

Kalinga Kanvas

The Timeless Legacy of
Excellence and Splendour



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Co - Editor,
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CHAIRPERSON'S MESSAGE



Ar. Swopnadutta Mohanty
Chairperson,
The IIA Odisha Chapter

Architecture, for us in Odisha, has always been more than design – it is heritage, innovation, and a responsibility towards society. The IIA Odisha Chapter, through its many initiatives, continues to celebrate this balance by creating opportunities for dialogue, collaboration, and growth.

This edition of Kalinga Canvas mirrors that spirit. It captures our collective journey—our recognitions at the national stage, the vibrant participation of our members, and the intellectual contributions of scholars, professionals, and students. Together, these pages stand as a testimony to our belief that architecture thrives when it is inclusive, contextual, and forward-looking.

As we reflect on the timeless lessons of our temples, the evolving pulse of our cities, and the contemporary expressions of our fraternity, I believe that the dialogue between past and future is what will guide us towards more responsible and meaningful design.

I congratulate the editorial team for curating yet another thoughtful edition of Kalinga Canvas, and I invite all readers to engage deeply, contribute generously, and carry forward this shared vision of architecture with purpose.

With warm regards,

Ar. Swopnadutta Mohanty
Chairperson, IIA Odisha Chapter

CHIEF EDITOR'S MESSAGE



Prof. Dr. Bharati Mahapatra
Chief Editor, Kalinga Kanvas

This edition of Kalinga Kanvas holds a special place, as we open with a proud celebration of the IIA, Odisha Chapter's remarkable achievements at the IIA NATCON in Bhopal. The Chapter has once again demonstrated its stature, excelling across diverse dimensions of the profession; be it through dynamic professional forums, academic engagement, government collaborations, or impactful social outreach.

As we present the works of academicians, practitioners, and students, our endeavour remains to craft a platform that nurtures immersive narratives, sparks creative ideas, and stimulates meaningful dialogue. Moving forward, we aspire to expand this collective perspective with contributions from across the spectrum of the discipline, enriching the content and broadening our readership.

Prof. Dr. Bharati Mahapatra
Chief Editor, Kalinga Kanvas



Dr. Prof. Deepashree Choudhury
Editor, Kalinga Kanvas

Architecture, in its truest sense, is a bridge; a bridge between tradition and innovation, form and function, aesthetics and purpose. Every edition of Kalinga Kanvas strives to uphold this spirit, curating voices, ideas, and creativity that enrich our understanding of the built environment. This issue is no exception; it is a vibrant mix of scholarship, student expression, professional practice, and artistic interpretations.

We begin with Chapter Achievements, a section that reflects the dynamism of our IIA Odisha Chapter, events, workshops, and initiatives that continue to foster professional growth and community engagement. These milestones remind us that architecture is as much about people and processes as it is about design.

Our lead article, *Responsive Realms: Toward a Biophilic, Intelligent, and Contextual Built Environment*, sets the tone for this issue. It invites us to imagine a future where technology and empathy converge, where architecture becomes regenerative, and where the built environment harmonizes with nature rather than resisting it. This visionary discourse is complemented by scholarly explorations such as *Kalinga Temples through Time*, which reminds us that tradition and innovation have always coexisted in Indian architecture. The enduring elegance of Odisha's temples rooted in geometry, symbolism, and cultural ethos offers timeless lessons for contemporary practice. "The Forgotten Pulse of Bhubaneswar" takes readers on a nostalgic journey through the city's overlooked corners, markets and college streets where fading memories and silent stories reveal the soul of a city beyond its modern skyline. Bringing theory into practice, the Architect's Work section presents a project that elegantly bridges the language of contemporary architecture with the timeless symbolism of sacred geometry. It stands as a testament to contextual modernity, functionality, and aesthetic finesse.

Art and architecture share a common soul, the ability to evoke emotion and narrate stories. Our Canvas Painting and Photography Section celebrate this intersection. While the painting captures imagination on canvas, the photographs freeze moments that speak volumes about place, perspective, and perception. Together, these diverse contributions form more than a magazine; they create a dialogue; a dialogue between thought and action, heritage and innovation, individual expression and collective vision. This issue is, therefore, not just a collection of articles; it is a curated conversation between past and present, academia and practice, ideas and action. As you turn these pages, I hope you find inspiration to think critically, design responsibly, and engage deeply with the ever-evolving narrative of the built environment.

I invite you to not just read, but to pause, reflect, and find connections that inspire your own creative journey.

Happy reading!

Dr. Prof. Deepashree Choudhury
Editor, Kalinga Canvas

CHAPTER ACTIVITIES



IIA Odisha Chapter participated in large numbers **IIA TRANSOM** hosted by IIA Madhya Pradesh Chapter witnessing the historic charm of Bhopal's heritage sites to the vibrant energy of Indore's architectural journey that blends knowledge, culture and innovation.

CHAPTER ACTIVITIES



IIA Odisha Chapter received the first runners up award for the best chapter at **NATCON** Indore, April 25



Ar Rabi Narayan Das received the best outstanding member (runners up) award for 24-25

CHAPTER ACTIVITIES



IIA Odisha Chapter received the first runners up award for the best chapter at **NATCON** Indore, April 25



Ar Prathiba Chakraborty received the certificate of merit for her outstanding contribution in the chapter events.



Ar Srijew Panda received the certificate of merit for his outstanding contribution in the chapter events.



Editorial Team of **Kalinga Canvas** Odisha Chapter bagged the first Runners Up for best Newsletter / Magazine of IIA for 2024-25



IIA Presidential special recognition award for conducting International Conference on Women Architects **Pink Print** to Chapter Chair, Person **Ar Swapnadutta Mohanty**

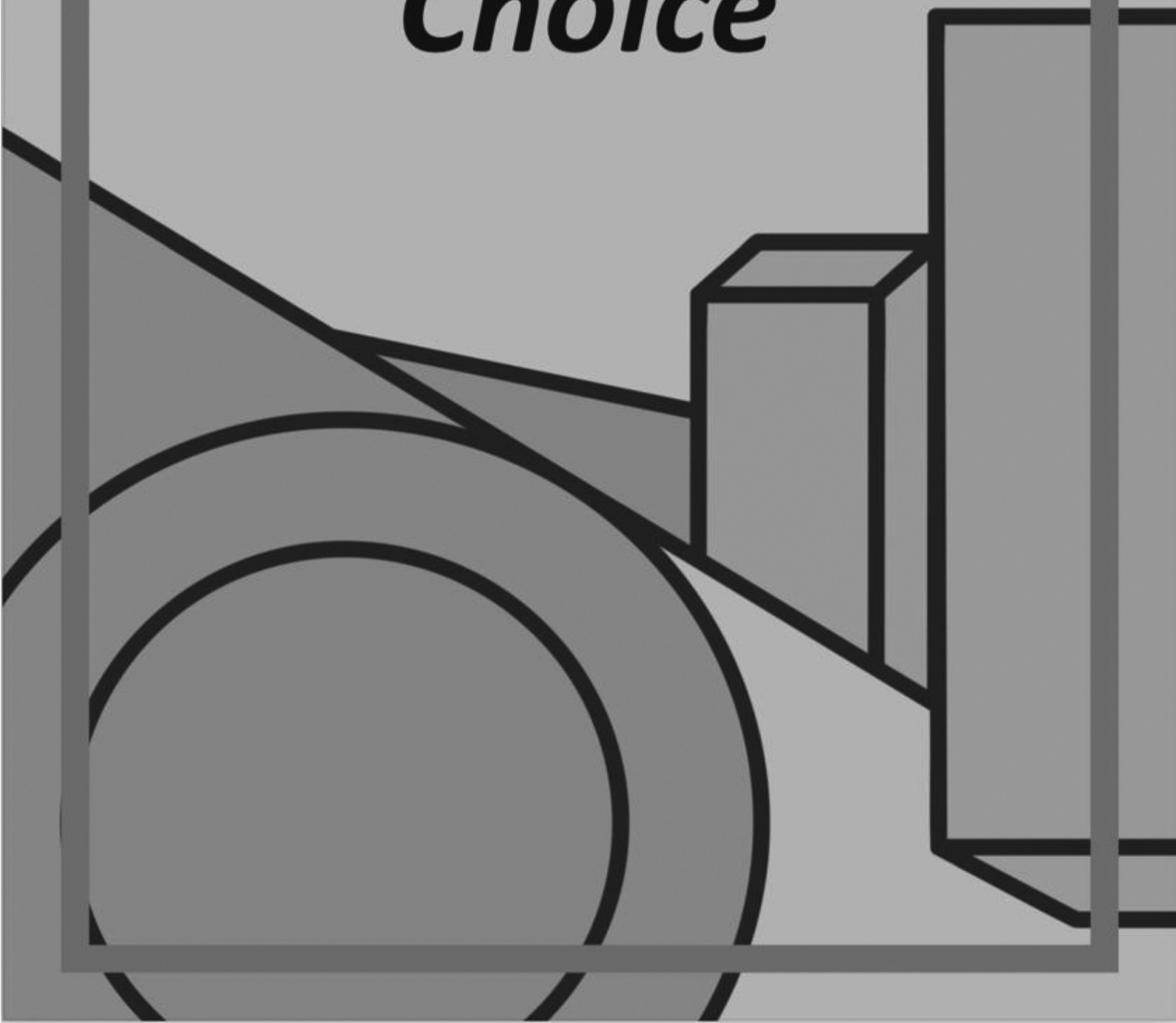


IIA Cuttack Subi-centre received the 1st Prize for Sub Centre Membership Growth in percentage to Sub-centre head **Ar Priyadashi Bisoi**



