SICURPAL

OUR

REFERENCES

Sicurpal®

“Fall protection systems are essential to protect the lives of workers at height.

However, this is true only for systems that comply with high standards. Our technicians plan the systems with quality products, while our installers mount them and verify the fastening."

Giampiero Morandi
Founder and C.E.O. of Sicurpal srl

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Rachele Tassi’s Cover Image

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Introdutction

This document shows a few relevant and representative works made by Sicurpal to ensure safety at height.
We offer costumer-oriented solutions both to fulfill customer needs and cover every field of application. Historic and cultural buildings, residential constructions, industry sector, green roofs.
Sicurpal ensures safety and protection of workers' lives striving tirelessly to achieve excellence in quality and creating new effective and efficient products.
Workers' issues are our own issues, therefore we work every day to defend the life of every worker at height.

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British School, Rome

The valley that lays in between the Parioli district and the Borghese Gardens, named Valle Giulia, hosted the International Exhibition of Art in 1911 to celebrate the 50th anniversary of the unification of Italy. On the following year, the British Pavilion designed by British architect Sir Edwin Lutyen was taken over by the British School at Rome, becoming an official research centre for archaeology, history and fine arts.

COSTUMER'S NEEDS

On the occasion of a major project concerning energy rehabilitation of the building and in order to secure future maintenance works, the customer needed a fall protection system. The request was to secure the roofs of the East, North and West wings on the back of the frontal pavilion, which surrounded the internal courtyard in a C-shape. The British School appointed Sicurpal for this challenge.
However, due to the artistic and cultural value of the building, it was mandatory to install a fall protection system with a very low visual impact so as to not impair its external esthetic.

SOLUTION

LVBD is the perfect solution for historic and cultural buildings thanks to the high quality of its material (AISI Type 304 Stainless Steel), its small dimensions, and its particular installation under the ridge tiles, which ensures an almost complete invisibility of the anchor. Should a fall occur, the fall energy is distributed on the whole structure thanks to the extreme flexibility of the LVBD plates.

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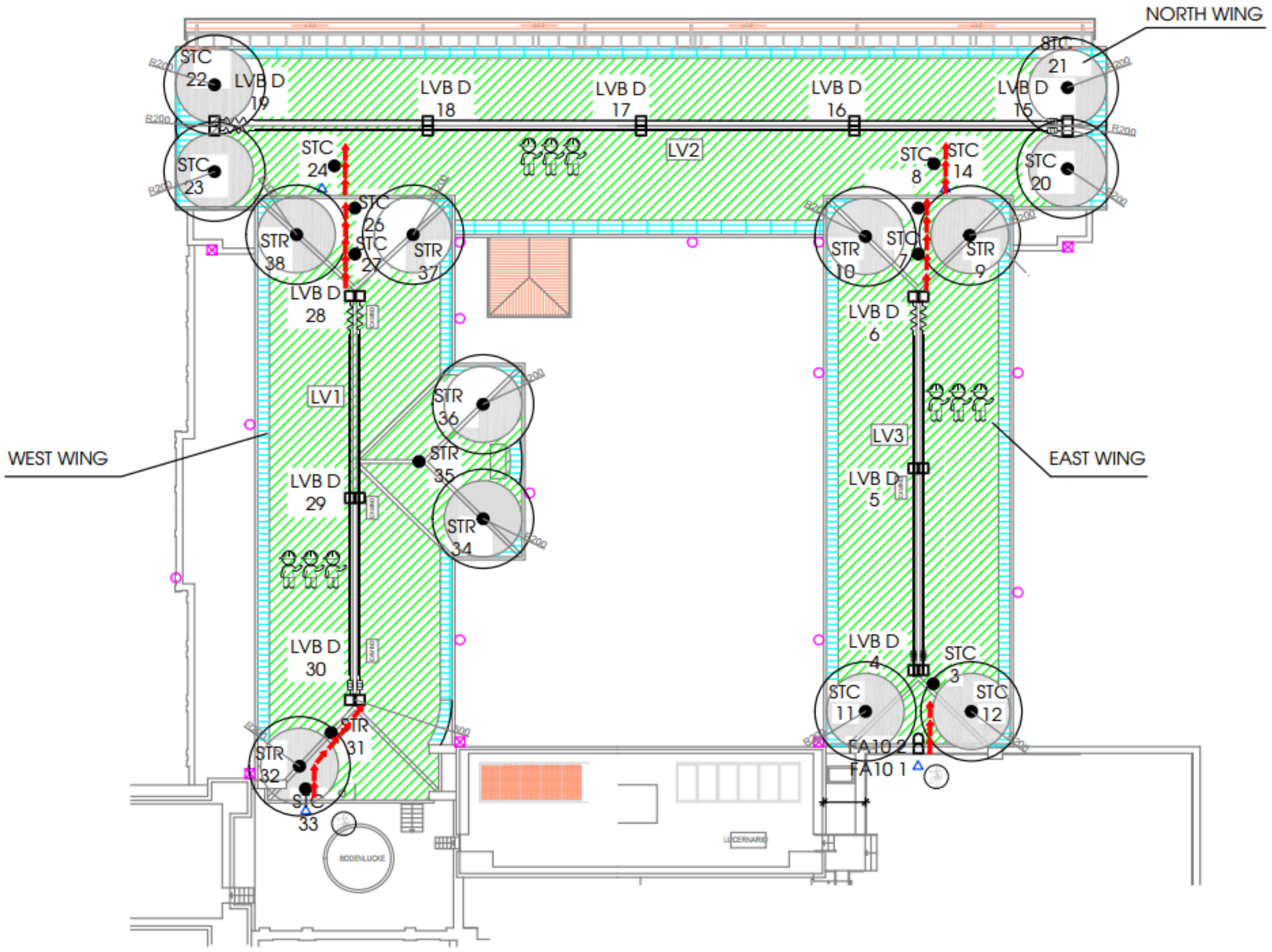
This feature avoids any damage to the roof.
Moreover, the double LVBD lifeline allows users to work on both gables of the roof while using only one anchor.
In order to solve the problem of the reduced load-bearing capacity of the supporting structure, Sicurpal installed load distribution plates on two beams to create the adequate support for the installation of all anchor devices.
The double anchor plate LVBD has been installed under all three ridges in order to create three separate lifelines, totaling 11 plates. Single anchor points are now installed in the roof corners in order to solve pendulum effect: STC devices were installed under roof tiles, while STR devices were placed both on gables and on the roof of the protruding part of the Western wing.
In order to secure the walkway from the access point (i.e. the flat roof of the frontal pavilion) to the lifeline, Sicurpal installed fall arrest eyebolt anchor points.

