Digitization of the Architect Antonio Tenreiro Brochón's legacy

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Abstract:

Antonio Tenreiro Brochón (A Coruña 1923 - 2006) is one of the key figures in the recovery of modernity that occurred in Spain from the 1950s onwards, when the autarchic period following the Civil War was overcome and a new generation of architects joined the profession, detached from previous historicist languages and reintroducing modern principles in a critical and reflective manner.

As a result of his professional activity, carried out between 1951 and 1981, a documentary fund was generated which he himself donated to the City Council of A Coruña in 2001, being preserved since then in the Archivo Municipal de A Coruña. In 2017, Fundación Alejandro de la Sota proposed the incorporation of this legacy into "Archivos de Arquitectos del Siglo XX". This experience has allowed Tenreiro Brochón most outstanding projects to be available on the web.

The aim of this study is to assess and analyse the reflection process carried out for the documentary selection, as well as other critical decisions of both a theoretical and technical nature taken in the same. It is proposed here as a model of interdisciplinary action in the case of professional archives, concretised in the archives of architects' offices.

Keywords: Antonio Tenreiro Brochón; Professional archives; Digitization; Architectural archives

Introduction

The number of documents generated from the different fields related to architecture has grown enormously during the last century, as well as the complexity of the processes related to the constructive event and the number of studios and professionals involved. Awareness of the value of these documents has also evolved, partly in response to the destruction of architectural heritage as a consequence of the great wars of the 20th century (International Council on Archives, 2000), but also due to the impossibility of being conserved by the creators themselves at the end of their professional careers due to the costs and space involved.

An increasing interest in architectural documents and archives has taken shape in recent decades, especially since the creation within the International Council on Archives (ICA) of the Working Group on Architectural Records (1982). In 2000, this group became the Section on Architectural Records (ICA/SAR) during the 14th International Archives Congress in Seville. Among the objectives of the SAR we highlight, given its direct link with the object of this text, that of "to encourage the identification and the preservation of architectural records in offices, in the hands of private individuals, and in local or national agencies, in order to render them accessible to the public and to researchers" (International Council on Archives, 2016).

The documentation generated in the processes related to the design and construction of architectural works, from the design scale to urbanism, is susceptible of being considered archives of architecture as "chronicles of mankind's built environment" (International Council on Archives, 2000, p. 9) and we can obtain them through three fundamental sources: the offices and other administration organizations (Government Offices and Other Organizations), the architecture studios (Architects' Offices) and the companies and entities that participate in the construction process (Contractors, Engineering Firms, Engineers...).
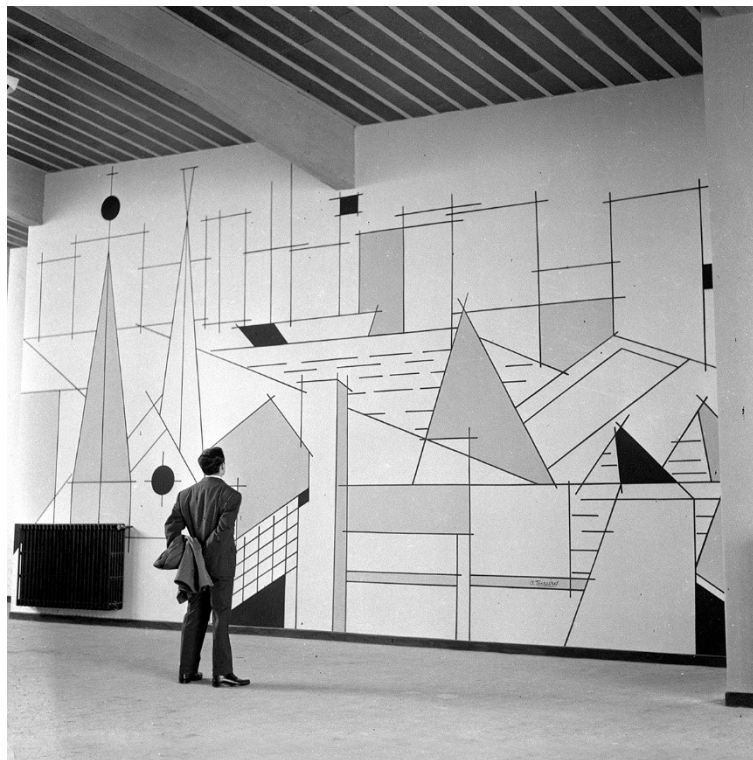