First Runners Up Musical Band **Chanting Kalinga**

***The
Scholar's
Choice***



Responsive Realms: Toward a Biophilic, Intelligent, and Contextual Built Environment

Prof. Parthiba Chakraborty

Architect, Urban Planner, and Researcher

Faculty at KIIT School of Planning and Architecture

A Transformative Vision

As the world grapples with the twin urgencies of environmental collapse and technological acceleration, architecture must undergo a profound transformation. No longer can it serve merely as the aesthetic pursuit of form or function. Instead, the next generation of built environments must become agents of ecological renewal, cultural continuity, and technological ethics.

This is the call of progressive architecture: a design philosophy that integrates biophilia, metamorphosis, artificial intelligence, and critical regionalism to reimagine how we live, build, and coexist.

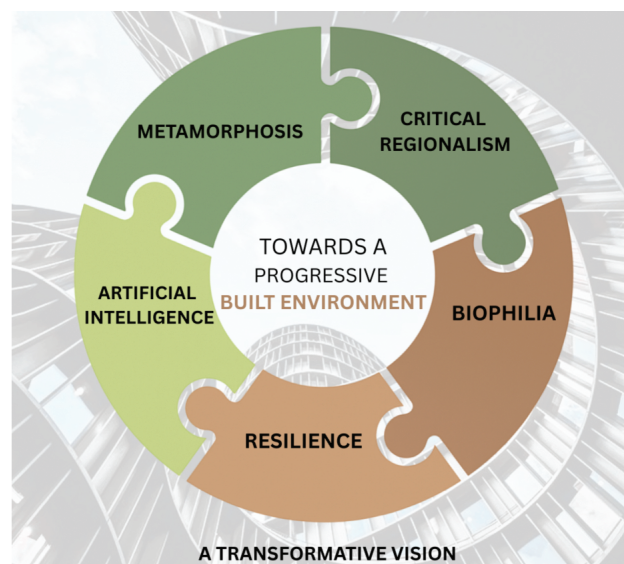
Coined by biologist E.O. Wilson, biophilia is not a design trend but a biological necessity. Today's built environments, saturated with artificiality, alienate users from the rhythms of nature. Progressive architecture must reverse this disconnection—not by superficial greening, but through systems thinking that rewilds the urban. Designing with biophilia means crafting environments that engage the senses, mimic ecological patterns, and foster psychological well-being. It includes everything from vertical forests and biodiversity corridors to edible roofs and biomimetic materials. Buildings should no longer resist nature but harmonize with it—becoming microhabitats, climate moderators, and restorative spaces for all species.

The future of architecture lies in its capacity to adapt. Just as organisms evolve in response to changing ecosystems, so too must our buildings. Metamorphosis in architectural thinking promotes dynamic, modular, and regenerative structures—ones that transform over time in response to climate, demographics, and resource availability. Adaptive reuse, kinetic facades, modular construction systems, and reprogrammable public spaces exemplify this shift. Such approaches are particularly vital in regions facing urban flux, economic inequality, and climate-induced displacements. Metamorphic architecture empowers communities to reshape their environments with resilience and flexibility.

The rise of Artificial Intelligence in design practice introduces not an existential threat, but a catalytic opportunity. AI tools can synthesize environmental data, simulate material behavior, and predict spatial usage patterns with unprecedented precision. But more critically, they can liberate architects to focus on intent, empathy, and narrative. This human-AI partnership can lead to hyper-contextual designs—spaces that are simultaneously data-driven and deeply emotional. The architect's role expands from form-giver to systems orchestrator, merging computational power with ethical foresight. Beyond functional optimization, AI has the potential to ignite emotional serenity within spaces. By harnessing AI to generate immersive, sensory-rich environments and virtual realities, designers can communicate through a global visual language—transcending cultural barriers and enhancing emotional connections between people and place.

When AI is powered by the human thought process and creative ambition, it becomes a force for revolutionizing the built environment—creating experiences that are not only efficient and responsive but also deeply meaningful and universally engaging. In this new paradigm, AI does not replace imagination; it amplifies it—helping architects craft environments that are smarter, more soulful, and infinitely more human.

Critical Regionalism was first introduced by architectural theorists Alexander Tzonis and Liane Lefaivre and later refined and widely popularized by Kenneth Frampton. It emerged as a response to the homogenizing forces of global modernism, offering an architectural approach that is both rooted and reflective—drawing from place-specific traditions while resisting cultural erasure.



In the current era of digital proliferation and algorithmic design, the relevance of Critical Regionalism has only intensified. As buildings increasingly adopt universal aesthetics driven by parametric tools and AI engines, there is a pressing need to re-center ethnicity, context, and tradition as core drivers of architectural identity. This is not about nostalgia or revivalism, but about cultural continuity and resilient innovation. Rammed earth walls embedded with IoT sensors, bamboo frameworks enhanced by robotic precision, and AI-informed water harvesting systems shaped by indigenous knowledge—all exemplify how regional materials and techniques can synergize with modern technologies.

Architecture, in this light, becomes a dialogue between past and future, intuition and computation, memory and possibility. Critical Regionalism thus urges us to see tradition not as a limit but as a lens-through which innovation gains depth, meaning, and rooted relevance.

Reimagining the Future

For this vision to materialize, pedagogy must evolve. Architectural education must pivot toward systems thinking, environmental ethics, and transdisciplinary collaboration. Studios should become laboratories for speculative futures—testing hybrid materials, simulating climate response, and engaging AI-human workflows. Just as importantly, students must be sensitized to socio-cultural nuances, gender equity, and ecological justice. Architects must now be trained as planetary custodians, capable of bridging the tactile with the technological, the local with the global, and the present with the possible. To manifest the vision of a biophilic, intelligent, and context-responsive built environment, architectural education must transcend the constraints of conventional studio formats. The urgency of climate breakdown, digital dominance, and socio-political fragmentation demands an equally transformative response from academia. Education can no longer be a passive transmission of form, typology, and precedent—it must become an incubator of ethics, experimentation, and ecological intelligence. Tomorrow's architects must be systems thinkers—capable of synthesizing environmental science, cultural anthropology, material innovation, and digital intelligence into holistic design responses. Curricula must therefore be restructured around interdisciplinary modules, blurring boundaries between architecture, urban planning, computational design, data science, ecology, and humanities. Moreover, reform must embrace decentralized and inclusive narratives.

Critically, the role of mentorship over instruction must be reasserted. Faculty should become facilitators of inquiry, co-explorers of futures, and stewards of value-driven design. Studio critiques must move from formal judgment to contextual reflection, fostering empathy, cultural intelligence, and planetary consciousness.

Toward a Regenerative and Ethical Architecture

The built environment is no longer a passive backdrop to human life-it is an active player in the ecological, social, and digital matrix of our time. Progressive architecture calls for humility in design, adaptability in execution, and courage in vision. It is not a style, but a sensibility.

As we move forward, we must ask: Can our buildings listen to the wind, learn from the land, and speak in the language of empathy and code? If yes, we are on the cusp of an architectural renaissance-one that builds not only for shelter but for symbiosis, not just for now but for generations to come.

Student's Section

SAURYA

Indian Air Force Museum

By *Lalit Kumar Naik*, Student, NIT, Roulkela

Background

"**Shaurya**" in English translates to bravery, courage, valor, or gallantry. It signifies a strong, courageous, and fearless attitude. The word embodies heroism and the ability to face challenges with fortitude.

