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TRANSPORT TERMINAL - BETWEEN INTERMODALITY AND DISCONNECTION IN ITAQUERA, SÃO PAULO, BRASIL

EL TERMINAL DE TRANSPORTE - ENTRE INTERMODALIDAD Y DESCONEXIÓN EN ITAQUERA, SÃO PAULO, BRASIL

TERMINAL DE TRANSPORTE – ENTRE A INTERMODALIDADE E A DESCONEXÃO EM ITAQUERA, SÃO PAULO, BRASIL

Figure 0. Views of the subway platform and roof from inside the station. Source: Author's photo in 2017.

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ABSTRACT

This article analyzes the construction of the Corinthians-Itaquera transport terminal, an important intermodal mass transit hub, located in a peripheral area of the metropolis of São Paulo, Brazil. To promote urban development, the neighborhood of Itaquera has received investment in housing and transportation consistent with the Transit-Oriented Development (TOD) proposal; however, the implementation process has made it difficult to articulate these uses. As architecture, the terminal questions the boundaries of the building and raises important questions about urban context and design. This article addresses the architecture of transport nodes in two simultaneous dimensions: on the one hand, as a node in the network (access to a set of mass transport points), and on the other, as a place in the city, in a particular type of public space. Despite its numerous connections to the city's transportation networks (train, subway, and bus) and its proximity to a major housing complex, the Itaquera terminal has a precarious connection to its immediate urban context. Through the description of the case study, production of graphic material, and historical contextualization of the site, alongside a bibliographic discussion, this article aims to assess the gap between parameters in urban planning and those on a local architectural scale. It is argued that considering transit nodes as public buildings and spaces for collective use requires urban design and is fundamental to face the most critical urban challenges of peripheral metropolitan conditions.

Keywords: urban mobility, architectural design, public space, public transport, TOD

RESUMEN

Este artículo analiza la construcción del terminal de transporte Corinthians-Itaquera, un importante nodo de transporte de masas intermodal en una zona periférica de la metrópolis de São Paulo, Brasil. Para impulsar su desarrollo urbano, el barrio de Itaquera recibió inversiones en el área de vivienda y transporte consistentes con la propuesta del Desarrollo Orientado al Tránsito (TOD, por su sigla en inglés), pero el proceso de implementación dificultó la articulación de estos usos. Como arquitectura, el terminal cuestiona los límites de las definiciones del edificio y trae consigo preguntas importantes sobre el diseño y el contexto urbanos. Este artículo aborda la arquitectura de los nodos de transporte en dos dimensiones simultáneas: de un lado, como nodo de la red, o sea, un acceso a un conjunto de puntos del transporte de masas y, de otro, como lugar en la ciudad, en un tipo particular de espacio público. A pesar de sus numerosas conexiones con las redes de transporte de la ciudad (tren, metro y autobús), y su proximidad con grandes conjuntos habitacionales, el terminal de Itaquera presenta una relación precaria con el contexto urbano inmediato. A través de la descripción del estudio de caso, la producción de material gráfico y la contextualización histórica del sitio, junto con una discusión bibliográfica, este artículo tiene como objetivo evaluar la brecha entre los parámetros de la planificación urbana y los de la escala arquitectónica local. Se argumenta que considerar los nodos de tránsito como edificios públicos y espacios de uso colectivo requiere de un diseño urbano y es fundamental para enfrentar los desafíos urbanos más críticos de las condiciones metropolitanas periféricas

Palabras clave : movilidad urbana, dibujo arquitectónico, espacio público, transporte público, TOD

RESUMO

Este artigo analisa a construção do terminal de transporte Corinthians-Itaquera, um dos principais nós intermodais de transporte de massa na periferia da metrópole de São Paulo, Brasil. Para impulsionar seu desenvolvimento urbano, o bairro de Itaquera recebeu investimentos em habitação e mobilidade alinhados à lógica do Desenvolvimento Orientado ao Transporte Público (TOD); contudo, as características do processo de implantação dificultaram a articulação desses usos. Como objeto arquitetônico, o terminal problematiza os limites das definições de construção e suscita questões importantes sobre desenho urbano e inserção contextual. O estudo aborda a arquitetura dos nós de transporte em duas dimensões simultâneas: enquanto pontos de acesso a redes de mobilidade de massa (trem, metrô, ônibus) e enquanto lugares urbanos, dotados de características próprias de espaço público. Apesar das inúmeras conexões de transporte da proximidade com grandes conjuntos habitacionais, o terminal de Itaquera apresenta uma relação precária com seu entorno imediato. A partir da análise do caso, da produção de material gráfico e da contextualização histórica do local, associadas a uma discussão bibliográfica, o artigo busca avaliar a lacuna entre os parâmetros de planejamento urbano e os da arquitetura a escala local. Argumenta-se que compreender os nós de transporte como edifícios públicos e espaços de uso coletivo implica necessariamente estratégias de desenho urbano, fundamentais para enfrentar os maiores desafios das condições metropolitanas periféricas.

