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Campo Alegre: the evolution and persistence of a territorial intent

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Abstract. The decision to construct the Arrábida Bridge, induced the need to rethink the area of Campo Alegre (Porto) which led to the conceiving of the "Urbanization Plan of Campo Alegre — Future Entrance to the City by the Arrábida Bridge", rendered by Januário Godinho. Campo Alegre had been, until that time, characterized as a set of private gardens that structured a Romantic landscape. The conceived Plan renders its transformation proposing a new collective open space linked with those existing to form a co-ordinated public park related to the new road system and the new proposed building ensembles. With this design Januário Godinho interprets Campo Alegre's essence through understanding the environmental character of the place in a contemporary way.

Key Words: place, garden; park, Porto, Januário Godinho

Premise

The object of this paper is the "Urbanization Plan of Campo Alegre [Merry Field] – Future Entrance to the City by the Arrábida Bridge", commissioned by the Municipality of Porto and designed by the architect Januário Godinho (1910-1990), between 1951 and 1955.

In the wide range of different studies about Porto or the professional practice of Januário Godinho there are few that investigate specifically this Plan. Until today, the only identified pertinent reference is "Campo Alegre: from the New City to the University" (Guedes, 1995).

This magazine article focuses on the Plan mainly through "Reports and Management Accounts" of the Municipality of Porto (1954, 1956-59). It summarizes, without deeper study, some implementation issues associated to the Plan: the State and Municipality responsibilities; the affected University properties; the land expropriation process and the University facilities proposal for the area.

The article also addresses the Plan as a transforming action of Campo Alegre's form and through this point of view, we might interpret the following: i) the exclusive responsibility of the local planning authority for the proposal, enframed by the City Plan: "Plano Regulador da Cidade do Porto", developed by the engineer Antão de Almeida Garrett and approved in 1952; ii) the resolution of the entrance of Porto by Arrábida Bridge and its surrounding urban areas as the Plan's main objective; iii) the change in land ownership, from private to public domain as the main design premise; iv) the consequences of the partial implementation of the Plan, execution of the first phase only, which corresponds currently to the major road system (Figures 1 and 2).

Therefore, recognizing the significance of this Plan in the current definition of Campo Alegre's urban form, this paper aims to deepen its understanding. The interpretation presented is concerned essentially with the relationship between the Plan and the territory to which it was conceived. We propose to demonstrate that, despite the Plan's intent to radically alter Campo Alegre, in its transformation, some of the main features of the place still persist, even though its form may change.



Figure 1. Campo Alegre, 21st century (source: O Porto visto do céu, 2000).



Figure 2. Campo Alegre, 21st century (source: O Porto visto do céu, 2000).

Urbanization Plan

Since the intent of a new crossing over Douro River and the consequent setting of the Arrábida Bridge was officially proposed (1945), the design of the new road network and the urbanization of Campo Alegre, became a major issue for the Municipality.

These studies were the responsibility of the local planning authority. However, the nonexclusive dedication of the municipal services to this plan compromised a comprehensive and global solution (*Contrato*, 1951), worthy of approval.

In 1949, with the completion of the urban plans for the territory on the south end of the Bridge (Vila Nova de Gaia), the conclusion of the studies for Campo Alegre became most urgent.

The minister of Public Works and Communications, Frederico Ulrich (1947-54) had suggested hiring an architect from outside the local planning authority to conclude the studies for Campo Alegre. On one of his visits to Porto, with the purpose to analyze the activity of the local planning authority, the Minister recommends Faria da Costa (Távora, 1949) who was, at that moment, the most qualified architect from local planning authority of Lisbon (Lôbo, 1995).

Subsequently to the suggestion of the Minister and the positive assessment for the construction of Arrábida Bridge, from the Superior Council for Public Works and Communications, in 1950/51 (Cruz, 2001), the Municipality of Porto invites Januário Godinho, one of Porto's architects also recognized by its urban practice, to develop the Urbanization Plan for Campo Alegre (Contrato, 1951).

The invitation was addressed to Januário Godinho in 1949/50; with the main terms of the contract presented in 1951 and the work beginning in 1952.

When Januário Godinho started Campo Alegre's Plan, he was 42 years old, had completed 2 decades ago the Course of Architecture at the School of Fine Arts of Porto; and for nine years had developed plans for the urbanization of cities in the north of Portugal. His name was on the list of architects qualified to work in urban planning by the National Buildings and Monuments Committee, although he had no specific studies in town planning (Lôbo, 1995).

