

IDENTIFYING THE TRANSFORMATIONS IN FACADE COMPONENTS FROM  
HISTORIC RESIDENTIAL ARCHITECTURE TO MODERN TOWNHOUSE -  
A CASE STUDY ON TRAN PHU STREET, DA NANG

NHẬN DIỆN CÁC BIẾN ĐỔI TRONG THÀNH PHẦN MẶT ĐÚNG TỪ  
KIẾN TRÚC NHÀ Ở LỊCH SỬ ĐẾN NHÀ PHỐ HIỆN ĐẠI:  
TRƯỜNG HỢP NGHIÊN CỨU TẠI ĐƯỜNG TRẦN PHÚ, ĐÀ NẴNG

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(Received: August 04, 2025; Revised: November 04, 2025; Accepted: November 21, 2025)

DOI: 10.31130/ud-jst.2025.23(11).387E

**Abstract** - The rapid development of Da Nang’s urban center has brought about significant transformations in the form of modern housing. In response to this context, the study focuses on analyzing the relationship between historic residential architecture and current housing design trends in the city center – an area strongly influenced by urbanization. Based on literature review, field surveys, and comparative analysis, the study clarifies the various transformations of traditional architectural elements such as roofs, windows, balconies, and doors in modern housing design. These transformations include reproduction as well as modified reproduction, reinterpretation, symbolic abstraction, and omission of vernacular elements in modern housing facades. The results show that although a few buildings creatively incorporate vernacular features, in general, the vernacular architectural identity is gradually fading in newly developed residential areas.

**Key words** - Historic residential architecture; vernacular architecture; traditional architecture; Indochina-style architecture; architectural identity; modern housing

1. Introduction

In the context of rapid globalization and urbanization, many cities in Vietnam, including Da Nang, are facing significant changes in the residential morphology. The development of modern living spaces brings many improvements in technology and aesthetic quality, but at the same time, it also raises concerns about the gradual loss of local architectural identity, which was an important part in shaping the urban area’s cultural expression.

Historic residential architecture is more than the continuation of old building traditions. It embodies adaptive approaches developed through generations, reflecting how local communities responded to climate, topography, culture, and social life. Although historic residential architecture is important for culture and history, there are still not many studies that clearly evaluate how its forms and values can influence the design of new residential architecture in Da Nang today, especially in the city center, where redevelopment pressures are strong.

This study focuses on identifying and analyzing how historic architectural elements are transformed and integrated into the design of contemporary urban residential architecture. The purpose is to clarify the role of architectural identity in the process of creating

**Tóm tắt** - Sự phát triển nhanh chóng của đô thị trung tâm Đà Nẵng đã mang đến những thay đổi lớn trong hình thái nhà ở hiện đại. Nghiên cứu này tập trung phân tích mối quan hệ giữa kiến trúc nhà ở lịch sử và xu hướng thiết kế nhà ở hiện đại tại khu vực trung tâm thành phố, nơi chịu ảnh hưởng mạnh mẽ từ quá trình đô thị hóa. Dựa trên tổng hợp tài liệu, khảo sát thực địa và phân tích so sánh, nghiên cứu làm rõ các hình thức chuyển hóa của yếu tố kiến trúc truyền thống như mái, cửa sổ, lan can, cửa chính trong thiết kế nhà ở hiện đại. Các hình thức này bao gồm kế thừa nguyên dạng, giữ nguyên tinh thần, biến tấu, biểu tượng hóa hoặc biến mất của các yếu tố bản địa trong các công trình mới. Kết quả cho thấy, mặc dù một số ít công trình sáng tạo tích hợp các yếu tố bản địa, nhưng bản sắc kiến trúc truyền thống đang dần bị phai nhạt trong các khu dân cư mới.

**Từ khóa** - Kiến trúc nhà ở lịch sử; kiến trúc bản địa; kiến trúc truyền thống; kiến trúc Đông Dương; bản sắc kiến trúc; nhà ở hiện đại

contemporary urban environments. The result of this research can provide a foundation for future research and support the development of design guidelines or policies to protect the architectural identity during the process of rapid urban growth.

2. Theoretical framework, research scope, and research methodology

2.1. Vernacular, Traditional, and Indochina-style Residential Architecture: an extended analytical framework

In this study, historic residential architecture is approached as an extended category comprising three related but different notions: (1) Vernacular residential architecture – built on local experience, local materials, and adaptation to climate and daily life; (2) Traditional residential architecture – highlighting regional identity and cultural inheritance in the community; and (3) Indochina-style residential architecture – a hybrid form first introduced by French architects, then gradually localized to fit the Vietnamese climate, society and culture. In this sense, Indochina-style residential architecture is not the same as vernacular or traditional forms, but is considered an intermediate stage in the evolutionary trajectory of Vietnamese architecture.

