Your Structural Design Solution

Light-weight Building Systems Inc.

PREFACE

The LBS system is the most cost-effective non-combustible system approach available. This guide provides our clients with a step by step description of how we progress from a detailed LBS estimate through to the completion of your project, while addressing any concerns over financial risk. Our approach is to provide our clients with a structural design that will save on drawing schedule and cost, overall construction budget, construction schedule, and will result in a high quality building that continues to give owners financial savings on their investment long after the building is occupied.
The LBS portion of work is typically only a fraction of the overall project cost, but a well thought-out structural design approach from foundation through to the roof will provide the benefit of a fast schedule, quality end result and can significantly increase the value and life span of your investment.

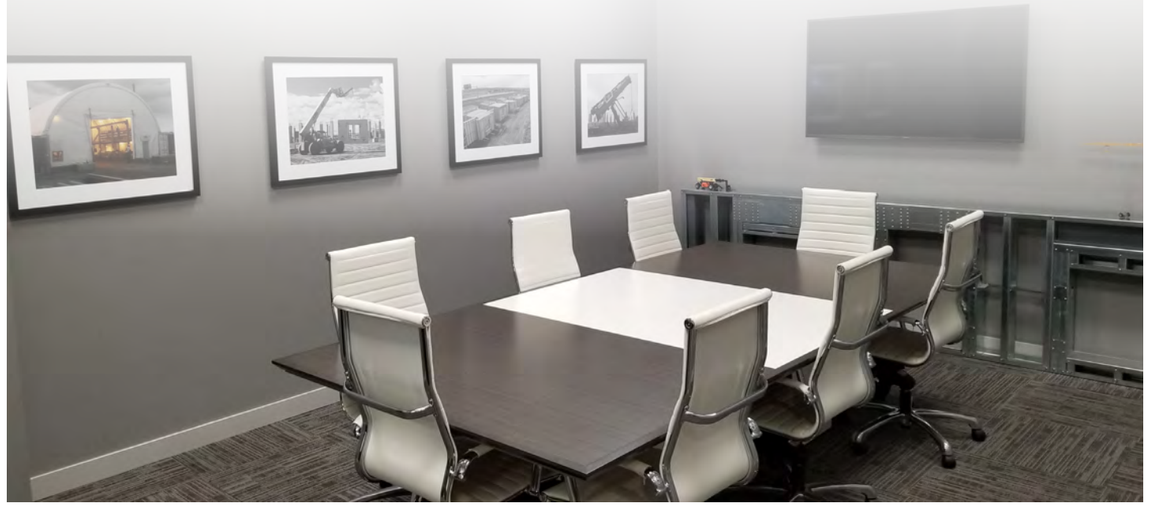
WHO WE ARE

Light-weight Building Systems Inc. manages our projects Canada wide from its head office and panel plant location just 20 minutes south of Calgary, Alberta. We have a second office and panel plant location in Winnipeg, Manitoba. We supplement our two fixed panel plants with our four unique mobile panel plants that are regularly sent to any location in Canada. We pride ourselves in providing detailed and comprehensive estimates, professional engineering services, timely structural 3D design support, a quality non-combustible product, competitive fabrication options, a safe work environment and a well scheduled – on budget performance with all our project ventures. We provide our building system approach anywhere in Canada, whether it is a large city hub or small remote location, we provide you with a turnkey option. Our cooperation with the client on scheduling their project for success is unequalled in the industry. When you specify Light-weight Building Systems Inc., you get comprehensive and coordinated support from design through construction and beyond.

OUR MISSION

Light-weight Building Systems Inc. is a progressive company offering leading edge technology and construction processes at competitive rates. We are dedicated to bringing our construction process to new locations where the market has not yet developed. We bring factory quality construction right to the jobsite. Our long-term goal is to develop lasting client relationships through a partnership approach based on honesty and integrity with the client's investments in mind.
We will develop our company from within bringing management and employees together through communication and skills training programs that will provide personal growth and pride in everyone's contribution. We will sum up our mission statement with three major points.

