

POLYTECHNIC OF TORINO
FACULTY OF ARCHITECTURE 2
Degree in Architecture
Honors theses

**Upgrading Project of the Favela of Gamboa, Santo André, São Paulo, Brazil:
From The Rubble Reutilization To The Space Management**

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Thanks to the cooperation between the Documentation Centre for Developing Countries of the Turin Politecnico (Centro di Documentazione per i Paesi in Via di Sviluppo del Politecnico di Torino) and the Prefeitura of Santo André near São Paulo in Brazil, we could develop our thesis working with the local municipality.

The area where we travelled is the Favela of Gamboa, an informal built-up area next to the most important park in the centre of the city.

In addition to the characteristic aspects of every shanty towns, the specific problems of this context are:

- The squatting of a space owned by the society supplying the electric energy to the state of São Paulo, located under the high-tension wires.
- An high presence of fibrocement with asbestos fibres.
- A partition wall developing on the favela length, increasing inhabitant marginalization and seclusion.

Because of all this features it was not possible to act in according to the normal urbanization and renewal politics targeted to provide basic services. The complete clearance was necessary.

There were two main matters to settle: a social one, move the favelados and another technical-environmental one, dismantle the demolition rubbles.

To solve the first one a census and a population monitoring had been taken to realize living unit in order to satisfy people needs. For the second one a selective demolition plant had been studied to collect all the rubbles which could be sent as secondary rough materials after a processing. In this way demolition costs and the impact on environment are decreased and the activity gained a great value.

Before both the activities the area had to be surveyed. Because of a lack of time and of specialized manpower it was possible only on the 64% of the area.

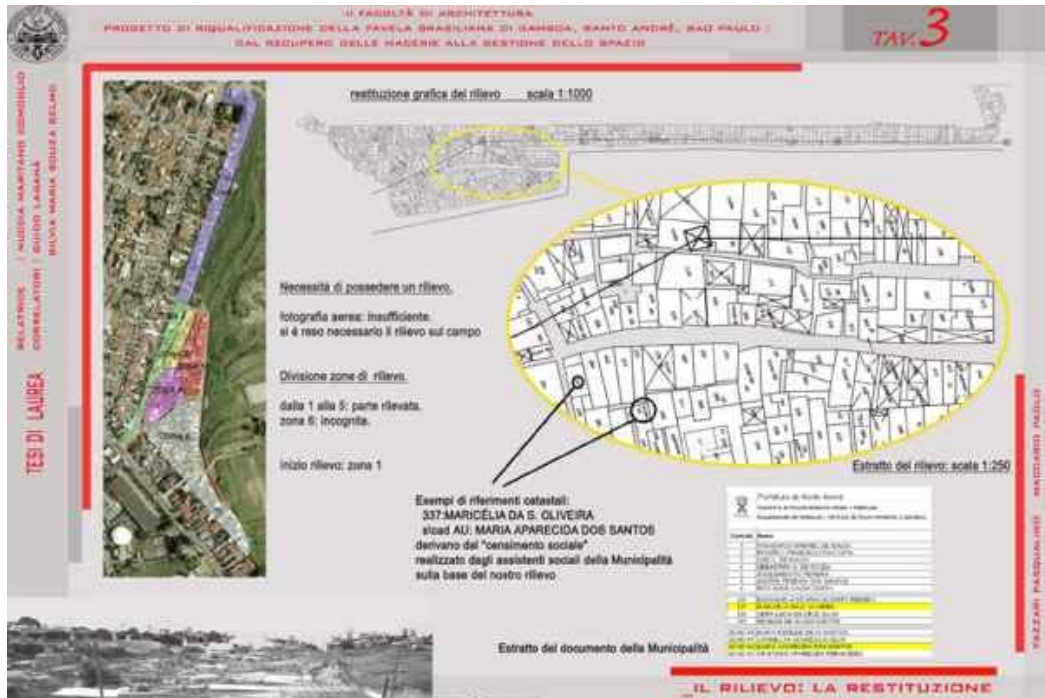


Table 3 – The area surveyment and the social census

Thanks to the collaboration with Mrs Selmo and Mr Cheng of the University of São Paulo it was possible to create a mathematical-statistic model called Fuzzy with which we could obtain reliable data on the favela. This joint work will soon draw up a repeatable and legitimate method of evaluation.

With the collected data we could quantify in a reliable way the following values:

- 310.133,40 ft^3 of concrete
- 282.326,61 ft^2 of fibrocement slabs
- 10.241,25 ft^3 of wood
- 61.412,21 ft^3 of cement
- 13.878,66 ft^3 of reinforced concrete

