



Steel Design

DOFASCO™

Fall 2006 | VOLUME 38 | NO. 2

**Healthy Homes,
Happy Homeowners.**

**Steel Helps 'LEED'
The Way In Edmonton**

**Light Steel framing (LSF) Contributes
To Record Breaking Construction Time**

PROJECT SUBMISSIONS

Do you have a project using sheet steel that you would like to see in *Steel Design*? The editor welcomes submissions of completed buildings—commercial, institutional, industrial, recreational, and residential—using components made from steel, including cladding, steel decking, light steel framing, steel roofing, steel doors, steel ceiling systems and steel building systems.

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CHANGE OF ADDRESS AND NEW SUBSCRIPTIONS

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Cover Photo, Marriott Residence Inn: Tom Lehari

DOFASCO

Our product is steel. Our strength is people.

IN THIS ISSUE

MARRIOTT RESIDENCE INN, Vaughan, Ontario – LSF contribute to record breaking construction time

Light cold-formed steel framing played a major role in meeting several design objectives for the new Marriott Residence Inn, located on Interchange Way in Vaughan, Ontario.

3

University of Toronto Early Childhood Learning Centre: A beautiful Building & a great play Environment

Kids love to have fun and because steel was used in innovative ways, over a hundred youngsters attending the Early Childhood Learning Centre at the University of Toronto have a variety of play environments from which to choose.

6

St. John Ambulance Headquarters, Edmonton, Alberta Steel helps 'LEED' the Way in Edmonton

Completed in 2004, the St. John Ambulance headquarters building designed by Manasc Isaac architects, has been described as prominent and 'iconic' and it has achieved LEED Silver rating.

8

Fifthshire Homes, Sharon, Ontario Healthy Homes. Happy Homeowners. Light Steel Framing – Quality, Environmentally Sound Homes

Fifthshire is committed to giving our clients the best products available on the market today and steel gives customers greater design flexibility, reduced maintenance costs, and a healthier indoor environment

10

Concentrate for 30 years in the wilderness and STEEL makes it possible

In addition to the design of the concentrate storage building, a method for modularizing and shipping the components to Labrador, was performed by the Structural Engineers, SDI Engineering Inc., working very closely with the fabricator.

12

The Last Word in Steel News

- 2006 CSSBI Award of Recognition
- Iowa River Gazebo, Coralville, Iowa
- Construct Canada 2006 • Bergstrom Indoor Training Facility, Ames, IA • Husker Du II House, Sydney, Australia • Galvalume Approval to CSAG-401 Corrugated Steel Pipe Applications
- Flow Hummer Dealership Winston-Salem, N.C.
- Lone Peak Park Pavilion, Sandy, Utah.



14

MARRIOTT RESIDENCE INN, VAUGHAN, ONTARIO

LSF contributes to record breaking construction time

The superstructure erection began March 20 and it took only seven weeks for the framing, including roof and deck, to be completed. April 27 - View looking north with 6th floor wall panel assemblies installed. ZF075 light coated steel deck is over lobby area.

Light cold-formed steel framing played a major role in meeting several design objectives for the new Marriott Residence Inn, located on Interchange Way in Vaughan, Ontario. It was a positive contributing factor to the construction efficiency and timing of the long-term stay hotel and addressed some important technical requirements.

Bernardo Cascone of Quadrangle Architects Ltd. explains that the six-storey, eight thousand nine square metre (96,000 sq. ft.) building was designed "to respond to The City of Vaughan's urban planning conditions for their new downtown core", as well as maintaining Marriott's long term branding of a hotel that is recognizable to people across the continent. "Soil bearing conditions

determined how much weight could be put on the existing ground. The building had to be as light as possible, so light gauge steel framing panels were used with six-inch pre-cast concrete slabs," says Cascone, adding that structural steel was also used for the one-storey entrance Gate House lobby.

Bailey Metal Products supplied Z275 (G90) galvanized heavy gauge for the structure's load bearing walls and light gauge steel framing (LSF) for the interior panels. The prefabricated panel system, manufactured by FNA Building Systems Inc., included standard load bearing wall panels ranging in thickness from 1.9mm to 1.22mm (.075" to .048"), with a few sections at .91mm (.036"), for a total 90,000 lbs.



Dan Finelli, Millennium Engineering, emphasizes that because the panels were pre-fabricated and then brought to the site, “it made installation faster”. Finelli noted that six stories is the highest facility they have built using pre-cast slabs. “The walls and floors go together very smoothly.” The floor system was also pre-manufactured and assembled on site so it was simple to connect to the light steel framing (LSF) wall panels.