Indian Airforce

8 October 1932 as an auxiliary air force of the British Empire. Became the Royal Indian Air Force (RIAF) during WWII, and was re-named Indian Air Force after independence in 1947.

Why do we need a museum ?



Why Barmer?

Locating a museum on the battlefield allows visitors to experience the geography and scale of the conflict firsthand. This tangible connection enhances understanding of strategic decisions and the realities of warfare.

Border Proximity, Military Installations, Well connectivity, Military Tourism

Aim

Preservation of the decommissioned mighty fighter jets and their other essential equipment which were once in service.

Objective

To design a museum for decommissioned warplanes (combat/ non-combat) and other decommissioned equipment once in service in the IAF (Indian Air Force).

To incorporate Indian desert architecture.

To explore the scope of enhancing the tourism experience through architecture.

Case studies (Inferences)

The museum is zoned effectively into indoor and outdoor exhibits, with a distinction between educational, interactive, and observational functions.

Circulation within exhibit halls is logical and chronological, enhancing interpretive storytelling.

The exhibits were well planned, with clearly separate galleries catering to the different kinds of exhibits, creating a sense of clarity and theme throughout the area.

promote the flow and circulation of visitors, the strategic deployment of barricades and the availability of vigilant security personnel assisted in directing traffic and reducing congestion, especially at peak hours.

Site studies (Inferences)

Courtyard planning along some trees creates a good cool microclimate as evaporative cooling effects occur in this type of courtyard.

The Eastern wall and the Western wall should be shaded with trees or incorporate a cavity wall.

A thin Jali-type covering is provided to the façade to shade and protect from dust.

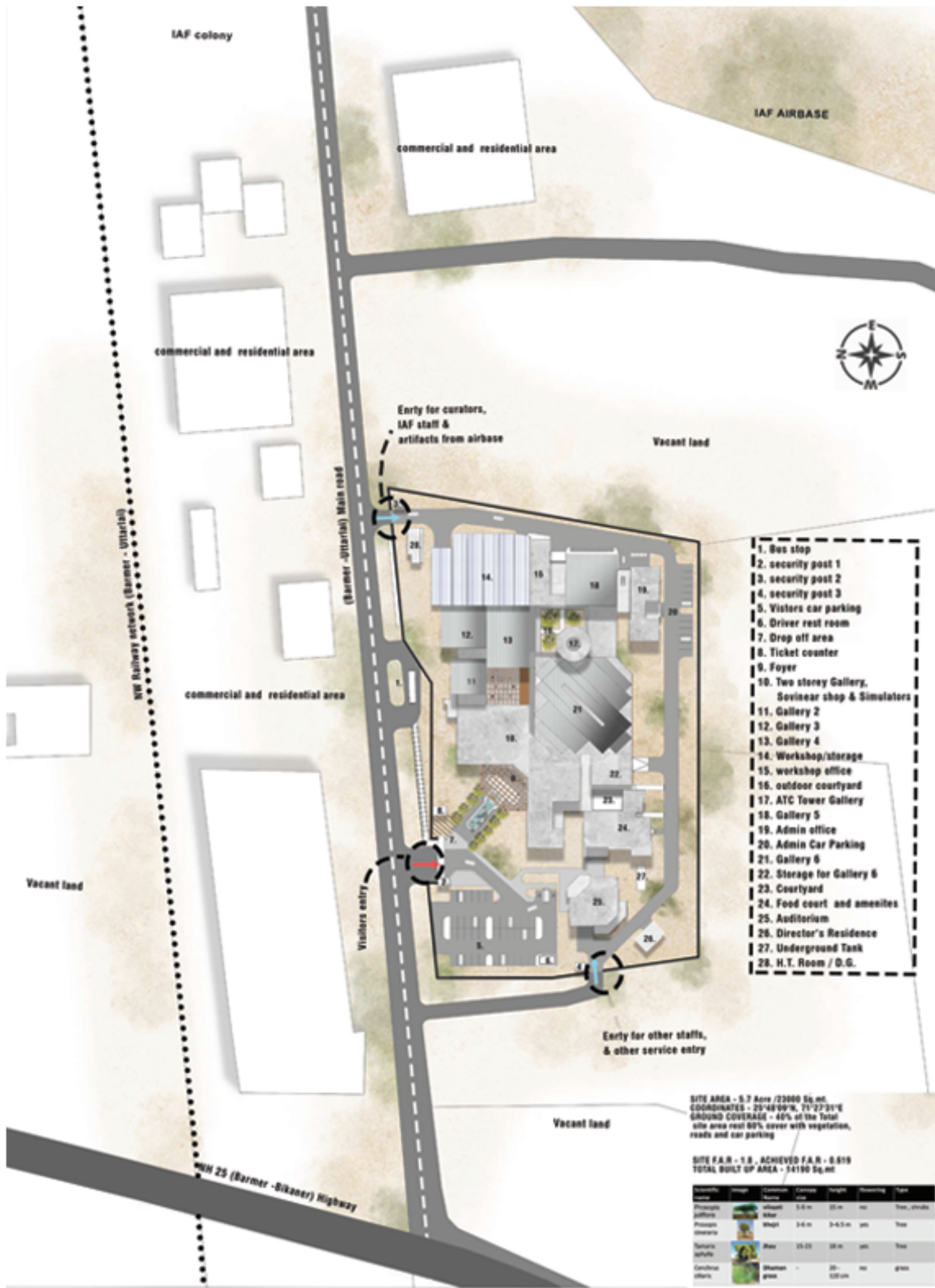
Curved roof with reflective material for less heat gain.

Concept

"Chronology, Connectivity, Clarity"

To seamlessly guide visitors through the rich history technology, and experience of the Indian Air Force while ensuring functionality, accessibility, and engagement in every part of facility.





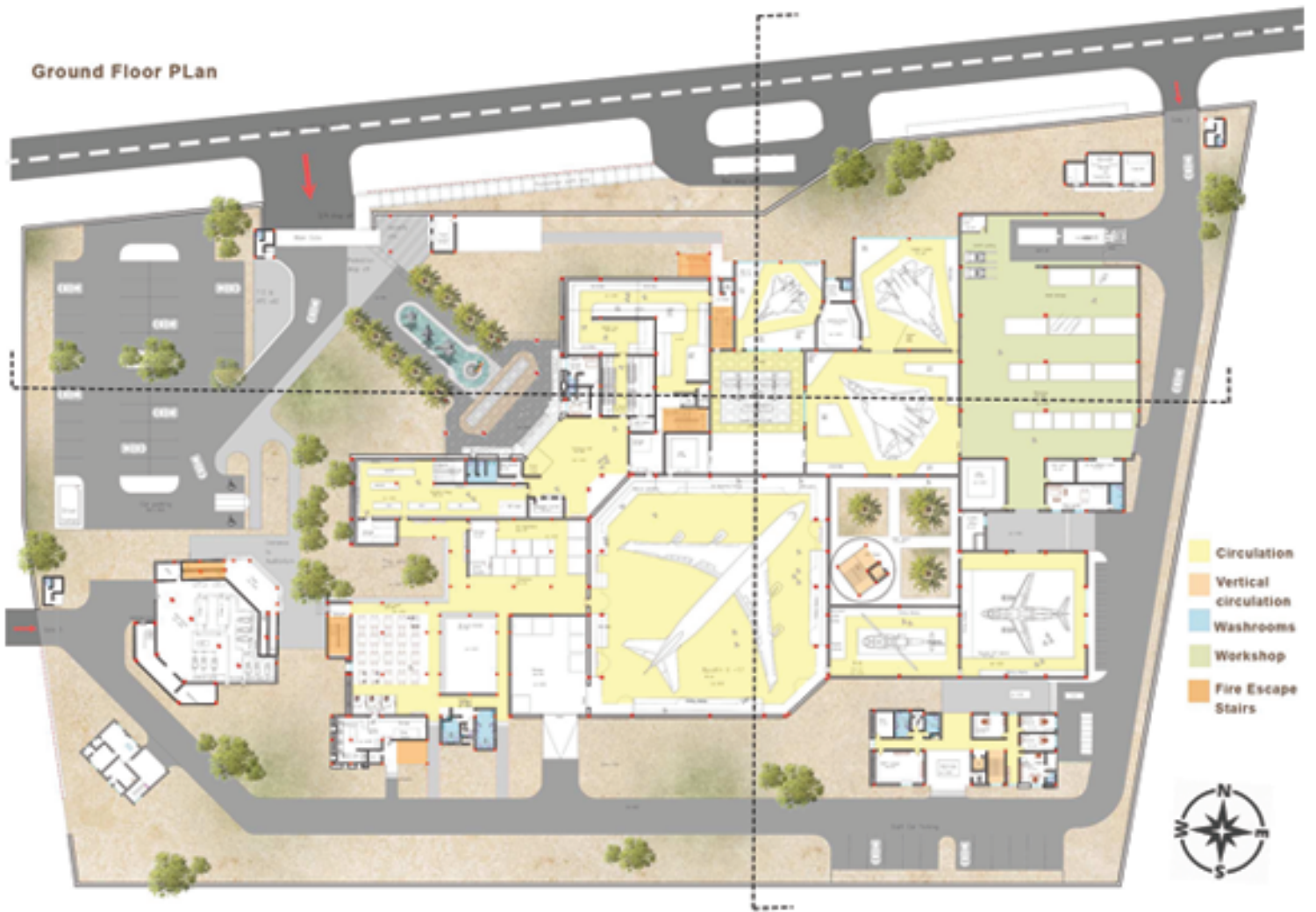
1. Bus stop
2. security post 1
3. security post 2
4. security post 3
5. Visitors car parking
6. Driver rest room
7. Drop off area
8. Ticket counter
9. Foyer
10. Two storey Gallery, Sovinear shop & Simulators
11. Gallery 2
12. Gallery 3
13. Gallery 4
14. Workshop/storage
15. workshop office
16. outdoor courtyard
17. ATC Tower Gallery
18. Gallery 5
19. Admin office
20. Admin Car Parking
21. Gallery 6
22. Storage for Gallery 6
23. Courtyard
24. Food court and amenities
25. Auditorium
26. Director's Residence
27. Underground Tank
28. H.T. Room / D.G.

