

## Two DESIGN examples of mobility assistance in historical buildings

The main design problems and restrictions that face those who are going to transform historical buildings in Italy, consist of meeting the architectonic and landscape cultural patrimony conservation's requirements while providing general public access. The two following examples of building restoration have two goals: (i) keeping intact the building original structure, and (ii) introducing transportation means for people with mobility restrictions (further to be called 'disabled').

### THE MOLE ANTONELLIANA IN TURIN

The Mole Antonelliana in Turin (Figure 1) is a building of the late XIX century designed by Alessandro Antonelli (1798-1888). It has a little temple, placed at a height of 85 m, today reachable exclusively by means of a panoramic lift<sup>1,2</sup>. Emergency evacuation, however, called for a unique procedure that was commissioned by Dr. Giorgio Panicco, executive for public transport.



Figure 1 The Mole Antonelliana (by courtesy of Comune di Torino)



Figure 2 The rescue of a disabled person from the Mole Antonelliana (by courtesy of Dr. Giorgio Panicco, GTT, Torino, Italy)

This emergency procedure has different options: evacuation of persons from the lift cage, and the rescue of disabled from the Mole's little temple. The Speleo Alpino Fluviale (SAF) group of the National Fire Department assists in the evacuation of persons in wheelchairs with the aid of a second chair that is hooked to the reinforced-concrete hoisting beam by means of ropes, in order to manually lower the person to the basement floor. During the descent, the SAF agent stays in direct touch with the person to be evacuated (Figure 2). The procedure is regularly practiced and tested, and apparently functions well.

### THE RESIDENZA PALAZZO VESCOVILE NOLI

From 1998 to 2001 the town of Noli (province of Savona) renovated and adapted the historical bishop's residence, and turned it into a 'vacations-house' according to a design of Dr. Arturo Bricchetto. A panoramic lift system was



Figure 3 Overview of the renovated Palazzo Vescovile with heights of lift's tops indicated

constructed to cover a drop of about 32 meters, to make a direct connection with the city nucleus of Noli.

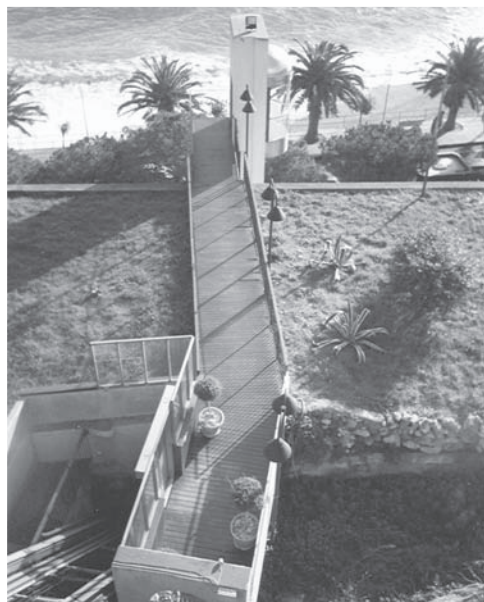


Figure 4 The horizontal walkway connecting the two lifts of the Palazzo Vescovile, as seen towards the sea

The system consists of two air-conditioned lifts, one vertical and the other inclined, and a horizontal walkway.

The inclined lift, a traction system with uncovered hoist way, connects the Palazzo to the pedestrian passage, and has four stops (Figure 3). The highest stop of the inclined lift coincides with the Vescovado entrance and is located at the first floor level of the Palazzo (32.57 m above ground level).

The second stop is constructed at the upper historical pedestrian passage (brick edge course), 29 m above ground level. The third stop, 19.3 m above ground level, gives access to an ancient turret mast. Finally a fourth stop at the 'foot' of the rocky escarpment, opens towards a horizontal walkway of about 15 m (Figure 4), adequately paved with antiskid material. It crosses the upper wing surface of the artificial tunnel of State road n° 1 'via Aurelia' (9.5 m above ground level) to end at the smaller vertical lift that connects to the parking at the sea side.

Evacuation from the Palazzo of a person on a wheelchair will take about 3 min.

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## References

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