- Client Relations – growing LBS through the services we provide.
- Offering a quality, leading edge and non-combustible building system that is cost effective.
- To bring employees and management together in a combined effort to promote the LBS System.



LBS™ Light-weight Building Systems Inc.

LBS™ LBS Structural Engineering Inc.

Light-weight Building Systems Inc.

Your Structural Design Solution

How the LBS System is staged and financial risk is controlled:

STAGE 1

A detailed and comprehensive LBS quote is provided to the CM/GC, Architect, or Owner from a current and preliminary architectural design. This quote includes:

- Structural design intent with complete layout drawings and a 3D building model.
- Overall SF of the LBS structure identified.
- Overall LF and location of LBS wall panels and structural steel identified.
- Preliminary LBS installation schedule.
- Pricing for the following is supplied:
  - LBS System – wall and floor elements.
  - Engineering.
  - Exterior sheathing installed on wall panels.
  - Crane and crane operator supply.
  - Structural Steel.
  - Suspended slabs – pour and place concrete. Price per SF are confirmed.
  - Core walls. Design and price per SF are confirmed.
  - Other project-specific items are quoted.
- A detailed estimate drawing package is provided with LBS structural elements identified.
- Information is provided on the floor system, balcony approach and LBS wall assemblies.
- A history of projects completed by LBS with site and trade coordination concerns are reviewed.
- An engineering, quote and agreement letter.
- A detailed list of inclusions and exclusions.

STAGE 2 / *Week 1*

LOI based on a GMP is provided to LBS for the current and preliminary architectural design.

STAGE 3 / *Week 1 to 3*

Confirmation of the LBS design is provided through an engineering design review.

STAGE 4 / *Week 3*

Value engineering. A structural design review is provided to ensure that any cost saving ideas are presented .

STAGE 5 / *Week 4*

GMP Contract and overall “Scope of Work” is negotiated.

STAGE 6 / *Week 5*

Materials are secured with suppliers (based on LBS design and the LOI).

STAGE 7 / *Variable Timeframe*

LBS completes the structural design through coordination with all consultants and the architect. “Issued for Fabrication” and “Issued for Construction” drawings produced.

STAGE 8 / *Variable Timeframe*

Fabrication of LBS walls, floor assembly components, structural steel, and balconies.

STAGE 9 / *Variable Timeframe*

Mobilization to the site.

STAGE 10 / *Variable Timeframe*

Raw materials are supplied to site.

STAGE 11 / *Variable Timeframe*

Site installations. Installations would be as per contract and schedule requirements. 3rd party field reviews will be conducted throughout the installation stage.

STAGE 12 / *Variable Timeframe*

Demobilization – LBS will leave the site when our scope of work is completed, inspected by the CM/GC, EOR and Architect and is determined to meet all design and contract requirements.

FINAL STAGE

LBS will remain committed to assist all other trades through to completion of the entire project.

The Mitigation to Financial Risk with the LBS Design Assist Process:

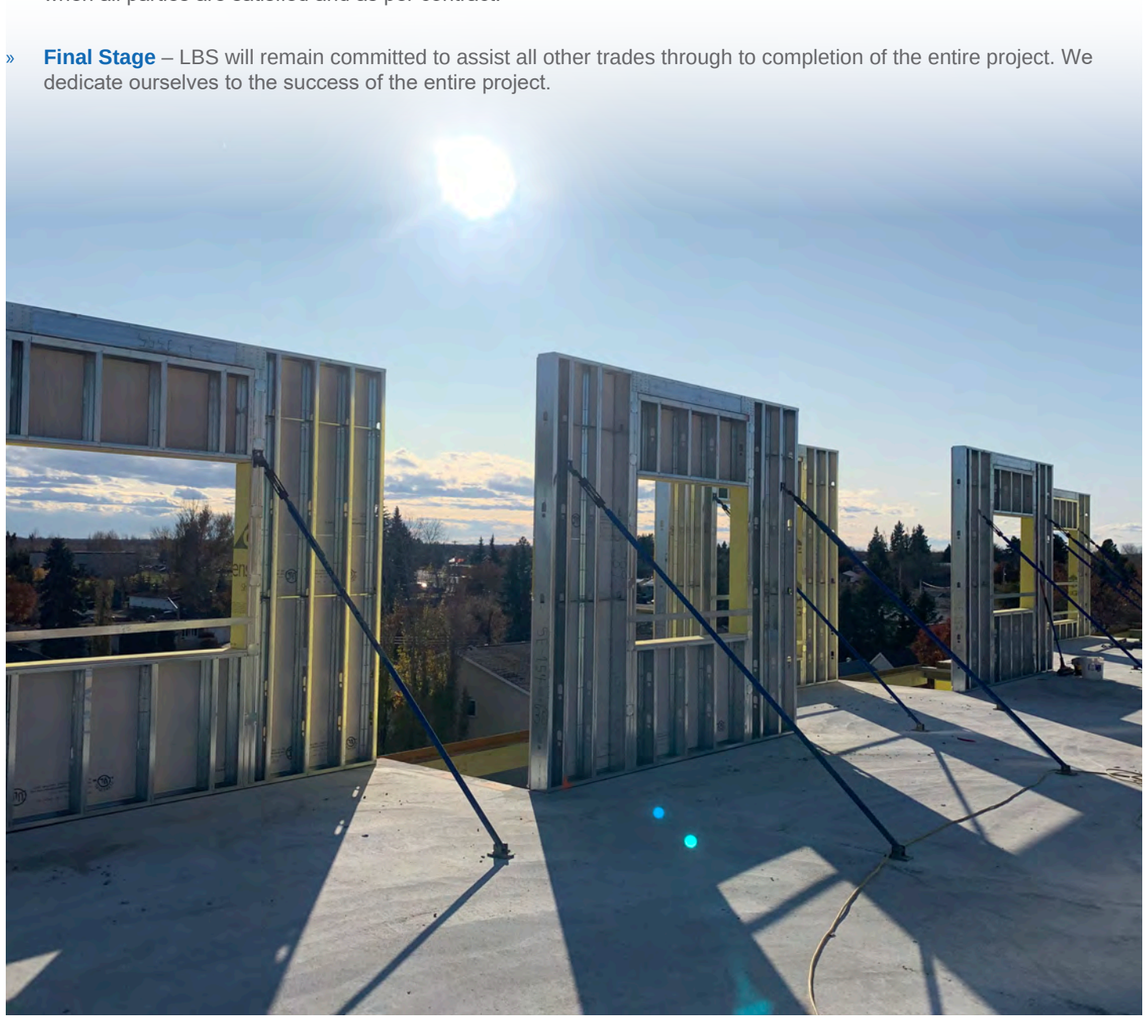
» **Stage 1 through 6** – will ensure that the estimate is accurate to the design. Material suppliers will be secured to ensure additional future costs are mitigated.

» **Stage 7** – when completed all LBS structural design and fabrication erection drawings will be in the control of the Owner, CM/GC, EOR and Architect. A 3D model will be coordinated and supplied to the Architect.

» **Stage 8 through 11** – will be completed through a standard subcontract progress draw process and through compliance to negotiated contract requirements. 30 day draws on approved invoices complete with appropriate holdbacks will apply.

» **Stage 12** – Field reviews and inspections will be performed throughout the installation phase. As the structure progresses all parties will be provided with inspection reports. A final draw and holdback amount will be released when all parties are satisfied and as per contract.

» **Final Stage** – LBS will remain committed to assist all other trades through to completion of the entire project. We dedicate ourselves to the success of the entire project.

