

ALMO COLLEGIO BORROMEO PAVIA

Almo Collegio Borromeo: Restoration, Design, Retrofit, Technological and Systems refurbishment

Name of client:

Almo Collegio Borromeo

Design and Work supervision:

Studio Calvi Srl

Project managers:

Prof. Eng. Gianpaolo Calvi, Prof. Eng. Gian Michele Calvi,
Arch. Roberto Pitolini

Intervention area:

Historical building 12.770 m²

Garden 70.000 m²

Classes and categories of works

Id	€ 4.432.967,00
If	€ 90.557,00
IIIa	€ 32.904,00
IIIb	€ 255.766,00
IIIc	€ 315.225,00

Start of planning

1996

End of planning

2005

Start of works

1996

End of works

2007

DESCRIPTION OF PROJECT

The Almo Collegio Borromeo, founded by Saint Charles Borromeo, is an historical complex of unique value in terms of architectural, institutional and cultural importance. The construction of the building, designed by Pellegrino Pellegrini, dates from the second half of XVI Century. This building stands out for its architectural innovation and artistic complexity in respect to the educational facilities of the sixteenth Century. It is characterized by a quadrangular internal court with a portico and loggia on two levels and a façade with three orders. Beyond the internal courtyard is the outstanding noble garden, also known as Richini Garden.

The strategic design choices arise from the necessity to update the building to meet new standards requirements and to satisfy the need to expand the teaching activities held in the College without modifying the original constructive and decorative apparatus of the monument. The project is an example of complete design of the entire intervention (architectural, plants, structural). The complex construction site organization was defined to safeguard the course of the normal activities and not to interfere with the student life.

In terms of structures, the project faced complex problems such as the conservative restoration of the internal courtyard (static strengthening) and the scaffolding necessary for the execution of the restoration works.



Above. View of the College from Piazza del Collegio Borromeo. Works on the external façade were concentrated on the preservation and restoration of the materials, trying to stop or reduce the process of degradation.

Opposite page, above. View of the College from the Richini garden.

The drawings, essential to support the restoration, have been set on a geometric survey of the four façades carried out with the most recent photogrammetric techniques. Furthermore, a complete mapping of the pathologies suffered by the complex was created and the building was subjected to an extensive testing campaign.

Chemical and petrographic analysis were carried at the laboratory of the University of Pavia, while a campaign of ultrasonic and dynamic tests gave information about the modulus of elasticity and the density of the material contained inside the columns of the portico. The basements of the columns were really damaged and the level of degradation could have potential terrible consequences on the stability of the building. In some cases the footings of the columns needed to be completely replaced.

Works on the external façade were concentrated on the preservation and restoration of the materials, trying to stop or reduce the process of degradation. The façades of the internal courtyard have been subjected to a series of restoration works to conserve the finishing layers and to recover the original colors. Furthermore, some safety measures were taken to enhance the static behavior of some technological components.

Right up. Internal courtyard after restoration.

Right down. Replacement of the bases of the columns with a supports system in steel. The basements of the columns were really damaged and the level of degradation could have potential terrible consequences on the stability of the building.

