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Plans and drawings by Leopoldo Torres Balbás in archival holdings: analysis and interpretation

The important legacy of the architect Leopoldo Torres Balbás (Madrid, 1888-1960) has been extensively studied in all the fields in which he excelled. However, according to his own words, expressed in an article signed under a pseudonym in 1920, he lacked skills as a draftsman. Whether this claim is true or not, understanding how Torres Balbás approached drawing, identifying his assistants and collaborators, and examining what distinguishes the plans created under his guidance and what he drew, are the key objectives of this article. These will help us explore his role as a draftsman through an analysis of the archival materials that have been preserved. They are distributed among various Spanish archives, which hold original documents by or belonging to Torres Balbás. However, their authorship

is not always clearly indicated, as with some of the graphic materials accompanying his publications, which make up a bibliography of over 300 scientific works. Therefore, methodologically, after searching for documentary sources, selecting the principal graphic documents, and comparing them with the drawings illustrating his articles, it has been possible to determine their authorship and subsequently analyse and systematise the vast graphic material preserved by the architect. Finally, the research carried out has been possible, first, to gain a deeper understanding of Torres Balbás's figure and his real skills in graphic matters; second, to identify the key figures that helped and collaborated with him: draftsmen, architects, students, etc.; and third, to uncover his actual relationship with drawing.

Keywords: archives; drawings; plans; handwritten notes; Leopoldo Torres Balbás



INTRODUCTION

Leopoldo Torres Balbás (Madrid, 1888-1960) was a highly significant figure in the history of 20th-century Spanish architecture and restoration. On the one hand, he stands out for having served as the director and chief conservator architect of the Alhambra from 1923 to 1936, where he carried out exceptional work on the monumental complex. Torres Balbás introduced and applied an innovative doctrine in the Spanish context, closely aligned with European trends in scientific restoration. He was part of the Spanish delegation in the international congress that produced the Athens Charter in 1931 (Muñoz, 2017). On the other hand, he is notable for having been a professor of the History of Architecture and Plastic Arts at the Escuela Superior de Arquitectura de Madrid, a position he attained in 1931, and for having conducted rigorous and extensive research on traditional Spanish architecture as well as Hispano-Medieval art and architecture until his death.

As a result, his life and professional career have been extensively analysed and studied by numerous researchers, including Muñoz Cosme (2005, 2014, 2017), Gallego Roca (1995, 2008), Esteban Chapapría (2008, 2014), Calderón Roca (2010, 2012a, 2012b), Villafranca Jiménez and Fernández-Baca Casares (2008, 2013), among others, across the multiple fields he engaged with: architecture, archaeology, restoration, research, teaching, and more.

However, to date, no specific study has been conducted on the entirety of the architect's graphic materials held in various Spanish archives, which formed part of his professional projects, research, or teaching documentation. A detailed analysis of these materials would allow for a deeper understanding and examination of how Torres Balbás drew and whether it could refute or confirm his assertion that he "...lacked drawing skills," as stated in a 1920 article published under a pseudonym (Ramos, 1920, p. 351). This claim has also been echoed by several researchers (Muñoz, 2005; Almagro, 2008; Castillo & Molina, 2017). Nevertheless, although some plans bear his sig-

nature, not all the preserved graphic material was exclusively produced by him. It is documented that during his tenure overseeing the restoration of the Alhambra, he was assisted by the draftsman Manuel López Bueno and other architects, who did not always attribute their work to the graphic documentation they produced. Additionally, there is written and archival evidence indicating that Torres Balbás requested colleagues, professionals, and even his students to create drawings and plans for his scientific publications (AAV. 2017: Gallego, 1995). According to Calderón Roca (2010), he consistently credited the authorship of all images, whether they were photographs, his sketches, or drawings made by students or colleagues. This practice, in principle, should facilitate determining how Torres Balbás indeed drew, provided that he adhered to this approach consistently.

OBJECTIVES AND METHODOLOGY

The primary objective of this article is to delve into Torres Balbás's role as a draftsman through the analysis of drawings and plans held in various Spanish archives. Specifically, the study aims to determine whether it is true that he lacked drawing skills, to identify his assistants and collaborators, and, ultimately, to characterize his drawing style, both freehand and technical.