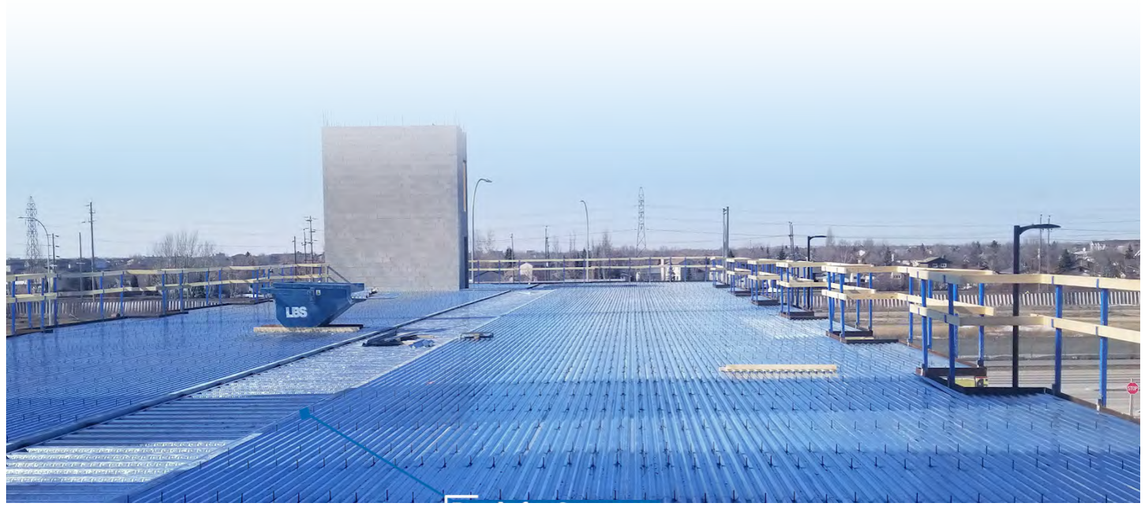


Average Costs Associated with Each Stage of the LBS Structure

STAGE	DESCRIPTION	MIN. COST/SF	MAX. COST/SF	RISK ASSESSMENT
1	LBS estimate	—	—	—
2	Letter of intent	—	—	LOI will be based on GMP estimate
3	LBS design confirmation	TBD	TBD	Low risk with timely review
4	Value engineering	—	—	—
5	GMP contract & scope of work	—	—	—
6	Secure materials	—	—	—
7	Complete the structure design	1.40/sf	1.70/sf	A timely drawing package & 3D model
8	Prefabrication of structural members	14.00/sf	22.00/sf	Low risk - fabrication invoiced on completion
9	Mobilization & site costs	0.75/sf	0.75/sf	Low risk - invoiced on a progress basis
10	Raw materials supplied to site	1.00/sf	2.00/sf	Low risk - materials invoiced on supply
11	LBS structure installations	3.00/sf	5.00/sf	Low risk - invoiced on a progress basis
12	De-mobilization	0.25/sf	0.25/sf	No risk - invoiced once 100% complete
Final Stage	Occupancy assistance	—	—	—
TOTAL AVERAGE COST VARIANCE		20.40/SF	31.70/SF	Variance is based on design

NOTE: *Cost/SF is variable based on complexity of design, size of project and confirmed LBS scope of work. The above amounts are based on cost averages from 11yrs of LBS projects.*

Light-weight Building Systems Inc. has completed structures throughout Canada since 2009. We use design build and design assist solutions as a process to ensure that a project successfully meets all schedule, design and cost-related expectations. If you have any questions, please do not hesitate to **contact us at 1 (866) 458-2573 or email us at info@lwbsi.com for more information.**



PRODUCTS AND SERVICES

Standard LBS pricing includes the following:

- Engineering – design assist or full EOR
- 3D modelling and detailing services
- LBS prefabricated steel stud walls
- Floor System options:
  - Composite joist and deck
  - 8” deep deck
  - 3” and 5” deck
  - Steel stud floor joist assemblies
  - Hollow core
  - CLT
- Balcony design options:
  - Typical LBS steel balcony designs
  - Aluminum balconies
  - Cast in place balconies
  - Pre-cast concrete balconies
  - Wood options
  - Juliette balconies
  - Structural steel for the LBS
- Structural steel for the LBS system
- Wire mesh
- Roof structure options
- Crane & Crane operator
- Densglass installed to LBS panels

