



East Coast

Architectural Design Guidelines



Application Handbook - Residential Villas















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Application Handbook - Residential Villa

East Coast - Architectural Design Guidelines







Introduction

The purpose of this document is to help designers and builders of low-rise mixed-use buildings apply the architectural character of East Coast to their projects.

The urban character of the East Coast of the Kingdom of Saudi Arabia is primarily known as the powerhouse of its petrochemical industries. Usually used to illustrate the dramatic urban transformation experienced in the Kingdom as a result of the oil discoveries in the 20th century, its pre-oil landscape was mostly characterized as a constellation of various fishing settlements across the narrow, sandy coastal strip on the Arabian Gulf.

The natural landscape of the East Coast is distinguished by an elevation drop from the neighboring As Summan plateau, and results in a diverse mixture of sandy plains, coastal marshes, and salt flats. Vegetation is relatively sparse with a formidable cultivation of resilient plants and trees, such as date palms. Although temperatures are lower in than in other regions, it is extremely humid.

Given the ecological conditions, most traditional settlement responded to the site which harvest the sea rather than sandy landscape, for building

materials and sustenance. Offshore shoals and coral reefs form the basis of building stock with coral aggregate for walls and the structure.

In addition, palm fronds and trunks were used for floors and roofs, and homes are generally structured into three tiers. Ornamentation is limited to door frames, windows and openings made of repeated elements, or decorative parapets or banding. Shaded balconies (mashrabiyas) are also found in this region.

This handbook is a supplement to the East Coast Architectural Design Guidelines. Designers are recommended to read the full version of the Architectural Design Guidelines to gain a comprehensive understanding of all aspects of the character. Please also consult regulating plans that may describe which styles are applicable to your project area. To access these resources please use the links below.







Example of elevation of a Traditional Villa in East Coast

II Residential Villas

Villas form a significant and common aspect of the residential built environment throughout the Kingdom. A housing prototype, they respond strongly to people's experience and character of their homes and place.

Serving residential needs, villas are built across a stylistic scale to better integrate within their neighboring context. Addressing their design is thus necessary to ensure the implementation of architectural design guidelines.

The villa includes three distinctive styles that developed in the twentieth century in the Kingdom, which encapsulate a fluidity from the historic fabric to contemporary development patterns. They are typically composed of large rectangular plots of land enclosed at the perimeter, accessible by car or the main entryway, both placed alongside the same edge. Villas tend to exhibit a horizontal, rectilinear form, where the street facing side is clearly articulated while simultaneously maintaining privacy through the fenced perimeter. Their various stylistic expressions derive from developed differences in the building type.

Single Family Residential Villas

Designers should apply the architectural character and adapt its compositional principles to the unique challenges of the villa building type. Because architectural character is created at a neighborhood level, designers of villas need to contribute a coherent and attractive streetscape. The treatment of primary facades and boundary walls, and their contributions to the public realm will be crucial. The repetition of identical villas can lead to monotony and anonymity. Though consistency is good, organic variation between neighboring buildings is good for a sense of distinction and ownership. By addressing these primary challenges, single family residential villas will strengthen the architectural character of East Coast

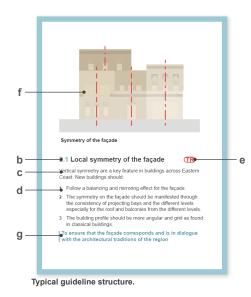
This handbook implements the East Coast Architectural Design Guidelines in residential villas by harmonizing their needs with the requirements of the guidelines.

III How to use the guidelines

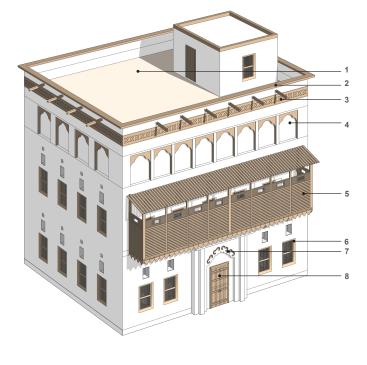
Follow these instructions to create a building that supports the architectural character of East Coast.

- Consult the regulating plan to determine which architectural style options (Traditional, Transitional, or Contemporary) are permitted at your project location.
- 2 Select from the permitted architectural styles, and review the list of general guidelines on the style start pages (Pages 5,6 & 7).
- **3** Assess your design according to each of the following guideline categories:
 - Composition: do your building massing and facade design follow compositional principles? (Section 2)
 - Elements: do the individual parts of your building properly interpret the architectural character for your style? (Section 3)
 - Materials and Colors: does your building use acceptable materials and colors in the proportions defined? (Section 4)
 - Patterns: do any elements show inspiration from local craftsmanship and culture? (Section 5)
 - Public Realm: does your building contribute to the quality and character of the street and the neighborhood? (Section 6)
 - Do's and Don'ts: have you avoided common mistakes that lower the quality and character of buildings? (Section 7)
 - Worked examples: these are illustrations showing one possibility of how the guidelines can be applied, provided for inspiration. (Sections 8)
- 4 Throughout the document, mandatory guidelines for each character style will marked with the following symbols. Where a guideline is mandatory for all styles, all three symbols will be present:
 - Mandatory for Traditional style
 - Mandatory for Transitional style
 - Mandatory for Contemporary style

- 5 Guidelines are organized according to the following parts:
 - a. Section heading: identifies the general quideline category
 - b. Header: identifies the guideline topic
 - c. Description: expands upon the topic
 - **d. Instructions:** provides rules and design principles to observe
 - Mandatory symbol: indicates high priority quidelines that must be complied with
 - f. Illustration: non-regulatory diagrams that help visually explain guidelines
 - g. Rationale: objective of the guideline, to allow for alternative approaches to fulfilment



This general character reference model is from the East Coast Architectural Design Guideline, summarizing the key features of the architectural character.



