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Planning and foundation
the first city in Brazil Empire

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ABSTRACT

Originally developed to support the author's doctoral thesis about the logic of modernization and growth of the city of Teresina, Piauí State, this article deals with the founding of the city of Teresina - which, though little studied from the urban point of view, has great importance in the history of Brazilian housing, because it was the first capital city planned and built in the empire period. The text focuses on particular aspects of city planning through an approach that considers primary sources and technical literature on the Portuguese urban practice.

Keywords: City of Teresina; History of the city; Urban planning; Construction of city.

The nature of urban endeavors in Colonial Brazil should constitute a helpful technical background to the Brazilian administration (REIS FILHO, 1994); and the creation of new cities figures in among such endeavors. Teresina was the first planned capital built under the imperial regime. Therefore, its foundation history and its planning characteristics have singular elements of urban actions of the Colonial Brazil.

Its conception, recorded in the official documentation, and the initial plan's graphic representation that is available for consulting, indicate that the urban form of Piauí's capital, Teresina, is the result of a rigorous Portuguese legislation for the Brazilian colonial villages and towns conception. Although having occurred during the 19th century, Teresina's urban planning replicates some of the same principles utilized in the reconstruction of Lisbon. This peculiarity establishes a formal link with Portugal's capital and provides evidence that Roberta Delson (1997) was right when affirmed that the successfulness of the Portuguese urban program experimented during the 18th century.

The Portuguese urban model characterizes for the use of straight lines, volume regularity, geometric rigidity and the concentration of established powers – government and justice – around the main plaza. Differently from Lisbon, a third power was also established in the main plaza in Teresina: religion, which assumed an important role in the city occupation, and was related to the construction of the principal church in Deodoro da Fonseca Plaza.

These characteristics indicate a spatial pattern observed in the form and metric of the Brazilian colonial cities' central plazas related to the grid dimensioning and typological groups. These principles are also present in Teresina's plan, evidencing the Portuguese model influence. The fact that it was repeated a century later confirms indeed the applicability of the urban principles of the Portuguese school.

Nevertheless, the political and economic circumstances perceived in Saraiva's discourse (1850; 1852), might indicate that Teresina's planning was a result of both these conditions and the speed in which the city had to be built. However, technical evidences refute this argument. Thus, we may consider that the regularity of its pattern is a consequence of the necessity for reducing budget and time spent. And although it is clear that regularity presumes a technical facility, it also depends on a topographically appropriate site selection, which demands planning. Which means, the foundation of Teresina can be seen as a technical matter related to Geography and Topography fields, but some of its planning aspects are still to be cleared up.

Teresina's urban history refers to the transference of the capital as a large extent urban endeavor (D'ALENCASTRE, 1857, p.116). It was related to the creation of a city as a State Capital. Under this condition, the new city should have appropriate buildings for the functionality of all fiscal agencies and public institutions; and should shelter a numerous population, formed by workers that would build the city, by state leaders and public employees with their families coming from Oeiras, as well as the inhabitants of Vila do Poti that in 1841, as it

was known, had 2,849 dwellings distributed in 16 blocks (D'ALENCASTRE, 1857, p. 80-81); all of them excited to live in a healthy place free of the flooding risks caused by Poti and Parnaíba rivers.

According to the Presidency Official Registry Book # 404 (PIAUÍ, 1850-1854, p. 56), the new capital should constitute an appropriate tool for the political strategy and for the development of Piauí. So, the choice of the place for the location of the urban core was done carefully. The diligence dedicated to this operation denotes a common Portuguese urban planning practice.

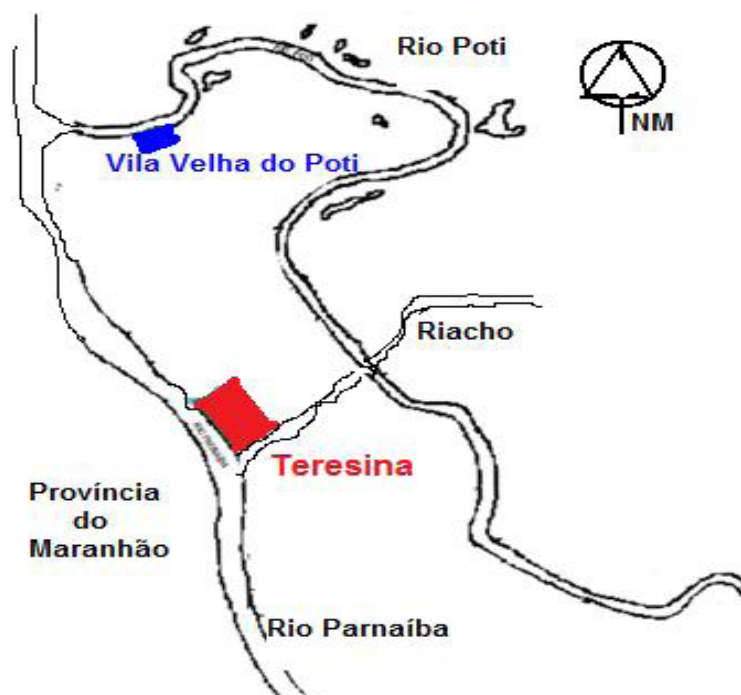
Once it was determined that the new capital would be erected in the Vila do Poti region, the province president, José Antônio Saraiva, carefully chose the site. According to D'Alencastre's description, Saraiva's official secretary then, the site he chose fit the purpose of the province's development (D'ALENCASTRE, 1857, p.116).