Vietnamese vernacular and traditional residential architecture represent long-term adaptation between human habitation and the specific natural-social environment of each region. Elements such as tiled roofs, courtyards, wide verandas, and natural materials demonstrate flexible responses to the tropical climate [1]. According to [2] and [3], these architectural styles emerge from the integration of environmental conditions, local materials, and traditional construction techniques; however, it is culture, including customs, social structure, and traditional values, that fundamentally shapes the organization and use of space. In the Vietnamese context, [4] also highlights that architectural identity derives from both tangible forms and intangible cultural values.

These characteristics are clearly shown in each region, with the Central region being a typical case. In this area, characterized by harsh weather, including intensely hot summers and prolonged rainy seasons, vernacular housing has developed specific adaptive strategies such as steeply pitched tiled roofs, deep verandas, open ventilation structures, and locally sourced materials such as bamboo, wood, and rammed earth etc. Traditional Hue “*Ruong*” houses and three-compartment houses in Da Nang exemplify the close relationship between architecture and the natural-cultural context of this region [5].

In the process of Vietnamese architectural development, Indochina-style architecture is considered an important transitional stage that absorbed Western modernist ideals and preserved local cultural and climatic identities. Although initiated by French architects during the colonial era (early 20th century), this style was not purely “foreign” but rather the outcome of a process of transforming and localizing French architecture in the environmental, social, and cultural conditions of Vietnam [6]. The Indochina-style frequently incorporates traditional elements such as sloped tiled roofs, wide corridors, courtyards, sun-shading screens, and natural ventilation systems - features that were already present in Vietnamese vernacular and folk architecture [7]. In addition, the use of local materials, climate-adaptive block organization, and symmetrical layout has created a harmonious blend between Western design language and Eastern architectural spirit. The success of the Indochina-style lies in its ability to balance modern functionality with a culturally embedded formal approach [8].

According to [9], the separation of modern architecture from its local context may undermine its cultural depth and spatial identity. He proposed “Critical Regionalism” as a strategy to resist the delocalization and commercialization of internationalism. Critical regionalism aims to reconcile modern values with local conditions of climate, topography, and building tradition. From this perspective, the Indochina-style can be seen as an experimental premise for the spirit of critical regionalism, as it combined Western formal language with a deep adaptation to local social and climatic conditions.

Urban architecture during the Indochina period was emphasized by [10] as not only a tool of imperial authority but also a product of a politically and culturally strategic “symbiosis”. Under the French policy of “association,”

modernization was carried out alongside the selective acceptance of vernacular elements to create a hybrid architectural paradigm that could adapt to local conditions. From this extended viewpoint, it is apparent that Indochina-style residential architecture - particularly in its facades, roofs, openings, and decorative details - reflected a negotiated relationship between colonial power and indigenous identity.

When architectural forms are introduced into new contexts, they rarely retain their original meanings [11]. Instead, they are often redefined and re-appropriated by local communities, carrying new cultural and social values. Even with similar formal appearances, each building may be interpreted differently depending on its historical, social, and cultural contexts. This argument helps clarify that Indochina-style architecture, although employing a Western design language, should be understood as a localized hybrid architectural form. It reflects the adaptation and reinterpretation to Vietnam’s climate, living customs, and cultural aesthetics, but not to be conflated entirely with indigenous architecture.

Based on these arguments, this study approaches historic residential architecture as an extended analytical framework encompassing vernacular, traditional, and Indochina-style forms. Examining these three categories in relation to modern townhouses provides a critical foundation for identifying the transformation of historic architectural elements on the façades of modern townhouses in the central area of Da Nang.

## **2.2. Literature review on local architectural identity in Da Nang**

Previous studies on vernacular and traditional residential architecture in Da Nang have addressed a variety of aspects. Several studies focus on the characteristics of traditional materials such as wood, stone, rammed earth, yin-yang roof tiles, and thatch, as well as their applications in construction [12], [13], [14]. Other studies delve into the spatial structure of traditional residential architecture, particularly courtyards, wide verandas, and door systems, to examine how spatial organization responds to climatic conditions [15], [16].

Recent studies have also highlighted growing concerns about the potential loss of traditional architectural values under the pressures of urbanization and changing lifestyles [17], [18]. More than warnings, scholars have proposed the notion of a “new vernacular architecture” - one that embraces the spirit of tradition while renewing form, materials, and function to suit contemporary contexts. Meanwhile, conservation studies emphasize the need to identify the value system of traditional architecture and integrate conservation strategies into the discourse of contemporary architectural development.