Key features:

- 1 Flat roofs and open occupiable spaces.
- **2** Merlons are sometimes found with a tile pattern
- 3 Horizontal moldings and bands running above windows or frames.
- 4 Decorative elements such as trefoil arches found in panels between piers.
- **5** Simple ornamental screens of repeating patterns,

- sometimes even mashrabiyas run across the majlis (seating area) on the second floor.
- Windows to provide
 ventilation surrounded by iron
 bars or wooden shutters.
- 7 Rounded arches and stylized floral design adorn the articulated high portal doorway with vertical piers.
- 8 Wooden or steel crossed bars add decorative variety to the main door's stonework.



Traditional (TR)



The most conservative and faithful effort at interpreting traditional architectural form.

START AT PAGE 5



Transitional (III)

A style suitable to help create gradual transitions between areas of different character style.

START AT PAGE 6



Contemporary (C)

This style keeps the essence of the architectural character that makes it distinct from contemporary architecture of other places.

START AT PAGE 7

1.0 Traditional Style

Start here to review the general guidelines of the traditional style villas.

Traditional style buildings should observe as many architectural design guidelines as strictly and as faithfully as possible. The traditional style is suitable for projects near heritage assets and parts of town closer to historic cores.

Note - guideline numbers below correspond to sections 2 through 5 of this Handbook and are not sequential: only the key features relevant to the application of the Traditional style villas are shown on this page.

COMPOSITIONAL RULES

2.1 Local symmetry of the façade

Localized symmetry is crucial on the East Coast for aesthetic cohesion. While the overall facade may be asymmetrical, each building volume maintains symmetry, ensuring consistency in window placements and decorative elements. This principle enhances visual appeal and upholds the region's design ethos.

2.2 Grouping of elements

Grouping sections of openings is essential to distinctly show variety along the façade. This involves pairing bands of windows with niches situated above them. Establish a distinct grouping through variations in parapet heights or changes in local symmetry groups across the different levels. Additionally, buildings could incorporate large protruding (mashrabiyas) bays in the middle floor.

2.3 Entrances and articulation

In the villa typology, the initial point of entry comprises the boundary wall, which directly interfaces with the public realm, contributing positively to the aesthetic appeal of the pedestrian environment. The vehicular and main entrance gate should feature decorated shutters or doors, in line with traditional façades, with consideration for a simple design along the boundary wall.

The secondary entry level to the villa is the entrance to the interior. The base and rest of structure should share the same material. The entrance door must be clearly distinguished through special framing and heavily decorated in traditional patterns.

2.7 Solid façades

Building facades should have 'opening' proportions of 15-25% of the total front façade area. The 'opening' area encompasses the full extent of components such as windows, doors, balconies, multiple parapet roofs, lookouts, and so on—all compositional elements which provide entry into the villa. Side facades should not overwhelm the front façade, featuring less openings in comparison.

2.8 Geometry of components

Ensure a cohesive arrangement of facades, openings, and decorations by incorporating geometric shapes such as circles, semi-circles, rectangles, and orthogonal shapes. Choose between orthogonal or arched styles for doors and windows, while integrating recessed niches into the facade for added depth and interest. Additionally, strategically place windows, balconies, doorways, mashrabiyas, bays, and staircases to establish local symmetries that align with the interior architecture and intended use of the space.

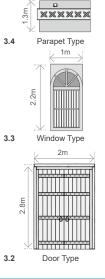


Axonometric view showcasing an example of the application of compositional rules for traditional style residential villa.



Elevation view showcasing an example of the application of compositional rules for traditional style residential villa.

Key traditional architectural features.



2.9 Roofscape and rooftop elements

The parapet line and roof silhouette must be flat and rectangular. Balconies and accessible rooftop terraces may feature a shaded cover or arcade. The roofline must not be one single straight line across the façade. It must be broken down to create variation in heights across the single facade elevation.

TRADITIONAL ELEMENTS

3.2 Doorways and entrances

The main residential entrance should be clearly expressed upon the façade as a high portal doorway with vertical piers and an arch adorned in stylized floral design, slightly set back from the fenced boundary, using framed wooden double doors. Doorways on other levels, such as for balconies or on the rooftop, are also typically framed.

3.3 Windows and openings

Windows are typically rectangular or arched, constructed of wood, and feature semicircular arch in their frame. The windows themselves are typically of the same size, material, and style, and align with one another. There may also be a mashrabiya, along the side, which is a protruding wooden balcony that provides privacy and is typically placed along the main habitable section of the structure, such as the majlis.

Avoid using long horizontal strip windows and placing windows directly across from existing windows on neighbouring buildings.

3.4 Rooftop elements

The villa's façade elevation must not form a long unbroken shape. Break frontages at frequent intervals to give the street a human scale and a sense of interest and variety. Apply this across the building façades, especially the main facade by making at least one volume higher than the rest of the façade. Protect residents' privacy and exposure by using higher parapet walls, screens, and by providing overhead shading structures. Mizabs (drainage sprouts) can be included along the façade.

COLORS, MATERIALS AND PATTERNS

4.1 Colors

The building facades should comprise natural colors, using predominantly off-white shades and timber. Employ accent colors minimally. See section 4.0 'Colors and Materials' for more information

4.2 Materials

The primary wall surface should feature a textured matt-finish with off-white plaster, limewash or similar. This must be continuous from above the base to the top of the parapet. Wood should be used for windows and doors.

5.0 Patterns

Incorporate patterns for timber screens from historic designs existing in the region. There may also be horizontal bands across the structure, featuring a repetitive pattern.

1.0 Transitional Style

Start here to review the general guidelines of the transitional style villas.

Transitional style buildings help integrate traditional architecture with the larger urban context and steer design towards new interpretations of traditional form.

Note - guideline numbers below correspond to sections 2 through 5 of this Handbook and are not sequential: only the key features relevant to the application of the Transitional style Residential Villa are shown on this page.

COMPOSITIONAL RULES

2.1 Local symmetry of the facade

In transitioning from traditional to transitional architectural styles, it's essential to preserve the localized symmetry ingrained in the former while embracing new geometric and angular features. Although the overall facade may adopt asymmetry, maintaining symmetry within each building volume is critical. This localized symmetry within individual volumes contributes to an overall sense of balance and cohesion across the facade. Consistency in details and decorative elements further reinforces this harmony, bridging the gap between traditional and transitional designs.