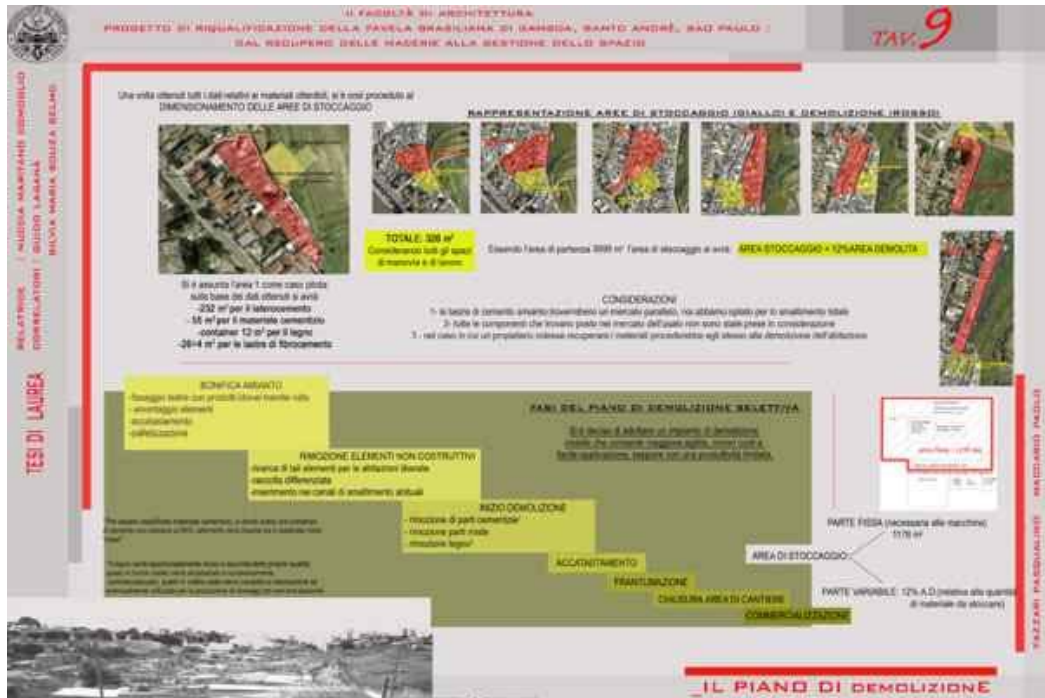


Table 9 – Phases and activities of the selective demolition yard

After these data collection a selective demolition yard had been proposed. This yard had been organized according to materials, following a plan that divided the area into parts and organized the working phases in a coherent chronological way:

- *Training of not specialized manpower*
- *Reclaim of asbestos*
- *Not building elements removal*
- *Separate demolition of wooden, concreted and mixed components*
- *Stacking*
- *Shattering*
- *Closing of the yard area*
- *Secondary rough materials marketing*

In the last phase we decided to integrate this zone into the bordering park, increasing its surface and making it an area with an high recreational and cultural potential.

We tried also to leave a strong historical witness: the wall. It has always be hated by the favelados and today it becomes a furniture and at the same time a point of interest as possible support for “urban” arts as murals.

The projected covering has a double aim: service parking for the infrastructures and “urban gallery”. The bamboo has been suggested in this project because of its high performances, its easily finding and its low costs.

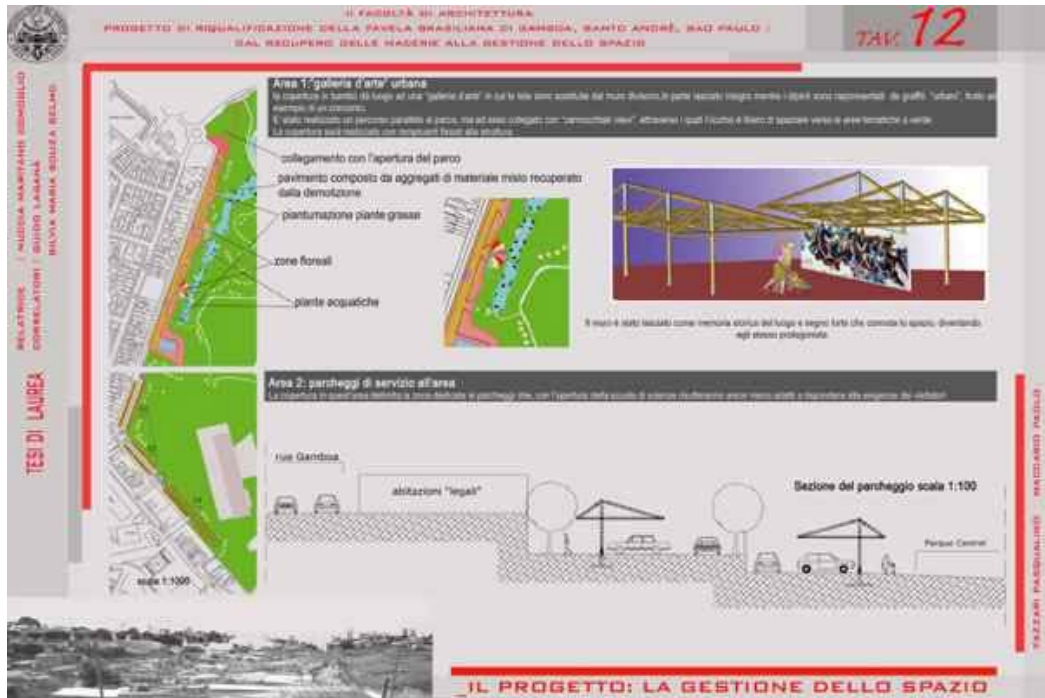


Table 12 – Space updating: the covering and the park project

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