Methodologically, the research has involved the search, location, and analysis of documentary materials related to Torres Balbás preserved in the principal Spanish archives that currently house what remains of his personal and professional records¹. It is worth noting that his legacy has been dispersed across various institutions. Particular attention has been paid to the existing graphic material and its authorship, as, although it belonged to the architect, it was often produced by others for inclusion in his research. Simultaneously, a review and study of the graphic documentation accompanying his scientific publications, particularly his research articles, has been conducted. In these publications, Torres Balbás was expected to indicate the authorship of the drawings. To this end, all drawings accompanying publications



Fig. 1 - Elevation drawing of a two-story house in Ansó, with details of cornices and eaves, c. 1922, F. García Mercadal and J.M. Rivas Eulate. Tracing paper, ink, 17.4 x 20 cm, mounted on paper measuring 21.6 x 31.5 cm (AGRM, PLANERO, 4/3,023).

signed by Torres Balbás, and those under the pseudonyms Ramos Gil, Fernando García Piñel, and Andrea Romano, have been examined and analysed. This extensive body of work comprises 345 articles published in 41 journals.

Subsequently, after selecting the principal graphic documents and comparing them with the drawings that illustrate his research articles, it has been possible to clarify their authorship. Finally, the vast collection of graphic material preserved by the architect has been analysed.

1. THE PERSONAL ARCHIVE AND LIBRARY OF TORRES BALBÁS: PARTIAL LOSS AND DISPER-SAL ACROSS OTHER ARCHIVES

Torres Balbás Torres Balbás possessed an exceptional personal archive and library, which, unfortunately, were partially lost during the Spanish Civil War. His residence on Viriato Street, No. 65, in Madrid was looted (Gallego, 1995; Muñoz, 2005), as was his summer home in the Sierra de Guadarrama (Madrid) (Gallego, 1995).

As a result, Torres Balbás lost a significant portion of his valuable notes, sketches, plans, and library—materials he considered essential for his research—and various works of art (Castillo & Molina, 2017). He expressed his regret in correspondence with his friend Antonio Gallego Burín (Gallego, 1995, p. 150):

"I am occupied, in my spare time, with writing something about the Alcazaba of Badajoz, struggling with the lack of books, which I try to compensate for with the help of some good friends there and Félix Hernández."

Fortunately, during his lifetime, he was able to recover a substantial part of his documents and library thanks to the intervention of his friends in Granada (Esteban, 2013; Vilchez, 2013). This has allowed his archive and later legacy to be preserved in various Spanish archives today.

A significant portion of his materials is held by the Archivo del Patronato de la Alhambra y Generalife (APAG) in Granada, which acquired over

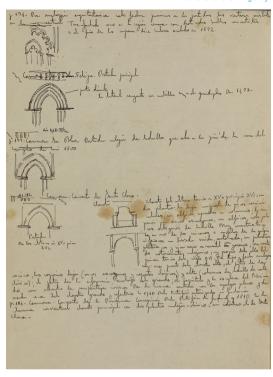


Fig. 2 - A page from the manuscript *Las iglesias mudéjares de Sevilla y de la Baja Andalucía* and bibliographic notes, c. 1940–1950, L. Torres Balbás (AGRM, PSM, 10225/060, p. 74).

3,000 books and photographs from his archive and library in 2010. This material was added to the documentation already held by the Patronato, which Torres Balbás generated during his tenure as conservator of the Alhambra (1923–1936) and architect of the Sixth Zone (1929–1936) (Castillo & Molina, 2017). As a whole, this collection holds extraordinary documentary value, as it includes materials related to his teaching career; manuscripts of his research and publications; sketchbooks of monuments created during his summer travels in the 1920s; correspondence with colleagues such as the architect Gustavo Giovannoni and the orien-

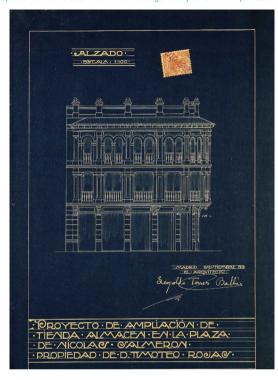


Fig. 3 - Elevation of the project for the expansion of a warehouse store in Plaza de Nicolás Salmerón, owned by D. Timoteo Rojas, Madrid, September 1918, L. Torres Balbás (AVM SEC-23-279-81).

talist and historian of Islamic architecture Georges Marçais, as well as with public figures of the time; and, finally, photographs along with personal and family documents (Cano, 2010).

The Archivo General de la Administración (AGA) in Alcalá de Henares (Madrid) currently houses several project works carried out by Torres Balbás during his tenure as a civil servant (restoration architect) for the Dirección General de Bellas Artes del Ministerio de Instrucción Pública y Bellas Artes. These primarily include conservation and restoration projects for the Alhambra in Granada, as well as for other buildings in the city, such as



the Church of San Juan de los Reyes, the Corral del Carbón, and the Casa del Chapiz, in addition to projects for the Alcazaba of Málaga and the Cathedral of Sigüenza in Guadalajara. Furthermore, the archive holds plans for new constructions, such as the project for enclosing the plot at the Royal Chapel of Granada and the works at the Sacristans' House of the same chapel (Muñoz, 2005).