2.2 Grouping of elements

To effectively emphasize variations along the façade in line with traditional style, follow these steps: Group sections of openings strategically by placing similar windows on each separate volume. Establish a distinct grouping through variations in parapet heights or changes in local symmetry groups across the different levels. Additionally, buildings could incorporate large protruding (mashrabiyas) bays in the middle floor.

2.3 Entrances and articulation

The initial point of entry comprises the boundary wall, which directly interfaces with the public realm, contributing positively to the aesthetic appeal of the pedestrian environment. The vehicular and main entrance gate should feature timber finish shutters or doors. in line with transitional facades, with consideration for a simple design along the boundary wall.

The secondary entry level to the villa is the entrance to the interior. The base and rest of structure should share the same material. The entrance door must be clearly distinguished through special

2.7 Solid façades

Building facades must have 'opening' proportions of 30-40% of the facade area. Side facades should not overwhelm the front facade. featuring less openings in comparison. Glass is allowed to be used in higher percentages. Arch elements feature minimally on the façade, seen only above window openings.

2.8 Geometry of components

To ensure architectural coherence, coordinate the side facades, openings, and decorations by employing a consistent array of geometric shapes. Emphasize simplicity and orthogonality in the design of doors and windows. Choose between orthogonal or



Axonometric view showcasing an example of the application of compositional rules for transitional style residential villa.



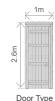
Elevation view showcasing an example of the application of compositional rules for transitional style residential villa

Key transitional architectural features.





Window Type



3.2

arched styles for doors and windows, while integrating recessed niches into the facade for added depth and interest. Additionally, strategically place windows, balconies, doorways, mashrabiyas, bays, and staircases to establish local symmetries that align with the interior architecture and intended use of the space.

2.9 Roofscape and rooftop elements

The parapet line and roof silhouette must be flat and rectangular. The rooftop level may function like a terrace. The roofline must not be one single straight line across the façade. It must be broken down to create variation in heights across the single façade

TRANSITIONAL ELEMENTS

3.2 Doorways and entrances

Placed under a shaded projection canopy, the main residential entrance should be clearly expressed upon the façade, and on the gate of the fenced boundary. Doorways on other levels (such as for balconies or on the rooftop) are also typically framed.

3.3 Windows and openings

In the transitional style, windows feature longer openings. This design allows for a greater amount of light to enter. On the main level, there are arched design elements above certain openings.

Avoid using long horizontal strip windows and placing windows directly across from existing windows on neighbouring buildings.

3.4 Rooftop elements

The villa's facade elevation must not form a long unbroken shape. Break frontages at frequent intervals to give the street a human scale and a sense of interest and variety. Apply this across the building facades, especially the main facade by making at least one volume higher than the rest of the façade.

Where an accessible rooftop terrace is provided, protect residents' privacy and outdoor exposure with high parapet walls (slightly shorter in the transitional style), as well as the provision of a shade covering or arcade. Include horizontal banding around the parapet, of a different material than the structure.

COLORS, MATERIALS AND PATTERNS

4.1 Colors

The building facades should comprise natural colors, using predominantly off-white shades and timber finish. Employ accent colors minimally. See section 4.0 'Colors and Materials' for more information.

4.2 Materials

The primary wall surface should feature a textured matt-finish with off-white plaster, limewash or similar. This must be continuous from above the base to the top of the parapet. Wood or its equivalent should be used for windows and doors.

5.0 Patterns

Typically features minimal patterning, largely horizontal bands across parts of the structure.

1.0 Contemporary Style

Start here to review the general guidelines of the contemporary style villas.

Buildings of this style should aim to retain the essence of the architectural character by skilful and knowledgeable interpretation of traditional forms into contemporary expression.

Note - guideline numbers below correspond to sections 2 through 5 of this Handbook and are not sequential: only the key features relevant to the application of the Contemporary style Residential Villa are shown on this page.

COMPOSITIONAL RULES

2.1 Local symmetry of the façade

Expanding on the notion of localized symmetry, for the contemporary style, it remains centered on aligning key elements for visual cohesion. However, in this contemporary interpretation, there is flexibility for elements to extend vertically, spanning the full floor height. This intentional design choice should aim to craft an inviting spatial experience, emphasizing user interface considerations within the contemporary architectural context. While the features become more geometric and angular, the focus on localized symmetry, consistent detailing, and decorative elements should persist across each façade.

2.2 Grouping of elements

To align with the traditional style, emphasize differences along the façade by strategically grouping openings. Arrange elements according to the interior program's needs, considering functions both vertically and horizontally, without strictly separating floors. Create multiple variations in parapet height, or changes in local symmetry groups, across more than one story. Balconies and roofs with transparent glass railings, and longer vertical windows extend the vertical sense of the villa. By following this approach, you can achieve a contemporary façade design that integrates functionality seamlessly while still respecting traditional principles.

2.3 Entrances and articulation

The initial point of entry comprises the boundary wall, which directly interfaces with the public realm, contributing positively to the aesthetic appeal of the pedestrian environment. The vehicular and main entrance gate should feature timber finish shutters or doors, in line with contemporary façades, with consideration for a simple design along the boundary wall which may be decorated with a series of arched elements.

The secondary entry level to the villa is the entrance to the interior. The base and rest of structure should share the same material. The entrance door must be clearly distinguished through special framing.

2.7 Solid façades

In the contemporary style, parapet styles and high walls are replaced by more open and wider frames. Windows and portals are recessed, with larger sections of glass, thus increasing openness to 50-60% of the entire facade. Walls are flat, and corners are angular. Side facades should not overwhelm the front façade, featuring less openings in comparison.

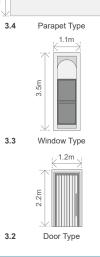


Axonometric view showcasing an example of the application of compositional rules for contemporary style residential villa.



Elevation view showcasing an example of the application of compositional rules for contemporary style residential villa.

Key contemporary architectural features.



