

Stainless Steel in Architectural Applications





Contents

[Introduction](#)

Art

[Still Pond](#)

[Gorilla Garden Sculpture](#)

[Sun Yat-sen](#)

[The Runners](#)

[Mok Mok Wak Wak Yokohama Yo Yo](#)

[Inflorescence](#)

[Coralarium](#)

[Silene Luminaris](#)

[The Tear Drop](#)

[Spiral Odyssey](#)

[Statue of Genghis Khan](#)

[Woman of Words](#)

[Vestige](#)

[Empty Sky Memorial](#)

Business

[Houston Area Safety Council](#)

[Samsung Headquarter America](#)

[3 World Trade Center](#)

[400 Spectrum Drive Center](#)

[The Spectrum Building](#)

[300 East Randolph](#)

[\(Blue Cross and Blue Shield Tower\)](#)

[Dearborn Center \(Citadel Center\)](#)

[Dancing House](#)

[300 North LaSalle](#)

[Nakanoshima Mitsui Building](#)

[Nihonbashi Mitsui Tower](#)

[One La Jolla Center](#)

[One Canada Square](#)

[7 Bryant Park](#)

[Goldman Sachs New World Headquarters](#)

[Vessel](#)

[Fukuoka Bar Association Hall](#)

[The Berlingot](#)

[Monaco House](#)

[133 Wai Yip Street](#)

Culture and history

[Civic Arena Pittsburgh](#)

[The National Museum of Art](#)

[Museum at Prairiefire](#)

[David H. Koch Center](#)

[Theatre an der Elbe](#)

[L'Agora](#)

Education

[UCLan Social Spaces](#)

[Hayes Primary School](#)

[New Mechanics Hall for Ecole Polytechnique](#)

[Federal de Lausanne](#)

[Bill and Melinda Gates Hall](#)

[University Library](#)

Mobility and Infrastructure

[West Bank Station](#)

[Yvoire Pier](#)

[Garrison Crossing](#)

Sports and Leisure

[American Airline Arena](#)

[Velodrome](#)

Renovation

[Ichii Renovation](#)

[151 Rue de Faubourg Poissonnière](#)

[Court of Strasbourg](#)

Residence

[Riversdale](#)

[104 Rue Gambetta](#)

[520 West 28th](#)

[Nova Housing](#)

Shopping

[Liverpool Plaza Toreo Parque Central](#)

[Redman Road Plaza](#)

Other

[The Heart of Malta](#)

[Phra Maha Chedi Tripob Trimongkol](#)



Foreword by the Secretary-General



JOHN ROWE
Secretary-General

It is my great pleasure to introduce you to the 6th edition of the ISSF's Architectural Brochure. This brochure started its life as an attempt to highlight some selected success stories where stainless steel had been used in architectural applications, in order to inspire to others to

enter this exciting market. The brochure has grown in size and quality exponentially as the architects of the world have increasingly taken interest in the potential of stainless steel for their design work.

In many ways this has been a tribute to the excellent Education Course for Architectural Students which was developed internally for the ISSF by Bernard Héritier, who worked very closely with a panel of professors of architecture and design. This course has helped to boost the knowledge of stainless steel among graduating architects. But the brochure also acts as a catalyst to provide inspiration to those

who may not yet have tried using stainless steel, or who may have tried it before and have now been encouraged to come back.

There are some remarkable structures in this book, which serve to remind me of the words I wrote for the fourth edition "For me, the milestone achievement over the years since the Millennium has been the amazing growth of the development of stainless steel as an "art meets function" tool in the architectural sector. Our Architectural Brochures series will reveal immediately how the architect, as artist, has used stainless steel creatively to design something which is more than a building, more than a sculpture or more than a structure. And the best thing is that whilst creating a thing of beauty, the designer is adding to the sustainability of our world, because the stainless steel he uses is capable of being 100% recycled when it comes to the end of its useful life, thus adding immeasurably to the value of life on earth."

My thanks go to our Fellow from Nisshin, Naoki Yasuda, who has worked so hard to collect the

contributions for this issue and to obtain the necessary permission to reprint the material; to Jo Claes, our Administration and Communications Manager, who ensures that deadlines are met and is responsible for the excellent design of these pages; to our members who work so hard to find unusual and informative examples and to submit the details to us; and, finally, to the architects, designers and photographers, who so willingly gave their permission for us to reproduce their work in these pages.

Our goal remains to provide inspiration to you and your customers to continue the excellent work that has already been done in the ABC sector and the fruits of your endeavours will be published in the 7th edition next year.

John Rowe
Secretary-General
International Stainless Steel Forum
Brussels

Still Pond

Bessbrook, United Kingdom

**Know ye the fame of the bright little river
Which floweth through Bessbrook from moorland
and lea?
Between blue waving flax-flowers and rushes which
quiver,
He runs his short course from the lake to the sea.**

This is the opening verse of "The Ballad of Camlough River", by James N. Richardson, which was used as inspiration when designing the sculpture for the mill pond. Today saw the launch of Bessbrook's Flax Flower stainless steel sculpture by artist Alan Burke. This opening verse sets the scene of the origins of Camlough river. The river that flows from Camlough lake, born of fire and ice, to be harnessed at Bessbrook pond to power the mill in Bessbrook, which in turn drove the local economy, forging communities and a social scene that survives to this day.

Key to this all is the flax plant. Without it, the river may have ran its course to the sea largely unmentioned. The production, processing and eventual weaving of the fibre from this plant is why the river rose to fame. The geography of the area, the quality of the water and the ability to grow flax locally, conspired to grow the linen industry in the locality of Bessbrook.



Picture courtesy of Alan Burke

The artwork also has a woven pattern fabricated into its structure representative of the linen industry which used the flax as its raw material. This was also used to form the basis of a community project with local schools that highlights the woven and intertwined nature of different communities within

the area. Reminding each other of the common ground of a shared history and heritage.

Rosemary Mulholland, Chairperson of the Bessbrook Heritage Group said, "With the demise of linen production in the mid 1900s, fields of blue-flowered flax no longer appear in our countryside. Most people have never seen the one plant which was essential to the creation of villages like Bessbrook. This amazing sculpture will be a constant reminder and celebration of the flax which was grown throughout the Bessbrook and Camlough areas, spun and woven here in the Mill and exported all over the world."

Environment:	park side
Use:	main body
Material:	316 with a double-sided mirror finish
Manufacturer:	John Desmond Ltd.
Artist:	Alan Burke
Photographs:	Alan Burke
More information:	johndesmond.com



Picture courtesy of Alan Burke



Picture courtesy of Michael Turner Studios

Gorilla Garden Sculpture

London, United Kingdom

Michael Turner has recently turned 40. Since leaving school, the development of his creative and artistic skills, has led to recognition both within the UK and internationally. During his formative years, his talent became apparent. He had an innate understanding and ability to capture the form and beauty of nature by creating bugs and insects, created simply from the most basic of materials including nuts, bolts and sheet metal found in his fathers' garage. From these early beginnings, Michael's parents became aware that with his obvious creativity and flair, he needed to be professionally trained, supported and nurtured within the education system.

After finishing school in 1992, Michael chose to go to Bournemouth Art College and then finally onto Higher Wycombe University, where he graduated

Environment:	park side
Use:	main body
Material:	316 with a polished finish
Fabricator:	Precision Profile
Artist:	Michael Turner
Photographs:	Michael Turner Studios
More information:	michaeltturnerstudios.co.uk precisionprofiles.co.uk

with honours, which was the start of a promising career in the art world. Michael established his first workshop in the green depths of the New Forest at the age of 22. He started to realise his true potential and decided to work in stainless steel, and in particular delighted in the use of recycled materials. He knew that the material would be perfect for outdoor garden sculptures withstanding the hazards of the outdoor environment. Through nature and its various forms, Michael was inspired. At first, Michael created small insects, fish and dragonflies which kept him busy supplying several galleries around the country.

In 2010, Michael was introduced to a major gallery in London where his work took on a whole new dimension. He married and a son was born later in 2011. This gave Michael the impetus and inspiration to create a full-sized Arabian Horse, which was sold through the Gallery. This was to be the start of a whole new era. He soon began to see his work reaching a global clientele who were both discerning and appreciative of great contemporary art. The Gorilla Garden Sculpture is a magnificent and unique piece of artwork. Michael was wanting to capture this great creatures prominence, and strength, with a little of irony to boot with the cage.



Picture courtesy of Michael Turner Studios

Sun Yat-sen

San Francisco, United States of America

Nested in the small St. Mary's Square in San Francisco's Chinatown is a Beniamino "Benny" Bufano sculpture of Dr. Sun Yat-sen. Bufano was an Italian American sculptor renowned for his large-scale works, most often representing peace. The artist met and became friends with Dr. Sun Yat-sen during a two-year trip through China in 1920. While in China, Bufano learned the art of terra-cotta glazing, which became one of his favorite media. In the 1930s, Bufano settled in California, where he worked on numerous sculptures, including a number for the Federal Art Project. To commemorate Dr. Sun Yat-sen's 1911 visit to San Francisco while he was in political exile, the business leaders of Chinatown commissioned Bufano to sculpt this 14-foot-tall red granite and stainless steel statue. The sculpture was completed in 1937 and placed in the square, which was a fitting location, as the exiled leader visited it often during his trip to San Francisco to relax. Artist Benny Bufano is pictured at work in his North Beach, San Francisco, art studio on the head of the Sun Yat-sen sculpture. Bufano used various tools to carve the head as well as the hands – all made from one piece of red granite. The body is fashioned from stainless steel.



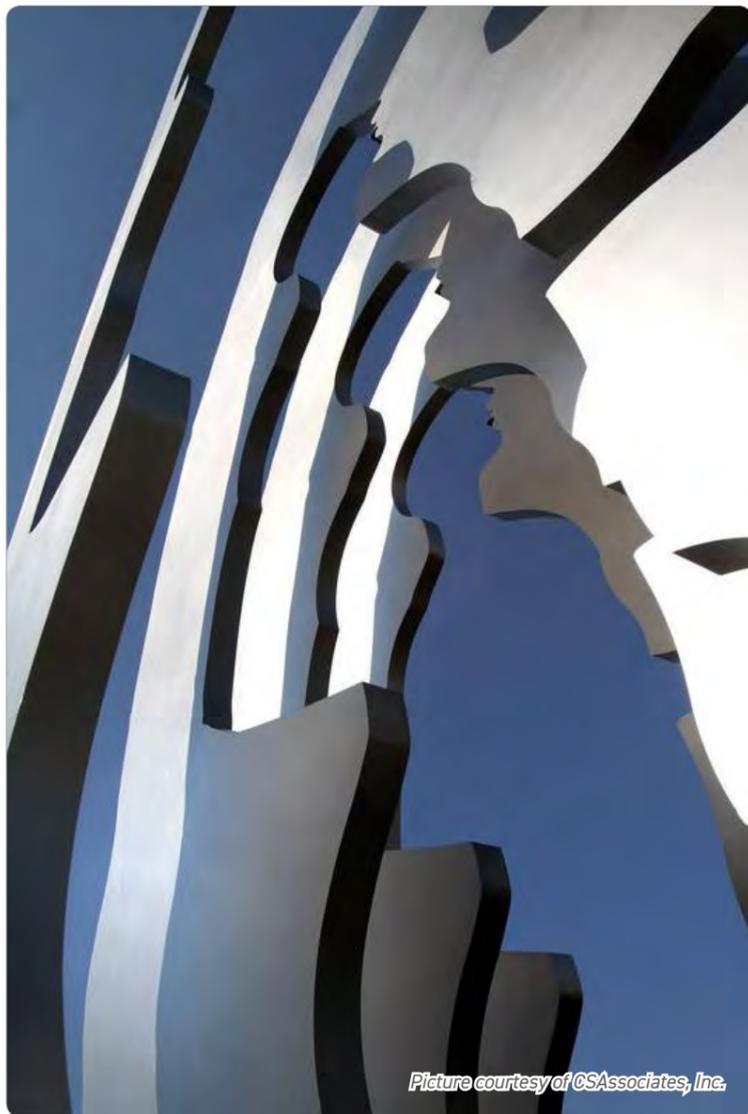
On the front base of the Sun Yat-sen sculpture is a round stainless steel plaque. The exterior ring reads, "Dr. Sun Yat-sen 1866-1925, Father of the Chinese Republic and First President, Founder of the Kuo Min



Tang, Champion of Democracy, Lover of Mankind, Proponent of Friendship and Peace Among the Nations, Based on Equality, Justice and Goodwill." The center of the plaque has the same inscription written in Chinese.

Environment:	park side
Use:	main body
Artist:	Benny Bufano
Photographs:	through Wikimedia: Another Believer Larry Jacobsen Luenlin
More information:	waymarking.com





Picture courtesy of CSAssociates, Inc.

The Runners

Chicago, United States of America

Dedicated in 2011 and located along the approach road at O'Hare International Airport, the 16' tall "Runners" sculpture was a gift of the Chicago-Athens Sister Cities Committee. The sculpture was designed by Dr. Theodoros Papagiannis, a professor at the School of Fine Arts in Athens. 2.25" thick stainless steel plates were extended down into a concrete foundation to prevent any connections from being visible. Finite element modelling was used to determine the stresses and deflections in the rather complicated sculptural elements.

Environment:	urban
Use:	main body
Material:	Duplex UNS 32205
Fabricator:	CSAssociates, Inc.
Artist:	Dr. Theodoros Papagiannis
Photographs:	CSAssociates, Inc.
More information:	csaeng.com



Picture courtesy of CSAssociates, Inc.



Picture courtesy of muza-chan.net
muza-chan.net

Mok Mok Wak Wak Yokohama Yo Yo

Yokohama, Japan

One of the best known public art works in Japan is this stainless steel construction from Yokohama Minato Mirai 21, created by the artist Hisayuki Mogami. It is called... "Mok Mok Wak Wak Yokohama Yo Yo" (and of course, in Japanese it is pronounced Moku Moku Waku Waku Yokohama Yo Yo). And if you're wondering about the name, the artist has a predilection for such sonorous appellations, some of his earlier creations were named "Teki Teki Teki Teki", "Dong Dong Dong Dong", "Ki Ki Ki Ki" or "Ping piko Ping". With a height of 13 meters, it is an impressive sight, especially at night time! But I don't know anything about its meaning... what do you think?

Environment:	marine
Use:	main structure
Material:	304 with a polished finish
Manufacturer:	NKK (JFE)
Artist:	Hisayuki Mogami
Photographs:	muza-chan.net or @ART
More information:	muza-chan.net



Picture courtesy of @ART

Inflorescence

Anchorage, United States of America

Inspired by sunflower patterns, Inflorescence is a sculpture for the University of Alaska, Anchorage's ConocoPhillips Integrated Science Building. The mirror-polished stainless steel facets of each "seed", "atom" or "cell" create little individual paintings of the world, each one interpreting the same world around it, but each one unique in what it shows us. The sculpture encourages physical interaction with the piece. The viewer can walk directly inside the piece, seeing their own reflection multiplied hundreds of times. The interior becomes self-reflective - interpretations of interpretations. An interactive lighting program utilizing sensors that monitor activity in the building is integral to the work, making the lighting on the piece warmer when more active, and cooler when less active.

Environment:	urban
Use:	main body
Material:	316 with a mirror-polish
Fabricator:	Heath Satow
Artist:	Heath Satow
Photographs:	Heath Satow
More information:	publicsculpture.com



Picture courtesy of Heath Satow



Picture courtesy of Heath Satow



Picture courtesy of Heath Satow



Picture courtesy of Heath Satow



Picture courtesy of Heath Satow



Picture courtesy of Jason de Caires Taylor

Coralarium

Sirru Fen Fuchi, Maldives

Artist and environmental sculptor Jason deCaires Taylor has just completed his most remarkable work to date. The installation is situated in a large coral lagoon on the island resort of Fairmont Sirru Fen Fushi, in the Maldives. To reach this extraordinary structure visitors must snorkel or swim around 500 ft (150m) following an underwater coral pavement that is sea-scaped with planted corals.

The structure itself is a 20-ft-tall (6 m) stainless steel cube weighing about 200 tons, with the median tide sitting around 10 ft (3m) up the façade. The building is accessed via a submerged staircase that arises above the water line to a dry elevated viewing platform.

The entire installation is designed to operate across three tiers, with some sculptures sitting on top of the cube, and others sitting well below the water line. "It exists in three different elements," says Taylor, explaining the work's multifaceted approach. "A set of sculptures that interact with the sky and the atmosphere. There's a set of works that are in the tidal area. They live both above the water and below the water. And then there a set of submerged works. The idea is that it's about taking all the elements of our planet and showing that everything is connected."

This unique and ambitious project took around nine months to develop and the complex structural

formation utilized high-grade marine stainless steel and pH-neutral cement. The cube's walls reference coral patterns while also being engineered to allow currents and marine life to pass through it.