SITE AREA - 5.7 Acre / 23000 Sq.mt.
 COORDINATES - 25°48'00"N, 71°27'30"E
 GROUND COVERAGE - 40% of the Total site area rest 60% cover with vegetation, roads and car parking

SITE F.A.R - 1.8 , ACHIEVED F.A.R - 0.619
 TOTAL BUILT UP AREA - 54190 Sq.mt

Species Name	Image	Common Name	Canopy Use	Height	Flowering	Type
Prosopis juliflora		silkworm	5-6 m	25 m	no	Tree, shrubs
Prosopis cineraria		shear	3-6 m	3-6.5 m	yes	Tree
Tamarix sp.		tree	15-25	20 m	yes	Tree
Cordia alliodora		shear	-	20-	no	grass
				100 cm		

Ground Floor PLAN



First Floor PLAN



The forgotten pulse of Bhubaneswar

Ayesha Shamim

Student, Piloo Mody college of Architecture

Bulldozer ready for Ashoka - Traders agree to move out of market after govt provides alternative arrangement

Read more below

Sandeep Mishra | Published 11.10.17, 12:00 AM



In Bhubaneswar's skyline, now filled with malls, glass towers, and real estate signs, there are still fragile, quiet corners that seem to belong to another time. They don't seek attention. They don't demand preservation. Yet they hold decades of untold stories and shared histories. This article explores such areas of the city, Ashoka Market and some college streets, not just from an observer's perspective, but as silent mourners of a past that is fading. These places are not heritage sites with plaques or protection. They are living corners, slowly disappearing under the weight of development. When you pause, you realize that the spirit of Bhubaneswar may lie not in its shiny new buildings, but in the overlooked edges of its memory.

Ashoka Market: Between Commerce and Silence

Once, Ashoka Market was the lively commercial heart of Unit II, where people found tailors, textiles, watch repair shops, stationery vendors, and roadside eateries. It wasn't glamorous, but it was essential. It was woven into the city's daily life. Today, that life has slowed. You walk through its main corridor and feel the weight of stillness. The passage that once echoed with laughter now carries silence like a heavy coat. Faded shop shutters display layers of political posters. A broken mannequin leans against a wall stained with paan. The air holds a faint smell of rust and old newsprint.

Electric wires hang above like tangled veins, lifelines to shops that barely survive. Some shopkeepers still open at ten, sweep up dust, and sit silently behind counters filled with unsold goods. They wait, not for customers, but for the city to remember them again. There's a kind of poetry in this decay. In the fading blue signs, in the arched corridors that once bustled during rush hour, in the dusty glass of a watch

repair shop that hasn't opened in weeks. Each object is a relic; each silence tells a part of a forgotten story.

Yet Ashoka Market is not completely abandoned. It is in limbo. Caught between nostalgia and neglect. People still pass through, students taking shortcuts, workers on breaks, old men who have visited since their youth. The market keeps breathing, though its breath is shallow.



A forgotten market place with store front turned sepia under the weight of time.

College Street: Faded Footnotes of Youth

A short walk from the busier areas, College Street unfolds behind the noisy parts of Bhubaneswar. Once, it served as a haven for students, filled with the restless energy of youth: coaching centres piled like Jenga blocks, bookstores offering notes for every subject, and tea stalls acting as informal confession booths.

There was a pulse here, fast, chaotic, vibrant. The street buzzed with ambition and anxiety. Amidst it all, moments of laughter, graffiti battles, and spontaneous hangouts took shape.

But now, that pulse has faded. The signboards remain, but many windows are often closed. "Crash Course for NEET 2017" hangs over a door that hasn't opened since the pandemic. A lone tea seller stands beside his rusted stove, stirring a kettle that rarely empties.

This decay doesn't shock; it hurts slowly. Benches that once held hundreds now sit covered in dry leaves. A child flips through an old guidebook lying in a gutter. A crow pecks at a tattered bag left behind by a student who likely moved on. College Street feels like a dream someone forgot to wake from.

Yet it refuses to die. In the quiet, it still offers something: a chance to reflect. A reminder of life's cycles in cities, how places shine bright, fade gently, and wait for meaning to return.

Some coaching centres are still running. Some tea stalls still see visitors. Some bookstore owners hold on to hope. They fondly talk about students who once bought books here and now work in Delhi, Bangalore, or abroad. They cherish stories like treasures.



Holds more than just educational history, it carries emotional geography.



*It is a street where someone fell in love, failed an exam, wrote a poem,
or simply sat and pondered the future.*

Seeing the Unseen

What makes a place worth remembering?

Is it the crowd, the noise, the significance? Or is it something subtler—the way light filters through broken glass, the stories that never made it to plaques or guidebooks? Bhubaneswar is not just a smart city. It's a layered one. Between the flyovers and malls, it still breathes through these fragments, places that shaped thousands of lives and now slowly vanish under silence.

This article is not a call to restore or revive. It's simply a quiet reminder: that beauty often lives where no one is looking. That the soul of a city may just lie in its cracks.

And maybe... the most human thing we can do is to see it before it disappears.

**GUEST
SECTION**



Kalinga Temples through Time : An Architectural Study

Dr. Pratishtha Mukherjee

Assistant Professor, Rishihood Foundation Program

Rishihood University

Abstract

The present paper examines the architectural evolution of temples in Kalinga (Odisha), tracing their development from early structural beginnings to their mature and monumental forms. The paper focuses on the stylistic, structural, and spatial transformations that define the Kalinga school of temple architecture. By analysing key examples across different historical periods from the modest shrines of the early post-Gupta era to the grand temples of the Eastern Ganga dynasty the study highlights changes in design elements, construction techniques, and spatial organisation. The paper situates this architectural progression within the broader regional context, emphasizing Odisha's unique contributions to the Indian temple tradition.

Keyword:

Odisha, Art, Architecture, Culture, Archaeology

1. Introduction

The architecture of Indian temples stands as one of the most remarkable expressions of the subcontinent's cultural and religious imagination. Rooted deeply in metaphysical and ritualistic traditions, temple construction in India is not merely an architectural endeavour but a spiritual science (*adhyatmika vidya*) grounded in cosmology, sacred geography, and canonical texts. Across millennia, Indian temples have functioned as dynamic institutions serving not only as spaces for devotion and ritual but also as centres for education, art, music, dance, and social organization (Kramrisch, 1946; Michell, 1988). The earliest sacred spaces in India were ephemeral in nature, often constructed from perishable materials like wood or thatch and primarily used for Vedic rituals centred around the *yajna* (sacrifice). These ritual enclosures, such as *yajnavedis* and *kundas*, were governed by precise spatial and geometrical regulations outlined in the *Shrauta Sutras* and *Brahmana* texts, forming the conceptual basis for later permanent structures (Staal, 1983). With the rise of puranic traditions, and sectarian theologies- primarily Shaiva, Vaishnava, and

Shakta, temple-building emerged as a codified and monumental expression of religious practice, particularly during and after the Gupta period (4th–6th century CE) (Brown, 1942; Meister, 1989).