Alternative pricing provided on the following:

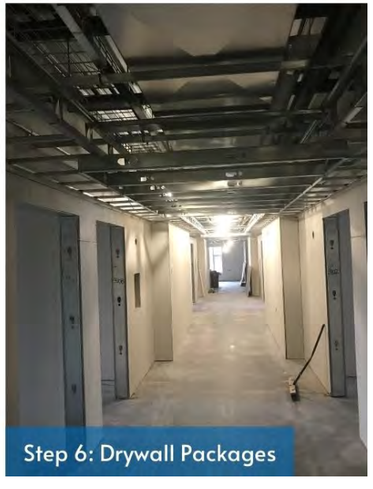
- Concrete foundations
- Concrete and or concrete block (CMU) cores
- Steel stud & concrete core wall alternatives
- SOG
- Transfer slabs
- Mechanical concrete pads
- Rebar
- Pour & place topping
- Parapets and Mansard roof framing
- Roof anchors and support steel
- Window and balcony door installations
- Embeds
- Brick ledger angles
- Backing – wood or steel
- PSF frame installations
- Interior light gauge steel framing
- Drywall packages

STRUCTURE TYPES

Light-weight Building Systems Inc. is the natural choice for:

- Senior Living and Care Facilities
- Apartments
- Condominiums
- Student Housing
- Military Housing
- Hotels and Resorts
- Medical Facilities
- Office buildings
- Housing Developments

LBS CONSTRUCTION PROCESS



North America-Wide

Light-weight Building Systems Inc.

Has experience with successfully completing projects North America- wide. With our unique on-site panel plant, we can bring our non-combustible system approach to any location. We offer a competitive and local alternative to traditional approaches.

Canada

Stony Plain – Alberta
Sherwood Park – Alberta
Red Deer – Alberta
Wetaskiwin – Alberta
Cochrane – Alberta
Fort McMurray – Alberta
Edmonton – Alberta
Leduc – Alberta
Olds – Alberta
Calgary – Alberta
Okotoks – Alberta
Vernon – British Columbia
Vancouver – British Columbia
Whistler – British Columbia
Kamloops – British Columbia
Yorkton – Saskatchewan
Saskatoon – Saskatchewan
Winnipeg – Manitoba
Niagara Falls – Ontario
Toronto – Ontario
Whitehorse – Yukon

USA

Seattle – Washington
Issaqua – Washington
Phoenix – Arizona
Branson – Missouri
Napa Valley – California
Park City – Utah

BENEFITS OF LBS VS. WOOD FRAME CONSTRUCTION

- Environmentally friendly. All LBS materials are made from recycled steel (Green Construction).
- Published Fire & Sound Ratings that are more cost-effective than wood.
- Higher sound ratings can be achieved easier with an LBS system design when compared to wood.
- 100% termite, insect and vermin proof.
- Moisture resistant product with the use of galvanized and pre-primed materials.
- Faster speed of construction that is less affected by adverse weather conditions including rain, cold or snow. Faster construction equals faster sales which reduces bank interest costs. The LBS system is up to 3 weeks faster per floor than a wood structure.
- Flexibility in design provides for easy interior renovations.
- Longer floor spans with the LBS system allows designers to create custom suite lay-outs that can easily be revised before, during and after construction.
- Non-combustible components enhance fire ratings.
- Manufacturing in a controlled environment under optimum conditions provides for a better product than site-built structures. LBS provides fixed manufacturing facilities and unique site panel plants.
- Steel buildings have reduced requirements for costly and time-consuming bulkheads.
- Pre-punched holes for electrical and plumbing services increased speed of installations for rough-ins.
- Retains structural integrity and longevity. Steel buildings provide for a greater life term with your investment.
- Shrinkage and warping of structures are minimized so problems like settlement, cracking and nail pops do not occur. Less deficiency call backs.
- Uniform, straight, flat and dimensionally accurate walls and floors add savings for installations of following trades.
- Higher speeds of sales have been realized through buyer awareness to increased product quality and the added comfort of living in a non-combustible building.
- A steel stud structure with large floor spans can easily be repurposed, if required. Building owners have options.