Fig. 1. Antonio Tenreiro Brochón. Mural at the Instituto Laboral de Betanzos, 1952.
Archivo Municipal de A Coruña. Fondo Tenreiro Brochón. Sig. 33 (3)

This paper focuses on the funds generated in the heart of an architectural studio, Antonio Tenreiro Brochón's firm [Fig. 1]. It fits between the so-called "professional archives" defined as those that reflect the activity of an architecture, urbanism and landscaping studio or the engineer's technical office, originally generated and conserved as office archives. These are private archives that are not subject to any specific regulations, except those corresponding to the economic sector (Rivas Quinzaños, Ruilope Urioste & Suárez Menéndez, 2012), but which, nevertheless, are of great interest

because they are capable of illustrating, from within, the creative process that leads to the final result, gathering influences, attempts or different versions of a project.

The way in which these archives are managed and preserved varies enormously: in general terms, it can be said that professional studios conserve during their existence all those documents that may have a legal value related to the characteristics of what was built. However, the treatment of other materials with different values such as artistic, in the case of sketches, models or photographs, differs greatly between studies. In some cases, these documents are finally donated to an institution, public (as in the case of the legacy of Antonio Tenreiro Brochón) or private. Is this institution the one in charge of their cataloguing, conservation and enhancement, allowing public consultation or their loan to exhibitions. In them it acquires different characteristics and is then linked to the concept of fond, given that it is the set of series generated by a creator as the result of an organic process reflecting its functions (Rivas Quinzaños, Ruilope Urioste & Suárez Menéndez, 2012).

These funds have an important set of values to contribute from an archival point of view, but especially for the construction of a specialized historiography. In a schematic way it is possible to highlight the values of:

- Urban memory: helping to construct the global image of the development of those urban spaces intervened or in which it could intervene.
- Memory of the architectural work at all scales of the project: allowing to find out what was the process of gestation, limits, variations…
- Testimony of the architectural process of each period: insofar as it offers a vision of how the architect or the studio as a whole, in creative facets or as a designer, faces the surrounding circumstances at each moment of history and own life. Requirements, aesthetic currents, construction needs, limitations...
- Evidence of the relationships between architects, professional associations, clients and contractors: especially the documents generated for the build process, given the reality of the existing collegial and professional model in Spain.
- Biographical profile: the professional archives have the capacity to show, as a personal record, multiple facets of the architect both through his work and, in many cases, other complementary documentation such as letters, annotations, press clippings and magazines... which offer a multifaceted vision of the person and his professional development.

These features tend to be accentuated in modern archives as ICA emphasizes:

> "In the modern practice of architecture, the time between design and construction of a building and debate and discussion concerning its qualities continues to shorten. Modern architectural records are therefore of ever greater interest to researchers studying shifts in ideas and cultural trends of the recent past. Just as researchers studying scientific breakthroughs seek to come as close as possible to the source of the concept, so researchers studying the built environment seek modern architectural records as a contemporary mirror to the still mysterious and fascinating act of creation." (International Council on Archives, 2000, p. 17)

In Spain, the need for regulation for the conservation and defence of this heritage, as well as historical research, has been pointed out for decades. A milestone in this process is the Declaracion de Palma (1972), signed by representatives of the Cultural Services and Historical Archives of the Official Associations of Architects of Spain, meeting in Palma de Mallorca. This declaration alerts of the dangers for the heritage and demands, among other measures, the creation of historical archives and their endowment to enable the Official Colleges of Architects in their social function.