In recent years, a number of residential projects in Da Nang have actively integrated vernacular and traditional elements into modern designs, reflecting ongoing efforts to preserve and reinterpret traditional architectural culture in a contemporary setting [19], [20]. These buildings use natural materials, incorporate courtyards and wide verandas, and feature distinctive elements such as yin-yang

tilled roofs and louvered shutters, creating spaces that are both comfortable and rich in local identity.

### 2.3. Research scope

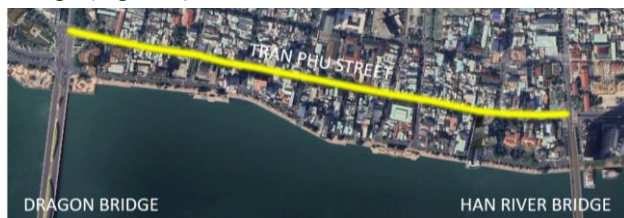
In the study of historic residential architecture, it is essential to approach both the *implicit* and *explicit aspects* of a building to fully understand its essence and value. The implicit aspect refers to elements related to life philosophy, customs, and local culture - foundational values that shape how people create and inhabit their living environment. In contrast, the explicit aspect includes visible features that can be directly perceived through visual observation, such as massing, proportions, color, materials, decorative details, etc. Among these, *the building façade* is the most representative component of the explicit expression, as it concentrates various formal elements and directly reflects the relationship between the building and the urban space.

In this study, the author defines several research boundaries to ensure both focus and feasibility, as follows:

- *Research objects*: This study examines four historic houses and all modern townhouses along Tran Phu Street in Da Nang City. Tran Phu Street was selected for its central location and its association with multiple layers of Da Nang's urban development history. It has also faced strong modernization pressures since the 2000s, making it a suitable site to observe the transformation and fading of historic architectural characteristics. However, the findings represent a case study rather than the entire city. The analyses in this research serve as a reference and foundation for future, broader surveys in other areas of Da Nang.

- *Content limitations*: The study focuses on the explicit aspect of both historic and modern townhouses. Within this scope, two primary components can be identified: (1) the spatial organization, and (2) the architectural form. However, this research only concentrates on the architectural form – namely the building façade – in order to identify expressions of historic identity within the context of contemporary architecture in the surveyed area. The spatial organization and implicit aspects, such as cultural practices and customs, are beyond the scope of this study.

- *Spatial limitation*: For modern townhouses, the research is confined to the segment of Tran Phu Street in Da Nang city, between Dragon Bridge and Han River Bridge (Figure 1).



**Figure 1.** Spatial scope of the study  
(Source: Google Maps – Edited by the author)

- *Temporal limitation*: The study focuses on modern townhouses built from 2000 onward along Tran Phu Street. This timeframe was selected because Vietnam officially entered the global economy in 2000 through the Bilateral Trade Agreement with the United States and the implementation of ASEAN Free Trade Area. These events

brought significant shifts in architectural trends and design preferences, reflecting the influence of globalization and urban modernization. The survey records the current façade conditions of the buildings based on field observations, without distinguishing between original and renovated elements.

### 2.4. Research methodology

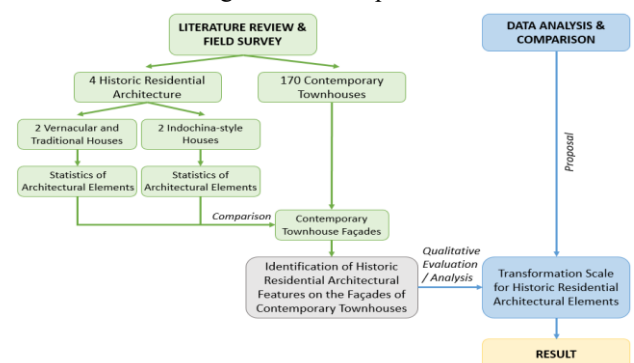
This study employed a qualitative approach combining literature review, field survey, and comparative analysis, to identify and assess the degree of transformation of historic residential architectural elements in contemporary townhouse façades in Da Nang central area.

- *Literature review*: was employed to collect and analyze scholarly works, articles, architectural drawings, and images related to historic residential architecture in Da Nang region, particularly focusing on elements from traditional and Indochina-style architecture.

- *Field survey*: was conducted through direct observation, photographic documentation, and condition recording of 170 contemporary townhouses along Tran Phu Street - an area with a high density of residential buildings and a wide variety of façade typologies.

- *Data Analysis and Comparison*: involved cross-referencing the historic residential architectural elements identified from literature with those observed in the modern buildings, in order to determine the extent to which these elements have been preserved, transformed, or lost.

Based on qualitative data, the research followed a sequence: identifying historic residential architectural elements in vernacular, traditional, and Indochina-style residential architecture, comparing them with contemporary townhouse façades, and evaluating the transformation using a five-level qualitative scale.