2.8 Geometry of components

To ensure architectural coherence, coordinate the side facades, openings, and decorations by employing a consistent array of geometric shapes. Emphasize simplicity and orthogonality in the design of doors and windows. Use orthogonal doors and windows, while integrating recessed niches into the facade for added depth and interest. Additionally, strategically place windows, balconies, doorways, mashrabiyas, bays, and staircases to establish local symmetries that align with the interior architecture and intended use of the space.

2.9 Roofscape and rooftop elements

The parapet line and roof silhouette must be flat and rectangular. Each accessible terrace features a shaded coverage. The roofline must not be one single straight line across the façade. It must be broken down to create variation in heights across the single façade elevation.

CONTEMPORARY ELEMENTS

3.2 Doorways and entrances

Placed under a wide, recessed frame, the main residential entrance should be clearly differentiated upon the façade and on the gate of the fenced boundary. Doorways on other levels (such as for balconies or on the rooftop) are also typically framed.

3.3 Windows and openings

Windows are a combination of square and rectangular windows and openings, including doorways, typically made of timber, or equivalent materials. Windows feature wider openings, and are typically not shuttered. This design allows for a greater amount of light to enter.

Avoid using long horizontal strip windows, and placing windows directly across from existing windows on neighbouring buildings.

3.4 Rooftop elements

The contemporary style villa does not use large parapets or crenelations. Instead, flat, minimal roofscapes are preferred. The accessible and habitable rooftop terraces features a shaded area.

COLORS, MATERIALS AND PATTERNS

4.1 Colors

The building facades should comprise natural colors, using predominantly off-white shades and timber finish. Employ accent colors minimally, through definitions in framing, banding, and so on. See section 4.0 'Colors and Materials' for more information.

4.2 Materials

As with traditional and transitional styles, the base and structure should be of the same material. The primary wall surface should feature a textured matt-finish with off-white plaster, limewash or similar. This must be continuous from above the base to the top of the parapet. Modern materials that resemble wood could be used for windows and doors.

5.0 Patterns

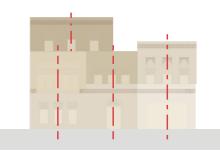
Inspired by existing historical patterns, develop a minimal fractal and scalar geometric design. This is best applied in corners along the façade.

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m 0}$

2.0 Compositional rules

The following guidelines provide compositional rules for building design with the East Coast architectural character, specially adapted for villas.

The rules apply generally to all three styles (traditional, transitional, and contemporary), with mandatory requirements for specific styles identified by the relevant symbol.



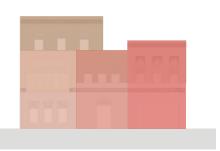
Symmetry of the facade

2.1 Local symmetry of the façade

Vertical localized symmetry is are a key feature in buildings across Eastern Coast. New buildings should:

- 1 The symmetry on the façade should be manifested through the consistency of projecting bays and the different levels especially for the roof and balconies from the different levels.
- 2 Identify separate building masses, place entrances according to the interior programing of each mass, then make sure the rest of the elements are symmetrical.

To ensure that the façade corresponds and is in dialogue with the architectural traditions of the region.



Grouping of elements

2.2 Grouping of elements

The legible organisation of bays and side façades is a dominant feature which characterises vernacular design. New buildings should:

- Bands of windows should be paired with niches situated above them.
- 2 Buildings should occasionally adopt large protruding (mashrabiyas) bays in the middle third.

To embrace and reinforce the distinctive expressions of traditional sources.



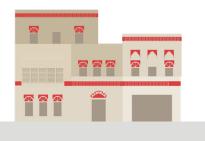
Entrances and articulation

2.3 Entrances and articulation

Wall finishes demonstrate a close relationship with the ground. New buildings should:

- Make use of the same material for the base and remaining structure.
- 2 Emphasize framing of the entrance and vehicular parking/ garage.
- 3 Include a boundary wall around the perimeter, with gates for the driveway and the main entryway.

To maintain a connection with the landscape and typical vernacular materials.



Ornamentations, fenestrations and crenelations

2.5 Ornamentation

As new buildings are on average of a larger scale to traditional form, avoid distorting the original architecture, as this could undermine the quality. New buildings thus should:

- 1 Embed ornamentation within parapets, horizontal banding, arches, doors and recessed elements.
- 2 Façades generally show singular ornamentation at every level, used repetitively.
- 3 TR The doorway portal should be ornamented with inscribed stylized floral designs.

To ensure that the ornamentations reflect the style of the Eastern Coast architecture and distinguish it from other



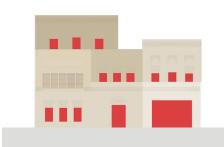
Solid façades

2.7 Solid facades

Per traditional architecture, facades feature a moderate number of openings. New buildings should:

- 1 Buildings should be moderately opaque with openings of different sizes and proportions.
- 2 Incorporate clear and angular openings around windows and doors, with timber, or equivalent, elements and shutters.
- 3 The solid-to-void ratio should be lower on the pedestrian level and increase in the upper sections of buildings.

To design the openings of façades building upon the region's traditional architecture.



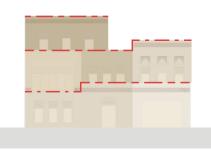
Orthogonal geometry of elements

2.8 Geometry of components

Organize side facades, openings, and decorations with cohesive use of various geometric shapes. New buildings should:

- 1 The geometry of doors and windows can be either orthogonal or arched in style.
- 2 Geometries such as circles, semi-circles, and rectangles should be adopted for fenestrations.
- 3 The façade should include recessed niches of orthogonal shapes.

To embrace the distinctive lines, angles and overall composition inherent to the region's traditional architecture.



Roofscape and rooftop elements

2.9 Roofscape and rooftop elements

Roof and parapets form a distinctive component in Eastern Coast. The design of new buildings should:

- Incorporate flat roofs and accessible rooftop terraces.
- 2 Have parapets on each projecting bay, which integrate a horizontal band in the case of traditional and transitional styles, and no band for contemporary styles.

I To retain a consistent and traditional roofscape.

