

POLITECNICO DI TORINO
SECOND SCHOOL OF ARCHITECTURE
Master of Science in Architecture (Rehabilitation and Revaluation)
Honors theses

The yard for restauration and structural rehabilitation of the “Cappella della SS. Sindone” in Turin. Contribution for the restauration project of the external surfaces of the Guarini’s Chapel

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The study of the “Cappella della SS. Sindone” has took cue from the experience of training conducted on the restoration site directed by Mirella Macera, the Architect of the Superintendence of Cultural and Environmental Heritages of Turin, started after the disastrous fire on 11 April 1997. During this occasion had emerged the will to complete the already extensive documentations of the Superintendent, with a specific study of the outside building, facing especially in the drum.

The work has therefore followed the following steps:

Cognitive phase:

The first phase consisted to collect the archivist documents at the Superintendence, comprising: analysis, interventions, projects, reports, estimates...

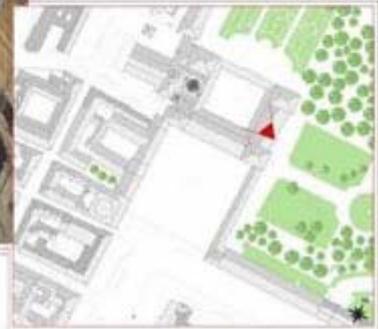
It had been necessary to get geometric and materialistic information of the construction external surfaces and to understand the workmanships and the situation of maintenance of the Chapel before the fire and the consequences that it had caused.

Second phase regards to collect and revise the photographic documents, in which there are images since 1949 to 1997 that represent the external surfaces of the construction, at detailing at particular visions.

This involved me to get further information and to going into more depth regarding to the information learned with the previous archivist documents.



1997



Planimetria fuori scala

Figura 29.1

Cappella della SS. Sindone Dopo incendio, Archivio fotografico della Soprintendenza per i Beni Ambientali e Architettonici del Piemonte, Raccolitore n 16. foto n. 019a. 05/ **1997** Torino.

Following picture shows the “*Cappella della SS. Sindone*” after the fire of 1997; Collected during the cognitive phase

Graphic rendering and analysis phase:

I have realized the external prospectuses of the Chapel in staircase 1:100 and 1:50 based on the considerations of the previous studies: structural elements analyses, materials analyses, degradation analysis of the drum external surfaces.