British School, Rome

Project



KEY	
●	Pole device
▨	Plate device
—	Lifeline
⊣⊢	Spanner
∿	Shock absorber
⌂	Eye bolt
◎	Access point

EXPLANATIONS

- AREA WITH PARTICULAR SAFETY PRESCRIPTIONS
- AREA WITHOUT RISK OF FALLING
- UNSAFE AREA
- AREA WITH RISK OF FALLING
- AREA WITH PREVENTED FALLING
- PATHWAY

Max. one person for each fall protection device of type A (FA-10, STR, STC)

Max. three persons for each fall protection system with fall protection devices of type C (LVB-D)

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UAE Pavilion, Expo 2015, Milan

For the world's fair hosted by Milan in 2015, the British Architect Norman Foster designed the United Arab Emirates Pavilion. The elegant and highly sustainable building was completely demountable and fully covered with gardens on the top, with a sand dune-inspired structure.

COSTUMER NEEDS

Gardens fully cover the building. The roof is a mix of tradition and sustainable technologies. However, green roofs need frequent maintenance and their form should not be changed by any system not included in the architectural plan. Moreover, a green roof requires a particular type of fall protection that does not change the structure, nor damage the roof.
Being the building fully covered with gardens, Sicurpal has been asked to install a lifeline that did not require any penetration in the roof.

SOLUTION

To protect workers' lives, Sicurpal developed PTV, the freestanding fall protection system designed for green roofs.
Operators install the product without penetrating neither the waterproofing nor the roof structure.

All parts of the PTV system embed directly into the green roof system, so to exploit the superimposed load generated by each device.

When a fall occurs, the system reduces considerably the forces transmitted to the anchor points by distributing the load over the entire line. The PTV by Sicurpal is not only the safest cable fall protection system on the market, but also the less invasive. For such reason, it was the best solution matching both esthetical and safety requirements for the roofs of this pavilion.

