



Case study

Bus depot Grüzefeld in Winterthur, Switzerland

Roof:

- 7'000 m² SWISS PANEL® SP 44, 0.70 mm in polyester 25my RAL 9006

Facade:

- 1'200 m² MONTAFORM® Design 110-4/800, 0.80 mm in stainless steel

Builder:

City of Winterthur

General contractor:

Baltensperger AG, Seuzach, Switzerland

Architects:

BDE Architekten, Winterthur, Switzerland

Facade / roof:

Covra Metall AG, Goldach, Switzerland

Supplier stainless steel:

Aperam Stainless Europe SA

Realisation: 2013 - 2014

“MIRROR, MIRROR ON THE WALL – WHO’S GOT THE FAIREST DEPOT OF THEM ALL?”

Almost as beautiful as Snow White in the fairy tale of the same name, there is now a new star on the architectural skyline, shining in the east of Winterthur – the new bus depot «Grüzefeld» for the modern vehicle fleet of «Stadtbus Winterthur».



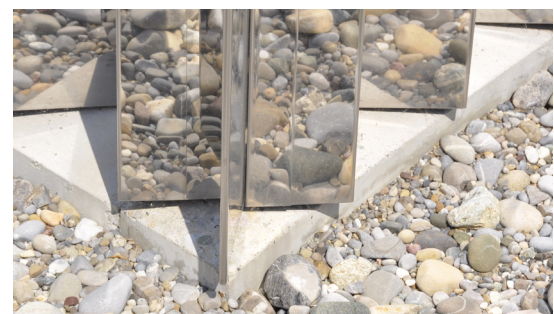
With the renovation of the former depot from the sixties and the planned adjacent extension, the building owners set their standards high as from the tendering procedure. In a two-stage overall service competition, an architectonically attractive and representative solution was aimed at, uniting the bus depot and the administration under one rook on one central site. Due to the constant expansion of the bus network and the associated extension of the vehicle fleet to currently almost 90 vehicles, the former locations and parking halls have become too small over the past years. A distinct commitment to renewable energy is demonstrated by the photovoltaic system planned for installation on the roof of the new building.

The team 'Volt', consisting of the BDE architects from Winterthur and the general contractor Baltensperger AG from Seuzach, with its comprehensive and detailed specifications, was able to claim victory in the demanding competition. One of the decisive factors here was the well thought-out concept regarding the implementation of the PV unit in the roof of the new building: "In deviation from the known sawtooth roof principle, we decided to mirror the conventional geometrical sawtooth roof, thus aligning the steep side of the roof to the south instead of the north. This enabled us to integrate the photovoltaic system into the shape of the

roof with ideal inclination angles. Therefore, the architecture of the bus station is based on its function as a solar power plant", Philipp Brunnschweiler, co-founder and partner of BDE Architects explains. The silhouette of the roof in serrated shape has also been transferred to the entire building, thus expressing a uniform architectural language. Therefore, the walls of the depot are also designed in the characteristic zigzag formation.

The wish of the building owners was always present to position a unique and unmistakable building in the middle of an area distinguished by industrial companies and major distributors. With the new building of the bus depot it came true. This wish reflects – in the most literal sense of the word – in the high-gloss chrome steel facade, which sets an architectonic exclamation mark with its appearance. When selecting the cross-sectional shape of the facade cladding, the lively shape of the roof was taken into account: with its form and unique character, the edged profile MONTAFORM® Design 110-4/800 from Montana Bausysteme AG with its distinct zigzag shape exactly fitted in with the ideas of the architects and building owners. In conjunction with the chrome steel material 'UGINOX Bright K36' it gives the bus depot a three-dimensional form and crystalline character.

"Depending on the viewing angle, weather and time of day, the building has different effects due to the interaction of the reflections in the facade – but is always maintains its sophisticated and fascinating appearance" the architects from BDE confirm. "The selected chrome steel material upgrades the facade, but still keeps up the industrial character and is also permanently resistant to corrosion and other environmental influences, which ensures long-term value preservation."