**Figure 2.** Process of analyzing and evaluating the degree of historic residential architectural transformation in contemporary townhouses (Source: Author)

Figure 2 illustrates the research process in three phases: (1) surveying and analyzing data from two building groups (historic residential architecture and contemporary townhouses), (2) identifying historic residential architectural elements that remain visible in the façades, and (3) applying the transformation scale for qualitative assessment, serving as a basis for drawing conclusions and proposing design directions appropriate to the modern context.

To ensure reliability, the identification of historic residential architectural elements was guided by criteria

synthesized from key references [2], [3], [4], [9]. Survey data were systematically recorded through photographs and classification tables. In cases of ambiguity, group discussions were conducted to reach consensus, thereby reducing individual bias. Although the assessment remains qualitative, these procedures help maintain consistency and minimize subjectivity in the analysis.

3. Identification of historic architectural elements in vernacular, traditional, and Indochina-style residential architecture

3.1. Historic architectural elements in vernacular and traditional residential architecture

In this study, two representative houses were selected as reference cases. Jackfruit Wood House is classified as a vernacular house, clearly expressing indigenous folk characteristics through local materials (wood, stone, clay tiles), climate-responsive spatial organization, and a philosophy rooted in rural living. Besides, Duc An Ancient House is considered a traditional house, exemplifying urban heritage architecture with historical-cultural value and reflecting the interplay between local traditions and external influences during Hoi An’s port-era development. The selection of these two cases provides a morphological basis for comparison, allowing clearer identification of the core elements of Central Vietnamese architectural identity.

House A, a more than 200-year-old jackfruit wood residence located in Loc Yen village, Thanh Binh commune, Da Nang city. The house is constructed from forest-harvested jackfruit timber and follows the traditional “three-bay, two-wing” layout typical of “*Ruong*” houses. It features 36 solid wooden columns and is roofed with yin-yang tiles; structural components such as the trusses, beams, and gable ends are intricately and meticulously carved (Figure 3). The space surrounding House A is enclosed by a fruit garden and a lotus pond. A wide veranda positioned at the front façade functions as a transitional space that helps regulate the microclimate.



Figure 3. House A – Jackfruit Wood House (Loc Yen village, Thanh Binh commune, Da Nang City) (Source: Construction Newspaper (Photograph) – Author (Facade Drawing))



Figure 4. House B – Duc An Ancient House (129 Tran Phu street, Hoi An ward, Da Nang City) (Source: Author)

House B – the Duc An Ancient House, built in 1830 during Emperor Minh Mang's reign of the Nguyen Dynasty.

Located at 129 Tran Phu Street, Hoi An ward, Da Nang city, it retains the structural composition of a Central Vietnamese “*Ruong*” house, yet incorporates design influences introduced through international commerce. The house is constructed with brick walls and roofed with yin–yang tiles. The wooden door system at the front façade can be fully opened, allowing for flexible spatial expansion (Figure 4).

Historic residential architecture in Da Nang reflects a long-term adaptation to local climatic and cultural conditions. The façades of these houses typically feature a symmetrical composition, with the main entrance positioned at the center to ensure both aesthetic balance and functional efficiency. The façade is not merely a shielding wall but is thoughtfully designed to enhance natural ventilation and daylighting, thereby improving the overall quality of living spaces. Table 1 presents the vernacular elements from House A and the traditional architectural elements from House B.

Table 1. Vernacular and traditional architectural elements observed in Houses A and B

Vernacular & Traditional residential architecture	HOUSE A – Jackfruit Wood House	HOUSE B – Duc An Ancient House
Picture		
Roof		
Door		
Window		
Decorative and Ventilation Details		
Materials	<ul style="list-style-type: none"><li>- Yin-yang tiled roof</li><li>- Brick wall</li><li>- House columns are made of wild jackfruit wood</li></ul>	<ul style="list-style-type: none"><li>- Yin-yang tiles roof</li><li>- Brick wall</li><li>- House columns are made of “kieng kieng” wood</li></ul>
Colors	<ul style="list-style-type: none"><li>- Reddish brown color: roof tiles, wood</li><li>- Yellow color: lime-plastered walls</li></ul>	<ul style="list-style-type: none"><li>- Reddish brown color: roof tiles, wood</li><li>- Yellow color: lime-plastered walls</li></ul>

The yin-yang tiled roof is a distinctive feature of traditional architecture, commonly designed with a steep pitch ranging from 30° to 55°, which suits the climate of Central Vietnam. This roof design effectively protects against heavy rains and storms, while also adding to the aesthetic value of traditional buildings [13], [21].