Palavras-chaves: mobilidade urbana, projeto de arquitetura, espaço público, transporte público, TOD

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INTRODUCTION

The conception of mobility nodes is, simultaneously, a problem of urban planning, urban design, and architecture. Nevertheless, it is frequently considered singularly by only one or two of those dimensions. The combination of those fields of study enhances the potential of this type of project to function as nodes and centralities in the city, especially considering peripheral areas. This article examines the construction of the Corinthians-Itaquera Terminal, an important intermodal transportation node within the expansion of the subway in São Paulo in the eastern periphery of the metropolis.

The Corinthians-Itaquera Terminal stands as a paradigmatic case for the implementation of Transit-Oriented Development (TOD) policies, as it links fundamental issues of regional mobility with local urban development of an important peripheral hub in the largest Latin American metropolis.

Even though the basis of TOD proposals associates real estate with mobility lines to enhance urban density and vitality, a closer look at Itaquera's case highlights some important disconnections around those aspects. Furthermore, the distinct social and cultural patterns of Brazilian peripheries, which differ significantly from those of American suburbs, render the direct application of TOD strategies even more questionable. As such, Brazilian 'peripheral hubs' should be read in their particular relation to informal practices and social potential. The urban and architectural design of the Terminal is central to this discussion, given its importance as a regional intermodal transport hub. We ask how its design addresses the connection to both its immediate housing surroundings and its metropolitan dimension.

There is a widespread body of literature on promoting and analyzing how the articulation of public policies for urban planning, housing, and transportation can lead to the production of accessible urban spaces (Chatman, 2013; Knowles et al., 2020; Rouillard & Guiheux, 2020). However, little has been written on the urban and architectural design scales of the Terminal. Although some studies acknowledge that these aspects play a crucial role in the terminal's dynamics (Amorim et al., 2022; Rouillard & Guiheux, 2020), a discussion on how local-scale design relates to the urban-regional scale is still needed. This article seeks to analyze the articulation of these scales by converging the urban context alongside the design of the building. More specifically, it aims to identify the problems of the Corinthians-Itaquera terminal project and adapt the concept of TOD to developing countries and peripheral areas. We discuss the site's history, including its housing and mobility projects, as well as graphic materials such as drawings and photographs. It is shown that the regional dimension alone may not be sufficient to address the demands for mass transport in peripheral areas.

THEORETICAL FRAMEWORK

A mobility or transport node can be defined as a location that provides access to a network system comprising one or more lines. If the line is the element that crosses the urban fabric, offering a mode of displacement, nodes are the points where users can access the system. The idea of highlighting the dual dimensions of transport nodes was outlined by Bertolini and Spit (1998),

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initially analyzing railway stations (where access to more than one transport mode often converges). The dialogue with the local scale is fundamental for this type of design, as the stations are also "places" in the city and can offer activities and provide public spaces to the urban environment, and even to the neighborhood. The difference in being a design that is part of a transport network implies a second dimension, which brings the network outside of it to the station, and also brings a constant flow of people from different parts of the city. For example, the building's relationship with the surrounding urban fabric will depend on the priority assumed in the project regarding access, accessibility, and visibility of the station.

Several studies point to the need to analyze the design and planning of mobility spaces to better take advantage of their urbanity potential (Bertolini, 1998; Bertolini & Dijst, 2003; De Solà-Morales, 2008; Martin, 2023; Rouillard & Guiheux, 2020). The basis for this approach is that in today's increasingly mobile and connected urban society, one of the main qualities of a given location is its degree of accessibility. This refers both to the connection to transport networks, that is, passenger capacity, speed, price, etc., as well as the diversity of activities available, in addition to their opening hours and structure of public space. Therefore, applicable institutional regulations, such as access and security points, must also be considered.

The connection points that terminals and connection stations comprise have the characteristic of "network nodes" and can also conform to "urban nodes" and centralities. Bertolini & Spit, in Cities on Rails (1998, pp. 211), define the "surrounding environment" as one of the factors that drive the development of areas surrounding stations. They define four parameters for considering the location of the station in the city: a fixed walkable radius of 500 meters, or even, the physical limits (barriers, topography, etc.), a 10-minute walkable radius from the station; historic uses in the surroundings such as industrial areas or commercial hubs; and an institutionally delimited perimeter (in urban plans, for example). Even within this perimeter around the station, the difficulty of forming centralities from urban nodes can also be credited to the lack of adequate micro-accessibility. For the authors, this should be one of the main scales of action of the architectural design of transport facilities, not limited to the perimeter of buildings.