There is a small number of these archives in Spain that have adopted an independent status that we find more frequently at the international level, with foundations such as that of Le Corbusier, Alvar Aalto, Mies Van de Rohe, Oscar Niemeyer or Frank Lloyd Wright. It is worth mentioning the Fundación Alejandro de la Sota [Fig. 2], which will be discussed later, or other similar cases of private initiative such as the Fundación Miguel Fisac or the Fundación Goerlich. However, there have been numerous donations from these archives to public and private institutions, including architects' officicial associations (for instance, the Servicio Histórico del Colegio Oficial de Arquitectos de Madrid or the Archivo Histórico del Colegio Territorial de Arquitectos de Valencia), universities (like the Universidad de Navarra) or even museums, such as the recent donation of the José Antonio Coderch archive to the Museo Nacional Centro de Arte Reina Sofía. Interest in other archives has also grown, including those of the architects' associations (Pérez Herrero, 2009), with examples such as the donation of the historical collection of the Colegio Oficial de Arquitectos de Galicia to the Archivo del Reino de Galicia. Ruilope Urioste, Sanz Hernando and Suárez Menéndez (2016) have drawn up an interesting analysis of the state of the professional archives of architects of Spanish modernity and their opening through the Internet.

Fig. 2. Home page of Archivo Digital de Alejandro de la Sota (Fundación Alejandro de la Sota)

Antonio Tenreiro Brochón and the recovery of modernity in Spain through the archives

Antonio Tenreiro Brochón (A Coruña 1923-2006, become architect by the Madrid School of Architecture Madrid in 1952), had a wide contact with international artistic environments in his formative years: living long periods in the north of Europe, especially in Scandinavia, Sweden and Finland, between 1957 and 1967, attracted by the renovating architecture carried out there. In Sweden he collaborated for a few months with the architects Thorsten Roos and Kurt Hultin and in Finland he met Alvar Aalto personally. As part of his professional career, we can highlight projects such as the competition of the Tax Agency of the Ministry of Finance in A Coruña (with Alejandro de la Sota and Ramón Vázquez Molezún, 1956), the Instituto Laboral de Betanzos (1958), the Coca-Cola bottling plant in A Coruña (with Andrés Fernández-Albalat Lois and his brother Ramón Tenreiro Brochón,

1963) [Fig. 3], or the villages for the workers of the FENOSA hydroelectric power plants in Os Peares, Chantada and A Capela (1956-1964). In the mid-eighties, he gradually abandoned architecture and devoted himself to travelling and painting, interests that accompanied him throughout his life, becoming a member (Académico Conservador) of the Real Academia Gallega de Bellas Artes.
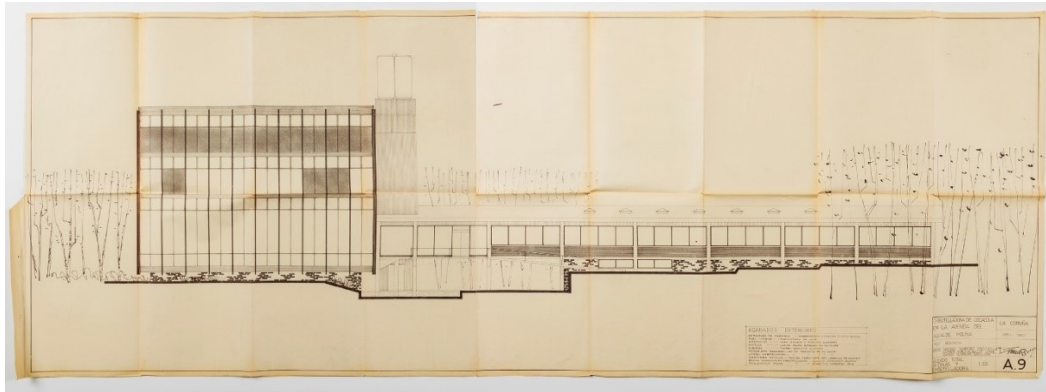