The theoretical framework of Indian temple architecture is preserved in classical treatises like the *Vastuśāstra*, *Śilpa Śāstras*, and *Āgamas*. These texts not only prescribe the dimensions, materials, and orientation of temples, but also delineate the iconometry (*talamana*), symbolism, and ritual functions of each component from the *garbhagha* (sanctum sanctorum) and *mandapa* (pillared hall) to the *Vimana/shikhara* (superstructure) and *gopura* (gateway tower) (Acharya, 1997; Dagens, 2007). Temples are thus conceived as living organisms, with each part corresponding to a limb of the cosmic body (*Purusha*) a principle formalised in the *Vastu Purusha Mandala*, a metaphysical grid used to organize sacred space (Kramrisch, 1946).

The regional diversity of India gave rise to three principal architectural idioms: the *Nagara* style of North India, the *Dravida* style of the South, and the *Vesara* style that emerged as a synthesis in the Deccan. Each of these exhibits distinctive features, yet shares a common architectural vocabulary. For instance, the *rekha-deul* or curvilinear tower of *Nagara* temples contrasts with the pyramidal *Vimana* of *Dravida* structures, while both maintain the axially and hierarchical symbolism central to temple design (Michell, 1988; Hardy, 1995).

Temples were never limited to aesthetics or religious function alone; it was deeply embedded within the political and ideological frameworks of its time. Temples served as symbols of dynastic legitimacy and were frequently employed by rulers as instruments of statecraft and expressions of sovereign power. Royal patronage played a crucial role in the development of monumental temples, which were not only spiritual centres but also administrative hubs, custodians of land and wealth, and sites of cultural production. Dynasties such as the *Cholas*, *Pallavas*, *Gangas*, and *Paramaras* invested heavily in temple construction to reinforce their divine right to rule and to embed their authority within sacred geography (Stein, 1980; Orr, 2000). The inscriptions found on temple walls often recorded royal donations, land grants (*devadana*), and military conquests, turning the temple into a political archive. Moreover, temple rituals themselves mirrored royal ceremonies, reinforcing the king's role as both a worldly and a cosmic ruler (*chakravartin*), thus blurring the lines between kingship and divinity (Champakalakshmi, 1996). The spatial dominance of temples—often located

at the heart of cities or at strategic pilgrimage sites-ensured not only religious patronage but also economic control, as temples managed large estates and employed a wide range of functionaries including priests, artisans, musicians, and administrators. Hence, the temple was both a sacred and sovereign space, reflecting the interlinking of architecture, ritual, and political power in the shaping of early Indian society.

Sculpture formed an integral and inseparable component of Indian temple architecture, transforming stone into a narrative medium that conveyed religious, philosophical, and socio-political ideals. Far beyond decorative embellishment, sculptural programs on temple walls, pillars, ceilings, and gateways served to encode cosmological concepts, depict mythological episodes, and communicate theological doctrines to both learned elites and lay devotees. Temples in Odisha, particularly from the 7th to 13th centuries CE, display a rich iconographic vocabulary-ranging from scenes of deities and celestial beings to daily life, erotic imagery, and dynastic achievements.

The use of sculpture was not arbitrary; it was governed by the Shilpa Shastras and iconographic texts that prescribed proportions (talamana), gestures (mudras), and symbolic attributes for each figure (Goswamy, 1992; Srinivasan, 2000). For instance, the Sun Temple at Konark and the Lingaraja Temple in Bhubaneswar showcase sculptural brilliance not only in terms of artistic finesse but also in spatial logic-placing fierce guardians near thresholds, cosmic dancers on walls of the nata-mandira, and erotic motifs on transitional zones, thereby guiding the devotee's journey from the sensual to the spiritual. Moreover, many sculptures carried subtle messages of royal power and divine sanction, with kingly figures often portrayed as ideal devotees or as part of divine retinues, reinforcing political patronage through visual rhetoric (Dehejia, 1997). Thus, sculpture within temple architecture functioned simultaneously as theology, pedagogy, and propaganda, animating sacred space with layers of meaning that transcended time and audience.

Thus, the study of Indian temple architecture-rooted in ritual theory, sacred geometry, and dynastic patronage-offers far more than an understanding of structural evolution. It opens a window into the intellectual, spiritual, and socio-political frameworks that shaped India's sacred spaces. As this introduction has outlined, temples functioned as living institutions: designed with cosmological precision, built under the aegis of ruling powers, and animated through ritual, sculpture, and public life. By tracing their historical development, especially through regional idioms like the Kalinga style in

.Odisha, we gain insight into how architecture became a language through which devotion, authority, and aesthetics were simultaneously articulated.

2. The Kalinga Style of Architecture

Kalinga architecture is identified as a sub-school of the broader Nagara tradition of North Indian temple architecture. What sets the Kalingan idiom apart, however, is its remarkable continuity. From the 6th–7th century CE through the 15th–16th centuries, temple-building activity persisted uninterrupted, irrespective of dynastic change or sectarian affiliation. Bhubaneswar ancient Ekamra Ketra—served as a nucleus of this architectural evolution. Unlike Pallava, Chola, or Chandella traditions, where temple styles are often aligned with dynastic identity, the Kalinga style is more regionally rooted, transcending specific royal patronage (Donaldson, 1985). Epigraphic evidence testifies to an earlier tradition of sacred architecture in Odisha. The Hathigumpha inscription of King Kharavela (1st century BCE) describes him as the “repairer of all divine shrines” (sava-devsk



Hathigumpha inscription, Udayagiri, Bhubaneswar, Odisha



*Asanpat Stone inscription,
Odisha State Museum,
Bhubaneswar*

(Images by the author)

The indigenous architectural manuals of Odisha, such as the *Silpa Prakasa*, *Silpa Ratnakosa*, and *Bhubana Pradipa*, provide valuable insights into the regional canon of temple construction. These texts, composed between the 9th and 13th centuries CE, detail the fundamental typology of Kalingan temples, classifying them into three primary categories: *Rekha deul*, *Pidha deul*, and *khakara deul* (Donaldson, 1985; Panigrahi, 1961). The *rekha deul* serves as the sanctum (*garbhagha*) marked by curvilinear superstructure, while the *Pidhadeul*, with its tiered pyramidal roof, generally functions as the *Jagmohan* or assembly hall. During the Ganga period (12th–13th century CE), two additional components—the *natamandapa* (dance hall) and *bhogamandapa* (offering hall)—were introduced, culminating in a four-fold axial alignment enclosed by a *prakara* or boundary wall (Donaldson, 1985). The third typology, *khakara deul*, is distinguished by its oblong ground plan and barrel-vaulted roof resembling an inverted boat or gourd. Typically associated with feminine and tantric cults, especially *Sakta* worship, this form stands apart from the more vertically accentuated *Rekha* and *Pidha* types (Kramrisch, 1946; Panigrahi, 1961).^a



*Siddheswara Temple,
Bhubaneswar, Odisha*

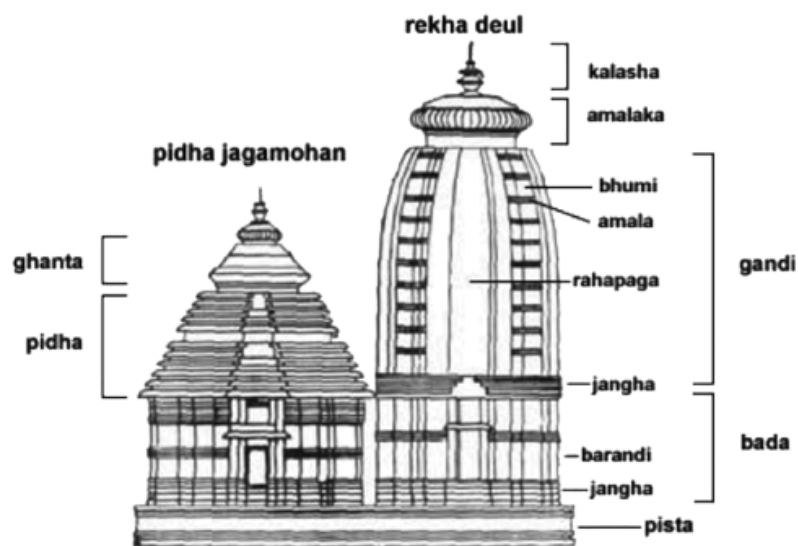
- (a) *Rekha Deula*
- (b) *Pidha Deul*

Vaital Deul,
Bhubaneswar-
Khakhra Deul

(Images by the author)



