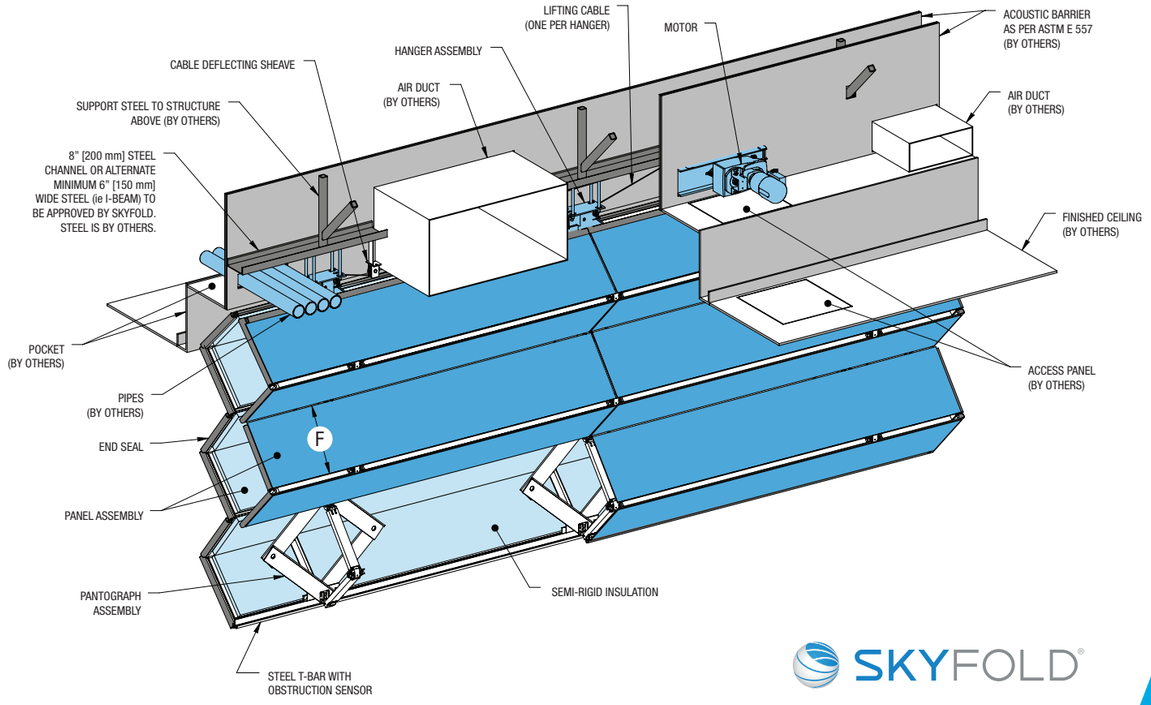


TRADITIONAL WALL CONFIGURATION
Each room has its own storage cavity. New configuration requires manpower and scheduled time.



*Based on standing capacity as per fire code (253 seating capacity)

SKYFOLD® WALL CONFIGURATION
Each room now has SIGNIFICANTLY MORE SPACE. New room configurations are just a turnkey operation away.



PROJECT:

HEALTHCARE

DESIGN CHALLENGE:

Highly acoustic, maintenance free, quick and easy space division or the end users.

The proven acoustic performance and ease of use coupled with the flexibility to accommodate services vital for healthcare designers makes Skyfold a product of choice for SIM labs, teaching hospitals and multi use spaces in medical facilities.

PROJECT:

EDUCATION: UNIVERSITY - GYMNASIUM

DESIGN CHALLENGE:

Reducing the deflection on the structure while using an operable wall, while lowering costs of the steel structure.

Skyfold walls are lighter than traditional movable walls and exert a dead load on the structure.

COST COMPARISON

Based on a 36’ (10,972mm) long wall

Below are the estimated costs associated with the support steel for the two partitions shown above.