The idea of the mobility node as an urban place brings internal issues to projects of this complexity, from construction to space management, in addition to the interference between the activities and the different functions of the intermodal terminals. The concept of "Urban exchange complex" (Amar, 1996) addresses the issue of "complexity", which involves the exchanges that characterize the space, and the "urban", as intrinsic dimensions. Within the design aspect, the concept proposes a global approach, whereas sectoral cuts (for example, among companies managing different modes of transport) lead to ineffective solutions, both from a social and economic perspective. When considering the quality of the design of connection hubs, it is traditionally considered that people are usually able to move around spaces, that is, the node dimension of the network works. However, without considering the

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dimension of place in the city, Amar (1996) questions that if we do not increase the quality parameters, we will come across people who are lost, stressed, and certainly more tired than necessary. The design of a "Complex of Urban Exchanges", as an understanding of a minimum vitality of the public and urban space, should value a higher quality of the environment.

The complex of urban exchanges can be understood through two main functions: connection and services, analogous to the node and place scales presented by Luca Bertolini and Tejo Spit (1998). Amar (1996) distinguishes between a macroscopic scale, in the former, regarding mass movements, and a microscopic scale, in the latter, related to the activities of individuals. The second function dialogues directly with the urban space, but it is in the encounter that the scene is completed, proposing another rhythm. The complexity of these spaces and the organization of the types of activities is reflected in the relationship between public use and collective use, which can take place even inside the terminal, or in conjunction with surrounding facilities, as well as within a larger perimeter. De Solà-Morales (2008) points to the importance of considering, in urban design, the collectivity as a premise for intervention. In this sense, collective use overlaps with the notion of public space (which, for the author, refers to state-owned spaces), as it permeates between public and private spaces.

METHODOLOGY

The analysis of the case study was conducted through a description of the case study, production of graphic material, and a historical contextualization of the site, alongside a theoretical discussion. The article discusses three main areas: the urbanization of the eastern zone of São Paulo, including housing and transport, the concept of TOD, and the design of transport terminals, which refers to public and collective space in peripheral contexts. Regarding the graphic material, observing constructed spaces as an architectural design is a fundamental method to reveal them as a project (Jacob, 2016). This historical reading of recent events aligns with a methodological approach that seeks to uncover lessons from the existing city (Koolhaas et al., 2018). Rather than imposing preconceived ideas, it relies on what might seem like a 'mere description' of reality. However, this descriptive stance serves as a critical method, allowing for a reflective and open-ended review of the contemporary urban condition (Waisman, 2013, p.32). The combination of theoretical and empirical analysis allowed the construction of new hypotheses about the role of transport terminals in social inequality associated with urban mobility. From different points of view, the situation of the terminal is shown in relation to its immediate surroundings.

CASE STUDY

THE CORINTHIANS-ITAQUERA TERMINAL

Context and location

The Corinthians-Itaquera terminal, as shown in Figure 1, with its grey appearance, red roof, and walkway over the roadway, is located in the Eastern Zone of São Paulo, a historically working-class district. It is a key place to review,

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Figure 1. Corinthians-Itaquera Terminal, access walkway. Source: Author's photo in 2017.

as it received one of the São Paulo State government's most important plans for urban development, and one of the few that embraced both housing and transit. In addition, it is one of the few transport nodes that have three types of public transport: train, subway, and bus. The construction of the second line of São Paulo's subway system**1** responded to the city's needs in the 1970s, since the East Zone was already expanding **2** and had precarious accessibility. The train line had provided a route between the city center ("Luz" region) and the east ("Mogi das Cruzes" region) since the beginning of the 20th century, along the former railway line "Central do Brasil"**3**. With the expansion of these areas and the decrease in industrial activities (with a consequent increase in dependence on the city center as a focus of jobs), the railway line was no longer up to the task of taking passengers and workers to the city center, which burdened the urban bus system.

Completed in 1988 with the subway line, the terminal has a built area of 30,435 m² and a maximum capacity to serve 60,000 passengers per hour. The subway system operates in parallel to the Expresso Leste, also known as the "East Expresso" train line, and the "Radial Leste" highway, forming a triple-mode corridor. The east-west subway line has not been extended since 1988, and the Corinthians-Itaquera Terminal remains the last station in the east direction. Figure 2 and Figure 3 present the architectural plans and sections of the terminal, which features three levels: buses on street level, halls and ticket offices on the mezzanine-second level, and, on the third level, platforms to access trains and subway systems.

The terminal's building, elevated from the ground level, provides access to subway line 3, the "Coral line 11" train line, and the bus terminal. It is an important point of entry to the city for a large group of neighborhoods in the

1 Currently named Line 3.

2 Itaquera's population almost doubled between the 1970s and 1980s, rising from 63,000 to 126,000. In 2010, it had reached almost 205,000 (Ramalhoso, 2013, p. 120).

