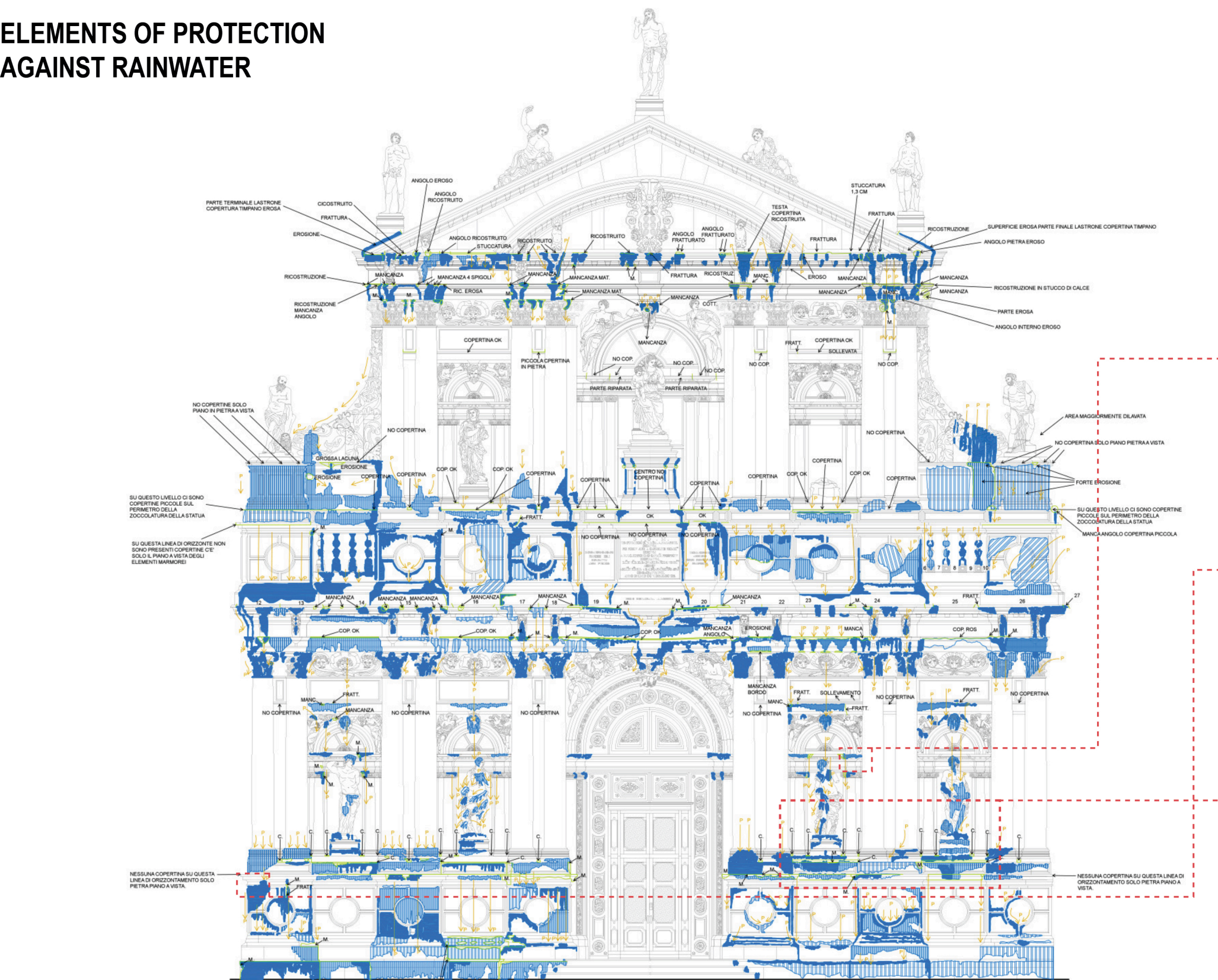


ELEMENTS OF PROTECTION AGAINST RAINWATER

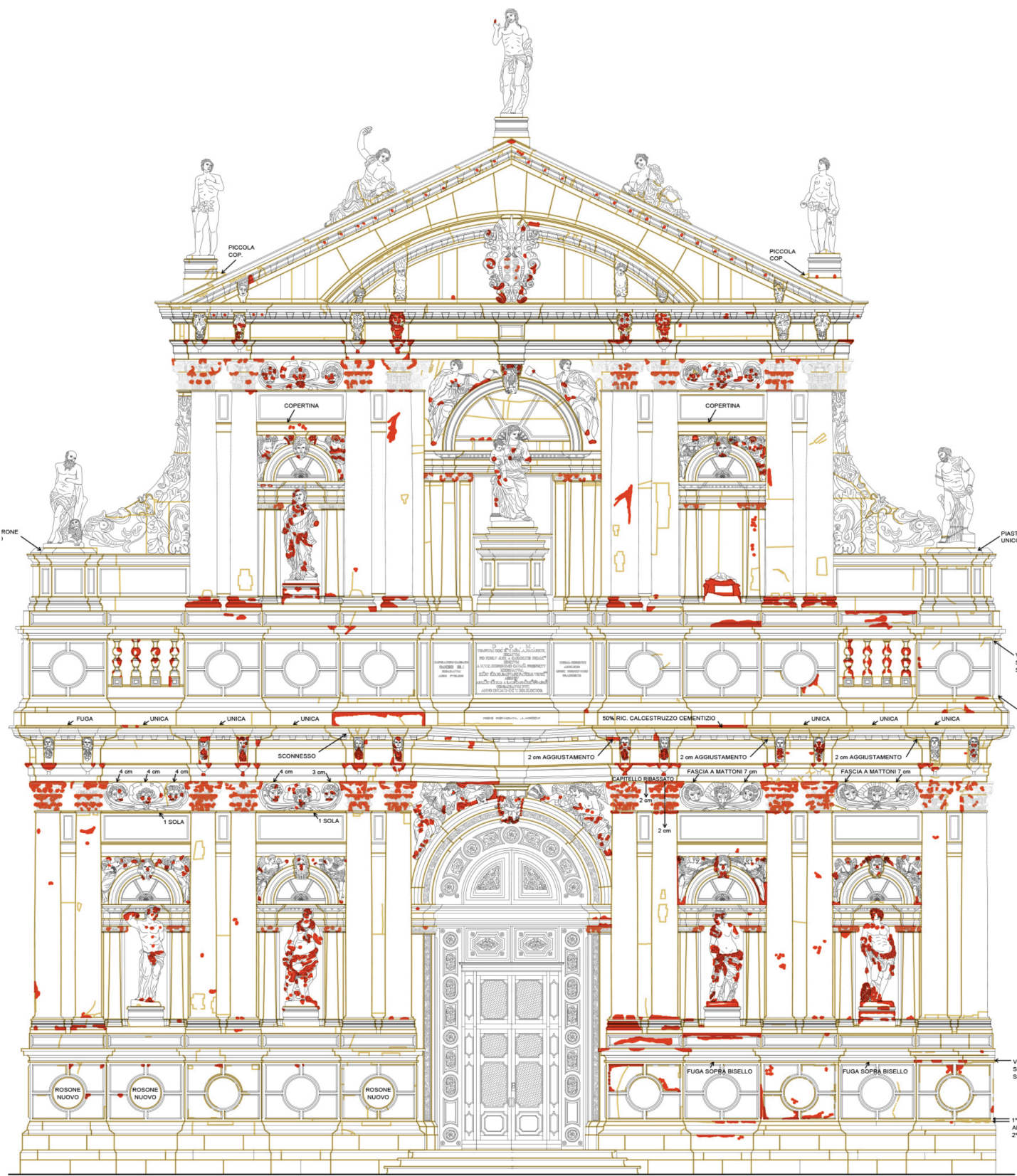


PERCOLATION (near the covers and drips on the horizontal lines on the facade and on the critical points of the lateral sides of the same; any problematic items are highlighted in correspondence with the most accentuated phenomenon)