The superstructure erection began March 20 and it took only seven weeks for the framing,

including roof and deck, to be completed. Ersilio Serafini, Construction Manager, Chamberlain Construction Services Limited, reiterates the speed of erection as an advantage. “The pre-fabricated panels were easily hoisted into place. Once they were braced, we placed the coreslab on top. It took only three days per floor to erect the sections – there was no waiting time for on-site labour crews and so we saved considerable time getting to the top of the building.” Some of the lower floors required double studs at 406mm (16-inch)

centers, while the upper floors took 152.4mm (6”) studs at 406mm (16 inches) on center. Panels were cross-braced with steel straps on both sides. The roof was constructed with 305mm (12”) light gauge steel ‘C’ joists and 1.5-inch metal deck. Roll Form Group provided 1,672 m² (18,000 sq. ft.) of (ZF075) light zinc coat .76mm (.0299”) 1-1/2” S15 roof deck.

The new Marriott Residence Inn, located south of Highway 7 and east of Highway 400, will be ready for occupancy late this Fall.

- 1. Typical interior load-bearing wall showing double 152.4mm (6”) studs @ 660mm (16”) o.c. and shear wall cross bracing.**
- 2. View of northwest corner showing typical end wall window opening panel with multiple 152.4mm (6”) king and jack studs.**
- 3. May 5th - view looking east showing roof panels installed and densglas sheathing underway.**
- 4. View looking northeast from 4th floor level showing 152.4mm (6”) loadbearing stud on 2nd and 3rd floors, with 38.1mm (1-1/2”) ZF075 coated steel deck being installed over front lobby.**
- 5. 4th & 5th floor wall panel assemblies installed, 6th floor partially installed, with factory panelized roof assemblies. The roof assemblies are 304.8mm (12”) ‘C’ by 1.9mm (.075”) and 2.74mm (.108”) ‘C’ sections.**



Statistical Information

Wall height: 2.74m (9 feet)clear

Deck size: 152.4mm (6”) precast concrete floor slabs

Acoustic ratings for floors: 48 STC

Acoustic ratings for walls: average 54 STC

Ceiling finish: drywall or finished coreslab, stiple texture

Total sq. footage per floor: 1500 sq. metres (16,145 sq.ft.)

Applicable building code: Ontario Building Code

Snow load: 25 psf

Header types: built-up stud sections

Total weight of framing: 90,000 lbs.

Size of sections: 152.4 mm (6”) galvanized stud & track
1.9mm – 1.22mm (.075” thru .048”)

Roof assembly: factory panelized with 304.5mm (12”) studs using 1.9mm – 2.74mm .075” and .108”) and 38.1mm (1-1/2”) deck

Design and Construction Team

OWNER:

Concord Hospitality 919-455-2900

ARCHITECT:

Quadrangle Architects Ltd.
416-598-1240

CONSTRUCTION MANAGER:

Chamberlain Construction Services Ltd.
905-631-7777-227

SUPER STRUCTURE:

Millennium Engineering Ltd.
905-631-9294

LIGHT STEEL FRAMING

PANEL FABRICATOR:

FNA Building Systems Inc.
416-232-9801

LIGHT STEEL FRAMING PANEL ERECTOR:

I. Con 416-727-1782

LIGHT STEEL FRAMING STEEL SUPPLIER:

Bailey Metal Products
1-800-668-2154

STEEL DECK:

Roll Form Group 1-800-233-6228

LGM WIND BEARING

WALL INSTALLER:

Extreme Insulation Ltd.
905-877-9634

STRUCTURAL STEEL:

Gensteel 905-799-3324

STRUCTURAL FLOOR SUPPLIER:

Coreslab Structures
905-689-3993

PHOTOGRAPHY:

Tom Lehari

A beautiful Building & a great *play* Environment



ABOVE: This rear view shows the sculptured qualities of the project. Scale was an important design aspect whereby the building had to address the scale of both the teacher/parent and the child.



ABOVE: A typical playroom showing the elevated pod which provides program space underneath and above.



RIGHT: This shows how the space of the pod interacts with the floor above.