House A has wooden windows with a louvered design,



single-panel shutters, and protective frames. The main doors are also made of wood and include ventilation slits. These features provide privacy while allowing airflow inside. In House B, the windows are made of horizontally stacked wooden planks. The main entrance consists of two layers: a solid wooden door inside and a lower, outer door, suitable for commercial buildings. On the façade walls of House A, small ventilation openings are incorporated to improve air circulation, reduce humidity, and enhance comfort inside. House B also has wooden ventilation openings above the windows and the main door. Both Houses A and B are built using local materials, such as clay and wood. The colors of these traditional houses reflect a strong connection to nature, with reddish-brown tiles and soft yellow or white lime-plastered walls.

It is clear that the architectural elements in the traditional houses of Da Nang not only serve practical and climate-related functions but also hold cultural significance, reflecting a balanced relationship between people, architecture, and the natural environment.

3.2. Historic architectural elements in Indochina-style residential architecture

To explore the architectural characteristics of Indochina-style, two representative residential buildings in central Da Nang were selected. The first, House C, located at 90 Trung Nu Vuong Street, was built around the 1900s. The building has a symmetrical layout, with the façade arranged along a central axis. The windows and doors are symmetrically placed, with three large arches that create a unique architectural rhythm. The roof is decorated with a balustrade in the French neoclassical style (Figure 5).



Figure 5. House C – Indochina-style Heritage House (90 Trung Nu Vuong Street, Da Nang City) (Source: Author)



Figure 6. House D – Indochina-style House (102 Hoang Van Thu Street, Da Nang City) (Source: Author)

The second building, House D, is located at 102 Hoang Van Thu Street and was built in the 1930s. Its façade is also symmetrically arranged along a central axis, with arched

frames and decorative columns placed in a balanced rhythm, creating a cohesive and grand architectural composition. Features like tall and wide doors, a front veranda, and a green courtyard emphasize the design's focus on ventilation and sun shading, traits typical of tropical architecture. The façade includes symbolic ornamentation, such as a central relief sculpture, reflecting the aesthetic tastes of the French colonial period (Figure 6).

Indochina-style architecture in Vietnam is a blend of Western architectural styles, especially French neoclassicism, and traditional Vietnamese elements. While influenced by Western design, it adapts many local features to suit the region's climate and culture. Table 2 highlights the architectural characteristics of Indochina-style in Vietnam in Houses C and D.

Table 2. Architectural elements in Indochina-style Houses C and D

Indochina-style residential architecture	HOUSE C – 90 Trung Nu Vuong St.	HOUSE D – 102 Hoang Van Thu St
Picture		
Roof		
Door		
Window		
Decorative and Ventilation Details		
Materials	- Tiled roof - Brick wall	- Corrugated metal roof (renovation) - Brick wall
Colors	- Brown: roof tiles, wood - Yellow: lime-washed walls	- Brown: wood - Blue: lime-plastered walls

Both Houses C and D feature a balanced and symmetrical façade. Large wall surfaces, stylized columns, and elegant balustrades are harmoniously mixed with traditional decorative patterns, merging modern and traditional aesthetics. Both buildings have sloped roofs, a common feature in Indochina-style architecture. The roof pitch ranges from 30° to 40°, with modest overhangs, often paired with balconies or loggias. House C is topped with terracotta tiles, while House D has corrugated metal roofing, likely added during a later renovation.

Doors and windows are crucial in Indochina-style architecture, designed to open wide for ventilation and

shading. House C has a single-layer wooden door with glass panels, while House D has a double-layer system, with louvered shutters on the outer layer and glass on the inner layer. House C's windows are single-layer arched windows with explicit protective grills, while House D's windows are double-layered, with wooden louvers on the outside and glass panels inside, allowing natural light while keeping out rain and insects. Decorative elements like balustrades, column capitals, moldings, and reliefs on the façade have strong cultural meaning through stylized ornamental patterns. These contribute to the distinctive identity of Indochina-style residential architecture.

Both houses feature wide verandas and buffer zones to reduce direct sunlight. The use of decorative arches in the veranda area is a key characteristic of Indochina-style architecture. Houses C and D are built using locally available materials such as terracotta roof tiles (originally on House D before renovation), brick walls, and wooden louvered doors. This choice of materials ensures durability while blending with the local landscape and culture. The exterior walls are often painted in soft colors like yellow, green, or white lime wash.

Overall, Indochina-style architecture is a strong example of the creative blend between Western and traditional design, meeting both functional and climatic needs while preserving and celebrating Vietnam’s cultural identity.

4. Transformation and Preservation of Historic Residential Architectural Forms in Vietnam

The transformation of historic residential architecture in the façades of contemporary townhouses refers to the process of reinterpreting and modifying traditional elements, such as roof shapes, materials, door and window details, and the overall façade design, within modern townhouses. This process can range from directly preserving historic features to adapting and creatively integrating them to fit urban contexts and modern lifestyles. The façade acts as the "cultural interface" of a building, where vernacular, traditional, and Indochina-style elements are either maintained, transformed, or redefined.