The Kalinga temple is characterized by its precise geometric planning and articulated elevation. The ground plan is usually square, though exceptions exist such as star-shaped sanctums (e.g., Boudh) or circular layouts (e.g., Ranipur-Jhari and Hirapur) adapted to specific ritual needs. The temple plan often features vertical projections (rathas) or pagas in elevation, leading to classifications such as triratha, pancharatha, saptaratha, and navaratha-with early temples typically following the triratha scheme (Donaldson, 1985). Vertically, the Kalinga temple is divided into three principal zones: Bada (base), Gandi (trunk), and Mastaka (head or crowning element). The Bada is further subdivided in later examples into five articulated segments: Pabhaga (foot), Tala Jangha (lower thigh), Bandhana (moulded joint), Upara Jangha (upper thigh), and Baranda (waist). The superstructure (Gandi) of the Rekha deul is curvilinear and tapers smoothly, while the Pidha deul features a stepped pyramidal form with successively receding pidhas (tiers). The masaka comprises elements like the Beki (neck), Amalaka (ribbed disc), khauri (skull), kalasa (auspicious pot), and Ayudha (emblem of the presiding deity). The khakara deul differs in its oblong plan and vaulted roof, often compared to the Boita (boat) or a pumpkin gourd (Panigrahi, 1961; Kramrisch, 1946).



Parts of the Kalinga Style of Temple
(Image source: Google)



Parts of the Bada (Jangha region)
(Image source: Puratattva)



Chausanth Yogini Temple, Hirapur
(Image by the author)

Sculpture plays an indispensable role in Kalingan temple architecture. As Stella Kramrisch noted, "Architecture in Orissa is but sculpture on a gigantic scale" (Kramrisch, 1946). The sculptural repertoire includes divine figures, surasundaris, erotic motifs, mythical beings, and ornamental features such as scrolls, miniature shrines, and decorative motifs like piha mui and khakara mui. These embellishments were not merely ornamental but imbued with symbolic and didactic significance, contributing to the temple's role as a visual scripture.

3. Evolution of the Kalinga Architecture

Like any enduring tradition of art and architecture, Kalinga temple architecture evolved through multiple phases of development, marked by gradual innovations in form, style, and symbolism. Kalinga temple architecture underwent a well-marked evolutionary sequence, broadly categorised into four phases: (i) the Formative phase, (ii) the Transitional phase, (iii) the Mature phase and (iv) the post Mature phase (Donaldson, 1985; Mishra, 1997).

Formative Phase : *Early Structural Features*

The period extending from the 6th century CE to the first half of the 9th century CE is regarded as the formative phase of Kalinga temple architecture. This developmental stage was primarily shaped under the patronage of the Sailodbhava dynasty and the early Bhaumakara rulers. The temples attributed to this phase include Laksmanesvara, Bharatesvara, Satrugnesvara, Svarnajalesvara, and most notably, the Parashurameshvara temple, which stands as the best-preserved exemplar of early Kalinga temple architecture (Donaldson, 1985; Panigrahi, 1961). Dated to the 7th century CE, the Parashurameshvara temple exhibits a triratha Vimana surmounted by a rekha sikhara, a curvilinear spire rising directly from the sanctum. The Jagmohan or assembly hall is a rectangular, pillared structure capped by a two-tiered terraced roof, representing one of the earliest forms of a frontal hall (mukhasala) in the region. The graha architrave above the doorway depicts only eight planetary deities, notably omitting Ketu, a feature indicative of early iconographic conventions (Mitra, 1963). Architecturally, the temples of this phase follow a triratha plan, consisting of a central raha projection flanked by two kanika corners. In elevation, the bada (vertical wall) is tri-anga or tripartite, divided into the pabhaga (foot), jangha (shaft), and baranda (entablature). The pabhaga typically comprises three mouldings: khura (hoof), kumbha (pot), and pata (plank). The Gandi (superstructure) displays a smooth, uninterrupted curvature, devoid of angasikharas (subsidiary spires), lending the temple a modest vertical emphasis. The baranda concludes in a recessed kanthi moulding. Sculpturally, this phase is marked by figures rendered in low relief,

appearing somewhat rigid and stylized. However, during the later Bhaumakara period, a discernible transition toward greater anatomical proportion and naturalism becomes evident, reflecting evolving aesthetic sensibilities and improved sculptural techniques (Kramrisch, 1946; Donaldson, 1985).



Parashurameshvara Temple



Sculptures and Motifs present on the Ratha/ Pagas or the Projections
(Images by the author)

Transitional Phase : *Innovation in Form and Ornamentation*

The second half of the 9th century CE to the early decades of the 11th century marks the transitional phase in the evolution of Kalinga temple architecture. This period unfolded under the patronage of the later Bhaumakara rulers and the early Somavamsi (Kesari) dynasty. It is during this era that temple architecture in Odisha began to display marked innovation in both spatial planning and ornamental vocabulary.

Notable monuments from this phase include the Vaital Deula (a rare khakhara structure), Sisiresvara and Markanesvara temples in Bhubaneswar; Bringesvara at Bajarkot (Angul district); Svapnesvara at Kualo (Dhenkanal district); the Siva temple at Badgaon; the Simhanatha temple on an island in the Mahanadi River (Cuttack district); the twin Hari-Hara temples at Gandharadi (Baudh district); and the Varahi Temple at Chaurasi (Cuttack district), another prominent example of the khakhara order (Donaldson, 1985; Mitra, 1963).

One of the defining features of this period is the introduction of erotic imagery, often attributed to the influence of Vajrayana Buddhist iconography. The Muktesvara Temple in Bhubaneswar, often hailed as the "gem" of Kalingan architecture, represents the culmination of this phase. It exhibits a harmonious integration between the Vimana (sanctum) and the Jagmohan (assembly hall), which were now conceived as a unified architectural plan, moving away from the disjointed compositions seen in earlier periods.

Architectural innovations include the transformation of the Jagmohan from a flat-roofed, rectangular hall to a square structure with a pyramidal superstructure. The pabhaga (foot portion) of the bada now comprises four mouldings, and the Jangha zone began incorporating naga-nagi pilasters, chaitya medallions, and dynamic vyala and jagrata motifs. The baranda often features recessed bas-relief panels, and the kanika pagas were divided into five horizontal storeys, demarcated by bhumi-amalakas (miniature ribbed disks).

A notable departure from earlier construction techniques is seen in the treatment of Parsvadevata niches, where subsidiary deities are now carved from independent monolithic blocks rather than being integrated directly into the temple wall. Furthermore, ceiling ornamentation becomes more sophisticated-particularly in the Jagmohan-with intricate floral and figurative carvings that are characteristic of Somavamsi craftsmanship and largely absent in earlier or later periods. Iconographically, the image of Ketu was incorporated for the first time into the

Navagraha (nine-planet) panel, completing the astrological ensemble that became a standard feature in subsequent Kalingan temples. Similarly, depictions of Matrikas carrying infants on their laps began appearing, marking a shift in maternal imagery and symbolic representation during this period (Donaldson, 1985; Kramrisch, 1946; Mitra, 1963).



Mukteswara Temple, Bhubaneswar, Odisha
(Image by the author)

Mature Phase : *The Apex of Kalinga Architecture*

The mature phase of Kalinga temple architecture, spanning the mid-11th to 13th centuries CE, represents the culmination of a long trajectory of stylistic development. This period, initially under the patronage of the Somavamsi dynasty and later the Eastern Gangas, witnessed the refinement of temple design, iconography, and sculptural treatment into a cohesive and highly sophisticated architectural idiom. Temples such as Rajarani, Brahmesvara, and the grand Lingaraja at Bhubaneswar exemplify the fully developed Kalingan temple style under the Somavamsi (Donaldson, 1985; Panigrahi, 1961). The Eastern Gangas further enriched the tradition,

as seen in the Jagannatha temple at Puri, Chatesvara at Kakudia, Sobhanesvara at Niali, Daksa Prajapati at Banapur, and the monumental Sun Temple at Konark, which marks the stylistic zenith of the Kalinga tradition (Mitra, 1963; Mishra, 1997). Architectural features became increasingly standardized and sophisticated. The bada was now consistently divided into five vertical segments: pabhaga, tala Jangha, bandhana, upara Jangha, and baranda. The pabhaga itself consisted of five classical mouldings-khura, kumbha, patta, kani, and basanta. The Gandi (superstructure) was richly decorated with miniature temples (angasikharas) arranged in diminishing order. Projecting pagas were fully articulated, while the amalaka stone atop the spire was supported by sculpted deula-charini (divine attendants), often accompanied by dopichha simha on the beki.