The ideal place for building the new city – named Covas – was chosen according to some criteria. One of them was to avoid flooding areas. Thus, an area on Rio Parnaíba's margins was chosen, which elevation above the river level was higher than the one at the confluence of Parnaíba and Poti rivers, where Vila do Poti was located. The chosen area was distant one league from Vila do Poti's original settlement, south to Barra do Poti (D'ALENCASTRE, 1857). From that point it was possible to descend the Rio Parnaíba plain slope, without crossing any bordering lake (MONTEIRO, 1987, p.28).

Figure 1

Location of the chosen site for the city of Teresina.

Source: sketch by the author



In the correspondence exchanged with the Empire's Businesses Minister, Saraiva pointed out the region's good geographic situation: its centrality in relation to the province, its healthfulness; the proximity with Parnaíba River; the fact that it was the most agriculturally active municipality; and the only village where the inhabitants were committed to "[...] prepare in the minimum time span to own the Capital of the Province", having in mind that the provincial treasure was low on resources (CHAVES, 1998, p. 175) and it could not afford the necessary costs for the capital transference.

Among the advantages of the chosen site are: the facilities of utilizing Parnaíba River as a navigation means to achieve political and commercial relations¹; its topography, favorable for the city location, which did not demand large costs – it was a plain covered with low vegetation, soil in grass and bean plants (MONTEIRO, 1987b); the regular morphology extended for four square leagues (FREITAS, 1988), fitting the region to the purpose in terms of its dimensions. The only existing unevenness – the slope down to the river – and the distance between the chosen site and Barra do Poti (FREITAS, 1988) would protect the region against flooding. The terrain, partially rocky and partially clay, would furnish appropriate raw materials for the construction industry. Finally, there were no impediments regarding the property issue, since the area belonged to only one owner, Colonel Francisco Cunha Castello Branco, a wealthy farmer from the city of Campo Maior (CHAVES, 1998). The existence of only one owner was a positive factor in an expropriation process.

City Planning and Building

The urban characteristics of the city's original plan are present in José Antônio Saraiva's discourse². They can be extracted from the official correspondence. Thus, the analysis of its conception becomes possible.

Paulo Souza (2004, p.20) points out some elements that established links between the building of Teresina and the Portuguese culture, among which the Portuguese nationality of the site's landowner; of the first contractor of city's public works; of the official in charge for street alignment and the first buildings' construction – foremen João Isidoro da Silva França and José dos Santos Silva. In addition, many families that settled cattle ranches in the region were Portuguese, and the most important merchants of the new town were either Portuguese or their descendants, mostly coming from Maranhão, as well as commerce and employees of the incipient bureaucracy. Teresina is, thus, according to the author, a 'Portuguese' city with a new standard.

This new standard refers to the spatial organization. Therefore vulgar, Souza's

1. Note that commerce was the natural activity of the settlement located at Barra do Poti.

2. President of the province at the time of the foundation of Piauí's new capital.

approach provides traces of the influences over Teresina's planning, considering that Saraiva's Plan design suggests some common aspects with the Portuguese colonial city, through certain patterns that appear in Teresina's urban structure, which are perceived in the planning process. The already mentioned careful site choice is the first of them.

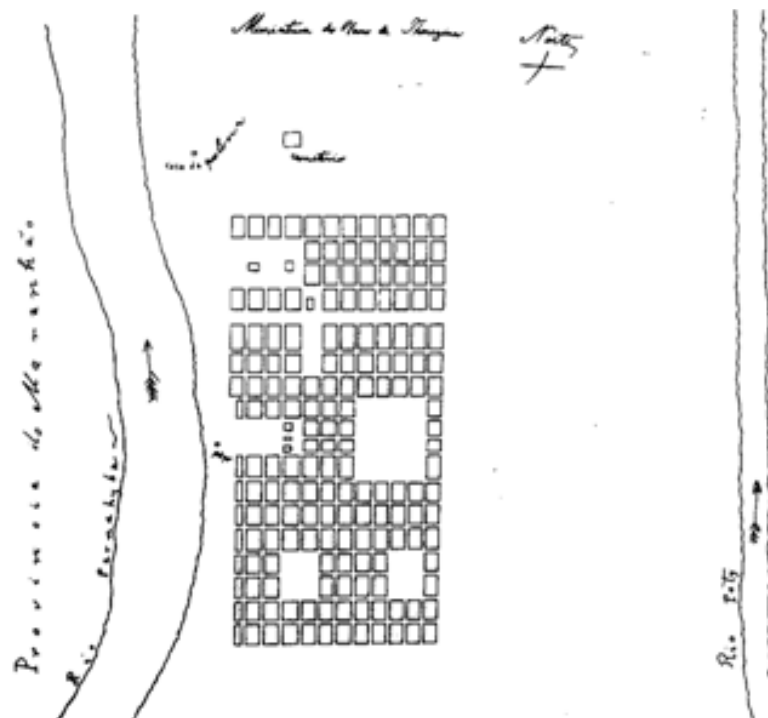
Apparently, the implantation of the city imposed a negative aspect to its urban pattern in terms of thermal comfort. The city's geographic coordinates – latitude 05° 05' 21" South and longitude 42° 48' 07" West – indicate that it is close to the Equator and, thus, it has a hot climate.

In a study on Teresina's urban design and its relation to the microclimate, Aline Castelo Branco concludes that in cities with hot climate, as in Teresina, streets should be (done, built?) preferably in alignment with the dominant winds; and they should be wider, for the purpose of allowing easy air circulation through the city (CASTELO BRANCO, 2001).

