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Steel Design

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**Steel the Material
of Choice for
Justice Centre**

**LSF makes winter
construction
fast and easy**

**Steel Contributes
to Environmentally
Responsible Design
and Construction**

**Prepainted Steel
Enhances Utilitarian
Structure**

**Parks Canada
awarded LEED[®]**

**Platinum
Rating**

DOFASCO[™]

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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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Cover Photo, Nunavut Justice Centre: Ross Sheppard

DOFASCO
Our product is steel. Our strength is people.

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**Nunavut Justice Centre – Iqaluit, NU
Steel the Material of Choice for Justice Centre**

The \$14.6 million Nunavut Justice Centre in Iqaluit, NU, is a showcase of colourful steel and concrete that is in harmony with the natural landscape and environment. **3**

**Holiday Inn – Huntsville and North Bay, Ontario
LSF makes winter construction fast and easy**

With temperatures hitting minus 38°C, construction during the winter can present some tough challenges. But a light steel framing (LSF) panel system proved to be the perfect solution for two hotel projects, in Ontario cottage country and Northern Ontario. **6**

**Windsor Lake, Water Treatment Plant – St. John’s, Newfoundland
Prepainted Steel Enhances Utilitarian Structure**

The architect’s challenge was to design a functional structure that was both economical and relatively pleasing visually for a building of this kind. For economics, durability and especially appearance, prepainted Galvalume™ steel was chosen for much of the exterior. **8**

**The Semiahmoo Library & RCMP District Office
Steel Contributes to Environmentally Responsible Design and Construction**

The Semiahmoo Library & RCMP District Office located on 152nd Street in Surrey, British Columbia has earned accolades for its environmentally responsible design, cost effective construction, quick and efficient erection. **11**

Operations Centre, Gulf Islands National Park Reserve, Sidney, BC

Parks Canada has been awarded LEED® Platinum rating by the Canada Green Building Council for its vision and achievement with the successful completion of this 1050m² environmentally friendly facility. This is the first building to be awarded with a Platinum rating in Canada. **12**

The Last Word in Steel News

- The Steel Product of Choice for Superior Corrosion Resistance • Elevator Bay House – Architectural Record – Residential Showcase • Platinum Framing System
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- CSSBI Labeling Program
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NUNAVUT JUSTICE CENTRE – IQALUIT, NU

Steel the material of choice for Justice Centre

The \$14.6 million Nunavut Justice Centre in Iqaluit, NU, which opened in September 2006, stands as a testament to Inuit art and culture. This showcase of colourful steel and concrete is open and inviting and is in harmony with the natural landscape and environment.

Number Ten Architectural Group and Accutech Engineering North Inc. designed and built the state-

of-the-art facility. Steel was used extensively throughout the facility: for the structural frame; the exterior steel stud walls carrying both wind and cladding loads; interior wall framing and cladding (non-load bearing interior steel stud walls designed as double stud wall systems to ensure acoustical privacy); the roof decking, floors, interior pan stairs and external galvanized stairs;



Photo: Greg Hasluk

Interlocking, vertical panels with concealed fasteners in .76mm and .61mm (.0299" and .0239") thicknesses and formed from AZM180 prepainted Galvalume steel coloured QC3659 Grey Berry and QC2624 Silver Metallic, respectively, were used for the main body of the building to provide a refined, smooth appearance.

North-east view of the Justice Centre showing the application of the different interlocking and corrugated pre-painted Galvalume and galvanized steel panels.



Photo: Greg Hasiuk

the ramps and railings; and galvanized steel mesh skirting in steel angle frames below the raised main floor.

The building's design, development and the preparation of contract documents started in September 2003 and were done on a very strict schedule in response to building in the Arctic.

Architect Greg Hasiuk emphasizes that steel was the material of choice for a number of reasons. "We were on a very tight budget and steel is affordable," says Greg, adding that its durability, efficient load bearing capacity and

colour range for exterior cladding options were also important considerations. The fact that steel is lightweight was also an essential factor in shipping the material by sealift out of Montreal to the site.