Fig. 3. Coca-Cola bottling plant in A Coruña. Total elevation, offices and bottling plant, 1960.
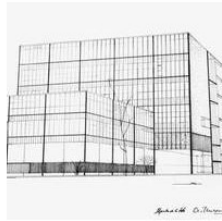Archivo Municipal de A Coruña. Fondo Tenreiro Brochón. Sig. 40 (2)

In November 2001, he donated his professional archive to the Archivo Municipal de A Coruña, being accepted by the Government Commission on 23rd November of the same year (donation nº 232) and placed next to the legacy of his father, the architect Antonio Tenreiro Rodríguez (1893-1972). The fund was incorporated into the private funds of individuals with the identification code ES.GA.15030.AM/2.1.14.2 and collects materials generated between 1948 and 1985, with 99 installation units (signatures 33 to 228), stored in very diverse ways: mainly project boxes, but also rolls, folders and envelopes. The content is, for the most part, the documents of the projects corresponding to the professional assignments carried out by Tenreiro: plans, sketches, memories, budgets and some photographs, very heterogeneous in terms of techniques, sizes and supports.

Most of the documents are freely accessible and the state of conservation is, in general, good, as they are high quality paper of little age. Access is restricted only to those documents that are affected by legal provisions established in article 105-b of the Spanish Constitution and, exceptionally, to certain installation units that are not in an adequate state of conservation.

The quality of this legacy awakened the interest of the Archivos de Arquitectos del Siglo XX project. This is inscribed in the activities of the Fundación Alejandro de la Sota, focused on the "conservation, dissemination and study of the work of the architect Alejandro de la Sota". The foundation, over the years, has incorporated among its activities those framed in the architect's own identity of thought and the valorization of the dissemination and teaching of architecture. Thus, after cataloguing and digitising its own archive and creating a website (www.alejandrodelasota.org) [Fig. 4] which "contains one of the most complete on-line digital archives in the world of an architect's work", began in 2013 the process of opening up the archive to external collaboration, with the aim of "sharing our experience with other architects' archives in order to boost international knowledge of modern Spanish architecture" (Fundación Alejandro de la Sota).

DELEGACIÓN DE HACIENDA, LA CORUÑA

concurso edificio para delegación de hacienda en la coruña
1955

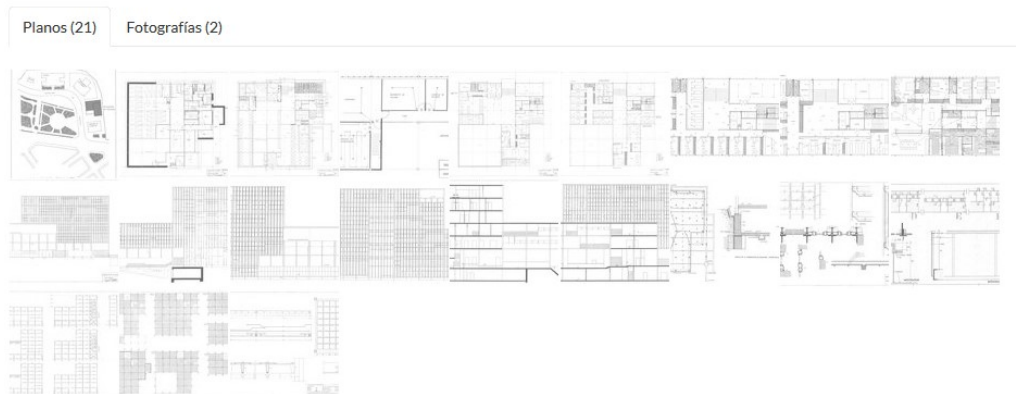|	
Referencia	55-B
Concurso	Sí
Anteproyecto	Sí
Proyectos	Sí
Construído	No
Restaurado	No
Demolido	No
Cliente	MINISTERIO DE
Dirección	CARRETERA EXTERIOR DE LOS JARDINES MUNICIPALES, LA CORUÑA

Planos (21)   Fotografías (2)

Fig. 4. Project File from the Alejandro de la Sota Digital Archive
Fundación Alejandro de la Sota

This is the context in which the project called Archivos de Arquitectos del Siglo XX appears; thanks to a framework agreement signed between the Fundación Alejandro de la Sota and the Ministerio de Fomento del Gobierno de España at the Museo ICO, in Madrid on 12 December 2013, with the aim of constituting a network platform of Spanish architecture based on the work that the foundation has previously developed with the Alejandro de la Sota digital archive.