3.0 Traditional Elements

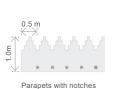
The elements illustrated are examples and should not limit other possible design solutions that follow guideline principles and historic precedents. Element measurements are illustrative and provided to indicate general proportions only.

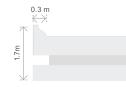


Top

Middle

Base









3.4 Rooftop elements

- 1 Be completely flat.
- 2 Usually have a rectilinear form and can be flat or create a staggered
- 3 Parapets can be arched, dented or punched and usually have upward facing screens.

To create functional roof spaces and roofscapes which embrace the typical characteristics of the local area

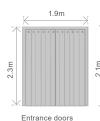
Windows Mashrabiya balcony

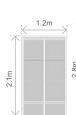
Flat parapets with notches

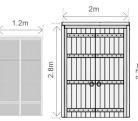
3.3 Windows and openings

- 1 Rectilinear vertical windows or balconies with shading and screening from the street.
- 2 Rectilinear or arched fenestrations and windows.
- 3 Include upward openings or projecting bays.
- 4 Embrace arched fenestrations and openings or have a solid rectangular niche.
- 5 Windows and mashrabiya balconies should be generally be made of and framed with wood.

To respond to climate considerations and provide an aesthetic treatment which is distinct to the local area

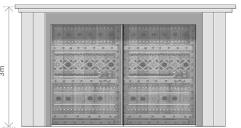










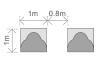


Garage door

3.2 Doorways and entrances

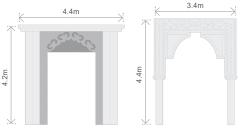
- 1 Clearly define entrance with a singular high portal doorway.
- 2 Incorporate arched doorways with some ornamentation and floral or geometric motifs centered and above the door.
- 3 Consider the articulation of entrances through recessed and projecting elements.
- 4 Consider the articulation of ornamented entrances and openings using local materials where possible, such as wood or stone.

To create suitable thresholds within the base which is part of a well-ordered, coherent street scene and responds to the local character









3.5 Other elements

- 1 Merlon and floral motifs are inscribed to the building's material.
- 2 Use horizontal moldings and decorative arches.
- 3 Boundary walls, their gates and portals should be designed to complement the villa design

To embed other elements which are frequently part of the overall composition of buildings.

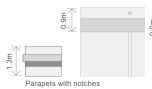


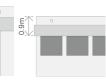
Ornamentations / Fenestrations

3.0 Transitional Elements

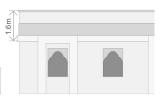
The elements illustrated are examples and should not limit other possible design solutions that follow guideline principles and historic precedents. Element measurements are illustrative and provided to indicate general proportions only.











3.4 Rooftop elements

- 1 Be completely flat.
- 2 Maintain a rectangular form, with more linear and angular forms rather than arched or moulded merlons.
- 3 Should feature flat parapets which are flush or slightly emerging from the primary building line and integrated into the building's

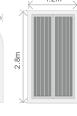
To create functional roof spaces and roofscapes which embrace the typical characteristics of the local area.

Middle

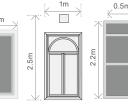
Base



Windows









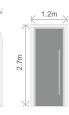
Mashrabiya balcony

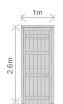
3.3 Windows and openings

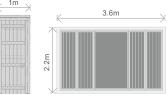
- 1 Windows are rectangular and recessed with thin frames surrounding
- 2 Should have minimal decoration with thin wooden louvres, or equivalent, and can be topped with a small square niche.
- 3 Upper level windows can also have a small arched frame, or trefoil arches in panels between frames or openings.
- 4 Window frames and shutters should be crafted from glass and wood or a material that closely mimics its texture and color.

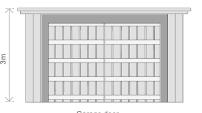
To respond to climate considerations and provide an aesthetic treatment which is distinct to the local area.











Garage door

3.2 Doorways and entrances

- 1 Square framing for the door or a minimal arch above.
- 2 Incorporate arch tops or columns to the side of the doors as well as recessing to mark a high portal doorway.
- 3 Consider the articulation of entrances and openings using materials such as stone or timber finishes, and incorporate modern accents such as glass or paint.

To create suitable thresholds within the base which is part of a well-ordered, coherent street scene and responds to the local character.

3.5 Other elements

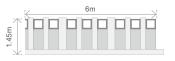
- 1 Trefoil arched fenestrations could be used for added ventilation.
- 2 Add balustrades with fenestrations to facilitate airflow.
- 3 Boundary walls, their gates and portals should be designed to complement the villa design

To embed other elements which are frequently part of the overall composition of buildings.









Other elements Ornamentations / Fenestrations

Balustrades

3.0 Contemporary Elements

The elements illustrated are examples and should not limit other possible design solutions that follow guideline principles and historic precedents. Element measurements are illustrative and provided to indicate general proportions only.

3.4 Rooftop elements

- 1 Be completely flat.
- 2 Can be multi-tiered with several roofscapes projecting on different levels with functional seating areas.
- 3 Should feature flat parapets and banding which are flush with the primary building line and integrated into the building's façade.

To create functional roof spaces and roofscapes which embrace the typical characteristics of the local area



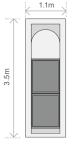


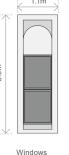


Top

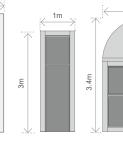
Middle

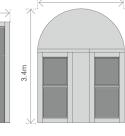
Base

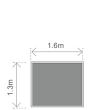


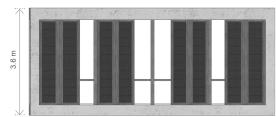


Parapets with notches









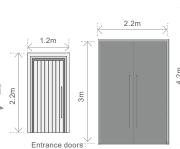
Mashrabiya balcony

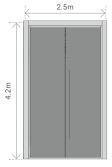
3.3 Windows and openings

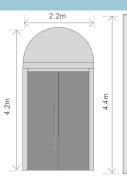
- 1 Use vertical windows on all levels.
- 2 Incorporate linear and angular patterns.
- 3 Should come in diverse widths and heights.
- 4 Use shading structures to reduce solar gain and decorative elements.
- 5 Reduced adoption of window frames and embrace glass.
- 6 Window frames and shutters could be made of metal or another modern material, styled to reflect traditional features in a contemporary manner.