Picture courtesy of Jason de Caires Taylor

Environment:	ocean
Use:	main structure
Material:	316L
Artist:	Jason de Caires Taylor
Photographs:	Jason de Caires Taylor
More information:	jasondecairestaylor.com



Picture courtesy of Jason de Caires Taylor

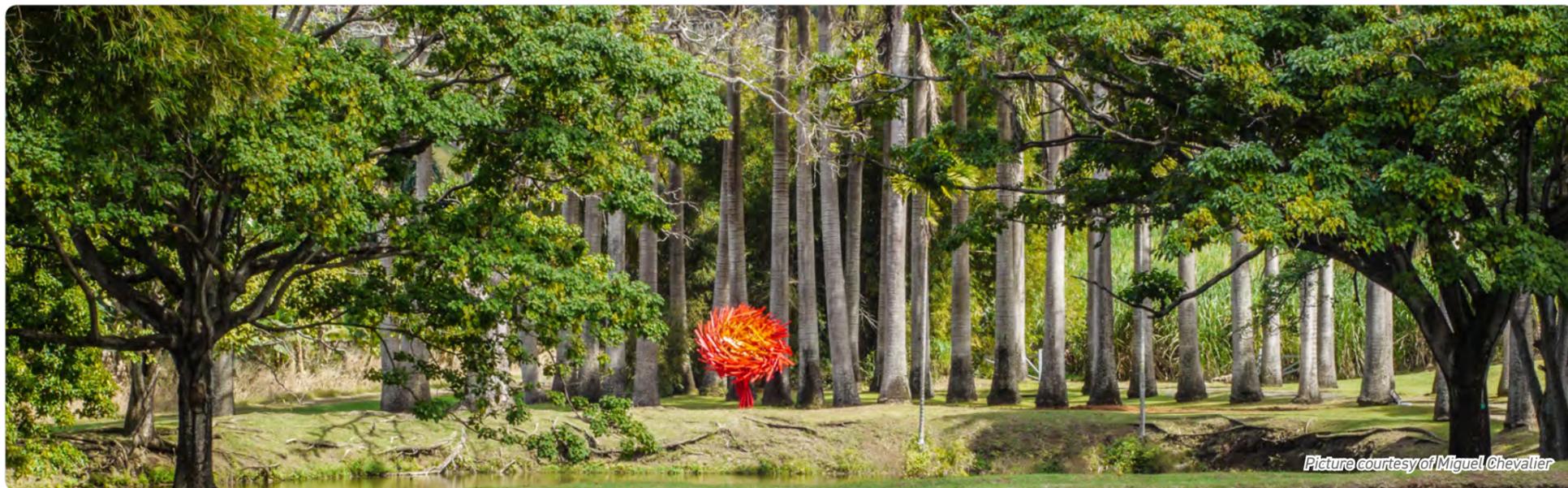
Silene Luminaris

Martinique, France

Strolling through the grounds of Martinique's Fondation Clément botanical park, visitors may come across a rather surprising, abstract species of plant. Amongst the green of royal palms, banana trees and sugar cane fields grows a giant red-orange flower of twisting metal. Known as the *Silène luminaris* sive *Muflier de Borges* and commissioned by collector Bernard Hayot, the stainless steel sculpture is part

of artist Miguel Chevalier's Fractal Flowers series. Renowned for his experimental use of technology and 3D printing, Chevalier provides the model from which metalworkers can work from, adding their own unique artistic touch. Now permanently planted in Martinique, the sculpture's twisting rhythms bring an aura of reflection to the surrounding landscape, while at night the use subtle lighting sends mysterious shadows running across the grounds.

Environment:	park side
Use:	main body
Material:	316, painted (red and orange) on a No. 1 finish
Manufacturer:	Aperam
Architects:	Miguel Chevalier
Photographs:	Miguel Chevalier
More information:	aperam.com

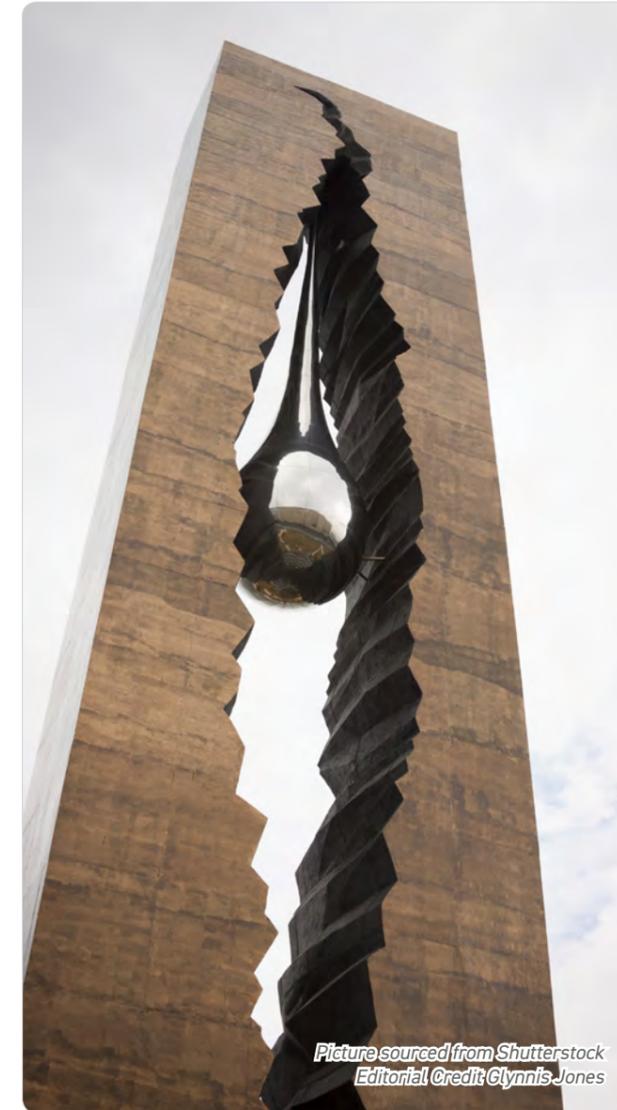
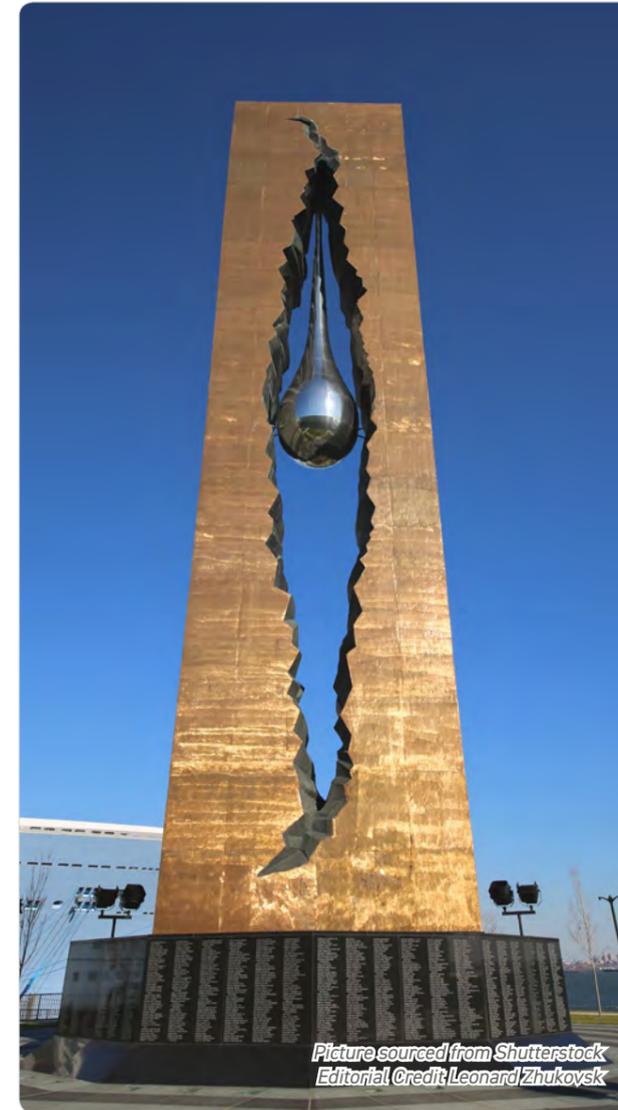
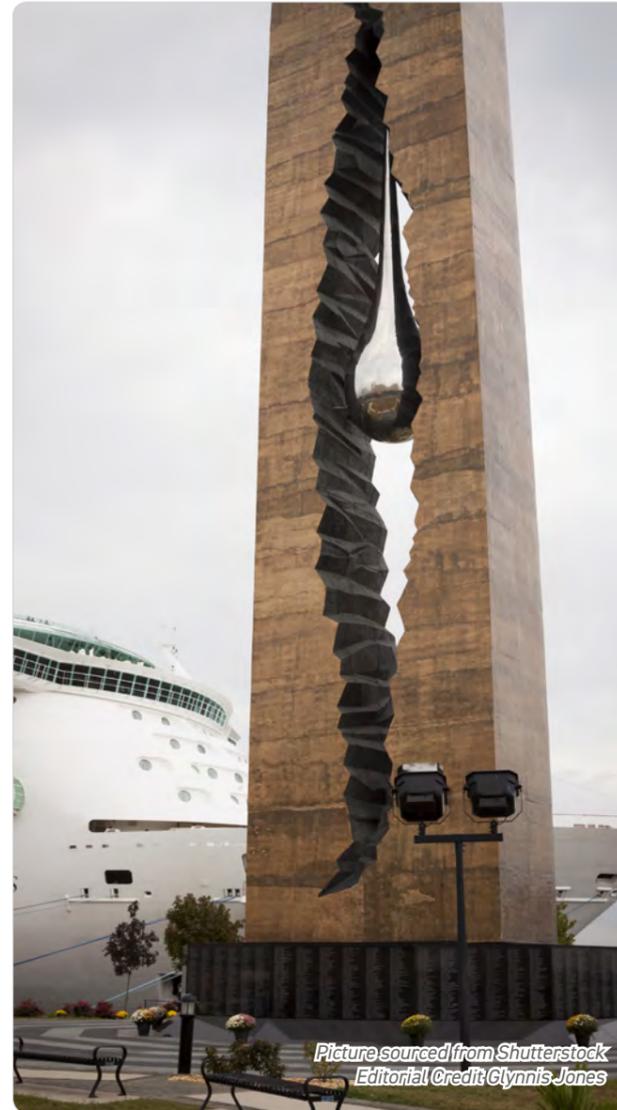


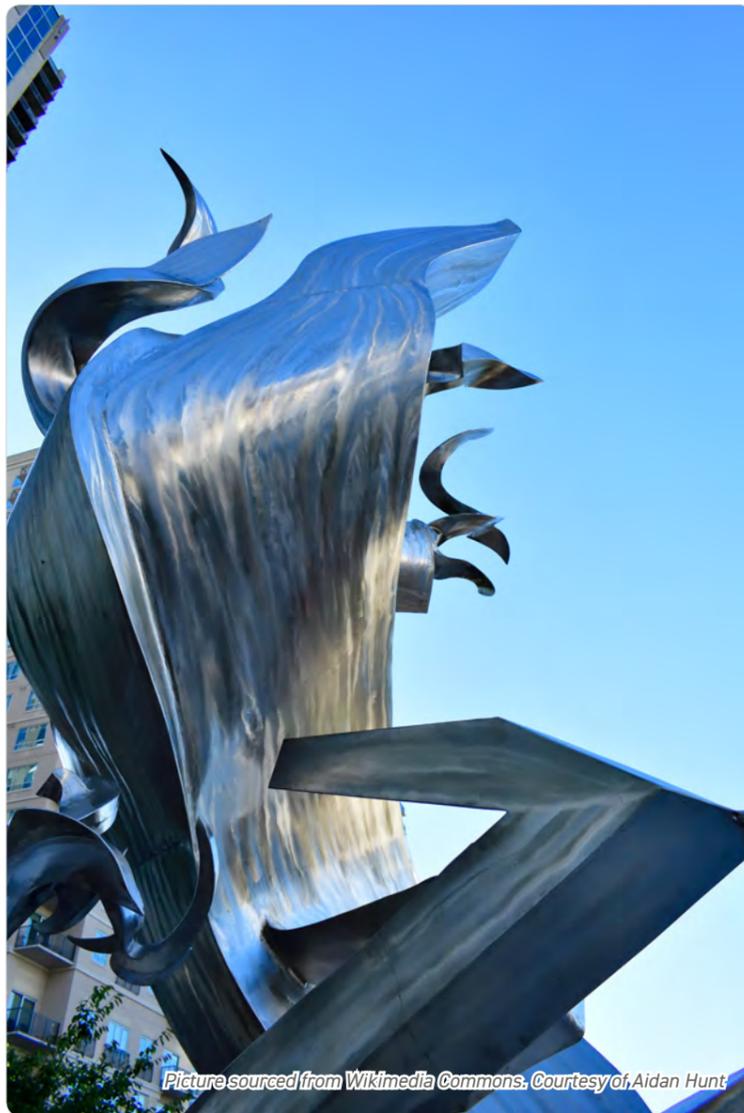
The Tear Drop

Bayonne, United States of America

One of the more controversial of all the 9/11 memorials is the Russian inspired sculpture originally known as the "Tear Of Grief". The forty-foot stainless steel replica of a teardrop suspended in a fractured 100-foot, 175-ton, bronze-clad tower now bears the official title "To the Struggle Against World Terrorism". This extraordinary work is a gift to the United States from the citizens of Russia and from the renowned sculptor Zurab Tsereteli. Mr. Tsereteli first envisioned the image of the "Tear Of Grief" on September 11 after he witnessed the horrific destruction of the World Trade Center on Moscow television and, later, as he drove past a gathering of crying Muscovites in front of the nearby US embassy. He began the design of the "Tear Drop Memorial" on that same day.

Environment: marina
 Use: main body
 Architects: Zurab Tsereteli
 Photographs: Iminox
 More information: iminox.org.mx





Picture sourced from Wikimedia Commons. Courtesy of Aidan Hunt

Spiral Odyssey

Charlotte, United States of America

Charlotte's public art scene just grew — more than a little — with the May 13 installation of Chicago-based artist Richard Hunt's "Spiral Odyssey" in Romare Bearden Park. This work has a special connection to Romare Bearden. The artist, Richard Hunt, was a contemporary of Bearden. The two were the first African-American artists to have solo shows at the Museum of Modern Art, both in 1971.

Made of welded stainless steel, this eye-catching sculpture is nearly 30 feet tall and weighs approximately 8,000 pounds. For comparison's sake, the Firebird, outside Bechtler Museum of Modern Art, is about 17 feet tall.

It's too early to know if the new sculpture will become one of the iconic symbols of the city, but on a clear Sunday morning, a number of parents were already setting their kids up in front of it for photo ops, so it's starting strong.

Environment:	park side
Use:	main body
Architects:	Richard Hunt
Photographs:	Aidan Hunt (CCO) from Wikimedia Commons
More information:	richardhuntstudio.com



Picture sourced from Wikimedia Commons. Courtesy of Aidan Hunt



Picture courtesy of J.D. Sculpture

Statue of Genghis Khan

Ulaanbaatar, Mongolia

The sculpture of Genghis Khan is 40 meters high and is located in the Tsonjin Boldog, 54 kilometers east of the Mongolian capital, Ulaanbaatar. The whole sculpture is forged from SUS304 stainless steel plate. The internal main structure was constructed by steel welding. The surface is made of brushed stainless steel with uniform texture. The sculpture was completed in 2008 and is the world's largest statue of Genghis Khan. Genghis Khan is seen holding the golden whip. This sculpture is meant to symbolize the spirit of war horses.

Environment:	park side
Use:	main body
Material:	SUS304, brushed
Architects:	Erdembickg Dorjjadamba
Photographs:	J.D. Sculpture
More information:	chinajdsulpture.com



Picture courtesy of J.D. Sculpture

Woman of Words

Wellington, New Zealand

One of New Zealand's most celebrated writers, Katherine Mansfield, has been immortalised in a beautiful sculpture by sculptor Virginia King. Here Virginia talks about the practical creation of the stainless steel sculpture 3.4 m in height, Woman of Words – that graces Midland Park on Wellington's Lambton Quay.

"To create the sculpture, I made several small models or maquettes of the figurative form, the first in paper, the second in plaster of Paris and a third in wood at 1/5 full size. The final maquette was shaped in 2mm thick, stainless steel."

The body of the sculpture is embellished with laser cut phrases and quotations sourced by King from the wealth of short stories, diaries and journals the author left behind when she died at the age of 38.

The intricate layering of words was a complex part of the design process. The final panels of text were laser cut from panels of 2.5mm thick stainless steel. With panels of laser cut language it was possible to form these slightly more easily using two presses.

"Having decided to create the hands and face of the sculpture from cast metal and to ensure the entire artwork was created using 316 grade stainless steel, I saved all the 'drop outs' from my previous laser cut sculptures ('I only ever use grade 316')," the sculptor says. "So the collected 'drop outs' were delivered to an Auckland foundry, Progressive Castings, to be recycled for this sculpture."

Environment:	urban
Use:	main body
Material:	316 with a thickness of 2.5 mm
Sculptor:	Virginia King
Photographs:	New Zealand Stainless Steel Development Association
More information:	nzssda.org.nz



Picture courtesy of NZSSDA



Picture courtesy of NZSSDA



Picture courtesy of NZSSDA



Picture courtesy of NZSSDA



Vestige

Trossachs, United Kingdom

The essence of who we are as individuals in relation to others and our environment, forms a strong aspect of Rob's artistic practise. In Vestige Rob wanted to explore this relationship further by creating a group; a community within the protective elements of the woods, reflecting the past inhabitants of the space. Before the First World War this area of Scotland was open hillside with small sheep farming Crofts [farms] and rural communities. The crofters were

moved to other land by the government as there was a desperate need for timber after the war. The six male and female figures made by polished stainless steel, represent a vestige, a faint trace of the past people and communities that once occupied and lived in this space. The figures absorb their environment, reflecting on their surface the daily changes of life in the forest. They create a visual notion of non-space, a void, as if they are at one moment part of our world and then, as they fade into the forest, they become an intangible outline.