The Archivo General de la Región de Murcia (AGRM) also holds a substantial number of documents that belonged to Torres Balbás, discovered in 2013 among materials donated by the family of the architect Pedro San Martín Moro. These materials are part of the so-called "Legajo 57," which contains drawings and sketches, most of which do not belong to Torres Balbás but to other

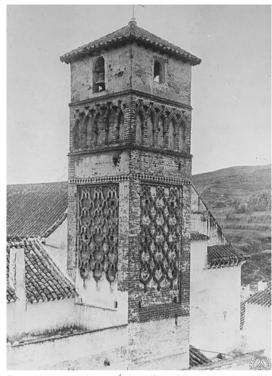


Fig. 4 - Elevation of the housing project on Padilla Street, Medina del Campo, May 1920, L. Torres Balbás (AMMC, D, box 804-7223, exp. 112).

architects (Fig. 1); photographs; and documents, undoubtedly autographed, many of which include annotations and are drafts of his research on traditional Spanish architecture and Hispano-Medieval art (Fresneda, 2017; Castillo & Molina, 2017). The primary interest of the handwritten writings in "Legajo 57" is the included sketches and small drawings of architectural and ornamental elements because they are the only graphic designs by Torres Balbás within this archival collection. However, these documents have the drawback of lacking dates. Additionally, they feature numerous corrections and erasures and various paginations and alphanumeric sequences (Castillo & Molina, 2017) (Fig. 2).

Similarly, two other local Spanish archives stand out: the Archivo de la Villa de Madrid (AVM) and the Archivo de Medina del Campo (AMC). These archives hold limited and specific documentary collections related to Torres Balbás, dating back to the early years of his career after completing his architecture studies in 1916. In 1918, he was commissioned to design a building in Madrid, whose records and plans are preserved in the capital's archive (Fig. 3). A few years later, from November 1919 to March 1921, he served as the municipal architect of Medina del Campo (Valladolid). Consequently, the archive holds urban planning projects, assessment and rehabilitation interventions for monumental buildings, documents related to his role as a municipal architect (minor works), and the construction plans for several private residences he designed during this period (Sánchez, 2013) (Fig. 4).

Finally, the Archivo Histórico Digital of the library of the Escuela Técnica Superior de Arquitectura de Madrid (AHD-UPM-ETSAM) holds the collection of slides, plans, and drawings of monuments that Torres Balbás used for teaching, as well as some official documents (Castillo & Molina, 2017) (Fig. 5). Particularly noteworthy is the collection of slides and negatives, comprising 2,156 individual documentary units of photographic material, which Torres Balbás produced during his years as a professor of the subjects he taught from 1931 to 1958 (Muñoz & Sánchez, 2009).



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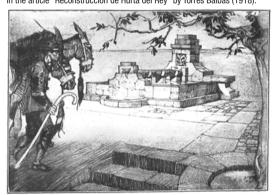
Fig. 5 - 14th-century minaret of Árchez (Málaga). Photographic material, slide by L. Torres Balbás (AHD-UPM-ETSAM, ES 28079. BUPM 01-BETSAM-01-01-TorresB-01-01-TorresB 026-013)

2. THE SCIENTIFIC OUTPUT OF TORRES BALBÁS: ARTICLES PUBLISHED IN JOURNALS OF THE TIME

Torres Balbás carried out intense, rigorous, and high-quality work in all the disciplines he engaged with. His tireless efforts as a disseminator of his research and knowledge stand out materialized in an extensive body of work that includes contributions to notable collections such as *Ars Hispaniae* or Menéndez Pidal's *Historia de España*, as well as numerous articles in various journals. 345 scientific works have been documented and published



Fig. 6 - Drawing by Pedro Muguruza Otaño in conical perspective, published in the article "Reconstrucción de Hurta del Rey" by Torres Balbás (1918).



PROYECTO DE FUENTE-ABREVADERO, POR EL AR QUITECTO D. PEDRO MU-GURUZA OTAÑO.