Construction commenced in September 2004 on the two-level, 2,507m² (26,986 sq. ft.) building. G.C. North was the General Contractor on the project. "Installation of the steel structure went well," says Dave Gordon, Project Manager, mentioning that the structure was up before November when the site shut down due to weather conditions until

March 2005. The 4,300m² (46,285 sq. ft.) steel deck consisted of .91mm and .76mm (.036" and .0299") ZF075 galvaneal steel.

Two main steel cladding profiles were used in the Centre. Arcan Construction Ltd. installed 1,850 sq. m (20,000 sq. ft.) of pre-painted AZM180 Galvalume™ steel and pre-painted Z275 galvanized exterior wall cladding, and 170 sq. m (1,830 sq. ft.) of pre-painted AZM180 Galvalume for the soffits.

"The colours we chose were a direct result of our consultation process with community members, whereby the natural landscape and local artwork were important influences. The vivid royal blue colour is a common colour in Inuit artwork and clothing, while the silver and grey berry colours are reminiscent of the rock and tundra landscapes which reflect the strong northern sun," says Hasiuk.

Gyptech Acoustics provided the Z275 galvanized light steel framing studs ranging in size from 63.5mm to 152.4mm (2-1/2" to 6") for both the wind bearing exterior walls, as well as, the non-load bearing interior steel stud walls designed as a double stud wall systems to ensure acoustical privacy. Light gauge steel was also used for the acoustical ceiling. G.C. North installed approximately 1,394m² (15,000 sq. ft.) of torch down roof.

The 7/8" deep .61mm (.0239") pre-painted Z275 galvanized corrugated panels, coloured QC8790 Royal Blue, were used for the building's more colourful feature components. The soffits were .45mm (.0179") thick pre-painted Galvalume steel coloured QC8306 Charcoal.



Photo: Greg Hasiuk



Photo: Greg Hasiuk

"The prefinished steel cladding is a proven, affordable and durable system that ensures a virtually maintenance free finish with a long life expectancy".

Greg Hasiuk MAA
Number TEN Architectural Group

Site Plan -
Nunavut
Justice Centre

Iqaluit
City Hall &
Amiatuk Arena

The intense sunlight in the north creates a nice interactive appearance between the pre-painted steel profiles and colours, which we used both vertically and horizontally.



Photo: Ross Sheppard

Design and Construction Team

OWNER: Government of Nunavut — Department of Justice and Department of Community & Government Services. 867-975-6131 or 867-975-5421

ARCHITECT: Number Ten Architectural Group, Winnipeg 204-942-0981.

STRUCTURAL, MECHANICAL & ELECTRICAL ENGINEERS: Accutech Engineering North Inc., Winnipeg 204-944-1555

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LANDSCAPE ARCHITECT: Hilderman Thomas, Winnipeg 204-944-9907

CIVIL ENGINEER: Dillon Consulting Ltd., Iqaluit, NU. 867-979-6712

GEOTECHNICAL: DST Consulting Engineers, Thunder Bay. 1-800-668-4201

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WIND & SNOW ANALYSIS: RWDI Inc., 519-823-1311

QUANTITY SURVEYORS: Hanscomb Ltd. 613-234-8089

EXTERIOR CLADDING & SOFFIT INSTALLER: Arcan Construction Ltd. 867-874-2303

STEEL CLADDING SUPPLIER:
Agway Metals Inc. 1-800-268-2083
Metal-Span Corp. 780-466-6039

STEEL ROOF DECK SUPPLIER: Canam Steel through Beauce Atlas Inc. 418-387-4872

ROOF DECK INSTALLER: G.C. North Inc. 867-979-1992

LIGHT STEEL FRAMING & ACOUSTICAL CEILING INSTALLER: Gyptech Acoustics 418-836-5038

LIGHT STEEL FRAMING SUPPLIER: Manugypes Inc. 1-800-871-5818

STEEL SUPPLIER FOR LSF:
Samuel, Son & Co. 1-800-233-6228
Acier Point-Claire 1-888-332-3331