The inclusion of the magnetic North in Saraiva's plan (figure 2) indicates that the N-S and E-W orientation was considered in Teresina's plan. Therefore, knowing that city streets are SE-NW and SW-NE, and that the dominant winds in the region are SE, we may consider the possibility that the pattern axes were not defined according to the *heliotecnica* application. Nevertheless, disregarding dominant winds orientation may also mean that the design axes were defined based on the Portuguese geographic position.

Figure 2
Miniature of
Therézina Plan. 1850

Source: Fundação
Monsenhor Chaves
(1987, p. 5).



The city's orientation and the nationality of its builders and dwellers are not the only traces that Teresina was built under the influence of the Portuguese urban tradition. There are others, as the following arguments.

The Portuguese urbanism is characterized, in different periods and places, through the occurrence of two approaches:

The vernacular component, in most cases, corresponds to the first stages of the urban location done without specialized technicians, where a narrow relationship of the urban pattern with the topographic characteristics of their locations may be observed. The scholarly component is generally present in later development stages when urban growth, or the city's importance, vindicates the participation of specialized technicians with theoretical knowledge (TEIXEIRA, 2000, p.1).

In the scholarly approach, the building of Teresina presents many aspects of the Portuguese planning. As a capital, it already had the importance that would vindicate its theoretical based planning. Its initial plan, structured in an orthogonal system, seems to follow D. João V's Royal Provision's urban norms (dated August 1st 1747). It refers to Pombal's policies for urban and architectonic planning of cities and villages that, besides the alignment rules, predicted first the definition of a central plaza and secondly the church and other civic buildings location (REIS FILHO, 1968). Thus, in the Portuguese urban planning, the central plaza is linked to the city's formation. "These plazas play the role of a urban landmark, as a reference point in the landscape structure and, because of these characteristics, they are still symbolic spaces in the present days." (TEIXEIRA, 2000, p. 77).

Teresina's territory Demarcation Act establishes that the Principal Church is the city's ground zero (CHAVES, 2005). This defines the churchyard as a special space, with both a religious and a monumental character, and with a social and spatial importance in the city's structure. Thus, while the Principal Church becomes the reference point for the city pattern, its churchyard, Marechal Deodoro da Fonseca Plaza, is the main structural element of Teresina's plan³.

However, both this conclusion and the regularity of its pattern could also link Saraiva's Plan to the Spanish urban planning of the 18th century. After all, the foundation of Spanish cities in America started up with the *Plaza Mayor*: rectangular shaped, with a 600 by 400 feet proportion, and located at the settlement core (BENÉVOLO, 2009). Yet, although Deodoro Plaza may have served as a reference to the street design, differently from *Plaza Mayor*, there are three streets that begin at the plaza in Teresina. If, on one hand, the chessboard pattern approximates Saraiva's Plan to the Spanish urbanism, on the other hand,

3. This conclusion is based on Saraiva's speech, expressed in the official mail sent to the Minister of the Empire, Viscount of Monte Alegre [José da Costa Carvalho] (1851). He vindicates the transference of the capital, presents suggestions of works and improvements in the chosen region, and suggests the adopted strategy to facilitate the new capital's building process: the increase of Deodoro Plaza's dimensions, surpassing the 200x200 feet of the block itself, to accommodate in its surroundings the ones that financed the capital's transference. This explains, thus, in a political perspective, the fact that the plaza is considered the main node of the urban plan instead of the 200x200 ft. block.

this same grid and its renaissance characteristics are also in the core of the Portuguese urban activities in Brazil in the 17th and 18th centuries (TEIXEIRA, 2000).

Independently from their original morphological approach, the main characteristic observed in plazas and colonial urban setting's formation process is the multiplicity of functions, such as civic, religious and commercial characters. It is through this approach, consolidated with the creation of various spaces for distinct functions, that the Portuguese plaza left its signature in foreign towns and cities in America (CALDEIRA, 2010, p.36).

As it happens in a Portuguese plaza, the city's most important public buildings were located around Deodoro Plaza: the government headquarters, the police department, the principal church, the forum, the treasure building and the public market. The proximity between the plaza and the river, and the building's location facing it, suggest a defense strategy, and point to another similarity: the building typology and location are contributions from the colonial Portuguese urban planning. Nevertheless, the presence of the public market in the surroundings of the plaza is an aspect that differentiates Teresina from other cities built according to the Portuguese tradition. Probably, the location of the market building is due to the symbolic representation of the importance commercial activities should have over the city life, considering the economic development strategies that guided the capital's transference and Teresina's building.

Saraiva's Plan proposes a rational and functional street pattern that differs from the organic-functional pattern of Brazilian colonial cities, built according to the Portuguese urban culture. In Teresina, the pattern creates parallel streets symmetrically arranged and crossing at 90 degrees angle as in the chessboard, resulting in a square shaped street grid, and in blocks with a functional hierarchy. Its design resembles the classical Portuguese colonial model, but differs from Lisbon's reticule proposed by Eugenio dos Santos after 1755.

While Teresina's urban design was due to an economic and political necessity, Eugenio dos Santos Plan's design for Baixa⁴ was conceived to address the demand of Lisbon's rebuilding. However, both cities' pattern logic establishes the main plaza as the structural element of their conceptions; experimentations of baroque concepts can be observed in both patterns, reflecting the "rationality, formalism, uniformity and right-lined aspect" (BRAZ E SILVA, 2007, p.1). These similarities provide aspects of the Portuguese identity to Saraiva's Plan.