Insurance premiums are one of the many factors that can determine a project's definitive cost, representing 5% of cost during construction and up to 10% of the cost for long-term operation of the structure.

BUILDERS RISK INSURANCE

This insurance covers the structure during the course of construction. Coverage can be written for the direct causes of loss. As well as indirect results such as business income lost, and soft cost lost usually generated from interest on income expense delay. Construction material plays a significant role in the costs of builders' risk premium. Loss history for wood construction has been poor and carriers are very restrictive of the amount of the risk they will take.

PROPERTY OWNERS INSURANCE

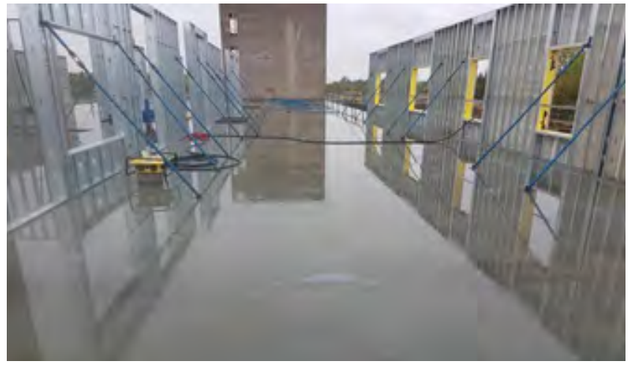
After the structure is completed, construction material will impact the owner for future property renewals. Like builders' risk insurance, property coverage can include business income caused by a covered event and becomes an annually recurring expense. Similar to builders' risk insurance plans, capacity will become an issue. This can represent a huge advantage for owners of a steel-framed structure because the savings recur every year when the policy is renewed at the non-combustible rate.

GENERAL LIABILITY AND OTHER INSURANCE PRODUCTS

For some types of coverage's, construction materials may not be specifically considered when pricing policies. Savvy insurance brokers work with insurance carriers to develop and gain access to insurance products with premium savings and possibly broader policy terms for projects with cold-formed steel framing.

Example savings of negotiated insurance incentives:

- 16 to 60 percent savings of Workers Compensation premiums.
- 5 to 15 percent savings on Surety/Bonds.
- Up 50 percent premium savings on General Liability Insurance.
- Up 50 percent premium savings on Property Owners Insurance.



RECYCLABLE

All steel building products including steel framing are 100% recyclable. One of the key sustainable attributes of steel is its ability to be recycled without any loss or degradation of its inherent material properties, allowing it to exist for an infinite number of product life cycles. As part of a holistic approach, use of steel components can contribute to obtaining over 50 LEED points for building owners seeking certification under LEED Canada NC 2009.

NON-COMBUSTIBLE

Steel can't burn, because it contains no elements that can serve as fuel. Steel provides no means for a fire to start, it does not contribute to fire growth or fire spread, and it does not contribute to the generation of smoke and toxic combustion products in fires. Building codes recognize steel framing as a non-combustible construction material. Steel remains non-combustible throughout the entire life cycle of the building - during building construction, occupation and future renovation and repair.

WATER RESISTANT

Steel stud load bearing walls are galvanized with a layer of zinc. The steel is protected from corrosion and does not absorb moisture. With steel stud framing, adverse weather conditions do not impede site progress and moisture is not trapped within the framing members. Steel framing does not dry out and shrink over time, thus the costly call backs to repair warped walls, nail-pops and squeaking floors are eliminated.

MOLD & INSECT RESISTANT

Steel stud framing is an inert material that doesn't release harmful chemicals and resists the growth of mold, mildew and other bacteria. Indoor air quality is regarded as one of the top environmental risks today, affecting the well being, productivity and performance of many people. Steel stud framing reduces these issues. Steel stud framing does not provide a home for insects and rodents.