Kids love to have fun and because steel was used in innovative ways, more than a hundred youngsters attending the Early Childhood Learning Centre at the University of Toronto have a variety of play environments from which to choose. Architect Stephen Teeple, explains that the Glen Morris Street facility, completed in 2004, is really unique. "It creates a whole range of play landscapes in the building using the form of the building itself. The steel facades fold in to create lofts in the playrooms. These provide an overview of the space for the kids, as well as places to tuck away from other kids. Views are created between floors and up to the roof. This folding action is repeated until the building takes on an energetic, playful quality. Kids can literally play all over the building including a second floor play deck and the roofs."

Steel is used as the basic structure – 1,115m² (12,000 ft²) of 76mm (3") ZF075 galvaneal coated steel deck from Vicwest, was used on the steel frame in the 1231m² (13,250 sq. ft.) facility. The steel cladding used on the structure is Dofasco's AZ180 Galvalume Plus. Commenting

on the choice of material, Teeple says, "We used steel because we needed the flexibility to achieve the folds and a variety of spatial configurations. It also creates a light structure that can appear to float in various locations. We liked the light colour of the Galvalume Plus steel siding because it is not as rustic as copper or other metals. It also allows us to express the idea of folding in the facades because the material itself actually folds."

Agway Metals Limited supplied the AZ180 Galvalume Plus cladding with the AZ-38 standing seam profile in a .67mm (.024") thickness and Krypton Steel installed 418m² (4,500ft²) of the 400 mm wide panels. "This project was a great challenge and interest to all of us at Krypton Steel," comments Mike Uschak, Project Manager. "The seaming of the vertical seams on the panels was a bit difficult, due to the the fact that it was a standing seam roof profile, but we faced the challenge and the final building is the result – it's excellent."

Everyone who views the building compliments us on how beautiful it looks. Mike agrees, "It's especially beautiful at night."



ABOVE: All materials come together on the North elevation, Galvalume Plus, cedar, dark brick, glass and perforated mesh railings. Dofasco's AZ 180 Galvalume Plus steel was supplied by Agway Metals for the cladding in their AZ-38 standing seam profile.

LEFT: The site addressed significant existing conditions beautifully, such as this tree at the back of the building.

Design and Construction Team

OWNER: University of Toronto

ARCHITECT: Teeple Architects 416-598-0554

GENERAL CONTRACTOR: M.J. Dixon Construction Ltd 905-270-7770

STEEL CLADDING SUPPLIER: Agway Metals Inc. 1-800-268-2083

STEEL DECK SUPPLIER: Vicwest 1-800-387-7135

CLADDING & STEEL DECK INSTALLER: Krypton Steel Inc 905-764-2432

PHOTOGRAPHY: Tom Arban

Steel helps 'LEED' the Way in Edmonton



"I like corrugated steel as cladding for a number of reasons. It's easy to put up in all sorts of weather, it's easy to dress up and it's easy to take apart after the building has come to the end of its life".

Myron Nebozuk, Manasc Isaac Architects



Photo: Manasc Isaac

The striking St. John Headquarters achieved LEED Silver certification by targeting a healthier environment and low operational costs.

The first structure in Edmonton, Alberta to receive LEED™ (Leadership in Energy and Environmental Design) accreditation was St. John Ambulance headquarters designed by Manasc Isaac Architects Ltd.

The St. John Ambulance organization wanted to create a facility to serve their Edmonton and Provincial administrations and also provide space for instructional activities. The resulting building has been described as prominent and 'iconic' and achieved LEED Silver rating. As well, it incorporates sustainable design strategies targeting a healthier environment and lower operational costs.

Completed in 2004 the facility was recognized as an Exemplary Educational Facility by the Organization for Economic Cooperation and Development (OECD) in 2005. David J. Hook, Executive Director and CEO said of the project, "The design and construction is responsive to the needs of St. John Ambulance. It reflects the cutting edge of energy, environmental and efficient design."

With a total area of 4,180m² (45,000 sq.ft.), the facility comprises 3 storeys plus underground parking. St. John's thousand year history is also represented in the design. A cylindrical stair tower recalls St. John Council's medieval roots: the central block of classrooms represent this organization's unwavering commitment to education and the east facing atrium represents the Council's forward-looking focus.

INSET TOP:
Steel played a significant role in shaping the building's aesthetics. The corrugated wall cladding supplied by Vicwest, was made from Dofasco's Galvalume™ AZ150 painted steel, coloured Bright Silver.