3 Operated by the Central Railroad of Brazil since 1980, the line reached Mogi das Cruzes in 1910, and the "Estudantes" station in 1976, marking the current end of the line to the east. Regarding the administration of its operation, control passed to Rede Ferroviária Federal, Sociedade Anônima or the Federal Railroad Network (RFFSA) in 1975, then to Companhia Brasileira de Trens Urbanos (CBTU) in 1984, and finally to Companhia Paulista de Trens Metropolitanos (CPTM) in 1994, when the system passed to State government control.

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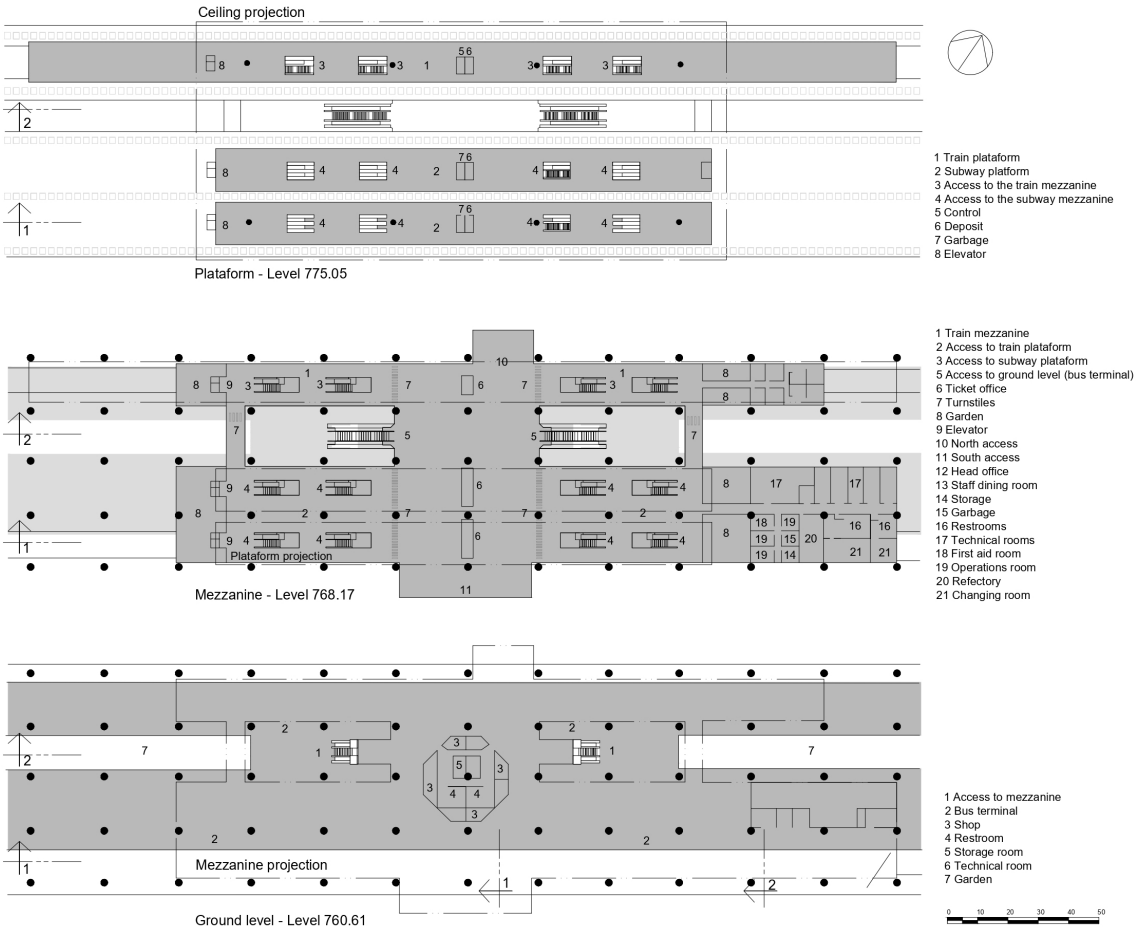

Figure 2. Corinthians-Itaquera Terminal's floor plans. Source: Redrawn by Luísa Gonçalves based on Subway Documents: Metro, 1979, p.187.
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Eastern Zone, and is also a unique case of connection for the Subway with the state housing company (known as COHAB) for a combined transport and housing project (Freitas, 2020). Figure 4 shows several facilities in the terminal's immediate surroundings: the adjoining Itaquera "Poupatempo" **4** (Figure 5) and shopping mall buildings, which are directly connected by walkways, as well as across the road, the Corinthians Stadium (Figure 6), and the maintenance yard of the 3-Red east-west line. Itaquera's "Poupatempo" building, which opened in 1998, was designed by renowned architect Paulo Mendes da Rocha in partnership with the MMBB architectural office. Its location alongside the intermodal terminal was a requirement of the architect, and it is accessed via a walkway connecting to the terminal. The building, more than 300 meters in length, can attend up to 12,000 people daily. On the other hand, Itaquera Shopping Mall was inaugurated in 2007 and is part of the subway company's plan to link stations to large shopping malls.

