Secundino Zuazo’s intermediate stations on the Caminreal-Zaragoza rail line: minor architectures for a paradigm shift

Las estaciones intermedias de Secundino Zuazo en la línea Caminreal-Zaragoza: arquitecturas menores para un cambio de paradigma

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Abstract
The firm Compañía del Ferrocarril Central de Aragón built 21 stations and halts along the 120 kilometres separating Caminreal and Zaragoza. The construction of this line in the 1930s marked a turning point in Spain’s railway history as it was an example of adapting technological solutions to the circumstances of the environment. Its most important novelty, however, was that great architects provided minor architectures, which served as an experimental laboratory of design mechanisms that would end up being identified with modernity in our country. The stations designed for this line by Secundino Zuazo (1887-1971) represented an opportunity for him to reflect on a modern language combining rationalist elements with local traditional ones but without ever losing sight of the appropriateness to the surroundings. The rational use of new materials, whose qualities differ greatly from traditional ones, determined a new architecture.

Resumen
En los 120 kilómetros de trayecto que separan Caminreal y Zaragoza, la Compañía Central de Aragón construyó 21 estaciones y apeaderos. La construcción de esta línea en los años 30 del siglo pasado, marcó un hito en la historia ferroviaria de España al servir como ejemplo en la búsqueda de soluciones tecnológicas adaptadas a las circunstancias del entorno. Pero sin duda, la novedad más importante que aportó fue la incorporación de pequeñas arquitecturas de grandes arquitectos, que sirvieron como laboratorio experimental de mecanismos proyectuales que acabarían identificados con la modernidad en nuestro país. Las estaciones proyectadas para esta línea por Secundino Zuazo (1887-1971), representaron para él una oportunidad de reflexión sobre el lenguaje moderno, combinando elementos racionalistas con otros propios de tradiciones locales pero sin olvidar nunca su adecuación al lugar. El uso racional de los nuevos materiales, con unas cualidades muy distintas a los tradicionales, determinaron una nueva arquitectura.

Palabras clave
Secundino Zuazo, patrimonio ferroviario, tradición, modernidad, técnica, Aragón.
Secundino Zuazo’s work was copious and relevant. He always had his finger on the pulse of the architectural moment with no highs, lows or stunts and the determination of a rounded professional whose lifetime works ranged from the large Nuevos Ministerios complex to minor works, such as these stations for the Compañía del Ferrocarril Central de Aragón. Any comparison with his peers highlights the extent of the care and attention to detail he afforded the study of some small buildings on the deserted plains of Aragon, which few were ever going to see, but which Zuazo approached as if they were important parts of his architectural legacy.

Figure 1. General drawing of the Camínreal-Zaragoza line, part of the design submitted by the Compañía del Ferrocarril Central de Aragón in 1914.† Source: AGA Archive, 1914, catalogue number 24/08480.

†Secundino Zuazo’s work was copious and relevant. He always had his finger on the pulse of the architectural moment with no highs, lows or stunts and the determination of a rounded professional whose lifetime works ranged from the large Nuevos Ministerios complex to minor works, such as these stations for the Compañía del Ferrocarril Central de Aragón. Any comparison with his peers highlights the extent of the care and attention to detail he afforded the study of some small buildings on the deserted plains of Aragon, which few were ever going to see, but which Zuazo approached as if they were important parts of his architectural legacy.

1 In the final construction of the line, based on the design submitted in 1928, 21 stations and halts were built, with the following variations compared with the drawing in Figure 1: the Cucalón and Lechago stops were eliminated, and the Villahermosa halt and Ferreruela and Calamocha stations were added.