RECONSTRUCCIÓN DE HUERTA DEL REV

in 41 journals and 3 conference proceedings between 1916 and 1974. To these figures must be added an undetermined number of unsigned reviews, as well as several articles published under pseudonyms and introductions or editorials signed by La Redacción of the journal Arquitectura, a publication he co-founded in 1918 and for which he served as secretary for five years. Al-Andalus was the journal where he published most frequently, with 164 articles, and he was the driving force behind the section *Crónica de la España* musulmana. This was followed by Arquitectura, with 78 articles, and the Boletín de la Real Academia de la Historia, with 18 articles. His contributions to the Boletín de la Sociedad Castellana de Excursiones. La Esfera, the Boletín de la Real Academia de la Historia, and the Archivo Español de Arte y Arqueología are also noteworthy. These contributions have been partially compiled by the archaeologist Manuel Casamar in the monumental "Obra dispersa" (Torres, 1982) and by the architect Ángel González Hernández in "Sobre monumentos y otros escritos" (Torres, 1996).

Torres Balbás' publications cover multiple topics, offering a multifaceted perspective on contemporary and historical built environments. These include works on Spanish architecture from various periods, primarily vernacular and Hispano-Medieval, as well as archaeology, urban history, domestic objects and utensils, furniture, painting decoration, art and construction crafts, new construction projects, restoration, architectural criticism, and more.

These publications are richly illustrated with abundant photographs and drawings, thanks to his ability to assemble an extensive collection of images produced by established architects, emerging professionals, and architecture students. Throughout his extensive career 1,225 drawings were published. Of these, 35 are signed by him, 659 are attributed to other authors with proper references, and 531 are of unknown authorship. In other words, only 2.8% of the drawings are signed by him, while 43.3% lack specific attribution. Among the references he provides for the drawings, over a hundred authors are mentioned,

many of whom, as previously noted, were friends, professional colleagues, or other contributors.

This data might suggest that many of these drawings and photographs could be his own, given that he signed the articles and appeared as the sole author. However, a comparative study with the drawings preserved in archives reveals that some of these drawings, found in both sources, are either his own or belong to other known authors who were not referenced in his publications (see Section 3).

The drawings featured in the articles are varied and employ different representation systems depending on the information they aim to convey. These include freehand conical perspective drawings, floor plans, elevations, sections, site plans, axonometric and military perspectives, detail drawings, and symbolic representations, executed using various techniques such as graphite pencil, ink, engravings, cyanotypes, and more. When examining the drawings published in his articles (with acknowledged authorship), it is evident that all are precise orthogonal projections, comprising 19 scaled floor plans, 6 architectural details, and 10 sections, published up to 1931. This fact is significant for several reasons. First, it represents a short percentage of the total published drawings (2.8%). Second, in the subsequent 43 years, during which he published 235 articles, he did not reference any further drawings as his own, instead citing other authors or providing no attribution.

This raises the possibility that many of the drawings used to illustrate his articles were either his own or produced by his draftsmen, and he may not have felt the need to explicitly state their authorship, given that he was the author of the articles. This possibility is reinforced by the fact that he never credited the draftsmen who worked for him, such as Manuel López Bueno, in his articles. The third reason is the absence of his freehand perspective drawings in conical projection, even though throughout his extensive career, he relied on external collaborators to include such drawings in his publications (Fig. 6).

Thus, there are 182 drawings of known authorship and 50 of unknown authorship. Additional-



ly, among his collaborators are several students from the Escuela Superior de Arquitectura de Madrid and architects of the Generation of '25, such as Rafael Bergamín, Fernando García Mercadal, Luis Blanco Soler, Agustín Aguirre, and Regino Borobio, among many others.

3. THE DRAWINGS AND PLANS OF TORRES BAL-BÁS: AUTHORSHIP AND COLLABORATIONS

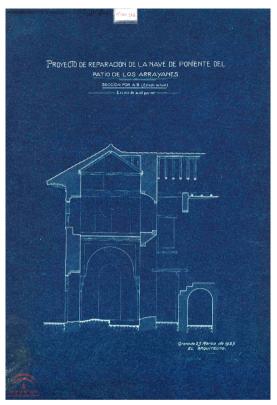
In his early years as an architect, Torres Balbás likely produced his plans without assistance from others. However, during his tenure as the architect of the Alhambra from 1923 to 1936, he collaborated with and received support from Manuel López Bueno, who served as the monument's draftsman from 1920 to 1939. Consequently, under Torres Balbás's direction, López Bueno produced numerous plans following his instructions. After their professional relationship ended, Torres Balbás continued to request drawings from him for his scientific articles (Gallego, 1995) (Fig. 7). López Bueno was succeeded in his role by his son, Manuel López Reche, who created copies of some plans initially made by his father and signed by Torres Balbás, which are now preserved in the APAG (Fig. 8).