Decorative elements such as pidha mundi, khakhara mundi, and vajra mundi became common in the Jangha zone. The sculpture of this phase was marked by a high degree of plasticity, anatomical proportion, and stylized elongation, particularly visible in non-iconic female figures rendered in alto-relievo. Iconographically, innovations included the appearance of Hanuman with a simian head, Ketu with a serpent body, and the prominent placement of udyota simhas (projecting lions) on the Raha Paga. The addition of subsidiary shrines in front of parsvadevata niches, natamandapas, bhogamandapas, and vahanastambhas further elaborate the axial composition. The inclusion of female counterparts of the Dikpalas on the upara jangha reflects a shift in ritual iconography and temple hierarchy.



Lingaraja Temple, Bhubaneswar



Shri Jagannath Temple, Puri
(Images by Incredible India)

Post-Classical Phase: Decline and Continuity

Following the monumental achievements of the Eastern Ganga period, temple construction in Odisha entered a phase of relative decline during the reign of the Surya Vamsi-Gajapati dynasty 14th–16th century CE. Political instability and reduced royal patronage curtailed large-scale architectural projects, signalling an end to the vigorous temple-building traditions that had flourished for over half a millennium (Donaldson, 1985; Mishra, 1997).

Few temples from this period survive, with Kapilesvara temple at Bhubaneswar being a representative example. Structural simplicity and material substitution—particularly the widespread use of laterite over sandstone—became typical. Pidha deul forms were now used for both Vimana and Jagmohan, marking a departure from the earlier vertical and axial complexity. The walls and doorjambes of these temples are notably devoid of sculptural embellishment, and decorative programmes were minimal or entirely absent.

Despite this artistic contraction, Odisha retained a remarkably cohesive and regionally distinct temple tradition. From the 6th century CE through the 16th century CE, Kalinga architecture evolved continuously—reflecting changing political landscapes, religious practices, and aesthetic ideals—yet maintained a stylistic consistency rare in Indian architectural history. These temples remain enduring symbols of Odisha's cultural heritage and are among the most compact, homogeneous, and refined architectural groups in India.



*Kapilesvara Temple,
Bhubaneswar, Odisha*
(Image by the author)

4. Legacy and Continuity of Kalinga Temple Architecture

The tradition of temple construction in Odisha, which began in the 6th century CE, blossomed into one of the most remarkable and enduring architectural legacies of India. From the early structures under the Sailodbhavas to the monumental creations of the Eastern Gangas, especially the iconic Jagannatha temple at Puri and the majestic Sun Temple at Konark, Kalinga temple architecture showcases an unbroken lineage of spiritual, artistic, and architectural excellence. While the tempo of temple building gradually slowed during the Surya Vamsi-Gajapati period (14th–16th century CE), this shift did not mark an end but rather a transition. Though fewer in number and simpler in execution, temples continued to be built—testifying to the resilience of this sacred tradition. Rather than decline alone, this phase reflects adaptation, resourcefulness, and the continued devotion of local communities who sustained temple culture beyond the heights of royal patronage. What sets Odisha’s temple architecture apart is its stylistic cohesion, rich iconographic language, and harmonious integration of structure, sculpture, and symbolism. These temples are not merely historical monuments—they are living embodiments of a civilisational ethos, still vibrant with festivals, rituals, and cultural memory. Today, Odisha proudly preserves one of the most compact and homogenous architectural traditions in India. These temples stand as lasting imprints of ancestral wisdom, artistic mastery, and cultural continuity. They are a source of pride not only for the people of Odisha but for all of India—reminding us of the profound beauty and resilience of Bhartiya heritage. Far from relics of the past, they continue to inspire scholars, pilgrims, artists, and heritage lovers alike.

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Short Biography of Guest



Dr. Pratishtha Mukherjee is a dedicated archaeologist and heritage scholar specialising in ancient Indian sculpture, iconography, and temple architecture. She currently serves as an Assistant Professor at Rishihood University, where she combines academic teaching with active research and fieldwork.

Dr. Mukherjee holds a PhD in Archaeology and Ancient History from The Maharaja Sayajirao University of Baroda. Her doctoral research examined the sculptural traditions of Yaka figures in North India, with a special focus on the Ganga Valley. She also holds a gold-medal Master's degree in Archaeology and Heritage Management from Guru Gobind Singh Indraprastha University.

Her research career spans roles at the Archaeological Survey of India, National Museum, INTACH, and MSU Baroda, as well as international mentorships with Save Ancient Studies Alliance (USA). Dr. Mukherjee has published in journals like KALA, Heritage Journal, and the Sri Lanka International Journal of Buddhist Studies.

She is the recipient of the Sri Shankara Swami Bharati Fellowship (2024–Present) under well-known historian Dr. Vikram Sampath and the IKS Research Grant (2022), awarded for her commitment to Indigenous Knowledge Systems.

Architect's Work



KM Convention



Anusuya Tripathy

FIRM BRIEF :

Name Of Project	: KM Convention
Project type	: Commercial
Location	: Bhubaneswar
Site Area	: 20,000 sqft.
Design Firm Architect & Engineer	: Alta Vizta
Principal Designer	: Ar. Anusuya Tripathy
Design Team	: Ar. Ansuman Tripathy Ar. Hrusikesh Tripathy
Photographer	: Ar. Lalatendu Nayak

Anusuya Tripathy, Visionary behind Alta Vizta Architects & Engineers. Anusuya Tripathy stands at the forefront of sustainable design, known for her signature approach that blends climate responsiveness with timeless aesthetics. With over 15 years of shaping spaces that breathe with their environment, she has built a reputation for architecture that is both thoughtful and transformative.

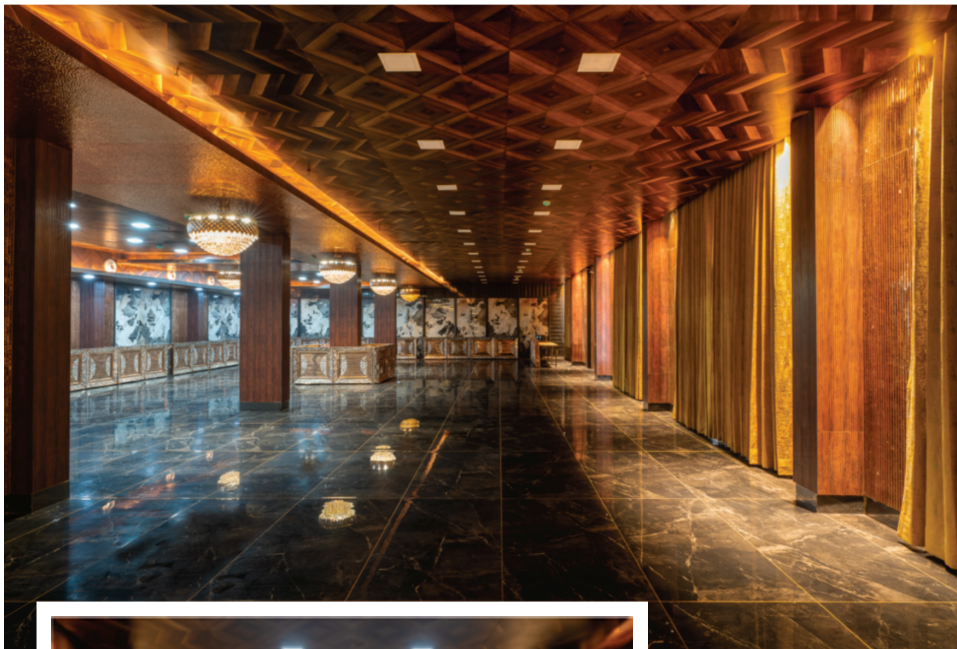
Her Bhubaneswar-based firm, Alta Vizta Architects & Engineers, undertakes a spectrum of projects-industrial,-residential, commercial, hospitality, landscaping, and interior design-blending innovation with functionality and sustainability. Anusuya Tripathy's design philosophy combines modern aesthetics with environmental consciousness, emphasizing energy efficiency, smart use of materials, and contextual relevance. Backed by a team of experienced professionals, she ensures every project is carried out with precision, purpose, and integrity, making Alta Vizta a respected name in Eastern India's architectural space.