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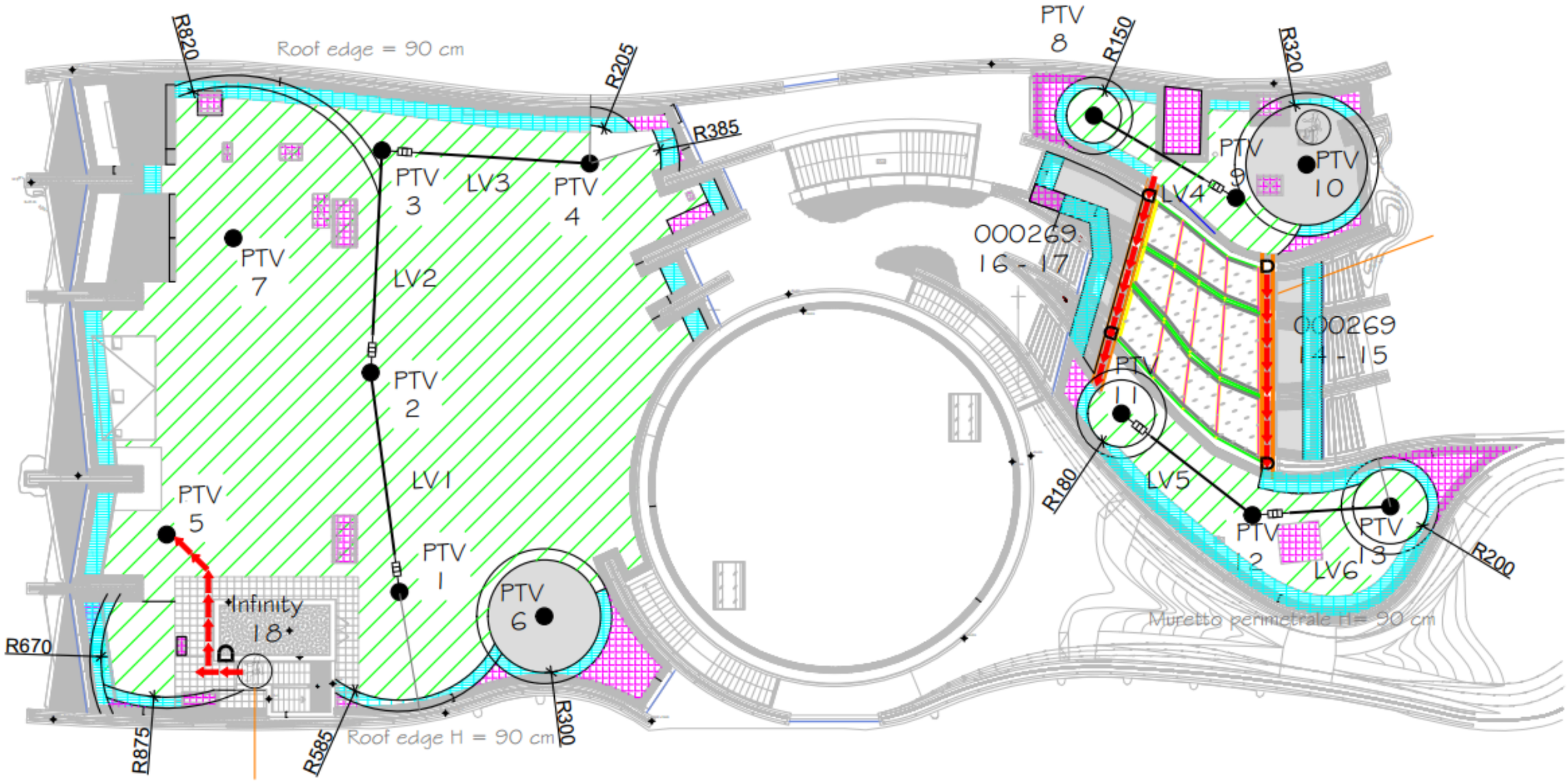
UAE Expo 2015 Pavilion, Milan

Project



KEY	
●	Pole device
—	Lifeline
⊢⊣	Spanner
D	Eye bolt
⊙	Access point

EXPLANATIONS

- AREA WITH PARTICULAR SAFETY PRESCRIPTIONS
- AREA WITHOUT RISK OF FALLING
- UNSAFE AREA
- AREA WITH RISK OF FALLING
- AREA WITH PREVENTED FALLING
- PATHWAY

Max. one person for each fall protection device of type A

Max. two persons for each fall protection device of type A

Max. three persons for each fall protection system with fall protection devices of type C

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Italgraniti

Italgraniti Group, Reggio Emilia

An important plant located in Reggio Emilia is part of the company Italgraniti Group, a dynamic and innovative institution in the field of ceramics.

COSTUMER NEEDS

The mandate includes ensuring the safety of a particular area of the factory. Maintenance of the shed-roof, installation of bird protection nets as well as PV panels were the reasons for this operation. Sicurpal has been asked to provide a lifeline that did not clutter the narrow passage between sheds while ensuring safety on the slippery metal sheet roofing.

SOLUTION

Sicurpal decided to use different types of anchor points among which Sicurlam, Shed Line plates installed on walls, and a rail system. The latter has been installed in the narrow passage between sheds: its flexibility and compactness provided the ideal solution to customer needs and, thanks to its sliding trolley, it allows workers to move smoothly and fast.

Due to the significant length of the roof, Sicurpal installed both a simple ladder and a ladder with safety cage on both sides of the building, in order to provide a safe and comfortable access to the roof whenever needed.