Steel Cost Description	Skyfold 36’ Long	Traditional 36’ Long	Difference
**Main Support Steel	W24x68 x 36’ lg @ $1785	W36x160 x 36’ lg @ $6786	$5001.00
Pocket Steel	0	~ $6786	$6786.00
Pocket Steel Installation	0	~ $1000	$1000.00
Total	$1785.00	$14,572.00	$12,787.00
Cost / Linear Ft of Wall	$49.58/ft	$404.78/ft	$355.20/ft

**Its assumed that the installation (labor) costs for the two main steel supports are similar thus ignored for this exercise. Only the material costs are compared for the main support steel. Steel pricing was provided by a local steel distributor and do not include contractor mark-ups or taxes.

Conclusion: Difference may by up to **135%**

SKYFOLD®

DESIGN CHALLENGE:

Flexibility of small spaces

Making the most of the flexibility this Skyfold wall offers in his small office, Coach McDermott uses the wall at Creighton University to separate him (with a potential player) from the family and media. After he has received the commitment, he raises the wall, visually joining everyone in a theatrical experience.

PROJECT:

CORPORATE OFFICE

DESIGN CHALLENGE:

Multifunction meeting space with flexibility in configurations

First, it is the most compact system out there, and it gives me the ability to minimize the impact to the room. In other words I don't have a closet full of folding panels. The second reason I used this system is the minimal impact on the plenum. This system takes about as much space above the ceiling as the sliding wall panel systems. I used the higher acoustic system because of the clients desire to have all 3 rooms running simultaneous with fully amplified speech systems, and this is the only product that came close to meeting the acoustician's requirements. I would also point out that the wow factor of the wall folding up into the ceiling was a selling point for the client. Being able to open a wall in seconds in the middle of a meeting and uniting the entire west half of a building for an important event blew their minds. After that the ease of use and the minimal labor requirement to set up was readily apparent to my client.

Those were some of the thoughts that went into the product selection.

- MARIO G. DEGISI, AIA (LSM Studio)

SKYFOLD®

PROJECT:

EDUCATION K-12 - GYMNASIUM

DESIGN CHALLENGE:

2 Simultaneous games; 2 sets of screaming fans?

No! The challenge was to have Impact resistant movable walls

Low maintenance and easy to use impact resistant walls? With a third party test certificate, Skyfold is now a preferred product by school boards and PTAs.

The screaming fans don't hear each other? That's just an added plus!

V-RESULTS – III - PANEL FOR STC 56 TO STC 60 (RW 56 TO RW 59) SKYFOLD SYSTEMS.

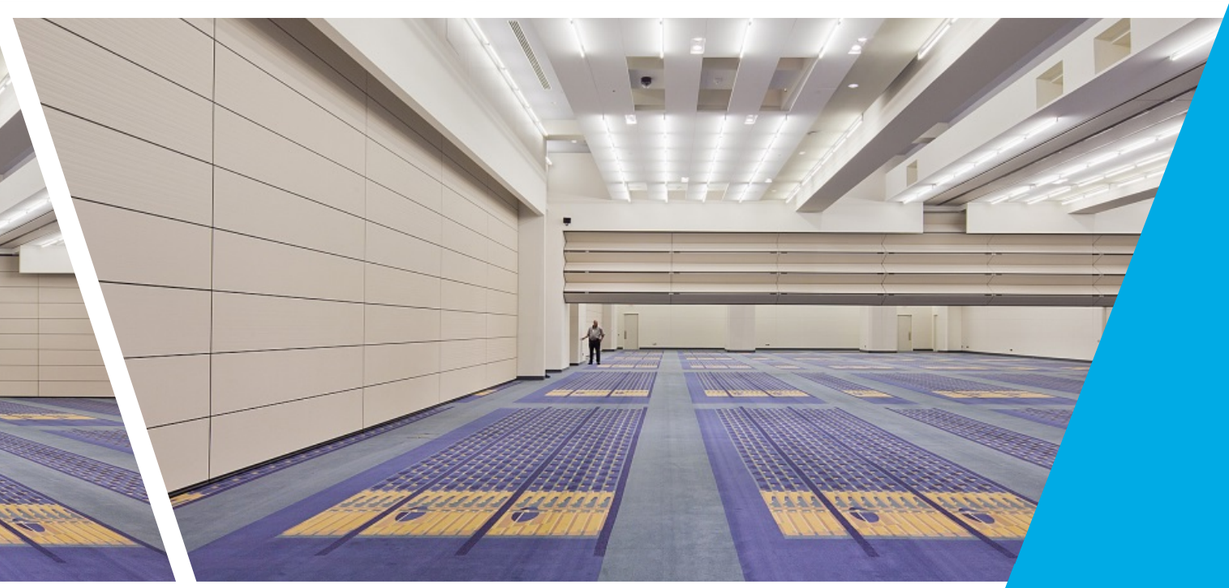
Property	Test method	Test	Inspection	Results	Class according EN 13964
Ball impact resistance	DIN 18032-Part 3	Ceiling*	The strength, function, and safety of the ceiling not adversely affected.	Pass	1A
			Appearance not changed to any great degree.	Pass	1A
		Wall*	The strength, function, and safety of the wall not adversely affected.	Pass	1A
			Appearance not changed to any great degree.	Pass	1A