The capital of Piauí is not a colonial city, since it was conceived and built during the 19th century, thus, during the Brazil Empire era. Its original plan presents certain characteristics that resemble some of Eugênio dos Santos' design formal aspects, as well as the Portuguese urban planning of the 18th century: a regular, symmetrical and orthogonal street pattern; longitudinal and transversal streets linking two plazas – in Teresina: Deodoro Plaza and Rio Branco Plaza

4. Author of Lisbon's reconstruction plan, Eugênio dos Santos was the engineer captain with an architecture license when the earthquake happened, in November 1st 1755, followed by a tsunami and horrible wild fires, which destroyed most of the city of Lisbon.

–; and streets with hierarchy levels according to their position in the plan. A question that may be raised is if the author of Saraiva’s Plan previously knew the Portuguese urban planning or its cities, and as a consequence, its formal characteristics.

Other similarities with Eugênio dos Santos design may be noticed in Deodoro Square and its surroundings (Figure 3). Apparently, it has the same composition principle of Comércio Square in Lisbon. In relation to its formal aspects, for example, the location of activities – commercial and institutional – in its surroundings is due to the facilities of using the Parnaíba River as a navigational means; after all, the city building’s main objective was to increase political and commercial relations regionally, and the river made this integration possible.



Figure 3

Activities in Deodoro da Fonseca Plaza: religious (lilac); commerce (red) and institutional (orange). Teresina (PI). [End of 1900 decade]

Source: IPHAN-PI collection

Deodoro Plaza, as many Portuguese plazas, is open to the river, and the city’s main residential and public buildings are located in its surroundings. Its terrain is plain, but presents a slight slope down to the river – for this, and perhaps in a direct analogy to the Portuguese plaza, the area was called by the previous dwellers as “a baixa”⁵ (D’ALENCASTRE, 1857). Its declivity may be observed in the figure 3, a photo dating the end of 19th century, where the natural paths through Largo do Amparo, between Parnaíba River and the Principal Church (in the background, still without the towers), can be seen.

Considering the hypothesis that Teresina’s planning is a consequence of the *Pombalino* urbanism, the same can be said in relation to other Portuguese cities built during the 18th century. It may be noted that Saraiva’s Plan also relates to the geometric street pattern of Vila Real de Santo Antônio⁶ and with the civic and commercial center represented by its main plaza, Marquês de Pombal Plaza.

The city plan was designed by Casa de Risco of Lisbon, under the supervision of the Portuguese Architect Reinaldo Manuel dos Santos, and it is considered as the best expression of the rational and abstract principles that based the Portuguese urban planning of the 18th century (CORREIA, 1997). Horta Correia

5. Low city (n.t.)

6. Located in Algarve region, in the shores of Guadiana River, the city of Vila Real de Santo Antônio was founded in December 30th, 1773.

considers that Vila Real de Santo Antônio reproduces the experience of Lisbon's rebuilding after the 1755 earthquake, both through the urban structure careful planning, facilitated by the flat terrain, and through the use of rigid architectural modules (CORREIA, 2007).

The design of Vila Real totally disregards the topographic characteristics of the site. Its plan (Figure 4) is inscribed in a rectangle and presents a street pattern absolutely orthogonal that defines square and rectangular blocks. In the center of the plan, the square shaped Marquês do Pombal Plaza is located, corresponding to a non-built block. Two other plazas, also square shaped but smaller in their dimensions, are symmetrically located, in each side of the central plaza.

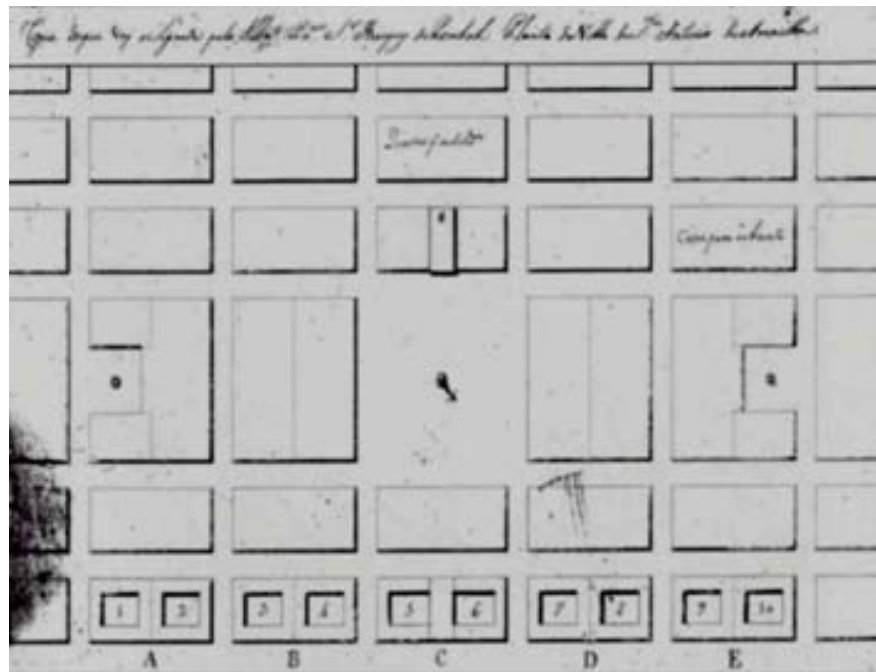


Figure 4

First plan of Vila Real de Santo Antônio, sent to Algarve in January 1774, Portugal

Source: Correia (1997, p. 469).