Inspired by the sacred geometry of a temple situated directly opposite the site, the design of this commercial building pays subtle homage to traditional forms-without resorting to overt classical expression. The iconic triangular silhouette of the temple's shikhara served as a conceptual starting point, but at the client's request, the interpretation was translated

into a contemporary architectural language. Merging gracefully within the urban context, the building blends sculptural form with spatial clarity. Its façade-defined by rhythmic vertical fins and expansive glazing-creates a dynamic interplay of light and shadows throughout the day. Avoiding conventional boxy massing, the design unfolds through offset planes and



■ Front Facade



■ Main Hall



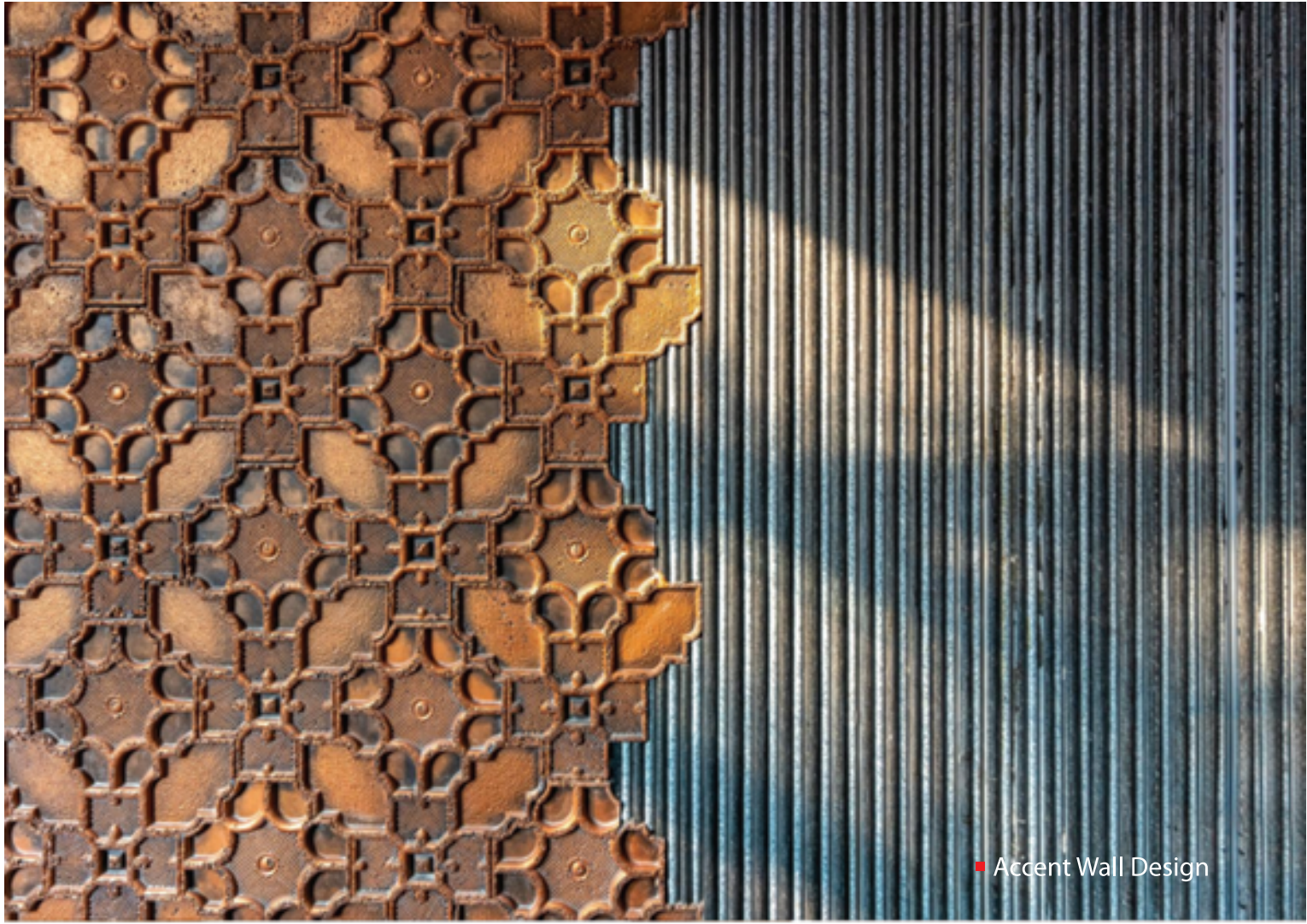
■ Main Hall



■ Accent Wall

softened edges, creating a distinct identity that resonates with its surroundings. Natural light filters through generous fenestration, enhancing the openness of the interiors and fostering a strong visual connection with the landscaped outdoors. The internal layout is intelligently planned to encourage circulation and interaction among users, with open transitional spaces that feel fluid

and inviting. Carefully curated green pockets, shaded sit-outs, and edge landscaping introduce biophilic moments, blurring the boundary between the built and natural environments. This is not just architecture for today-it is a forward-thinking design that gracefully bridges tradition and modernity, functionality and elegance, purpose and poetry.



■ Accent Wall Design



■ Room Type 1



■ Stairs leading to the 1st Floor



■ Main Hall



■ Stairs leading to the 1st Floor

Rich Italian tile flooring, golden velvet drapes, and intricately patterned wooden ceilings create a luxurious ambience. Crystal chandeliers illuminate the space with warmth, while wooden textures and sculpted stone walls add depth. The interiors blend grandeur with symmetry, crafting an atmosphere of elegance ideal for both celebration and sophisticated gatherings. Whether used for celebration or contemplation, the ambience is immersive—an orchestration of symmetry, reflection, and luxury. This is not just a space—it's an experience carved in elegance and framed in craft.



■ Room Type 1



■ Room Type 2

Design Concept of "Jugaad Junction"

Ar. Shiva Prasad Rath
Plan Arch Studios



■ Resturant Dinning Area

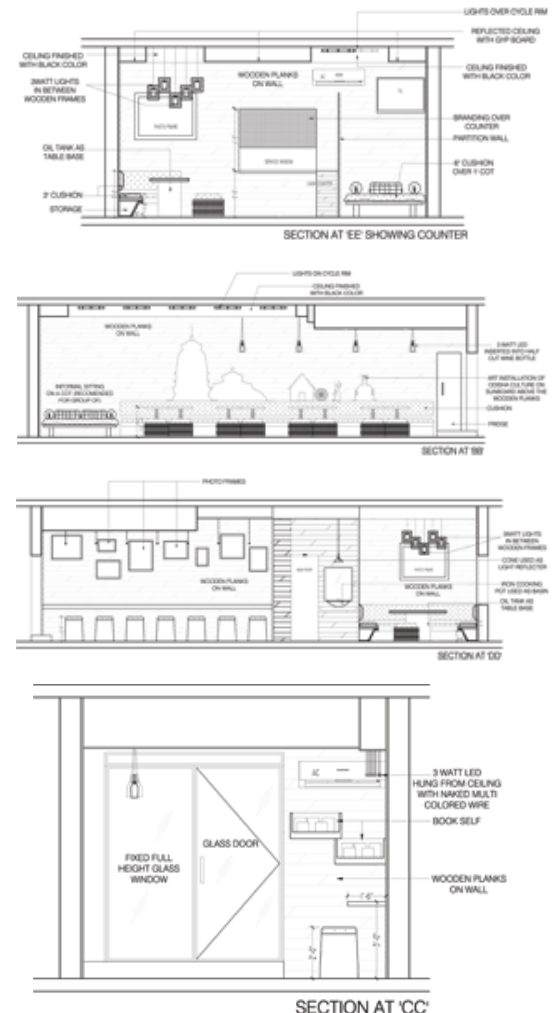


■ Ceiling Lights

The design of Jugaad Junction was conceived with the philosophy of doing more with less—an embodiment of the very spirit of **"jugaad"**. Located near KIIT Road, Patia, Bhubaneswar, the project was executed in 2012 with a very limited budget, where innovation and improvisation became the foundation of its character.

The entire restaurant interior thrives on the smart use of upcycled and repurposed elements. Old tree stumps were transformed into stools, discarded tyres became colorful cushioned seating, and glass bottles found new life as pendant lamps, creating a playful yet sustainable atmosphere. Bicycle wheels were reimagined as ceiling light installations, turning everyday objects into striking design features.

The walls carry silhouettes of rural and cultural life, narrating stories through simple cut-outs against bright yellow backdrops, infusing





*Front Cover Page Contributed by **Ar. Shiva Prasad Rath** and
Rear Cover Page Art work contributed by **Ar. Anshuman Mishra***