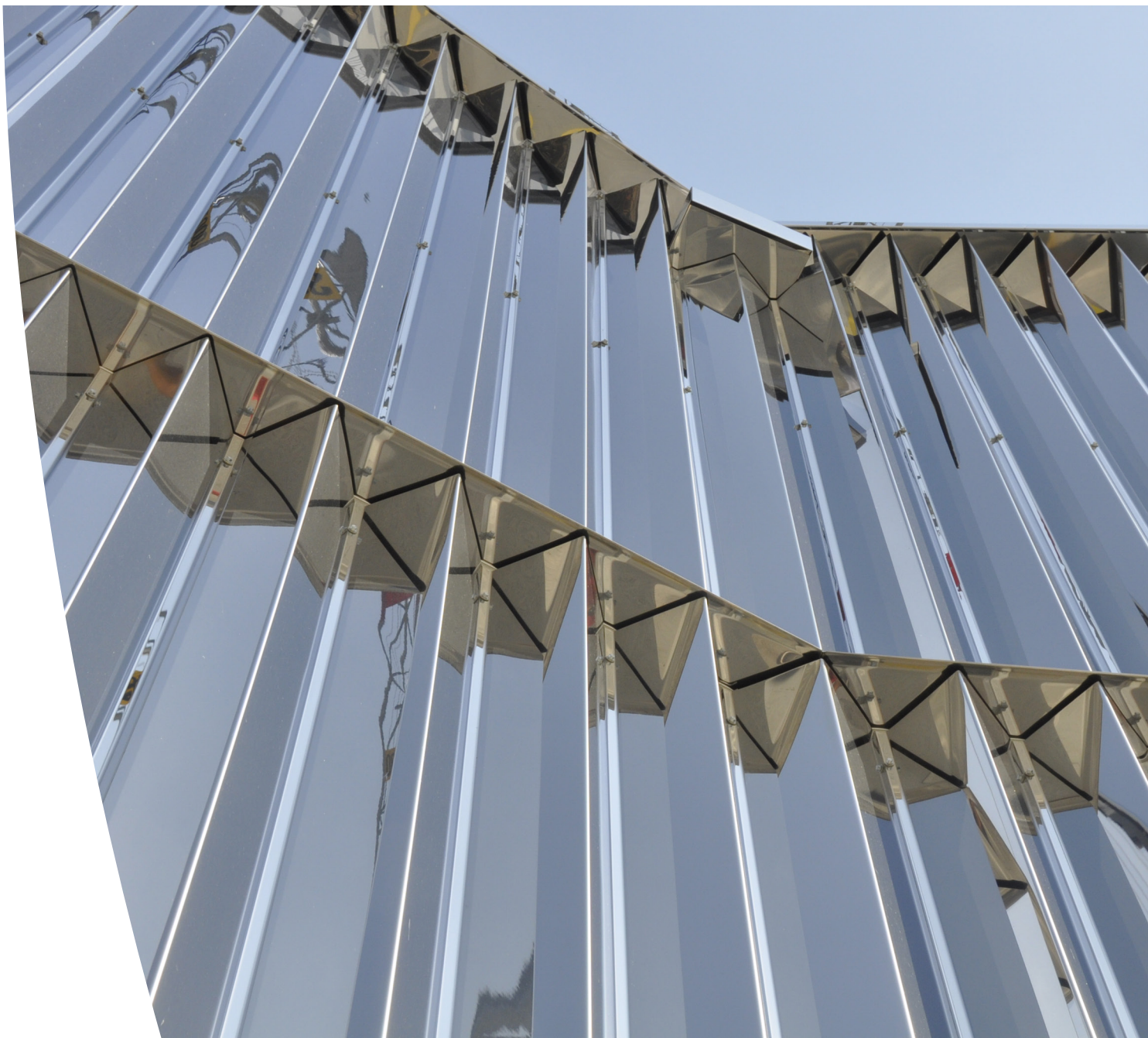


The MONTAFORM® Design profile line enables the normally impossible balancing act between industrial sheet metal facade cladding and individual design possibilities. Due to these merits and an optimum cost-benefit ratio, architects and building owners are increasingly deciding on such individualised profile shapes to give their buildings an extraordinary and unique appearance. Upon request and after a previous feasibility check, Montana Bausysteme AG manufactures unique profile shapes, originating from the creativity of facade planners or architects. The most diverse profile shapes, different materials/ material combinations, an enormous colour and coating versatility and various perforation options enable the realisation of visions. Numerous recent reference objects verify this fact and illustrate that Montana Bausysteme AG, with its extensive know-how and

excellent technical support, is the preferred partner for the realisation of prestigious buildings such as the bus depot «Grüzefeld» in Winterthur, for instance.

Such a superior facade cladding sets high demands on installation, of course. Urban Thaler from Covra Metall AG in Goldach, who accompanied the project over a period of almost three years as project manager from conception to execution, confirms this. "The façade segmentation and formation of the corner details were exactly coordinated to the cover widths of the metal profile sheets. Due to the necessary strict adherence to spacing an exact production of the profiled sheets while adhering to the most minimal production tolerances was required. These high requirements were able to be optimally fulfilled by Montana Bausysteme AG". Necessary sheet metal processing for the

formation of end sections such as on the ridge, for example, where hundreds of metres of oblique cuts needed to be made, had to be done with special tools. The fastening of the profiled sheets to the substructure took place using specially made high-alloy stainless steel bolts (V4A quality). The consideration of such special features requires the commitment of an experienced company such as Covra Metall AG. With the competence of more than 20 years of experience in the realisation of sheet metal facade and roof construction, not only the facade but also the roof covering of the bus depot was to be planned and executed with SWISS PANEL® SP44 trapezoidal profiles without any difficulty.



The building owner, the municipality of Winterthur, was able to find an elegant solution for its former space problems with the new attraction in public transport. Thanks to the respectful renovation of the existing depot and the newly added station hall there are available 1000 m² of additional office space for the administration and 6000 m² of useable area for the vehicle fleet. Due to the selected building method with steel construction visible from the inside in conjunction with pre-fabricated wooden elements, an industrial hall and an office building in one were able to be created. This architectonic expression is deliberately

increased by the selected form of facade cladding from the industrial sector by combining it with the high-gloss chrome steel material 'UGINOX Bright K36'. This gives the building the desired high-quality appearance and individual character.

With the completion of the new bus depot «Grüzefeld», Winterthur underlines its ambitious claim to developing further towards an architectural metropolis. The answers to the initially asked questions should therefore have now been able to be clearly provided.



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www.montana-ag.ch

MONTANA BAUSYSTEME AG

Durisolstrasse 11
CH-5612 Villmergen

T: +41 56 619 85 85
F: +41 56 619 86 10
E: info@montana-ag.ch

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