Introduction

Construction of the railway began in Spain throughout the second half of the nineteenth century, primarily by private companies as it was impossible for the State to assume the financial burden.\(^3\) As in the rest of Europe, at the turn of the twentieth century some of the rail companies with the most presence in the country (for example Caminos del Norte and Madrid-Zaragoza-Alicante) demanded more personal architectures that could even be considered their best propaganda ploy and their own mark of identity. Occasionally they even sought a local flavour for their stations to contrast with the markedly industrial style of the ones that had been the benchmarks up until that point. One of these firms was the Compañía del Ferrocarril Central de Aragón, formed in 1894 by a group of Belgian capitalists, nationalised in 1941 and the developer of one of the main lines for the province of Teruel, the Caminreal-Zaragoza line (Figure 1), which would mark a before and after in Spanish rail history as it was a groundbreaker in adapting technological solutions to the particular circumstances.\(^4\) Although this line only featured originally as secondary in the State’s plans, Central de Aragón also wanted to make its stations stand out from what had been the norm in second-class rail constructions before then. That is why they commissioned designs from well-known architects of the time, who opted for unique buildings for each of the stops, thus turning their backs on the academic conventions that until that point had only copied, adapted or combined established models, as we will see below.

Secundino Zuazo (1887-1970) and Luis Gutiérrez Soto (1900-1977) were the architects selected for the project.\(^5\) Gutiérrez Soto produced the designs for the start and end of the line, while Zuazo, who had just completed the stations of the Cuenca-Utiel line for the firm MZA (1921-1924), was responsible for the intermediate stations (Figure 2). For Zuazo, this commission represented an opportunity to reflect on modern language while ensuring it was appropriate for the location, inserting in the landscape an almost intuitive architecture that can be considered a first trial of new architectural currents, even though it was the result of old compositional patterns and briefs.

<table>
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Figure 2. Table summarising all the buildings of the Caminreal-Zaragoza line. Source: Own.
No more stations in a series on the Caminreal-Zaragoza line

When we see a long line of poorly-dressed children, all with clothing of the same material and cut, the same caps, ties and shoes, we say “Ah, there are the boys from the Poorhouse”. When we cross Spain from North to South, from San Sebastian to Granada, and see our impoverished train stations passing by, one after another, all cut from the same pattern, are we not likely to ask “Is this a nation or a poorhouse?” And our poverty of ideas stands out to us in all its nakedness.¹⁰

At that time it was usual for rail companies to commission their buildings from their technical departments with the main premise of cost-savings and an obviously functional purpose. The principles dominating the new era of the machine were gradually applied when they realised that the use of standardised elements—characteristic of mechanisation—could also be transferred to other fields such as construction and its method. This meant that new rail buildings began to repeat their models along the track, except for stations in cities and those at the start and end of the line, which continued to be based on classic and even monumental references and became the representative image of major companies and even the cities where they were located. When these models began to be repeated on several lines owned by the same company, and in differing construction types, we could say, as we alluded to above, that the company had achieved its own mark of identity.⁷

All these background conditions converged in the Central de Aragón and its main network, formed by the Calatayud-Valencia line, which would serve as a model and a starting point for the initial configuration of the Caminreal-Zaragoza line. In a first design, which was not implemented, the usual standardisation was applied to the stations (also standardised by buildings on other lines run by the Société Générale de Belgique),⁶ resulting in buildings following a modular type whose length and even height referred to the station category, which usually coincided with the importance of the place where it was located. Stations had become a reference, and somehow hierarchised cities and towns as first, second, third and fourth class, from the start and terminus stations to the simple halt.

These standards were applied to the initial design the company drafted for the Caminreal-Zaragoza line (Figure 3) after the invitation to tender in September 1914;³ however, the project did not go ahead due to the increasing international economic instability at that time, the immediate consequence of the start of the First World War. Given this scenario, the construction of the new line could not restart until the end of the 1920s, when the company’s economy stabilised again once the Compañía de los Caminos de Hierro del Norte had acquired the Belgian company’s shareholding in it. This situation impacted the first project, especially the design of its stations, since the general parameters of the initial project to construct the line changed and only Spanish technicians worked on the process.¹⁰