The State considered Januário Godinho an expert in solving problems such as the ones in Campo Alegre – 'the government had great consideration for the way he had solved the urban planning tasks he had been entrusted with' (Contrato, 1951).

According to the contract for the Urbanization Plan, Januário Godinho would submit to the Municipality of Porto, first a Preliminary Project and then the Definitive Plan.

The first was intended to provide advance knowledge about the way the theme was to be interpreted, to outline the adopted design and the guidelines for the Definitive Plan. The second was intended to develop, describe and regulate, with detail and accuracy, the approved Preliminary Project so that there would be no doubt when its implementation would occur (Contrato, 1951).

Januário Godinho presents the Preliminary Project for Campo Alegre on August 1954 (Figure 3). The study was approved by the local planning authority, the National Road Authority and the Minister for Planning and Territorial Administration (Parecer, 1954; Informação, 1954). In its report, the National Road Authority takes the responsibility for the construction of the road that, through the Arrábida Bridge, would connect Porto with the coastal cities north and south, thus, becoming part of the national motorway network (Informação, 1954).

With the approval of the Preliminary Project by the committees, on July 1955, Januário Godinho presented the Definitive Plan (Figure 4) and its economic study (Guedes, 1995). During the presentation he defined the intent of his proposal as a "piece of architecture" (Távora, 1995) for Campo Alegre which would be approved by the local and national authorities.

In the following years, Januário Godinho would issue technical reports on solicited changes to the Plan, presented by the responsible authorities (*Parecer*, 1957; *Informação*, no date) and would study its reformulation in order to integrate a set of University amenities (*Programa*, 1957).

In 1956, the construction of the Arrábida Bridge triggers the expropriation procedure of private terrains for the implementation of the first phase of the Plan – the major road network (Guedes, 1995).

The procedure was prolonged and complex (Guedes, 1995), in a way that calls into question the fulfillment of the other planned phases. Consequently the implementation of the Plan was never completed.

The execution of the Plan's first phase did not solve the pressing urban issues present in Campo Alegre. Therefore, they remained an important topic of Porto's future planning. Years later, the "Plano Director da Cidade do Porto", coordinated by the architect-urbanist Robert Auzelle, between 1958 and 1962, will once again study the urbanization of Campo Alegre.

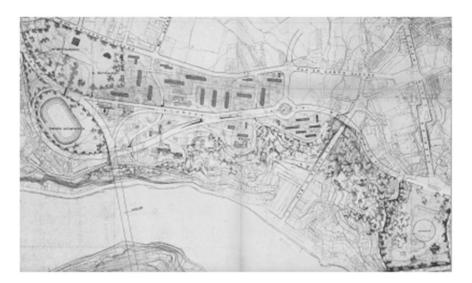


Figure 3. Preliminary Project (Esboceto-Programa, 1954).



Figure 4. Definitive Plan (Oliveira, 1969).

Place: a sum of private garden plots

The Urbanization Plan for Campo Alegre included two distinct areas of action inscribed in each other: one extensive regulated by general principles of urbanization and the other, smaller in size and inscribed, where the Plan proposed a "complete and radical system of urbanization" (*Plano*, 1955). This area, with deeper development, corresponded to Campo Alegre – considered by Januario Godinho as "a privileged territory" that "the new bridge over the Douro River and the associated road network, would certainly change completely" (*Plano*, 1955).

Campo Alegre's site corresponds to the cliff on Douro's riverbank, located at the point where the distance between the River's margins decreases, just before the River's mouth.

The area of the territory studied by the Plan is larger than 75 ha, facing the River over more than 1500 m. The boundaries are defined by Campo Alegre Street in the north, Douro River in

the south, Cristal Palace Garden (1865) in the east, and, in the west, the Botanical Garden (1875).

The general configuration of the site alludes to a polygon comprised of a convex section with a pronounced curve southwest and a sequence of ledges, facing the River that characterizes its perimeter to the east.

Campo Alegre is composed by two different topographical forms: the plateau, located at the top of the cliff, between 75 and 60 m; and the steep slope, between 60 and 0 m, accompanying the course of the River. In the south-west, this slope is characterized by a rocky mass and in the south-east, it is shaped by a sequence of natural terraces.

In 1952, the area of Campo Alegre was at the outer limits of the main urban areas, between the City center, at less than 2 Km, and the communities near the seaside.