The bottom-left picture is what you would get with conventional concrete. Heating and hoarding is expensive and time consuming. The top-right image is what you get with the LBS system. The building is enclosed with sheathing and minimal hoarding is required, making it the most time-efficient and cost-effective option.

BENEFITS OF LBS VS. CAST-IN-PLACE CONCRETE CONSTRUCTION

Here are some key areas in which the LBS System compares with wood and conventional concrete – and wins:

GREATER ROI
Steel stud load bearing structures provides both construction and long-term savings

EASY & FAST INSTALL
Properly designed and prefabricated components add speed and efficiency to our installations

LOWER COSTS
Cost-effective designs when compared to conventional approaches

SAVE TIME
Faster schedule with fewer issues inherent in wood and concrete construction

SUSTAINABLE
100% recyclable and our structures retain their value over the life span of your investments

EARTHQUAKE RESISTANT
Our structures are earthquake resistant & perform well in high seismic zones

FULL DESIGN
Complete detailing & engineering services provided across Canada

ACCURATE
3D software used to coordinate design with all consultants eliminate site conflicts

DESIGN FLEXIBILITY
Greater strength-to-weight ratio for longer spans provides options to design

NON-COMBUSTIBLE
Steel doesn't burn or add fuel to a fire and provides considerable insurance savings

CWB CERTIFIED
With over 30 years of experience, our installation crews are certified

MOISTURE RESISTANT
Galvanized steel is moisture resistant and does not provide an environment for mold or insects

Light-weight Building Systems Inc. provides structures that are typically designed with large open floor plans.

- Clear spans up to 45 ft.
- Simple Integration with LBS Walls.
- Faster, safer and more cost-effective than CIP concrete.
- Low-profile designs are available to manage building height.
- Modifications to an interior space is easily achieved using long span assemblies.

LBS can construct using our assembly up to 12 stories. If you can provide 3 floors of concrete and or structural steel, we can then provide a 15 story structure. Which building material should you choose, cast-in-place concrete or the LBS System? Here is how we compare:

STRENGTH-TO-WEIGHT RATIO
Cold-formed steel has the highest strength-to-weight ratio of any construction material.

SCHEDULE
With LBS – schedule benefits are a major plus when comparing to cast-in-place concrete structures.

DESIGN BENEFITS WITHOUT COMPROMISING SOUND AND FIRE
Lightweight flooring systems provide high STC and IIC sound ratings along with independently tested fire assembly ratings of 1 - 4hrs.

COST OF CONSTRUCTION
Ultimately, the benefits of the LBS System can lead to a lower overall cost of construction. Time related savings alone can amount to between 5 and 10 percent of the overall project value.

