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INDIAN BUILDINGS CONGRESS

Legacy of Trust



Er. C. Debnath, President, Indian Buildings Congress

MESSAGE

Built Environment and Sustainable Construction

A Vision for a Resilient, Smart and Sustainable India

The built environment is a key driver of India's economic and social development. With rapid urbanisation and growing infrastructure needs, it is essential to adopt sustainable construction practices that balance development, environmental protection, resource efficiency and public well-being. Sustainable construction aims to minimise energy and water consumption, greenhouse gas emissions, resource depletion and construction waste throughout the life cycle of buildings and infrastructure. Key focus areas include:

1. Green and Energy-Efficient Buildings: Promoting climate-responsive design, natural lighting, energy efficiency and renewable energy.
2. Sustainable Construction Materials: Encouraging locally available, recycled and low-carbon materials, subject to technical suitability and safety standards.
3. Water Conservation: Adopting rainwater harvesting, wastewater recycling and efficient water management.
4. Waste Management: Ensuring segregation, recycling and responsible disposal of construction and demolition waste.
5. Digital Technologies: Promoting Building Information Modelling (BIM), digital twins and energy simulation to improve project efficiency, quality and cost control.
6. Climate Resilience and Disaster Risk Reduction: Designing safe and resilient buildings and infrastructure in accordance with applicable codes and standards.
7. Life-Cycle Costing: Emphasising durability, maintenance, operational efficiency and long-term value rather than focusing solely on initial construction costs.

Role of the Indian Buildings Congress (IBC): IBC can facilitate collaboration among government departments, engineers, architects, researchers, industry and academic institutions through technical seminars, capacity-building programmes, research, dissemination of best practices, development of guidelines and recognition of exemplary sustainable projects.

Action-Oriented Roadmap: The way forward involves implementing pilot projects, setting measurable performance indicators, monitoring outcomes and documenting successful practices for wider adoption across the country.

Conclusion: India must move towards a built environment that is sustainable, safe, affordable, resilient and inclusive. Through technological innovation, professional collaboration and effective implementation, the Indian Buildings Congress can contribute significantly to developing resource-efficient infrastructure while safeguarding the environment for future generations.

The vision is to build responsibly, efficiently and resiliently for generations to come.

Er. C. Debnath
President
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From Editor's Desk

"Price is what you pay. Value is what you get," Warren Buffet's often quoted statement in finance is true for today's built-environment projects in our country.

In consistency with our earlier themes, "Safety", " Standards and Quality", “Schedule and Time”, the current quarter theme transitions to a critical and multidimensional pillar "Cost and Value in Projects". Uncontrolled and unmonitored capital escalation and adversarial risk transfers remain common structural bottlenecks undermining bankability and straining both public and private resources. As emphasized earlier, quality, time and cost are the core co-dependent factors which guide life cycle of our built-assets. Contemporary market dynamics go beyond cost optimization and focus on value optimization, the fulcrum balancing capital expenditure, lifecycle durability and operational utility. Cost-overruns and value degradation are apparently the cumulative outcome of weakly managed/ supervised DPRs, deficient engineering briefs and cost analysis of non-scheduled components, mostly in MEP and asymmetric RFP conditions. Shifting risks on to contractors without fair financial provisions leads to prolonged disputes, compromised execution and delayed asset commissioning. In a nutshell these projects are not sustainable.

The scenario leads us once again to bring home the sense of urgency to effect factors like actual-market parity pricing, optimized design mandate within NBCS-2026 framework and philosophy, updating state SRs, employer's disclosure on land titles and encumbrances status, adopting a fair and equitable procurement practice e.g. paying for actual foundations based on "confirmatory" geotechnical investigation and high end equipment of superior specifications in RFP as mandated by client.

It is heartening to note that IBC HQ and state centres have been actively promoting the quarterly themes in various technical events, seminar and training programmes. The National Seminar on "Innovative Modern Eco-friendly & EQR construction Technology in A&N Island" conducted by Andaman State Centre on the 29th Aug'26 at Sri Vijay Puram opened up issues for deliberation and action like shipped construction materials from mainland, fragile ecosystem, limitation of height of building (3 St.), vulnerability to EQ (Z-V) and cyclones. This calls for paradigm shift in approach, technology and methodology for ensuring cost control and value in projects in the Islands. The Odisha State Centre in collaboration with BIS and with support of Government conducted a widely acknowledged national seminar on NBCS-2026 on the 19th Sept 2026 at Bhubaneswar. NBCS 2026 transforms the earlier prescriptive to a new safety and performance based regime. Tripura and other state centres of IBC have also conducted similar state and region-specific technical events. IBC's advocacy and sensitization roles will continue to propel the core themes as presented in the four quarters towards achieving the goals of Viksit Bharat by 2047.



(B.C.Tripathy)

From Cost to Value in Projects: What Should a Project Manager Really Measure?

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Abstract

Cost is one of the first things examined when the performance of a construction project is reviewed. The usual comparison is between the approved cost and the final expenditure. This is necessary for financial control, but it does not by itself tell us whether the project has created value. Additional expenditure may arise from escalation, statutory changes, essential infrastructure, design development, delay or rework, and each has a different meaning for the completed asset.

The observations presented in this paper are based on my professional experience of more than 25 years in project and construction management across large institutional, industrial, power and steel-plant projects, with the *Phase A development of the permanent campus of IIT Tirupati* serving as the principal case. The project comprised approximately 1.3 lakh m^2 of academic, hostel, residential and supporting infrastructure and was executed during a period of pandemic restrictions, major material-price escalation, labour and supply-chain difficulties and evolving requirements. The experience showed that cost changes need to be understood in relation to their ***cause, outcome and eventual benefit***. A practical Cost-to-Value approach is therefore proposed to help project managers distinguish necessary, value-creating, preventive and avoidable expenditure.

Introduction

Cost, time and quality are the conventional measures of construction project performance. Cost is often judged by comparing the final expenditure with the approved estimate. This is important for financial control, but it does not by itself explain project performance.

During execution, costs may increase due to market escalation, statutory changes, essential additions, design development or rework. All these increase cost, but they do not have the same meaning.

For a project manager, an increase in cost should not be looked at only as a higher number. The first question should be why the cost increased. The next question should be what the additional expenditure delivered to the project. It may have been necessary to keep the project on track, may have added a useful facility, may have prevented a larger problem later, or may simply have corrected something that should have been done right the first time.

The Phase A development of the permanent campus of IIT Tirupati provides the practical experience considered in this paper. The project was executed under significant pandemic, market and supply-chain constraints, while also involving extensive institutional and supporting infrastructure.

The purpose of this paper is not to present a project completion report, but to examine the practical relationship between cost, expenditure, outcome and value, and what a project manager should measure beyond the final project cost.



IIT Tirupati Campus Master Plan



Aerial View of Phase A Campus

Fig. 1: Campus Master Plan and representative Phase a development;

The Master Plan covers the approximately 548-acre permanent campus and provides the framework for phased development and future expansion.

Looking at Cost from a Project Manager's Perspective

Cost and value are related, but they are not the same. Cost is the resource consumed; value is what that resource delivers.

A simple way of looking at the relationship is:

NEED → DECISION → EXPENDITURE → OUTCOME → PERFORMANCE → VALUE

The same additional expenditure can therefore have different meanings. An increase caused by steel or fuel prices adds to project cost without necessarily adding physical scope. Expenditure on an additional water system may increase capital cost but provide an essential operational capability. Similarly, spending more at the design stage to resolve a utility interface may prevent much larger expenditure and disruption during construction.

This is why value engineering should not be understood only as reducing the initial estimate. A cheaper solution is not necessarily a better solution if it leads to higher maintenance, greater energy consumption, reduced durability or early replacement.

For practical project control, expenditure can be viewed under four broad heads:

Necessary cost – expenditure required because of legitimate or unavoidable conditions.

Value-creating cost – expenditure that adds capacity, functionality or performance.

Preventive cost – expenditure that reduces future risk, rework or lifecycle cost.

Avoidable cost – expenditure arising from errors, poor coordination, rework or late decisions.

These are not accounting categories. They are simply a way of asking a more useful question when reviewing a variation or revised provision.

What did the Additional Expenditure Actually Buy?

The IIT Tirupati Phase A experience provides a useful illustration.

The original contractual period was 26 months, while completion took place approximately 11.56 months later, equivalent to about 44.5% of the original planned duration. The execution period was affected by pandemic restrictions, labour mobilisation problems, supply-chain disruption, material-price escalation, design evolution and weather interruptions. Recorded material increases included approximately 40% for steel, 20–25% for cement and more than 50% for fuel.

The additional approved provision was approximately 13.3% of the original approved provision. When its principal components are examined, approximately 57% was associated with escalation and schedule-related effects, 16% with GST/statutory changes and 27% with additional drinking-water infrastructure.

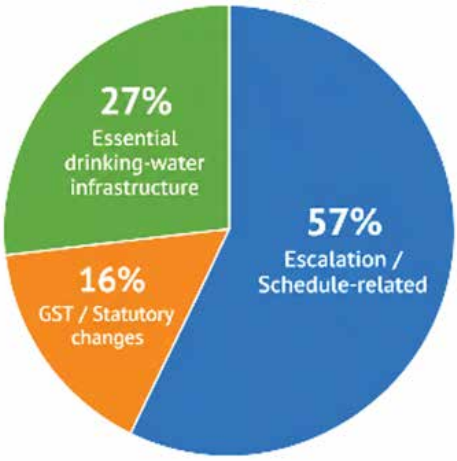

Fig. 2: Principal Composition of Additional Approved Provision

The escalation component largely represents the financial consequence of market conditions and extended execution. The statutory component represents an external financial impact. The additional drinking-water infrastructure, on the other hand, resulted in physical infrastructure that directly supported the functioning of the completed campus.

Putting all three into one basket and calling them "cost overrun" does not provide sufficient information to the project manager.

Value is seen in the Asset, not in the Bill

The real test comes after expenditure has been converted into an operating asset.

Phase A delivered around 1.3 lakh m² (1,32,329) m^2of institutional infrastructure. The completed development included approximately 1 MWp solar photovoltaic capacity, interconnected water bodies with about 81,000 kL storage capacity, about 710 KLD combined sewage-treatment capacity, treated wastewater reuse, around 12 km of internal roads and associated infrastructure, and district cooling.

These figures are important, but they are not the value by themselves. The value comes from what they enable.

Water storage and treatment improve water security and reuse. Solar generation provides renewable-energy capacity. District cooling provides an operating system intended to perform efficiently over its service life. Roads, drainage and external utilities are equally important because the buildings cannot operate as an integrated campus without them.

The relationship can therefore be expressed as:

CAPITAL EXPENDITURE → ASSET / SYSTEM → FUNCTION → PERFORMANCE → LIFECYCLE BENEFIT

This is where a project manager needs to look beyond physical completion. A building handed over with incomplete utilities, difficult maintenance access or unresolved interfaces may be technically complete but may not yet be delivering its intended value.

Another example is the widespread use of fair-faced concrete in Phase A. Unlike conventional construction, where concrete surfaces are subsequently covered with plaster and paint, fair-faced concrete makes the concrete itself the finished architectural surface. Achieving this required greater control over formwork, materials, workmanship and casting, including precision PERI formwork systems, 18-mm birch plywood shuttering surfaces and strict control of alignment, joints, tie-rod locations and panel continuity. Skilled teams were also given dedicated orientation and toolbox training for fair-finish concrete workmanship.

The additional execution discipline therefore had an immediate quality implication as well as a potential lifecycle benefit through reduced dependence on secondary finishing layers. In this case, higher execution effort was not simply additional cost; it was an investment in architectural quality and long-term maintainability.

The opposite situation was also visible through post-completion lessons. Coordination gaps between architecture, structure, MEP, drainage, horticulture and external development resulted in issues such as site-level mismatches, utility locations conflicting with pedestrian areas, irrigation affected by subsequent excavation and road-drainage coordination problems.

Where expenditure is required to correct such deficiencies, the owner receives little additional value.

An expenditure that adds a capability is different from an expenditure that merely restores a capability that should have been delivered correctly in the first place.

This distinction is important in deciding where project management effort should be concentrated.

The Cost-to-Value Lens for a Project Manager

The above experience suggests that cost-to-value assessment should not be left until the final account. It should be part of project decision-making.

In Phase A, this approach was supported by a layered project and Quality Assurance system rather than by cost monitoring alone. IIT Tirupati, CPWD, consultants, the Third-Party Quality Assurance (TPQA) agency and the contractor had defined roles, with major design, variation and financial decisions subjected to institutional review. TPQA inspection and non-conformance tracking were supported through the Q-SCAN platform. This combination of independent quality assurance, progress monitoring, bill certification and formal approval of major variations helped connect expenditure with quality and project outcomes.

The experience also reinforced that cost control is most effective when it is linked to quality control, progress monitoring and timely decision-making.

The same lens can be applied at different stages.

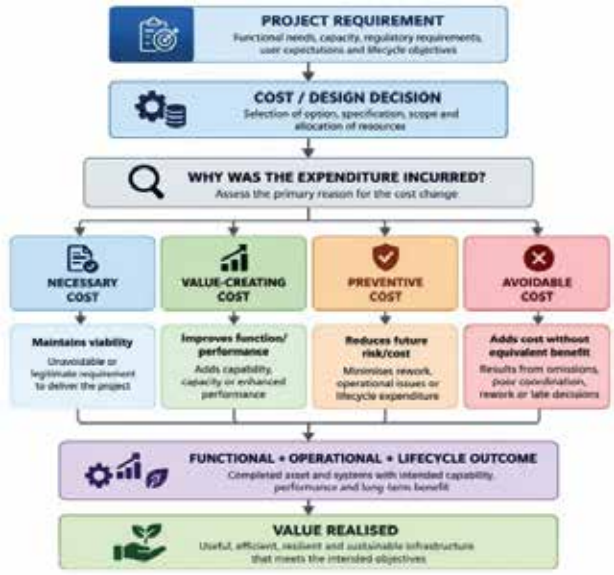

Fig. 3: Practical Cost-to-Value Assessment Framework

During planning, the intended project outcomes and major lifecycle requirements should be clear. During design, coordination between buildings, utilities, roads, drainage and external development becomes critical. Before tendering, interfaces should be sufficiently defined.

During construction, major variations should be examined for both cause and consequence. At completion, attention should move from expenditure to commissioning, functionality and operational readiness.

A variation review can therefore be reduced to four practical questions:

Why has the cost changed?

Was the change foreseeable?

What will the change deliver?

Does it create, preserve or merely restore value?

This approach also changes the purpose of lessons learned. Instead of merely recording that an item was added, the project team can ask whether it could have been identified earlier, whether the expenditure created a lasting benefit and what should be done differently in the next project.

The Phase A experience reinforces the need for stronger multidisciplinary coordination, BIM-based clash detection, integrated utility corridors, topography-based drainage planning and coordinated road, drainage and landscape design. These are examples of preventive value—effort spent early to avoid greater cost and disruption later.

What should a Project Manager really Measure?

A normal project dashboard tells us about cost, time, progress and quality. These remain essential. But they mainly tell us how the project is being delivered.

The project manager also needs to know what theexpenditure is achieving.

A useful measurement chain is:

COST → CAUSE → OUTCOME → VALUE

This shifts the evaluation model across three distinct tiers:

- **Delivery Performance :** Tracking traditional parameters like cost, schedule adherence, safety, and quality.
- **Asset Performance :** Measuring functional capacity, system reliability, energy efficiency, and ease of maintainability.
- **Value Realization :** Evaluating long-term operational benefits and lifecycle efficiency once the asset is occupied and running.

This distinction is particularly useful in public infrastructure. The owner ultimately receives a functioning asset, not a final account statement.

For a centrally funded institution such as IIT Tirupati, cost control also has a broader institutional meaning. The objective is not simply to keep expenditure below a sanctioned figure, but to ensure that public resources are converted into the academic, residential and infrastructure capacity required to fulfil the Institute's institutional mandate. IIT Tirupati was established as an institution of national importance under the Andhra Pradesh Reorganisation Act, 2014, with a mandate extending beyond physical infrastructure to technical education, research, innovation and national development.

In Phase A, formal approval of variations, independent quality assurance and continuous project monitoring helped maintain financial accountability while accommodating essential infrastructure and sustainability investments. Cost control therefore supported both responsible use of public resources and the creation of a functional permanent campus.

Cost control did not mean eliminating expenditure on sustainability; it meant directing expenditure toward systems capable of producing long-term institutional benefit.

The project's water systems treated wastewater reuse, solar generation, district cooling and ecological planning illustrate this approach. Sustainability was treated as part of the infrastructure itself rather than as an optional addition.

The objective is not to justify additional expenditure. It is to understand whether the expenditure produced the intended result.

Conclusion

Final project cost is an essential measure, but it is not a complete measure of project value. The IIT Tirupati Phase A experience shows that additional expenditure can have very different causes market escalation, statutory changes, essential infrastructure, design development or avoidable rework—and these should not be interpreted in the same manner.

For a project manager, cost control should therefore be complemented by cost-to-value management. Significant changes should be examined through their cause, necessity, outcome and eventual benefit.

The completed asset provides the final test. Infrastructure that improves functionality, capacity,

water security, energy performance, reliability and maintainability creates value when those benefits are realised during operation. Expenditure caused by preventable coordination failures or rework, on the other hand, provides an important lesson for improving future projects.

The central proposition is simple:

Cost is incurred when resources are committed; value is realised when those resources produce the intended function, performance and lifecycle benefit.

The question for the project manager therefore needs to move from:

"How much did we spend?" to: "What did we obtain for what we spent?"

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☆☆☆

Call for Papers – Built Environment (Oct-Dec, 2026 Issue)

Theme: Sustainability & Life-Cycle Performance

The forthcoming issue of Built Environment (BE), to be published in January, 2027, will focus on the above theme in the Built Environment, inviting reflections on life cycle performance influencing project delivery.

Submission Guidelines

- **Full Papers :** maximum 5 pages in A4, including text, formatting, figures, and references. Papers should present clear arguments with practical relevance, linking planning, execution, and outcomes. (Two papers maximum shall be chosen)
- **A3 Papers / Posters :** A3 size, 2 pages (centre spread, left–right flow). The paper should present one core idea as a continuous narrative from practice. Reproduction of codes, detailed procedures, and excessive data are not required. (Five papers maximum shall be chosen)
- **Content Focus :** practical, observational, analytical, contributions, with emphasis on lessons from practice and real project experience.
- **Deadline :** Dec 10, 2026

The Cost of Saving Cost
When Today's Savings Become Tomorrow's Expenses

Manoranjan Misra

Former Engineer-in-Chief & Special Secretary, Odisha

1. Introduction

Every construction project seeks to control expenditure. Estimates are scrutinised, tenders compared, specifications reviewed, and opportunities for savings explored. Lower project costs are often welcomed as evidence of economy and efficient management. Yet an important question is seldom asked: **Does every reduction in expenditure represent a genuine saving?**

A saving made during design or construction may reappear later as increased maintenance, higher energy consumption, premature deterioration, reduced functionality, or costly replacement. The immediate reduction is visible in the project budget, while its consequences may remain hidden for years. Cost saving is therefore not merely a matter of spending less. It is a matter of understanding what is being saved, what is being sacrificed, and who will ultimately bear the consequences. A project may become cheaper to construct without becoming more economical to own or operate.