Both the Campo Alegre Street, at the level of the plateau, and the road near the waterfront established important communication connections between these urban areas reinforced by public transportation (tram and bus) that also circulated through these routes.

In general, the land division in Campo Alegre presented a rural pattern. The territory was divided into large plots, organized in a system ingrained in Campo Alegre Street and on some ancient milestones; this system interpreted the local topography (Ramos, 2013).

In certain parts of Campo Alegre this rural pattern had turned into an urban one, namely with Campo Alegre Street, Entre-Campos Street and in the Arrábida Neighborhood.

Along Campo Alegre Street, some rural plots had been divided into new lengthy and narrow urban parcels, perpendicular to the street with a constant front dimension.

Entre-Campos Street was outlined through rural plots, by a group of local owners who proposed to transform their farming land into urban parcels where, years later, the State/Municipality constructed semi-detached and terraced low cost housing (Colónia Operária Viterbo Campos, 1915; Bairro Sidónio Pais, 1918-20, 1922-23).

Complementarily, near to an important industrial area at the time (Lordelo do Ouro), and very close to the rocky-mass, but away from the riverside, a working-class neighborhood, consisting of terraced housing, was being constructed - the Arrábida Neighborhood.

The population density, in average, was low hence Campo Alegre was a sparsely populated area due to the fact that building concentration existed only where the field system had been updated, while in the other areas, the buildings were detached and dispersed.

Campo Alegre was punctuated by poor and ephemeral constructions, to support agricultural and gardening practices, camouflaged in the landscape, and by a group of small palaces, disengaged from the rural surroundings.

In the 19th century, Campo Alegre was a place of sublime nature and picturesque qualities, where many foreign families of merchants and industrialists – including English, Danish and German – cultivated a Romantic lifestyle.

These families built their small palaces and gardens, with exquisite greenhouses, in existing rural plots. Many of the gardens, apart from native vegetation, contained special plant collections from all over the world, namely big trees which formed luxurious arboreal masses. These estates were: Casa Andresen, Casa Burmester, Casa Primo Madeira, Quinta da Esperança, and Casa do Gólgota.

Casa Andresen was purchased by the State in 1950/51 with the purpose to create a Botanical Garden (1951), a University Stadium (1951-53) and a series of residential and functional buildings for the University. Casa Burmester was also handed by the State to the University (1957) as compensation for the area reduction of the Botanical Garden, motivated by the necessity to construct the new road network associated with the Arrábida Bridge.

Therefore, in 1952, Campo Alegre was a huge greenery, composed of a series of private gardens between the Cristal Palace Garden and Botanical Garden. Campo Alegre's landscape was characterized by the estates of the small palaces, clashing with the low cost neighborhoods, the vast plateau, the steep rocky mass and the sequence of natural terraces, all largely cultivated and strongly arborized.

Through this territory, the Arrábida Bridge, as the second car crossing to be built in the City, would link the major coastline cities north and south of the Douro, transforming Campo Alegre not only into a new entrance of Porto, but also into a forced passage point for the main national highway.

Under these circumstances, the "Plano Regulador" (Figure 5), which summarizes the previous studies "Ante Projecto das Comunicações Regionais do Porto" (1945), "Ante Plano Regional da Cidade do Porto" (1946), and "Plano Geral de Urbanização da Cidade do Porto" (1947/48), all rendered by the local planning authority, programmed the City expansion for Campo Alegre in the following way (Garrett, 1952): i) identified existing public or private open spaces and defined them as being of public interest – the Cristal Palace Public Garden and the Botanical Garden; Casa Burmester Garden and some estates on the steep slope, namely, Quinta da Esperança and Casa do Gólgota gardens; ii) defined the traffic facilities in Campo Alegre, associated with Arrábida Bridge; iii) suggested the construction of a residential zone, where non residential buildings were only admitted in specific areas.



Figure 5. "Plano Regulador": the proposed roadway network and the open spaces of public interest (Garrett, 1952).

Intent: a co-ordinated public park

The territory between the Cristal Palace Public Garden and the Botanical Garden was for Januário Godinho "of the greatest difficulty, in all aspects, due to constrains of all kind, consummated facts, that by a singular coincidence seemed to have met in order to render useless a rare opportunity for the future of Porto" (*Plano*, 1995). These restrains were: the rugged terrain; the open spaces of public interest; the location of Arrábida Bridge; the low cost housing ensembles; the commitments between the State and the University; the importance of the programmed road network; and the symbolic significance of the planned urban landscape – a fresh new image of Porto.

