

DOI: 10.24904/footbridge2017.09982

## RESTORATION OF THE BRIDGES OF OURO PRETO, MINAS GERAIS - MG, BRAZIL

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The article deals with recent interventions in the conservation of the bridges of Ouro Preto, one of the most important and symbolic cities in Brazilian history and culture. Ouro Preto, like other "Gold cities" in Minas Gerais, has a particular layout which does not conform to the radial urban structures or traditional nuclei of Colonial Brazil. Its organic and linear configuration anticipated the type of urban development known as conurbation, a city formation resulting from the merging of nearby urban nuclei. The linking of the surrounding villages was consolidated in the second quarter of the XVIII century through significant urban interventions promoted by the Governor, Gomes Freire de Andrade, Conde de Bobadela (1735-63). The principal type of intervention used was the construction of bridges, among them that of Antônio Dias, Rosário, Palácio Velho and Seca, the subjects of this article.

An architectural reading of each bridge will be made, examining the material and building systems used in their construction; their meaning for the city and the heritage designation process, the surrounding environment at various periods, and the physical, functional and visual relationships with the city. Regarding the recent restoration works, the following will be examined: causes of deterioration, diagnosis and state of conservation, interventions that have taken place over the years, the project, and intervention methodology. In the conclusion the interventions undertaken will be analyzed in light of modern principles of preservation of cultural heritage.

This article makes an architectural review of each of the bridges, concerning the materials and construction systems applied in their constructions; their meaning to the city and the processes of declaring them as listed buildings; the environmental scenario throughout the times, and the physical, functional and visual relations towards the city. About the recent restoration works, the following aspects will be approached: degradation causes, conservation diagnosis and status, interventions suffered along the years, intervention project and methodology. In the conclusion, an analysis will be made on the executed interventions, from the point of view of the modern principles of culture assets conservation.

The city of Ouro Preto is built on a "Baroque topography", comprising the bottom of four major valleys connected by nine bridges which connect steep and undulating streets. Eleven other smaller bridges pass over the rivers snaking their ways along vagarious curves. Most bridges have seats on the sides and a cross in the center, forming a place for rest, social life, inspiration for poets and artists, and even for tourists and the general population to contemplate the city.





Fig.. Map of Ouro Preto – 1888. Collection, National Library of Rio de Janeiro.

The projects and intervention works have primarily solved the structural problems and drainage failures, following recommendations from the modern theory of conservation of cultural assets. Yet, the construction just below the polyhedral pavement of three bridges (Antonio Dias, Seca and Rosário) and the building of reinforced concrete boards to better distribute the stresses on their structures is an polemic intervention liable to be questioned. Was such intervention really necessary? Wouldn't it change the original construction systems of the bridges? Doesn't it represent additional weight on the bridges? Wouldn't the inclusion of rigid concrete elements cause greater vibrations on the bridges and thereby hamper their absorption? A measure of fundamental importance for the conservation of the bridges is the implementation of the project that provides for the prohibition of the traffic of heavy vehicle traffic on the city. The restoration of the bridges Antonio Dias, Rosário and Palácio Velho will be only fully complete when their surrounding areas are restored. This supplementary intervention will not only ensure the visibility and the reading of these architectural monuments, but will also make the whole city distinctive. The landscaping intervention and the renewal of the surrounding areas of these monuments will significantly contribute to the recovery of cultural, environmental and emotional aspects of the city of Ouro Preto.

## References

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