Similarly, when the Sociedad Española de Amigos del Arte commissioned Torres Balbás to design the decoration of several rooms for the Exposición Internacional del Mueble y Decoración de Interiores, held in Barcelona in 1923, he received invaluable assistance from the Sevillian architect José Manuel Sanz Arizmendi (1885-1929), who was trained at the Zurich Polytechnic. Torres Balbás acknowledges this in his article published in Arquitectura (Torres, 1925), where he details that the project involved three rooms: one Mudéjar-style room from the early 16th century, a hall from the time of Carlos V, and another from the era of Carlos II. However, the plans preserved in the APAG lack signatures. Sanz Arizmendi was a talented painter, as evidenced by the various watercolour-painted plans he created for the room decorated in the style of Carlos II (Fig. 9). He was also an architect praised by Torres Balbás in his



Fig. 7 - Project for consolidation and repair works of the Patio del Harén and adjacent areas. Current state, Granada, July 1923, M. López Bueno and L. Torres Balbás. Copy, paper, cyanotype, 54 x 60 cm (APAG / Plan Collection / P-000846).







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article "Un Panteón" from the section Arquitectura española contemporánea in the journal Arquitectura in 1922 (Torres, 1922).

Likewise, the APAG holds some carpentry plans for the Escuela Normal de Maestros de Granada [1923-1929], dated between 1923 and 1935, attributed to Torres Balbás and Antonio Flórez. It is almost fixed that these plans were part of the project by the architect Antonio Flórez Úrdapilleta [1877–1941], who was the director of the Technical Office of School Constructions of Ministerio de Instrucción Pública. In 1920, Torres Balbás worked there as an architectural inspector for construction projects, and the Granada building was one of the projects he supervised.

Drawing also served as a communication tool used by various professionals and friends in their correspondence with Torres Balbás. For instance, the master builder Miguel Campos Ruiz (1873-1940) illustrated his letters profusely with sketches and numerous handwritten notes regarding the projects they collaborated on in Jaén (Fig. 10). Similarly, his close friend Antonio Gallego Burín (1895-1961) accompanied one of his letters to Torres Balbás with schematic drawings of the Casas del Chapiz and their floor plan layout, dated between 1929 and 1931.

In the AGRM, most preserved drawings are originals or copies produced by renowned Spanish and foreign architects during the first third of the 20th

Fig. 8 - Project for the repair of the western nave of the Arrayanes. Section A-B (current state), March 1925, M. López Bueno, L. Torres Balbás, copy, cyanotype on paper, 42 x 29 cm (APAG / Plan Collection / P-000248) (left) and tracing of the same plan made by M. López Reche, tracing paper, ink, 44 x 31 cm (APAG / Plan Collection / P-000249) (right).

century. The main focus of these works is traditional Spanish housing, and a portion of them was reproduced in the monograph on the subject published in 1930 (Torres, 1930). Among the collection are freehand and precise architectural drawings by Pedro Muguruza Otaño, Manuel Gómez-Moreno Martínez. Fernando García Mercadal. José María Rivas Eulate, as well as by Fritz Krüger, Eugeniusz Frankowski, and others.

The drawings by Torres Balbás are undoubtedly those that accompany his notes and handwritten texts on medieval Spanish architecture. These include, similarly, some freehand sketches of architectural elements from the Alhambra (Fig. 11) and the few plans published in his scholarly articles in



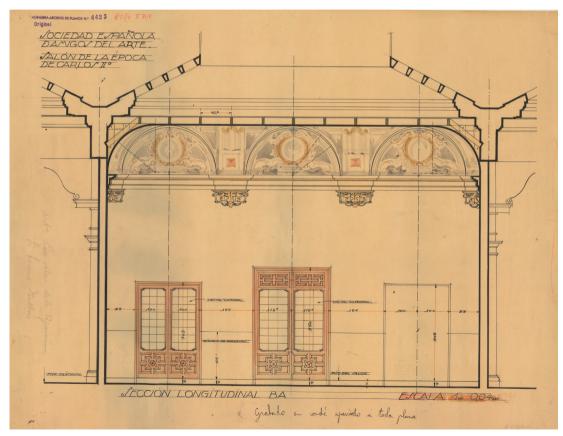


Fig. 9 - Longitudinal Sections of the Room from the Era of Carlos II, 1923-1925, L. Torres Balbás. Paper, ink, watercolors, and pencil, 50 x 65 cm (APAG / Plan Collection / P-005707).

which he explicitly indicates his authorship in the descriptive legend—such as the plan of the pillars of the Cathedral of Siguenza and the church of the Monastery of Matallana, published in a 1946 article (Torres, 1946) (Fig. 12). Also attributable to him are the tracings of plans or drawings copied from books or other publications he consulted and kept in his library. Torres Balbás often redrew them for his research or publications and are currently preserved in the APG and the AGRM (Fig. 13).