Félix Garré Comas and Enrique García Reyes, the engineers involved in the construction of the line,¹¹ refer to the buildings in the journal Ferrocarriles y Tranvías¹² in the following terms: ‘On this railway, to prevent a lack of variety and aesthetics suffered by stations on most of the railway lines in our country, and considering that there is absolutely nothing to be gained from all the buildings being exactly the same, since due to their distance and many other circumstances serial construction was not possible, it was observed that only the main elements, columns, beams, doors, windows, etc., needed to be the same to make the most of unit prices, and it was agreed to make all the buildings at stations and sidings different. Signalman’s houses and halts were built the same for the purposes of maximum simplicity and because they were minor works and less visible to travellers.’¹³ The concession of the Caminreal-Zaragoza line to Central de Aragón was published on 27 September 1927,¹⁴ thereby marking the beginning of its definitive construction. The approved design involved a development of 120 kilometres and included the construction of 21 stations and halts.
Zuazo, an architect for architectural renewal

'A long, classical tradition rests on architecture. It is hard to break free today from such secularly followed principles, such as the principle of symmetry, of the correspondence of openings in elevation in the plan drawings, of the sameness of these external bays in the same plan and part of the building. Almost everything has been respected by the most different architectures of classicism and those that presumed to be renewing. Once educated in this traditional aesthetics, we are repulsed by buildings that contravene it. And yet the time has come to teach new arrangements, to widen the limits architectural forms move between.'

The intermediate stations for the Caminreal-Zaragoza line were built from 1928 to 1931 in a period defined as one of the most difficult junctures in the modern history of architecture when coexistence was possible between eclecticism and historicism with nineteenth-century symbols, nationalism using style as a commitment to its own history compared with the rest of the world, and even regionalism, fuelled by the recent formation of the Mancomunidades de Provinvia (provincial communities, the forerunner of what are currently the autonomous communities). Zuazo tried to overcome this phase with formal and constructive approaches that became increasingly simplified, hinting at an attitude of renewal that would eventually link him to the new architecture, although for younger architects, included in the 1925 generation, he never managed to be avant-garde enough.

In many interviews, he also described how he tried to understand and assimilate the transformations underway in the Western world through mainly German journals. With this background, Zuazo always insisted that he wanted to find the architectural truth using history not as a tool to operate with but as a reflection on his masters' know-how (Figures 3 and 4). In Lilia Maure's opinion, 'his relentless search for a new definition
of architecture without discarding language revived as an instrument of architectural configuration, with classical elements reappraised for that purpose, resulted in him not being included as a member of the modern movement at that time.\textsuperscript{21}

A shift in the era’s paradigms: the intermediate stations of the Caminreal-Zaragoza line

The character of all the stations of the line linking Zaragoza with Caminreal is that of the rural architecture of Aragon, in harmony with the common construction of the respective towns and using material from the country as far as possible.\textsuperscript{22}

We could say that during the 1920s, minor architectures were extremely important for experimenting with new architectural languages or construction systems focused on developing a new way of life. In Europe, the Weissenhof estate in Stuttgart, opened in 1927, was a clear example of this and also of how work on the suburbs would become a playground for experimenting with the architectural avant-garde movements of the time. During this period, Zuazo used small projects commissioned by special owners, aware of these avant-garde trends and with links abroad, to distance himself from the principles of the classical architecture that had dominated his designs up to that point. The houses built for the couple formed by the writer Gregorio Martínez Sierra and the actress Catalina Bárcenas (1927), for the sculptor Sebastián Miranda (1928), and for the actress Irene López Heredia (1928) were an example of this.

In parallel, the nineteen buildings—stations and halts—designed by Secundino Zuazo for the Caminreal-Zaragoza line were an opportunity to investigate the new language, combining new elements with others typical of local tradition, without ever overlooking that they should be appropriate for their location. They were buildings that served as an ‘experimental laboratory’ of design mechanisms that would eventually be identified with the incipient modernity in our country.