To place the transformation of historic residential architecture along Tran Phu Street within a broader context, it is important to consider current trends in the preservation and adaptation of historic residential architecture in major Vietnamese cities. In terms of urban architectural conservation, cities like Hoi An (before becoming an administrative part of Da Nang City in July 2025), Hanoi, and Ho Chi Minh City have developed various strategies to preserve or reinterpret historic architectural elements while facing pressures from modern development.

In Hoi An, conservation principles have been clearly articulated through a set of guidelines proposed by UNESCO, emphasizing the preservation of traditional façades and materials [22]. In Hanoi, numerous studies have approached the preservation and transformation of vernacular elements using evaluation frameworks for architectural heritage. [23] and [24] both emphasize the critical role of façades, massing, and materials in defining the value of colonial-era architecture. Building on this

perspective, [25] proposed a set of criteria for identifying vernacular elements in contemporary architecture, explaining how the transformation occurs from implicit meanings to explicit expressions, with the façade being the most visible representation.






In Ho Chi Minh City, the study by [26] compared urban heritage management models between Ho Chi Minh City and Yokohama, Japan. The study pointed out that while Ho Chi Minh City has acknowledged the importance of legal frameworks and urban governance, more legal support and collaborative models between the government and experts are needed to protect the façade landscapes in central areas, especially District 1.

From these insights, the present study defines "transformation" as the theoretical framework to identify the historic residential architectural expressions that remain, are reinterpreted, or are symbolically represented in the façades of contemporary townhouses in Da Nang.

4.1. Qualitative Scale for Assessing the Transformation of Historic Residential Elements

To qualitatively identify and analyze the presence of historic architectural elements in contemporary residential buildings along Tran Phu Street (Da Nang), this study introduces a five-level transformation scale (Table 3). The scale categorizes the presence of historic architectural elements along a continuous spectrum, from full preservation to the complete disappearance of recognizable features. It is based on the three-tier system for identifying vernacularism in contemporary architecture proposed by [25], while also drawing on the conceptual frameworks of [2], [4], [9], and [11]. Although these theorists do not provide specific measurement scales, their works offer foundational insights into architectural identity in the modern context.

Table 3. The transformation scale for historic architectural elements on residential façades

Level	Designation	Definition	Code
1	Reproduction	The element is preserved with minimal alteration to its original form and function.	
2	Modified reproduction	The form is altered, but the function retains its core value.	
3	Reinterpretation	The form is stylized and symbolic, with function appropriately adapted.	
4	Symbolic abstraction	Only superficial traces remain (decoration, imagery), with the original function no longer preserved.	
5	Omission	No distinctive traces of the vernacular element remain.	

This study adopts the concept of “transformation” as the key term to describe how historic architectural elements, such as form, materials, proportions, and façade details, are modified, reproduction, reinterpretation, symbolically abstracted, and omission in both form and function within contemporary townhouse design.

The proposed five-level scale aims to standardize the qualitative analysis process, offering a scientific tool to assess the degree of transformation of vernacular, traditional, and Indochina-style elements in modern architecture. As such, the scale serves not only academic



research but also practical applications in heritage conservation, architectural design, and urban planning, helping to preserve and develop local architectural identity amidst rapid urbanization.

4.2. Traces of historic residential architecture on contemporary townhouse façades along Tran Phu Street, Da Nang city

Although these architectural forms can be clearly observed on façades, they originate from deeper cultural layers. The yin–yang tiled roof in Central Vietnam, for example, is not only a response to climate but also conveys traditional cosmological beliefs. Likewise, wide verandas and wooden shutters in Hoi An or “Ruong” Hue houses reflect a way of living rooted in community interaction and the gradual transition between private home and public street.

However, this study focuses only on the explicit aspect - their visual expression on façades. The implicit aspect, including spatial philosophy and socio-cultural values, is left for future research to provide a more comprehensive understanding.

To identify vernacular architectural features on the façades of contemporary townhouses along Tran Phu Street, the author conducted on-site field surveys and photographic documentation. Buildings that were preliminarily identified as exhibiting vernacular elements were then analyzed and statistically recorded.

