

THE EDGE 2016

“re”GENERATION

recycle.
reuse.
rethink.
refurbish.
reform.
refinish.
repaint.
rebuild.
reinvent.
recast.
rekindle.
return.
redefine.
rejuvenate.
refashion.
realign.
reevaluate.
rework.
rewarding.
remarkable.
remember.
reconstruction.
redevelopment.
revitalization.
restoration.
conservation.
protection.
earth DAY.
today.
everyday.



SMAID
PUBLICATION

HERITAGE



Charutar Vidya Mandal Institution

Shantaben Manubhai Patel School of Studies & Research in Architecture and Interior Design

Shantaben Manubhai Patel School of Studies & Research in Architecture and Interior Design (SMAID) is a dream venture of Dr C L Patel, Chairman of CVM which aims to provide creative learning environment for various branches of Design Education .The Institute is located in the satellite township christened as New Vallabh Vidya Nagar. It is a peaceful setup on a lush green belt of the region. The pledge of CVM to bring renaissance through the means of education has brought a cascading flow of colossal donation from India and abroad. The campus incorporates two Engineering Colleges, ITI college, Pharmacy college, Ayurvedic college and Hospital, Bio Technology, Hospitality and Management College plus a state of art Design School.

SMAID has made a humble beginning with its 5 years Bachelor in Architecture program



with an intake of 40 seats and 4 years Bachelor in Interior Design program with an annual intake of 60 seats affiliated to Sardar Patel University. The Institute has a state of art Infrastructure with a conducive environment of Design education – fully equipped with modern ergonomically designed furniture in

Studio, Audio Visual Rooms, Material Museum, Computer Labs, Library, Work Shops, Multi Purpose Room , Arena Theatre , Canteen and a beautifully designed Landscape with a lush green campus – a setting just apt for Design Education.

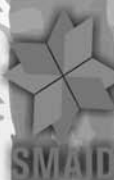
We at SMAID invites you to visit the campus to cherish the pulse of our vision and ambition. Let us all join hands to offer service to our Alma Mater by sharing our rich experience through Visiting faculties, Expert Lecturers, Presentation and Exhibition to nurture the future generation to cater the need to the threats and challenges of globalisation.

THE EDGE 2016

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ON THEME

HERITAGE

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Chairman's Message



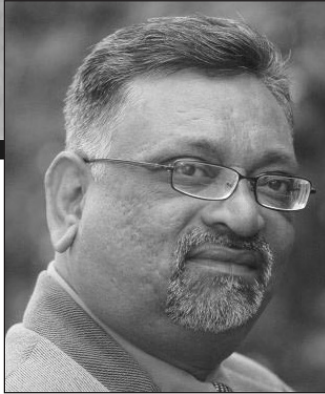
It is an immense pleasure that the subject of SMAID Publication this year is Heritage! The subject of 'Heritage' is very close to my heart. Anything which is old, has outlived its life span and which has a unique value should not be thrown out. Such objects are to be researched upon as they inform us of the times and the context in which they were created. Thus the study of heritage is an important link in knowledge of history and without knowing and understanding history, it would be meaningless to talk about sustainable or smart development. Heritage values may be emotional like those of spirituality, continuity or creating a unique identity; Cultural value like the aesthetic sense, ecological, scientific, technological etc and lastly it may have some use value like being functional or adaptable for use today, possesses some low-income and political value.

The district of Anand itself, is rich with innumerable cultural properties under its heritage like the residence of Sardar Patel in Karamsad, the Vav at Sojitra and Borsad, temples at Bhadran, Dakor etc; the havelis of Vaso, the Jami Mosque at Khambhat, the system for harnessing rain water etc.

I wish SMAID a great future ahead and a grand success to their Annual Aarohan 2016.

Dr. C. L. Patel
Chairman, Charutar Vidya Mandal

Message From the Hon. Director



Greetings from Team SMAID!