As in Vila Real's plan, Saraiva Plan proposes a city inscribed in a rectangle, and places the established powers in its main plaza (Figure 5). The main urban elements of 18th century are in the Portuguese city plaza: the church, the city council and the house of the guards – which is not present in Teresina's plaza.

Teresina, as well as Vila Real, was built in a fast mode, and in both the speed was due to the economic and political contingencies. While in Teresina the economic development and regional integration originated the new city, the building of Vila Real de Santo Antônio was originated from an economic, political and territorial strategy of enforcing the Portuguese state, in relation to the Spanish state. In this process, Marquês de Pombal's desire of addressing two main goals prevailed: "control of the fishing business, and absolutist affirmation of the royal power [...]" (FIDALGO, 2010, p.7) along Spain's border.

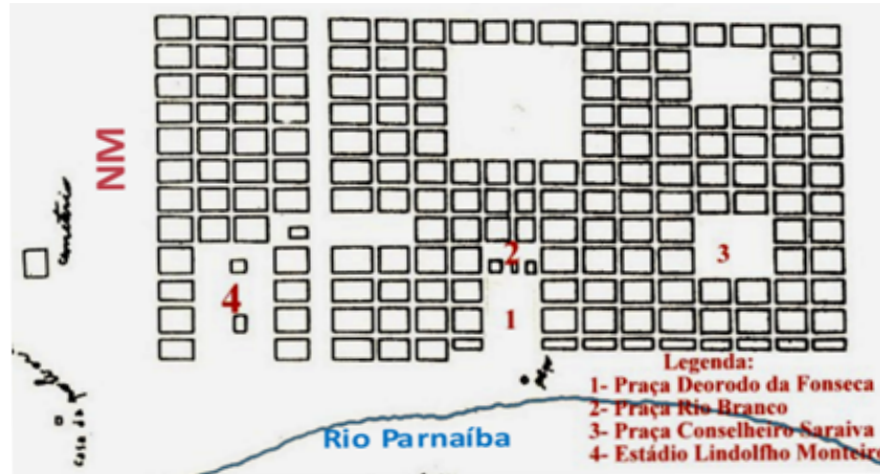


Figure 5

Saraiva's Plan squares system. Teresina (PI). 1852

Source: Author edition on the miniature drawing of Teresina's Plan.

Despite of the economic reasons that originated their foundations, there was a fundamental difference between Teresina and Vila Real de Santo Antônio: the roles of these two cities. While the former was the capital, the latter had an industrial function. As Correias observes (1997, p.125): “the whole urban grid was thought in function of the industrial village concept. The blocks facing the river sheltered the ‘production lines’, that is, the buildings where the industrial activity happened.”

But, in general, the comparison between the Portuguese urban planning in Brazil and Saraiva's Plan also point out to some differences.

Plazas such as Largo da Matriz, currently Deodoro da Fonseca, are in the origin of the Portuguese form of occupying a territory as a whole. They are the settlements' structural elements of appropriation and physical order. In the villages and cities founded during the 18th century, the Portuguese square was always defined by rules⁷, as it can be observed in the following excerpt of the Royal Provision of August 9, 1747 (ARQUIVO HISTÓRICO ULTRAMARINO, 1747, s./p.):

In the chosen site, a square will be marked measuring 500 palms⁸ each side for the plaza, and in one side the church will be located, the street or streets will be marked with widths of no less than 40 palms, and through them and on the sides of the plaza the fine residences will be placed.

The urban grid proposed in Saraiva's Plan has a metric proportion, in which the module is defined by the main square (Deodoro Plaza): in its geometric form, the largest side equals to three modules; the smallest, to two. This aspect, the origin of the module, is what differentiates Teresina's planning from other uni-

7. These rules, with strong urban intentions, generated the application of uniform patterns as Teresina's, which, despite the similarities, represents a shift in relation to the traditional form of colonial occupation prior to the 17th century, when the geometric regularity was not yet present, as the prevalence of locational aspects was, such as the rational grid organically adapted to the topography.

8. One palm, an archaic Portuguese measuring system is equivalent to 8 feet (n.t.)

form Portuguese colonial cities, where the palace defines the probable module. This is the case of the Portuguese colony in India, Damão, a successful foreign example of a colonial city, despite its regular pattern is not usual among the Portuguese cities before the reconstruction of Lisbon in 1755.

Deodoro Plaza, like the rest of the city, shows that Teresina's initial plan followed the Royal Provision determinations dated August 9, 1747 (ARQUIVO HISTÓRICO ULTRAMARINO, 1747). Currently, the application of many of these determinations can still be observed *in situ*.

Differently from the square shaped plaza, located in the center of the settlement as it was common to the Portuguese colonial city (REIS FILHO, 2000), Deodoro Plaza is rectangular shaped, and it is not located in the geometric center of the plan; its metric proportion also differs from the one present in the Portuguese plaza – it is larger: 1,200 palms that equals to three blocks of its urban grid. The Principal Church – an institution that is not present in the Portuguese plaza – is located in one of its sides.

The isolated location of the buildings in the middle of their lots, both around the Deodoro Plaza, as in the whole city, differentiates Teresina's blocks from the Portuguese block.

Around the main plaza, differently from Eugênio dos Santos design, Saraiva's Plan presents three blocks in each side east and west of the plaza (Figure 2); it was the result of Saraiva's interventions in the city plan⁹, as he states:

[...] through the plan [sent with the official letter] it will be known that the Village will start very regularly. In this plan I made a change [...] starting in the large plaza three streets instead of two, forming three blocks out of the existing two in the same plan. The six blocks of the large plaza will be filled up with beautiful houses [...] (PIAUI, 1851-1851, p.3)

Saraiva's words suggest that the city design, more than its preliminary character, has a political connotation. His discourse evidences the game of interests and the intelligent strategy. Considering that Deodoro Plaza would be Teresina's most important place, in the surroundings of which the local powers would be concentrated, the province's president deduced that a larger number of blocks around the plaza meant that more important people would settle in this main area of the city. This would please Vila do Poti's prominent residents, who provided the capital's transference financial support, as well as would gather more people interested in investing in the region to facilitate the new capital's consolidation process.