In Itaquera, the City Council grasped the opportunity of the available land of the state housing company (COHAB) to request national funding **5**, which made it feasible to combine the expansion of the subway with a housing project (Ramalhoso, 2013). Housing developments played an important role in the region's density, which in the early 1960s had a still small but growing population, concentrated alongside the railway line. The Corinthians arena was a promise of the 1970s, when COHAB ceded land neighboring the

4 PoupaTempo or "SaveTime in English" is a Brazilian public service designed to optimize bureaucracy for the population.

5 Funded by the Housing National Bank.

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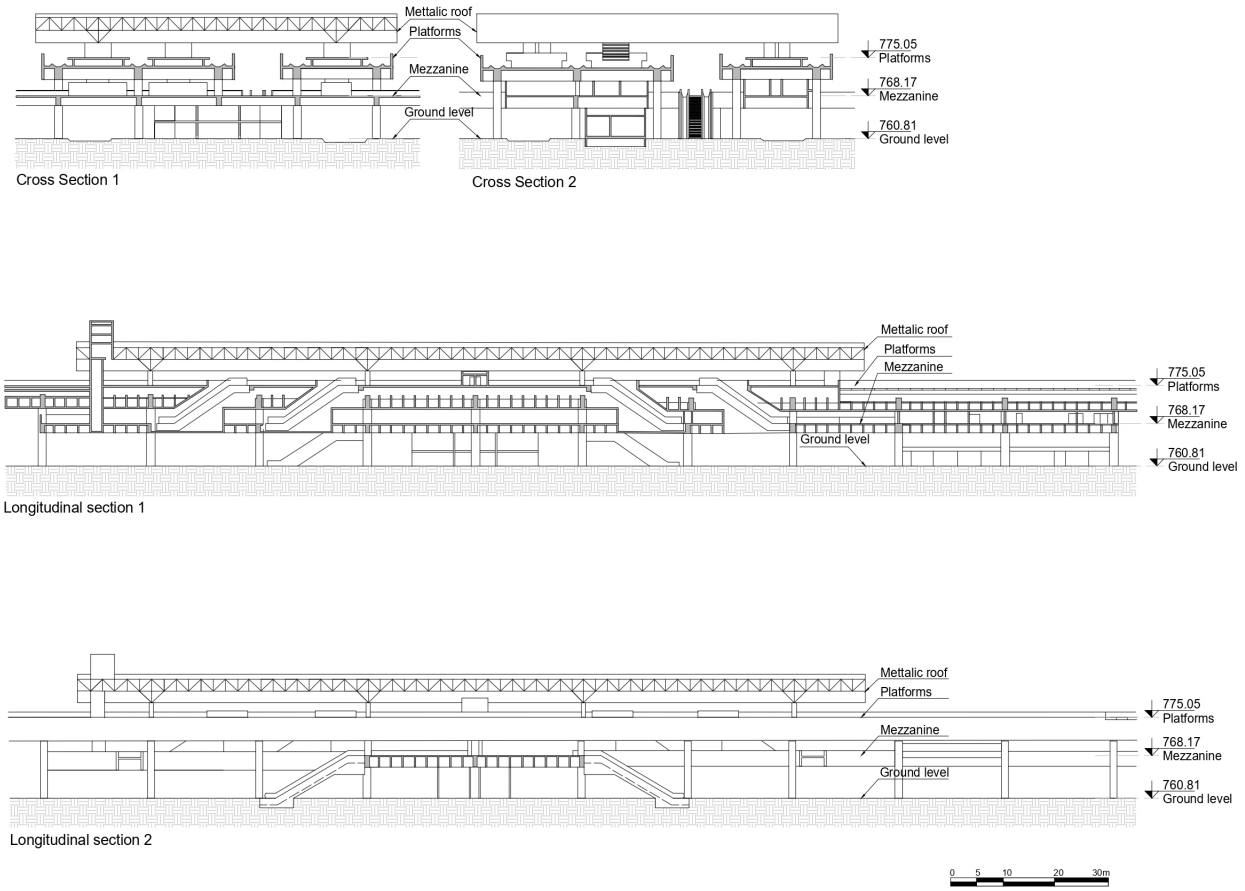

Figure 3. Sketched sections of the Corinthians-Itaquera Terminal. Source: Redrawn by Luísa Gonçalves based on Subway Documents: Metro, 1979, p.187.

housing complex. However, it only came to fruition in 2014, with the World Cup. In addition to the housing project, the National Housing Bank (BNH) also financed the "CURA" (Urban Communities for Accelerated Recovery – Itaquera) project, which organized urban development around the subway project in the region, but it was not carried out, since the priorities of the city at the time focused on the works already underway on Linha 1- Azul (Line 1 – Blue). Hence, the population of the first COHAB in the area (1978) had to wait 10 years for the intermodal terminal with train, subway, and bus connections (1988), 20 years for the "PoupaTempo" service, 29 years for the shopping mall, and 36 years for the sports arena.