2. Cost Savings Across the Project Life Cycle

Opportunities for reducing expenditure arise throughout the life cycle of built environment assets. Their consequences, however, are not always confined to the stage at which the decisions are made.

- During PLANNING, selecting a cheaper site without adequately considering ground conditions, access, drainage, or utility requirements may lead to substantial additional expenditure during development and operation.
- During DESIGN, reducing structural provisions, eliminating essential facilities, or selecting less durable materials solely to meet a budget may increase future maintenance, rehabilitation, or replacement requirements. Design optimisation, however, can achieve genuine savings when safety and performance are preserved.
- During PROCUREMENT, accepting the lowest initial price without sufficient attention to quality, technical capability, maintainability, and delivery reliability may introduce risks that exceed the apparent financial advantage.
- During CONSTRUCTION, reducing expenditure on supervision, quality assurance, testing, workmanship, or preventive safety measures can lead to defects, rework, accidents, interruptions, and additional costs.
- During OPERATION & MAINTENANCE, postponing inspections, repairs, waterproofing, protective treatments, or equipment servicing may provide immediate budgetary relief but accelerate deterioration and increase future rehabilitation expenditure.

The common issue is not cost reduction itself. It is the failure to recognise the longer-term consequences of decisions taken to achieve immediate savings.

3. When Savings Become Additional Costs

A building constructed with inadequate attention to waterproofing may require repeated repairs, damage restoration, and disruption to occupants. A road with insufficient drainage or unsuitable pavement provisions may deteriorate prematurely, demanding frequent maintenance and rehabilitation. A bridge whose protective systems are neglected may develop corrosion and deterioration requiring costly intervention. An air-conditioning system selected primarily for its lower purchase price may consume substantially more energy throughout its operating life.

In each situation, the initial saving is easily identified, while the subsequent costs are distributed across different years, budgets, departments, and stakeholders. The agency responsible for construction may receive recognition for completing an asset below budget, while the agency responsible for operation inherits higher recurring expenditure. Users may experience reduced serviceability, inconvenience, or interruptions that never appear in the original project accounts.

The apparent saving is therefore not necessarily eliminated expenditure. It may simply be expenditure transferred from construction to maintenance, from the present to the future, or from the project owner to society.

4. Sound Cost Decision :Saving Cost without Sacrificing Value

The objective should not be to discourage cost savings. Unnecessary expenditure, overdesign, material waste, inefficient processes, avoidable delays, and excessive resource consumption must be identified and reduced. Genuine economy improves efficiency without compromising essential functions, safety, quality, durability, or performance.

Value Engineering provides a structured approach to examining functions and identifying alternatives that achieve required performance at an appropriate cost; ensuring the comparison beyond initial expenditure to include operation, maintenance, replacement, and disposal. Lean practices help reduce waste, waiting, rework, and unnecessary activities that consume resources without contributing corresponding value.

Procurement decisions should also consider technical suitability, reliability, maintenance requirements, and whole-life implications rather than initial price alone. During operation, timely preventive maintenance can avoid more expensive corrective interventions.

The essential distinction is between eliminating unnecessary cost and eliminating necessary provision. The former creates efficiency; the latter may compromise the very purpose for which the asset was created.

A sound cost decision therefore asks not only how much can be saved today, but also what consequences that saving may create tomorrow.

5. Conclusion

Savings should be judged by their contribution to the overall performance and life-cycle economy of the asset, not merely by the immediate reduction in the construction budget. A lower initial cost is beneficial when it results from better planning, improved design, efficient procurement, reduced waste, or increased productivity. It becomes questionable when achieved by transferring expenditure, risks, or performance deficiencies to future stages.

The real measure of economy is therefore not simply how little is spent, but how wisely resources are used to deliver and sustain the intended benefits.

Every rupee saved is not necessarily a saving.
A saving is meaningful only when it reduces the overall cost without diminishing the value the asset is meant to deliver.

Congratulations

Indian Buildings Congress congratulates Er. C. Debnath, President, IBC on receiving the "Engineer of the Year - 2026" Award instituted by The Institution of Engineers (India), Tripura State Centre, in recognition of his outstanding contribution to the development of the state.



Dr. Manik Saha, Chief Minister of Tripura presenting "Engineer of the Year - 2026" Award to Er. C. Debnath, President, IBC

Strategic Master Check list for Estimating Tall Building Projects (>50m Height) at DPR Stage

This checklist establishes a technical, operational, and fiscal filter for the preparation and evaluation of estimates in DPR stage for tall buildings exceeding 50 metres in height aligned with the NBCS 2026, CPWD Guidelines, IS 16700-2023 (Tall Building Design), IS 17900-2022/2025 (Mandatory Elevator Safety Lift Code), ECBC/ ECBSC and MoEFCC/NDMA mandates. Only critical points are covered.

1. **Planning, Permissions, and Statutory Approvals**
   - **Aviation Clearance (NOC from AAI) :** Estimate fees for online NOCAS application; verify top-of-structure elevation limits (including lightning arrestors, water tanks, and lift machine rooms).
   - **Environmental Clearance (MoEFCC Mandate) :** Verify that Category B projects (built-up area more than 20,000 sqm include budgeting for an Environmental Impact Assessment (EIA), expert appraisal committee fees, and baseline seasonal environmental studies.
   - **High-Rise Committee Approval :** Ensure state/municipal High-Rise Committee presentation fees, structural peer-review charges, and mandatory traffic impact analysis (TIA) study modeling costs are integrated.
   - **Fire NOC (Chief Fire Officer - CFO) :** Allocate costs for structural fire strategy validation, hydraulic flow calculations, and provisional NOC processing.
   - **Municipal Services Assurances :** Confirm explicit cost provisions for obtaining municipal bulk water supply, water-booking assurances, power distribution company (DISCOM) connectivity, and drainage disposal connectivity, city sewerage connection.
2. **Geotechnical Investigation and Foundation Decisions**
   - **Borehole Density & Depth Integrity :** Verify that borehole layout meets IS 16700-2023 and IS 1892 requirements (minimum grid distribution covering the footprint; depth penetrating at least 1.5 times the raft width or extending minimum 5m into sound rock).
   - **Advanced Testing Parameter Costing :** Ensure the estimate includes specialized soil dynamic tests: Cross-hole/Down-hole seismic tests for dynamic shear modulus pressure meter tests, and cyclic triaxial tests to establish the soil-structure interaction (SSI) model.
   - **Confirmatory Boring Provisional Lock :** Replace the predatory "confirmatory soil trap" with a fixed, quantity-linked provisional item rate for foundation modifications, avoiding unilateral risk-shifting to bidders.
   - **Excavation & Shoring Sub-System Budgeting :** For deep basements, explicitly budget for diaphragm walls, contiguous/soldier piles, multi-level rock anchors or strutting systems, and deep-well continuous dewatering systems.
   - **Raft and Deep Foundation Elements :** Include trial pile testing as per IS-2911 pt-4: pour setups (such as low-heat fly-ash blended cement mixes to prevent thermal cracking per IS 456), high-capacity bored cast-in-situ piles, pile integrity testing (PIT), and high-tonnage cross-directional sonic pile load tests.
   - **Estimate for combined piled raft foundation (CPRF) as per IS-19117 :** 2025.
3. **Structural Design (Conforming to IS 16700-2023 & NDMA Frameworks)**
   - **Structural System Selection Compliance :** Verify that the lateral force-resisting system (e.g., Structural Wall Systems, Core-Frame Systems, or Tube Systems) complies with height limits imposed by IS 16700-2023 based on Seismic Zones (Zone III, IV, V).
   - **Wind Tunnel Testing Modeling :** For buildings in more than 150m height, or shapes with significant aerodynamic irregularities as per IS 875 (Part 3), budget explicitly for physical scale-model boundary layer wind tunnel testing.

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- **Structural Steel & Concrete Grades :** Consider the base estimates on minimum concrete grades of M50/M60 and above for vertical columns/shear walls, and high-strength reinforcing steel (Fe 550D/Fe 600 conforming to IS 1786 seismic ductility criteria).
- **Serviceability and Drift Control Mitigation :** Allocate costs for structural elements designed to meet wind and seismic drift limits (H/500). Budget for auxiliary dampening systems (e.g., Tuned Mass Dampers - TMD) if acceleration thresholds exceed NDMA human comfort limits.
- **Progressive Collapse Prevention :** Ensure structural framing itemizes additional structural tie-bars, beam-column joint detailing, and redundant load paths to mitigate progressive collapse from localized extreme failure events.
- Estimate for structural health monitoring system including settlement, pressure etc.

4. Finishing items

- High-Performance External Facades & Curtain Walls: Explicitly cost structural glazing/curtain walls tested for dynamic water penetration and air infiltration under structural pressure limits matching local wind velocity zones.
- Lightweight Internal Partition Systems: To lower structural dead load, replace traditional clay brickwork estimates with lightweight options, such as Aerated Autoclaved Concrete (AAC) blocks or gypsum drywall systems with acoustic insulation inserts.
- Fire-Rated Internal Assemblies: Incorporate strict pricing for 2-hour fire-rated doors along escape stairwells, fire-rated sealing compounds for MEP shaft penetrations, and non-combustible Class A internal wall finishes.
- Anti-Carbonation & Protective Coverings: Budget for high-durability elastomeric anti-carbonation external paints to protect reinforced concrete elements from atmospheric degradation over extended lifecycle horizons.

5. Windows to Withstand Cyclones (Coastal/High-Wind Zones)

- **Estimate for Class 5 / Grade 5 window systems in conformity with IS-18648 :** 2024 and IS-1948: 2024 for high gust resistance and water tightness, reduced air permeability and noise.
- **Wind Pressure-Engineered Frame Profiles :** Ensure window profiles (Aluminum or heavy-duty uPVC) are estimated based on structural wind pressure calculations derived from the location's basic wind speed per IS 875 (Part 3).
- **Laminated Safety Glass Configuration:** Mandate structural budgeting for double-glazed units (DGU) featuring outer toughened glass and inner laminated safety glass layer to resist high-velocity wind loads and flying debris impacts without catastrophic failure.
- **Heavy-Duty Hardware and Anchoring Matrix :** Price specialized multi-point locking systems, heavy-duty friction stays, and extended structural anchor fasteners to prevent window frames from detaching under negative wind suction forces at upper elevations.
- **Water Tightness Performance Testing :** Ensure project cost estimates include mandatory prototype field chamber testing or factory mock-up testing (air, water, and structural stability parameters).\

6. Mechanical & Electrical Subsystems

- **Power Distribution Architecture :** Design and budget for dual high-voltage (11 kV or 33 kV) incoming feeds, dedicated oil-filled or dry-type transformers, and sandwich-buspoint rising mains running vertically down the core.
- **Emergency Backup Generation (DG Sets) :** Budget for automated synchronized AMF (Auto Mains Failure) DG sets capable of supporting 100% of emergency operations (fire pumps, lifts, pressurization fans, public address systems) with at least 8 hours of baseline fuel storage.

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- **IS 17900-2022/2025 Compliant Vertical Transportation (VT) :** All passenger and service elevator lines must be budgeted with an additional 12%–15% cost factor to integrate mandatory safety controls:
  - Unintended Car Movement Protection (UCMP) and Ascending Car Overspeed Protection (ACOP).
  - 1000-Newton force resistant laminated/toughened glass lift shafts and car doors.
  - Integrated Automatic Rescue Devices (ARD) and minimum 1-hour emergency car battery backup backups.
  - Shaft and pit emergency lighting installations delivering ≥ 50 lux operational lighting.
- **Energy-Efficient HVAC System Optimization :** Balance equipment estimates against ECBC/ENS requirements. For central HVAC systems, detail variable speed water-cooled chillers, smart VAV boxes, and specialized dedicated outdoor air systems (DOAS) with heat recovery wheels, mandatory in dependent thermal zoning.

7. Water Supply (Internal and External)

- Estimate for water efficient fittings to reduce demand to 100 lpd per head (from 135 lpd).
- **Hydro-Pneumatic Pumping Sub-Systems :** Replace traditional overhead gravity drop lines with multi-stage variable frequency drive (VFD) hydro-pneumatic pumping stations to maintain consistent flow pressure across all vertical zones.
- **Pressure Reducing Station Zoning :** To avoid structural pipe failures from excessive static pressure, budget for pressure reducing valves (PRVs) splitting the building vertically into distinct hydraulic pressure zones (typically every 10–12 floors).
- **Advanced Centralized Treatment Filtration :** Budget for comprehensive raw water treatment plants (WTP) featuring filtration, softening, and ultrafiltration (UF)/reverse osmosis (RO) systems based on deep-well chemical water assessments.
- **Dual-Piping Plumbing Infrastructure :** Integrate a separate dual-piping framework to isolate potable supply lines from treated recycled greywater lines (used for flushing and landscape irrigation) to satisfy environmental clearance mandates.

8. Sewerage

- **High-Velocity Drainage Acoustic Piping :** Incorporate heavy-duty, noise-dampening polypropylene (PP-3 Layer) or solid-wall PVC drainage lines configured with specialized aerator fittings (e.g., Sovent systems) to control terminal velocity drops inside single-stack high-rise drainage lines.
- **Sub-Grade Drainage Pumping Collection :** Detail dedicated sewage sump pits equipped with dual, alternating submersible grinder pumps located within subterranean basement floors to lift waste up to municipal invert elevations.
- **Packaged Sewage Treatment Plant (STP) :** Budget for an on-site STP utilizing advanced Moving Bed Biofilm Reactor (MBBR) or Membrane Bioreactor (MBR) technologies. The treated effluent quality must meet strict local pollution control board parameters.

9. Fire Fighting Provisions

- **Dedicated Large-Scale Fire Storage Reservoirs :** Budget for massive, split-compartment underground static water storage tanks coupled with dedicated rooftop holding tanks sized exactly to high-rise risk classifications.
- **High-Pressure Pumping Array :** Include detailed estimates for main electric-driven fire pumps, standby diesel-engine driven pumps, and smaller jockey stabilization pumps, with fire line ratings exceeding 14–24 kg/cm2pressure limits.

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- **Automatic Fire Sprinkler & Wet Riser Network :** Detail comprehensive coverage with wet risers, landing valves, first-aid hose reels, and quick-response automatic sprinkler heads distributed throughout all functional zones and parking basements.
- **Smoke Extraction & Stairwell Pressurization :** Budget for dedicated high-volume centrifugal fans to pressurize internal escape stairs, lift shafts, and fire lobbies, preventing smoke infiltration during evacuation.
- **External Fire Fire-Fighting Access Overlays :** Include budget allocations for reinforced external peripheral ring-road pavements (designed to handle heavy fire-tender axle weights up to 45–60 tonnes) and clear, unhindered fire-refuge balconies every 24–30 metres vertically.
- Estimate for helipad for building above 200 m height and its associated impact on structural design and cost.

10. Building Management System (BMS)

- **Central Control Integration Platform :** Estimate a high-speed, open-protocol (BACnet/Modbus) central BMS terminal capable of monitoring mechanical, electrical, plumbing, and fire safety sub-systems.
- **Smart Energy Metering Arrays :** Line-item cost allocations for digital multi-function energy meters positioned at every distribution board, chillers, and tenant interface to log precise sub-system energy patterns.
- **HVAC Variable Optimization Loop :** Incorporate programmable controllers, temperature/ humidity sensors, advanced monitoring probes for fresh-air regulation, and automated motorized butterfly valves to optimize variable chiller loops.

Real-Time Fault Detection System : Budget for automated alarm diagnostic software that monitors pump operations, trip statuses, water tank elevations, and ventilation runtimes

11. Building Information Modeling (BIM)

- **Mandatory 4D & 5D Spatial Planning Modeling :** Specify the requirement for generating a project model at LOD 400 (Level of Development) to run comprehensive spatial clash-detection across structural frames, structural glazing, and multi-layered MEP routings before field mobilization.
- **As-Built Operations Asset Integration (6D BIM) :** Budget for transforming the final construction file into an asset-tagged Asset Information Model (AIM) populated with OEM equipment data sheets, testing metrics, and maintenance intervals for direct handoff to property operations.

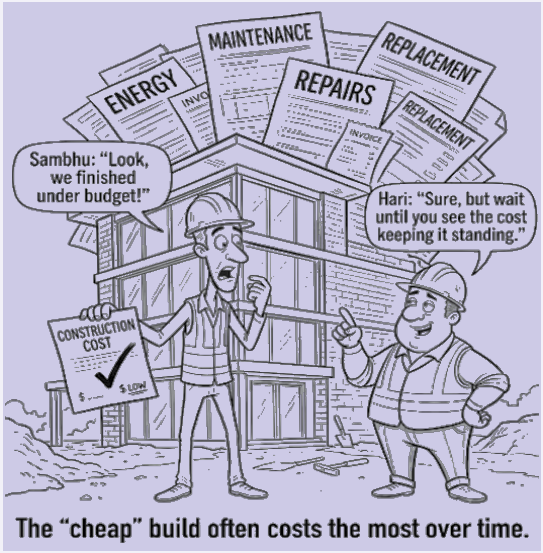
12. External Building Services & Other Relevant Components

- **Dedicated Main Electrical Substation Yard :** Estimate the capital outlay for constructing an on-site electrical substation yard, including structural foundations, outdoor/indoor vacuum circuit breakers (VCB), and safety fencing.
- **High-Velocity Building Maintenance Units (BMU) :** High-rise configurations require dedicated structural budgets for roof-mounted telescopic crane BMUs or monorail cradle tracking installations for façade cleaning, repair, and wind-load stability.
- **Comprehensive Site Stormwater Network :** Detail an external drainage collection layout complete with rainwater harvesting pits, artificial desilting chambers, and high-capacity storm collection reservoirs matching local historical rainfall patterns.
- **Comprehensive Structural Health Monitoring (SHM) :** For iconic or structurally complex frames height, budget for a permanent array of structural health instruments (including digital accelerometers, vibrating-wire strain gauges, and tilt meters) to monitor long-term building response against seismic vibrations and wind vectors.