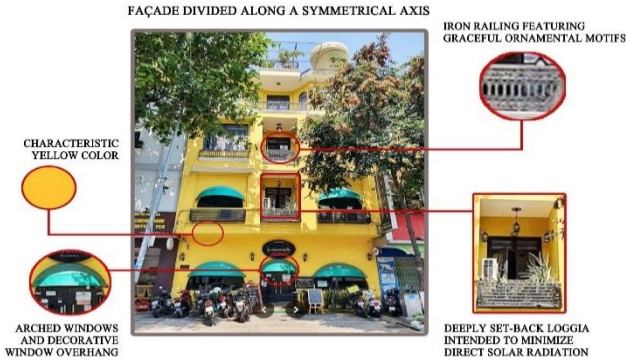


Figure 7. Sample analysis of Indochina-style architectural features on a contemporary building along Tran Phu Street, Da Nang (Source: Google Maps 2020 – Analyzed by the Author)

Figure 7 illustrates a modern building influenced by Indochina-style architecture (image sourced from Google Maps, 2020; the building has since been modified), featuring characteristics such as a symmetrical façade, recessed loggia, arched windows, and the iconic yellow façade color. Although the materials and decorative details have been modified (e.g., single-pane glass doors, stylized fabric awnings, and inconsistent window designs across floors), the building retains its core functional elements and is classified as Level 2 – "Modified reproduction", reflecting a selective continuation of historic architectural elements in the modernization process.









The analysis focused on townhouses with historic architectural features on their façades. A total of 170 townhouses were surveyed along Tran Phu Street (from Dragon Bridge to Han River Bridge). Buildings serving as cinemas, markets, preschools, churches, banks, or administrative offices were excluded from the scope. The

results show that only 11 buildings exhibited historic architectural features on their façades (and fell within the research timeframe). However, most of these had lost elements such as gardens, wide verandas, decorative column motifs, cornices, and reliefs. What remained were features like tiled roofs, windows, doors, ventilation openings, and traditional materials.

Among the 11 townhouses listed in Table 4, tiled roofs were the most commonly retained historic architectural elements. However, determining whether a roof form comes from vernacular, traditional or Indochina-style architecture requires further study, as Indochina-style architecture itself adapted traditional Vietnamese elements and has evolved in the modern context. Therefore, all observations on roof typologies in this study should be considered as preliminary, serving as a foundation for future systematic surveys.

Table 4. Historic architectural features on the façades of contemporary townhouses along Tran Phu Street, Da Nang City

(No.) Add- ress	Facade	Historic Architectural Features	Origin of the Features	Trans- formation Scale
(01) 87 Tran Phu St.		 <i>Arched windows combined with loggias</i>	Indochina- style	Reinterpre- -tation
(02) 92 Tran Phu St.		 <i>Triangular pitched roof, Arched frame</i>	Indochina- style	Reinterpre- -tation
(03) 154 Tran Phu St.		 <i>Ventilation openings above doors and on side walls</i>	Vernacular & Traditional	Reinterpre- -tation
(04) 169 Tran Phu St.		 <i>Louvered doors, ventilation openings, Decorative yin-yang tiled roof, Building colors</i>	Vernacular & Traditional	Modified reproduction
(05) 187 Tran Phu St.		 <i>Window and balustrade motifs, Stylized windows with arched awnings, Building colors</i>	Indochina- style	Reinterpre- -tation
(06) 198 Tran Phu St.		 <i>Pitched triangular tiled roof, featuring opening in the wall beneath the roof</i>	Indochina- style	Reinterpre- -tation
(07) 211 Tran Phu St.		 <i>Traditional roof with steep pitch, featuring decorative arches over windows typical of Indochina-style architecture</i>	Mixed of Vernacular, Traditional and Indochina- style	Reinterpre- -tation

(No.) Address	Facade	Historic Architectural Features	Origin of the Features	Transformation Scale
(08) 219 Tran Phu St.		 <i>Fish-scale tiled canopy roof is intended purely for decoration, no longer performing its original function</i>	Indochina-style	Symbolic abstraction
(09) 222 Tran Phu St.		 <i>Traditional roof with steep pitch, featuring clerestory windows and double-layered windows typical of Indochina-style architecture</i>	Mixed of Vernacular, Traditional and Indochina-style	Modified reproduction
(10) 229 Tran Phu St.		 <i>Three-layer roof, lower two decorative, sealed clerestory window</i>	Indochina-style	Symbolic abstraction
(11) 253 Tran Phu St.		 <i>Triangular pitched roof with clerestory window and ventilation above the entrance</i>	Indochina-style	Reinterpretation

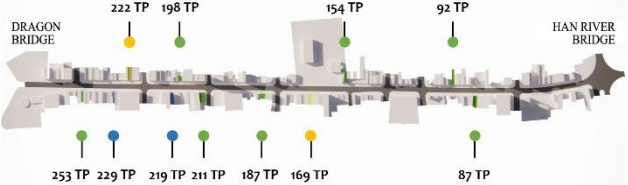
According to the transformation scale, two buildings at 169 and 222 Tran Phu Street were classified as Level 2 – “Modified reproduction”. In these buildings, features like windows and entrance doors maintain distinct historic architectural characteristics. Additionally, the building at 169 Tran Phu is notable for creative adaptations, such as stylized ventilation blocks and a decorative functional canopy. The building at 222 Tran Phu showcases a harmonious blend of traditional and Indochina-style roofs across its two main building volumes.