Saraiva's Plan proposes a block of little more than 200 ft. wide x 200 ft. deep: "The city occupation was facilitated by the donation of 200x200 ft. 'blocks' or 40,000 square feet to seventy families, where they settled residences with collective crops and animals breeding" (MONTEIRO, 1987b, p.89).

9. Regarding these changes, we presume that they were done by Saraiva, and up to the moment for this research, we did not find any drawing or map prior to the known ones, that could confirm the Province's president's words.

Still according to Orgmar Monteiro, Saraiva's discourse shows that, from the initially proposed 100 blocks, 70 of them were given to 70 families. This means that the proposed cadastral recording system was one lot per block and its residential typology was single-family homes. Despite that Teresina's buildings are aligned at the street frontage, the recording system had many more differences than similarities with Lisbon's.

For its official subdivision, occupation and size, the block in Teresina looked like a small farm or ranch "All have a hundred and something palms in the front façade" (CHAVES, 1998, p. 508). The lots had, in general, large backyards for domestic animals breeding and orchards".

In relation to the built architecture, Saraiva's Plan and some historic documents consulted – Documents 21 and 30, from the Book of Presidence's Official Registry # 224 (PIAUI, 1850-1853) – point out to the existence of a typically Portuguese typology, such as, for example, the church, the plaza, the City Council, the jail, the Mercy House, among others. Besides the planning of this typology, as a fact already mentioned, historical documents register the existence of two residential building types: the solid houses and the "fragile ones, made of straw" (CHAVES, 1998, p.39). The latter were inhabited by most of the population, while the solid ones were built in stone, wood and clay masonry (adobe blocks) and occupied lots compatible to the social and financial importance of their residents.

Regarding city streets, they were designed with 45 palms width. Recent measurements done in Downtown – which preserves the original street pattern –, show that the streets have this same dimension (10 meters), except for current Campos Sales Avenue, which is wider, according to the plan definition. This raises the question of what originated in Campos Sales Avenue region its distinct width¹⁰.

The dimensions regularity of almost all streets show a certain conformity with the 1747's Royal Provision and with Royal Letters, dated 1761 and 1762, regarding the creation and foundation of cities and villages in Piauí (ARQUIVO HISTÓRICO ULTRAMARINO, 1747, 1761-1762). This fact makes us believe that it is possible that Saraiva's Plan was conceived in accordance with what was taught in Mafra (ARAÚJO, 2007)¹¹. After all, from the 18th century on, anyone that was building in Brazil then could have been influenced by it. However, be it for knowing Lisbon, be it for complying with the royal determinations or by the knowledge acquired in Mafra, the fact is that Teresina's original plan's author was exposed to those influences and designed a plan with a particular street alignment – a typically Portuguese urban design process characterized by orthogonal axes that start at the principal church plaza and originate orderly blocks.

10. It is known that a hill named Alto da Pitombeira existed in this area, but probably, the dimensions difference is not related to the topographic aspects, but to the pre-existence of some access route to a local society's important person's property, either for his financial condition or for his political prominence.

11. Quote of Renata Malcher de Araújo's class on the theme "Brazil and the oriental network – space occupation and administration strategy", at the course "Architecture and Urbanism Portuguese School", Doctorate Program in Urbanism of the Federal University of Bahia, in September 11, 2007.

The confrontation of Saraiva's plan proposed street alignment to the ones found in the Portuguese literature references¹², evidences a certain theoretical applicability to the plan's pattern, especially in relation to its geometry.

Luis Miguel Martins Gomes (2007, p. 170) affirms in his book '*Geometria nos traçados urbanos de fundação portuguesa – o Tratado da Ruação de José Figueiredo Seixas*' (Geometry of urban patterns of Portuguese foundation – José Figueiredo Seixas Street Alignment Treaty):

It is, therefore, in documents linked to the national urban planning practice, and once more particularly in Brazil, territory where Pombal's urbanizing effort is perceived, that it is possible to find some signs regarding plots demarcation, territorial limits, or procedures on site interventions forms that relate to Figueiredo Seixas proposals, notably references to the terrain's leagues system attributed to settlements and their boundaries definition modes.

To confirm what Luis Gomes says, the lecture of the Demarcation Act (ACERVO CAB, 1852) from Teresina's territorial heritage, conveys to Figueiredo Seixas' Street Alignment Treaty¹³, more precisely to the part of the manual referring to the territory's arrangement principle and determines the territory's division in half league sized squares, with sides facing the four cardinal points, North, South, East, and West. Saraiva's plan has the Principal Church as the center of a compositional axis. It divides Teresina's territory in two squares, one North and the other South of the church, both with 1,500 arms (half league) sides. In Teresina's patrimonial term a half patrimonial league is equivalent to 6 leagues.¹⁴ It refers to a sign that Saraiva's Plan adopted Seixa's territorial arrangement principle. The grid pattern and its metric proportions are other signs because, according to Luis Gomes (2007, p. 232), this grid is a methodological procedure that served as compositional and design scale basis, a process recommended in every design manual of that period.