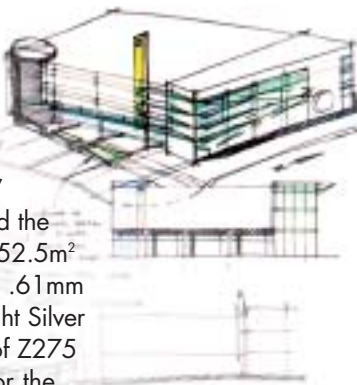
INSET BOTTOM:
The stone tower at the west end is reminiscent of the Middle Ages when the Order of St. John was founded. While the 3-story atrium at the east end with its steel columns symbolizes the future.

Myron Nebozuk, a Partner at Manasc Isaac, describes the design objectives presented by the client: "Give us a great working environment, lower our operational expenses, and give us incredible street presence." He goes on to say that the use of steel was an integral part of achieving that.

"I like corrugated steel as cladding for a number of reasons. It's easy to put up in all sorts of weather, it's easy to dress up (with metallic silver paint and simple reveals) and it's easy to take apart after the building has come to the end of its life."

Igloo Erectors Ltd. of Edmonton installed the cladding on most exterior walls involving 852.5m² (9,177 sq.ft.) of 7/8" corrugated cladding, .61mm (.0239") Galvalume™ AZ150 painted Bright Silver QC2624, as well as 121m² (1300 sq.ft.) of Z275 galvanized steel decking Profile RD938 for the atrium roof, and some aluminum panel 1.6mm (.063") in Silver Metallic located mainly around the atrium roof's perimeter.

Proving that sustainable and eye-catching design does not have to cost the proverbial arm-and-a-leg, the project came in at \$113/sq.ft. and overall will operate about 47% below the baseline building according to the Canadian Model National Energy Code for Buildings (MNECB), and that translates to operational savings of \$22,342 per year (in 2006 dollars).



Design and Construction Team

OWNER: St. John Ambulance

ARCHITECT: Manasc Isaac Architects Ltd. 780-429-3977

CIVIL ENGINEER: GPEC Engineering 780-463-3950

STRUCTURAL ENGINEER: Earth Tech 780-453-0909

LANDSCAPE ARCHITECTS: Carlye and Associates 780-424-6993

GENERAL CONTRACTOR: Chandos Construction 780-436-8617

STEEL CLADDING SUPPLIER: Vicwest 1-800-252-9351

CLADDING INSTALLER: Igloo Erectors Ltd. 780-448-9765

PHOTOGRAPHY: Jim Dow, Dennis Hayden, Manasc Isaac

Healthy Homes. Happy Homeowners.

Light Steel Framing – Quality, Environmentally Sound Homes

Vice-President of Fifthshire Homes, Joe Vella, is a pioneer in the use of light steel framing (LSF) for single-family dwellings, something he's been doing for the past 12 years. He's also credited with exploding the myth that you can't build R2000 homes with LSF due to thermal conductivity issues.

Durability of lightweight steel framing is assured with the corrosion resistance coatings of Galvalume or galvanized steel.

In fact Joe's steel framed homes are more energy efficient than their wood-framed counterparts. The exterior walls comprise structural 3-5/8" steel studs with a high grade exterior insulated wall sheathing. More than 98% of the cavity wall is filled with Polyisocyanurate insulation, an environmentally safe material containing no CFCs, HFCs or Formaldehyde.

Fifthshire began a housing development in 1986 that was to involve six phases and total over 250 homes. They began as wood-framed. Somewhere around Phase 4 Joe says, "I saw a need to improve the quality of homes because the quality of the wood available was diminishing. I felt it was damaging to the overall quality of a finished home." He switched to LSF. The final Phase 6 started in May 2005 for completion in fall 2006 with 10 bungalows in the 2200 – 2700 sq.ft. range.

Joe points out that working with LSF was picked up quickly by his framers, and the trades work just as fast and cost effectively as with

wood-framed houses. Proper layout and planning in the framing process keeps the mechanical – HVAC trades work to a minimum. He sees the benefits to the builder including:

- Every steel stud is a good stud with consistent quality
- No cracks or nail pops – all walls, ceilings, and floors are perfectly straight so there are no callbacks
- LSF can be supplied to the exact lengths required, virtually eliminating on-site cutting and waste
- LSF is manufactured with pre-punched holes for running piping and electrical wiring, minimizing preparation work for other trades
- Steel is competitively priced and supplies have historically been more readily available than good lumber
- LSF weighs 60% less than wood so foundation and seismic loads can be reduced.



Typical of Fifthshire's energy efficient and healthy homes in Sharon, Ontario, may look like many other homes, but you have to look behind the surface.



Light steel framing is a proven technology and reflects the superior strength and consistency of steel. Steel being inorganic does not support the growth of mold or give off gas, thus contributing to excellent indoor air quality.