The outcome is a flexible and open network platform to which the archives of 20th century Spanish architects can adapt and suitable for use by those who wish to share and disseminate their work. In this sense, the agreement allows important actions to be implemented, such as the incorporation of other architects' archives to the platform, advising them on the process of incorporation into the digital world; counting on the addition of public and private entities to this project to contribute efforts and capacities; and promoting dissemination activities using a website as a tool.

The digitization of Antonio Tenreiro Brochón's legacy

Archival digitization, when it serves the purposes of preservation and public access to documents, is a complex process consisting of a variety of facets that must be taken into account both as a whole and in their own complexity. The National Archives and Records Administration (NARA), in its Strategy for Digitizing Archival Materials for Public Access, 2015-2024 (2014), provides a definition of digitization that constitutes a suitable conceptual framework for the effects of this study. It considers that "*digitizing* should be understood not just as the act of scanning an analog document into digital

form, but as a series of activities that result in a digital copy being made available to end users via the Internet or other means for a sustained length of time" (p. 3).

In March 2017, the Fundación Alejandro de la Sota contacted us to study the possibility of digitizing the legacy of Antonio Tenreiro Brochón and incorporate it into the website of Archivo de Arquitectos del Siglo XX for its consultation through the Internet. The previous knowledge of his architecture through different research studies that we had carried out allowed us to approach him with a scientific base, to which we had to add the inexistence of monographic studies on his architectural work, being limited only to his pictorial production.

With the aim of having the digitalised material available before the end of 2017, the first step was to reach an agreement between the Concello da Coruña (on which the Archivo Municipal depends) and the Fundación Alejandro de la Sota to proceed with the detailed study of the legacy, according to the following work sequence:

1. Review of all available legacy material (April - September)
2. Selection of the most relevant projects to be digitized (October)
3. Incorporation of each project's metadata in the Archivo de Arquitectos del Siglo XX database (October).
4. Digitization of the selected material (November)
5. Incorporation of the digitised material in the Archivo de Arquitectos del Siglo XX database (November).
6. Publication of the page in open access

During the first phase, the 99 units of the legacy were reviewed, noting the diversity of scales, typologies, techniques and formats of the existing material. The legacy contains everything from interior refurbishments of little interest to the large urban facilities in which Tenreiro had participated. This exhaustive revision allowed some unpublished proposals to be discovered, such as the non-materialised intention to place a sculpture created by Cristino Mallo (Tui 1905 - Madrid 1989) inside the turbine room of the Os Peares hydroelectric power plant; also to correct the identification data of some project that was erroneously named within the legacy, such as the chapel for FENOSA in Erberdeiro (Chantada) [Fig. 5].

Selection, as part of digitization, differs conceptually from the selection and (re)evaluation decisions that archives make during collection management processes. Bibliography proposes different lists of criteria that should be evaluated when selecting for digitization (examples include Menne-Haritz & Brübach 2000 and Ooghe & Moreels, 2009), which can be summarized as follows: content, demand and physical state (McIlwaine *et al.*, 2002). This means that we must take into account both the intellectual value of the document in terms of its content, the information to be digitized, and whether it is worth the effort and cost of the project. It is also necessary to consider the potential users of the digitised documents and the state of the documents, especially if this does not support the digitisation process or, on the contrary, digitisation is assumed as an important conservation element in terms of replacement copy.

Professional archives include diverse types of documents, an issue that has been addressed abundantly in literature over the last few decades (Lathrop, 1977; Nelb, 1996; Rivas Quinzaños, Ruilope Urioste & Suárez Menéndez, 2012...). In all these classifications it is clear that the range of typologies is very wide and, as is logical, it is directly related to the activities carried out in the architecture office.