In the Portuguese colonial urbanism, the existence of a formal pattern and a sense of regulation are compositional principles. They are expressed in the use of the block as a module of the urban structure module, and as the centrality that characterizes this structure's design. In Teresina, both respectively, are perceived in the urban grid geometry and in the logic that guided its grid definition, established the Principal Church as a reference landmark, and the Deodoro Plaza as Teresina's design structuring element.

The compatibility of certain Saraiva's Plan principles with the norms pointed out by Gomes may indicate that the original plan's author knew Seixa's manual; if not directly, perhaps, indirectly, through Lisbon's experience and experi-

12. On this particular way of designing cities.

13. The *Tratado da Ruação* by José de Figueiredo Seixas is an Architecture and Urbanism Manual that represents the generic culture of the engineers during the 1700; still not well studied, it was discovered by Rafael Moreira in 1984 (see MOREIRA, 1984).

14. Renata Araujo (1998), in her work on Amazonian urbanism, reminds that in the beginning of the 18th century the league was used as a measuring unit for the lots in any foundation city's administration.

mentation, which constitutes the stronger example of the *pombalino* urbanism in the Portuguese territory, represented by Vila Real de Santo Antônio.

Conclusion

Teresina is an example of the foundation urbanism of a capital city. On the planning perspective, it was thought as a strategic territory. After all, the chosen site to locate the new capital has the appropriate centrality for the territorial managing and for the social dynamics among cities and villages in Piauí. The objective of building an urban center in Piauí, which would put an end to Caxias' (MA) commercial hegemony in relation to Piauí cities, proves the desire of reinforcing an urban network in the province and means that the city of Teresina was conceived to be the main node in the regional network scale.

The analysis of the city's initial plan confirms that there exists a relation of Teresina's historic core with the Portuguese city-building procedures, which manifests through the procedure that adopts the grid as an auxiliary design compositional guide, and which characterizes by presenting compositional principles, such as modulation and regulation sense; by considering technical aspects, such as functional attributes; and by adopting a political strategy in the territory's occupation.

The city design denotes a careful planning. The previously defined size of the city, totaling 100 blocks for example, has an important meaning in relation to the scientific character of the urban activity. It relates to the concerns with technical aspects, as density, surface, flows, dimensions etc. In Saraiva's Plan, the city's functional needs were compatible with the territorial extent of the new capital, considering the fact that the designed blocks are sufficient to shelter public buildings, the inhabitants of old Vila do Poti and the presumed population transferred from Oeiras. The site's choice is another element that denotes Saraiva's Plan's planning character. It constituted a political strategy of occupation, a very Portuguese urban planning character. It occurred due to its relation with the territory, but it was also planned in terms of accessibility, topography and climate conditions.

The plan design contains important articulations that reveal the diligence with the city building, which are appropriate to the previous planning. They refer to the balance of urban interactions and functions, use conditions etc. In the case of Deodoro Plaza, for example, the urban design presents a proportional relation between the width and the volume of the main open space, and of the buildings' dimension that surround it. The balance is also present in the location of certain activities, as commerce and services, and of some public spaces hierarchy. The plan shows that the relations of built elements and open spaces are proportional in volume and appropriate to the climate.

The evidences of functional (activities distribution) and dimensional (geometric modulation) appropriateness in Saraiva's Plan show that the design of Teresina's original nucleus was based on regulations and brings formal specificities of the Portuguese urbanism of the 17th and 18th centuries, even though it was built in the 19th century. Among the specificities we can observe: rationality and abstraction in relation to the site, the league as the territory's demarcation module, the orthogonal symmetrical pattern and axes that start at the principal church plaza and originate regular blocks.

Teresina's pattern is straight and orthogonal, aspects that resemble the *pompalino* determinations defined at the Royal Letters of 1750 and 1761.¹⁵ Its design manifests the prevalence of the street grid as the constitutional process of the nucleus and resembles the 18th century's Portuguese pattern (the streets: *Direita* and *Nova*), due to its grid disposition and building functions. This is the case of the first city's structural main road, Rui Barbosa Street (Rua Direita), that follows the river banks, although, in a much higher level.

Teresina's spatial organization also approximates Saraiva's Plan to the Portuguese mode of city building. The city's historic documentation demonstrates that its territory is organized according to the typical Portuguese urbanization typology, the Principal Church, and registers the existence of other typologies: City Council, prison, Mercy House, forum, Treasury etc. The main plaza's urban typology, in Teresina, has a locational form that points to a defensive strategy, common to the Portuguese colonial urbanization.

From the morphological point of view, Teresina's design has other characteristics that resemble the 18th century Portuguese city. Besides the existence of a territory's order and occupational plan, the occurrence of a regular morphological pattern and the street grid, built in relation to the public space, the following aspects are noticeable: the one way grid; the grid and topography articulation; the location of institutional buildings in order to intervene in the urban pattern structure; the uniform urban structure; some streets as the city's structural axes; and the parcels regular structure.

In this sense, Teresina's original plan and its implantation denote an occupation process based on regulations (SHÜRMANN, 1999), which ratify the thesis in which the city's implantation occurred according to a previous planning, with characteristics that relate it to the Portuguese colonial architectonic and urban treatises.

The evidence of Saraiva's Plan and the Portuguese urban planning similarities brings to light Roberta Delson's (1997) ideas¹⁶ on the planning existence in

15. The first letter defines the *pompalino* politics for the administrative reorganization of the northern colony's provinces, among them, São José do Piauí; the second determines the characteristics of its planning. Through the second letter, the King Dom José determined to the first governor of Piauí, João Pereira Caldas, that the straight and orthogonal street grid – baroque characteristic – should be adopted, as well as the standardization of the façades in the villages (BARRETO, 1938).