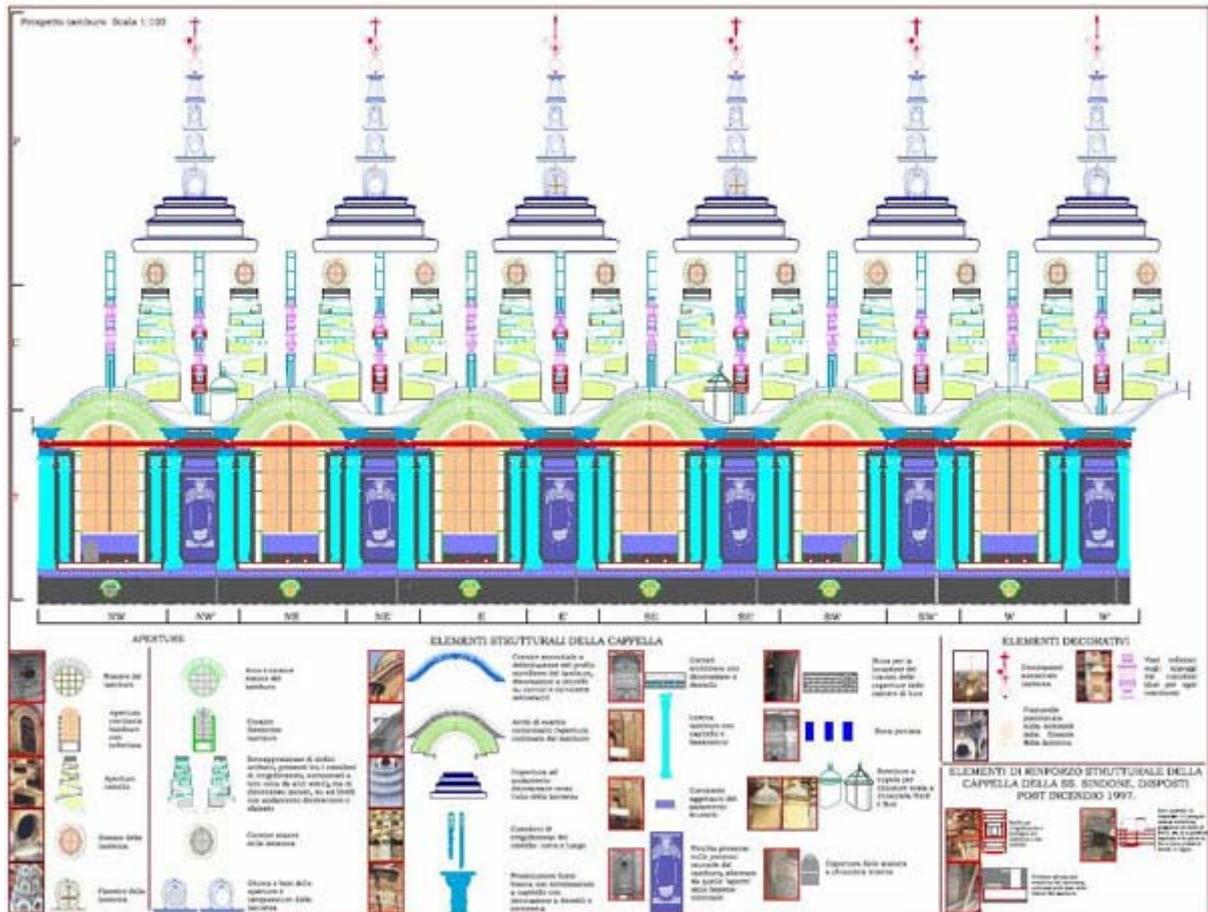
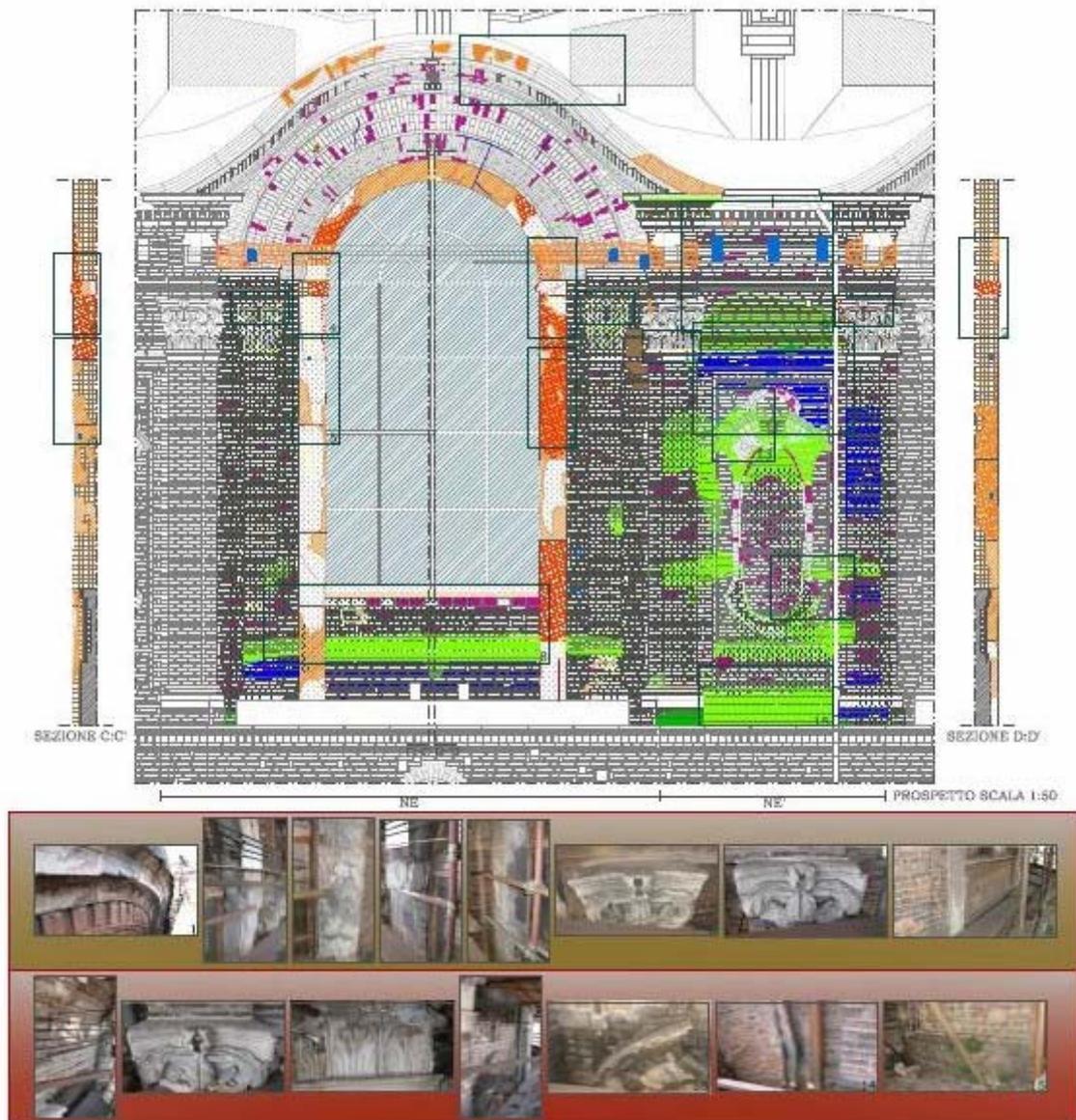


Table with identification of the structural elements making up the exterior of the Guarini's Chapel

The drum is composed of six foreheads and it is affected of two types of degradation. The first one is related to the fire of the 1997 which is showed very pronounced but it is different among the six foreheads. In this case it finds the presence of: fessures determined both from the forehead materials contact to the heat of the flames and from the fusion of the chains situated inside the bottle-holder and the drum; exfoliations, erosions, chromatic alteration and gaps.

The second one degradation type results to be the consequence of the post fire condition surfaces: absence of maintenance, the presence of constants zones of shade produced by the external scaffolding... in this case there are a lot of degrades: stains, inferior and superior vegetation, plaser mining, efflorescences, degrade of metallic elements and encrustation.



Significant degradation of NE-NE' s forehead of the drum

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