Seven other buildings, located at 87, 92, 154, 198, 211, and 253 Tran Phu Street, were categorized as “Reinterpretation” based on the transformation scale. Within this group, the historic architectural elements most commonly preserved was the pitched roof form. Although these roofs have been altered in terms of overhang and slope, they continue to fulfill key functions such as shading, insulation, and waterproofing.

Two buildings located at 219 and 229 Tran Phu Street were classified under the “Symbolic Abstraction” level in the transformation scale. At 219 Tran Phu, the canopy roof is designed primarily as a decorative feature, with fish-scale roof tiles and column ornaments influenced by Indochina-style architecture. However, these elements no longer serve practical functions and instead function as symbolic representations. Similarly, at 229 Tran Phu, faux roof components (painted white) are used purely for decoration, with no structural or functional role in the building.

According to the survey, only 11 buildings along Tran Phu Street (from Dragon Bridge to Han River Bridge) still display recognizable traces of historic residential design,

and these are scattered intermittently (Figure 8). The remaining 159 houses fall into the “Omission” category, showing no visible continuity with earlier architectural forms. Furthermore, the degree of historic inheritance is seldom fully preserved; most features have been altered or modified, although some key formal and functional characteristics remain partially intact.



**Figure 8.** Distribution of contemporary residential buildings retaining historic architectural features along Tran Phu Street, Da Nang City (Source: Author)

5. Conclusions and recommendations

This study has identified and categorized historic residential architectural elements - across vernacular, traditional, and Indochina-style forms - and examined their transformation on the façades of contemporary townhouses along Tran Phu Street, Da Nang.

Tran Phu was not chosen to represent Da Nang’s most traditional area, but rather as a critical urban corridor where redevelopment pressures are most evident. As the research is confined to a single street segment, the findings are illustrative rather than representative of the entire city. They offer a contrasting perspective to heritage-centered studies in historic towns such as Hoi An or Hue. Future comparative investigations on other streets in Da Nang (e.g. Bach Dang, Hung Vuong) and in larger cities such as Hanoi and Ho Chi Minh City are needed to determine whether these transformations reflect a broader national trend of diminishing historic identity.

From the field survey, only 11 out of the 170 buildings along Tran Phu Street were found to retain any visible traces of historic residential form. In these cases, familiar features such as sloped roofs, wooden doors, windows or ventilation details still appear, but most of them have been adjusted in shape, proportion, or material to meet contemporary aesthetic and functional needs. Only two buildings (located at 169 and 222 Tran Phu) still carry a clearer sense of their original spirit, while the others show only partial or symbolic remnants.

A limitation of this study is its focus solely on the explicit façade, without considering implicit aspects such as interior organization, functional use, and cultural practices. Future research should address these dimensions to provide a holistic understanding of architectural identity. In rapidly urbanizing contexts where diverse architectural typologies coexist, examining the interplay between interior and façade transformations can help explain how hybrid identities evolve within the changing urban fabric.

Regarding the façade form, the main focus of this research, preserving vernacular elements, should be approached through creative reinterpretation rather than strict restoration. Design solutions should emphasize the



organization of proportions, architectural rhythm, and selective transformation of key features such as pitched roofs, verandas, balconies, door systems, and ventilation blocks. The use of local materials and familiar color palettes can evoke cultural sensibilities, fostering a subtle connection between tradition and modernity, and reinforcing Da Nang's regional identity.

Based on the survey and analysis, this study recommends establishing a set of design criteria for façades incorporating vernacular elements, especially along streets with heritage value or distinctive urban identities. The reintegration of features like pitched roofs, verandas, door systems, or ventilation blocks should be achieved through contemporary morphological solutions that adjust proportions, materials, and functions. Rather than restoring original forms, architects should aim to create new forms that flexibly interpret historic residential architecture. Additionally, in renovation projects of existing townhouses, preserving and transforming the original façade layers that reflect traditional elements is a feasible way to maintain identity while adapting to new needs. At the urban scale, the reintegration of vernacular and traditional elements should also be embedded into planning strategies for key street corridors and central urban axes.

Finally, vernacular and traditional elements should be integrated into the design and planning guidelines for street corridors to ensure continuity in architectural language and cultural values within the urban fabric. Such an approach underlines that safeguarding identity does not mean rigid restoration, but flexible and creative reinterpretation that aligns with sustainable urban development.

**Acknowledgement:** This research is funded by The University of Danang – University of Technology and Education under project number T2024-06-10.

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