***Ceiling**
A handball is thrown 36 times against the test ceiling at a velocity of 16.5 ± 0.8 m/s. The shots are thrown 2 × 12 times at an angle of 60° and 1 × 12 times at an angle of 90°.

***Wall**
A handball is thrown 54 times against the test wall at a velocity of 22.5 ± 1.2 m/s. The shots are thrown 2 × 12 times at an angle of 45° and 1 × 30 times at an angle of 90°.

Report number	R14504CAN-A1	Page 4 / 4
Date	November 13th 2014	

SKYFOLD®



PROJECT:

CONVENTION CENTER

DESIGN CHALLENGE:

An economical solution

Rather than build a new wing across the street for millions of dollars, a leading Convention Center instead used 17 Skyfold Classic retractable wall systems to convert registration areas on an as-needed basis into meeting areas. The walls, which are key-operated by the meetings staff, can be quickly deployed to change facility configurations in between events.

SKYFOLD®

Skyfold is a member of the USGBC and its products contribution to LEED credits for Innovation and Design, Materials and Resources and Indoor Environment Quality.

Recycled materials	*up to 97%*
Post-consumer	*27%*
Pre-Consumer	*51%*
VOC	*0*

Skyfold walls have been the industry leader for 20 years and rigorously tried and tested by users with over 4500 installations worldwide. The Skyfold® Classic 60™ wall has been acoustically tested by an independent government authorised laboratory in full accordance and compliance with ASTM E90 (ISO 140-3) for a completely functioning retractable wall. With numerable in built safety features, the lifting mechanism is designed with a safety factor of 10. All tests are certified by a government authorized third party.

- **ADDITIONAL SAFETY FEATURES:**
- **AUTO REVERSE**
- **OBSTRUCTION SAFETY SENSOR**
- **BACK-UP OPERATION**

Thousands of installations worldwide and counting, Skyfold® is quickly gaining popularity with international designers.

PROJECT NAME
Norton Rose Fulbright
Children's Hospital
Kresge Foundation
Conde Nast
Rolls Royce HQ
Guggenheim
Henderson Global TIAA
Snapchat
KPMG
KPMG – Project Roma
BBC Broadcasting House
Facebook Manila
Bain & Company
Kirkland & Ellis
Weil Gotshal & Manges LLP
Francis Crick Institute (UKCMRI)
St. Regis Hotel
Wells Fargo
JP Morgan Chase
Reb Lobster Test Kitchen
Grant Thornton
Schroders Plc
Deloitte Tower – Montreal
Mount Sinai Health System
Music Venue – Phase II
SCF – South Central Foundation Nuka Building
Davidson Kempner Management

AND MANY MORE...

ARCHITECT
Gensler – Dallas
GBBN Architects
Valerio Dewalt Train Associates
Gensler – New York
AECOM Architects
MKDA
Perkins & Will - London
MKDA
Kasian
Sheppard Robson
Lawray Architects along with Sheppard Robson
Paperspace
Fusion Architecture
VCA
Gensler – New York
HOK – London
Avalon Collective along with RSP Architects
Perkins & Will – London
Gensler – New York
Hunton Brady Architects
Stantec
TP Bennett
Lemay & Associates along with FKA Architecture
Gensler – New
SLAB Architecture
Watterson Construction
TPG Architecture