DIRECTION OF PERCOLATION marked as well as with the color with the down arrow

Mapping of percolation on the stone of the facade

FILLING

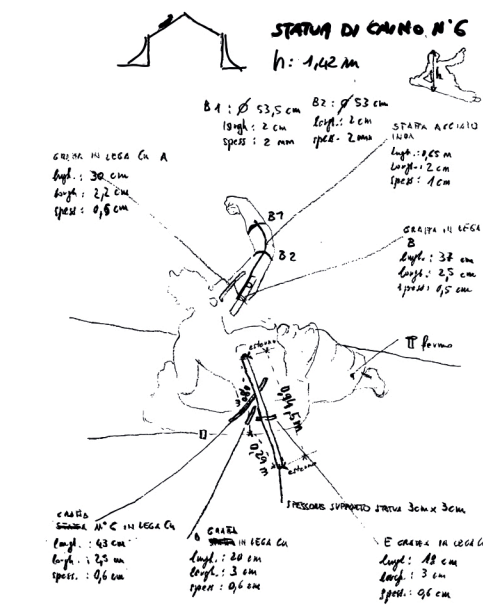


Grouting of the lines connecting the stone elements

Mortar reconstructions (lca: mixture based on lime and aggregate. Cem: cement-based mixture)

Mapping of additions and fillings

STATIC CONSOLIDATION



CONSOLIDATION PROJECT:ELEVATION FRONT

CONSOLIDATION PROJECT: REAR ELEVATION

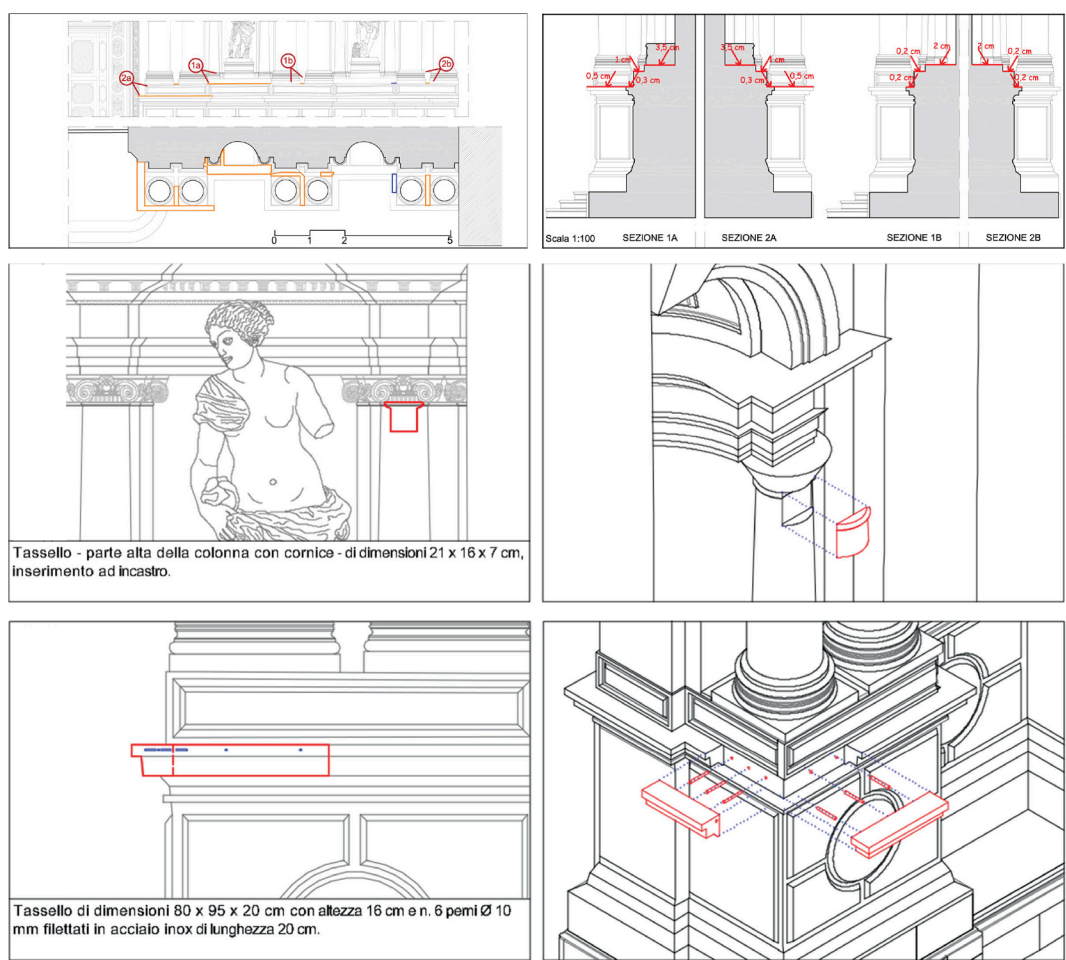
Architectural designers

Giorgio Forti
He graduated in architecture at Università IUAV di Venezia (1973) with a thesis on buildings restoration. Since 1973 he practiced as freelance architect and project manager of various restoration works for monumental buildings, including the Cathedral of Verona, the Church of Santa Maria Antica alle Arche Scaligere in Verona, the San Bernardino complex in Verona, the Church of Santa Maria di Nazareth and the orchard annexed to the Convent of the Carmelitani Scalzi in Venice. He drew up numerous plans at the urban scale, including those related to the conservation and restoration of the color and plasters of the facades: among these the Facades Plan for Siena and the Interventions Plan for Florence. Forti has been director of the Verona Academy of Fine Arts and taught classes at Università IUAV di Venezia and at the Università di Firenze, in both cases in the Department of Restoration and Conservation of Architectural Heritage. Forti is a curator and author of various publications related to the field of architectural conservation and restoration.

Ilaria Forti
She graduated in architecture at the Università IUAV di Venezia (2007) with a thesis on architectural restoration and representation. In 2017 Forti got a degree at the School of Specialization in Architectural Landscape Heritage (former restoration of monuments) of



PHOTO: Giorgio Forti and Ilaria Forti



Another fundamental intervention to reduce the degrading effects of water was the improvement of the gradient of the horizontal planes of the facade so that water could flow faster. This was achieved by tessellation and integration of some parts of the artifact that were incomplete or interrupted. The design logic followed for the practice of tessellation has affected the parts where the presence of congenital defects or degradation phenomena have compromised the mechanical characteristics of the material and its performance, thus weakening the facade and irreversibly changing its appearance. It was deemed necessary to replace only the parts that served to avoid rainwater infiltration between the various stone elements and to prevent this phenomenon from being renewed as far as possible. The tessellation was carried out with a lithotype similar to that of the facade in question, to restore the unity of its appearance and to avoid problems of mutual incompatibility.