Environment:	park side
Use:	main body
Material:	316L, mirror polished
Artist:	Rob Mulholland
Photographs:	Rob Mulholland
More information:	robmulholland.org



Empty Sky Memorial

New Jersey, United States of America

Just west of the tip of lower Manhattan and at the confluence of the Hudson River and the Atlantic Ocean, Liberty State Park played many roles in the events of September 11 and its aftermath. During the attacks, Jersey City residents and office workers gathered on the shore, witnessing the burning and collapse of the towers.

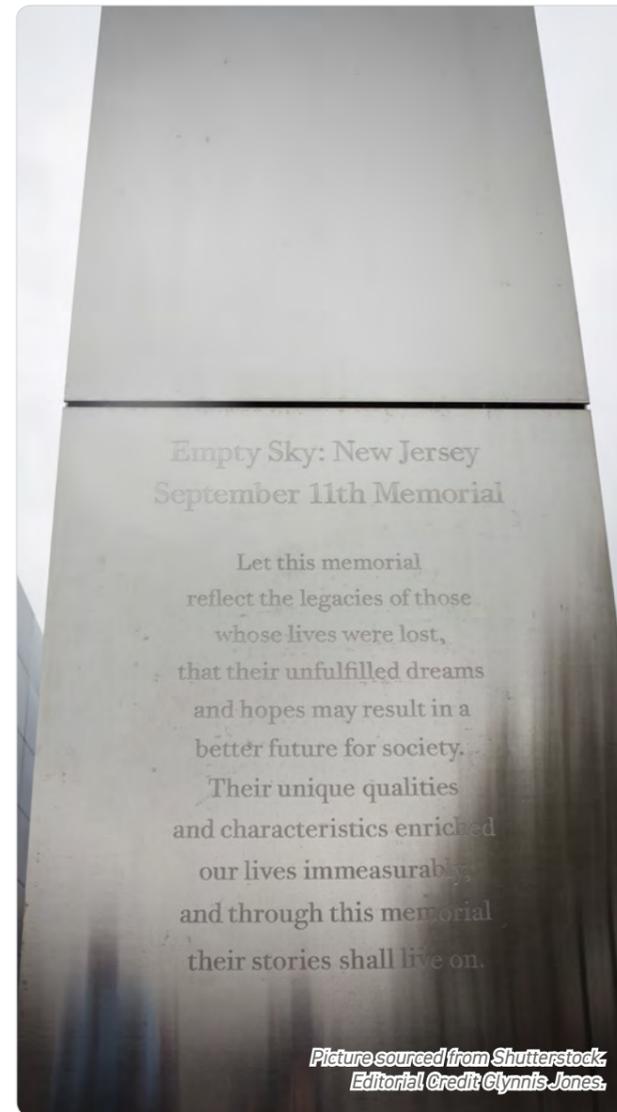
The families of the New Jersey victims of the attacks organized as the New Jersey 9/11 Memorial

Foundation and chose a 2.6-acre site in the park to honor their dead. In June 2004, they selected a memorial concept called Empty Sky, designed by Jessica Jamroz and Frederic Schwartz. Facing the twin towers site across the Hudson River, the memorial consists of two parallel stainless steel walls, each 210 feet long by 30 feet high. A single row of 4- by 8-ft. stainless steel panels at eye level bears the names of the 476 New Jersey victims in random order.

Environment:	marina
Use:	wall panels
Architects:	Jessica Jamroz and Frederic Schwartz
Photographs:	IMINOX
More information:	iminox.org.mx



Picture sourced from Shutterstock.
Editorial Credit: Jayson Photography



Picture sourced from Shutterstock.
Editorial Credit: Glynnis Jones.



Picture sourced from Shutterstock.
Editorial Credit: Jayson Photography



Yang'asha of Guizhou

Kaili, China

The large-scale landscape sculpture "Yang Asha" is located in Kaili, Guizhou Province, China. The sculpture was started in November 2016 and completed in April 2017. It is the highest statue of the Hmong goddess in the country. The "Yang Asha" sculpture is 88 meters high. The base is 22 meters high and the statue is 66 meters tall. It was taken from the local Miao holiday "February 2" and "June 6" and has the traditional meaning of the Miao nationality. The main character sculpture and base spray adopt SUS304 stainless steel plate, and the internal main structure is welded by special special-shaped steel. The surface is a brushed stainless steel plate with uniform texture. On December 16, 2017, Mr. Andreas, the world record certification official, read out the certification results and issued the world record certificate of "The world's largest Hmong goddess Yang Asha sculpture".

Environment:	park side
Use:	main body
Material:	SUS304 brushed
Architects:	Yutong Zhang, Jun Lv
Photographs:	J.D. Sculpture
More information:	chinajdsulpture.com



Picture courtesy of J.D. Sculpture



Picture courtesy of J.D. Sculpture



Picture courtesy of J.D. Sculpture

Houston Area Safety Council

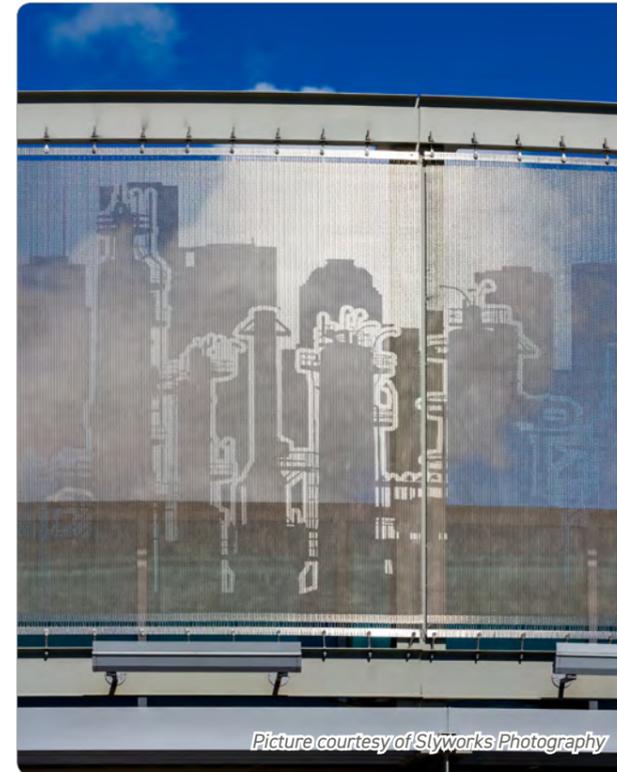
Pasadena, USA

Starting in 2009, the new campus of the Houston Area Safety Council was created in three construction stages. It was constructed on a 34 hectare site in Pasadena, just 15 kilometers from Houston, that was acquired one year previously. Local architecture firm Kirksey, which specializes in green buildings for industrial operations, planned the entire project. It was opened in 2013 as the new HQ of the HASC. All buildings were equipped to the latest technical standards. They also set standards in ecological and energy-usage terms and are all LEED-certified.

A fully-glazed semicircular entrance area underlines the building's welcoming effect. Its raised canopy bears the clinic's name and also creates the stage for one of the rooftop parapets made of stainless steel mesh that follow the semicircular building form. The shimmering texture combines technical aesthetics with a large number of functional performance characteristics. The mesh thereby guarantees efficient solar protection for the recessed windows on the top floor, while granting unrestricted views of the beautifully sculpted green spaces on the campus. Despite its sophisticated appearance, it also offers reliable protection from the hurricanes regularly encountered in the region. Lowmaintenance, durable and almost completely recyclable at the end of its useful life, the mesh supports the LEED-certified sustainability of the building.

For the architects the decisive impetus for selecting this material came from the specific mesh design, which facilitates imaging by etching. Their design included an illustrated balustrade as an identitycreating element of the clinic that visualizes working life in the region and thereby also the focus of the HASC. The image developed by Kirksey shows the skyline of Houston with skyscrapers, drilling rigs, chimneys and cranes together with the people that work there. This complex perspective was applied to the stainless steel mesh in a silhouette-like form using a special etching process developed in-house by GKD-USA.

In comprehensive tests, GKD therefore developed a process with which the design template could be blasted with the desired level of detail and spatial effect. This led to a visually seamless panoramic view of the hustle and bustle in the region over a total area of 100 square meters, comprising seven panels – each measuring 3.4 x 4.3 meters. Without any further surface treatment, this imagery is both permanently weather-proof and UV-resistant. Depending on the incidence of light and the viewing angle, the images can appear either transparent or opaque. At night, spotlights lend the scenery the appearance of a shadow theater using targeted light accents.



Picture courtesy of Slyworks Photography

Environment:	urban
Use:	mesh façade
Material:	316 0mage-1520
Manufacturer:	GKD
Architects:	Kirksey Architecture
Photographs:	Slyworks Photography
More information:	gkd.de or impetus-pr.de



Picture courtesy of Slyworks Photography

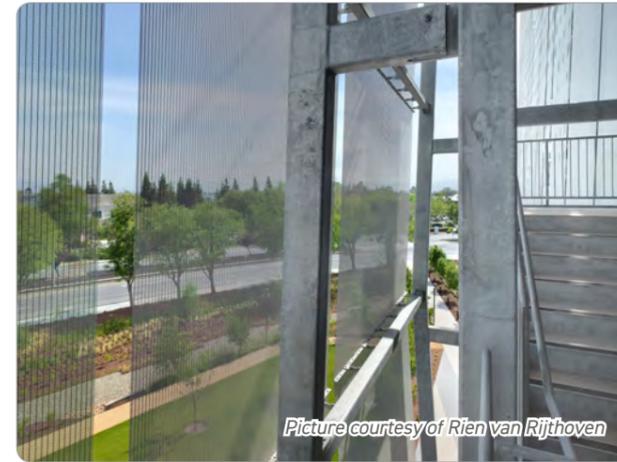
Samsung Headquarter America

San Jose, USA

The NBBJ architectural firm designed superlative headquarters for Apple's South Korean rival, Samsung's corporate campus in San José, with over more than 100,000 square meters. Alongside a ten-story main building the campus includes a star-shaped cafeteria and a ninestory parking deck. For the cladding of its 152 meter-long and roughly 27 meter-high façade, the architects chose Omega 1520 metal mesh from GKD, which GKD printed with a design specified by Samsung.

As a convincing statement of the company's self-image and values, the building was to offer innovative minds an environment that lends their work importance and with which they can identify. This also comprised the sustainable use of natural resources, which is why the new headquarters were built in line with the criteria of LEED Gold. Furthermore, Samsung aimed to almost quadruple its number of employees from 700 to 2,500 with the project, with the dimensions of the ten-story building specified to accommodate this. In light of its sheer size, the challenge for the architects was in creating the desired collaborative environment over some 25,000 square meters, in which each individual's visibility is maximized – regardless of which floor he or she is on.

Organically linked to the campus is the parking deck, which offers 1,346 parking spaces across almost 54,000 square meters. Its elongated, narrow design leaves maximum space for green areas and relaxation zones. To give the nine-story building a less dominant appearance, the open parking deck is encased by shimmering stainless steel mesh panels measuring up to 27 meters high and three meters wide. The reflection of sunlight and the structure's surroundings transforms the parking deck façade into a lively backdrop for the neighboring park area. The 70 mesh panels form a semitransparent membrane and were mounted using the tried and tested structure made of round rods and eyebolts. These ensure that the parking deck is optimally ventilated and flooded with daylight, while also functioning as a fall guard protection, providing protection from heavy rain and minimizing the draftiness often typical of parking decks. Internal lighting at night gives the Omega 1520 stainless steel mesh a transparent appearance, thereby giving users an additional feeling of safety. An artistic print reminiscent of electric circuits on circuit boards gives the shimmering texture its image-forming quality, impressively merging the corporate identity with the natural surroundings.



Picture courtesy of Rien van Rijthoven

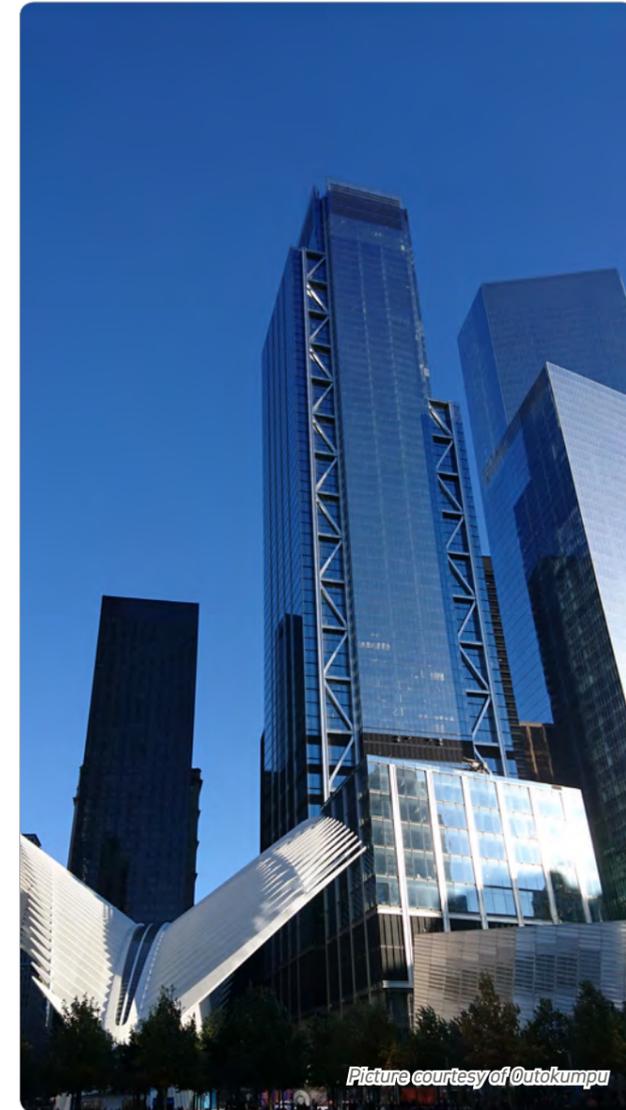


Picture courtesy of Rien van Rijthoven

Environment:	urban
Use:	mesh façade
Material:	316 - Omega 1520
Manufacturer:	GKD
Architects:	NBBJ architectural firm
Photographs:	Rien van Rijthoven
More information:	gkd.de or impetus-pr.de



Picture courtesy of Rien van Rijthoven



Picture courtesy of @otokumpu

3 World Trade Center

New York, United States of America

The initial brief issued by Silverstein Properties was to develop an overall commercial development of 2.8 million sq ft with an above grade area of approximately 2.5 million sq ft. The brief demanded the building to be integrated with the infrastructure below grade forming the entire “Eastern Bath Tub” that connected Tower 3 with the PATH terminal and Towers 2 and 4.

The areas below grade include retail and public concourses serving the Transportation Hub located between Towers 2 and 3. Additional basements below accommodate truck loading docks for each tower, a port bus parking area and associated car parking

Environment:	urban
Use:	panels façade
Material:	316L with a Deco Linen M25 finish
Weight:	550 tons
Fabricator:	Permasteelisa
Manufacturer:	Otokumpu
Architects:	Rogers Stirk Harbour + Partners
Photographs:	Otokumpu
More information:	otokumpu.com

provision with the lowest basement level primarily allocated for mechanical and support functions. The siting of Tower 3 commands a central position within the ensemble of the five towers as they cascade down in height towards the south away from Tower 1.

Tower 3 is defined by its stainless steel-clad exterior frame and unique load-sharing system of k-shaped bracing in the corners. Through their location on the outside of the structure, the bracing accentuates the central volume of the building and provides human scale of grain and texture to the external façade. The use of these external steel load sharing “K” brace allows all corners of the tower to be column free which provides wider, unimpeded panoramic views for the occupants of the office levels.

The main lobby is located along the full length of the Greenwich Street elevation and encloses the lobby along three sides by a 60ft high cable-net glazed façade.

The tower features three outdoor terraces located Levels 17, 60 and 76. Located 935ft above street level, the 76 floor terrace is the tallest outdoor office terrace in Manhattan. The 60th floor terrace is positioned 718ft above street level, and the 17th floor at 205ft above street level. In total there is 11,000 sq ft of outdoor, fully-landscaped space with a lush garden environment for it's tenants.



Picture courtesy of @otokumpu

400 Spectrum Drive Center

Irvine, United States of America

Hovering tall over the Irvine Spectrum retail and business area, near the convergence of the I-5 and the I-405 freeways, stands Irvine's newest office building, 400 Spectrum Center. Built by the Irvine Co. in only 19 months, the shimmering blue and gray structure had its grand opening in 2018.

The 323-foot high, 21-story edifice, gleaming with floor-to-ceiling Viracon glass and wrapped in linen-finish stainless steel, is now Orange County's tallest office building. Its sister structure, 200 Spectrum Center, which opened in February 2016 and also includes linen-finish stainless steel panels, is just a few inches shorter.