The detailed study of plan drawings in relation to the buildings’ function, the logical use of materials or modern construction techniques associated with classical and even traditional languages and, above all, no longer viewing a passenger building as just a place to shelter from nature, led him to rethink the value of the language, thus beginning a process of synthesis in certain elements that would make it possible to consider these minor architectures as the start of an academic and rationalist alternative resulting in his most important works.

In defining them, Zuazo rebelled against previous catalogued patterns that had governed the construction of Spanish stations up until then. In contrast, he opted for a simple, natural and logical architecture in which constructive truthfulness—exact use


\textsuperscript{22} Secundino Zuazo, ‘Los edificios de la nueva línea’, Ferrocarriles y tranvías 25 (1933): 98–104. In this article, the author gives a general description of the execution of the buildings and architectural brief, as well as the circulation areas and how the various internal uses link with the buildings’ exteriors.
of simple materials—learned from Hendrik Berlage (1856-1934) and the Amsterdam School (1915-1930), harnessed the use of traditional materials capable of establishing their own rhythms and even series, which, with their varied organisations, removed all decorative superficiality to arrive at rational buildings, as Juan de la Encina described Zuazo's buildings in 1933: ‘Whoever cannot appreciate an unmistakable goal to construct in a modern style within an obvious national tradition has seen little of architecture. From the arched porticoes, seen in so many Spanish towns and cities ... or the way he deals with the colours of surfaces, moves volumes and simply shapes lines against the sky.’ (Figure 6)

The longitudinal order

‘To better adapt to the landscape’s silhouette and fulfil its purpose, the form adopted is markedly horizontal, extending parallel to the tracks.’

The station locations were chosen to be perfectly aligned with the track, thus subtly fitting in with the rhythm established by the platforms. Once the building site had been chosen, he began playing around with the arrangement of its volumes, which emerged from reflecting on the brief requirements. Although we can see in the proposed plans that the orthogonal order always predominated, either parallel or perpendicular to the tracks as far as use and circulation areas were concerned, the flexibility afforded by their surroundings made it possible to accommodate several volumetric and even stylistic types. Evidence of this were the variations Zuazo studied in many of his intermediate stations fostering the experimental nature of these constructions, as mentioned above (Figure 7).

Based on the symmetry that had so far dominated compositions with clear classical references, Zuazo was able to dilute, or rather transform it, to achieve subtle asymmetry mainly by means of slight shifts from the dominant centreline that were possible with a modular decomposition that maintained these buildings’ longitudinal order.

In the various proposals he put forward for his buildings, he changed symmetry for a balanced relationship between the modules his compositions are divided into, depending on their function. He removed the element of addition, even repetition, which had been used in the company’s passenger buildings before then, as we have seen, and gave them what we could call an additional play of opposites: open-closed, full-empty and public-private. Both Ferreruela and Navarrete Stations...
Figure 7. Ferreruela Station (left) and Navarrete Station (right). Plan drawing studies for passenger buildings. Zuazo (1931). Source: Zuazo BNE Archive.

are a clear example of these intentions. In them, he showed great permeability in the specific space of the station, in contrast to the compactness of the residential modules. As the latter are mostly located on both sides of the module for public use, in principle they support the law of symmetry, which, however, is eliminated in the joint reading of the building. Similarly, the integration of empty space in the module for public use also distances the elevations further from any classical reading.

New techniques and traditional materials

Other factors influencing this transformation were structural optimisation and reinterpreting traditional materials, which would result in a new configuration of the image conveyed by the buildings.

As economy was sought for the construction, the former resulted in the volumes being divided into two bays along the centreline, as in all the buildings. This division materialised with load-bearing walls that were intentionally prominent in the plans of the modules for residential use, thus clearly dividing the residents' daily life from the
public sphere generated by usual railway traffic. In contrast, in the public module, the division materialised as mixed, since columns were introduced, thus favouring permeability in circulations. In both cases, it is interesting to see how he manages to increase the presence of the main direction, which dominates the design.