Tiling sheets, interventions for rainwater percolation and photographic survey of the elements

Execution of the fillings: methodology and materials



Regarding the intervention related to the fillings, we tried to use materials and technologies that guaranteed maximum compatibility with the Carrara marble. For the execution of the fillings, necessary to protect the surfaces from the erosive action of the rain and marine aerosol, we used a lime made up of 98% pure calcium carbonate totally devoid of additives or salts that could generate efflorescences. This type of lime was chosen so that it had the same composition as the marble, and was therefore compatible with it. We opted for a filling which would recreate a surface similar to marmorino to ensure the flow of rainwater, avoiding dangerous stagnation of humidity and ensuring an appreciable aesthetic recovery.



Photographic survey of the project



Ernesta Vergani Restauro Opere D'arte

Ernesta Vergani
After graduating in Architecture at Università IUAV di Venezia and a period of 6 years working in the restoration laboratory directed by professor Ottorino Nontfarmale in Bologna—founded her own restoration company in 1989, acquiring SOA OS-2A -II category certification. The company has worked to acquire direct contracts from public bodies or similar (Superintendencies, Municipalities, Curia of Venice, Parishes) and from private individuals. Restoration activity has always involved works of great value on mural, stone and wooden surfaces and paintings on canvas. Among the many works carried out in the Veneto area are those carried out in the city of Venice: at Palazzo Ducale, carved and gilded wooden ceilings (halls of the Maggior Consiglio and Quarantia Criminal), the Scamozziano altar with Madonna with Child by Jacopo Sansovino; in Piazza San Marco the VII IX X arches of the Procuratie Nuove, the wooden choir in the Church of Santo Stefano, in the Church of Santa Maria di Nazareth—known as degli Scalzi—the Chapels of San Giovanni Battista and San Sebastiano and the restoration of the main facade. The entrepreneurial spirit of the company relies in the involvement of highly qualified personnel to complete work with maximum efficiency and attention to the cultural heritage.