Environment:	urban
Use:	panel façade
Material:	316L with a linen-finish (Deco Linen M25)
Fabricator:	Christian Pohl GmbH
Manufacturer:	Outokumpu
Architects:	Pei Cobb Freed & Partners
Photographs:	Outokumpu
More information:	outokumpu.com

Located in the heart of Irvine Spectrum®, the building's façade is comprised of a linen-finish stainless steel and its floor-to-ceiling glass maximizes daylight and energy efficiency. Hathaway Dinwiddie also completed extensive sitework for the project.

The building was built with environmental sustainability in mind; it's powered by Tesla's advanced energy storage system and received an Energy Star recognition from the U.S. Environmental Protection Agency. Both 200 and 400 Spectrum Drive is LEED Gold certified.





Picture courtesy of Andrew John Rainnie @ Discover Glasgow

The Spectrum Building

Glasgow, United Kingdom

The Spectrum Building, previously known as Spectrum House, was originally built in the 1960s as an office block. It was redesigned by architecture firm Gordon Murray and Alan Dunlop Architects in 1999, whose work led it to be dubbed the Tinfoil Building.

The nickname comes from the stainless steel exterior that has undergone the Bright Annealing process to make it so shiny. The front of the building, a sheet of bland glass, inconspicuously hides the sculptured, shiny shape of the building's east and rear walls.

Environment:	urban
Use:	panel façade
Material:	316L (EN 1.4404) with a bright annealed finish
Architects:	Gordon Murray and Alan Dunlop Architects
Photographs:	Andrew John Rainnie @ Discover Glasgow
More information:	discoverglasgow.org alandunloparchitects.com



Picture courtesy of Andrew John Rainnie @ Discover Glasgow



Picture courtesy of Andrew John Rainnie @ Discover Glasgow

300 East Randolph (Blue Cross and Blue Shield Tower)

Chicago, United States of America

300 East Randolph is a unique combination of a build-to-suit headquarters and a multi-tenant office tower in downtown Chicago. The design concept defined an initial building to serve a company's immediate needs and planned for vertical expansion in the future. Thus the building was constructed in two phases, with the second phase of construction occurring on top of the fully operational phase one, without interrupting existing tenant operations.

Environment:	urban
Use:	clad façade
Material:	316 for the lower part and 304 for the upper part, with a linen-finish
Fabricator:	Permasteelisa
Manufacturer:	Outokumpu
Architects:	Goettsch Partners
Photographs:	James Steinkamp Photography
More information:	gpchicago.com outokumpu.com

The project's 33-story, first phase was completed in 1997 and in 2006 the decision was made to proceed with the initial plan and add 24 stories on top of the existing building. Nearly a decade separated the two phases of construction. The initial foundations and structure were designed and constructed to support the fully expanded building. Additional riser space also was provided to accommodate independent mechanical, electrical and plumbing systems for the expansion floors. In order to allow the cooling towers on the roof of phase one to continue to serve the building during construction, a three-story gap from the 30th to the 33rd levels was left during construction. Once the new cooling towers were in place, 24 floors above the originals, the old cooling towers were removed, and cladding was applied. This space now serves as a mid-building conference center, providing necessary additional meeting and training space. Vertical shafts to accommodate the high-zone elevators that service phase two of the project were accommodated in phase one as large atrium spaces that ran the height of the building alongside the low-zone elevator banks along the north wall. Local open stair cases are also located along the northern wall to promote inter-floor interactions without dependency on the elevators. The entire exterior of the building is clad in glass, stainless steel and stone, all materials that both aged well and were easily matched as the building expanded. As a result of this design planning, there is no visible distinction between the old and new portions of the building, providing a seamless,



integrated expression that now achieves its full height and appropriately fits into the Chicago skyline.



Dearborn Center (Citadel Center)

Chicago, United States of America

Dearborn Center is the second Chicago skyscraper by RBTA after 77 West Wacker. The structure consists of two parts: a low-rise section on State Street and a square high-rise tower to the west on South Dearborn. Built on the former site of Montgomery Wards' flagship department store, part of that building's foundation was kept and used to support the new tower.

The program consists of an office complex formed by two glass volumes of 35-storey (175-meters high) and 11-storeys respectively.

The building is designed like a classical column with a heavy base, a projecting cornice at the top and curved walls on each side. Its gleaming stainless steel and glass surfaces reflect the vitality of Chicago's business center in sync with the demands of the global marketplace.

The unique open plan design of the building allows great layout flexibility for individual tenants. The steel grid structure is a perfect base for this design, and becomes nearly the only permanent element of the building, along with the vertical circulation core. This was the first building in Chicago to use a raised-floor pressurized plenum system, allowing for air to be pumped in through the floors for individuals to control their temperature using floor diffusers.



Picture courtesy of Ricaldo Bofill Taller de Arquitectura

The basement levels were constructed to allow for the stop of the subway lines.

The showpiece of the office lobby is a limited-edition cast of the Winged Victory of Samothrace, one of the world's most famous sculptures.

The project was awarded "Best New Building" by the Friends of Downtown Association. In 2010, the building earned the Energy Star label, and in June, 2011, it received the Silver LEED certification for Existing Buildings (LEED-EB).

The entire exterior of the building is clad in glass, stainless steel and stone, all materials that both aged well and were easily matched as the building expanded. As a result of this design planning, there is no visible distinction between the old and new portions of the building, providing a seamless, integrated expression that now achieves its full height and appropriately fits into the Chicago skyline.

Environment:	urban
Use:	curtain wall
Fabricator:	Permasteelisa
Architects:	Ricaldo Bofill Taller de Arquitectura
Photographs:	Ricaldo Bofill Taller de Arquitectura
More information:	ricardobofill.com



Picture courtesy of Ricaldo Bofill Taller de Arquitectura

Dancing House

Prague, Czech Republic

Dancing House is remarkable and magnificent building which has become an integral part of Prague. There had been free space on the corner of Rašín's waterfront and The Square of Jirásek since 1945. The house, which stood here, was destroyed on February 14 in 1945 by the bombs of US aircraft when the Americans mistook Prague with Dresden. After the final clearance of debris in 1960 the former government had been arguing about the purpose of this place for more than 30 years. Dancing House was designed by Croatian architect Vlado Milunić along with Frank O. Gehry and British architect of Czech origin Eva Jiřičná. As a result of this cooperation a real masterpiece, which in its concrete structure harbors nine floors and two floors underground, came into being. Nowadays, the building serves as a newly opened luxury hotel, which offers 21 luxurious rooms with

unforgettable views of Prague Castle, a café and a top-floor restaurant. At the top of the house you will find amazing panoramic terrace where you can admire the city and its skyline view. Building gained its name thanks to the towers that resemble famous figures of dancers, Ginger Rogers and Fred Astaire. A stone tower represents dancer and a glass tower his female partner. At the top of the tower symbolizing the dancer there is a dome with the construction of metal tubes coated with stainless steel mesh-work. The dome is shrouded in imaginary hair and symbolizes the head of jellyfish. Dancing House was opened in 1996 and the same year won the prestigious award of US magazine Time in the category of design of a year. Equally important is the fact that the Czech National Bank allowed to portray Dancing House on commemorative coins as an example of present building for the cycle "Ten Centuries of Architecture". Dancing House has belonged among the controversial constructions of modern architecture in Prague which originated in the nineties.

Environment:	urban
Use:	dome shape sculpture
Architects:	Frank Gehry
Photographs:	Honza Goh and Naoki Yasuda (ISSF Staff)
More information:	dancinghousehotel.com



300 North LaSalle

Chicago, United States of America

Standing 60 stories high (239.12m/784.51 ft), 300 North LaSalle is one of the tallest buildings in Chicago which was completed in 2009 respecting and carrying forward the traditions of innovative, inspiring skyscrapers in the very birthplace of the skyscraper. The custom unitized curtain wall project is located in the downtown area, along the north bank river walk. The façade is comprised of horizontal and vertical features in both stainless steel and aluminum as well as multiple stainless steel canopies, balconies and entrances. The integration of stainless steel into almost every facet of the façade made the project challenging with maintaining consistency with grain direction within material size restrictions. The low-E façade ensures maximum natural lighting during the daytime hours and minimizes solar induced temperature rises, thus helping achieve Gold LEED-CS status.



Environment:	urban
Use:	curtain wall, lobby wall, canopy
Material:	316 with a satin-brush
Fabricator:	Permasteelisa Group
Architects:	Pickard Chilton
Photographs:	Peter Aaron-Otto Alan Karchmer Hedrich Blessing
More information:	pickardchilton.com



Nakanoshima Mitsui Building

Osaka, Japan

Nakanoshima Mitsui Building is the hub of the Mitsui group in Kansai area. While designing the Mitsui Shinkan plan, the architect was also doing the same for a building in Muromachi, Tokyo. A relationship between these two buildings separated by great distance and the synchrony that comes from their relationship was sought. Nakanoshima is especially blessed with water and greenery among all the locations of Osaka, 'the city of water'. During the Edo era, lots of Daimyo's had their storehouses there as the river received a high amount of traffic bringing the wealth to the town. Now, the water flow gives people peace as a wealthy urban environment and the flow of lively people on the street brings a human touch to the space. Utilizing the rare urban environment that has good conditions and developing more appeal are important.

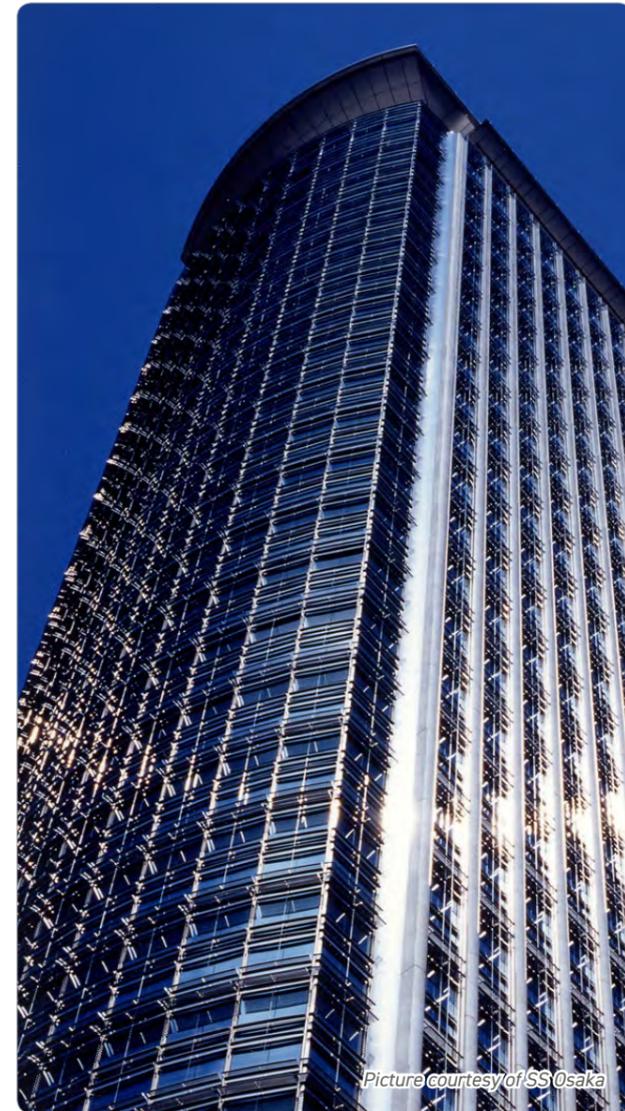
The architects accentuated the long standing cultural identities of the north and south by actualizing the main thoroughfare that connects the 'North', a town of new business, with the 'South', an area that has been the centre of commerce and culture since a long time ago. There are plans for the west side of the property to have a super high-rise building built, so a strong stone wall with small windows was constructed rhythmically. The east side of this building has a 14-storey office building close by, so large pillars were incorporated into the design to

block the view with each other.

On the entire wall surface, lots of stainless steel parts such as louver sunshade, curtain wall, rail cover, pipe, rod and more, are contrasted with white granite and designed lengthwise and breadth, creating a light image.

HL glossy finish contrasting with white granite with fine light reflection of stainless steel gives an advanced impression. Meanwhile, thanks to the concept of lightness and aesthetics, a see-through freshwater entrance eaves and the mullion of stainless steel structural materials and tempered glass catches visitor's eye. It is a work that raised the image of stainless steel building materials contributing to harmony with long life, appearance, and environment, which is required for skyscrapers.

Environment:	urban
Use:	curtain wall, mullion, pipe façade
Material:	304 with a hairline polish
Manufacturers:	Aichi Steel Nisshin Steel
Architects:	Jun Mitsui & Associates Inc. Architects (Pelli Clarke Pelli Architects)
Photographs:	SS Osaka
More information:	jma.co.jp



Picture courtesy of SS Osaka



Picture courtesy of SS Osaka

Nihonbashi Mitsui Tower

Tokyo, Japan

This is a newly added building joining the main Mitsui building, the Mitusi building was designed by Trowbridge & Livingston 70 years ago and is designated as a cultural asset of national importance. The origin of the concept for this project was the will to connect to more developments continuing the memories, quality level and pride of those great historical buildings in the Muromachi era. All aspects that were paramount in formulating a design including historical construction function, promotions, rhythm, shape and the aged look were created through conversations. The building's main function as a closed off bank was changed to an atrium function which interacts with the public greatly. The transparency that keeps the promotion principle of Neo-classicism was achieved.

This tower is a state-of-the-art building composed of a granite PC, a stainless steel sash, a stainless steel cornice and stainless steel pipe structure, and its corridor of columns creates a urban landscape harmonized with historic buildings. SUS445J1 is adopted for the exterior façade material because of maintenance free appreciation and durability, the surface finish of interior stainless steel is unified with a special HL finish of a mat style which suppresses gloss, and it is used as a building material. It is a building which raised the importance of stainless steel.

Environment:	urban
Use:	cornice, panel façade, pipe structure
Material:	SUS445J1 with a hairline polish (NSS445M2), 304
Fabricator:	Kikukawa Kogyo Co., Ltd.
Manufacturer:	Nisshin Steel
Architects:	Jun Mitsui & Associates Inc. Architects (Pelli Clarke Pelli Architects)
Photographs:	Kawasumi Architecture Photograph Office
More information:	jma.co.jp



One La Jolla Center

San Diego, United States of America

The tower completes the La Jolla Center superblock, located within the San Diego area's only master-planned live, work, learn, and play community. With a space-making design and high-quality materials, One La Jolla Center exhibits an attention to detail exceptional in an office environment. The stainless-steel-and-glass-clad unitized curtain wall system includes 10-foot floor-to-ceiling, high-performance low-E glazing, while 30-foot column spacing allows for column-free corner offices. Arriving at the main lobby via the motor court drop-off or by foot through a landscaped courtyard, occupants and visitors can easily find their way to the appropriate lift within the central elevator lobby. The state-of-the-art, 1,000-foot-per-minute elevator

system uses destination-dispatch technology to shuttle passengers efficiently to their intended floors. Ground-level amenities include a fitness center and full-service café accessible from the main lobby. The landscaped grounds feature a large central garden

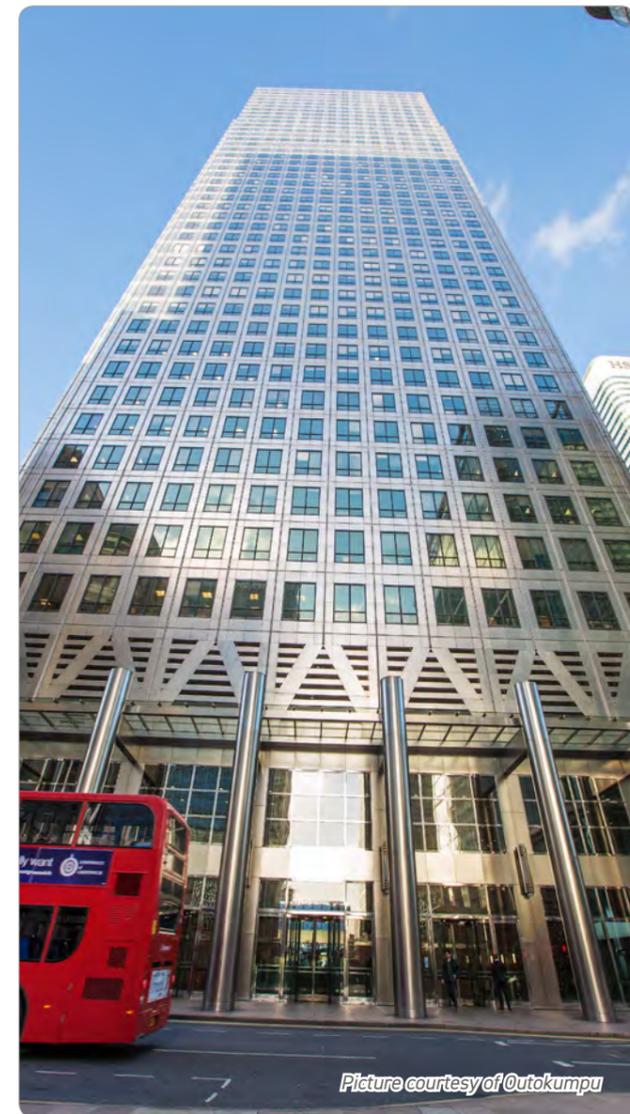
courtyard containing several shaded workspaces with soft seating and Wi-Fi connections. The fifteen-story LEED Gold office building is neatly joined to an adjacent multilevel parking facility by a landscaped garden.