Joe concludes, "I am committed to giving our clients the best products available on the market today and steel gives customers greater design flexibility, reduced maintenance costs, and a healthier indoor environment by providing excellent indoor air quality through being inorganic and not supporting the growth of mold or giving off gas as happens with most engineered wood products.

John Rice of Bailey Metal Products adds for the benefit of builders who may be considering the switch to LSF, "It's not a major challenge to evolve a structure to steel framing from what would have been wood, and to comply with all the codes for fire rating, wind and snow loads, details, and spans and so on.



Steel framing members in a variety of standard shapes and sizes in varying steel thicknesses have been used to accommodate virtually all structural requirement.

Because of its strength, steel can span greater distances offering larger open spaces and increased design flexibility.

Fifthshire's Light Steel Framing Member – Dimensions

• Roof Rafters:	203mm (8") x 41mm (1-5/8") x 1.22mm (.048")
• Ceiling Joists:	152.4mm (6") x 41mm (1-5/8") x 1.22mm (.048")
	152.4mm (6") x 41mm (1-5/8") x 1.52mm (.060")
• Lintels – Depending on span and load:	
	254mm (10") x 41mm (1-5/8") x 1.90mm (.075")
	203mm (8") x 41mm (1-5/8") x 1.52mm (.060")
	203mm (8") x 41mm (1-5/8") x 1.22mm (.048")
• Rim Joists and Floor Joists:	
	254mm (10") x 32mm (1-1/4") x 1.22mm (.048")
	254mm (10") x 41mm (1-5/8") x 1.22mm (.048")
	254mm (10") x 51mm (2.00") x 1.52mm (.060")
• Exterior Walls & Knee Walls:	
	92mm (3-5/8") x 41mm (1-5/8") x 1.22mm (.048")
• Interior Walls: Non-load bearing:	
	92mm (3-5/8") x 32mm (1-1/4") x 1.22mm (.048")
• and Load bearing:	
	92mm (3-5/8") x 41mm (1-5/8") x 91mm (.036")

Design and Construction Team

BUILDER/DEVELOPER:

Fifthshire Homes 905-660-7415

STRUCTURAL ENGINEERS:

Atkins and VanGroll 416-489-7888

LIGHT STEEL FRAMING SUPPLIER:

Bailey Metal Products 1-800-668-2154

CANADIAN SHEET STEEL BUILDING
INSTITUTE WEBSITE www.cssbi.ca

STEEL FRAMING ALLIANCE WEBSITE:

bkraft@steel framing.org

Photography: John Rice

Concentrate for 30 years in the wilderness & STEEL makes it possible

Voisey's Bay sits at the eastern edge of a vast expanse of wilderness 350 km north of Happy Valley-Goose Bay in Labrador. Voisey's Bay Nickel Company is a wholly-owned subsidiary of Inco Ltd., responsible for developing a \$950 million project there to mine 6,000 tonnes of ore per day and in winter store concentrates of nickel, copper, cobalt and zinc.

During the early spring of 2004, MetalWorld Inc., fabricator and building supplier, and Structural Engineers, SDI Engineering Inc., negotiated the design build for the concentrate storage building at Voisey's Bay. In addition the Roll Form Group worked very closely with the team in providing technical details and pricing for the panel system. In mid-May, 2004, the contract was awarded to MetalWorld Inc. In addition to the design, a method for modularizing and shipping the components to Labrador, was performed by the Structural Engineers, SDI Engineering Inc., working very

ABOVE LEFT: The 8mil (.088", 200 micron) thick Barrier Series coating resists attack by alkalis, acids, salts and bleaching agents. The textured coating also resists coating impact damage.
ABOVE RIGHT: Ship loader for Nickel, Copper and Cobalt ore.

closely with the fabricator, MetalWorld Inc. This meant that 4000 tons of structural steel and insulated panels had to be designed, detailed, fabricated and modularized during June, July, August and September. Shipments to Labrador were completed between October and December.

The building modules comprised 60 ft. long by 26 ft. wide steel panels consisting of cladding, purlins and structural framing. They were fabricated and shipped to the site from Argentia, Newfoundland. Where required, insulation was included as part of the finished assembly. On site, panels were assembled into larger modules 180 ft. x 26 ft. that were lifted into place. Hinged on base sections connected to the foundations, they were rotated into position and joined at the peak, with closure plates installed to make the building watertight.