4. THE DRAWINGS AND PLANS OF TORRES BAL-BÁS: TYPES AND CHARACTERISTICS

The drawings attributed to Torres Balbás can be grouped into two main categories: on the one hand, freehand architectural sketches or schematic drawings of details, and on the other hand, plans of archaeological and architectural heritage, town planning and location maps.

4.1. Freehand Architectural Drawing: Architectural Sketches

Throughout his career, Torres Balbás produced a prolific body of freehand sketches. These drawings served as preliminary tools for the evolution of accurate measured surveys and as graphic exercises focused on the geometry and construction of the architectural structures under analysis. Some are copies of sketches by other authors. Despite being drawn freehand, they are notably precise, maintaining accurate proportions and displaying abundant detail in both plan and section. particularly in the depiction of spatial geometry, openings, wall thicknesses, and other architectural elements (Figg. 13 & 14).

In cases intended for subsequent technical representation, the sketches reveal a careful correspondence between the proportions depicted and the recorded measurements, incorporating notes on wall thicknesses and other construction elements. Employing graph or millimetre paper as an auxiliary graphic reference system is a recurring feature (Fig. 15).

In another type of sketch, the drawing approaches a naturalistic study, with precise proportional anal-



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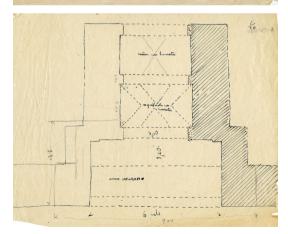


Fig. 11 - Sketch plan and section of the *Arco de las Orejas* (Bib Rambla Gate), 1933–1935, L. Torres Balbás. Transparent paper, ink, 22×24 cm (APAG / Plan Collection / P-008511 and P-008512).

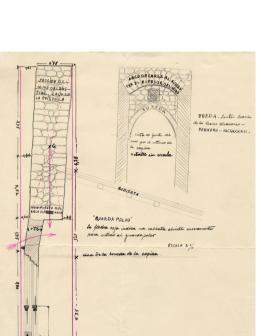


Fig. 10 - Partial section of the gable wall on the Epistle side and elevation of the relieving arch of Santa María de los Reales Alcázares in Úbeda (Jaén), February 1923, M. Campos Ruiz. Paper, black and pink pencil, 32x22 cm (APAG / Plan Collection / P-008767).

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PLANTA DE LA CAPILLA

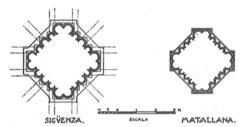


Fig. 14.—Planta de los pilares de separación de las naves de la catedral de Sigüenza (Guadalajara) y de la iglesia del monasterio de Matallana (Valladolid). (Planos de L. Torres Balbás.) Escala: : rentimetro por metro.

Fig. 12 - Drawing signed by L. Torres Balbás, published in the article: Iglesias del siglo XII al XIII con columnas gemelas en sus pilares, *Archivo Español de Arte*, no. 19, 1946.

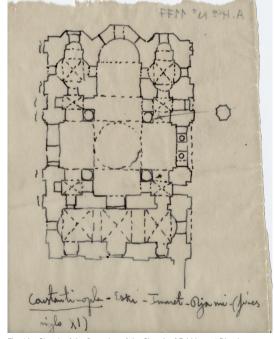


Fig. 13 - Sketch of the floor plan of the Church of Eski Imaret Djami (Constantinople), 11th century (possibly traced from a published source), n.d., L. Torres Balbás. Tracing paper, ink, 14×10 cm (APAG / Plan Collection / P-008518).

ysis and suggestive strokes that do not reach the definition of a technical sketch. Flevations in the orthogonal system are combined with elements of conical perspective to incorporate depth while maintaining annotations and dimensions typical of architectural sketches. The drawings of a Granada residence, published without explicit authorship, are an example (Fig. 16) (Torres 1923b).

In other cases, he employs the orthogonal system to document built spaces and to represent new architectural proposals characterized by loose yet controlled strokes, straight lines, and a definition of details rich in suggestions and hints, with clear intentionality (Fig. 17).

4.2. Freehand Architectural Drawing: Detail Schematics

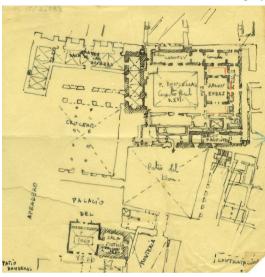
Among his annotations, numerous freehand drawings are identified, situated between sketches and preliminary drafts. These are characterized by their rapid execution, absence of scale and measurements, and representation in orthogonal views. Despite their schematic nature, they demonstrate precise control of line and proportion and address complex geometries such as domes, vaults, arches, and ornamental motifs (Fig. 2).