The latter shows the importance for Zuazo of the idea of durability, of the permanence in time of his works, an idea he held onto throughout his career. Lilia Maure said that “in the principles of constructive rationalism, his thirst for discipline found a rigorous and simple possibility of addressing the reality of building in the 1930s.”27 However, although it is true that new materials led to a new architecture, in the case of Zuazo, its development contributed to the use of traditional materials. As mentioned above, after travelling to the Netherlands in 1927, Zuazo, in his own search for architectural truth, began to experiment with brick and use it differently. In the station buildings, solid brickwork began to be laid alongside hollow brick covered with white cement mortar, thus boosting the plastic opportunities possible with a single material. The horizontal properties typical of the natural bond of facing brick were highlighted by the folding of the wooden shutters—always represented open in drawings to increase the length of the openings almost like ribbon windows. This also occurred with the soldier courses laid to replace classical moulding used previously as decorative elements and to outline the openings, or with base courses, demonstrating more durability and strength with the dense bond, and even the benches created naturally from interpreting this base course. Thus, Zuazo gave the traditional use of brick an innovative twist that he would continue to use in later designs.

By trying out new things in these small buildings, he also managed to reinterpret the languages that defined the representative character of this kind of architecture to differentiate it from a purely functional type. Unlike previous constructions, public image was no longer associated with the size or grandeur of the buildings, and instead, how the compositional games interacted with each other defined how the buildings related to their own limits (Figure 8).

In most cases, the openings were based on the established modulation, although this did not always correspond to the plan arrangement in the brief. Above all, there was always a willingness to incorporate a repetitive rhythm throughout the buildings, only interrupted in the elements whose formal difference highlighted their character. These elements were usually structural parts, accesses, waiting areas or porches, which were adapted to the brief’s specific conditions without interfering in the coherence of the whole.
Intermediate or semi-built spaces

‘Consideration has also been given to the noticeable trend in these towns to make stations a place for strolling by providing them with benches and porches that make them more pleasant for the general public, particularly passengers.’

It is important to note that there is a series of lines running perpendicular to the dominant direction used to indicate accesses to the various uses the brief was divided into and which were distributed into the established modules. These accesses, always through different types of reception areas, perfectly interpreted the scale of the place and adapted to either the arrival of passengers or walkers. They took the shape of lobbies, porches or simply shaded lines, in some cases replacing the function of canopies, which, traditionally, every station had to have and the lack of resources could not stretch to. It is interesting to consider these spaces as part of the route, after the serialisation and repetition of a construction system that would be crucial in Zuazo’s architecture: ‘A sober and repeated compositional element; separate, free, independent arcades under volumes like those that had been built throughout the history of architecture, arcades with modern materials but used nobly.’ (Figures 9 and 10)

He referred to these intermediate spaces as semi-built and, as a result of how he approached them in some of his buildings, we could consider them as empty modules or volumes whose careful organisation, both in plan and in section, was able to give them a usage category similar to those alongside them. Thinking constantly about passengers and also their condition as walkers led him to discover a new dimensional condition for his designs in his solution to incorporate the railway in the rural landscape. Architecture finally allowed people to inhabit a space in tune with their own scale and also provided them with a close reference within an infinite dimension. Later buildings, such as the block of flats known as Casa de las Flores (1930), Nuevos Ministerios (1932), both in Madrid, and the Bank of Spain in Cordoba (1934) used this resource masterfully.

It is worth noting the influence these architectures exerted on Zuazo’s architectural thought and how they formed part of an architectural renovation that accepted the avant-garde without abandoning the possibilities tradition also offers.
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Rehaciendo el patrimonio arquitectónico controvertido, repensando el espacio público
Remaking Contested Architectural Heritage, Rethinking Public Space

ALEGRÍA COLÓN MUR
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Secundino Zuazo’s intermediate stations on the Caminreal–Zaragoza rail line: minor architectures for a paradigm shift
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Zuazo has undoubtedly been a major figure in a period of our architecture due to what he did and what he designed that was not realised. He attained the place reserved for the great masters who not only created prestige through their works but also gave social meaning to the profession of architect.

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