Fig. 5. Chapel for FENOSA in Erberdeiro (Chantada), 1955
Archivo Municipal de A Coruña. Fondo Tenreiro Brochón. Sig. 35 (1)

In the case of Antonio Tenreiro Brochón's legacy, after reviewing and analysing all the projects, the twelve most relevant ones were selected as a representative sample of the architect's professional career, including public and private development works, residences and public buildings and built and unbuilt proposals. In each case, the most significant documents were chosen, mainly memoirs, general architectural plans and photographic records. Since these are working documents during the project process, it is common to find different suggestions and corrections or notes on the plans [Fig. 6].
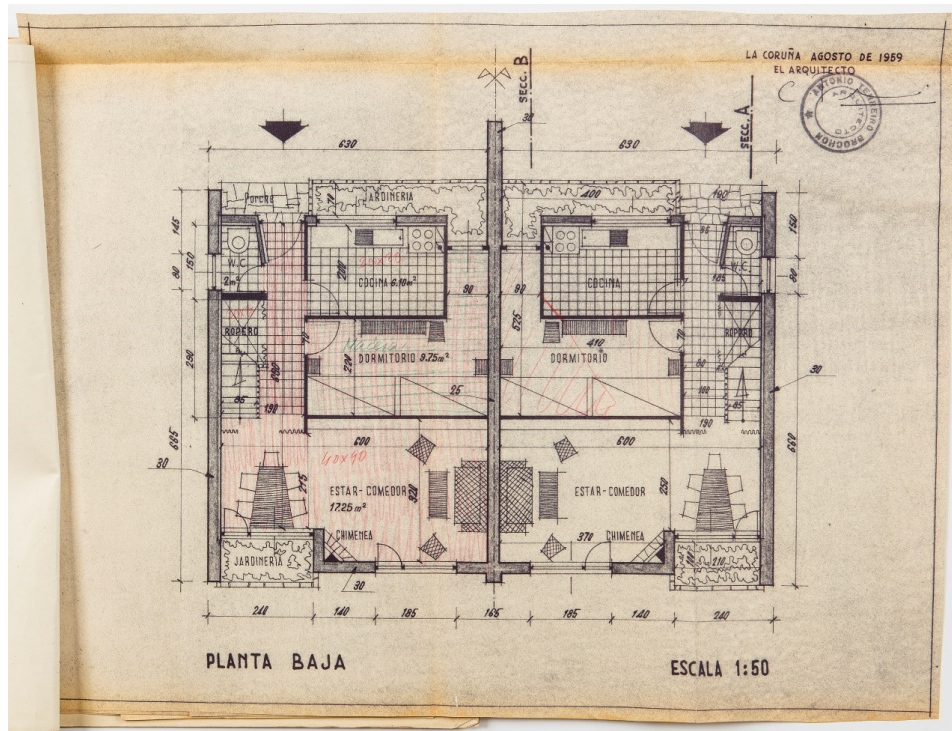

Fig. 6. Dwellings for Eume hydroelectric power plant workers (A Capela, A Coruña), 1959
Archivo Municipal de A Coruña. Fondo Tenreiro Brochón. Sig. 39 (4)

In addition, we proposed two complementary documents corresponding to his stage of training as architect: a project exercise carried out at the Madrid School of Architecture in December 1949 and a series of perspectives drawn during his collaboration with the studio of Thorsten and Roos in Malmö (Sweden) at the end of the 1950s.

Regarding metadata, in order to incorporate these projects into the Archivos de Arquitectos database, we used the following identification data:

1. Project title (simplified for easy identification)
2. Full title of the project
3. Project date
4. Location
5. Reference (code generated from the year and a letter)
6. Status: tender, preliminary project, project, built, restored, demolished
7. Customer
8. Address
9. Existing bibliography
10. Observations

Of the 12 projects selected, we revised the existing material again, in order to generate a table that would facilitate incorporation into the portal and, at the same time, include a series of new data such as: the signature of each document in the archive, the title to identify it properly, the type of paper (opaque, vegetable, negative or photographic), the measurements of the minimum rectangle that would allow scanning, and the name of each digital card according to the indications provided by the Fundación Alejandro de la Sota. For each project, we were allowed to introduce five types of content, called "cards" in the portal: sketches, plans, photographs, texts (memoirs and writings of the architect) and miscellaneous (news, brochures and any material not classifiable in the other types).