The building is a modified A-frame with a traveling tripper conveyor system hung from the

peak to distribute ore concentrate to the appropriate storage area. The storage facility involved the use of 8,360m² (90,000 sq ft) of Roll Form Group's Samson panel cladding with a .61mm (.0239") galvanized substrate and paint finish of Barriercoat 8/8 QC7164 Slate Blue and on the reverse side QC1508 Bone White, with the roof comprising 19,274m² (215,000 sq ft) of Roll Form Group's S-40 panel with .61mm (.0299") galvanized substrate and the same Barriercoat finish. The same wall and roof materials were used on the smaller receiving facility with 604m² (6500 sq. ft.) of siding and 604m² (6500 sq. ft.) of roofing.

The use of pre-engineered steel modules and their erection system allowed winter construction, which in turn allowed the installation of mechanical systems in the Spring of '05. Consequently the first shipment of nickel concentrate occurred on November 16, 2005, more than six months ahead of schedule.



The initial challenge was to develop an infrastructure at Voisey's Bay including a ship-loading and concentrate storage building. The timing was such that winter construction would be involved.

2. The concentrate storage building is a modified A-frame 120' high x 205' wide x 741' long and is clad with Dofasco's Barriercoat prepainted steel. Barriercoat's 8mil thick coating offers a remarkably effective long lasting barrier against aggressive environments.

3. After further assembly on-site, the 180' x 26' panels, hinged on base sections connected to the foundations, were rotated into position and joined at the peak.

4. The use of pre-engineered steel modules and their erection system allowed winter construction.

Design and Construction Team

OWNER:

Voisey's Bay Nickel Company

Project Engineer:

SNC Lavalin, Torbay, NL 709-758-8868

Structural Engineers:

SDI Engineering 709-726-3468

Steel Fabricator & Building Supplier:

Metal World Inc. 709-726-3880

Steel Siding & Roofing Supplier:

Roll Form Group 1-800-233-6228

Congress of the United States
Washington, DC 20515

August 1, 2006

The Honorable Rob Portman
Director
Office of Management and Budget
725 17th Street, NW
Washington, DC 20503

We write today with respect to compliance with Section 6002 of the Resource Conservation and Recovery Act (RCRA), which requires the federal government to give procurement preference to products with recycled content. This program is expanded upon through Executive Order 13101 and administered through the Environmental Protection Agency.

On April 30, 2004, EPA published a final rule entitled, "Comprehensive Procurement Guideline IV for Procurement of Products Containing Recovered Materials." This final rule identified additional products purchased by the federal government that are made with recovered materials. As stated by EPA, RCRA and Executive Order 13101 mandate that

"Once EPA designates an item, any procuring agency that uses appropriated federal funds to procure that item must purchase the item containing the highest percentage of recovered materials practicable." (69 Fed. Reg., at 24028).

Among the items designated by EPA was "Roofing materials containing recovered steel, aluminum, fiber, rubber, plastic or plastic composites, or cement." 40 CFR 247.12(m). Earlier in this rulemaking, EPA had found that fiberglass and asphalt roofing materials did not contain any recovered content. Therefore, as a result of this rulemaking, the government is required to purchase roofing materials made with recovered content, including steel, in preference to asphalt when practicable.

Accordingly, we ask that you direct all Cabinet-level agencies to provide a list, to the authors of this letter, of their current building projects involving the procurement, via federal funds, of roofing materials, and a breakdown of the composition of the roofing materials being purchased or used as among steel, aluminum, fiber, rubber, plastic or plastic composites, and cement. If your agency is purchasing roofing materials composed of other materials, please list the applicable projects and composition, and provide an explanation of why roofing materials as described at 40 CFR 247.12(m) are not being used. In fact,

Federal Acquisition Regulation Subpart 23.405(c) requires contracting officers to provide written justification for not purchasing designated products with recycled content, underscoring the importance of adhering to EPA's lists of products with recycled content.

We would appreciate a response to this request within the next 60 days. Thank you in advance for your assistance.

Phil English
Phil English
Member of Congress

Peter Visclosky
Peter Visclosky
Member of Congress

Melissa A. Hart
Melissa Hart
Member of Congress

Jim Oberstar
Jim Oberstar
Member of Congress

Bob Ney
Bob Ney
Member of Congress

Ted Strickland
Ted Strickland
Member of Congress

2006 Award of Recognition

CSSBI created The Award of Recognition in 2003 to honour individuals or companies who furthered the goals of the Institute, expanded the scope of sheet steel in construction, and enhanced construction quality in Canada.