Environment:	urban
Use:	panel façade
Material:	316L with a Deco Linen M25 finish
Manufacturer:	Outokumpu
Fabricator:	Christian Pohl GmbH
Architects:	Pei Cobb Freed & Partners
Photographs:	Outokumpu
More information:	outokumpu.com

Picture courtesy of Outokumpu

Picture courtesy of Outokumpu



Picture courtesy of Outokumpu

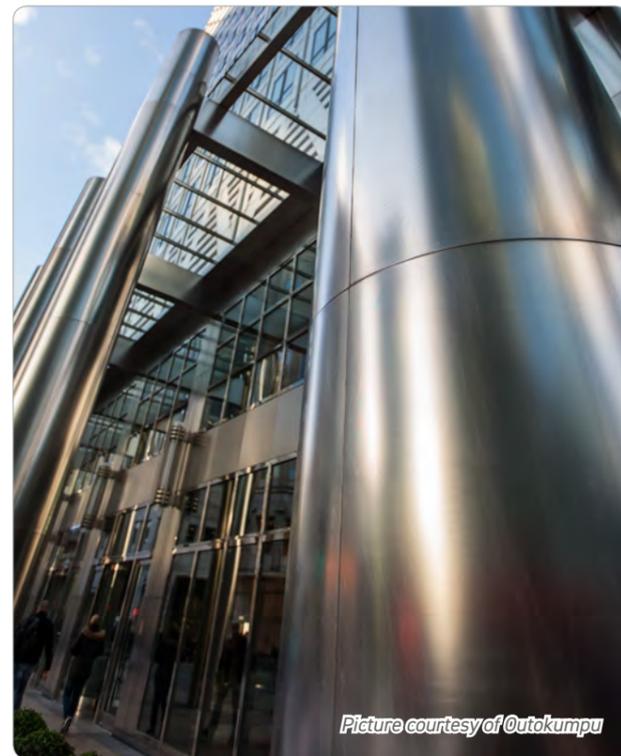
One Canada Square

London, United Kingdom

The building was built at the same time of 8 Canada Square, DS2 located on the other side of the square. The cladding design for the 45-story Citigroup headquarters tower at Canary Wharf was conceived as a tapestry of stainless steel elements. The Linen Finish stainless steel grid not only gives the tower its formal order, enhances its height; it also interacts with the super-grid of the adjacent building, designed by Foster + Partners, and unites the two buildings to form a common building base. Pelli Clarke Pelli Architects worked to develop creative details for the stainless steel elements where all vertical elements are bent and fastened together as a singular cladding

Environment:	urban
Use:	panel façade
Material:	316 with a linen finish (Hyclad Cambric finish)
Manufacturer:	Outokumpu
Fabricator:	Permasteelisa Group
Architects:	Pelli Clarke Pelli Architects/ Adamson Associates Architects
Photographs:	Outokumpu
More information:	outokumpu.com

panel. The main cladding system is a panelized curtain wall - aluminum on the inside and stainless steel on the outside - with vision glass and shadow boxes in front of the floorslab.



Picture courtesy of Outokumpu



Picture courtesy of Outokumpu

7 Bryant Park

New York, United States of America

With little fanfare, an eye-catching work of corporate architecture has landed in Midtown: a 30-story, glass-and-stainless-steel building called 7 Bryant Park, between 39th and 40th Streets, along Sixth Avenue. The building clearly is not just another spec office tower, or at least it wasn't designed to look like one. It makes the case for why architecture matters. It's a two-tiered midrise, with a setback a third of the way up and an arresting pair of cones incised almost as if by a giant ice-cream scooper out of one corner, the one facing the park. The first cone rises from the setback to the roof. The other, opening downward, clears space for a circular canopy, made of stainless steel, hovering, a little like the Starship

Environment:	urban
Use:	panel façade
Material:	316L with 316L with Deco Linen M25 finish
Fabricator:	Christian Pohl GmbH
Manufacturer:	Outokumpu
Architects:	Pei Cobb Freed & Partners
Photographs:	Outokumpu
More information:	outokumpu.com



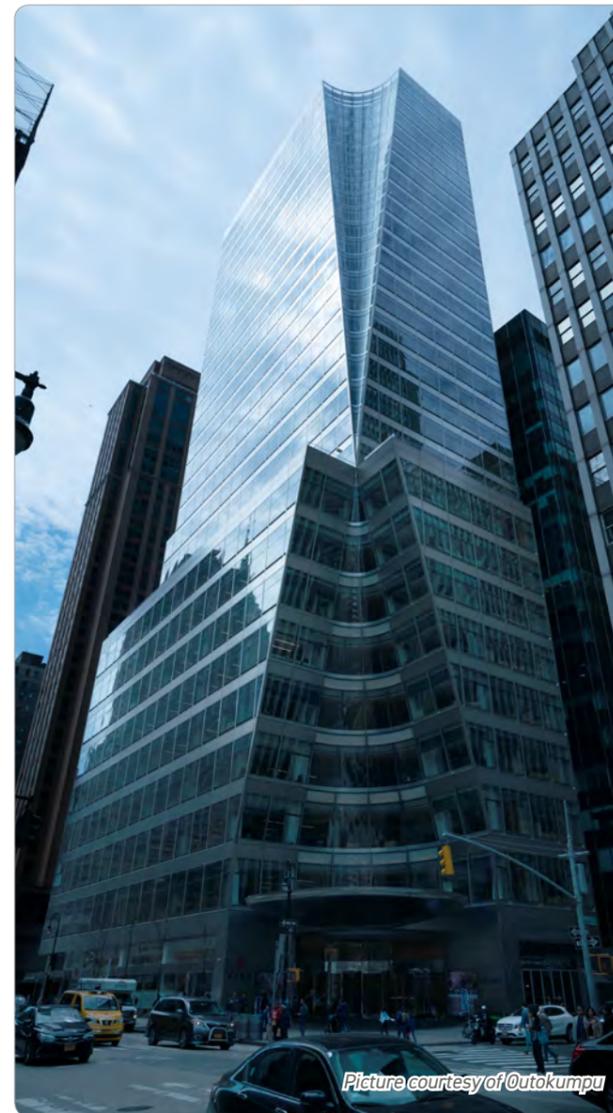
Picture courtesy of @outokumpu

Enterprise, above the building's entrance. The effect is something akin to a flashing Broadway billboard, begging for attention. Hines was the developer. The architects are Yvonne Szeto and Harry Cobb from Pei Cobb Freed & Partners. Mr. Cobb's Tour EDF in Paris, an elliptical skyscraper with a similar conical cavity, built for France's main electric company in 2001, will come to mind among architecture aficionados. The architects found a way to animate the façade so that, seen from the park, it plays off its neighbors, the stately rhythm of its 10-foot-wide modular windows syncopating with the busier window patterns of the buildings around it. From inside, those modules open up the office floors of 7 Bryant Park to the outdoors, generously. Where the windows curve and incline to shape the cones, the effect is akin to standing on the

prow of a ship, gazing down.

From outside, the wide modules ensure that the cones don't become a distracting muddle of mullions when the building turns the corner. It's an elegant, sculptural solution.

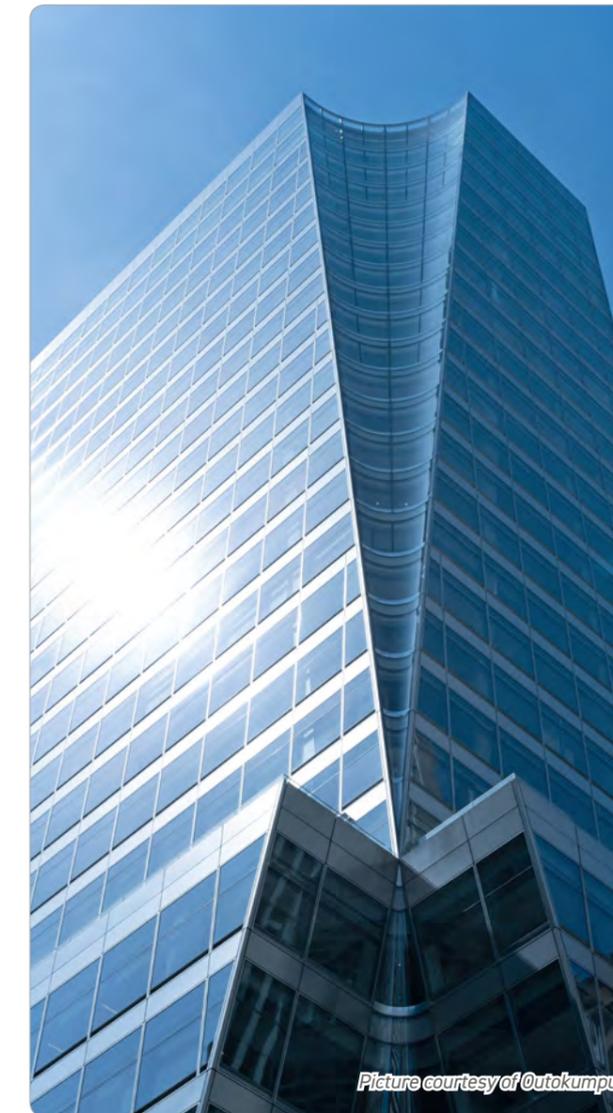
In the evening, colored lights in the spandrels outline a kind of mirrored Christmas tree. Artists talk about creativity feeding off restraints, self-imposed or otherwise, a truism architects have to live by. Mr. Cobb and Ms. Szeto capitalized on the limitation of a city setback rule to sharpen the points where the two cones meet. So there's also a crispness and concision to the geometry, derived partly from necessity.



Picture courtesy of @outokumpu



Picture courtesy of @outokumpu



Picture courtesy of @outokumpu



Picture courtesy of Outokumpu

Goldman Sachs New World Headquarters

New York, United States of America

The 43-story building consists of oversized units with the podium module measuring 10' wide by 18' high, and the office tower module 10' wide by 16' high (maximum weight of a curtain wall unit was 4,700 lbs.). The curving glass wall curtain wall was built with 'Bomb Blast' Technology; with the structural parts requiring a significant increase in the dimensions of the studs using medium strength aluminium alloy live loading a custom monorail system to install the units. The curtain wall units were transferred from the delivery trucks to a vertical trolley car system which then feeds the monorail. The monorail itself is suspended from outriggers at ten floor intervals, which like the vertical trolley car system climbs the building with unit installation.

Environment:	urban
Use:	curtain wall
Material:	316L with a Deco Linen M25 finish
Fabricator:	Permasteelisa
Architects:	Pei Cobb Freed & Partners
Photographs:	Outokumpu
More information:	outokumpu.com

A monorail was used to install units live-loaded, with the exterior clad in grade 316 linen finished stainless steel and glass. This tower's stainless steel and glass skin, coupled with three major setbacks as the building rises, animate its form while reinforcing its relationship to its surroundings.



Picture courtesy of Outokumpu



Picture courtesy of Outokumpu

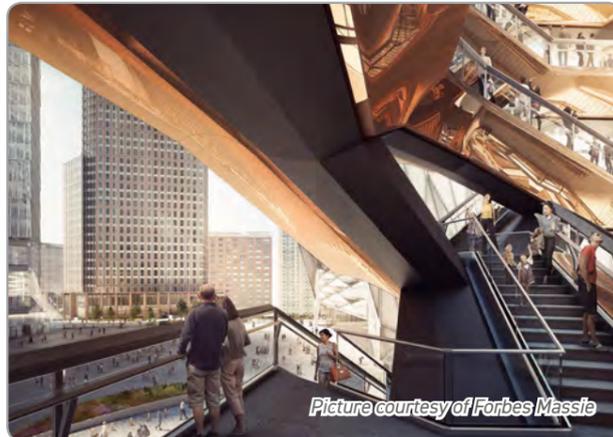
Vessel

New York, United States of America

Heatherwick studio was invited to design a public centerpiece for Hudson Yards, a new 11-hectare development on Manhattan's upper west side being constructed above a huge rail yard. To create something memorable, the studio decided to create a structure that visitors might be able to use and touch, not just to look at. A design was developed for a new social landmark that could be climbed and explored by everyone. Influenced by the Indian stepwells of Rajasthan, formed from multitudes of stone staircases reaching down into the ground, the studio became interested in the mesmerizing visual

effect of the repeating steps, flights and landings. Composed of 2,500 steps, 154 flights, 80 landings and 16 storeys, the resulting design. Is a climbing frame to lift people above the new square and reveal views across the Hudson River and Manhattan. Fabricated in Venice, Italy by specialist steel fabricator Cimolai, Vessel's complex architectural framework of raw welded and painted steel contrasts with its polished copper-coloured stainless steel underside that reflects the surrounding city. Forming a major free public attraction at the heart of this new district, Vessel represents an intention to create an extraordinary new kind of public legacy for New York.

Environment:	urban
Use:	reflect panel façade
Material:	316 and 2215 Mirror polished and Copper coated (PVD coated)
Architects:	Heatherwick Studio
Photographs:	Forbes Massie
More information:	heatherwick.com



Picture courtesy of Forbes Massie



Picture courtesy of Forbes Massie



Picture courtesy of Forbes Massie



Picture courtesy of Forbes Massie

Fukuoka Bar Association Hall

Fukuoka, Japan

“Fukuoka Bar Association Hall” is the first building to be constructed in the redevelopment project of the Tenjin Area of Fukuoka City, the largest city in Kyushu District.

It is designed by Mr. Koichi Furumori, the architect who lives in Fukuoka, to express the dignity of lawyers and to be approachable for local citizens, located in the same area as the district court and the public prosecutor’s office.

The characteristics of this hall are not only the application of cutting-edge technologies for structure, but also design using stainless steel sheet to both of the exterior and the interior. The surface of stainless steel sheet is polished to express the design derived from the traditional textile pattern “Hakataori Kenjo-gara”.

“Hakataori Kenjo-gara” is originated from the history that the Kenjo-gara textile has been proffered, or “Kenjo”, to Shogun from Fukuoka in Edo period. The pattern is a series of alternating lines of stripes and lines which are comprised of rhombuses to express buddhist teachings and flower bowls. It has been common to express Kenjo-gara on buildings with tiles by color differences, but there are no examples to express it with stainless steel. This time, Furumori Koichi Architectural Design Office, Toyo Stainless Polish Industry Co., Ltd, the expert of stainless steel polishing located in Fukuoka prefecture, and NSSC

strived to express Kenjo-gara pattern by changing the type of polishing on the surface of stainless steel sheet.

Toyo Stainless Polish Industry has been especially making its effort to express the appearance which can be seen both as lines from a distance and as rhomboid patterns at a close range. It repeated its trials by applying its technology of complex design polishing and finally achieved the unprecedented finishing of stainless steel.

Because the designer and the owner hoped to adopt products of local companies, NSSC as a manufacturer who has the production base in Fukuoka, provided the original stainless steel appropriate to the environment. Although Tenjin area is located close to coast, stainless steel type 304 is frequently used as materials for buildings, and rust can be seen on the surface. Therefore, NSSC proposed NSSC 220M as the exterior of the hall, which has been adopted to several buildings



in coastal area due to its excellent rust-resistance. In addition, NSSC FW2, whose polished surface becomes characteristic silvery-white color which cannot be achieved by other stainless steel grades, is applied to the interior.

Due to the strong zeal and advanced technology of local companies, the hall makes local people have familiarity and pride as citizen of Fukuoka. Moreover, it can be argued that this reflects the potential of stainless steel as material for decoration.

To contribute for further development of the stainless steel market, we will continue to expand the application of stainless steel for sophisticated design buildings.

Environment:	urban
Use:	panel façade, interior
Material:	NSSC 220M (Ferritic Grade with Ti & Nb & Mo) NSSC FW2 (Ferritic Grade with Sn) Design Polished Finish
Manufacturer:	NSSC
Architects:	Furumori Koichi Architectural Design Office
Photographs:	Omori Kyoko
More information:	furumori.net nssc.nssmc.com





Picture courtesy of Patrik André

The Berlingot

Nantes, France

Does spending your day in a candy-inspired building sound like a pretty sweet deal? For those working in Nantes' Le Berlingot, it's just another day at the office. Taking its name from a local confectionery, the office building's layered design mimics the striped hard candies that the city is famous for. Part of the city's urban renewal strategy, the 15,000m² stainless steel and glass building is located in the heart of the Euronantes business district. Adjacent to the main train station, the Berlingot gives arrivals a striking first impression of the new Nantes.

Environment:	urban
Use:	panel façade
Material:	304 with a Uginox TOP, Bright, MAT and brushed surface finishes
Manufacturer:	Aperam
Architects:	dl-a designlab architecture SA
Photographs:	Patrik André
More information:	aperam.com



Picture courtesy of Patrik André



Picture courtesy of John Gollings

Monaco House

Melbourne, Australia

This four storey building is located in a largely pedestrian lane at the east end of Melbourne's CBD. Dominant in the lane is the historic Melbourne Club wall and large plane trees emerging from the Melbourne Club garden.

A ground level entry and cafe are followed by two levels of office. The top level contains a small reception area to facilitate the client's role as Honorary Consul of Monaco. Within the office, large apertures to the west are shaded by deep balconies and the adjoining plane trees. Outdoor balconies and the 'green-roofscape' provide areas of release from the office desk. The building is an essay in fine-grained urbanism, it seeks to talk about its consular role as well as to enhance the pedestrian experience of the city.

Its exterior walls are made of black granite aggregate with black cement and Polished Stainless Steel.