Compiled by Editorial Team, BE, IBC

Cost – The Measurable Investment

Cost is a fundamental dimension of every built environment project. It represents the financial resources required to plan, design, construct, operate, maintain, and eventually renew or retire an asset. Unlike time, which passes continuously, cost is expressed in monetary terms and can be estimated, allocated, monitored, and controlled. Yet the expenditure recorded in accounts is only one dimension of the economic consequences of project decisions.



The "cheap" build often costs the most over time.

During pre-construction, cost is influenced by project scope, design choices, specifications, estimates, and budgets. During construction, procurement, productivity, resource utilisation, variations, risks, and delays determine actual expenditure. During operation and maintenance, energy consumption, repairs, replacements, and asset performance continue to generate costs. Cost therefore extends beyond the construction contract and must be understood across the asset life cycle.

Cost in built environment projects can be understood through the following key aspects:

1. **Direct and Indirect Cost –** Direct costs arise from identifiable work activities, materials, labour, and equipment. Indirect costs support overall project delivery, including supervision, administration, temporary facilities, and financing.
2. **Planned and Actual Cost –** Estimates and budgets establish financial expectations, while actual expenditure reflects execution realities. Variations reveal the influence of changing conditions, decisions, productivity, and resource utilisation.
3. **Capital and Recurring Cost –** Initial investment creates the asset, while operation, maintenance, repair, and replacement generate continuing financial commitments throughout its service life.
4. **Cost of Time and Waste –** Waiting, rework, idle resources, poor coordination, and prolonged project durations consume money without necessarily creating corresponding progress or benefit.
5. **Whole-Life Cost –** Design, construction, operation, maintenance, and eventual disposal must be considered together. A lower initial expenditure may lead to substantially higher costs over the asset's useful life.

Cost management is therefore not confined to estimating expenditure or controlling budgets. It begins with decisions that determine how efficiently resources are converted into lasting project outcomes.

Cost is measured in currency, but shaped by decisions.

What we spend today influences what we must spend tomorrow.

(Concept & framework articulation : Manoranjan Misra, Former E-in-C & Spl. Secy, Govt. of Odisha)

Value – The Realised Benefit

Value represents the usefulness, performance, and benefits that a built environment asset delivers to its stakeholders. While cost measures resources consumed, value reflects what those resources achieve. A building, road, bridge, or public facility creates value not merely through its physical completion, but through its ability to serve intended purposes reliably, safely, efficiently, and sustainably.



During pre-construction, value begins with identifying needs, defining functions, and understanding stakeholder expectations. During construction, design integrity, workmanship, quality, and timely delivery influence the benefits ultimately realised. During operation and maintenance, value is experienced through serviceability, reliability, accessibility, resilience, and user satisfaction. Value therefore develops across the entire asset life cycle and may differ among owners, users, operators, and society.

Value in built environment projects can be understood through the following key aspects:

1. **Function and Purpose –** Value begins with fulfilling the intended purpose of an asset. A facility that does not adequately serve its users cannot deliver its expected value, regardless of its construction cost.
2. **Quality and Performance –** Safety, durability, functionality, reliability, and serviceability determine how effectively an asset performs and sustains its intended benefits.
3. **Stakeholder and Social Benefit –** Owners, occupants, users, operators, and communities experience value differently. Accessibility, convenience, public welfare, and economic opportunities extend value beyond financial returns.
4. **Sustainability and Resilience –** Energy efficiency, resource conservation, environmental responsibility, adaptability, and resistance to future hazards help preserve benefits for present and future generations.
5. **Whole-Life Value –** The true benefit of an asset emerges through its useful life. Long-term performance, maintainability, adaptability, and service continuity may outweigh apparent advantages in initial expenditure.

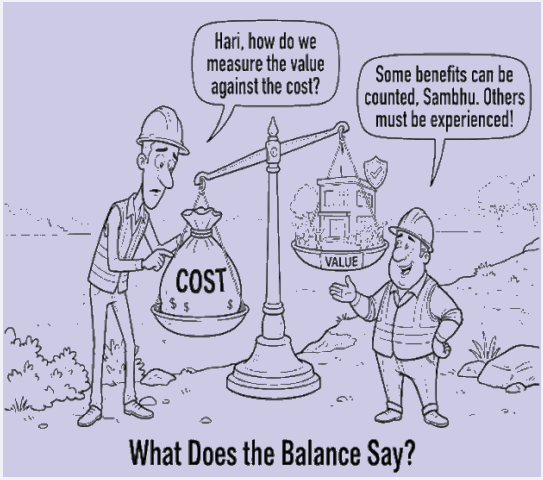
Value cannot always be expressed in monetary terms. Some benefits are measurable, while others are experienced through safety, comfort, reliability, environmental quality, and public well-being.

Cost tells us what resources have been consumed.

Value tells us what those resources have achieved.

Cost & Value – The Relationship

Cost and value are closely related, but they are not interchangeable. Cost represents the resources invested in creating and sustaining an asset, while value represents the benefits obtained from that investment. A project may be completed within budget yet fail to deliver its intended purpose. Conversely, additional expenditure may be justified when it produces greater durability, performance, resilience, or long-term benefit.



What Does the Balance Say?

During pre-construction, the relationship is shaped by decisions on scope, design, specifications, and investment priorities. During construction, resource efficiency, quality, productivity, and change management influence both expenditure and outcomes. During operation and maintenance, the relationship becomes increasingly evident as recurring costs are weighed against service performance and benefits realised. Understanding this relationship requires looking beyond immediate expenditure.

Cost and value interact through the following key aspects:

1. **Investment and Benefit –** Cost represents the resources committed; value represents the benefits expected or realised. Sound decisions consider both, rather than treating expenditure as an isolated measure.
2. **Price and Performance –** The lowest price does not necessarily deliver the best performance. Durability, reliability, safety, and functionality must be considered alongside initial financial commitments.
3. **Economy and Effectiveness –** Economy seeks to minimise resource consumption; effectiveness concerns achievement of intended outcomes. Meaningful value requires an appropriate balance between the two.
4. **Short-Term and Long** - Term – Immediate savings may increase future maintenance, energy, replacement, or rehabilitation costs. Whole-life assessment helps reveal consequences that initial budgets cannot capture.
5. **Decisions and Outcomes –** Every design, procurement, construction, and maintenance decision influences both cost and value. Their relationship must therefore be assessed throughout the asset life cycle.

Cost reduction can improve value when unnecessary expenditure is eliminated without compromising essential functions. However, reducing expenditure at the expense of safety, quality, or performance may destroy more value than it saves.

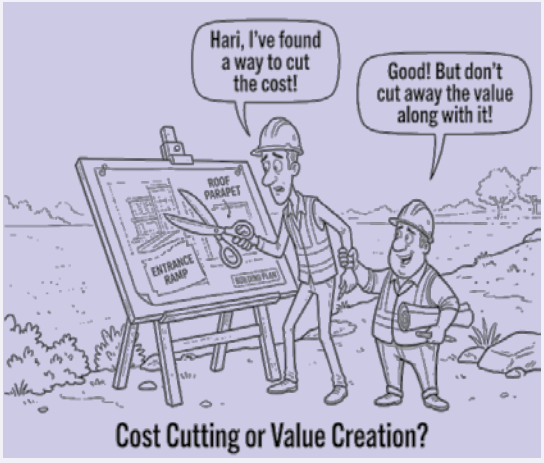
Cost and value are not opposing objectives.

The challenge is to use resources wisely while

preserving and enhancing the benefits they are intended to create.

Cost & Value – The Interpretation

From Cost Control to Value Creation



Traditional project management has often treated cost as a financial target to be achieved through estimates, budgets, expenditure monitoring, and corrective action. These remain essential disciplines. However, completing a project within budget does not necessarily establish that the investment has delivered its intended benefits. Cost performance and value realisation must therefore be considered together.

During pre-construction, informed choices about scope, design, alternatives, and whole-life implications establish the foundation for value. During construction, integrated planning, reliable workflow, productivity, quality assurance, and cost monitoring influence delivery efficiency. During operation and maintenance, actual asset performance reveals whether the original investment continues to justify its costs. Modern approaches increasingly connect these stages rather than treating them as separate financial responsibilities.

The changing interpretation of cost and value can be understood through the following key aspects:

1. **From Estimation to Forecasting –** Cost planning increasingly combines historical information, current performance, uncertainty, and emerging risks to support timely decisions rather than merely record expenditure.
2. **From Cost Control to Integrated Performance –** Earned Value Management connects cost, schedule, and accomplished work, helping assess whether expenditure and progress remain aligned with project expectations.
3. **From Cost Reduction to Value Engineering –** The objective shifts from indiscriminate savings to achieving required functions and performance with the most appropriate use of resources.
4. **From Construction Budget to Whole-Life Thinking –** Life-cycle costing, maintainability, sustainability, and asset management extend financial evaluation beyond project completion.
5. **From Reactive Decisions to Intelligent Optimisation –** Lean practices, digital information, predictive analytics, and AI can support earlier identification of waste, emerging cost pressures, and opportunities for improvement.

These approaches do not replace professional judgement. They strengthen the ability to understand the consequences of decisions before costs accumulate or benefits are compromised.

Cost control protects the budget. Value creation protects the purpose of the investment.

SUCCESSFUL PROJECTS MUST ACHIEVE BOTH

IBC NEWS

I. IBC HQ

Proceeding of the Mid Term Session and National Seminar on "Services in High Rise Buildings"

Inaugural Session



Dignitaries on Dais

The Mid Term Session & National Seminar on **"Services in High Rise Buildings"** was jointly organised by IBC Chandigarh Centre andHaryana State Centre on 25th-26thJuly 2026 atSector 10, HotelMountview, Chandigarh.Ms Prerna Puri, IAS, Secretary Engineering Department, Chandigarh was the Chief Guest and dignitaries were given grand welcome. The Session was inaugurated by Ms Prerna Puri, IAS, Secretary Engineering Department, Chandigarh.

Er. Chinmay Debnath, President, IBC; Er. C.B. Ojha, CE-cum-Spl. Secretary, Chandigarh Administration andVice President & Chairman Chandigarh Centre, IBC; Er. O.P. Goel, Former DG, CPWDand Founder President, IBC; Er. Anil Kumar Dahiya, Engineer-in-Chief (Bldg.)-cum-HoD, Haryana PWD (B&R) and Chairman, IBC Haryana State Centre; Er. Shiv Kumar Kukreja, Executive Engineer, CITCO and Hony. Secretary, IBC Chandigarh Centre; Er. Harpal Singh, Chief Engineer Haryana PWD (B&R) and Hony. Secretary, IBC Haryana State Centre and Col. (Dr.) Anand Mathialagan, Hony. Secretary, IBC were on the dais.

The Inaugural Sessioncommenced with lighting of Ceremonial lamp by the Chief Guest, Ms. Prerna Puri, IAS, Secretary Engineering Department, Chandigarh.



Lighting of Ceremonial Lamp by the Chief Guest, Ms Prerna Puri, IAS, Secretary Engineering Department, Chandigarh



Er. C.B. Ojha, CE-cum-Spl. Secretary, Chandigarh Administration and Vice President, IBCdelivering the Welcome Address

All the dignitaries on the dais also joined the Chief Guest in lighting of Ceremonial Lamp.Ganesh Vandana and IBC Geet followed.

The Proceeding started with the Welcome Address byEr. C.B. Ojha, CE-cum-Spl. Secretary, Chandigarh Administration andVice President & Chairman Chandigarh Centre, IBC. He welcomed Ms Prerna Puri, IAS, Secretary Engineering Department, Chandigarh, Chief Guest; Er. C. Debnath, President, IBC; Er. O.P. Goel, Former DG., CPWD &Founder President, IBC; Er. Anil Kumar Dahiya, Engineer-in-Chief (Bldg.)-cum-HoD,Haryana PWD (B&R) and Chairman, IBC Haryana State Centre; Er. Harpal Singh, Chief Engineer Haryana PWD (B&R) and Hony. Secretary, IBC Haryana State Centre; Er.Shiv Kumar Kukreja, Executive Engineer, CITCO and Hony. Secretary, IBC Chandigarh Centre, Col. (Dr.) Anand Mathialagan (Retd.) and Hony. Secy., IBC; Er. Ranjit Singh, Executive Director, IBC and all other dignitaries on the dais and off the dais who have come from different parts of the country. He also welcomed the Chairmen, Hony. Sectaries and members of various state centres who have joined physically and online in the seminar. He described about the Technical Seminar on "Services in High Rise Buildings" which is to be very useful for all professionals and engineers working in this field.



Ms Prerna Puri, IAS, Secretary Engineering Department, Chandigarh addressing the Gathering

The Chief Guest of Inaugural Session, Ms. Prerna Puri IAS, Secretary Engineering Department, Chandigarhwelcomed Er. C. Debnath, President IBC; Er. C.B. Ojha, Chairman IBC Chandigarh Centre and Vice President, IBC; Er. Anil Kumar Dahiya, Chairman, Haryana State Centre, IBC; Er. O.P. Goel, Founder President, IBC; Col. (Dr.) Anand Mathialagan, Hony. Secy., IBC and distinguished engineers.

She started her address that when we talk about construction, we often think in terms of cement, steel, blueprints, and physical labour. But construction is never just about creating physical structures—it is about laying the foundation for human connection, economic progress, and society itself. Infrastructure does far more than span across rivers or stand tall against the skyline; it bridges distances between people, cultures, and opportunities, serving as the quiet backbone of daily life.To understand the true spirit of construction, we must look at how we view our purpose through our work.

There is a classic story about three bricklayers working at a construction site. When asked what they were doing, the first replied with frustration that he was merely laying bricks. The second answered that he was building a wall. But the third looked up with pride and said, "I am building a school." All three were performing the exact same physical task, yet their perspective changed everything. The first saw routine labour, the second saw a physical structure, but the third saw the future—a place where children would learn, grow, and shape the nation. Whatever role we play in building infrastructure, we must remember that we are never merely laying bricks; we are building the future of our society.

This power of infrastructure to unite and transform is visible in modern engineering marvels like the Chenab Bridge. Suspended high above the riverbed in Jammu and Kashmir, this giant steel arch stands even taller than the Eiffel Tower. To a casual observer, it might look like an enormous iron monster cutting through a rugged valley. Yet what it represents is far deeper: it connects once-isolated regions to the rest of the nation, bringing healthcare, education, trade, and economic accessibility to communities that needed them most. It is not just an achievement of civil engineering, but a vital life-line that links human lives.

With such important responsibility comes a deep need for vigilance and immediate action. We can draw enduring inspiration from the legendary engineer, Bharat Ratna Sir M. Visvesvaraya. During an inspection of a dam that had developed a leak, the on-site engineers tried to reassure him, mentioning that they conducted their routine inspections every morning and would address the issue then. Sir Visvesvaraya stopped them and remarked, "If the leak does not sleep at night, how can we sleep at night? Fix it now!" That relentless sense of duty, knowing that public safety and society's trust depend on our immediate dedication; is the standard we must carry forward.

Whether we are engineers, administrators, project leaders, or workers on the ground, every structure we design and build is an opportunity to serve the public

good. Construction, at its highest level, is the physical embodiment of human ambition and care. When we approach our work with the visionary mindset of the third bricklayer, the bold ambition of the builders of the Chenab Bridge, and the unyielding sense of responsibility of Sir Visvesvaraya, we do far more than assemble raw materials—we build a stronger, more connected, and resilient nation.



Er. Anil Kumar Dahiya, Engineer-in-Chief (Bldg.)-cum-HoD, Haryana PWD (B&R) and Chairman, IBC Haryana State Centre addressed the gathering



Preliminary Publication, Built Environment & Souvenir being released by the Chief Guest

To mark the occasion, the Chief Guest, Ms Prerna Puri, IAS, Secretary Engineering Department, Chandigarh released the compendium of technical papers selected for the Seminar named as 'Preliminary Publication'; Quarterly Magazine of IBC named as 'Built Environment'and the Souvenir of the event.

Er. C. Debnath, President, IBC while addressing the gatheringmentioned that the Roads and Buildings Department, Govt. of Chandigarh (Institutional members of IBC) jointly with Indian Buildings Congress, Chandigarh Centre organised Mid Term Session and National Seminar on "Services in High Rise Buildings" of IBC on 25-26July, 2026 at Chandigarh and114th Governing Council Meeting of IBC on July26, 2026.



Er. C. Debnath, President, IBC addressing the Gathering

He said that the seminar will bring together engineers, architects, researchers, students and professionals related to Built Environment, to explore transformative ideas, breakthrough technologies and sustainable strategies that are redefining how we design, build and inhabit our spaces.

Indian Buildings Congress strives to bring all professionals on one platform for experience sharing, capacity building and information dissemination. IBC is a professional body connected with built environment and in the last 33 years of its existence, it has come of age and is rendering valuable service to the Country through interaction on the current issues pertaining to Built Environment. This seminar is one more in the unstinted series of Technical activities such asSeminars, Workshops, Training Programme, Technical Talk, Publication etc. Hecongratulate the IBC Chandigarh Centre for organising this seminar.

Shri O.P. Goel, Former DG, CPWD &Founder President, IBCwhile addressingmentioned that Chandigarh Centre has been very active and many activities of National levelwere organised at Chandigarh. Shri Parimal Rai, IAS who was Advisor to the Administrator,



Er. O.P. Goel, Founder President IBC addressing the Gathering

Chandigarh was a pivotal person for such activities. Haryana Centre is a New Centre but has progressed fast in a very short period. He thanked the Vice President of IBC Er. C. B. Ojha, CE-cum-Spl. Secretary, Chandigarh Administration and Chairman, IBC Chandigarh Centreand Er. Anil KumarDahiya, E-in-C (Bldg.)-Cum-HoD,Haryana PWD (B&R) and Chairman, IBC Haryana State Centre and their associates. The topic of the seminar is very current and relevant.

High–rise buildings are becoming a defining feature of Modern Urban Development, especially in rapidly growing Cities. As Buildings grow taller and more Complex, the Design andIntegration of services demand advanced technology and Multidisciplinary Coordination. This Seminar aims to explore innovative approaches, best practices, and emerging challenges in planning and managing services in high–rise Buildings.

Col. (Dr.) Anand Mathialagan (Retd.), Hony. Secy., IBC &delivered the Vote of Thankson behalf of the IBC at the conclusion of Inaugural Session of the Mid Term Session and National Seminar on "Services in High Rise Buildings".



Col. (Dr.) Anand Mathialagan (Retd.), Hony. Secy., IBC delivering the Vote of Thanks

On behalf of IBC members and delegates present physically and virtually, heexpressed heartfelt gratitude to Chief Guest, Ms Prerna Puri, IAS, Secretary Engineering Department, Chandigarh for graciously accepting the invitation despite her extremely busy schedule and for delivering such an inspiring and insightful address.