This year's recipient is Glen White, President of Steelway Building Systems of Aylmer, Ontario, recognized for his outstanding commitment to the steel industry over the past 18 years.



Since 1976, Steelway, a Canadian-owned company, has supplied steel building systems for industrial, commercial, recreational, institutional, and farm related applications across Canada, the northern United States, and internationally. ■

Iowa River Gazebo, Coralville, Iowa

Coralville and Iowa City seized the opportunity to promote the design of a new pedestrian bridge to link the trail systems

on both sides of the river, as Iowa City planned the renovation of the Iowa River Dam for the new water treatment plant.

The gazebo's arched roof of unpainted Galvalume Plus exposed fastener panels is fastened directly to the tubular steel frame, which is in turn linked to the arches of the pedestrian bridge.

Metal Architecture, March/06 ■



Construct Canada 2006

DATE: November 29, 2006 – December 1, 2006:

TIME: Wednesday and Thursday 10:00am – 5:00pm ■ Friday 9:00am – 1:00pm

LOCATION: Metro Toronto Convention Centre South Building

You can register for the seminars at <http://www.constructcanada.com/> the schedule for the seminars was posted in September.

CSSBI Seminar Topics for Construct Canada 2006:

1. LIGHTWEIGHT STEEL FRAMING DESIGN

Presenter/Speaker: Steven R. Fox, Ph.D., P.Eng

This session takes a technical look at building design incorporating cold-formed steel framing. Geared especially to the structural engineer, the session will provide an overview of the CSSBI Lightweight Steel Framing Design Manual specific to building construction.

2. STEEL BUILDING SYSTEMS FOR THE ARCHITECT AND ENGINEER

Presenter/Speaker: Steven R. Fox, Ph.D., P.Eng

This session will examine the roles an architect and an engineer can play in the design and erection of a steel building system. Looking at topics such as design flexibility, cost effectiveness, key design, manufacturing and erection processes, this seminar will encourage creative and efficient designs using this unique sector of the construction industry. A group of industry experts will also be available for a brief question and answer period.

Visit the Canadian Sheet Steel Building Institute: Booth 421

Bergstrom Indoor Training Facility, Ames, IA

7432m² of 457mm (80,000 sq. ft. of 18") wide structural standing seam panels, with 50.8mm (2") high seams, varying in length from 30.5m to 42.7m (100' to 140'), were installed on this building on the campus of Iowa State University. This training facility, designed by RDG Bussard Dikis Inc, utilizes unpainted Galvalume Plus for the roof panels.

Metal Architecture, April/05 ■



Husker Du II House, Sydney, Australia

As Ingrid Spencer writes in the February issue of Architectural Record, "the Husker Du II house sits on a precipitous slope of nearly 45 degrees in the midst of the

idyllic Sydney landscape – sandstone cliffs dropping toward native bushland and a harbour estuary below. The two-floor, 120m² (1292 sq. ft.) house, with its light-weight masonry structure and curving Zinalume (Galvalume coated steel in Canada) exterior, sits like a cool, metal barrel with its back to the south.

According to architect Ellen Woolley, who designed the home, "the architecture is a bit of a creature in and of itself," she goes on to say, "the house is one of a kind and is truly made for its site."

Architect: Ellen Woolley Architects

Photographer: Richard Glove ■



The curved white ceiling is a soft zenith to the stacked boxlike geometries of rooms and built-in elements such as the window-seat perches and a deep bench in the living room.



Galvalume Approval to CSA G-401 Corrugated Steel Pipe Applications

The latest revision to the Canadian Standards Association G-401 specification passed the 60 day public review without comments.

Accordingly the product is now included as an approved product for use in Corrugated Steel Pipe applications. The revised standard will be published later this year and will allow the use of Galvalume for projects specified by the Provincial Departments of Transportation.

Previously only galvanized and aluminized steel were on the



approved list. The addition of Galvalume will provide a product that can operate satisfactorily over a wider range of pH and water resistivity compared to galvanized. ■



Flow Hummer Dealership Winston-Salem, N.C.

Designed by Bradley & Ball Architects of Greensboro, NC, in keeping with GM's Hummer dealership prototype design, this 214m² (2,300 sq. ft.) showroom features curved metal roofing by Future Steel Buildings Intl. Corp. of Brampton, Ontario and SteelMaster Buildings LLC their distributor in Virginia Beach, VA. The curved roof is manufactured from 1.9mm (.075") 609mm x 190.5mm (24" wide x 7-1/2") deep panels made from Dofasco's AZM165 Galvalume Plus.