On this complex territory, Januário Godinho starts with the observation of Campo Alegre from the opposite riverside which would became one of the main viewpoints of Campo Alegre after the construction of the Arrábida Bridge. From Vila Nova de Gaia, Januário Godinho might have read Campo Alegre as a sum of private garden plots. Through balancing this specific quality of Campo Alegre with the conditions present in "Plano Regulador", Januário Godinho proposes the implementation of a co-ordinated public park, related to the new road system and the planned building ensembles.

Greenery

In the first drawings, Januário Godinho renders Campo Alegre as the "south park of the City" (*Plano*, no date). He foresees the entire territory coated with vegetation and restricts the construction areas to Campo Alegre Street and the surroundings of the University Stadium.

The proposal rendered buildings as elongated rectangles organized in a straight line, perpendicular to the river front, in an equally spaced layout. Taking into account this distributional pattern the scheme might have been organized with high-rise buildings attributing to Campo Alegre a closed architectural image of compacted vertical masses sited in an immense greenery, through which the major road network would be designed.

In the subsequent studies of this Plan, there was a progressive increase of the built area with consequent reduction of the open public space.

The main aim of "Plano Regulador" was to implement a residential area in Campo Alegre and although it pointed out some open spaces of public interest, the design did not include an open area of greenery, where anybody can go to walk, play, etc.

Therefore, this increase in density may reflect a gradual adjustment of the proposal to the "Plano Regulador" guidelines and/or a response to the financial burden that the implementation of the Plan implied for the Municipality (*Plano*, 1955). The draught of Januário Godinho required a global land expropriation which meant a huge investment of municipal funds that would need an equity return, incentivizing higher construction density.

However, even with considerable differences in land use between the diverse versions of the Plan, Januário Godinho never once deviated from his co-ordinated public park premise – the open space always dominated the constructed area.

The Plan stipulated that the construction of residential buildings, sponsored by private stakeholders, would be permitted only within the defined polygon according to the strict Municipality regulation. Apart from the building polygons all the remaining areas were defined as greenery for public use (Esboceto, 1954).

In the words of Januário Godinho: "the overview [of Campo Alegre] will be a curtain of greenery, revealing by transparency various kinds of architectural elements. The entrance of the City will therefore feature a wide and majestic balcony projected over the river, overlooking the sea" (Esboceto, 1954).

Traffic Intersection

Januário Godinho designed the road network at the exit of Arrábida Bridge based on the directives of the "Plano Regulador". The proposed road network establishes the connections between the points referenced in the City Plan. However, the solution in Campo Alegre's Plan deviates from that of the "Plano Regulador" in the way it solves the different traffic intersections.

The "Plano Regulador" stipulated from the Arrábida Bridge three road networks (Garrett, 1952): "Ultramar Avenue", the western section of the City's ring road, connecting the north of the country; the "new Avenue", an extension from the Bridge to the North, connecting the City's seaport; and "Infante de Sagres Avenue", the eastern section of the City's ring road, connecting the center of Porto. The "Ultramar Avenue" and "Infante de Sagres Avenue" were designed in continuity as a single gesture.

To design the intersection of the different road networks, Januário Godinho proposes a solution with the most modern research on traffic layouts; these schemes, which included Spanish and Dutch press clippings about Detroit and Ohio intersections, were part of the Plan's study process.

According to the "Ante Plano Regional da Cidade do Porto" the road network in Campo Alegre should be extremely efficient – saving time, energy and money; allowing maximum performance in speed and traffic flow; improving the traffic circulation (Anteplano, 1946).

Therefore, Januário Godinho segregates the fast long-distance traffic from traffic of purely local nature. He seeks to eliminate intersections providing uninterrupted traffic flow by: always favoring intersections at different levels between main and secondary roads; only allowing the contact between them in specific designated points; and avoiding construction along the fast long-distance network (Esboceto, 1954).

Based on these assumptions, the Plan proposed the following deviations from the scheme outlined by "Plano Regulador": i) canceled the "new Avenue" – Januário Godinho verified that the proposed road would create various intersections, something he intended to prevent (Esboceto, 1954); ii) changed the type of traffic intersection at the exit of Arrábida Bridge – Januário Godinho noted that the proposed roundabout solution, was unsatisfactory economically and aesthetically. It entailed the partial demolition of the University Stadium and required the construction of a high retaining wall, a "real dam between the plateau and the slope of the Douro River" (Esboceto, 1954).