Even with all these services, housing, and public facilities surrounding the terminal, it has precarious pedestrian accessibility. As shown in Figure 4, the immediate surroundings comprise parking lots to the north and the "Radial Leste" highway to the south. The south access is in the vicinity of the Itaquera ETEC (State Technical School) or by the walkway on the plateau of the football stadium, also surrounded by major avenues.

The terminal's architecture

In the first decade of the subway system in São Paulo, architectural designs were drawn up inside the private company Promon and coordinated by the architect Marcello Fragelli. When the possibility to expand to the second line

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Figure 4: Corinthians-Itaquera Terminal (1988) and surrounding buildings/areas: housing project (COHAB, 1980), Corinthians Arena (2014), "Poupatempo" building (1998), Itaquera shopping mall (2007), Technical schools (2007), and Subway's maneuvering yard. Source: Satellite photo from Google Earth with edition by the author in 2025.

Figure 5: Itaquera "Poupatempo, designed by renowned architect Paulo Mendes da Rocha. Source: MMBB's, 2024.

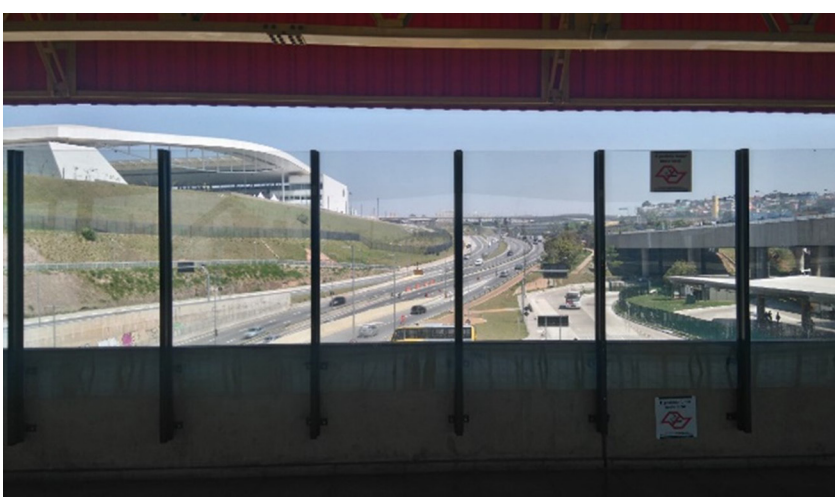

Figure 6: Corinthians Stadium seen from the terminal. Source: Author's photo in 2017.

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Figure 7. Views of the subway platform and roof from inside the station. Source: Author's photo in 2017.

Figure 8. Aerial view of the area: Corinthians arena and technical school on the left, and, in the center, Itaquera's terminal, "Poupatempo" building, and shopping mall. Source: Satellite photo from Google Earth in 2017.

arose, the state subway company, "Metro," started to work on the projects internally, bringing innovation to the process and its construction. As the line ran alongside the road and the train line, the barrier that divided the neighborhood between north and south could be easily reinforced, so one of the design guidelines was to include connecting walkways on both sides of all stations.

In Itaquera, given its size, its materiality is not understood as a cohesive unity but composed of fragments of structures and surfaces that outline the interior of the terminal's rails, sanitary blocks, and services, as shown in Figure 7. In this sense, the project does not stand as a traditional architectural "object" but more as an open and permeable form. Furthermore, the absence of an urban design that integrates the terminal with the urban fabric (Figure 8) is partly due to the administrative fragmentation of the projects' implementation, which, at that time, delegated the urban project (even if some public works

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were kept within the scope) to the City Hall and restricted the subway project to the building itself.

In the Itaquera terminal's design, architects Renato Viégas and Meire Selli modified some of the design solutions previously adopted in the design of São Paulo's subway stations. It was necessary to combine the platforms of the different systems (train and subway) and, therefore, design a large building with a single roof. The building was also placed above the ground level, which was designated for the bus terminal. However, the possibility of opening this level as a square was not done, prioritizing road design over pedestrian spaces.