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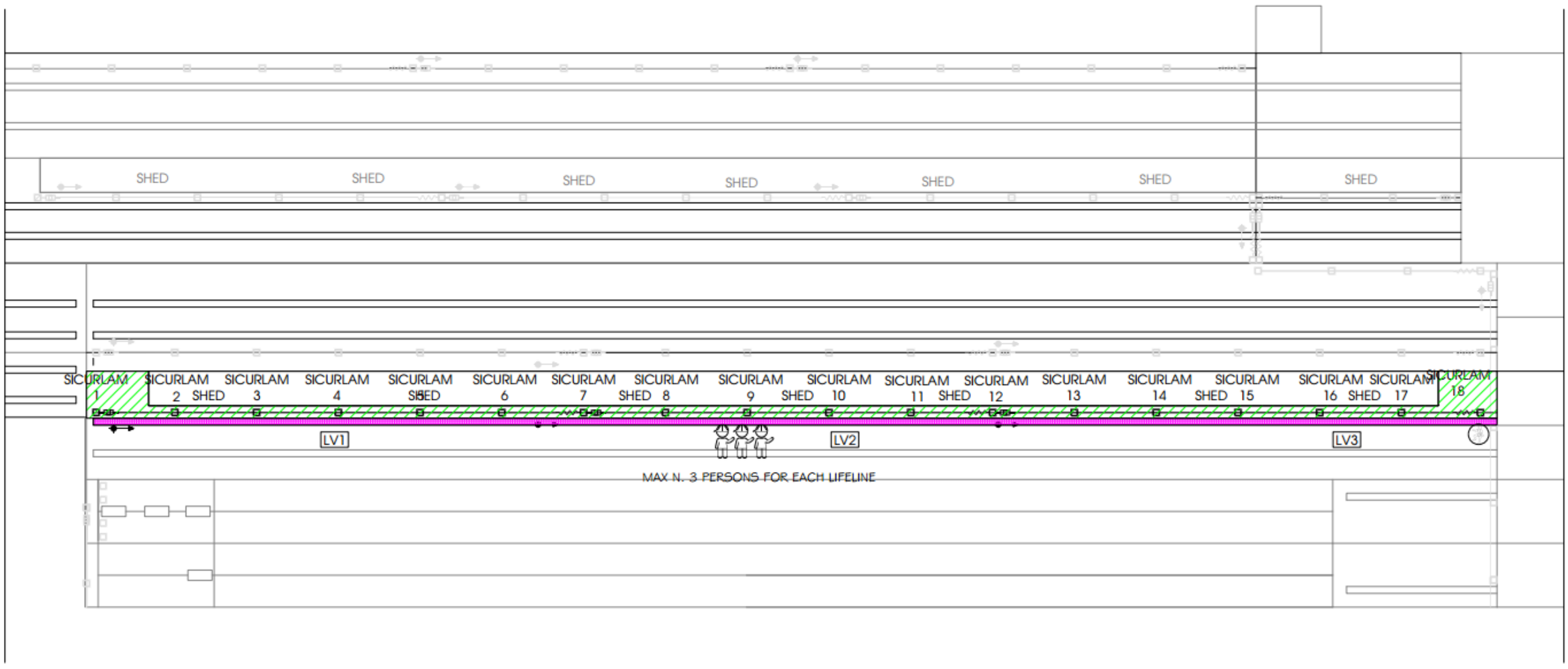
Italgraniti Group, Reggio Emilia

Projects



KEY	
☐	Platte
⟷	Begin
—	Lifeline
⊟	Spanner
∿	Shock absorber
⊛	Access point

EXPLANATION

AREA WITH PARTICULAR SAFETY PRESCRIPTIONS

AREA WITHOUT RISK OF FALLING

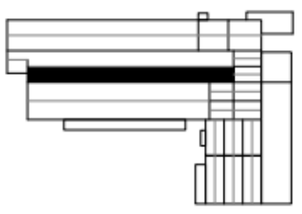
UNSAFE AREA

AREA WITH RISK OF FALLING

AREA WITH PREVENTED FALLING

Max. three persons for each fall protection system with fall protection devices of type C