He described the journey of Madam Puri, a Triple Gold Medallist from Punjab University in B.A. (Hons.) and M.A. (Psychology), a shining example of how academic excellence, hard work and commitment to Public service can create extraordinary leadership.

As an IAS officer,her innovative technology driven governance and administrative reforms earned immense respect.

He thanked Er. C. Debnath, President, IBC; Er. O.P. Goel, Former DG, CPWD&Founder President, IBC; Er.C.B.Ojha, CE-cum-Spl. Secretary, Chandigarh Administration andVice President & Chairman Chandigarh Centre, IBC; Er. Harpal Singh, Chief Engineer Haryana PWD (B&R) and Hony. Secretary, IBC Haryana State Centre; Er.Shiv Kumar Kukreja, Executive Engineer, CITCO and Hony. Secretary, IBC Chandigarh Centre, Organising Committee and the team for their meticulous planning, warm hospitality and excellence arrangements.

He thanked all distinguished speakers, delegates, volunteers and support staff for success of Inaugural Session.

Technical Sessions

Technical papers were presented in four Technical Sessions on 25th July, 2026 at Sector 10, Hotel Mountview, Chandigarh.

Technical Session I

Green Building Requirement of Building Services



Er. Yogesh Mohan Mehra, E-in-C (Roads), Chairman & Er. Michel, SE, Public Health CHD Admn, Co-Chairman on the dais

The Technical Session I was chaired by Er. Yogesh Mohan Mehra, E-in-C (Roads), Chairman and Er.Michel, SE, Public Health CHD Admn, Co-Chairman.The Chairman and the Co-Chairman of the Session were welcomed by presenting flower of bouquet.

Opening Remarks of the Chairman

The Chairman Er. Yogesh Mohan Mehra in his opening remarks welcomed all the delegates. He underlined the importance of the theme of this Session - 'Green Building Requirement of Building Services' andinvited the authors of paper to deliver their presentations.

Paper Presented

First Paper on "Important Considerations for Services in High-Rise Buildings" was presented online by Dr. K. M. Soni, Former ADG, CPWD. In the presentation, he mentioned that servicesin high-rise buildings are complex nature that needs to be designed by the experts in a way that the buildings behave as high-performance buildings through sustainable design. Services like accessibility services, exclusiveness and privacy services, parking services, smart utility services, roof drainage services, plumbing services, water management services, fire services, vertical transportation services, housekeeping services are to be designed considering future requirements using BIM and CDE with flexibility approach.

Second Paper on "Sustainable Construction through Green Building Practices towards Achieving Sustainable Development Goals" was presented online by Dr. Sunil Kumar Chaudhary, SE (Budget), Road Construction Department, Bihar, Patna. In his presentation,he described that Greenhouse gas emissions are major environmental implications of the building sector. Hence it is crucial to promote green buildings in the construction industry as a way to tackle environmental issues and problems, achieve the social equity and reap the associated economic rewards. This paper explores the key principles and objectives of green building practices, including energy efficiency, resource conservation, water management, and indoor environmental quality. This paper critically analyses solutions and constraints to incorporating green construction into Sustainable development initiatives. The study goals are to identify green building adoption challenges, examine sustainable practices techniques and initiatives, evaluate their performance, and suggest ways to overcome them.

Technical Session-II

Innovative MEP Services

The Technical Session II was chaired byEr.Mayank Tilak, Former SDG, CPWD,Chairman and Er. Surender Deshwal, CE, Haryana PWD, (B&R), Co-Chairman. The Chairman and the Co-Chairman of the Sessionwere welcomedby presenting flower of bouquet.



Er. Mayank Tilak, Fmr. SDG, CPWD, Chairman & Er.Surender Deshwal, CE, Haryana PWD, (B&R)Co-Chairmanon the dais

Opening Remarks of the Chairman

The Chairman, Er.Mayank Tilak in his opening remarks welcomed the authors. He underlined the importance of the theme of this Session – 'Innovative MEP Services' and invited the authors to deliver their presentations.

Paper Presented

First Paper was presented online by Dr. Pardeep Kumar Gupta, Professor; Punjab Engineering College (Deemed to be University), Chandigarh. on **"Integrated Building Services for High-Rise Buildings Challenges, Innovations and Indigenous Solutions Under Indian Conditions".** In his presentation he mentioned thathigh-rise buildings are self-contained vertical cities with complex, interdependent service ecosystems. In India, the challenge of designing, constructing and operating these services is compounded by climate diversity, resource constraints, skills gaps and an evolving regulatory environment, yet those very constraints are also the crucible of innovation. The centuries-old jaali is a sophisticated solar-control device; the DRDO biodigester is urban waste infrastructure; GRIHA is a more relevant benchmark than any imported framework. With indigenous MEP, smart-building automation, solar PV and AI-powered fire detection all now maturing domestically, India is positioned to produce high-rise service solutions that are not merely adapted from international practice but genuinely world-leading.

Second Paper on **"Solar Power and Small-Scale Wind Energy Integration in High-Rise Buildings: Economic Analysis and Policy Framework for India"** was jointly presented online by Dr. Subhransu Sekhar Swain, Addl. Chief Engineer, Odisha, PWD and Er. Dukhabandhu Behera, Former Engineer-in-Chief (Buildings) & Special Secretary, Odisha. In their

presentation, they described that Green building services are fundamental to achieving sustainable high-rise development in India. Efficient HVAC systems, intelligent lighting networks, water conservation measures, building automation systems and renewable energy integration collectively contribute towards reducing operational energy demand and improving environmental sustainability.

Third Paper was presented online by Ms. V. Shobhana, Jt. DG Arch (NFU) Retd, MES on **"Elevating Energy-Efficiency through confluence of Natural Factors with Mechanical Systems: High-Rise Buildings in the Green Framework".** She mentioned that energy crunch notwithstanding, volatile weather conditions, rising air pollution, climate change and global warming have thrown new challenges to provisioning and maintaining HVAC systems in the ever rising number of high-rise buildings in India. The call is for resilient, efficient and dynamic HVAC systems strictly complying with national and international standards – but cutting-edge options result in increased upfront costs and stringent operation.

Technical Session-III

Fire Services in High Rise Buildings



Er. (Dr.) I.S.N. Raju,Fmr. CE, Irrigation Deptt., Chairman & Dr. K.M. Godbole, Former CE, Maharashtra PWD, Co-Chairman on the dais

The Technical Session III was chaired by Er. (Dr.) I.S.N. Raju, Former CE, Irrigation Deptt.,Chairman andDr. K.M. Godbole, Former CE, Maharashtra PWD,Co-Chairman. The Chairman and Co-Chairmanof the Session were welcomed by presenting flower of bouquet.

Opening Remarks of the Chairman

The Chairman Er. (Dr.) I.S.N. Raju in his opening remarks welcomed all the delegates and the authors. He underlined the importance of the theme of the Session –'Fire Services in High Rise Buildings'and invited the authors of paper to deliver their presentations.

Paper Presented

First Paper was jointlypresented onlineby Er. Sidhant Das, AEE, Civil, Buildings Wing, EIC office, Nirman Soudha, BBSR, Odisha and Er. Bijoy Chandra Tripathy, Former E-in-C, (Buildings,) Odisha on **"Retrofitting of Fire Fighting Systems in High Rise Buildings: Two Case Studies".** In their presentation they informed that high-rise fire safety cannot be static. As codes evolve, existing buildings must be brought up to date. The Fortune Tower and IDCO Tower projects demonstrate how comprehensive retrofits (pumps, tanks, alarms, pipes, rated enclosures) can transform a vulnerable structure into one meeting current NBC standards. These upgrades mitigate the heightened fire risk from electrical and occupancy changes. The history of fire disasters (from the Siddharth Hotel fire[to modern Odisha tragedies) underscores that vigilance and modernization save lives. Owners of older high-rises should view retrofitting not as optional but as essential maintenance feature to protect property and people.

Second Paper was jointly presented online by Ar. K.T. Gurumukhi, Former Chief Planner, TCPO, Ministry of Housing and Urban Affairs and Shri Kishore Gurumukhi, Senior Urban Infrastructure & Real Estate Professional on **"Services in High-Rise Buildings".** In their presentation they mentioned thatthis paper explores the critical role of vertical development in addressing developable land scarcity and the economic inefficiencies of urban sprawl, noting that compact cities can reduce infrastructure costs by two to three times per capita compared to horizontal expansion. The paper provides a technical review of essential building services—including fire safety, vertical transportation, plumbing, and electrical systems, emphasizing that service reliability is fundamental basis for habitability in tall structures. It highlights the transformative impact of modern technology, such as AI-powered fire detection, smart water management, and integrated Building Management Systems (BMS), in enhancing efficiency and safety.

Third Paper was jointly presented onlineby Er. Kallol Kishore Pradhan, Additional Chief Engineer, OB&CC Ltd., Works Department Govt of Odisha and Er. Dharam Kaanar, Team Lead, Engineer Aecom India Pvt Ltd,Gurgaon on **"Fire & Life Safety Design and Implementation for SCB MCH Redevelopment, Cuttack".** In their presentation they mentioned thata critical component of transformation is the design and implementation of an integrated fire protection and detection system tailored to the unique risks of healthcare facilities, where vulnerable occupants and

critical medical services demand uncompromising safety. The system has been developed in compliance with NBC 2016, NFPA, IS codes, and NABH guidelines, combining active fire protection measures—automatic sprinklers, hydrants, suppression systems—with passive strategies such as compartmentation and fire rated construction.

Technical Session-IV

Automation and control of Maintenance Services of Buildings



Er. M. Ganesh, E-in-C, Karnataka, Chairman & Er. Sandeep Goel, CE, Haryana PWD, Co-Chairman on the dais

The Technical Session IV was chaired byEr. M. Ganesh, E-in-C, Karnataka,Chairman and Er. Sandeep Goel, CE, Haryana PWD, Co-ChairmanThe Chairman and Co-Chairman of the Sessionwere welcomedby presenting flower of bouquet.

Opening Remarks of the Chairman

The Chairman,Er. M. Ganesh in his opening remarks welcomed the authors. He underlined the importance of the theme of the Session –'Automation and control of Maintenance Services of Buildings' and invited the Authors of paper to deliver their presentations.

Paper Presented

First Paper was presented by Lt. Col. Onkar C. Bhandurge, AQMG on **"Engineering Information Continuity (EIC): An Open BIM-Enabled Sovereign Digital Twin (SDT) Framework for Lifecycle Management of MEPF Services in Indian High-Rise Buildings".**

In his presentation he informed that as high-rise MEPF networks grow increasingly interdependent, isolated 3D models and static handover documents are no longer adequate. This paper establishes Engineering Information Continuity (EIC) as a necessary lifecycle discipline to preserve, govern, and enrich engineering data across the full span of building operations.



Lt. Col. Onkar C. Bhandurge

Engineering Information Continuity is not merely a digital methodology; it is an engineering discipline that enables high-rise buildings to preserve, utilise, and continuously enhance engineering knowledge throughout their lifecycle. By combining Indian engineering practice with interoperable digital information management, the proposed EIC–SDT Framework offers a practical pathway towards safer, more resilient, sustainable, and efficiently managed high-rise buildings.

Second Paper was presented by Er. Manoranjan Misra, Former Engineer-in-Chief & Special Secretary, (Works), Odisha on **"The Living Monolith: Redefining Buildings as Bio-Mechanical Machines".**

He mentioned that the modern building has permanently outgrown the traditional boundaries of isolated engineering trades. We can no longer afford to manage building services in disconnected silos—where the lift technician, the electrical engineer, and the plumbing team operate independently without overarching coordination.

The era of the living monolith demands a complete professional evolution, transforming the role of our traditional engineer in charge of a building into a



Er. Manoranjan Misra

Systems Governor for such living Bio-mechanical facilities. The Systems Governor is a multidisciplinary coordinator equipped with a deep understanding of interface engineering. Treating the building as a single, integrated, bio-mechanical organism, the Systems Governor uses continuous digital telemetry to keep the building's internal metabolism steady, while enforcing the strict physical checks of the 80/20 framework to eliminate cybernetic blind spots.

Third Paper was presented onlineby Dr. Laxmikanta Tripathy, Former Addl Chief Engineer, DoWR, Odisha on **"Automation and Safety Services in Modern High-Rise Buildings".**

He mentioned that Automation and Safety in the building is very important factor for the serviceability and smoot functionality, As we know the construction stage is also important like the post construction period. So, the safety measures are also to be taken care of , as we consider the post construction stage. As the subject itself is vary vast, automation of the most essential objectives like water, AC, Gas etc. of automation and safety services have been considered in the here in this article. Along with some important case study examples. These brief expansion breaks down the core phases and systems mentioned, detailing the mechanisms, technologies, and operational benefits required for modern high-rise engineering for sustainability.

Fourth Paper was presented by Prof. B. P. Suneja, Former: Dean (Faculty of Engg. & Architecture) and Head (Civil Engg. Department) Rajasthan Technical University, Kota on **"Next-Generation Building Maintenance through Automation & Innovation: An Overview".**

He mentioned that high-rise buildings have become an integral part of urban development, offering solution



Prof. B.P. Suneja

to the space constraints and population density. They accommodate residential, commercial, and mixed-use needs, supporting the growing demand for urban living and working environment. However, the maintenance of these buildings presents unique challenges due to their complexity, height, and diverse system. Since many maintenance activities are repetitive, time-sensitive and resource-intensive, integrating modern automation techniques into conventional practices can significantly reduce manual effort, enhance accuracy, and ensure timely interventions. By enabling early problem detection, improving safety and boosting productivity with limited resource, automation transforms maintenance from reactive process to proactive process. As buildings become increasingly intelligent, it is essential for maintenance practices to evolve accordingly- embracing technologies that make operations faster, safer and more reliable.

Summing Up

Before concluding the Technical Sessions, the Chairmen invited questions related to paper presented by the Authors. There were many questions raised by the audience and were repliedby the respective speakers.



Dr. C.S. Prasad, Past President, IBC

Congratulations

Indian Buildings Congress congratulates Er. Chandra Shekhar Prasad on completing his Ph.D in Civil Engineering from IIT Delhi at the age of 74.The accomplishment is a true inspiration and a powerful proof that there is no age barrier to learning and fulfilling the dreams.

Valedictory Session – July 25, 2026



Dignitaries on Dais

The Valedictory Session of Mid Term Session and National Seminar on "Services in High Rise Building" was held on July 25, 2026 at Sector 10, Hotel Mountview, Chandigarh. Er. C. Debnath, President, IBC was joined on the dais by Er. O.P. Goel, Former DG, CPWD and Founder President, IBC; Er. Anil Kumar Dahiya, Engineer-in-Chief (Bldg.)-cum-HoD, Haryana PWD (B&R) and Chairman, IBC Haryana State Centre; Er. C.B. Ojha, CE-cum-Spl. Secretary, Chandigarh Administration and Vice President & Chairman Chandigarh Centre, IBC; Er. Shiv Kumar Kukreja, Executive Engineer, CITCO and Hony. Secretary, IBC Chandigarh Centre; Er. Harpal Singh, Chief Engineer Haryana PWD (B&R) and Hony. Secretary, IBC Haryana State Centre; Col. (Dr.) Anand Mathialagan, Hony. Secy., IBC and Er. Ranjit Singh, Executive Director.

Er. Anil Kumar Dahiya, Engineer-in-Chief (Bldg.)-cum-HoD, Haryana PWD (B&R) and Chairman, IBC Haryana State Centre delivered the Welcome Address.



Er. C.B. Ojha, CE-cum-Spl. Secretary, Chandigarh Administration and Vice President, IBC being presented a memento by Er. C. Debnath, President, IBC on behalf of IBC HQ



Er. Harpal Singh, Haryana State Centre, IBC being presented a memento by Er. C. Debnath, President, IBC on behalf of IBC HQ

Recommendations

Er. Ranjit Singh, Executive Director, IBC and Chief Rapporteur presented the recommendations emerging out of the papers accepted, presentations made and discussions held during the four Technical Sessions.

1. Expert-Led, Future-Ready Design

Services in High-Rise Buildings are of complex nature. They must be designed by experts such that the building performs as a high-performance, sustainable asset throughout its life. All services including accessibility, parking, smart utilities, plumbing, water management, fire, lifts, and housekeeping must be planned with future flexibility using BIM and CDE.

Mandatory Multi Hazard climate Resilience & Performance Design has to be followed.

2. Integrated & Resilient Systems

Integration of Mechanical, Electrical, Plumbing, Fire Protection, and Automation systems is non-negotiable.

This integration makes tall structures resilient and ensures safety, comfort, and sustainable. In critical buildings like hospitals and shelters, continuity of power, water, and ventilation is vital to save lives and ensure social stability during disasters.

Enforce Passive First & Active Next Integrated Architecture.

3. Sustainability & Green Roi

Green services consistently deliver 40% to 70% energy reduction compared to conventional buildings. With savings in carbon, water, and O&M costs, the investment in sustainable technologies is validated within 3 to 10 years.

Mandate that high rise envelope surfaces, roof tops & wind favourable mechanical floors & façade also function as power generation units.

4. Evolution To "System Governor"

The era of "living monoliths" demands a complete professional evolution. The role of the traditional engineer must transform into that of a System Governor. We must anchor operations with unified mechanical logic, structural integrity, flexibility for future growth, and strict compliance with National Building Code and IS standards. Our goal should be maximum operational efficiency, enhanced structural resilience, and absolute disaster protection for human life.

5. Technology Convergence For Smart Buildings

AI, through the convergence of BIM, Digital Twins, IoT, and CMMS, is the future. This enables real-time asset monitoring, predictive decision-making, optimized resource allocation, enhanced energy efficiency, and improved risk management. We must move from reactive maintenance to predictive governance.

6. Security By Design

High-Rise Buildings must be designed to resist threats and ensure security. Physical security of building services in critical infrastructure becomes crucial during emergencies to minimize loss and ensure continuity.

Disaster Recovery & Rapid service restoration are important aspects to be followed.

7. Way Forward

Let us commit to designing buildings that are not just tall, but are Smart, Safe, Sustainable, and Resilient. By adopting expert design, integrated systems, green practices, and smart technologies, we can build infrastructure that serves the nation for 100 years or so.

Whole life carbon and Asset Assessments spanning planning, material selection, construction, operations and eventual deconstruction have to be followed.