The terminal's design is divided into three levels: the first has pedestrian access and the urban bus terminal; the second, the distribution hall, ticket offices, entrance, and technical and sanitary areas, in addition to the walkways connecting with the "Poupatempo" and Itaquera Shopping Mall, to the north, and, the connection to the Corinthians stadium to the south (walkway over the "radial leste" highway); on the third and final floor, there is the access to both train and subway lines. The setup is part of the specific geography of the surroundings, constituting a new design for the highway, train, and subway transport projects, as well as the stadium. In fact, the terminal's architectural design was awarded at the Fifth Architecture Biennial of Buenos Aires (held in the 1990s).

DISCUSSION

DESIGNING INTERMODAL CONNECTIONS

Similar to the Corinthians-Itaquera terminal, several other terminals in São Paulo were built without intermodal integration planning, and even less so when considering joint activities and ventures, except shopping malls, in some cases, which cannot be considered as "inducing urbanity", as they are closed spaces with controlled access. More recently, in Rio de Janeiro, the Gentileza terminal was also built without paying attention to the urban design, in other words, without proper pedestrian connections, public spaces, and links to its immediate surroundings. In this sense, the best attempts are found in the design work that transformed the accesses into public squares, such as at Jabaquara, Liberdade, and São Bento stations, to name a few (Gonçalves, 2015). Other interesting integration designs were carried out between subway stations and bus terminals, such as in Ana Rosa, Vila Mariana, Vila Madalena, Sacomã, and, more recently, São Paulo-Morumbi; and also, between rails (train-metro integration), as in Barra Funda and Tamanduateí stations, but rarely between three or more transit systems.

Bertolini & Dijst (2003) also highlight the temporal dilemma for station buildings, since the development of the place and the node in station areas tend to follow autonomous paths. This distinction generates uncertainties that make the design process complicated, but, in general, they emphasize that the essential characteristic of the station is the intermodal exchange (and all the possibilities of exchange and meeting that will happen as a result of mobility connections), much more than a place of arrival and departure of trains.

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During the implementation of the subway in São Paulo, numerous plans, projects, and updates were developed for the structuring of the city. In recent decades, plans have focused on an integrated approach, outlining legislation regarding transport integration and transformation in its financing. With the elaboration of the PITU (Integrated Urban Development Plan), there was a broad discussion around how to expand the network, which in turn influenced the role of the station or terminal in the urban environment. In recent plans, the urbanity-inducing potential of stations and terminals has been highlighted: both in the PITU-2025 (published in 2006) and the PDE-Strategic Master Plan of 2014, increasing density around high-capacity networks as the primary urban strategy for urban mobility and accessibility. The PITU-2025 proposes that a new model of the terminal, partially implemented underground, can be better integrated into the surrounding urban space: "It requires a complete study of the neighborhood impact and the establishment of the necessary controls to lead to the creation of urban and visual value and for the properties" (Government of the State of São Paulo, 2006). With an open network, mobility nodes have a good potential to be urbanity inducers, due to their ability to bring services and activities together. Mobility infrastructure can offer intra- and intermodal exchanges but also serve the population through the provision of both public and private services.

"Giving collective quality to those who are not" (De Solà-Morales, 2008) is a central idea in the case of intermodal terminals that are built as activity complexes, when there is a good mix of public and private services open to urban life. In this context of services and activities of the "urban exchange complex", there are two main types: travel support services, such as ticket sales and information, and opportunity services, such as commerce, but also comfort points (such as bathrooms), amenities, and public services (Amar, 1996). As a result of the multiple activities and service options that the station has, it can become a hub of exchanges and a node of urbanity. In the design of the main floors for public access, the flow must be as unobstructed as possible, without many barriers, divides, or long corridors: the paths must be short and simple. However, it is also necessary to combine the routes of everyday users, who access the transport system and/or work in the complex daily, and occasional users, as they circulate in different ways. The services, such as shops, that they wish to use can demand and generate flow, or blockages in circulation, such as ticket purchase queues. For example, some types of commerce benefit from shop windows, while some services, such as restrooms, may be more hidden and use visual signs.

The Corinthians-Itaquera terminal plays a central role in the region, capturing and receiving network users, and has had a profound impact on the area since its inauguration. At the same time, it serves as a landmark for locating the territory. However, the permeability of the surrounding housing areas is extremely precarious, with a limiting distance for residents and areas for pedestrian circulation that are extremely fragile. In summary, from the historical review of both Itaquera's urban development and Corinthians-Itaquera Terminal, a paradoxical situation emerges, in which we find nearly all modes of mobility systems in Itaquera. At the same time, there is a significant level of