02 - Part 3



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Residenza Più, Giubiasco

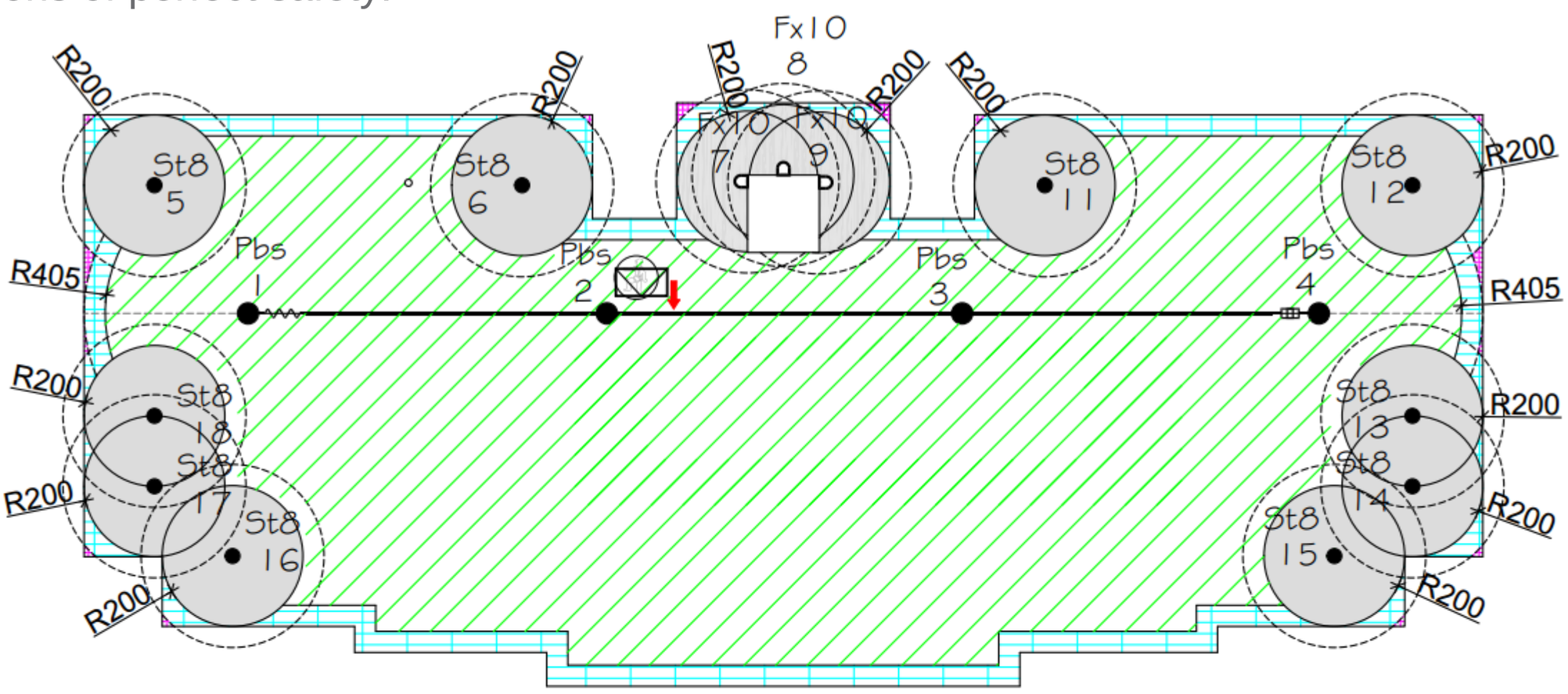
The works concern three identical residential buildings with flat roofs covered with gravel. The buildings are located in Giubiasco, in Switzerland's Ticin Canton, and all have plan roofs.

COSTUMER NEEDS

Sicurpal, together with Visetti Isolazioni Company, has been asked to secure the three identical roofs through three fall protection systems. The customer wanted the operators at height to make all kind of maintenance works in conditions of perfect safety.

SOLUTION

Sicurpal decided to use different types of anchor points. Among these there are type C devices used for lifelines, namely PBS, and type A devices used to solve pendulum effect, namely ST8.
The components have been fixed through threaded rods and bicomponent resin. Afterwards, the devices have been waterproofed and the nearby areas covered with gravel again. In addition to the lifeline system and the protection devices preventing pendulum effect, Sicurpal installed a guardrail around a skylight and some extra F10 anchor devices of type A on walls.



KEY	
●	Pole device
D	Eye bolt
—	Lifeline
	Spanner
	Shock absorber
	Access point

EXPLANATIONS

- AREA WITH PARTICULAR SAFETY PRESCRIPTIONS
- AREA WITHOUT RISK OF FALLING
- UNSAFE AREA
- AREA WITH RISK OF FALLING
- AREA WITH PREVENTED FALLING
- PATHWAY

Max. one person for each fall protection device of type A

Max. two persons for each fall protection device of type A

Max. four persons for each fall protection system with fall protection devices of type C

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CAM

Center for arts and crafts, Bellinzona

The school “Center for arts and Crafts” is a central element of the education system in Bellinzona.