Metal Construction News, June/05 ■

Lone Peak Park Pavilion, Sandy, Utah



Design appeal and desired durability were the reasons designer ASWN Architecture, Salt Lake City, selected prepainted Galvalume standing seam roofing for this recreation and meeting centre. In total 557m² (6000 sq. ft.) of 61mm (.0239") standing seam roofing with a separate snap-on batten was installed, which resulted in the aesthetically pleasing bold look the designer desired

Metal Center News, February/06 ■

EDITORIAL INQUIRIES

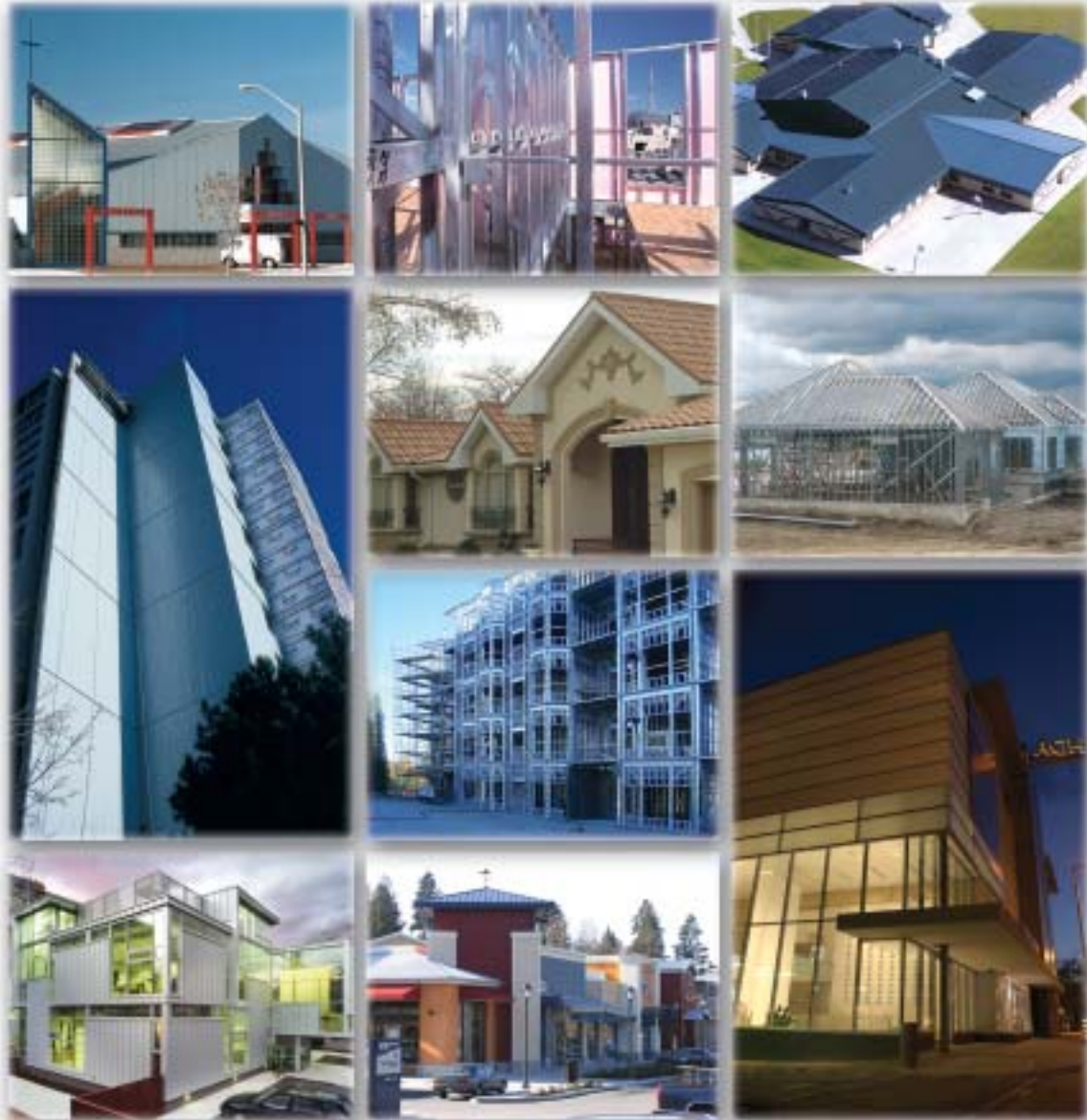
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