4.3. Plans of Archaeological Heritage

His graphic work also includes archaeological surveys with meticulous and detailed analysis. This aspect is significant because he studied at the Sección de Arqueología del Centro de Estudios Históricos de Madrid. These works show the superposition of multiple layers of information with different graphic treatments (line weights, strokes, and colours), combining current states with previous conditions, archaeological remains and findings, dimensions, and annotations, resulting in graphic documentation rich in content (Fig. 18).

4.4. Plans of Architectural Heritage

The plans by Torres Balbás are graphic representations of architectural heritage employed as tools for study, cataloguing, and documentation in conservation interventions. They are distinguished by their detailed and analytical plans, which meticulously record even the most minor



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Fig. 14 - Sketch plan of the Reales Alcázares of Seville, copied from Gómez Millán, ca. 1922-1933, L. Torres Balbás. Pencil and ink on semi-transparent paper, 16.7 × 16.8 cm (AGRM, PLANERO, 15/2, 083).

elements relevant to the interpretation of the monument, including construction phases, materials, and dating (Almagro, 2008). His technique employs section lines, projections, textures, and dimensions with detail, adapting the graphic approach according to the intended communicative purpose. For instance, he uses differentiated hatching in sectioned walls to emphasise specific elements or varies line weight to define spatial boundaries (Fig. 19).

In other cases, he applies the same criteria without distinction to the graphic treatment of the drawing, for example, representing the lines that define the geometry of the architecture in the same way as the elements he aims to analyse—in this case, the study of building pathologies—resulting in more complex and less clear plans. It is the elevation attributed to Torres Balbas by Almagro (2008) (Fig. 20).

Although Torres Balbás did not frequently use colour, limiting it primarily to indications of inter-

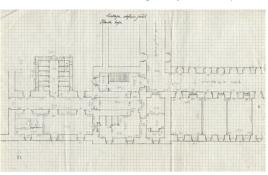


Fig. 15 - Sketch of the main building of the Charterhouse of Granada, 1932. L. Torres Balbás. Graph paper, pencil, 22×34 cm (APAG / Plan Collection / P-008678).

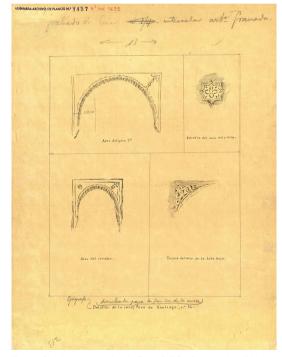


Fig. 16 - Sketch with annotations by Torres Balbás of a house demolished to open the Gran Vía de Granada, undated, 1923. Cardboard, pencil, 44 x 32 cm (APAG / Plan Collection / P-001635).





Fig. 17 - Sketch of the elevation of a project for a hotel or private chalet, undated, L. Torres Balbás. Tracing paper, ink, 33 x 38 cm (APAG / Plan Collection / P-008111).

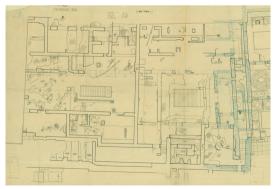
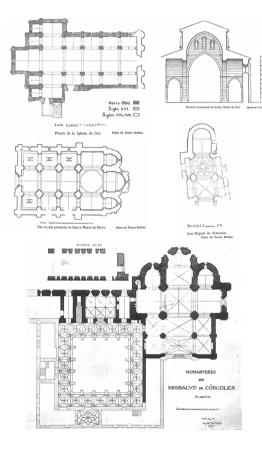


Fig. 18 - Plan of the Excavations at the Partal. Northwest Corner Sector. Excavations of the Palacio de Mondéjar, 1930, L. Torres Balbás. Tracing paper, ink, and coloured pencils, 67 x 132 cm (APAG / Plan Collection / P-001443).



THE VALUES OF DRAWING IN THE ARCHIVES OF ARCHITECTURE

Fig. 19 - Drawings with different graphic treatments of various plans of Spanish Romanesque churches (Torres, 1931) and the Monastery of Monsalud in Córcoles (bottom) signed by L. Torres Balbás (1918).

ventions, identification of sectioned walls in floor plans, and dating of floor layers, there are some plans where the use of watercolour is interesting for identifying complex elements in projection (mouldings, reliefs, etc.). In these, a notable mastery of the technique is evident, as seen in the interior elevations created by Sanz Arizmendi (Fig. 8).