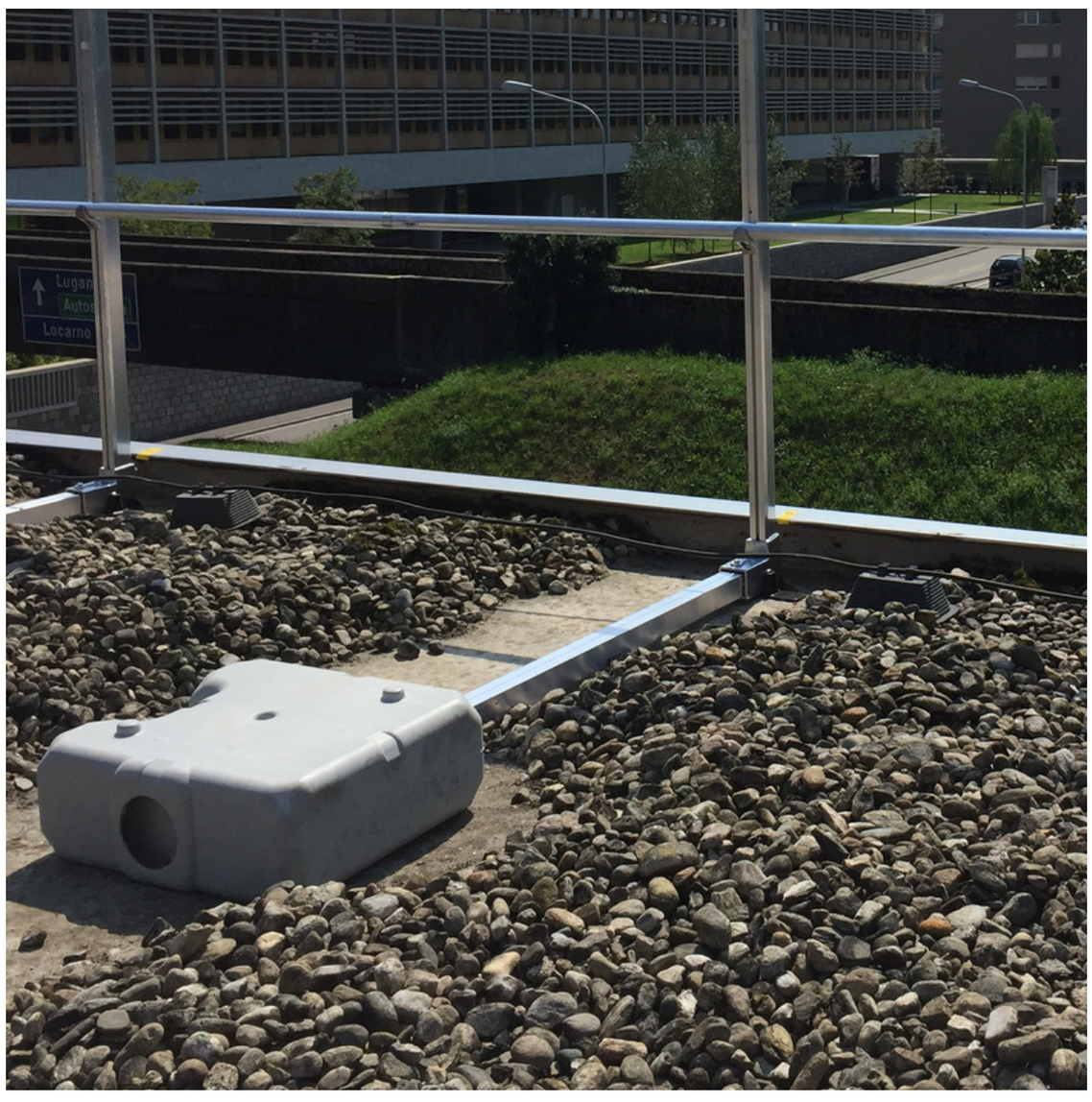
COSTUMER NEEDS

A Swiss electric company developing its renewables sources, AET, wanted to place photovoltaic systems on the roofs of the school CAM. Then, a fall protection system was necessary to protect workers during the installation and the following maintenance interventions. Besides, Sicurpal has been asked to provide a solution not including drilling in order to prevent water infiltrations.

SOLUTION

Operators can use some kind of fall protection systems without having deep knowledge of safety specifications.
Despite the easy usage, these systems do not make works at height more difficult. Collective systems, for example, allow a safe access to the roof to all kind of workers.
That is why Sicurpal installed a freestanding guardrail on the school’s roof, as it is an easy and safe solution.
Moreover, the freestanding guardrail represents a cost effective and time saving alternative to other lines, which require sealing and workers’ training.

