



सत्यमेव जयते

Emerging and Innovative Technology for construction of Housing used in Gujarat



Affordable Housing Mission

Urban Development & Urban Housing Department

Government of Gujarat

KEY FEATURES OF INNOVATIVE BUILDING TECHNOLOGY

► **Economic Factor:**

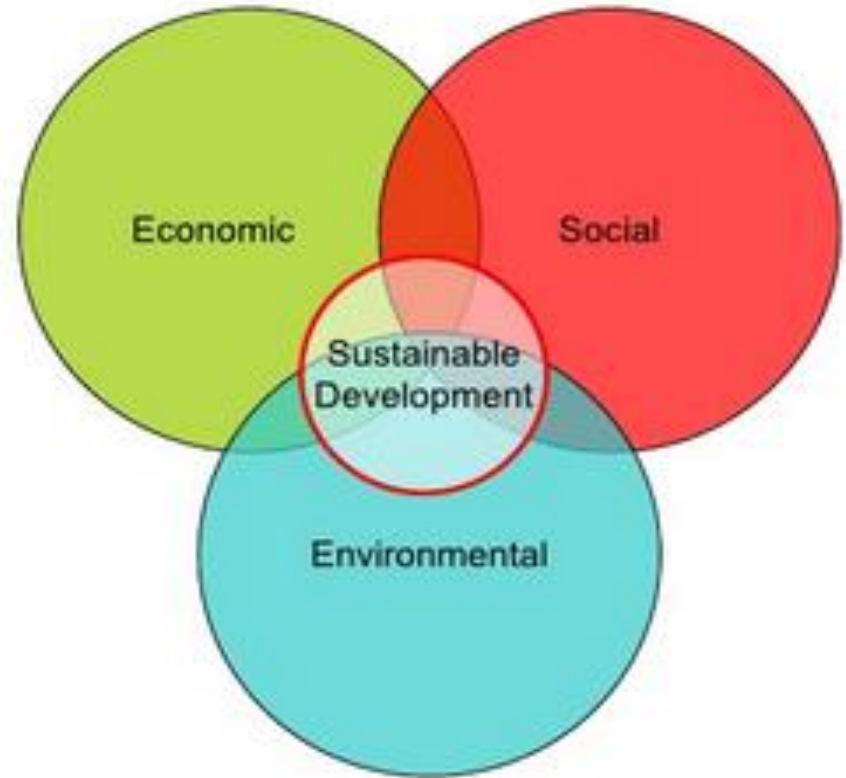
- Adaptability
- Affordability and Reductions in O & M
- Safety at Construction Site
- Cost Saving

► **Environmental Factor:**

- Sustainability
- Energy Efficiency

► **Social Benefits:**

- Quality Assurance
- Comfort and Standardization
- Enhance Productivity of Occupants



Advantages of Innovative Technology Buildings vs Conventional Building

- Cost savings
- Minimize impact on environment
- Enhanced health & productivity of occupants
- Speedy construction
- Community & social benefits
- Lower
 - energy costs
 - maintenance costs
- Improved space utilization
- Increased occupant comfort

LIST OF TECHNOLOGY APPROVED BY BMTPC

Formwork Systems

1. **Monolithic Concrete Construction System –**

(a) using Plastic - Aluminum Formwork; and (b) using Aluminum Formwork

2. Modular Tunnel form

3. Sismo Building Technology

Precast Sandwich Panel Systems

4. Advanced Building System – EMMEDUE

5. Rapid Panels

6. Reinforced EPS Core Panel System

7. Quick Build 3D Panels

8. Concrete wall Panel System

9. Glass Fiber Reinforced Gypsum (GFRG) Panel System

Light Gauge Steel Structural Systems

10. Light Gauge Steel Framed Structure (LGSFS)

11. Light Gauge Steel Framed Structure with Infill Concrete Panels (LGSFS-ICP) Steel

Structural Systems

12. Factory Made Fast Track Building System

13. Speed Floor System Precast Concrete Construction Systems

14. **Waffle-Crete Building System**

15. Precast Large Concrete Panel System

16. Industrialized 3-S system using cellular light weight concrete slabs & precast columns

Monolithic Concrete Construction AMC, Ahmedabad

Constructing Houses for Economical weaker section

Salient features of Monolithic Concrete Construction

- **Produce high quality, durable and low maintenance structures.**
- **Produce structures that are resistant to seismic conditions.**
- **Monolithic Construction- good finish**
- **Leak-proof joint less construction**



Monolithic Concrete Construction AMC, Ahmedabad **Constructing Houses for Economical weaker section**



Monolithic Concrete Construction AMC, Ahmedabad Constructing Houses for Economical weaker section



Monolithic Concrete Construction AUDA Ahmedabad



Waffle Crete Technology at Palanpur Nagarpalika

- Thermal insulation
- Low cost construction
- Least source utilization
- Speedy construction
- Standard quality of work



Construction stage

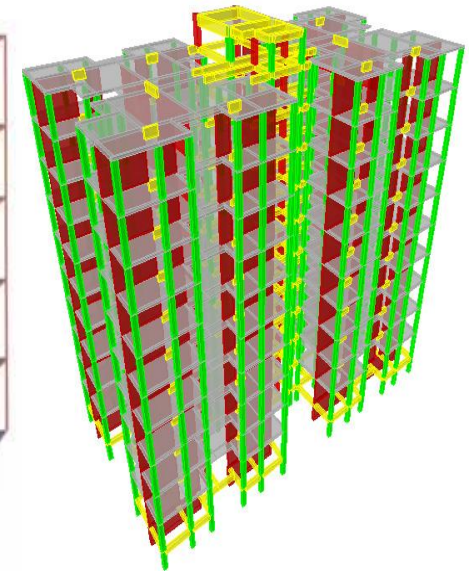


Completion stage



Flat Slab Building with Shear wall and Column GHB - Valsad

- Smoothness - reduces cost of plastering on walls & ceiling
- Environment friendly – allows use of fly-ash in the mix
- Speedy implementation and High structural strength
- Less maintenance, cost saving and good finishing.



Fly Ash Concrete Block & Bella Masonry Porbandar Nagarpalika

- More crushing strength and less water absorption ratio.
- Environment Friendly – green building concept.
- Low cost with speedy construction.

Construction stage



Completion stage



AAC Block –Conventional Structure AMC,Ahmedabad

- More crushing strength and less water absorption ratio.
- Environment Friendly – green building concept.
- Low cost of construction.
- Speedy construction.

Construction stage



Completion stage



BEST PRACTICE/INNOVATION

Innovative Technology/ Alternative Material Used in Project	Towns	No. of DUs		Scheme
		Approved	Completed	
Waffle Crete Technology	Anand	308	308	IHSDP
	Dahod	480	480	
	Deesa	1456	880	RAY
	Bharuch	512	288	
	Palanpur	1776	240	
	Kalol	2421	336	PMAY
	Total-A	6953	2532	-
Monolithic Concrete Construction	Boriyavi	416	416	PMAY
	Ahmedabad	33776	33776	BSUP
		4518	4518	RAY-AHP
		2528	2368	RAY-Slum
		1488	-	PMAY-AHP
		2240	2240	MMGY
		1652	1652	
	Rajkot	736	736	BSUP
	Total-B	47354	45706	-
	Total (A+B)	54307	48238	-

Thank you.....