For the traffic intersection, Januário Godinho rendered a flyover scheme (*Esboceto*, 1954). With this solution, he proposed to divide the "Ultramar Avenue" and "Infante de Sagres Avenue" in a system which permitted so many passageways as the route directions generated by their direct intersection. This solution, although less compact than the roundabout one, allowed to deal with the territory constrains in an "elegant way" (*Esboceto*, 1954).

For Januário Godinho this scheme was "natural, simple, open and, as far as possible, attached to the ground, eliminating the construction of stone walls, of colossal slopes" (Esboceto, 1954), or multiple and costly works of engineering, avoiding the destruction of trees, reducing to the minimum the intervention on the University grounds and the demolition of houses in Sidónio Pais and Arrábida neighborhoods (Esboceto, 1954).

Januário Godinho designs this flyover intersection in the following way: "Ultramar Avenue" and "Infante de Sagres Avenue", close to Arrábida Bridge, are divided each into two branches. One of these branches incorporates the Entre-Campos Street, crossing the Sidónio Pais Neighborhood and passing north of the University Stadium. The other, interpreting the convex shape of the territory through its pronounced southwest curve, is outlined between the southern boundary of the Stadium and the Arrábida Neighborhood; disregarding the area that lies between these two branches – characterized by University Stadium, part of the Sidónio Pais Neighborhood and different road extensions – this scheme divides the territory into two parts leaving to the north, the plateau, and to the south, the slope.

Therefore, by interpreting Campo Alegre's morphology and outlining the different qualities of its major topographical forms, Januário Godinho's design clings to the terrain.

This assertion is corroborated by the way the Via Panorâmica Route was designed on the slope, replicating the movement of the 60 m contour line and dividing the territory between the "Infante de Sagres Avenue" and the Douro's riverbank in two parts: the south where the steep slope inhibits construction and the north, an area which, although on the slope, still had acceptable construction conditions.

Januário Godinho's option of not proposing a pathway across the slope, connecting the plateau with the riverbank also reinforces this observation. A pathway with this direction would hardly cling to the terrain, so he does not consider it, in his design. Alternatively, the difference in elevation between the plateau and the riverbank would be solved by the elevators that would be included in the Arrábida Bridge's project.

In the words of Januário Godinho: "[in Campo Alegre] the system of grouping the blocks [is carried out] according to the nature of the terrain" (Plano, 1955).

Regardless the building's vocation, density of construction and housing type, which varied throughout the different phases of the Plan, Januário Godinho organizes the buildings according to the following principles: on the plateau, north of the "Infante de Sagres Avenue", the type and shape of the buildings were always identical, high-rise rectangular elongated residential blocks (8-12 floors), and its organization followed a single principle of composition with the blocks placed parallel and/or perpendicular to each other. These buildings occupied the best view and solar exposure of Campo Alegre, constituting "luxury residential units" (Plano, 1955); on the slope, south of "Infante de Sagres Avenue", the type and shape of the buildings were variable and its organization resulted "disarticulated for better adjustment to the characteristics of the terrain" (Plano, 1955). In the Preliminary Project, Januário Godinho proposed the construction of cultural, sports and leisure facilities along the Via Panorâmica Route: a municipal swimming pool, a restaurant and an amphitheater of greenery for outdoor performances (Esboceto, 1954). In the Definitive Plan, the margins of the Via Panorâmica Route were occupied by residential construction for the middle class with the exception of a small area designed as a center of leisure and sport. The residential buildings were planned as 4 stories high blocks (eventually 8), with different shapes in plan and associated according to different strategies, suggesting the construction of small residential ensembles with different morphological characteristics (Plano, 1955).

Thus, the nature of the terrain not only influences the system of grouping the blocks, but also the type and shape of the buildings and housing categories, as if Januário Godinho recognized through the nature of the terrain differentiating characteristics that influenced the buildings and, in particular, the type of residential units.

This idea is stressed in the Preliminary Project by implementing the municipal swimming pool and the restaurant in special topographical points of the territory. These public facilities were designed for the ledges that characterized the south border of Campo Alegre. Sticking out over the riverbank, the swimming pool and the restaurant would offer panoramic views over the future bridge and the Atlantic Ocean.