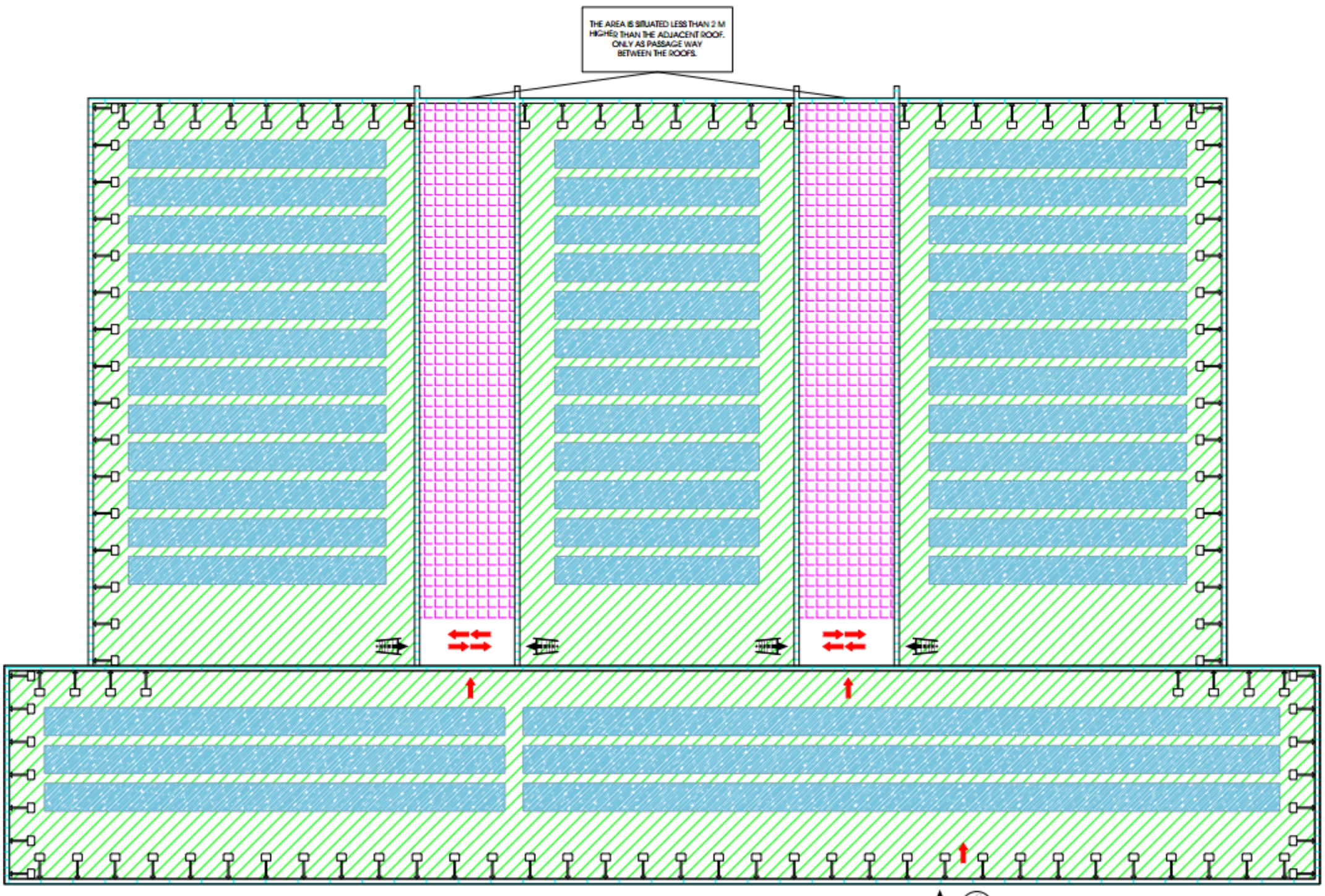
Finally, both the workers of the electric company as well as those of other companies benefits from a safe access to the roof.
In order to fill the gap between different heights, Sicurpal has positioned ladders with guardrail. The ladders allow going from one area to the other in safety conditions.



CAM, Bellinzona

Project

In order to fill the gap between different heights, Sicurpal has positioned ladders with guardrail. The ladders allow going from one area to the other in safety conditions.



KEY	
	Parapet
	Access point
	Ladder

EXPLANATIONS

- AREA WITH PARTICULAR SAFETY PRESCRIPTIONS
- AREA WITHOUT RISK OF FALLING
- UNSAFE AREA
- AREA WITH PREVENTED FALLING
- PATHWAY

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Swisscom Antenna

Richtfunkstation Swisscom, Monte Tamaro

Monte Tamaro is a 2000m high mountain located in Switzerland’s Canton of Ticino. Thanks to its numerous ski resorts, Monte Tamaro had been a famous tourist attraction until the end of the eighties. Nowadays, it is very popular among hikers and the tourist offer has changed, for example with the construction of a summer toboggan run. Given the strategic location, the telecommunication company Swisscom has Installed a telecommunications antenna to connect Ticino with the rest of Switzerland.

COSTUMER NEEDS

Helion Solar must install a photovoltaic plant on the site of the telecommunications antenna. Swisscom, which is responsible for the site, asked for a fall protection system. This is necessary to ensure safety during maintenance of the photovoltaic system despite the high slope of the roof. In addition to this, the fall protection system must be perfectly compatible with the solar power plant.

SOLUTION

The challenge was to combine the high slope of the roof, the high solar plant’s high extension area, and non-invasive fall protection system. A rigid rail fall protection allows working with two ropes and it has been chosen as the best solution because it alter the building structure only marginally.
Sicurpal planned a second rigid rail lifeline on one side to avoid pendulum effect via triangulation. Furthermore, Infinity Type A anchor devices on walls protect workers while walking from the access point to the main rail system.

The fall protection system by Sicurpal ensures safety for workers at height without shrinking the area of the photovoltaic system. For this project, Sicurpal realized tailor-made solutions thanks to the high flexibility of both planners and systems. Finally, Sicurpal performed on site structural analysis as well as tests to verify the proper functioning of the system and trained users through courses and instruction manuals.