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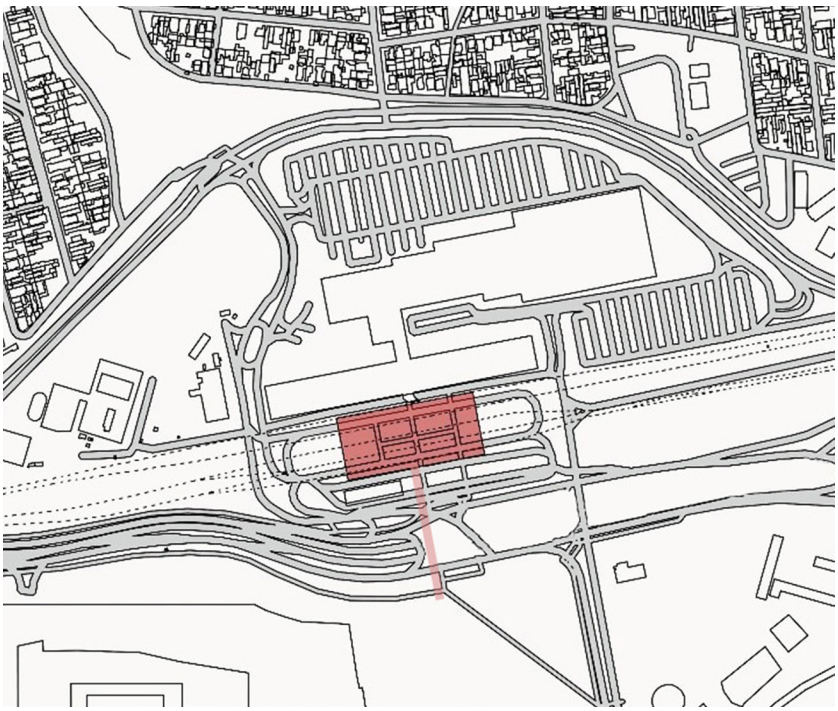

Figure 9. Corinthians-Itaquera's Terminal. Source: Drawing made by the author using the CadMapper base in 2019.

Figure 10. The terminal's surroundings. Source: photo from Google Street View in 2024.

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precarity in terms of local accessibility and the articulation of the entire dense housing area and public equipment (Figure 9 and Figure10).

CONCLUSIONS

In the Corinthians-Itaquera Terminal, in São Paulo, it seems that all criteria for a 'good' "transit-oriented development" are in place: many transit modes, surrounded by dense housing projects, and businesses on different scales. However, the urban experience remains precarious, particularly in the interconnection between these urban activities (housing, commerce, and transit). The Terminal stands, therefore, as a paradigmatic case to understand the role of architectural design within TOD practice. It is through an architectural project of the city that this urban experience may be improved. The data demonstrate negligence in the construction of an urban project integrated into its context, despite the complexity of the activities the site involved, which comprised the intermodal terminal, the "Poupatempo" building, and a shopping mall. We must consider that the architectural design of transit nodes has a fundamental role in metropolitan peripheries, as these infrastructures function as the locus of both local-local and local-global activities in these contexts. In other words, in metropolitan peripheries, transit nodes are very public spaces – and their design must consider this cultural, social, and political role (Capillé et al., 2021). As Augé (2008) has highlighted, public transport is one of the main places for the contemporary constitution of the notion of "public". It is where it retains meaning, identification, and identity, whether we refer to the physical encounter space, but also the abstract "public opinion" space.

Intermodal and connecting terminals are both nodes of the transport network and a 'place' in the city, and none of these scales can be neglected when designing the stations. Furthermore, even if the smallest and simplest stations have both dimensions – network and local –, it is in terminal and intermodal nodes that this issue appears with greater complexity.

If we consider that transit planning is becoming increasingly important within public urban planning, especially in São Paulo and other Brazilian and Global South metropolises, it is fundamental that we redefine its tools, considering that urban conditions in peripheries require a more thorough consideration of the architectural aspects of transit infrastructures. In summary, it is necessary to design terminals and stations beyond regular edifices; to incorporate urban design as part of the building design, to contemplate ground level as public space; to provide multiple services inside and outside the terminal or station building, dissipating its boundaries; to enhance pedestrian connections to immediate surroundings. In other words, architectural design becomes a fundamental discipline to address the cohesion of urban projects that seek to link sustainable urban development across different scales. As such, we believe that this paper contributes by providing the basis for the proposition of terminal design parameters grounded in the peripheral and metropolitan realities of the Global South, which can help construct mobility nodes that truly mitigate the relationship between social inequality and urban mobility.

AUTHORS' CONTRIBUTIONS CRediT

Conceptualization, LG and CC; Data curation, LG; Formal analysis, LG; Acquisition of funding, LG; Research, LG; Methodology, LG and CC; Project administration, LG; Resources, LG; Software, LG; Supervision, LG; Validation, LG and CC; Visualization, LG e CC; Writing - original draft, LG e CC; Writing - revision and editing, LG and CC,.

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