Vote of Thanks

Col. (Dr.) Anand Mathialagan, Honorary Secretary, IBC, presented the Vote of Thanks. He on behalf of IBC expressed heartfelt gratitude to the Chief Guest, Ms Prerna Puri, IAS, Secretary Engineering Department, Chandigarh for graciously accepting the invitation despite her extremely busy schedule and for delivering such an inspiring and insightful address.

He described the journey of Madam Puri, a shining example of how academic excellence, hard work and commitment to Public service can create extraordinary leadership.

He said that as an IAS officer Madam Puri has earned immense respect for introducing innovative technology driven governance and administrative reforms. During her earlier tenure in Chandigarh Madam played a significant role in strengthening digital governance initiatives and her subsequent contribution in J&K demonstrated how technology can make governance more transparent, efficient and citizen centric. The presence of Madam Puri has greatly enriched this programme and her encouraging words will undoubtedly motivate all of us to strive excellence in Nation Building.

He conveyed heartfelt thanks to Er. C. Debnath, President, IBC; Er. O.P. Goel, Former DG, CPWD and Founder President, IBC; Er. C.B. Ojha, CE-cum-Spl. Secretary, Chandigarh Administration andVice President and Chairman Chandigarh Centre, IBC; Er. Harpal Singh, Chief Engineer Haryana PWD (B&R) and Hony. Secretary, IBC Haryana State Centre; Er.Shiv Kumar Kukreja, Executive Engineer, CITCO and Hony. Secretary, IBC Chandigarh Centre, Executive Engineer, CITCO and Hony. Secretary, IBC Chandigarh Centre; Organising Committee and the team for their meticulous planning, warm hospitality and excellence arrangements.

It was the first Hybrid Mid Term Session and National Seminar successfully completed.

The Valedictory Session concluded by playing National Anthem.

114th Governing Council Meeting



114th Governing Council Meeting in Progress

114th Meeting of the Governing Council was held on 26th July, 2026 at Sector 10, Hotel Mountview, Chandigarh

At the outset, President welcomed Founder President, Vice Presidents, Hony. Secretary, Executive Members, Governing Council Members, Past Presidents, Permanent Invitees of EC &GC , Executive Director, other Staff of IBC HQ to the 114thmeeting of Governing Council of IBC. President on behalf of IBC expressed his sincere thanks.

Er. C.B. Ojha, CE-cum-Spl. Secretary, Chandigarh Administration andVice President & Chairman Chandigarh Centre, IBC and Er. Anil Kumar Dahiya, Engineer-in-Chief (Bldg.)-cum-HoD, Haryana PWD (B&R) and Chairman, IBC Haryana State Centrefor extendingwarm welcome and arrangements made for the successful conduct of Mid TermSession & Seminar at Chandigarh.



Training Calendar of IBC being released by Er. O.P. Goel, Former DG, CPWD & Founder President, IBC

To mark the occasion, the Training Calendar of IBC HQ was released by Er. O.P. Goel, Former DG, CPWD and Founder President, IBC during the 114th Governing Council Meeting

205th Executive Committee Meeting and National Seminar at Andaman & Nicobar

205th Executive Committee Meetingand National Seminar on "Innovative Modern Ecofriendly and Earthquake Resistance Construction Technology" was organised by Indian Buildings Congress, on August 29, 2026 at Dr. B. R. Ambedkar Institute of Technology (DBRAIT) Auditorium, Port Blair, Andaman and Nicobar.



Dignitaries participating 205th EC Meeting & National Seminar at Andaman and Nicobar

Inaugural Session

Welcome Address:

Er. D. Balaji, Former Chief Engineer, Andaman P.W.D and Chairman IBC Andaman & Nicobar Centre delivered the Welcome Address. He welcomed Dr. Sachin Shinde IAS, Commissioner-cum- Secretary Andaman & Nicobar Administration who was the Chief Guest of Inaugural Ceremony of the National Seminar on "Innovative Modern Eco-Friendly and Earthquake Resistance Construction Technology in Andaman and Nicobar Islands".



Er. D. Balaji, Fmr. Chief Engineer, Andaman P.W.D and Chairman IBC Andaman & Nicobar Centre delivering the Welcome Address

He also welcomed Er. C. Debnath, President IBC; Colonel (Dr.) Anand Mathialagan, Honorary Secretary IBC; Er. Bijoy Chandra Tripathy,Chairman Eastern Zone IBC; Special Guest Er. T.K. Prijith Rekh, C E,

PWD Andaman & Nicobar; Prof. (Dr.) Sanmukh Kaur, Principal DBRAIT; Builders Association of India; Chamber of Commerce; invited guests; members of IBC and participants attending the 205th Executive Council meeting of IBC. Chief Guest Dr. Sachin Shinde IAS and dignitaries on the dais were welcomed by presenting a bouquet. Dignitaries were also felicitated with the mementos.

Address by Er. C. Debnath, President, IBC

Er. C. Debnath, President, IBC welcomed the Chief Guest, all the dignitaries on the dais, and participants including the organisers. He mentioned that the Indian Buildings Congress was set up in 1992 having Headquarter in Delhi.

This was the first time that such a Seminar is being organised by Indian Buildings Congress at Port Blair. The outcome of Seminar will be helpful to the Andaman Government in regards to developing technology.

He mentioned that Indian Buildings Congress is doing lot of activities in technical field. IBC can support the engineers who are working in the field. Besides the capacity building is a very important sector for which the union government has given much importance through skill development and other scheme. IBC conducts training program for the engineers every month at IBC Headquarter, New Delhi.We request the administration to nominate their engineers for such technical training programmes conducted by IBC Hq.

He mentioned that IBC was established with a vision to create built environment which is conducive to good living affordable aesthetic cost competitive technology driven and capable of meeting the needs of Indian population. Its mission is to bring all professionals connected with built environment like administrators, financiers, planners, developers, architects, horticulturists, builders, manufacturer, building materials, researchers, teachers etc together on in one platform to form collective opinion so that built environment in the country is able to achieve the desired shape.

He conveyed his thanks to the host for making all arrangement and wished success of the programme.

Address by Er. B.C. Tripathy, Chairman Eastern Zone IBC

Er. B.C. Tripathy, Chairman Eastern Zone IBC welcomed Dr. Sachin Shinde, IAS Commissioner-cum-Secretary Andaman & Nicobar Administration, the Chief Guest of the function, and all dignitaries. He felt that the dream has come to fruition as the Chairman of the Eastern Zone Coordination Committee of Indian Buildings Congress.

The topic of the Seminar has been selected by the IBC Centre in the background of tsunami faced in 2004. He thanked to Er. Arun Kumar, Hony. Secretary, IBC Andaman & Nicobar Centre who was behind a lot of background work to conduct the Seminar. He said that exchange of ideas and dialogue among the participants will give a meaningful outcome of the Seminar.

It is indeed the vision and mission of IBC to carry forward its activities in the most meaningful way across India.



Dr. Sachin Shinde, IAS Commissioner-cum- Secretary Andaman & Nicobar Administration, Chief Guest Addressing the Gathering

The Chief Guest Dr. Sachin Shinde, IAS Commissioner-cum- Secretary Andaman & Nicobar Administration welcomed Er. C. Debnath, President IBC; other dignitaries of Andaman & Nicobar; Chamber of Commerce; the participating APWD team members; Principal of DBRAIT, the students and all invited members for this national conference of IBC. He thanked IBC for considering the venue of national seminar in Andaman & Nicobar. He said that holding such seminars by professional bodies would add in promoting the tourism value of this Island.

He accepted the patronage of Chief Patron for Andaman & Nicobar Centre of IBC. He said that the conference on the theme "Innovative Modern Eco-Friendly and Earthquake Resistance Technology in Andaman Nicobar Island" is very much relevant.

He appreciated the themes of Technical Sessions chosen for deliberation. Specifically, he was enthralled with the theme like "Sustainable Utilization of Tender Coconut Husk Fibre Tensile Strengthening Reinforcement in Cement Concrete" a locally sourced Eco-friendly approach for A & N Islands.Similarly, another theme "Enhancing Seismic Resilience of Pre-fabricated

Structures through Post Installed Corrections and Energy Dissipation Systems". These two themes along with other themes are very relevant for Andaman and Nicobar. The deliberations that will come out with certain pilot-based recommendations which APWD can implement considering the time line in which it has to operate certain projects.



Er. T.K. Prijith Rekh, Chief Engineer, PWD, Andaman & Nicobar and Chairman IBC centre Addressing the Gathering

At the outset, Er. T.K. Prijith Rekh thanked the Chief Guest for sparing his valuable time to grace this occasion. Also thanked distinguished members of IBC, engineers, professionals, faculty members and the young students of DBRAIT who participated in this National Seminar.

Andaman and Nicobar Islands face unique challenges like Geographical isolation, high transportation cost, limited availability of construction materials and skilled manpower, difficult terrain, climatic conditions and limited working season. We need to explore faster construction methods, pre-fabrication, modular technologies, modern materials, mechanization and sustainable construction practices.

He hoped that seminar will provide their engineers an opportunity to learn from the experts from around the country and more importantly identify technologies that can be adapted practically to the conditions of their islands.

Vote of Thanks by Col. (Dr.) Anand Mathialagan, Hony. Secretary, IBC

Col. (Dr.) Anand Mathialagan, Hony. Secretary, IBC thanked Dr. Sachin Shinde IAS, Commissioner-cum-Secretary Andaman & Nicobar, the Chief Guest; Er. T.K. Prijith Rekh, Chief Engineer, PWD, Andaman & Nicobar, Special Guest; Prof. (Dr.) Sanmukh Kaur, Principal DBRAIT; Er. C. Debnath, President, IBC; Er. B.C. Tripathy, Er. M. Nagaraj, Er. C.B. Ojha, Vice Presidents, IBC; Er. D. Balaji, Chairman, IBC Andaman & Nicobar Centre and Er. Arun Kumar, Hony. Secretary, IBC Andaman & Nicobar Centre; distinguished members, executive members, eminent speakers and professionals, representatives, all the delegates, guests the persons who had come from IBC headquarters.

First and foremost, he expressed deep gratitude to Dr. Sachin Shinde IAS, Commissioner-cum- Secretary Andaman & Nicobar, Chief Guest for gracing this occasion and for sharing his valuable time.

He also extended sincere thanks to Prof. (Dr.) Sanmukh Kaur principal DBRAIT who graciously accepted to conduct this event in this place. He appreciated IBC Andaman & Nicobar Centre for taking initiative and organizing the event.

He expressed his confidence that the deliberations will contribute to strengthening collective understanding of how modern technology and indigenous solutions can be practicably applicable.

Technical Sessions

Er. T.K. Prijith Rekh, Chief Engineer, PWD, Andaman & Nicobar and Chairman of the Technical Sessions; Er. R.K. Majumdar IAS (Retd.) Former Director Urban Development Department Tripura and Chairman Technical Committee IBC; Dr. Muthu Murugesan, Director of URC Technology Services Private Limited; Mrs. (Dr.) Agamoni Das, Head of Codes & Approvals (Fastening) at Hilti India and also the faculty members from DBRAIT, Er. Manoranjan Misra, GC member IBC &Former E-in-C-cum-Special Secretary Works Department Odisha; Er. C.B Ojha, Vice President IBC and also Chief Engineer-cum-Special Secretary, Engineering Department Chandigarh were present on the dais. Delegates were felicitated by presenting the bouquet by Er. Arun Kumar, Honorary Secretary, IBC Andaman & Nicobar Centre.

Technical Session I

Er. C.B Ojha, Chairman of the session informed that there will be three presentations in this session. He emphasized the importance of adopting earthquake-resistant, eco-friendly, and sustainable construction practices in the Andaman and Nicobar Islands, considering their high seismic vulnerability, heavy rainfall, and saline environment. He highlighted the need to follow relevant Indian Standards, including IS 1893 and IS 13920, and stressed the importance of proper soil testing, ductile detailing, and simple, symmetrical building designs. He recommended using lightweight construction materials, locally available

bamboo, light-gauge steel, and ferrocement technology to reduce structural loads and environmental impacts. He also emphasized the need for retrofitting existing buildings, particularly older schools, hospitals, and other public structures, through rapid visual screening and detailed assessment.

He urged future engineers and builders to adopt island-specific construction practices rather than copying those used in mainland cities, ensuring safer, more durable, and environmentally responsible buildings in the Andaman and Nicobar Islands.

Presentations:

Topic–I, Earthquake Resistant Design and Construction for High Seismic Zone

First presentation on the topic Earthquake Resistant Design and Construction for High Seismic Zone was by Dr. Muthu Murugesan, Director of URC Technology Services Private Limited. He described Seismic-Resistant Design for Andaman and Nicobar Islands. It covers into four points:

- Understanding Seismic Risk: Plate tectonics, the Ring of Fire, earthquake hazards, and the seismic vulnerability of the islands.
- Seismic-Resistant Design Strategies: Appropriate structural systems, earthquake load calculations, seismic design codes, and construction quality to prevent structural collapse.
- Ductility, Concrete, Steel, and Connections: Ductile design, reinforcement detailing, beam-column joints, structural connections, and modern construction systems.
- Case Studies and Innovative Solutions: Five real-world projects showcasing composite structures, precast and prestressed systems, railway redevelopment, 3D-printed construction, BIM, and advanced structural planning.

Although seismic risk cannot be eliminated, it can be managed through safe engineering practices, innovative technologies, quality construction, and effective implementation. Pilot projects and proven solutions can help strengthen infrastructure, protect lives, and ensure long-term resilience across the Andaman and Nicobar Islands.

Topic–II, RCC Precast Construction Technology for Sustainable and Earthquake Resistant Infrastructures in Andaman and Nicobar Islands.

Second presentation was by Er. Kingshuk Kumar Bala, proprietor of Bhushan Precast, manufacturer of precast boundary walls, low-cost housing structures, and farm sheds. He described the benefits of precast construction that it reduces construction time, labour dependency, material wastage, and overall cost.

Topic–III, Enhancing Seismic Resilience of Prefabricated Structures through Post Installed Connections and Energy Dissipation System

Third presentation was presented by Mrs. (Dr.) Agamoni Das, Head of Codes & Approvals (Fastening) at Hilti India and also the faculty members from DBRAIT. She described Seismic Resilience and Prefabricated Construction in the Andaman Islands. The presentation highlighted the importance of earthquake-resistant and resilient construction in the Andaman Islands, which fall under Seismic Zone V and face earthquakes, tsunamis, cyclones, flooding, and challenging soil conditions.

- Seismic Hazard and Risk: Earthquake risk depends on hazard, vulnerability, and exposure. Resilient design reduces vulnerability and helps communities recover quickly.
- Challenges: Soft coastal soils, liquefaction, corrosion, limited resources, and transportation difficulties affect construction.
- Prefabricated Construction: Factory-made components offer better quality control, faster construction, reduced waste, and improved efficiency.
- Post-Installed Connections: Properly designed and installed anchors ensure safe force transfer, especially under earthquake-induced cyclic loading.
- Base Isolation and Energy Dissipation: These systems reduce seismic forces and structural damage, improving building safety and performance.

Combining prefabrication, reliable connections, base isolation, and energy dissipation systems can improve the safety, durability, and earthquake resilience of infrastructure in the Andaman Islands. Early planning, code compliance, skilled installation, and regular maintenance are essential.

The first Technical Session I was summed up with discussion of Question-Answers.

Technical Session – II

Dr. K. Chandrasekaran, President Andaman & Nicobar Chamber of Commerce Industry (ANCCI) delivered

the opening remarks. He mentioned that the Andaman and Nicobar Islands is highly vulnerable to earthquakes, cyclones, heavy rainfall, and coastal erosion. We must prioritize disaster-resistant construction, quality materials, proper soil investigation, and strict adherence to building codes.

We should also promote sustainable practices such as solar energy, rainwater harvesting, recycling, and locally available materials. Modern technologies like prefabricated and modular construction can help overcome transportation costs, manpower shortages, and construction delays. Practical training and internships for students are equally important to develop skilled future professionals. The performance of buildings during the 2004 earthquake and tsunami highlights the importance of sound engineering practices.

On behalf of the Andaman and Nicobar Chamber of Commerce and Industry and the Builders Association, he assured their full cooperation.

Presentations:

Topic – I, Beyond Strength Technology that Control Earthquake Response

First Presentation was by Er. Manoranjan Misra, GC member IBC &Former E-in-C-cum-Special Secretary Works Department Odisha.

Beyond Strength - Intelligent Earthquake-Resistant Design: He described that Earthquake-resistant design goes beyond strength to absorb, dissipate, and isolate seismic energy, reducing damage and protecting lives. Key Technologies are as follows: -

- Tuned Mass Damper (TMD): Reduces building vibrations.
- Viscous Fluid Damper: Absorbs earthquake energy like a shock absorber.
- Buckling-Restrained Brace (BRB): Dissipates energy while preventing buckling.
- Base Isolation: Reduces the transfer of ground motion to buildings.

He also mentioned about the four F's of Earthquake Safety which are as follows: -

- Frame: Choose a suitable structural system.
- Force: Design for earthquake loads.
- Fitness: Ensure ductility and energy dissipation.
- Fidelity: Maintain construction quality and design compliance.

We learnt from the 2004 Indian Ocean Earthquake that the disaster highlighted the risks of ground shaking, liquefaction, landslides, and tsunamis. Resilient design in the Andaman and Nicobar Islands must protect essential services like hospitals, roads, power, and water.

In conclusion; no single technology suits every building. The best solution depends on site conditions, cost, maintenance, and performance needs. The goal is to build smarter, safer, and more resilient structures not merely stronger ones.

Topic – II, MEP beyond the Building Designing - Resistant Building Services for India's Islands.

Second presentation was by Er. Rita Bishwas, Senior Lecturer, DBRAIT. She described about the Region-Specific Biopositive Infill Systems through various slides dealing with Sustainable, locally sourced infill panels for improved seismic performance in coastal buildings; Failure Mechanisms; sand restrictions require alternatives; use of agricultural composites in insulation, ceilings and cladding; Coir and Recycled Glass Coir that improves crack resistance; Other Local Fibres, coir and bamboo offer potential reinforcement and insulation benefits.

The proposed system aims to reduce imported materials and improve seismic performance. Strength, durability, fire safety and code compliance must be validated experimentally.

Topic – III, Region Specific Bio Composite Infill Systems with Elastomeric Interface aimed at reducing Seismic drift in Urban Coastal Island setting.

Third presentation was by Shri Umah Maheshwara Rao, Environmental Engineer, Andaman Nicobar Pollution Control Committee, Department of Science and Technology and Nicobar Administration.

He described about Coconut Husk Fiber-Reinforced Concrete for Sustainable Construction in Andaman and Nicobar Islands. Concrete is strong in compression but weak in tension. Coconut husk fibres can improve its tensile strength, crack resistance, and ductility.