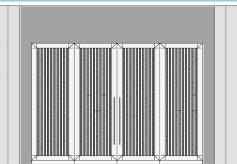
To respond to climate considerations and provide an aesthetic treatment which is distinct to the local area











3.2 Doorways and entrances

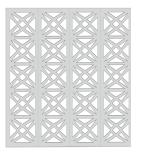
- 1 Doors are longitudinal with little joinery and slightly recessed.
- 2 Incorporate modest ornamentation and geometric abstraction.
- 3 Entrance can incorporate new materials such as steel.

To create suitable thresholds within the base which is part of a well-ordered, coherent street scene and responds to the local character

0.5m







3.5 Other elements

- 1 Abstracted ornamented fenestrations could be used.
- 2 Shading structures could be added to outdoor areas.
- 3 Glass balustrades may be utilized sometimes
- 4 Boundary walls, their gates and portals should be designed to complement the villa design.

To embed other elements which are frequently part of the overall composition of buildings

Other elements

Ornamentations / Fenestrations

Shading element

4.0 Colors and Materials

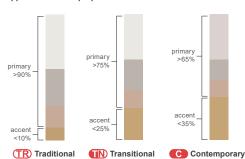
4.1 Colors

The color palette of East Coast is closely linked to traditional building materials such as coral and palm wood and off-white render. The surrounding landscape is also an important influence, particularly the sand pastel colors as well as the hues of the surrounding sea.

- 1 The base should have different earth and pastel tones as the primary colors slightly changing the saturation above
- 2 Generally use natural colors and finishes for the main body of the building with occasional use of brighter colors for accents on specific elements.
- 3 A maximum percentage of accent color, measured as a percentage of the total façade area, is allowed for each style:
- TR <10% • (1N) <25%
- C <35%
- 4 For windows' glass, avoid using mirror-like reflective glass with bright colors that do not harmonize with the local environment and character.

To create a townscape in harmony with the surrounding landscape and architectural character.

Approximate color proportions



RAL Color codes

RAL codes are part of a universal color-matching system used to provide consistency in architectural finishes. It is recommended that teams verify colors with a physical fan deck. For more information visit www.ral-farben.de/en/





Mud finish



clay plaster



render







Wood mashrabiya





shading





Mud wall







Mud finish texture

米米米米米米米米米米米米米米 米米米米米米米米米米米米米米米

Rammed earth texture









Mud finish







Ornamented

metal door





metal door





Concrete/stucco blocks



Concrete



possible. Poor interpretations or applications of the materials

4.2 Material

Rammed earth

This palette summarizes the prevalent materials found in the architecture of East Coast.

- 1 The six large images reflect materials used in traditional architecture; new traditional style buildings should employ these materials as faithfully as possible
- 2 Precious or no-longer available materials may entail the need for substitutions. The smaller images reflect a range of feasible substitutions for the primary images above them, acceptable for use in transitional or contemporary styles, and in a more cautious manner in traditional style.
- 3 When designers can't utilize original materials, they might utilize materials that closely resemble the original materials present in the area while taking into account material quality in terms of sustainability and durability aspects as much as

should be avoided.

4 Local and sustainably sourced materials are preferred.

fenestrations

To create buildings in harmony with the surrounding landscape and architectural character.

To enhance architectural character through the support of local craftsmanship.

To create buildings with tactile and visual richness landscape and architectural character.

5.0 Patterns

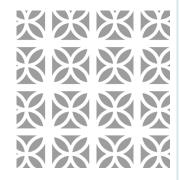
This section provides advice on the interpretation and use of traditional patterns in new projects.

New buildings should:

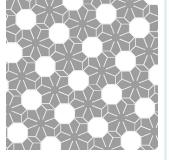
- Create patterns through the use of local materials and craftsmanship.
- 2 Where multiple decorative patterns are applied across a single façade, these should be consistent.
- 3 TR Focus the use of surface patterns to doors, window screens and shutter doors.
- 4 TR refer directly to historic precedents and be limited to geometric and floral patterns.
- 5 TIN C The contemporary use of patterns should involve interpretation and abstraction: a selective emphasis of characteristics to create meaning and beauty in its new context. Designers can selectively use formal characteristics such as:
- · Color (hue, tonality, tint)
- · Shape (figure, outline, 2-D geometry)
- Form (volume, 3-D geometry)
- · Texture (physical surface quality)
- Line (verticals, horizontals, diagonals, zigzags, curves, dashes, etc.)
- · Value (lightness to darkness)
- 6 Patterns can be further transformed in the way they relate to one another. Designers can play with compositional rules such as:
- · Balance (equality or harmony of parts)
- · Contrast (difference of parts)
- Emphasis (strengthening of parts)
- Movement (change, directionality)
- · Pattern (repetition, symmetry)
- Rhythm (even and uneven spacing)
- · Unity/variety (degrees of variation)

To express the spirit and essence of the original architecture in new yet familiar ways.









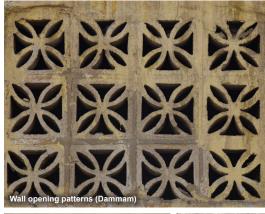




Patterns







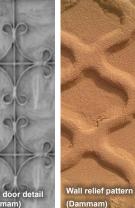






(Al Khobar)







6.0 Public realm

This section focuses on the contributions of residential villas to the surrounding streetscape and public spaces, creating strong character and high quality spaces.

The guidelines apply both to 'semipublic' spaces (public space built by private owners) and 'semi-private' spaces (private space that is generally accessible to the public.

Note: The application of these guidelines should be tailored to the specific project type, scale, and needs. It's essential to ensure that any modifications or additions to publicly-owned spaces are thoroughly coordinated and approved by relevant authorities.

To enhance the character and quality of publicly used spaces in between buildings.













6.1 Paving Materials

Paving guides users through both built and natural areas.