16. Delson verified the existence of a Brazilian city building program in the 18th century through the examination

the Portuguese colonization activities.¹⁷ According to Delson, the emergence of most new villages and cities is due to well-defined political objectives and follow an urban project model¹⁸- some of the characteristics of which can be found in Teresina. The regularity of the grid, for example, can be taken as a pragmatic character of the Portuguese urbanism that aims at resources use reduction, procedures facilitation, and plots standardization, to avoid confronting with city dwellers. Its defects, mentioned by Monteiro (1987), can be explained by Azevedo's thesis related to Salvador, João Pessoa, Rio de Janeiro, São Luis and Belém. The latter defends, through these cities street grids analysis, that the Portuguese urbanism does not follow a rigid geometric model. It deals with arrangements that prioritizes topography and social demands, and which is reflected in the flexibility of the urban tissue, in the plazas' articulation and in the subdivisions' informality (AZEVEDO, 1998). Thus, the Brazilian urban network building illustrates the success of the 18th century's Portuguese urban program, considering that its principles were used in the reconstruction of Lisbon and later, in the following century, in the capital of Piauí.

Despite the similarities, we can still notice many differences between the Portuguese urban planning and the foundation of Teresina. We believe that such differences mean an adaptation of the Portuguese colonial model to the local specificities. In this sense, it is worth to point out some of them:

- a. Implantation in the interior of the region (distant from the coast), and taking advantage of the navigability of Parnaíba River, promoted an articulation with other urban nucleus;
- b. The initial core location's careful choice, in the shores of Parnaíba River, shows a territorial logic aimed to the efficiency of the regional urban development;
- c. Teresina's original street pattern has a strong political influence and translates the necessities of accommodating new urban functions, but, mainly, it is an element that allows inferring the city's evolving and structuring logic, based on rationalization and simplification of proce-

of administrative requirements and architectonic preferences in small villages located in the interior of Brazil. Among them, Mocha (currently Oeiras); Piracuruca and São João da Parnaíba (Parnaíba), Piauí. This program, organized in an urban planning philosophy with a humanistic base, has clear and precise guidelines: (a) promote modernization of built spaces and for people, which generated a urban project model; and (b) association of the controlled urban growth and acceptance of the Portuguese authority in the Brazilian interior.

17. In Brazil, these ideas were accepted by various authors and discussed by Nestor Goulart dos Reis Filho, in *Evolução Urbana do Brasil*, and Paulo Ormindo de Azevedo, in *Urbanismo de traçado regular nos dois primeiros séculos da colonização brasileira - origens*. These authors developed research on many Brazilian colonial cities on the 18th century, analyzing their street patterns and concluding that their regularity was the result of a planning process prior to their foundations.

18. The characteristics of this model are: pattern created from the appropriate site for the central plaza (plain topography); emphasis in straight streets; demarcation of the church, city council, prison and other public buildings; regular plazas; architectonic elements uniformity; 'pelourinho' located at the center (symbol of the Portuguese authority); residents in straight lined lots, façades following the same style; and interaction of the architectonic elements. The author evaluates that the application of this model in Brazil produced the standardization of settlements, independently of their geographic situation, and served as an opportunity for urban experimentation of the Portuguese planning baroque concepts (rationality, formalism, uniformity and straight lines), which were applied later in the reconstruction of Lisbon.

dures¹⁹. Its street pattern is an element with an determining role in the urban territory's structuring; it has no limits and extends through the accumulation of blocks as the city grows;

- d. The city presents some space ordering elements (plazas, for example), which articulations (urban relations, functions, use conditions etc.) reveal them as growth gears and determinants of the current aspects of the urban form;
- e. The regularity of Saraiva's Plan is explained by its geometry and by the necessary budget limits during the capital's transference process.
- f. The urban principles utilized in the conception of Teresina's plan are: landscape and environmental character; purpose of exploring the river landscape scenographically; the site's geography as a street pattern definition element; the search for a orderly and balanced disposition, far from the irregular street patterns; the demarcation of the grid generating nucleus by the complex plaza/church, a typical morphology of the 16th century; the location of the buildings and the street grid fitted according to the West/East orientation, and the environmental protection against flooding, perceived on the buildings location distant from the river banks.

The comprehensive observation of the similarities and differences between the Portuguese urban planning and Teresina's foundation reveals the materialization of urban tradition elements. Among others: the manifestation of baroque concepts (rationality, formalism, orthogonality and uniformity), the presence of the classical urban planning in the city pattern through uniformity and regularity, and occurrence of aspects that can be observed in a similar way in the Portuguese and Iberian-American urban planning, such as, the symbolic importance acquired by the main plaza in the urban and social context and the design (its scale and hierarchy as origin of the urban grid). This particularity evidences a planning more related to the erudite school, and allows us to infer that Teresina's urban plan reflects an Imperial Brazilian urban planning that figures as a Portuguese-colonial urban evolution.

Finally, it is worth to mention that the historic documents analysis on the city's foundation provided important elements for the understanding of Teresina's original plan, but also imposed some inquiries. The first refers to the plan's author. Although, the clearing up of this issue is not the focus of this article, the documentation studied – Official Letter March 13, 1851, Book of Various Registries # 181 (CAB, 1850-1851, p. 35) – conveyed to the establishment of links between Saraiva's discourse and the city plan's authorship.

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19. On this type of pattern, see Paulo Ormindó de Azevedo (1998)

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