Environment:	urban
Use:	panel façade
Architects:	McBride Charles Ryan Architecture + Interior Design
Photographs:	John Gollings, Tim Lee
More information:	mcbridecharlesryan.com.au



Picture courtesy of John Gollings



Picture courtesy of Tim Lee



Picture courtesy of Tim Lee

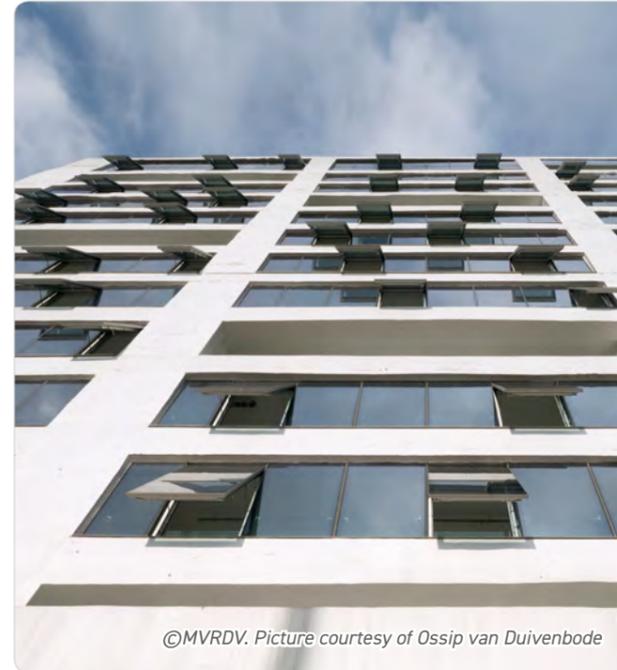
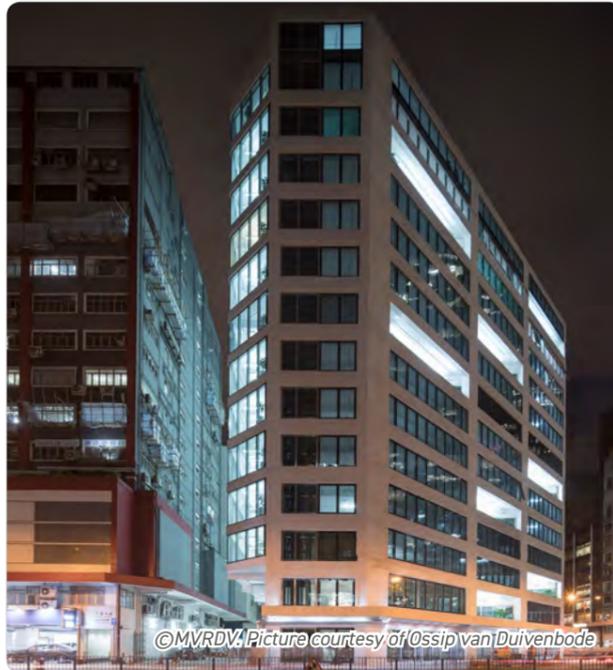
133 Wai Yip Street

Hong Kong, China

The building is stripped down to its beautifully raw and butch primary structure, with all unnecessary trimmings being taken out. Infill was only then added to the building in the form of white paint, glass and stainless steel in order to maintain and highlight the purity of the bare structure. Old and new are

easily distinguished, whilst the inner workings of the building are on display for all to see. With floor area at a premium in Hong Kong MVRDV aimed to create an office space which offered maximum attractiveness and perceived spaciousness in order to provide as pleasant working environment as possible.

Environment:	Marina
Use:	frame in façade
Architects:	MVRDV
Photographer:	Ossip van Duivenbode
More information:	mrvd.nl



Civic Arena Pittsburgh

Pittsburg, United States of America

Civic Arena (formerly the Civic Auditorium and later Mellon Arena) was an arena located in downtown Pittsburgh, Pennsylvania. The Civic Arena primarily served as the home to the Pittsburgh Penguins, the city's National Hockey League (NHL) franchise, from 1967 to 2010.

Constructed in 1961 for use by the Pittsburgh Civic Light Opera (CLO), it was the brainchild of department store owner Edgar J. Kaufmann. It was the first retractable roof major-sports venue in the world, covering 170,000 sq. feet, constructed with nearly 3,000 tons of stainless steel and supported solely by a massive 260-foot-long cantilevered arm on the exterior. Even though it was designed and engineered as a retractable-roof dome, the operating cost and repairs to the hydraulic jacks halted all full retractions after 1995, and the roof stayed permanently closed after 2001. The first roof opening was during a July 4, 1962 Carol Burnett show to which she exclaimed "Ladies and Gentlemen...I present the sky!"

The Mellon Arena's stainless steel dome had glimmered and gleamed for over 40 years. As if the shape of this unique arena were not eye-opening enough, the dome was designed to open or close in just two minutes. The Mellon Arena was the first retractable dome, and it was the largest dome in the world at the time it was built. It kept that record

until the Houston Astrodome was built three years later. The stainless steel dome weighs almost four thousand tons and has a diameter of a little over four hundred feet. To cover the entire outer surface of the dome, it took a whopping 166,000 square feet, 2,950 tons of stainless steel sheeting.

The Civic Arena closed on June 26, 2010. The former Mellon naming rights expired soon after, and the Penguins and all other events moved across the street to the new Consol Energy Center - now PPG Paints Arena. After various groups declined historic status for the venue, it was demolished between September 2011 and March 2012.

In November 2011, the Penguins started selling Christmas ornaments crafted from the Civic Arena's stainless steel roof. The team used the promotion to raise money for its charitable foundation. Grove City-based Wendell August Forge, the oldest and largest forge in the United States, created two types of ornaments: one with the arena and the Pittsburgh skyline and another with the arena with the Penguins' logo. The Penguins had originally planned to sell 6,000 ornaments, but due to demand, the team ended selling over 40,000 pieces.



Picture sourced from Wikimedia Commons
Courtesy of Daveynin



Picture sourced from Wikimedia Commons
Courtesy of Daveynin

Environment:	urban
Use:	roof panels
Architects:	Mitchell & Ritchey Architects
Photographs:	Daveyin and others
More information:	wikipedia.org



Picture sourced from Wikimedia Commons
Courtesy of Derek Jensen

The National Museum of Art

Osaka, Japan

The National Museum of Art posed an unusual design challenge: to create an iconic image for a museum in which only the entrance lobby was permitted to be built above ground. Pelli Clarke Pelli Architects responded to this requirement by creating an entrance that is an enormous stainless steel and glass sculpture. This web of intertwining stainless steel tubes stands against the sky with greater impact than its size would seem to allow.

The entrance structure is designed to resemble reeds along a riverbank or arching stalks of a bamboo grove, a counterpoint to the massive form of the neighboring science museum. The titanium-coated stainless-steel tubes rise to two peaks,

52 and 34 meters (170 and 112 feet) above grade. For the steel tubes that penetrate the skylight glass, there is a watertight seal in the form of a plate with a pair of bellows. The pair of bellows allows the steel tubes to move 10 to 15 centimeters (4 to 6 inches) in any direction, whimsically animating the plaza. The museum is distributed on three levels. The first level is a public gathering space, followed by two levels of galleries for temporary and permanent exhibits. The three floors are spacious and receive natural light. Visitors soon forget that they are underground and become absorbed viewing the exhibitions.

Environment:	urban
Use:	pipe structure
Material:	304 with a hairline polish and Ti coated
Fabricator:	JST
Architects:	Jun Mitsui & Associates Inc. Architects (Pelli Clarke Pelli Architects)
Photographs:	Naoomi Kurozumi 663 highland
More information:	jma.co.jp



Museum at Prairiefire

Overland Park, United States of America

As the signature building of a new 60-acre suburban live-work-play development, the Museum at Prairiefire was designed as a civic hub featuring world-class traveling exhibits from the American Museum of Natural History. The design concept evokes the imagery of one of the most unique aspects of the local Kansas region: the tallgrass prairie burns. These burns are important for the maintenance of the prairie ecosystem by suppressing trees and shrubs from overtaking native tallgrasses, and the project's LEED Silver Certification attests to its environmentally sound design and construction practices, echoing the architectural concept rooted in sustainability.

From siting, to massing, forms, materials, color, and detailing, all design decisions cultivate this 'burn' concept. Rolling 'hills' of stone, evocative of the soft prairie landscape, form the backdrop for colorfully vibrant and angular 'lines of fire'. The 'hill' forms are horizontal stone-clad 'boxes', housing exhibit and support areas, softly sculpted in plan with undulating profiles, and gently shifting in relation to one another. The fire forms engulf and connect the two main stone-clad 'hill' forms, and form the Grand Hall (lobby), which opens through the building to a wetlands park behind the Museum. Historically, horses dragging lighted torches in a line set prairie

fires. To emulate this, overlapping, jaggedly shaped walls clad in materials dynamically shifting in color and reflection form the 'fire'. These materials are multi-colored iridescent LIC stainless steel panels and dichroic glass, both of which shift in hue depending on the viewing angle, echoing the constant movement of a live fire. Light Interference Color (LIC) stainless steel panels were laid out in a vertical gradient, using 4 different base colors in 3 different finishes. The patterns echo flame bursts and sparks in a painterly manner, with bluish-purple at the base, through burgundy and burnt orange, to gold at the top. Used in a standard flat-seam application, there are over 10,000 individual stainless steel panels on the façades, all laid out in the construction documents in a paint-by-number manner. The cutting-edge insulated dichroic glass was developed exclusively for this project, and is considered the first North American application. Its unique color changing, rippled, and streaked mirror effects are remarkably evocative of flames. Though only one type of glazing was used, the glass color appears in a range from red, orange, yellow and even light green depending on the viewing angle, and at a close distance, creates a vertical gradient of these same colors.

In contrast to the vibrant and energetic warm color spectrum reflected on the exterior, the dichroic glass transmits the opposite color spectrum. In the interior, calming blue and purple transmitted light imparts a peaceful sense of awe, enhanced by the column-less, soaring spaces of the Grand Hall. The design goal of the Museum at Prairiefire was to

celebrate the region's unique identity. By embodying the story of the region in a building design, and emotionally engaging people with its architecture, the Museum at Prairiefire has become a symbol that connects people spiritually to where they live, allowing the suburb to become a proud, independent and sustainable community.



Environment:	urban
Use:	panel façade
Material:	304 with a light interference color
Fabricator:	Millenium Form
Architects:	Verner Johnson
More information:	vernerjohnson.com millenniumfoam.com



David H. Koch Center

New York, United States of America

At the New York-Presbyterian David H. Koch Center, patients receive integrated care and undergo complex procedures on an outpatient basis. With a focus on the human experience, the program provides a comprehensive suite of services for patients in a contemporary and soothing environment. The design of the leading-edge facility is the result of a collaboration among HOK as

architect, Ballinger as medical architect and Pei Cobb Freed

& Partners as consulting architects for building envelope and lobby.

Within the 40-foot-high lobby, a sweeping mezzanine offers a multipurpose gathering space with food service and a direct connection to the adjoining Wellness Center. An open stair invites access to the more intimate upper mezzanine, providing a comfortable "living room" for patients and their families.

An all-glass façade was suggested by the fact that the exterior edge of the building is primarily circulation space. The insertion of a wood screen into the triple-glazed assembly and application of a frit pattern on the inner surface of the outer pane give the curtain wall its distinctive character, achieving richness and variety in a highly sustainable form.

With its glass-encapsulated wood screen façade and transparent lower floors with stainless steel panel, the building presents a warm, hospitable face to the community. At the street-level entrance, canopies and a private drive-through welcome guests. The team designed the building for a minimum of LEED certification. Sustainable strategies include a green roof, high-performance building skin and high-efficiency mechanical systems. The distinctive exterior façade, which consists of triple-paned insulated glazing with an encapsulated wood screen, significantly reduces solar glare, heat gain and the need for solar or privacy shading. The resilient design enables the building to continue operating during an extreme weather event or disruption to the city power.

Environment:	urban
Use:	panel façade
Material:	316L with a Deco Linen M25 finish
Manufacturer:	Outokumpu
Fabricator:	Permasteelisa
Architects:	Pei Cobb Freed & Partners
Photographs:	Outokumpu
More information:	outokumpu.com



Theatre an der Elbe

Hamburg, Germany

On behalf of Stage Entertainment Theater Services GmbH, the office took over the constructive coordination for an unusual theater construction for the first time as executive planners. As a highly visible shiny metallic solitaire, the building exposes itself on the southern port of Hamburg opposite the Elbphilharmonie. The design, with its arched stainless steel attic and the glass façade open to the Elbe and the city, was designed by the Dutch

architectural firm AMA Group. Among the most important tasks was the handling of unusually many building rights - in addition to the usual technology, statics and the particularly complex fire and fire protection for the theater came here the water and the port authority into play - or the logistics for the approximately 1,800 diamond-shaped steel shingles, each of which is unique.

The implementation included both the restructuring and redesign of the outdoor facilities, as well as the sophisticated workshop and office concept in the

back-connected operating building. The complex 3-D planning of the highly functional interiors enabled a detailed realization of the design for optimal line of sight in the almost 2000-seat auditorium of high quality and with a sophisticated wall construction. Even in the airy, elegantly designed foyer with its strong exterior reference geometric challenges accompany the architectural signature.

Environment:	marina
Use:	shingles façade
Material:	stainless steel with a sparking shingles finish
Fabricator:	Lummel GmbH
Architects:	Schenk + Waiblinger Architekten
Photographs:	Avda, Geotrinity, Team-rag
More information:	schenk-waiblinger.de



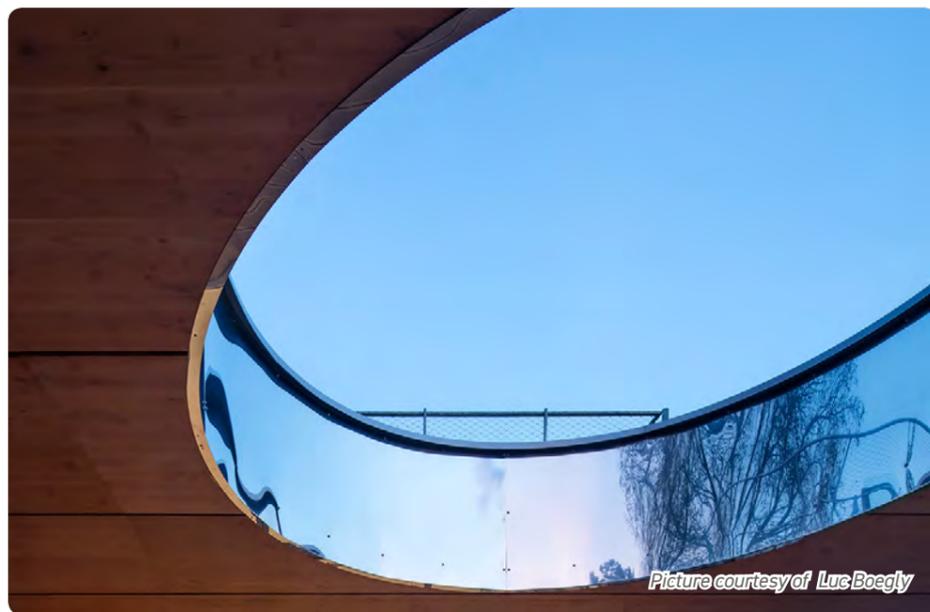
L'Agora

Metz, France

Metz's new Agora is a unique modern space that brings a media library, social centre and digital workspace together under the same roof. The cornerstone to an effort to revive the La Patrotte neighbourhood around the train station, the building's open architecture makes for a welcoming place for the public to gather. By using a variety of building materials, the Agora offers a contrast

of emotions. For example, the portions created with wood offer shade and warmth and are meant to encourage relaxation and reflection, while the sections that use stainless steel are bright and lively. In addition to housing office space, multimedia rooms, a café and multipurpose areas, the building also regularly hosts exhibitions and concerts. During the summer, movies are shown on a giant outdoor screen, where people can watch from the sloping square and lush green lawn.

Environment:	urban
Use:	panel façade
Material:	304 with a Uginox Bright Surface Finish
Manufacturer:	Aperam
Architects:	Ropa & Associés Architectes
Photographs:	Luc Boegly
More information:	aperam.com



UCLan Social Spaces

Preston, United Kingdom

The University of Central Lancashire (UCLan) commissioned 'social spaces' with the aim of encouraging students to stay longer on its Preston campus.

Architecture and building consultancy practice, AHR, sought to design and create a striking space that engaged with students. Key design features include a projecting entrance canopy, glass roofs and an indoor hidden garden, as well as moveable furniture so students can reconfigure the space to suit their needs.

Proteus Facades' supplied its Rimex ColourTex Pyramid Black stainless steel cladding for the front low level aspects of both buildings because it creates a tough, impact resistant surface – the pyramid

patterned finish hides scratches, dents and other impact damage, making it ideal for a high traffic student area.

Aside from its physical robustness, the three-dimensional pyramid pattern gives the black added depths and texture, creating a lively and reflective facade.

Both the ColourTex and AnoMax materials were specified on the Proteus HR honeycomb panel system. This is a sandwich cladding panel that features a linked geometric honeycomb core. This was structurally bonded to the ColourTex and AnoMax outer skins at UCLan. The result was a cladding panel with high bending stiffness and overall low density.