The islands generate approximately 7–10 metric tonnes of coconut waste daily. These fibres can be used in concrete, wall panels, floor panels, and drainage applications. The literatures available suggest potential improvement of approximately 15% in compressive strength, 30% in split tensile strength, and up to 50% in flexural strength.

Topic - IV, Sustainable Utilization of Tender Coconut Husk Fiber Tensile Strengthening reinforcement in cement concrete. A locally sourced Eco-friendly approach by A & N Islands.

Fourth presentation was by Er. Alamus Mustafa, Head of Department, BTC Civil Engineering and Dr. Niharaj, Civil Engineer Geotechnical Researcher. They discussed a sustainable approach to stabilize slopes along island and coastal highways, focusing on native vegetation and Microbially Induced Calcite Precipitation (MICP).

- Challenges: Coastal slopes face instability due to heavy rainfall, wave action, tidal cycles, and seawater salinity.
- Native vegetation: Plant roots reinforce surface soil, improve soil stability, and reduce erosion.
- MICP technique: Bacteria, commonly from the Bacillus group, facilitate calcite precipitation, which fills soil pores and binds soil particles, improving strength and stability.
- Integrated approach: Native vegetation is proposed for surface stabilization, while MICP is investigated for deeper or critical slope zones.
- Research gaps: Salinity, rainfall, tidal action, uneven bacterial distribution, and interactions between vegetation and calcite precipitation may affect performance.
- Future work: The proposed research involves site selection, laboratory testing, model-slope validation, durability assessment, and long-term monitoring.

They mentioned that combining native vegetation with MICP offers a potentially sustainable, nature-based alternative to conventional slope stabilization. However, further research and field validation are needed before widespread implementation.

Fifth presentation was by Er. Ail, Structural Engineer and Er. Ajel, Guest Assistant Professor. They focused on cold-formed light-gauge steel for sustainable and earthquake-resilient island infrastructure. Since islands face high transportation costs, harsh salt-air exposure, strong winds, and seismic risks, construction must be lightweight, durable, economical, and efficient.

Sixth presentation was by Dr. S. Rajima, Diploma Civil Engineer and Er. Aishwara, lecturer Civil Engineering Department. They focused on the relationship between changing livelihood patterns and the built environment in the Andaman and Nicobar Islands, emphasizing the need for sustainable and eco-friendly development.

They highlighted how post-pandemic tourism growth, public administration, and infrastructure development have increased construction activities and pressure on the islands' fragile ecosystems. Dependence on mainland construction materials, limited land availability, coastal regulations, groundwater depletion, and inadequate solid-waste management remain major challenges.

Seventh presentation was by Dr. Arun Kumar, Superintending Engineer, Andaman P.W.D. He mentioned that the key concern is our dependence on limited resources for construction, particularly aggregates and concrete. Instead of importing materials from the mainland, we should explore and improve the natural resources available in the Andaman and Nicobar Islands.

We should also explore, process, and improve locally available resources to meet structural requirements, reduce construction costs, minimize waste, and protect the island ecosystem. By developing local industries around these resources, we can reduce dependence on the mainland and promote a more sustainable, self-reliant construction sector.

Technical Session II summed up with the discussion Question Answer.

Valedictory Session

Welcome Address:

Er. D. Balaji, Former Chief Engineer, APWD and Chairman IBC Andaman & Nicobar Centre delivered the Welcome Address in the Valedictory Session. Er. T.K. Prijith Rekh Chief Engineer, PWD, Andaman & Nicobar; Colonel (Dr.) Anand Mathialagan, Honorary Secretary IBC; Er. C. Debnath, President IBC; Er. B.C. Tripathy, Chairman IBC Eastern Zone; Er. Arun Kumar, Superintending Engineer APWD; Er. Ranjit Sing, Executive Director IBC were present on the dais. Mementos were presented to the dignitaries on the dais.

Address by Er. C. Debnath, President IBC

Er. C. Debnath, President IBC addressed the gathering. He said that it is a proud moment to be part of this concluding session on innovative, eco-friendly, and earthquake-resistant construction technologies for the Andaman and Nicobar Islands.

He sincerely appreciated the IBC Andaman Centre, PWD, experts, faculty, engineers, and students for making this seminar successful. He hoped its recommendations will contribute to the sustainable development of the islands.

He especially commended the enthusiastic participation of students and encouraging joint programmes with technical institutions, as well as their association with professional bodies like the Indian Building Congress (IBC), to enhance their knowledge and professional skills.

Address by Special Guest Er. T.K. Prijith Rekh Chief Engineer, PWD, Andaman & Nicobar:

Er. T.K. Prijith Rekh Chief Engineer, PWD, Andaman & Nicobar, Special Guest; addressed the gathering and shared valuable observations of the seminar. He encouraged everyone to dream big and work hard to achieve their goals. He highlighted the importance of innovation in PWD and proposed taking up innovative construction technologies as a pilot project. He also discussed dam water levels, reservoir capacity, and the importance of the monsoon seasons. He concluded by thanking the organizers and participants.

Recommendations:

Er. Ranjit Singh, Executive Director, IBC and Chief Rapporteur presented the recommendations emerging out of the papers accepted, presentations made and discussions held during the four Technical Sessions.

1. Eco-friendly and locally available construction materials
    - o Explores the use of leaves, climbers, coconut products, coir and wood waste as alternative construction materials.
    - o Emphasizes reducing dependence on materials transported from the mainland and promoting sustainable use of local resources.
2. RCC Precast Construction Technology
    - o Encourages modular precast construction using GFRP reinforcement and polypropylene fibres.
    - o The technology aims to improve durability, reduce corrosion, speed up construction and enhance earthquake resistance.
3. Coconut Fibre Reinforced Concrete (CFRC)
    - o Highlights the utilisation of tender-coconut husk waste as a locally available reinforcement material.
    - o CFRC can improve tensile strength, flexural strength and post-cracking ductility when used at an optimum fibre dosage.
    - o It is recommended as supplementary reinforcement for suitable non-primary structural applications.
4. Seismic Resilience through Prefabrication and Energy Dissipation
    - o Encourages prefabricated structures combined with post-installed connections, buckling-restrained braces, viscous dampers, friction dampers and base isolation systems.
    - o Stresses the importance of resilient and functional infrastructure after major earthquakes.
5. Bio-Composite Infill Systems
    - o Encourages the use of coconut coir, bamboo, areca husk, rice husk ash and recycled glass for sustainable building components.
    - o Introduces bio-composite infill panels and elastomeric isolation joints to reduce seismic damage and improve ductility.
    - o Promotes circular economy, waste utilisation and reduction in embodied carbon.
6. Design: Beyond Strength
    - o The earthquake-resistant construction should go beyond merely making buildings stronger. Instead, buildings should be designed to manage earthquake energy intelligently—by controlling how seismic forces enter, travel through, and are dissipated within the structure.
    - o Modern seismic design should move beyond conventional methods (which rely purely on rigid strength and controlled damage) to allow buildings to respond intelligently by absorbing, sliding, yielding, or isolating seismic energy.
    - o During the Seminar, the following four advanced technologies for counterbalance, absorb, safely yield, or isolate the seismic response were presented & discussed with:

    a) Tuned Mass Dampers (TMDs) – Counterbalance

    b) Viscous Fluid Dampers – Absorb

    c) Buckling-Restrained Braces (BRBs) – Yield Safely

d) Base Isolation – Isolate

The above advanced technologies are valuable particularly for hospitals and essentials facilities where continued functionality is critical and become more critical immediately after severe Earthquake.

- Earthquake-resistant construction is not about making a building immovable; it is about intelligently deciding how it should move, how energy should be controlled, where damage may be permitted, and whether the building can continue functioning after an earthquake.

7. The Technical Seminar advocates an integrated approach to sustainable and disaster-resilient construction in the Andaman & Nicobar Islands. It promotes the use of innovative technologies, prefabrication, seismic protection systems, locally available bio-materials and waste-derived construction products to address the Islands' environmental, logistical and seismic challenges while ensuring safer, economical and sustainable infrastructure.

Er. Arun Kumar, Hony. Secretary, IBC Andaman & Nicobar Centre delivered the concluding remarks

He expressed sincere gratitude to everyone who has contributed to the success of this national seminar. He said that they were delighted that, after nearly a year of preparation, their efforts have finally come to fruition. He said that they look forward to organizing more such programs in the future, with meaningful discussions, debates, and the participation of distinguished resource persons.

Vote of Thanks

Col. (Dr.) Anand Mathialagan, Hony. Secretary, IBC delivered the Vote of thanks. On behalf of all he sincerely thanked APWD and the Chapter for organizing this wonderful event at such short notice. He deeply appreciated the warm hospitality, excellent arrangements, and teamwork.

Specially thanked to Honorary Secretary, Er. Arun Kumar and Er. D. Balaji.

The session ended with a vote of thanks, followed by the felicitation of technical speakers and dignitaries.

35th Foundation Day Celebration and V.R. Vaish Memorial Lecture

35th Foundation Day and V.R. Vaish Memorial Lectureon the topic "Shaping Construction Industry of Sustainable Buildings through a Hierachical Framework" was organisd by IBC in the Seminar Hall of IBC HQ Building on September1, 2026 in the memory of Late Er. V.R. Vaish, the first Director General(W) of CPWD. The programme sponsored by the EC members of IBC.



Dignitaries on Dais

Er. O.P. Goel, Former DG, CPWD and Founder President, IBC;Er. C. Debnath, President, IBC; Er. C.S. Prasad, Former DG, CPWD& Past President, IBC; Col. (Dr.) Anand Mathialagan, Hony. Secretary were on the dais.

Past Presidents, IBC:Dr. P.S., Rana, Former CMD, HUDCO; Er. Deepak Narayan, Former E-in-C, PWD Delhi; Er. C.S. Prasad, Former DG, CPWD; Er. S.K. Vij, Former Member Engineering, Railwaywere present on the occasion.The dignitaries on the dais were felicitated by offering a Shawl by Er. C. Debnath, President, IBC.

Er. S.D. Chandsure, Former EE, Maharashtra & Executive Council Member, IBC; Dr. Toli Bassar, Former Sr. Chief Engineer, Govt. of Arunachal Pradesh, Chairman IBCArunachal Pradesh& Vice President, IBC; Er. R.K. Majumdar, IAS (Retd.), Former Director, Urban Development & Executive Council Member, IBC; Er. M. Nagaraj, Former EE, PWD Karnataka and Vice President, IBC;Er. Ranjit Singh, Executive Director, IBC; Er. Suresh Kumar Bairwa, Former Addl. CE, Rajasthan PWD& Executive Council Member, IBC; Er. Binod Kumar Jha, Former Superintending Engineer, BCD and Honorary Treasurer, IBC;Er. B.C. Tripathy, Former E-in-C, Odisha PWD and Vice President, IBC;Er. Himangshu R. Vaish, Managing Director, Instapower Ltd., son of Late Er. V.R. Vaish and others were also present on the occasion.

The V.R. Vaish Memorial Lecture commenced with lighting of Ceremonial lamp by Er. C, Debnath, President, IBC; Er. O.P. Goel, Former DG., CPWD and Founder President, IBC andother dignitaries joined in lighting of Ceremonial Lamp. After Lighting of Ceremonial Lamp, IBC Geet was played.



Floral Tribute offeredto Late Er. V.R. Vaish

Er. Himangshu R. Vaish, Managing Director of Instapower Ltd., & son of the late Er. V.R. Vaish attended the Lecture. All the dignitaries, both on & off the dais, paid floral tribute to the late Er. V.R. Vaish.

Er. C. Debnath welcomed Er. Himangshu R. Vaish and the assembled dignitaries. To commemorate the occasion, two presentations were delivered; the first by Er. C.S. Prasad, Former DG, CPWD and Past President, IBC, on "Shaping the Construction Industry of Sustainable Buildings through a Hierarchical Framework" and the second by Er. Ranjit Singh, Executive Director, IBC on "A Life of Distinction & Nation Building of late Er. V.R. Vaish."

Er. O.P. Goel, Former DG, CPWD and Founder President, IBC addressed the gathering and paid profound homage to late Er. V. R. Vaish. He noted that IBC instituted this memorial lecture to honour an outstanding professional dedicated to national development, the engineering fraternity, and the Indian Buildings Congress. Born in 1920, Er. Vaish graduated in engineering at the age of 20 from the prestigious Thompson College of Engineering - an instution that later became a university and is now IIT Roorkee.

Late Er. Vaish worked in Central PWD from 1942 to 1979 a span of 37 years. He became a Chief Engineer in 1961 and looked after the development work being done by DDA in Delhi. He worked in Himachal Pradesh as Chief Engineer–cum–Secretary PWD, as Managing Director, National Buildings Construction Corporation, Advisor in Bureau of Public Enterprises. He became Head of the CPWD in 1976. He was the last Engineer–in–Chief in CPWD and the first Director General (Works).

After superannuation from CPWD, he remained fully active in social / welfare organizations and professional work. He worked as an Arbitrator, in large number of cases. He was Advisor to many organizations. Notable are IIT Delhi, Asiad work, Indira Gandhi Institute of Medical Sciences Patna and Hindi Bhawan, Dr. Zaqir Hussain College, etc.

His association with IBC dates back from the setting up of IBC. He attended all programmes and meetings of IBC without being any Office Bearer. His solemn advice in the matter of personal disputes regarding official position in the organization was very beneficial and instrumental in resolving all matters. He went to the extent of interacting with various heads of organizations to convince the bonafides of IBC and garner support for the same.

II. TRAINING PROGRAMMES

(i) Two days Training Programme on "Basics of E & M Systems in Buildings" on July, 20– 21, 2026

A two-day training programme on "Basics of E & M Systems in Buildings" was successfully conducted for Junior Engineers, Assistant Engineers, Executive Engineers and Architects (JEs (EL)AEs(EL)/EEs/Ars.) on July 20–21, 2026 at IBC Headquarters, Sector VI, R.K. Puram, New Delhi – 110022.Er. A. K. Rajput, Former Member, CEA, Ministry of Power was the Chief Guest and was welcomed by the Col. (Dr.) Anand Mathialagan (Retd.), Hony. Secretary, IBC with a floral bouquet.

The programme witnessed active participation from around 17 Engineers, representing various states across the country. The training aimed to enhance the technical knowledge and practical understanding of participants in the field of Basics of E & M Systems in Buildings and best practices prevalent in building system.



Two-days training programme on "Basics of E & M Systems in Buildings"

Participation and Interaction

Participants actively engaged in discussions, shared field experiences and clarified technical queries with the experts. The interactive nature of the sessions contributed to a deeper understanding of the subject matter.

The training program was highly informative and beneficial to the participants. It provided valuable exposure to participants for Basics of E & M Systems in Buildings and practical approaches for implementation in ongoing and future projects. The knowledge gained is expected to contribute significantly in improving in Building System.

(ii) Two days Training Programme on"Sub Soil Investigation and Pile Foundation" on August, 24-25, 2026

A two-day training programme on "Sub Soil Investigation and Pile Foundation" was successfully conducted for Assistant Engineers, Executive Engineers and Superintending Engineers (AEs/EEs/SEs) on August 24-25, 2026 at IBC Headquarters, Sector VI, R.K. Puram, New Delhi – 110022.

The programme witnessed active participation from around 21 Engineers, representing various states across the country. The training aimed to enhance the technical knowledge and practical understanding of participants in the field of Sub Soil Investigation techniques & Pile Foundation details and best practices prevalent in building construction.



Two-days training programme on "Sub Soil Investigation and Pile Foundation"

Participation and Interaction

Participants actively engaged in discussions, shared field experiences and clarified technical queries with the experts. The interactive nature of the sessions contributed to a deeper understanding of the subject matter.

The training programme was highly informative and beneficial to the participants. It provided valuable exposure to participants for Sub Soil Investigation & Pile Foundation and practical approaches for implementation in ongoing and future projects. The knowledge gained is expected to contribute significantly in improving construction quality and durability of structures.

(iii) Two days Training Programme on "Repair & Rehabilitation of Concrete Structures" on Sept., 25-26, 2026

A two-day training program on "Repair and Rehabilitation of Concrete Structures" was successfully conducted for Assistant Engineers, Executive Engineers and Superintending Engineers (AEs/EEs/SEs) on Sept. 25–26, 2026 at IBC Headquarters, Sector VI, R.K. Puram, New Delhi – 110022.

The program was inaugurated by Er. A K Sharma, Former SDG, CPWD.

The program witnessed active participation from around 32 Engineers, representing various states across the country. The training aimed to enhance the technical knowledge and practical understanding of participants in the field of Repair and Rehabilitation of Concrete Structures and best practices prevalent in building construction.



Two-days training programme on "Repair & Rehabilitation of Concrete Structures"

Participation and Interaction

Participants actively engaged in discussions, shared field experiences, and clarified technical queries with the experts. The interactive nature of the sessions contributed to a deeper understanding of the subject matter

The training program was highly informative and beneficial to the participants. It provided valuable exposure to participants for Repair and Rehabilitation of Concrete Structures and practical approaches for implementation in ongoing and future projects.

III. NEWS OF ACTIVITIES AT IBC CENTRES

A. Odisha State Centre

(i) Twodays Training Programon 'Maintenance of different Categories of Buildings in PWD for Safety, Durability and Operational Efficiency



Training Programme organised by IBC Odisha Centre for PWD Engineers of Govt of Odisha

A two days training programme on 'Maintenance of different Categories of Buildings in PWD for safety, Durability and Operational Efficiency' was organised by IBC Odisha State Centre on18th-19th July, 2026 for the PWD engineers of different categories like AE/ AEE/EE/SE under EIC Office, Central Circle, Khorda Circle, Cuttack Circle and GPH Circle, Bhubaneswar. Er B.C. Tripathy, Er Manoranjan Misra, Er Bipin Padhy, Er Dukhabandhu Behera, Er Aswini Kumar Biswal, Er Taraknath Chakraborty, Er Manoj Ranjan Nanda, Er G Thaliravan and Er Sakhee Chandrayan

joined the programme as the Expert Speakers for this two days program.They focused on specialized to pics like facility operations and modern engineer in gpractices. Er. Taraknath Chakraborty, member of the BIS National Council and Principal Consultant presented on the installation and regular maintenance offire safety systems in buildings citing several case studies. Er. G. Thaliravan, Country Head, Technical, VOLTAS focused on the operational performance and system atic up keep of air conditioning (HVAC) system components. Er. Aswini Kumar Biswal, Former EIC, Odisha addressed about the design, slope parameters, and execution controls required for drainage and drain maintenance with numerous examples. Er Manoranjan Misra, Former EIC (Civil), Odisha presented on maintenance management concepts, emphasizing a stewardship shift from reactive repairs to asset performance, legal and architectural decisiontrails, and integrated systems thinking. Ms. Sakhee Chandrayan presented on the detailed digital transformation frame works, covering smart building maturity levels, low-cost facility dash boards, and operational cybersecurity. Er. Santosh Kumar Das, Former EIC, Electrical, Odisha highlighted on interdisciplinary hospital building maintenance focusing on zero-downtime electrical continuity, indoor air quality, vertical transport safety, and energy indexing.