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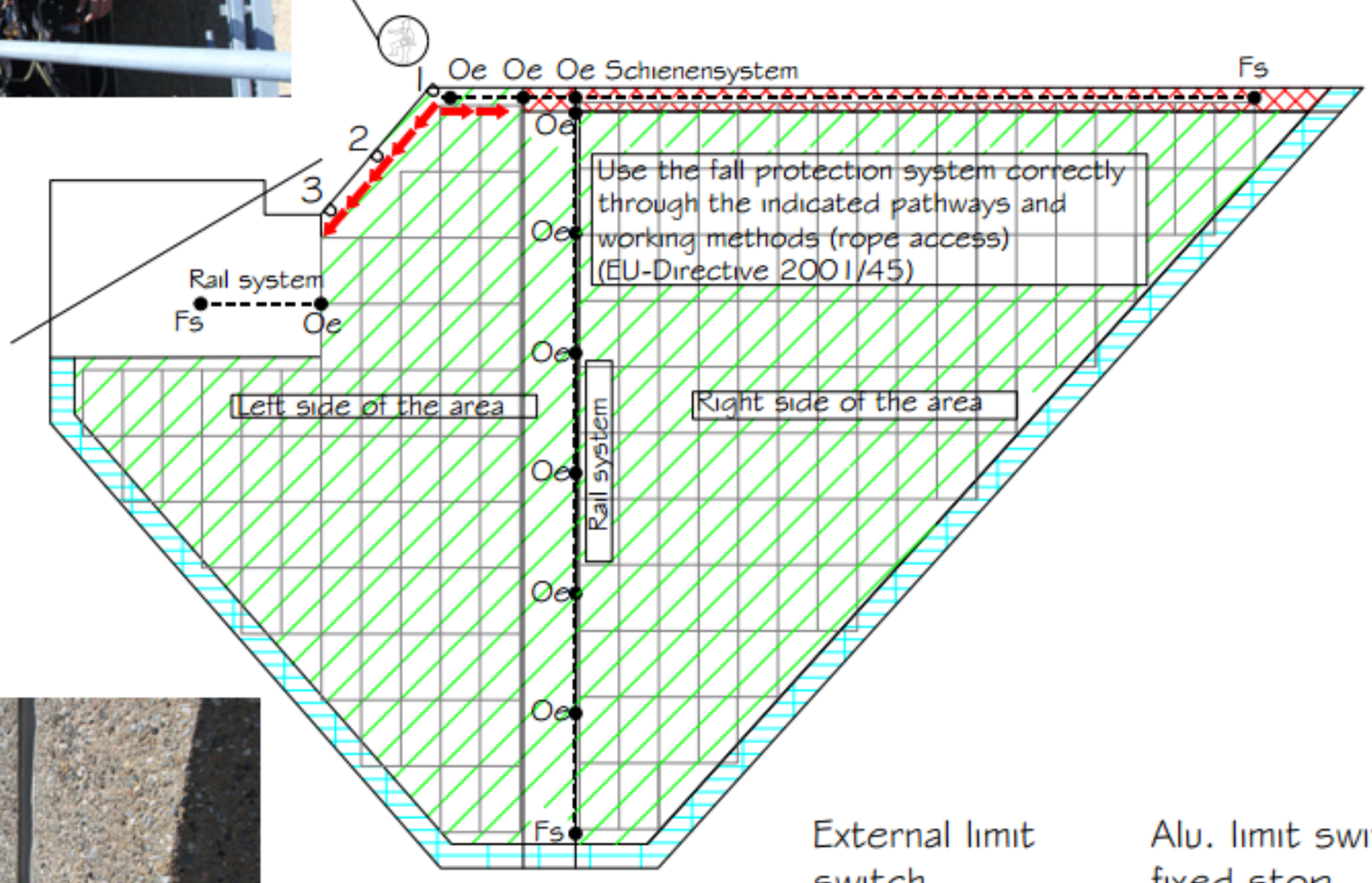
Swisscom Antenna

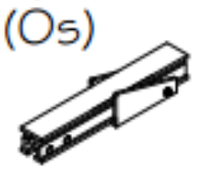
Richtfunkstation Swisscom, Monte Tamaro

Project

The operator can access the roof from the internal part of the building and must walk through an area with parapet. The operator must anchor himself to the eye bolt Infinity I using an Y-lanyard with energy absorber (EN 355) and access the roof.



External limit switch openable stop (Os)



Alu. limit switch fixed stop (Fs)

ZEICHENERKLÄRUNG

ARBEITSFLÄCHE MIT VERWENDUNG VON SEILEN (EU-Richtlinie 2001/45)

ARBEITSFLÄCHE MIT VERHINDERTEN FALL (Ungenügende Absturzhöhe bei Verwendung eines Auffangsystem)

FLÄCHE MIT ABSTURZGEFAHR, verwenden Sie Falldämpfer

STRECKE

KEY	
---	Rail system
Ω	Eye bolt
	Access point

Sicurpal®

Sicurpal

Your work is important. Your life too.

ABOUT US

Sicurpal was established in 1997. Our goal is to protect workers’safety. Therefore, we create high-quality fall protection systems and are permanently in search of new solutions for safety in the field of working at height.

KNOW HOW AND PROFESSIONALISM

We are a strong team of planners, manufacturers, installers and testers. Our fundamental and sector-specific know how allows us growth and innovation.

FIELDS OF APPLICATION

We offer you fall protection solutions in a variety of fields, from the residential to the industry sector.

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