This allowed the designers to minimize the amount of material used, reducing weight loadings on the

structure and delivering a more cost effective outcome due to the honeycomb core allowing thinner outer skin thicknesses whilst still retaining an optically flat panel. The Proteus HR honeycomb core also reduced weight loadings on the 5 m overhanging canopy that announces the point of arrival for students, avoiding the need for overly obtrusive support columns.

Main contractor at UCLan was Conlon Construction Ltd and the façade was installed by Preston-based Architectural Glazing & Facades. The development is part of UCLan's £200million Masterplan that is being rolled out over the next five years. The new social spaces were complete in early 2018.

Environment:	urban
Use:	panel façade
Material:	316L which was black coloured and pyramid formed
Fabricator:	PROTEUS
Architects:	AHR
Photographs:	PROTEUS
More information:	proteusfacades.com



Hayes Primary School

London, United Kingdom

Perforated stainless steel panels are bringing reflection, cohesion and illusion to an award-winning £3 million redeveloped school.

The Proteus SC panels, which were mirror polished on the face and grit polished on the rear, form a 54 m long screen to the upper half of the façade of the front and side elevations of the double-height extension onto Hayes Primary School in Kent. With the perforations reducing in size from the bottom to the top of the panels, they maximise translucency at the former and reflection of the

canopies of mature trees at the front of the site, at the latter. They also act as brise soleil, providing shade from solar glare and preventing over-heating to the teaching spaces.

The Proteus SC screens also give a uniformed building elevation to what had previously been a piecemeal development, an incoherent complex of buildings which failed to announce themselves on the street front. Now the "veil" gives the illusion of a state-of-the-art new school, shielding the existing building from the road.

The new accommodation is organised around the east and north elevations of the existing school

building and adds to the site four new classrooms, a small hall, ICT lab, admin area and external play spaces for more than 100 pupils.

Such is the transformation that the school has won awards including a New London Award run by London's Centre for the Built Environment to recognise the best in architecture, planning and development in the capital and a RIBA National Award (London). Here, the judges said: "On a tight budget the architects have created a building with a clear organisation and a strong identity, with a loggia-like entrance setting the tone."



Picture courtesy of PROTEUS



Picture courtesy of PROTEUS

Environment:	urban
Use:	mirror panel façade
Material:	304 with a mirror-bright polish for the front face and a 80-grit-polish for the rear face
Fabricator:	PROTEUS
Architects:	Hayhorst & Co.
Photographs:	PROTEUS
More information:	proteusfacades.com



Picture courtesy of PROTEUS

New Mechanics Hall for Ecole Polytechnique Federal de Lausanne

Lausanne, Switzerland

The ME building, dedicated to the mechanical engineering department, was built by the Zweifel + Stricker + Associates team in the early 70s, during the first phase of development of the campus. Since the early 2000s, in an effort to promote its top-level teaching, research and innovation activities, and to attract more international students, the EPFL itself undertook several redevelopment operations. The campus and the buildings were refurbished, including the ME building which had gradually become cramped and was rapidly deteriorating. The façades combine two distinct architectural styles in one common material, giving the building a contemporary allure while paying tribute the legacy of the 1970s. The stainless steel mesh, on the one hand, evokes the scope of mechanical engineering,

while the northern façade is a direct reference to the molding envelopes of the neighboring buildings. The mechanical façade stands to the East, South and West of the building. The shape and dimensions of its modules, which were prebuilt in a factory before assembly, were determined by the EPFL's historic master plan. Each module is made up of two superimposed layers: an inner skin offering thermal insulation and soundproofing, and an outer solar protection, consisting of a frame holding the signature stainless steel mesh used by DPA since the Bibliothèque nationale de France. The modules are divided into three vertical panels, two of which are sliding and one static. The sliding modules can be deployed in front of the glass panes or superimposed on the third one. For thermal optimization purposes, the mobile panels are generally operated through a building automation

system, but they can also be maneuvered manually. The third module remains in a fixed position on top of the opaque façade panel. The stainless steel mesh panels are tilted away from the façade by a 5° angle, with different slants; this juxtaposition of oblique planes looks like a woven pattern, or a hinge seen on a macro level. The raw material used to build these automated components denotes the building's purpose as a space for scientific experiment. At night, the indoor lighting system amplifies these contrasts by showing the general layout, turning the hall into a lighthouse for the campus.

Environment:	urban
Use:	panel façade
Material:	316 Escale 7*1
Fabricator:	GKD
Architects:	Dominique Perrault Architecture
Photographs:	Vincent Fillon
More information:	perraultarchitecture.com impetus-pr.de



Bill and Melinda Gates Hall

New York, United States of America

Gates Hall at Cornell University brings together the school's Computer Science and Information Science departments in a new joint facility designed to generate collaboration and spontaneous discourse between the disciplines. Through various strategies amplifying visibility, transparency, and social interaction, the new building interprets the departments' shared educational mission to "integrate computing and information science—its ideas, technology, and modes of thought—into every academic field."

Neighboring the historic Barton Hall and Hoy Field, Gates Hall re-energizes a previously underutilized campus corner, creating a new campus gateway and frontage. Surfaced in vibrant stainless steel panels, the building's cantilevered entry canopy covers an outdoor plaza and student social space also defined by native landscaping and sculptural forms. The performative steel skin wraps the exterior façade in an angular weave, shading interior classrooms and creating a continuously dynamic and transformative surface. Advanced digital modeling tools used in designing the pattern, geometry, and details of the skin speak to the profound impact of computing on the arts and sciences.



Environment:	urban
Use:	panel façade
Fabricator:	ZAHNER
Architects:	Morphosis Architects
Photographs:	Matthew Carbone
More information:	morphosis.com



University Library

Annecy Le Vieux, France

Built on the grounds of an old farmstead, the Annecy-le-Vieux University Library is designed to reflect the area's agricultural roots. The two gabled, barn-like buildings are connected by a contemporary glass building – literally connecting the past to the present.

Drawing inspiration from mathematician, physicist and philosopher René Descartes' metaphysical meditations, the entire structure has been wrapped in a stainless steel veil, giving the library an aura of modernity.

Environment:	rural
Use:	panel façade
Material:	304 with a Uginox MAT finish
Manufacturer:	Aperam
Architects:	De Jong Architects
Photographs:	De Jong Architects
More information:	aperam.com



West Bank Station

Minneapolis, USA

With 3.5 million inhabitants, the region surrounding the Twin Cities of Saint Paul and Minneapolis is among the 20 largest metropolitan areas in the United States. Day by day, tens of thousands of people commute between these three communities to get to work, university or school. The state implemented a comprehensive municipal rail project to bring the 100-year-old infrastructure consisting of buses and congested roads into line with these requirements. A key element of this mammoth project is the so-called Central Corridor Light Rail Transit (CCLRT) with the transport hub West Bank Station. The AECOM firm of architects designed a two-story station at this location. To ensure protection from the sun, the building was provided with large-scale cladding in the form of Omega 1510 and 1550 stainless steel fabrics. Through etching and the addition of stainless steel birds, the shimmering façade was transformed into an expressive work of art that reflects the eventful immigration history of the region.



Environment:	urban
Use:	mesh façade
Material:	316 etched - Omega 1510-1550
Manufacturer:	GKD
Architects:	AECOM / GKD
Photographs:	Nancy Blum
More information:	gkd.de or impetus-pr.de





Picture courtesy of Fabrice David Architecte

Yvoire Pier

Yvoire, France

Recreational boaters, fishers and ferry passengers enjoying the shores of Lake Geneva from the Yvoires pier can now do so under the protection of a new stainless steel pavilion. The T shaped awning, located at the end of the pier, offers a welcome respite from the summer sun, spring rain or winter wind. Designed to mimic the town's medieval skyline, its aerodynamic shape also serves a practical purpose, draining rain water directly into the lake. With its stainless steel reflecting the water and sky, at times the structure seems to disappear into its surroundings. The pier also includes wooden benches for relaxing and is fully accessible to those with reduced mobility.

Environment:	park side
Use:	mirror façade
Material:	304 with a Uginox Meca 8ND (mirror) finish
Manufacturer:	Aperam
Architects:	Fabrice David Architecte
Photographs:	Fabrice David Architecte
More information:	aperam.com



Picture courtesy of Fabrice David Architecte

Garrison Crossing

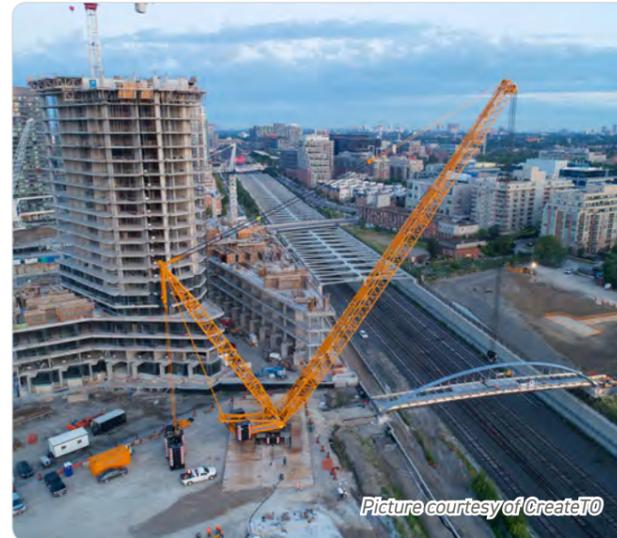
Toronto, Canada

Designed by Pedelta Canada Inc., a member of the Dufferin Construction Company team, Garrison Crossing features the first stainless steel bridges to be built in Canada. Garrison Crossing features two bridge structures spanning two rail corridors in downtown Toronto. One bridge structure spans from the South Stanley Park extension over the Kitchener rail corridor and lands on the north side of Ordnance Triangle Park. The second bridge structure begins on the south side of Ordnance Triangle Park and spans

over the Lakeshore West rail corridor, landing in the Fort York grounds. Duplex stainless steel was chosen because of its exceptional mechanical properties: it has a unique and beautiful appearance, it is highly durable, light-weight and corrosion and weather resistant, requires less maintenance and provides reduced life-cycle costs. Aside from the concrete deck and wood handrails, Garrison Crossing is comprised entirely of stainless steel. The north bridge structure is 130 metric tonnes and the south bridge structure is 125 metric tonnes.



Environment:	park side
Use:	main structure
Material:	duplex stainless steel
Fabricator:	Pedelta
Manufacturer:	ArcelorMittal
Architects:	CreateTO
Photographs:	CreateTO
More information:	garrisoncrossingbridge.ca



American Airline Arena

Miami, USA

The American Airline Arena built ten years ago for the NBA team Miami Heat – popularly referred to as Triple A – has long been considered an attractive location for big-name concerts such as Madonna, Celine Dion, U2 or Justin Timberlake, and it has hosted the MTV Video Music Awards several times. Every year 1.4 million sports and music fans visit the arena.

With the installation of the Mediamesh® façade – almost 320 square meters in size – that follows the curve of the main building façade to the west, the AA Arena performed a spectacular feat. This first large, transparent media façade in the USA has transformed the arena to Times Square South. The expectations regarding the new, digital outdoor advertising platform of contractor Heat Group were high: The view from the lounge was not to be hindered, and the façade was to be able to display videos as well as be clearly visible even in daylight. And the significance of the arena as a dynamic, innovative focal point of the city was to be underscored. Sustainable efficiency was also important: the system was to have low energy consumption but be able to resist extreme weather conditions - even hurricanes with winds up to 235 km/h – while requiring little or no maintenance. The arena management team was pleased to find Mediamesh® the system that can meet such complex

demands, even architecturally.

The transparent stainless steel mesh with integrated LED profiles melts right into the architecture of the prominent showplace, opening a whole new dimension of communications media. Because the woven shell is transparent, the rooms behind the mesh are not affected in any way. And the nearly invisible cables make the back of the media façade attractive, too. Whether it is showing still images, graphics, films or live broadcasts – with its tailor-made design for optimal use, the innovative system for bringing large surfaces to life, day or night, knows no limits. This is facilitated by the pixel spacing attuned to the specific project, guaranteeing optimal resolution. Brilliant images created by high-luminosity LEDs make a statement even in the brightest daylight.

Environment:	marine
Use:	mesh screen façade
Material:	316, GKD Mediamesh finish
Manufacturer:	GKD
Photographs:	GKD / a2a Media
More information:	gkdmediamesh.com impetus-pr.de



Velodrome

Berlin, Germany

The project is linked to the reunification of the two Germanys. Building on the nomination of the city of Berlin for the 2000 Olympics, finally celebrated in Sydney, Senate of the German capital turned its commitment to a unifying project of redistribution and linking the two parts of the city, the Olympic project. Under these rules were designed not only sports facilities, also a number of networks that served to them. It is within this context, the enthusiastic and controversial time, the city of Berlin created an international competition for the design of the Velodrome and Olympic Swimming Pool. The winning project submitted by French architect Dominique Perrault proposes a risky experiment

Environment:	urban
Use:	mesh roof and façade
Material:	316 - Futura 240
Fabricator:	GKD
Architects:	Dominique Perrault Architects
Photographs:	Georges Fessy
More information:	perraultarchitecture.com en.gkd.de impetus-pr.de



to combine the old existing building with the new architectural image that wished to present to the city and get while the pool and the Velodrome fade from view, which only left a beautiful "apple orchard." The territorial concept was limited by considerations of a rectangular field in two forms, a round for the velodrome and the other rectangular pool to enroll. For the Velodrome, 17 m buried under ground, only striking at first glance the bright gable metal disc with 142 mm diameter, which is its cover. A dramatic structure of radial steel with 48 triangle beams covers 115m free below and it is supported by 16 concrete columns 13m high. The beams that transmitted 3,500 ton weight to columns remember with its structure a bicycle wheel, which without intermediate supports creates a free surface suitable for any sport. This structure is covered with metal mesh panels. The building of the pool has a suggestive pools parallelepiped structure, a rectangular building

whose roof structure was also made with steel beams in which a double metal skin rests. A recess in the ground completely surrounding both buildings, while an inclined ground plane allows them to be viewed from above, while offering a green view from the inside.

In both buildings the bottom is interrupted by a public street where the different entrances in the side wall and you can see both the enormous structural reinforced concrete pillars and reinforcements in the retaining wall. Like most Dominique Perrault's works the dominant materials in the construction of this project are the metal and the glass. Both the Velodrome as the Pool have an outer shell of wire mesh, stainless steel. This wire is divided into prefabricated plates bolted to metal frames also, creating a surface that sparkles with sunlight and at first glance resemble stretches of water in the center of the park, and lakes.

The structure of the Velodrome and the pool were made with steel beams and the deck skylights that allow natural light to open. The perimeter of both the Velodrome and the pool is limited with large windows and metal frames, as many of the internal partitions, because the architect was of the opinion that the walls should not enclose or isolate why on numerous occasions glass was used as the separator material.



Ichii Renovation

Hakodate, Japan

The project mainly focused to renovate the façade of the existing two-story wooden structure, built in the 80's as a Japanese restaurant, surrounded by the inactive neighbor. The client requested that the new façade should be outstanding, and welcome local people and tourists somehow in a casual

manner. The existing structure was surrounded by stainless steel panels and wooden louvers which were supported by structurally independent steel framework. The bead blasted stainless steel panels, perforated so as to connect the scenes inside and outside the existing glazing gradually, dimly reflect the appearance of the sky. Covered with two contrasting materials, the new façade

affects as a catalyst not only to stimulate its inactive neighbor, but to provide intimacy with manipulation of a natural environment. The interior space was renovated mostly on the second floor, with the installation of an open kitchen counter and seating, illuminated with a lighting box resembling the perforated façade.

Environment:	urban
Use:	panel façade
Material:	SUS 304 vibration polished
Fabricator:	MTD. Co., Ltd.
Architects:	PODA
Photographs:	PODA
More information:	poda1.com



151 Rue de Faubourg Poissonnière

Paris, France

With fewer people owning cars, the once dominant parking garage is no longer king of the city. But instead of simply demolishing these old structures to make way for new projects, innovative architects like Laurent Niget are converting car parks into state-of-the-art apartments. At 151 rue du Faubourg-Poissonnière in Paris, an address once occupied by two Haussmann-style buildings and a parking garage, he has created an architecturally striking

housing project. By renovating and repurposing the existing buildings, Laurent Niget was able to create more units than would have been possible with a traditional demolition-reconstruction approach. The result is an industrial-styled building featuring an internal courtyard, exposed concrete beams, and open plan living spaces. Its stainless steel façade, made from Aperam's standing seam stainless steel cladding, gives the historic buildings a futuristic appeal, brings light to the courtyard and perfectly reflects the many trees lining the grounds.