Título: Instituto Laboral (Betanzos, A Coruña). Id.: 52_A					
Signatura	**Documento**	**Tipo**	**Medidas**	**Id. Ficha**	**Id. Dig.**
33 (3)	31 Negativos	Negativo	6x6	52_A_NEG_1	1
33 (3)	Alzado norte	Papel op.	90x35	52_A_PLA_1	A_8
33 (3)	Alzado poniente	Papel op.	70x35	52_A_PLA_2	A_7
33 (3)	Alzado naciente y secciones	Papel op.	90x35	52_A_PLA_3	A_6
33 (3)	Alzado sur	Papel op.	90x35	52_A_PLA_4	A_5
33 (3)	Planta primera	Papel op.	75x65	52_A_PLA_5	A_3
33 (3)	Planta de cubiertas	Papel op.	75x65	52_A_PLA_6	A_4
33 (3)	Planta baja	Papel op.	75x65	52_A_PLA_7	A_2
33 (3)	Situación	Papel op.	75x65	52_A_PLA_8	A_1

Table 1. Example of the data collected for the project of the Instituto Laboral de Betanzos

The photographer Juan Rodríguez (A Coruña, 1960), who specialises in architecture and has extensive experience in the digitalisation of artistic works, was commissioned to digitise this material. Not being able to remove the documents from the Municipal Archive, he had to deal with the reduced space, installing all the equipment in an archive room and photographing them on a horizontal white surface [Fig. 7]. For the 6x6 cm negatives, there was a special scanner exclusively for this format. A total of

187 documents were digitized, including 115 plans, 6 sketches, 32 texts (mainly project memories) and 34 photographs.

Fig. 7. Juan Rodríguez digitizing the documents at the Archivo Municipal de A Coruña
Photograph of the authors (November 9, 2011)

All the images were obtained at a high resolution, around 700 pixels per inch, which allows us to observe with precision all the details of each document. This resolution was reduced to 300 pixels per inch in the images incorporated to the portal to facilitate their better visualization through the Internet [Fig. 7]. The highest quality copies were delivered to the Municipal Archive of A Coruña for use as a consultation copy and other activities.

The last phase of our work consisted of entering all the digitized documentation in the web. Through private access to the administration of the page, and using all the data collected for each image, they were progressively added to the portal, becoming available for open access in May 2018, simultaneously with other legacies incorporated in previous months.

Conclusions

This experience has allowed us to know, first hand, the whole process of digitization of a professional archive of architecture for its diffusion through the Internet; starting from the exhaustive revision of the existing legacy, continuing with the critical selection of the projects and, finally, proceeding with the digitization of the documents. Selection has been observed as a crucial process in which the joint vision from the archival and architect's perspective has much to contribute.

Initiatives such as this one are fundamental to know the trajectory of the professionals who contributed to place the Spanish architecture in the path of modernity, once surpassed the autarchic period after the

Civil War. But they also allow us to discover the architects in their facet as creators [Fig. 8], within the reflective process of the project, with their doubts and attempts, aspects that are of great value in getting to know the resulting works better.

Public availability of digitalised documents through the Internet, accompanied by all their metadata, greatly favours their dissemination and diffusion, allowing people from distant regions to have unrestricted access to their consultation and promoting the social aspect and internationalisation of this heritage. A documentary heritage that is essential for understanding the history of architecture of the last century and our built environment.

Fig. 8. Sketch of the Labra family house in Gandarío (Sada, A Coruña), 1954
Archivo Municipal de A Coruña. Fondo Tenreiro Brochón. Sig. 34 (4)

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