- 1 Select robust materials for longevity, easy maintenance, and
- 2 Use contextual materials that complement surrounding

I To enhance aesthetics, and environmental sustainability in urban landscapes.





6.2 Shading

Shading structures are a critical component of modulating the public's interaction with the outdoors

1 Integrate light shading structures as distinctive features that reflect the architectural style or theme, ensuring they harmonize with other facade elements for a cohesive overall design aesthetic.

| To create a pleasant outdoor ambiance for public areas.



6.3 Shading

Shading structures are a critical component of modulating the public's interaction with the outdoors.

1 Integrate light shading structures as distinctive features that reflect the architectural style or theme, ensuring they harmonize with other facade elements for a cohesive overall design aesthetic.

| To create a pleasant outdoor ambiance for public areas.

Palm trees







Shade trees













6.4 Planting

Planting should complement and work with existing ecosystems and contribute to a sustainable built habitat.

1 Rely less on importing plant species and source drought and saline tolerant species.

| To ensure that plants do not disturb existing wildlife and natural environment.







6.5 Signage

Signage guides users and aids navigation in public areas.

- 1 Signage should integrate seamlessly with the architecture, ensuring clarity and harmony in form, scale, color, and size.
- 2 Minimize signage conflicts with residences and tree canopies by facing roads and using subdued illumination.

| To effectively orient the public in navigating built areas.









6.6 Lighting

Lighting is crucial for nighttime activity and overall design.

- 1 Consistent lighting enhances urban and architectural appeal.
- 2 Architectural lighting should target color temperatures in the 2200K-2700K range for comfort and good color rendering.

To create a harmonious and pleasurable perception of public areas.











6.7 Public realm interface

The shared spaces and walkways of public areas should be used

- 1 Boundary walls and their portals should be architecturally integrated with the building design.
- 2 Avoid protruding ramps or steps into public property.

To create a distinct and active sense of place.

7.0 Dos and don'ts

This section focuses on easy wins for the improvement of architectural quality and character. Drawing upon best design practice, these guidelines help avoid common mistakes which create visual pollution and hostile environments.

| To avoid common design mistakes.



7.1 Inappropriate materials

- 1 Use durable and quality materials that give the building authenticity, texture and mass while adhering to recommended material palette.
- 2 Do not use building materials alien to the tradition such as metal cladding and high reflectivity and colored glass.
- 3 Do not use low-quality building materials that appear fake or poorly imitate the original materials.



7.2 Saturated colors

- 1 Do not use non-contextual bright and artificial colors that detract from the natural landscape and local architecture.
- 2 Colors should be consistent and integrate well with the built landscape and landscape at large.





7.3 Screens and closures

- 1 Integrate the design of security features with the architecture.
- 2 Do not extend walls with unfinished corrugated metals and other raw sheet materials.
- 3 Do not use razor or barbed wires for typical buildings; utilize deterrents that are inconspicuous or visually appealing.





7.4 Superficial traditional elements

- 1 When integrating traditional elements on existing or new structures, it should be done in a conscious manner adhering to original precepts through which such motifs and elements were used.
- 2 Careless copies of historical motifs, lackluster incorporation of local symbols, poor consideration of proportions, massing, volume, and other instrumentalization of traditional motifs should be avoided



7.5 Exposed roller shutters

- 1 Exposed roller shutters create noise and visual pollution if not properly concealed. It is recommended that shutters are always integrated in the facade and properly mounted.
- 2 The use of high-quality mechanized shutters to ensure durability is advised.
- 3 Shutters should reflect the color scheme of the construction, design and overall region.





7.6 Exposed building services

Infrastructural elements such as communication towers, air-conditioning units, satellite dishes, water tanks and ducts, wires, pipes, among other should be discreetly embedded in the design and not exposed or be seen by the public.



7.7 Inconsistent or imported architectural style

- 1 The adoption of building materials, style, and standards which do not comply with local architecture style and character should be avoided.
- 2 Styles should embrace the cultural context and use materials that work with the local context.
- 3 Avoid applying foreign imported architectural elements.

 $\mathsf{V}1.0$



1 Wooden door panels with traditional patterns and ornamentation.



2 Arched window frames set within recessed niches, complemented by traditional wooden shutters and recessed trefoil arches above.



3 Timber shaded mashrabiya balcony.



4 Terrace with a traditional shaded canopy to enhance outdoor comfort.



8.0 Traditional villa example

In the traditional scenario, there's a notable emphasis placed on the embellished elements of the building's exterior. This emphasis is achieved through several distinct features: intricately adorned window frames, arranged uniformly across each floor; elaborately decorated cornices, doorways, and the distinctive mashrabiya positioned prominently within the villa's massing.

The worked example reveals a deliberate arrangement of symmetrical axes, evident in the clustering of elements such as balconies, bay windows, entrances, and the varying volumes of architectural components that collectively define the building's form, diverging from a rigidly angular grid.

Notably, drainage spouts are strategically positioned near the apex of the façade, adjacent to the parapet. Serving both functional and aesthetic

purposes, these elements contribute to the overall harmony of the design. Meanwhile, the primary surface of the walls is coated with an off-white plaster limewash or a similar material, lending a clean, timeless appearance to the structure.





 Vehicular gate made of wood, or similar, utilizing the material as a design feature.



2 Long window frames bringing more light and visibility into the interior.



3 Wooden finish mashrabiya on the middle level inspired from the traditional mashrabiya.



4 Accessible rooftop terraces, shaded with local timber finish canopies to enhance outdoor comfort.



8.0 Transitional villa example 1

Overlapping with the traditional style yet emphasizing newer materials and styles, the transitional style represents a departure from strict adherence to historical conventions, while embracing newer materials and design motifs. This approach is particularly evident in the interpretation of façade symmetry, where traditional elements overlap with modern sensibilities. Characterized by angular corners and a reduction in ornamentation, the transitional style exudes a distinctly modern aesthetic.

On the façade, elements such as doors and windows are arranged with a nod to symmetry, yet adorned with subtler frames compared to their traditional counterparts. The windows, elongated and strategically placed, offer increased visibility into the building, enhancing its connection with the surrounding environment. Similarly, the mashrabiya, while retaining its characteristic presence, features more openness and simplified ornamentation, with frames that allow for movement, reflecting a departure from the rigidity of traditional design.