(ii) 9th IBC Circle Level Technical Seminar



9th Circle level Technical Seminar organised by IBC Odisha Centre at MITS Rayagada

IBC Odisha State Centreorganized the 9th IBC Circle Level Technical Seminar on 'Standards and Quality in Built Environment' on 8th Aug, 2026 under the Chairmanship of Er. B.C. Tripathy, Chairman, IBC Odisha State Centre. The program was coordinated by Er Ashish Kumar Nayak, CCE, R&B Central Circle, Rayagada jointly with the Prof. C.V. Gopinath, Director, Majhighariani Institute of Technology & Science, Rayagada. In addition to the engineers under R&B Circle, Rayagada, the faculty members and students of Civil Engg.Deptt., Rayagada also actively participated in this event. Er Sriram Panda, CEO of MITS joined as Chief Guest in the inaugural session. Er Dukhabandhu Behera, Er Bimal Dash, Er Gourang Sahoo, Er P K Nayak, Ar Ameet Kothari and Ar Pratik Rath joined as the expert speakers. Prof P K Parhi, Vice Chairman presented the various activities organised by IBC Odisha Centre in last one year.

(iii) 35th Foundation Day



35th Foundation Day

35th Foundation Day of Indian Buildings Congress was organised by IBC Odisha Centreon 1st Sept., 2026 on the theme topic: Building India 2047: From Construction to Resilient, Sustainable and Human-Centric Development. Prof. Pravat Kumar Parhi, Vice Chairman, IBC Odisha Centre chaired this program and Er Ashok Basa, Internal Auditor, WFEO, Prof D K Mishra, MD, Ra Spect, Hongkong, Ar Debendra Parida, Founder, Space Archand Er Lingaraj Gouda, Former EIC, WR Deptt, Govt of Odisha joined the program as distinguished speakers and shared their thoughts on the theme topic. Dr Amit Chatterjee, Asst Prof, Arch Deptt, VSSUT Burla joined as the moderator. The speakers deliberated on earthquake-resilient infrastructure, agentic AI for predictive maintenance, climate-responsive and culturally rooted architecture, and structural detailing with professional accountability. The discussions reaffirmed that technology must support human judgement. The programme concluded with a vote of thanks by Er. Subhendu Bhattacharya, Hony. Secretary, IBC Odisha State Centre.

(iv) Workshop on "Building Future Bharat with NBCS-2026"

Indian Buildings Congress, Odisha State Centre and the Bureau of Indian Standards (BIS) jointly organized Workshop on "Building Future Bharat with NBCS-2026"on 19th Sep, 2026at Hotel Lemon Tree Premier, Bhubaneswar. The high-powered technical sessions witnessed comprehensive deliberations on code architecture, life and fire safety mandates, and quality procurement frameworks led by a no. of BIS stalwarts:



Expert Members participating theWorkshop

Er. Vasudevan Suresh, Chairman, NBCS Committee, BIS, Er. Sanjay Pant, Former Deputy Director General (Standardisation), BIS and Er. Arun Kumar S., Director (Civil Engineering) & Head (NBCUnit), BIS.The leadership of IBC Odisha State Centre steered the technical discourse under the coordination of Er. Bijoy Chandra Tripathy, Chairman, IBC Odisha State Centre, Er. Manoranjan Misra, Governing Council Member, IBC, Prof Pravat Kumar Parhi, Vice Chairman, IBC Odisha State Centre, Er. Ashok Kumar Basa, Advisor, IBC and Er. Subhendu Bhattacharya, Honorary Secretary, IBC Odisha State Centre.



Shri Prithiviraj Harichandan, Hon'ble Minister, Works, Law and Excise, Odisha & Chief Patron of IBC Odisha State Centre addressing in the Gathering

The Valedictory Ceremony was graced by Shri Prithviraj Harichandan, Hon'ble Minister for Works, Law & Excise, Government of Odisha, as Chief Guest. The Hon'ble Minister called upon engineers to reorient their approach towards building the future of the state and the nation. Heemphasized that modern public structures must be engineered for 100-year sustainability and disaster resilience, with aggressive reduction of project gestation periods. Heurged the engineering fraternity to leadthe transition towards green infrastructure, promote the adoption of non-conventional building materials, integrate IoT-driven building maintenance and monitoring systems, and proactively embrace disruptive technologies alongside skilled workforce development. During the valedictory session, Er. Manoranjan Misraformally presented the synthesized policy recommendations of the seminar to the state administration:

Given the profound paradigm shift in content and philosophy from NBC2016tothe National Building Construction Standards 2026 (NBCS-2026) published by BIS, the State Government should initiate a broad-based adoption process while framing specific rules for exclusions such as planning norms. Critical life and structural safety mandates require immediate executive orders—specifically addressing fire safety during construction, advanced lift safety standards under IS17900: 2025, structural safety compliance fort all buildings exceeding 50 meters under IS16700 : 2023, and the enactment of an up dated State Lift Act. Further more, the State should institute a policy framework for prioritized structural audits and retrofitting of all buildings older than 10 years, formulate dedicated policies to bridge the shortage of trained and licensed auditors across structural, fire, energy, water, and waste disciplines, and sustain continuoussen sitization programstoensure comprehensive implementation of NBCS-2026.

(v) Felicitation of Er. B.C. Tripathy by Government of Odisha

Er. B.C. Tripathy, Chairman of IBC Odisha State Centre was invited by Government of Odisha and presented "Standards and Quality" at Odisha Urban Conclave atState Government Centre, Bhubaneswar on 23rd Aug., 2026.

B. Assam State Centre

(i) Annual General Meeting

The Annual General Meeting of the IBCAssam State Centrewas held on 29th August 2026 at the Conference Room of the Institution of Engineers' (India) – Assam State Centre, Panbazar, Guwahati-1. Er. Dilip Deka presided over the meeting, where many active members of IBC were present in the AGM.

The meeting deliberated upon the issues of Membership drive, Opening of Bank account, Office accommodation and organization of technical activities, etc. etc. in detail.

C. Tripura State Centre

(i) Technical Seminar onStandard Bid Document (SBD) 2025 and Works Contract

The Indian Buildings Congress (IBC), Tripura State Centre, organised a technical seminar on "Standard Bid Document (SBD) 2025 and Works Contract" at Santirbazar, Tripura, on 20th July 2026. The seminar aimed to enhance the technical knowledge and professional understanding of engineers and other stakeholders regarding the provisions of the Standard Bid Document (SBD) 2025 and various aspects of works contracts.



Technical Seminar in Progress

The programme provided an opportunity for participants to gain valuable insights into the relevant procedures, contractual obligations and administrative and technical aspects associated with the execution of public works.The programme was graced by distinguished personalities from the engineering profession and public administration.

Er. C. Debnath, President, Indian Buildings Congress (IBC) and Past President, Institution of Engineers (India) and Er. Tapas Marak, Superintending Engineer, 3rdCircle, PWD (R&B), Government of Tripuraattended the programmeasSpecial Guests. Er. Shyamlal Bhowmik, Past Chairman, Indian Buildings Congress, Tripura Centre, presided over the programme.

The session on Works Contract, addressed by Er. R. K. Majumder, (Retd.) IAS, provided an opportunity to discuss the administrative and contractual dimensions of public works. His experience in public administration was valuable in addressing the importance of proper contract management and adherence to established procedures.

The seminar focused on two important areas: the Standard Bid Document (SBD) 2025 and Works Contract. The deliberations on SBD 2025 were intended to familiarise participants with the standardised bidding framework and its relevance to the tendering and execution of public works.

The technical seminar was an important professional initiative towards improving awareness of standard bidding procedures and works contract administration. Such programmes help engineers and other stakeholders remain informed about applicable procedures, contractual responsibilities, and good practices in the implementation of public works.It also provided a platform for professional interaction and the exchange of knowledge and experience among engineers, administrators, and members of the Indian Buildings Congress.

The technical seminar reflected the commitment of the Indian Buildings Congress, Tripura State Centre, to promoting technical knowledge and professional development in the construction and public works sectors.

(ii) Technical Programme on Tripura PWD Standard Bid Documents (SBD)-2025 - Opportunities, Challenges, Case Studies & Quality of Works

The Indian Buildings Congress (IBC), Tripura State Centre, organized a technical programme on "Tripura PWD Standard Bid Documents (SBD)-2025 – Opportunities, Challenges, Case Studies & Quality of Works" on 12thAugust 2026 at 3:00 P.M. at the Conference Hall, Netaji Chowmuhani, Agartala, West Tripura.

The programme was presided over by Er. Bimal Das, CE, PMGSY (Retd.). In his presidential address, he highlighted the importance of adopting the SBD-2025 in a systematic and practical manner and stressed the need for coordination among departments, contractors, consultants and other stakeholders to ensure quality and value for public expenditure.

The programme was attended by senior engineers, architects, technical professionals, members of IBC and other distinguished guests. The event aimed to provide a comprehensive understanding of the Tripura PWD Standard Bid Documents (SBD)-2025, including the opportunities and challenges associated with their implementation, relevant case studies and measures for ensuring quality in public works.

Er. Goutam Sarkar, CE, PWD (PMGSY), Government of Tripura, was the Chief Guest. Er. C. Debnath, National President, IBC, Headquarters, New Delhi and Er. Ratan Choudhury, SE, PWD Circle-II, Agartala were the Special Guests.



Technical Programme in Progress

Er. R. K. Majumdar, IAS (Retd.), Former Director, UDD, Government of Tripura, was also the Special Guest and Expert Speaker. He shared valuable insights on the practical aspects of bid documents, project implementation, administrative procedures and quality assurance in public works.

Er. Debabrata Debbarma, Hony. Secretary, IBC, Tripura Centre and SE, NH, Government of Tripura, made a detailed presentation on the topic. The technical deliberations focused on improving transparency, efficiency and accountability in the tendering and execution processes. The speakers also emphasized proper interpretation of the Standard Bid Documents, effective contract management, adherence to specifications, timely completion of projects and strict quality control.

The programme provided an effective platform for interaction, knowledge sharing and discussion on the opportunities and challenges associated with the Tripura PWD Standard Bid Documents (SBD)-2025. It was successfully conducted and contributed significantly towards promoting better procurement practices and quality construction works in the State of Tripura.

(iii) Technical Programme on "Development of a Low-Cost Water Purification System for Rural Communities"

The Indian Buildings Congress (IBC), Tripura State Centre, jointly with Dhalai District Polytechnic Institute, Tripura, organized a technical programme on "Development of a Low-Cost Water Purification System for Rural Communities" on 21stJuly 2026 at 11:00 A.M. at the Conference Hall of Dhalai District Polytechnic Institute, Dhalai, Tripura.

The programme was organized with the objective of creating awareness about affordable and sustainable water purification technologies suitable for rural communities. The technical session emphasized the importance of access to safe and potable drinking water, particularly in rural and remote areas, and discussed practical, low-cost approaches for water treatment.

The programme was graced by several distinguished personalities. Er. C. Debnath, National President, IBC; Er. R. K. Majumdar, IAS (Retd.), Former Director, UDD, Government of Tripura; Dr. Sajal Kanta Das, Principal-in-Charge, Dhalai Polytechnic Institute and Er. Abhijit Debbarma, Assistant Lecturer, TIT, Narsingarh, werethe Special Guests.Er. Jiban Debbarma, SE, DWS Circle, Ambassa, was the Guest of Honour.



Technical Programme in Progress

Er. Shyamlal Bhowmik, CE, DWS (Retd.), delivered the Keynote Address and shared his valuable technical knowledge and experience on water purification and rural water-supply systems.

Er. Jiban Debbarma, SE, DWS Circle, Ambassa, delivered a detailed PowerPoint presentation on the subject. His presentation highlighted practical aspects of water treatment, the challenges faced by rural communities and the need for cost-effective and sustainable solutions.

The technical deliberations provided an opportunity for engineers, faculty members, students and other participants to gain knowledge about innovative and affordable water purification methods and their potential application in rural areas.

The technical programme was successfully conducted with active participation from technical professionals, faculty members and students. The event served as a useful platform for knowledge sharing and sensitization on low-cost, sustainable and community-oriented water purification technologies.

(iv) 35th Foundation Day and Technical Seminar

The Indian Buildings Congress (IBC), Tripura State Centre, organized the "35th Foundation" Day of the Indian Buildings Congress along with a Technical Seminar on "Fire Hazards in Building Constructions – Occurrence, Prevention and Awareness"on 1st September 2026 at 6:00 P.M. at the Conference Hall of PWD Complex, Netaji Chowmuhani, Agartala, Tripura (West).



35th Foundation Day Celebration & Technical Seminar in Progress

The programme was attended by senior engineers, architects, technical professionals, members of IBC, and other distinguished guests. The event aimed to create awareness regarding fire hazards in buildings and to highlight the importance of appropriate planning, construction practices, fire-safety provisions, prevention measures and public awareness for ensuring the safety of life and property.

Er. Kshudiram Tripura, Chief Engineer (RD), Government of Tripura, graced the occasion as the Chief Guest.

The technical session featured valuable presentations and discussions by eminent technical professionals. Er. Jibesh Datta, HoD (Civil Engineering), TIT, Narsingarh, delivered an expert speech on the seminar topic.

The technical deliberations focused on the occurrence of fire hazards, preventive measures, fire-safety planning, appropriate building construction practices, emergency preparedness and awareness. The programme provided an effective platform for interaction and exchange of knowledge among engineers and other stakeholders.

The 35th Foundation Day, together with the technical seminar, was successfully conducted and contributed significantly towards strengthening professional awareness and promoting safer building practices in the State of Tripura.

D. Kota Local Chapter

(i) Foundation Day and 7th Annual General Meeting

IBC Kota Local Centre Celebrated 35th Foundation Day and Organised 7th Annual General Meeting with Technical Seminar on "Fire Safety Features in Building's" at ShriRam Divya Vatika located near Shrinath Puram, Kota on 6th September, 2026.

Programme started with Maa Saraswati Poojan and lighting the ceremonial lamp by guests.Er. Ajay Chaudhary, Er. Amjad Ahmad, Er. Ravindra Prakash Mathur, Er. Hemant Kumar Sharma, Er. Sunil Kumar Garg, Er. Manish Kumar Jain, Er. Ashok Sanadhya, Er.Suresh Kumar Bairwa, Er. Ganpat Chaudhary were on the dais.

Er. Hemant Kumar Sharma, Chairman, IBC Kota Local Centre welcomed the guests and members presented in programme. He also expressed thanks to members of IBCKota Local Centre for their valuable support, guidance, technical expertise and continued support in organizing day to day activities. He appreciated the members dedication to sharing modem engineering practices, sustainable building techniques and expert insights that help build safer, stronger and smarter communities across India.



Foundation day celebrated

Technical Seminar

"If there is a Fire, not a mobile, save your life first...

Every Student needs fire safety training"

Er. Ganpat Chaudhary, President, Fire & Safety Association of India, Jaipur Centre explained the ways to defend Firein Hostels and Coaching institutes of Kota.

Fire safety specialist has given important suggestions regarding safety of thousands of students coming from across the country in Kota. Basic trainingof Fire safety should be given only at the entrance of hostel, P.G. or Coaching institutes.Everybody living out there should know what to do and what tools to do on fire & how to use.Information of using Fire Extinguisher, cylinder and hose,instead of panicking students should begiven. Fire department need to continuously conduct Fire safety Awareness Campaign.

Er. Ganpat Chaudhary stated that before the construction of any building it should be utilized as per the permission and designed capacity. The use of the building should be as per the plan approved and should be used in the same category.

Er. Amjad Ahmad, Dy. Housing Commissioner, Rajasthan Housing Board, Kota Presided the programmeand stated that Raw Land is also necessary along with concrete, natural balance during building construction should be maintained. A certain of raw land should be abandoned instead of concrete so that

rain water can be submerged in earth. He said walking bare foot on such land is also beneficial for health.

Er. Ravindra Prakash Mathur, Director, Engineering, Kota DevelopmentAuthority (KDA), Kota and Special Guest of programme stated that KDA also follow the safety features in buildings at the time of approval of plans as per by laws.

Er. Suresh Kumar Bairwa, Former Chairman IBC Kota Local Centre, Former Addl. Chief Engineer, PWD, Zone Kota, Executive Council member IBC expressed his gratitude to the esteemed members present in programme and welcomed the new members & appeal to engineers join IBC on behalf of IBC Headquarter.

Er. Ajay Chaudhary, Addi. Chief Engineer, PWD, Zone Kota as Chief Guest addressed the programme and congratulated the IBC members for 35thFoundation Day & appreciated the programme conducted with Technical Seminar on a very important Topic i.e. "Fire Safety Features in Buildings" and said that speakers explained very basic things about the fire safety in buildings and how to use the fire safety equipments at the time of incident instead of making videos. He also congratulated IBC for making new members and conducting technical seminars & activities regularly on different days.

Er. Manish Jain, Secretary, IBC Kota Local Centre expressed gratitude and thanked to all guests & Special thanked to helping hands of the programme - Er. Raksha Sanadhya, Lecturer, Govt. Polytechnic College, Kota, Architect Anirudh Kaushik, Contractor Er. Devendra Sharma, Er. Kamal Kumar Sharma, Er. (Dr.) Shantilal Jain, Er. U.S. Mundra, and Er. R.K. Lohomi.

The programme concluded with National Anthem.

(ii) Engineer's Day

The Indian Buildings Congress, Kota Local Centre, organised Engineers' Day on 15th September, 2026 in association with PWD Zone Kota and PREAS Kota, at PWD Campus Nayapura Kota.

The programme was organised to commemorate the birth anniversary of Bharat Ratna Sir M. Visvesvaraya, the legendary civil engineer, administrator and nation-builder.

The programme commenced with a welcome address by Er. Hemant Kumar Sharma, Chairman, IBC Kota Local Centre, who extended greetings to all the engineers and highlighted their important role in infrastructure development and nation-building.

Er. Manish Jain. Hony. Secretary, IBC Kota Local Centre, conducted the proceedings of the programme.



Engineer's Day Celebrated

Er. D.R. Kshatriya presented an inspiring account of the life, engineering achievements, discipline, professional ethics and outstanding contributions of Sir M. Visvesvaraya. He highlighted how Sir M. Visvcsvaraya's vision and engineering excellence continue to inspire generations of engineers.