4.5. Urban and site maps

Torres Balbás's professional career was influenced by his father, the geographer Rafael Torres Campos (Barrios, 2023). As a result, several representations at the urban and territorial levels exhibit similar graphic criteria to highlight what is to be represented without interference from other elements that might distract attention. These are graphic representations with minimal information and a simple, austere style compared to the detailed surveys analysed earlier.

CONCLUSIONS

Leopoldo Torres Balbás was a key figure in the history of architectural restoration in Spain during the 20th century. Despite this, a significant portion of his archive and library was lost during the Spanish Civil War. However, his legacy is currently preserved in various Spanish archives that house materials related to his research, teaching, and professional work. His archive includes valuable manuscripts, drawings, photographs, and personal documents, which remain a crucial source for studying his work and career.

He was a prolific disseminator, dealing with architecture, archaeology, and urban history. The extensive body of work by Torres Balbás has made him a continuous reference for studies on restoration and the history of Spanish architecture. Throughout his career, he used drawing as a communication device in his research and projects. In this regard, he collaborated with other architects, draftsmen, and students, enriching his work. His legacy highlights the importance of collaboration and teamwork in his research and projects. The drawings included in letters from colleagues and friends, such as Miguel Campos Ruiz and Antonio



Gallego Burín, are the proof. They underscored the role of correspondence in sharing ideas and progress in his research and projects. However, he did not always credit the authors of the images. Although he signed only a short percentage of the drawings, many could be his own or those of uncredited collaborators.

The substantial preserved plans, sketches, and drawings—both his own and others—demonstrate how he used various graphic representations to illustrate his architectural studies, leaving behind a valuable legacy. His drawings reveal the meticulousness with which Torres Balbás approached historical documentation, applying a strict, rigorous, and rational methodology. The few plans that he signed reflect his precision and dedication to the study of architecture. His freehand sketches, though guick and schematic, show a great mastery of line and proportion, and some were used as the basis for more technical surveys. His work in archaeological and architectural surveys demonstrates a meticulous study and a clear intention to document and preserve heritage, incorporating multiple layers of information and graphic techniques.

According to the analysed drawings, it should be rejected the idea that he was a poor draftsman. However, other types of graphic representations, such as freehand conical perspective drawings, have not been identified as his own, and he relied on external collaborators when he wanted to illustrate his writings and research with such drawings².

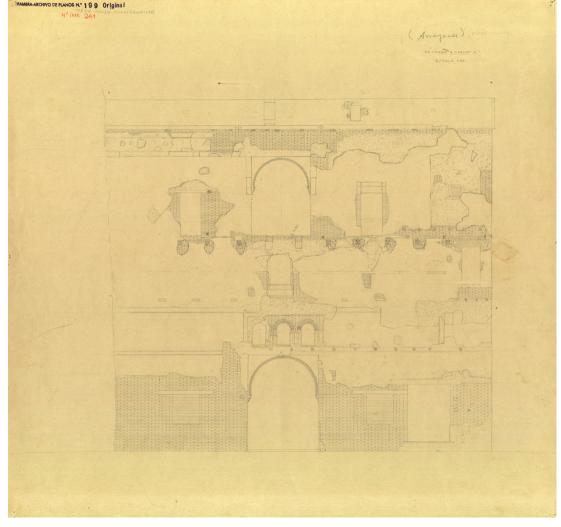


Fig. 20 - Facade in the Patio de Arrayanes, before 1954, L. Torres Balbás (attributed). Cardboard, pencil, 50 x 53 cm (APAG / Plan Collection / P-000241).



NOTE

[1] The main Spanish archives that were consulted, along with their locations, are the AGA: Archivo General de la Administración in Alcalá de Henares (Madrid, Spain): the APAG: Archivo del Patronato de la Alhambra y Generalife in Granada (Spain): the AGRM: Archivo General de la Región de Murcia in Murcia (Spain); the AVM: Archivo de la Villa de Madrid in Madrid (Spain): the AMC: Archivo de Medina del Campo in Medina del Campo (Valladolid, Spain) and the AHD-UPM-ETSAM: Archivo Histórico Digital of the library of the Escuela Técnica Superior de Arquitectura de Madrid in Madrid (Spain).

[2] We conceived this article as a ioint effort through a continuous exchange and discussion. However, in translating the research findings into written text, we have each taken responsibility for specific sections. Vincenzina La Spina is credited with "The personal archive and library of Torres Balbás: partial loss and dispersal across other archives" and "The drawings and plans of Torres Balbás: authorship and collaborations", and Pedro M. Jiménez Vicario with "The scientific output of Torres Balbás: articles published in journals of the time" and "The drawings and plans of Torres Balbás: types and characteristics". We have collaborated on the writing of the "Introduction", the "Objectives and methodology" and the "Conclusions".

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