Environment:	urban
Use:	panel façade
Material:	304 with a 2B - Uginox Mat
Fabricator:	Raimond
Manufacturer:	Aperam
Architects:	Atelier d'architecture Laurent Niget
Photographs:	David Boureau
More information:	aperam.com



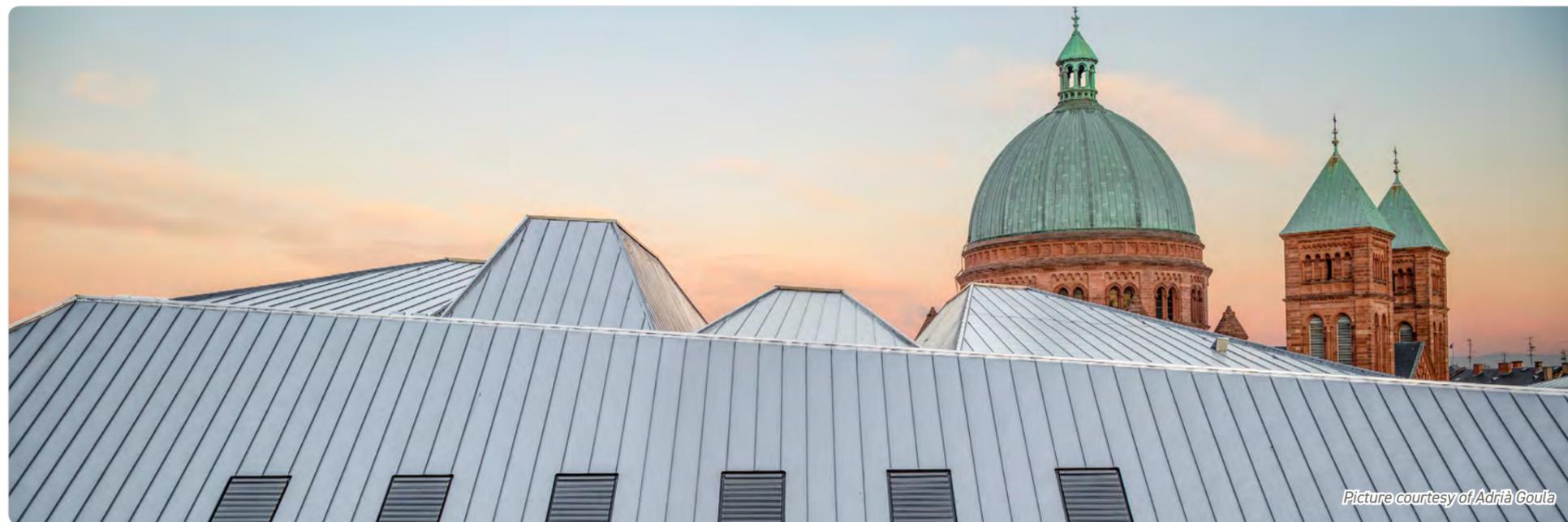
Court of Strasbourg

Strasbourg, France

Built in 1898, the massive sandstone Palais de Justice is one of the most recognizable buildings in Strasbourg's historic Neustadt district. However, to remain viable as a court, more space was needed. So, between 2014 and 2016, this architectural icon was transformed into a modern, 21st century courthouse – all while maintaining its classic 19th

century charm. The renovations included expanding the building's surface area by 60%. But the extension is more than just an annex, it's a bold statement of modernity. Although the new section is set back from the street, it is by no means hidden. Thanks to an abstract, origami-like stainless steel roof, the court's new addition mirrors the classic architecture of the past while magnifying the building's commitment to the future.

Environment:	urban
Use:	roof
Material:	304 with a Uginox TOP finish
Manufacturer:	Aperam
Architects:	Garcés De Seta Bonet Arquitectes & Serra Vives Cartagena Arquitectes
Photographs:	Adrià Goula
More information:	aperam.com



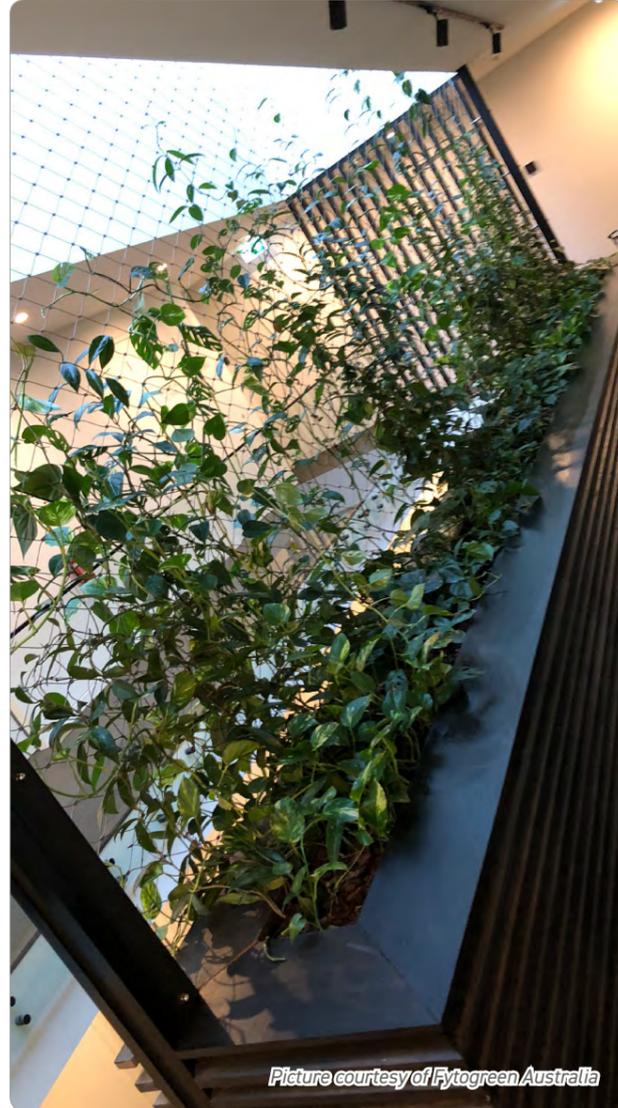
Riversdale

Melbourne, Australia

Six two storey apartments form the northern façade, with individual access provided from the street, as well as the ground floor. The repetition of the angled hoods creates a rhythm and helps direct pedestrians to the main entrance at the centre of the building. Operable timber screening delivers privacy from the street and creates a sense of depth through layering.

The third floor recedes into the building and is almost hidden by the metal clad angular boxes which project out above it. The recessive nature of the third floor allowed an additional storey to be added to the development as it is effectively acts as a negative level.

Environment:	urban
Use:	green façade
Material:	316
Fabricator:	Fytogreen Australia
Manufacturer:	Jakob Webnet Mesh
Architects:	Ewert Leaf
Photographs:	fytogreen.com.au
More information:	fytogreen.com.au



104 Rue Gambetta

Nantes, France

Nantes' new Gambetta housing complex features a stainless steel-enhanced façade that mirrors the contemporary while reflecting on the natural. Designed by architect Philippe Dubus, the building brings together 56 social housing units, a nursery, a rehabilitation unit and a number of administrative offices to create a new urban icon in the city's historic center. All of the building's façades are adorned with

cladding sheet steel strips and lacquered panels, between which slides screen walls, shutters and stainless steel panels. This unique use of stainless steel resembles a curtain, which not only gives the building a cutting-edge contemporary feel, it also reflects the surrounding forests and natural light. The project, which utilises Aperam's 304L grade with Uginox Bright Finish, won the 2018 Eiffel Trophy for Steel Architecture in the 'Living' category.

Environment:	urban
Use:	panel façade
Material:	304L with a BA - Uginox Bright finish
Fabricator:	Raimond
Manufacturer:	Aperam
Architects:	Philippe Dubus
Photographs:	Sergio Grazia
More information:	aperam.com



520 West 28th

New York, United States of America

520 West 28th has transformed the architectural landscape in New York's West Chelsea with its striking glass and nickel-containing stainless steel façade. The 11-storey, luxury residential building was designed by the late British-Iraqi and Pritzker Prize winning architect, Zaha Hadid, known for her abstract and circular form designs. Located along High Line Park, the surrounding urban landscape was the main inspiration for the building's design.

Unique to this L-shaped development is the split-level configuration and the façade's curves. The



Type 304 (UNS 30400) stainless steel features a blackened finish achieved by an antiquing process, light orbital brushing and hand tinting. The panels were engineered, cut, welded and installed by Philadelphia-based fabrication group, M. Cohen and Sons. Over 350,000 man hours were invested to produce these and bring the architect's vision to life.

Stainless steel's functionality and durability provide a long-lasting solution. Its aesthetic appeal made it the material of choice to create the striking visual impact. In addition, stainless steel was specifi ed

to adapt it to its historically industrial Chelsea neighbourhood. The building offers 39 loft-like units with amenities such as automated- valet car parking, a 23 metre sky lit swimming pool and New York city's only private IMAX theatre.

Environment:	urban
Use:	panel façade
Material:	304 with a blackened finish
Fabricator:	M. Cohen & Sons
Architects:	Zaha Hadid Architects
Photographs:	Hufton+Crow
More information:	zaha-hadid.com



Nova Housing

Strasbourg, France

The avant-garde Nova collective housing unit in Strasbourg is proof that creativity can prevail even when working within the most demanding constraints. Instead of the uninspiring buildings of yesterday, TOA architects have built a modern building that redefines collective housing. Nova's defining feature is its use of bright annealed stainless steel cladding from Aperam, whose accordion-like pleats add a unique textural element to the design while also reflecting the surrounding environment.

Environment:	urban
Use:	panel façade
Material:	304 with a Uginox Bright surface finish
Manufacturer:	Aperam
Architects:	TOA architectes associés
Photographs:	Frédéric Delangle
More information:	aperam.com



Liverpool Plaza Toreo Parque Central

Mexico City, Mexico

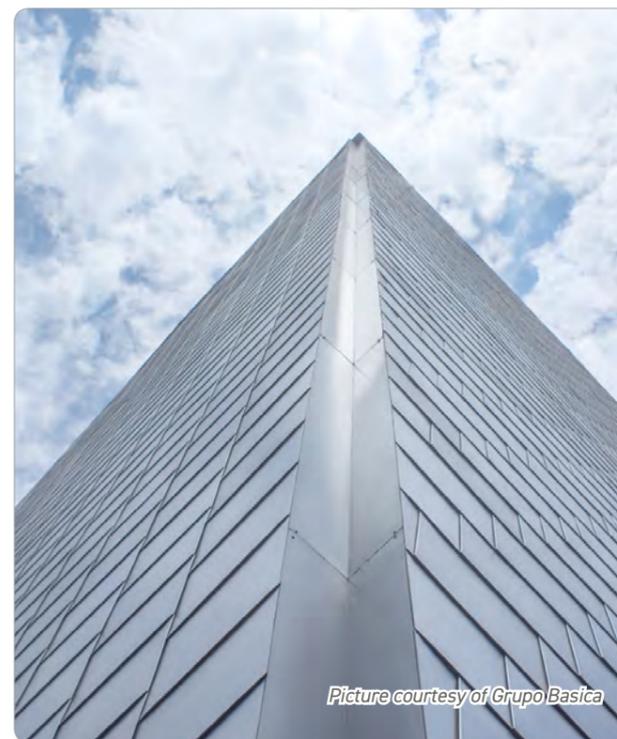
The façade of Liverpool Plaza Toreo Department Store is located on the Periferico Freeway, a road that connects Mexico City with Naucalpan, State of Mexico, and the busiest road in Mexico City. The façade is very visible for drivers that can view the different tones of the façade gets depending on the day light.

The way to assemble, a flat-lock system, seems as if they were fish scales. This technique of mechanical union avoids the use of welding, adhesives, sealants or liquid elements that could fail and stain the façade by draining them. This arrangement makes the façade waterproof since it allows the water to flow freely over the surface without entering the building, guaranteeing the watertightness. Also, fish scales is very attractive visually and undoubtedly attracts the

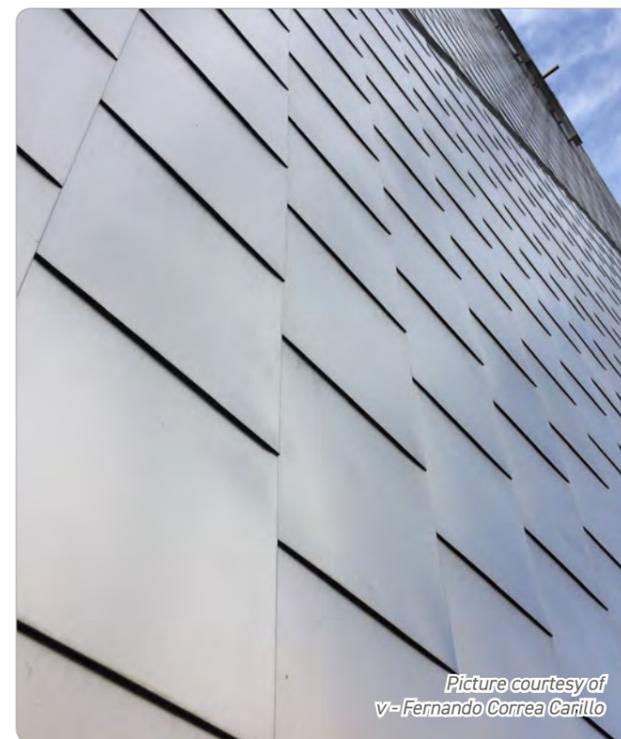
attention of people passing through the place. Liverpool Plaza Toreo is the only stainless steel façade of these dimensions in the metropolitan area of Mexico City and the second in the State of Mexico, the first is also of Liverpool Department Store but is located in Interlomas Mall in Huixquilucan State of

Mexico. In this way, this façade is a great promoter of stainless in façades, as it is the only one of its kind in Mexico City and located on the busiest road in this city.

Environment:	urban
Use:	panel façade
Material:	316L with a 2B finish
Architects:	Grupo Basica
Photographs:	Grupo Basica / Iminox-F. Correa Carrillo / Iminox-G. Asoka Guadarrama
More information:	iminox.org.mx



Picture courtesy of Grupo Basica



Picture courtesy of
v-Fernando Correa Carrillo



Picture courtesy of IMINOX - Gabriel Asoka Guadarrama

Redman Road Plaza

Dee Why, Australia

Redman Road Plaza was identified as a key open space and a recreational hub on the western side of Dee Why Town Centre. From concept design, design development and community consultation, Tract provided fill construction documentation of the park in early 2016. Redman Road Plaza was opened in late 2017.

The closure of Redman Road from Fisher Road to Mooramba Road has created a local destination. Redman Road Plaza was designed as a shareway, providing pedestrian friendly space whilst allowing service access to adjoining private businesses and properties. Redman Road Plaza forms a visual termination point providing an outlook for adjoining properties. The southern frontage will offer excellent outdoor dining with year round solar exposure.

Key design elements include;

- Shared zone 10 km/hr
- Formal entry with water feature
- Gateway artwork
- Central catenary lights
- Hanging gardens



Environment:	urban
Use:	main body
Material:	316
Fabricator:	Fytogreen Australia
Manufacturer:	Jakob Webnet Mesh
Architects:	Tract Consultants
Photographs:	Fytogreen Australia
More information:	fytogreen.com.au



The Heart of Malta

Goza, Malta

Tieqa Żerqa, more popularly known as the Azure Window, was an icon of the Maltese islands. Following a storm in March of 2017, the arch collapsed into the sea, and there was no way to restore it.

The Heart of Malta is a polygonal architectural form with mirrored stainless steel faces, which will blend into the landscape, and have the same size and proportions as the original limestone arch. Within this form the designer has designed over 5,000

square meters of exhibition space laid out over five spiral floors, with a dynamic laser show in which each spiral step represents one thousand years of Maltese history. For the project, we propose to make use of the latest techniques and materials available in architecture and shipbuilding to reflect the environment of Dwejra, which will enable us to bring the project to reality while preserving the existing natural coastal landscape. The design was officially submitted to the Maltese authorities at the beginning of 2019.

"It will be a perfect monument and symbol of the

fusion of modernity and nature, of time and history, and a testament to the tenacity of the human spirit."- Svetozar Andreev.

Environment:	marina
Use:	panel façade
Material:	mirror polished stainless steel
Architect:	Svetozar Andreev
Photographs:	Svetozar Andreev
More information:	hotei-russia.com/ theheartofmalta



Phra Maha Chedi Tripob Trimongkol

Hat Yai, Thailand

Although Phra Maha Chedi Tripob Trimongkol is touted to be one of Hat Yai's top tourist attractions, don't be surprised when locals give you a blank stare when you ask them for directions to this Stainless Steel Temple. Hat Yai, and in general Thailand, has way too many wats and temples, after all.

Located on the summit of a hill approximately 45 minutes' drive east from Hat Yai city centre, this world's first stainless steel temple is interesting to visitors who are religiously inclined. It is said that the temple looks more alluring at night.

The base of the stainless steel pagoda (or stupa) is made up of circular-shaped chambers that depict the days of the week. Each circular has been installed with one or two Buddhist deities and framed photographs on the wall.

On ground level, you can see two circular stairs to the top of the pagoda. On the upper level within the bowls of the pagoda are more stainless steel structures. Similar to the ground level, these too indicate time, in the form of Year and Month.

A visit to Phra Maha Chedi Tripob Trimongkol does not require too much time. However, once you are there, you would want to stay longer to enjoy its tranquility, especially on the upper level of the pagoda.

Environment: rural
Use: main structure
Photographs: emily2u.com
More information: emily2u.com





Help

Help page

Contents page.

Previous page.

Next page.

Previous view.

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The International Stainless Steel Forum (ISSF) is a non-profit research and development organisation which was founded in 1996 and which serves as the focal point for the international stainless steel industry.

Who are the members?

ISSF has two categories of membership: company members and affiliated members. Company members are producers of stainless steel (integrated mills and rerollers). The association has 56 members from all over the world and currently represents approximately 90% of the total production of stainless steel.

More information

For more information about ISSF, please consult our website worldstainless.org.

For more information about stainless steel and sustainability, please consult the sustainablestainless.org website.

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