All the engineers and dignitaries offered floral tributes and garlanded the statue of Sir M. Visvesvaraya installed at the PWD Zone Kota Campus.

On this occasion, Er. Ashok Sanadhya, Superintending Engineer, PWD Zone Kota, administered a pledge to the participating engineers to uphold professional integrity, prioritise quality and safety, conserve natural resources and contribute actively towards sustainable infrastructure and nation-building.

The programme was addressed/attended by Senior Engineers Er. Dhirendra Mathur, Er. R.K. Gaur, Er. B.L. Malav, Er. Suresh Kumar Bairwa, Er. Kamal Kumar Sharma, Er. R.P. Sharma, office-bearers and members of IBC Kota Local Centre, officers of PWD Zone Kota, members of PREAS Kota and several practicing engineers.

At the conclusion of the programme, Er. Kamal Kumar Sharma proposed the vote of thanks and expressed gratitude to all the dignitaries, engineers and collaborating organisations for their valuable participation and cooperation.

E. Durg Local Centre

(i) Technical Lecture on Water Management

A Technical Lecture on Water Management was organized on 26thSept., 2026by Durg-Bhilai Local Centre at Krishna Engineering College, Bhilai. Thistopic was with special reference to Rain Water Harvesting in the urban areas.

Shri Giridhar Kumar Madariya, National President, Sardar Vallabhbhai Patel Foundation was the Chief Guest. The Key note address was delivered by



Lecture on Water Management

Er. Prateek Dixit, In-charge Joint Director, Town & Country Planning Department, Durg, Chhattisgarh. Dr. R. P. Dewangan delivered an expert lecture on the topic of water management. During the session, he discussed various aspects of water conservation and management through a detailed Power Point presentation. He also demonstrated a live working model of a Rainwater Harvesting System. Dr. Rajesh Tamrakar, Chairman, IBC Bhilai-Durg Local Centre, delivered the welcome address and briefed the participants about the aims and objectives of IBC, as well as the present status and activities of the Bhilai/Durg Local Chapter. During the programme, Dr. Ravindra Sharma, Vice Principal, Krishna Engineering College (KEC), Bhilai, also welcomed all the participants on behalf of KEC, Bhilai. I/C JD, T&CP. Durg Local Centre delivered very effective and informative concept of Master Plan which is must for holistic development of any city. More than 100 participants attended the programme including engineering students of this college. At the end, Vote of Thanks was delivered by Er. S. K. Tamrakar on behalf of IBC.

IV. National News

गड्ढों का टिकाऊ समाधान बनेगा इकोफिक्स

एमसीडी ने सड़कों पर बने गड्ढों को भरने के लिए बिटुमिन का तोड़ निकाल लिया है। एमसीडी ने सीआरआरआई को उनके द्वारा तैयार किए गए इकोफिक्स के 12.500 बैग का आर्डर दिया है। इससे बरसात के दौरान बने गड्ढों को तुरंत भरा जा सकता है। जानकारों का कहना है कि इकोफिक्स बिटुमिन के मुकाबले इतना कारगर है कि यह तुरन्त फिक्स हो जाता है जबकि बिटुमिन पर पानी पड़ते ही वह उखड़ना शुरू हो जाता हैं इसलिए इस समय गड्ढों को भरने के लिए इकोफिक्स को सबसे ज्यादा कारगर माना जा रहा है।

दिल्ली में धूल की वजह से होने वाला प्रदूषण बड़ी समस्या हैं बरसात में गड्ढें इसे और बढ़ा देते है। बरसात रूकते ही जैसे ही सड़क सूखती है, गड्ढों के ऊपर से लगातार गाड़ियां गुजरने की वजह से धूल उड़ने लगती है।

इकोफिक्स के फायदे

- इसके इस्तेमाल के लिए गड्ढे से पानी निकालने की जरूरत नही। बरसात के दौरान सीधे इनका इस्तेमाल किया जा सकता है।



- इकोफिक्स तुरंत ऐसे सेट हो जाता है कि इसे वापस निकालना भी मुश्किल है।
- जहां इकोफिक्स का इस्तेमाल किया गया है, वहां मरम्मत के तुरंत बाद सड़क को ट्रेफिक के लिए खोला जा सकता है। सड़क के उस हिस्से को लंबे समय तक बंद रखने की जरूरत नहीं पड़ती।
- दिल्ली के अलावा महाराष्ट्र और तमिलनाडु में भी इकोफिक्स का इस्तेमाल किया जा रहा है।

(स्रोत : नव भारत टाइम्स तारीख – 25/8/2026)

Kedarnath Pilgrims bring back tonnes of Trash from Shrine

The 18km trek to Kedarnath, at 11,755 feet, from Gaurikund is for most pilgrims a journey of a lifetime in search of peace and tranquillity. And now, in an unusual act of service, thousands, in perhaps a first, are returning with bags of plastic waste collected from the sacred site.

Under the local administration's 'Carry Me Back' initiative, close to 5,000 pilgrims have so far voluntarily carried down more than 12 tonnes of compressed plastic waste, turning what began as local effort to tackle the mounting garbage problem into a wider campaign. The move comes against the backdrop of a serious sanitation challenge at the shrine, where a huge visitor influx generates vast quantities of waste.



Poor waste segregation, difficult weather and logistical limitations of working at such high altitudes compound everything.

Among the sights seen during the campaign have been pilgrims from Tamil Nadu, Odisha and other southern states carrying up to 10kg of trash on bicycles.

Officials from Healing Himalayas and Sulabh International, who are working with the local municipal body and the administration, have described the waste disposal situation as "critical".

Shri Neeraj Kukreti, Executive Officer of the Kedarnath local body, said that as part of the 'Carry Me Back' campaign, the administration has established a "material recovery facility or MRF"- equipped with a unit that compresses plastic waste, making it easier to transport. Boards carrying slogans have been put up to encourage devotees.(Source TOI dated 4/10/2026)

India's 50,000-KM High-Speed Road Plan: What New Highway Design Rules Say

To ensure uniformity and consistency in the construction of high-speed corridors, also known as access-controlled national highways or expressways, the National Highways Authority of India (NHAI) has issued detailed guidelines covering the design, standards and specifications for such projects. Until now, consultants have been preparing detailed project reports (DPRs) for these corridors based on varying standards and specifications.

The move assumes significance as India targets 50,000 km of high-speed corridors by 2036-37 under vision 2047.

These corridors are special sections of national highways which provide uninterrupted, end-to-end travel. The total length of high-speed corridors by December 2025 stood at 3,052 km. The highway authority has mandated that traffic assessment of these projects should include existing, generated, induced, as well as diverted traffic based on proper traffic modelling. "Freight growth rate shall be duly analysed considering economic development. The traffic shall be validatedfrom other secondary sources such as toll transaction. For freight traffic and determination of VDF (vehicle damage factor), data from GST portals, mining departments and other sources should be validated,".

It said that when the present traffic is up to 15,000 PCU (passenger car unit), the corridor should be developed as a four-lane highway with a four-lane structure. If the traffic is between 15,000 to 25,000 PCU, the corridor should be of four-lane highway and six-lane structures, and if the traffic is 25,000-40,000 PCU, then it should be a six-lane highway with six-lane structures.

"Access should be planned with the objective that the longdistance through traffic can operate at speed dictated by the flow on the main highway andnot by any other factors such as interference from local traffic, access traffic or cross traffic.

Access to the project highway shall be through properly designed ramps at pedestrian locations," said the NHAI.

It mandated that in areas characterised by frequent operation of heavy agriculture machinery, specifically harvesters and tractors with high laden farm produce, the height of underpass may be considered at 4.50 metres. The service road shall be provided in built-up and urban sections on both sides with drain cum footpath,said the authority.

Regarding road signage and markings, NHAI said full overhead gantries carrying direction signs shall be placed 5 km and2km ahead of an exit, while cantilevergantries carrying advance direction signs shall be placed 1 km and 500 metres before the exit. The authority also mandated that lane and other markings be 150 mm wide, while edge-lane markings be 200 mm wide.

Barrier-less tolling, corridor protection

Since NHAI is already shiftingtowards a multi-lane free flow (MLFF), or barrier-less tollingsystem, it has also asked for provisions for the system to be incorporated into the layout of high-speed corridors.

"In order toprevent encroachment and unauthorized access on high-speed corridors. a1 meter high RCC (reinforced cement concrete) boundary wall shall be constructed along the extreme outer edge of the ROW (right of way)," said the NHAI.

ROW, or right of way, refers to the total width of land legally acquired or owned by the government or road authority for construction, operation, maintenance, and future highway expansion.

The authority also said thatdrip irrigation will be provided in the median for watering of plants and tree plantation will be made an integral part of the project design at the DPR stage.(Source Indian Express 26/09/2026)

Madhya Pradesh looks at 400-yr-Old Fix to Solve Water Crisis

Over four centuries after Mughal engineers taught an entire city to drink water without a single pump, Madhya Pradesh is preparing to make the impossible work again. In an unprecedented heritage engineering mission, the state has launched a scientific effort to revive Burhanpur's Kundi Bhandara, a 400-year-old system that once solved a city's water crisis and may now help solve a modern one.



Kundi Bhandara is a Unesco Tentative World Heritage Site - a landmark or area that a country has officially put on a waiting list to be considered for full World Heritage status.

Built around 1615 under Mughal governor Abdur Rahim Khan-i-Khana during the reign of Jahangir on the Persian qanat principle, the Kundi Bhandara network comprises more than 100 vertical shafts linked by nearly 4km of underground galleries that intercepted groundwater from Satpura hills and carried it across Burhanpur entirely by gravity - without pumps or electricity.

Parts of the system still survive despite centuries of neglect, encroachments and collapsed shafts. Recent visits found water continuing to flow beneath sections of the network, raising hopes that scientific restoration could revive larger stretches.

The state's Directorate of Archaeology, Archives and Museums (DAAM) is spearheading the revival initiative. A study is being carried out by a multidisciplinary team from Bhopal's govt-run Maulana Azad National Institute of Technology (MANIT), led by water resources professor Rutuja Chavan. Her team will use magnetic surveys and other non-destructive technologies to map hidden galleries, identify structural failures and prepare the first comprehensive revival blueprint.

"This is not a dead structure. The groundwater is still there and the engineering principles continue to work. Our study will establish how the network can be safely revived, so that this extraordinary system can once again serve people while preserving its historic character," Chavan said.

Burhanpur collector Shri Harsh Singh said the initiative could become a global benchmark in heritage-led sustainability. "Very few places in the world possess a living underground water system of this scale that still functions. Reviving it is about safeguarding an internationally significant heritage asset while enhancing its future water-carrying capacity. For many years, people in the area have not used this water, but we are sure after its revival, Kundi Bhandara will quench the thirst of many," said the collector.

Calling it one of MP's most important "living heritage" structures, DAAM joint director Manisha Sharma said the restoration will begin after a report from the MANIT experts. Sharma added that its revival could create a national model for heritage conservation.

Independence Day Celebration at IBC Headquarters



Independence Day Celebrated

The 80th Independence Day of India was celebrated on 15th August 2026 at IBC Headquarters with great pomp and show. The celebration was attended by Col. (Dr.) Anand Mathialagan, Honorary Secretary, IBC;Er. Ranjit Singh, Executive Director and the staff of IBC.Col. (Dr.) Anand Mathialagan hoisted the National Flag. At the end, sweets were distributed on this occasion.

Technical Information

Cost and Value: Takeaways CPWD Procurement Manual

- Shifting the mandate towards predictable value engineering, risk containment and realistic cost mapping.
- Doing away with TS for EPC contracts.
- Assigning cost control mechanism to PE and the DPR stage.
- Discouraging unauthorized variation creep.
- Lifecycle value; mandatory green certification for public building works costing Rs 50 cr or more.
- Initial budget estimates toexplicitly account for the sustainable building materials, energy-efficient HVAC configurations, and renewable installations etc. to conform to green certification norms.
- Component Parity in PAR; non-arbitrary cost percentages to regulate budgeting at DPR stage.
- Safeguarding cash flow: 75% of the billed milestone amount within 10 days; ensuring contractor's liquidity and continuous work progress on site.

Regulatory Precedence in Dispute Minimization; preventing costly legal standoffs that ruin project financial viability; hierarchy of contractual interpretation is prescribed: GFR, CVC guidelines, GCC/ CPWD Work Manual based SOPs.



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New Members enrolled during 01/07/2026 to 30/09/2026

Individual Members:

S.No.	M. No.	Name	Qualification	Designation	Department	City	State
1	ML-10855	Er. Goirik Vachyas	B.Tech. (Civil)	Senior Instructor	Technical Education, Assam	GUWAHATI	Assam
2	ML-10856	Er. Akash Haushiram Pansare	B.E. (Civil)	Assistant Engineer	Maharashtra PWD		Maharashtra
3	ML-10857	Dr. Surajit Maiti	M.Sc. (Chemistry), Ph.D	Former Director (Science)	Archaeological Survey of India	KOLKATA	West Bengal
4	ML-10858	Dr. Bharati Mohapatra	Ph.D	Head, Department of Architecture	Veer Surendra Sai University of Technology	BHUBANESWAR	Odisha
5	ML-10859	Er. Sandeep Tukaram Badgujar	B.E. (Civil)	Team Leader	Civil Tech India Pvt. Ltd.	NASHIK	Maharashtra
6	ML-10860	Er.Varinder Kumar	B.E. (Civil)	Former Chief Engineer	Punjab Water Resources Deptt.	PATIALA	Punjab
7	ML-10861	Er. Satish Kumar Gupta	M.E. (Structures)	Former Chief Engineer	Punjab PWD (B&R)	PATIALA	Punjab
8	ML-10862	Er. (Ms.)Neichutuonuo Yhome	B.Tech.	Sub Divisional Officer	Nagaland PWD	KOHIMA	Nagaland
9	ML-10863	Er. Atul Kumar Pandey	B.Tech (Civil), M.E. (Strct.), AMIS, LLB	Director (Contracts)	MES	NEW DELHI	Delhi
10	ML-10864	Ar. Ruchipurna Jena	B.Arch.	Principal Architect	Prakriti Architects	BHUBANESWAR	Odisha
11	ML-10865	Shri Mubashir Farooq Lone	B.Com	Director	MFL Infrastructure Pvt. Ltd.	KUPWARA	J & K
12	ML-10866	Shri Haji Mohabat Ali Khan	12th Pass	Contractor	M/s Mohabat Ali Khan	SRINAGAR	J & K
13	ML-10867	Er. Ritesh Kumar	AMIE (Civil Engg.)	Sub Divisional Engineer (Civil)	Engineering Deptt., UT Administration	MOHALI	Punjab
14	ML-10868	Er. Prakhar Jain	B.Tech. (Civil)	Assistant Engineer	Uttar Pradesh PWD	GHAZIABAD	Uttar Pradesh
15	ML-10869	Er. Shekhar Chand Meena	B.Tech.	Executive Engineer	Rajasthan PWD	KOTA	Rajasthan
16	ML-10870	Er. Sushil Kumar Hansda	B.Tech. (Civil)	Chief Engineer	Jharkhand Education Project Council	RANCHI	Jharkhand
17	ML-10871	Er. Anil Manikrao Kshirsagar	Post Diploma in Automobile Engg.	Director	AtoX Trade Links Pvt. Ltd.	NAGPUR	Maharashtra
18	ML-10872	Er. Kallol Kishore Pradhan	B.E. (Civil), Masters in Geo Tech.	Addl. Chief Engineer	Works Department, Govt. of Odisha	BHUBANESWAR	Odisha
19	ML-10873	Er. Jaya Prakash Guru	B.E. (Civil)	Chief General Manager	NBCC (India) Limited	CUTTACK	Odisha
20	ML-10874	Prof. Paturu Neelakanteswara Rao	Ph.D	Professor	BITS Pilani	HYDERABAD	Telangana
21	ML-10875	Er. Shashankar Datta	B.E. (Civil Engg.)	Dy. Executive Officer	Tripura Housing & Construction Board	AGARTALA	Tripura (West)
22	ML-10876	Er. Ramesh Kumar	Diploma in Civil Engg.	Sr. XEN/Construction	Northern Railway	MOHALI	Punjab

23	ML-10877	Er. Dasari Taranath	M.Tech. (Strct. Engg.)	Vice President	KMV Projects Limited	BANGALORE	Karnataka
24	ML-10878	Er. Manoj Kumar Goyal	B.E. (Civil), M.E. (Strct.)	Director (Contracts)	MES	PUNE	Maharashtra
25	ML-10879	Er. Abdul Latif Ganai	B.E. (Civil), B.Tech.	Proprietor	L.G. Constructions	KUPWARA	J & K
26	ML-10880	Er. Shelar Aniket Arun	Diploma in Civil Engineer	Civil Engineer Assistant	Maharashtra PWD	DOMBIVALI EAST	Maharashtra
27	ML-10881	Er. Sarban Singh	Diploma in Civil Engg.	Sub Divisional Engineer (Civil)	Engineering Deptt., UT Administration	CHANDIGARH	Chandigarh
28	ML-10882	Er. Lakshmi Kantha Reddy K.	Diploma in Civil Engg.	Former AEE	Karnataka PWD	BENGALURU	Karnataka
29	ML-10883	Er. Junaid Kanth	B.Tech. (Civil)	Chief Executive Officer	Formulaic Engineers Pvt. Ltd.	NOIDA	Uttar Pradesh
30	ML-10884	Er. Harish P	B.Tech. (Civil)		The Zomax	KARAIKAL	Puducherry
31	ML-10885	Er. Chandan Sobhan Sasmal	M.Tech. (Geo-Tech Engg.)	Proprietor	C.S.Sasmal & Associates	HOWRAH	West Bengal
32	ML-10886	Er. Tapan Kumar Das	M.Tech.		Karukriti	HOWARH	West Bengal
33	ML-10887	Er. Atul Vijayrao Sangamnerkar	B.E. (Civil), M.E. (Civil Strct.)	Associate Professor	College of Military Engg	PUNE	Maharashtra
34	ML-10888	Er.Vijay Kumar Chaudhary	B.Tech. (Civil), M.E. (Civil)	Chief Engineer	Himachal Pradesh PWD	SHIMLA	Himachal Pradesh
35	ML-10889	Er. Vinod Kumar	B.Sc (Mathis), DEE (Hons)	AE E/M, AGE E/M	MES	GANDHINAGAR	Gujarat
36	ML-10890	Er.(Ms.) Pampa Sen	M.Tech. (Strct. Engg.)	Structural Consultant	PS Enterprise	HOWRAH	West Bengal
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