Purpose: a territorial interpretation

Through this current interpretation, we may synthesize the following considerations concerning the "Urbanization Plan of Campo Alegre - Future Entrance to the City by the Arrábida Bridge": i) the general idea of Januário Godinho's Campo Alegre, deviates from the principles established by engineer Antão de Almeida Garrett, emphasizing different disciplinary perspectives on the meaning of Campo Alegre in the City structure; ii) the Plan constitutes a singular exercise that interprets the essence of place by prolonging and underlining the features that Januário Godinho considered to be its core qualities; iii) by the proposal of a co-ordinated park, the Plan prolongs the existing dominion of luxurious arboreal masses over the constructed area that was characteristic of Campo Alegre's setting in 1952; iv) the gardens, beforehand fields, are transformed into a greenery system, linked to the existing public gardens (the Cristal Palace Garden and the Botanical Garden) and related to the new road network and proposed building ensembles; v) the park's design outlines the existing morphology and altimetry qualities of the territory, organizing the buildings and the major road network through their reinterpretation; vi) by the introduction of a public park theme, the Plan highlights the predisposition of Campo Alegre, through its topological and geographical qualities, to assume the special condition of a public space in the City of Porto.

These conjunctions permit the understanding of a certain architectural way to interpret the notion of place by identifying the evolution and persistence of a territorial purpose.

The Plan does not copy a model or an old solution, on the contrary, it recognizes the primary structural properties of Campo Alegre - respects its location, general spatial configuration, and its synthesized image - interpreting it in a contemporary way. Consequently, the proposed solution conserves the identity of the place emphasizing its material substance, shape, texture, and colour - its Romantic environmental character.

Therefore the Plan seems the outcome, in one hand, of the extreme attention Januário Godinho pays to the place, and on the other hand, of a sheer spatial force of Campo Alegre that guides Januário Godinho towards the accomplishment of its essence in a new historical context.

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References

Cruz, P. (2001) As pontes do Porto (Civilização, Porto).

Garrett, A. (1952) Pano Regulador da Cidade do Porto (Câmara Municipal, Porto).

Guedes, P. (1995) 'Campo Alegre: da Nova Cidade à Universidade', Boletim 26-27, 5-14

Lobo, M. (1995) Planos de Urbanização. A Época de Duarte Pacheco (Faup Publicações/DGOTDU, Porto).

Oliveira, A. (1969) 'Zone Campo Alegre', in Urbanisme 67, 48-50.

O Porto visto do céu (2000) (Argumentum, Lisboa).

Ramos, S. (2013) 'Campo Alegre: evolução e persistência de um desígnio', in Pinto, Nuno Norte and Almeida, Alexandre (eds.) Book of Abstracts of PNUM 2013, the 2013 Annual Conference of Portuguese Network of Urban Morphology, Coimbra, June 27 and 28, 2013 (Department of Civil Engineering of the University of Civil Engineering fo the University of Coimbra) 1040-1047.

Távora, F. (1949) 'Diário', 15 de Junho in Mendes, Manuel (2010) Do esquecimento para além da arte: do nomadismo ao erotismo, unpublished PhD thesis, Faculdade de Arquitectura da Universidade do Porto, Portugal.

Távora, F. (1995) 'Memória do Campo Alegre', in Boletim 26-27, 15-16

Anteplano (1946) Regional da Cidade do Porto

Contrato (1951) com o Arquitecto Januário Godinho para a elaboração do ante-projecto de urbanização da Zona do Campo Alegre

Esboceto-Programa (1954) do Arranjo da Entrada da Ponte da Arrábida, na cidade do Porto

Informação (1954) n.º 120/Ct, Junta Autónoma das Estradas, sobre o Esboceto-Programa do Arranjo da Entrada da Ponte da Arrábida, na cidade do Porto

Informação (no date) sobre as soluções esquemáticas n.º 1 e 2 apresentadas pela Junta Autónoma de Estradas para o traçado da via de ligação da Ponte da Arrábida à Via Rápida

Parecer (1954) sobre o Esboceto-Programa do Arranjo da Entrada da Ponte da Arrábida na cidade do Porto

Parecer (1957) relativo às alterações sugeridas pelos Serviços de Urbanização da Exa. Câmara relativas ao plano

Plano (no date) - Futura entrada do Porto pelo Parque Sul da Cidade

Plano (1955) de Urbanização do Campo Alegre – Futura entrada da cidade pela ponte da Arrábida

Programa (1957) das novas instalações da Universidade do Porto na Zona do Campo Alegre.

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