Furthermore, the perimeter boundary wall of transitional structures tends to exhibit a reduction in ornamental detailing, contributing to a more streamlined and modern appearance overall. This results in a façade characterized by clean lines and angular profiles, marking a departure from the embellished surfaces typical of traditional architecture.



Main entrance of the boundary wall matches the material of the mashrabiya, featuring ring handles, metal studs, wallmounted lights, and signage.



 Windows made from local timber, or similar, feature traditional trefoil arches over the panels.



3 Trefoil arched mashrabiya for the main living space made with timber finish material.



4 Accessible rooftop terraces, shaded with timber, or equivalent canopies enlivened with plantation.



8.0 Transitional villa example 2

Constructed in a transitional style, this villa seamlessly merges elements of traditional East Coast architecture with a contemporary aesthetic, resulting in a unique and harmonious design. Notably, the building's massing showcases a series of stepped roofscapes, creating visually striking forms and providing opportunities for the creation of accessible rooftop terraces, adding both functionality and aesthetic appeal to the structure.

The villa's windows feature vertical bars for a traditional touch while allowing natural light and outdoor views, fostering openness. Timber canopies crafted from local wood, or an equivalent modern material that provides shading and warmth, extending to various elements for a cohesive and harmonious façade. Furthermore, horizontal banding, a characteristic element of East Coast architecture, is employed strategically to accentuate the traditional horizontality within the stepped roofscape, adding visual interest and rhythm to the

design.

Lastly, the boundary wall of the villa mirrors the façade's recesses and incorporates greenery, enhancing the pedestrian experience and fostering a seamless integration between the built environment and nature. This thoughtful incorporation of landscaping elements further enhances the villa's aesthetic appeal while contributing to a more sustainable and enriching living environment for its occupants.



1 Vehicular gateway entrance made of wood or a similar finish material.



2 Long, angular floor-to-ceiling windows, with recessed semicircular framing around.



3 Modern mashrabiya with sliding, fold-able frames.



4 Terrace with a shaded canopy to enhance outdoor comfort.



8.0 Contemporary villa example 1

Within the contemporary context, a key focal point lies in the creation of an open and inviting atmosphere within the structure, achieved through the strategic integration of expansive, wide windows. Notably, the main doorway boasts a large window opening maximizing natural light penetration and establishing a seamless connection between interior and exterior spaces. This emphasis on transparency extends to essential interior passageways such as stairs and corridors,

where large windows further enhance the sense of openness and connectivity with the surroundings.

The perimeter boundary wall's facade harmonizes with the villa, using the same materials for visual cohesion. Fractal design elements in the facade add a dynamic dimension, complemented by semicircular arches above windows for a modern take on traditional motifs, enhancing depth and visual interest.

Furthermore, the balconies and bays maintain a consistent stylistic language throughout, reinforcing the contemporary design ethos and contributing to the overall coherence of the villa's exterior. This commitment to uniformity and contemporary design principles results in a façade that not only prioritizes openness and functionality but also exudes a sense of modernity and sophistication.

V1.0



I Main entrance of the boundary wall is made from the same material as the mashrabiya and adopts a sleek, lined timber finish design.



2 Windows feature vertical proportions and are set within a rectangular niche that spans from the sill to the top of the floor.



3 Simple mashrabiya for the main living space is made with timber or suitable alternative material.



4 Accessible rooftop terraces shaded with modern canopies made from timber finish materials enlivened with plantation.



8.0 Contemporary villa example 2

In this contemporary villa, a departure from both transitional and traditional styles is evident in its overall aesthetic and color palette, achieved through a deliberate reduction in the variety of materials employed. The villa's design emphasizes a seamless integration of main living spaces with the outdoors, with features such as rooftops and the mashrabiya prominently showcasing timber finishes, creating a striking contrast against the rest of the façade.

The villa's design features consistent window variations throughout, creating unity and cohesion. Rectangular recessed elements frame the windows, adding structural integrity and enhancing visual coherence.

Horizontal banding is less prominent in contemporary design due to uniform building materials, yet the mashrabiya remains integrated with the building's massing. Foldable timber windows enhance indoor/outdoor connection and livability.

Despite presenting a less ornamented style overall, the design process meticulously incorporates various traditional elements to maintain a sense of cultural continuity. Recessed arches within the boundary wall, the use of timber finish materials, deliberate façade contrast, and the preservation of the mashrabiya living space all serve as subtle nods to traditional architectural motifs, enriching the villa's design narrative while embracing contemporary sensibilities



1 Villa's garage entrance, crafted from timber finish materials in a minimal linear style, includes a canopy made of the same material as the building.



2 Open balcony
with geometric
timber, or
equivalent
shading and
modern glass
balustrade, using
glass as the
primary building
material.



3 Ornamented fenestrations on the building façade, developed from traditional East Coast patterns.



4 Terrace with a shaded canopy for maximized outdoor comfort made from timber, or suitable alternative material.



8.0 Contemporary villa example 3

This contemporary villa showcases unity through uniform massing and multiple rooftop terraces, adding to its modern look. Timber finishes are prominently featured in canopy shading, main entrances, and garage doors, adding natural warmth and texture to the exterior.

The villa's design thoughtfully extends its massing to include a garage, activating the space between the boundary wall and the building and enhancing the connection with the street. This integration

strengthens the villa's engagement with its surroundings, solidifying its role as an integrated part of the urban fabric.

Glass usage, especially in a fully glazed balcony with proper shading, enhances the villa's interaction with the public realm. This feature maximizes natural light and visual connectivity between indoor and outdoor spaces, improving livability and aesthetic appeal.

To inject a sense of vitality into the façade, ornamented fenestrations adorn the higher parts of the building, adding visual interest and depth to the design. Additionally, arched recesses integrated within the boundary wall pay homage to East Coast traditions, serving as subtle yet impactful design elements that contribute to the villa's unique character and sense of place within its cultural context.

W 0