YOUR NON-COMBUSTIBLE BUILDING SOLUTION

MCMILLAN CONDOS
Winnipeg, Manitoba

CONRAD HOUSE
Winnipeg, Manitoba

50 HARGRAVE
Winnipeg, Manitoba

THE ELEMENT
Winnipeg, Manitoba

PARK CITY COMMONS
Winnipeg, Manitoba

MARIE ROSE PLACE
Winnipeg, Manitoba

98 MARKET
Winnipeg, Manitoba

PARK WEST
Winnipeg, Manitoba

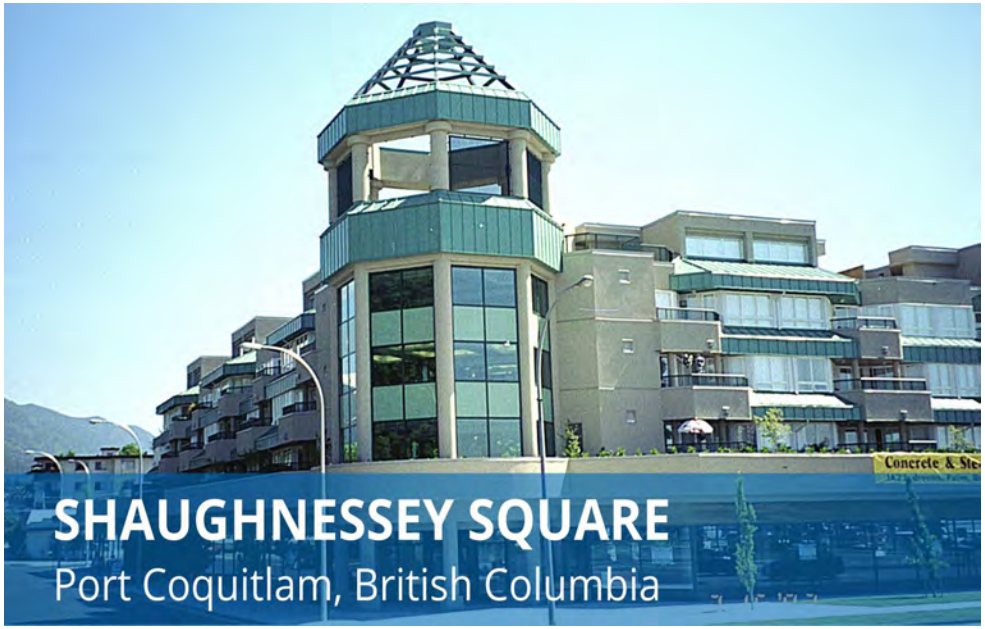
NASSAU CONDOS
Winnipeg, Manitoba

YOUR NON-COMBUSTIBLE BUILDING SOLUTION

MAH'S POINT
Whitehorse, Yukon

RICHARDSON OILSEED
Yorkton, Saskatchewan

SPIDER SITE
Calgary, Alberta



SHAUGHNESSEY SQUARE
Port Coquitlam, British Columbia

YOUR SENIOR HOUSING BUILDING SOLUTION

POINTS WEST LIVING
Red Deer, Alberta

CLOVER BAR LODGE
Sherwood Park, Alberta

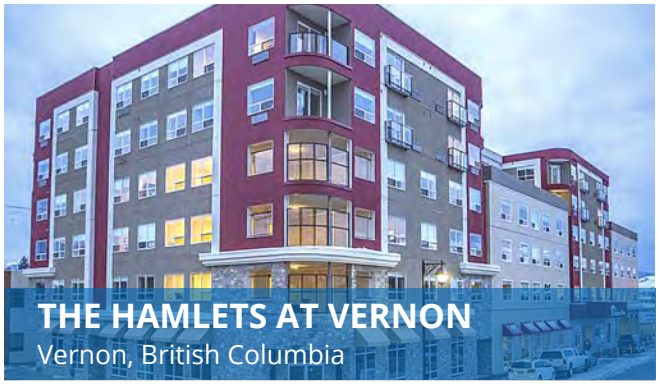
PRESTON II
Saskatoon, Saskatchewan

LAUREL HEIGHTS
Edmonton, Alberta

RIVERCREST
Winnipeg, Manitoba

POINTS WEST LIVING
Wetaskiwin, Alberta

POINTS WEST LIVING
Cochrane, ALberta



THE HAMLETS AT VERNON
Vernon, British Columbia

THREE ROBINS
Stony Plain, Alberta

YOUR HOTEL BUILDING SOLUTION

FOUR POINTS SHERATON
Calgary, Alberta

COURTYARD MARRIOTT
Saskatoon, Saskatchewan

GREAT WOLF LODGE
Niagara Falls, Ontario

HOLIDAY INN
North Vancouver, British Columbia

YOUR HOTEL BUILDING SOLUTION

HAMPTON INN
Richmond, British Columbia

FOUR SEASONS
Whistler, British Columbia

HYATT HOTEL
Seattle, Washington

WYNDHAM GARDENS
Calgary, Alberta

HEAD OFFICE
911 20 St SE,
High River, AB

MANITOBA OFFICE
54A Matheson Pky,
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