Charotar is glorious again with its perfect weather, festive season and mercury sinking down below 10 degree – attracting NRI / NRG back home for social and ceremonial occasions.

The past few months has seen interesting events on SMAID campus which has educated and exposed our students and kept exploring the outlook of Industry and professional – academia bridging and interactions through Workshops, Related Study Programs (RSP) & exhibitions cum presentations.

There is a tremendous amount of energy on SMAID Campus keeping no stone unturned in exploring possibilities of creating history worth remembering to celebrate our 4th Annual Day AAROHAN 2016. It is indeed a matter of proud privilege in presenting our 3rd publication “THE EDGE 2016” on the theme HERITAGE to be released during our Annual Day function Aarohan 2016 on 12 January 2016.

I am extremely happy to share with you that both our previous publications based on the theme WATER (The Edge 2014) and LIGHT IN DESIGN (The Edge 2015 –ISSN 2394-1472) has been very well accepted in the design fraternity – which has boosted our morale.

I would like to congratulate every member of Team SMAID comprising our faculty and students who have worked in harmony with a keen sense of dedication, hard work and sincerity with an endeavourer to achieve our best goals within a very short stipulated time limit without any compromise in Quality.

I, on behalf of Team SMAID, would like to express our heartfelt gratitude to the entire editorial team of THE EDGE 2016 comprising of Prof. Preety Shah and Ar. Shilpi Aggarwal along with their Computer, Design & Printing team members for their hard work in shaping up such an excellent publication – which has spread fragrance of knowledge to our Design Institute.

With warm regards.

Prof. Pradeep Patel
Hon. Director

Message From Principal's Desk



“To survive, to avert ‘Future Shock’, the individual must become infinitely more adaptable and capable than ever before. He must search out totally new ways to anchor himself, for all the roots-religion, nation, community, family, or profession are now shaking under the hurricane impact of the accelerative thrust.” Said Alvin Toffler in Future Shock.

This brings us to a question of whether we want our roots which are already shaking and fragile, be uprooted or do we want to strengthen them? The choice is open to us, but if we want to strengthen our roots, then we have to commit strongly to ourselves to understanding our Heritage; then conserve and preserve it!

Architecture, of what we have today is an irreplaceable resource. And it is a fact that we may never in future be able to create it! It is with this premise; we must salvage this Heritage- cultural resource from what is left, from further decay and damage.

I understand that a Research Publication is an engine which ignites thinking in human minds, shakes their conscience and compels them to react and respond to set a discourse open on a chosen subject. It is here that epilogues and conclusions of various studies are debated to make them real time implementable. Thus literacy is translated into education. Not only does this benefit faculty and students but opens up new approaches and methods for the society to adopt.

I wish to thank and congratulate the editor of this publication Prof. Shilpi for her persistent efforts in rendering a decent form to this issue. Acknowledgements are also due to the students for their efforts in designing the cover pages.

I earnestly hope that this Annual Publication continues to receive patronage from its prospective readers and contributors. This initiative has been made possible only due to unconditional support of the Management of Charutar Vidya Mandal. Full credits are due to the entire Publication team for achieving this feat.

With warm regards.

Prof. Preety Shah
Principal

Editorial Annotations

from the Co-ordinator



Publications are aimed at continuously enlightening lives of individuals. It gives us an opportunity to put our thoughts on paper and bring it live to public. The published observations, analysis and research with specific theme help build an idea from inception to application.

SMAID publication “THE EDGE” is one such platform to add value to many developmental issues and concerns. It is a matter of pride to take this opportunity and present the third edition of SMAID Publication “THE EDGE-2016” with the theme “**HERITAGE**” on the occasion of 4th Annual Day celebration “Aarohan-2016”.

The current edition takes care of issues, case studies, individual thought process, government efforts, global and national level interventions with respect to heritage. We have received an overwhelming response covering various topics with shades of history, art and architecture.

I would like to acknowledge the strong management support and a lot of team effort that made it all possible. I express my gratitude to our Chairman Dr. C.L. Patel and CVM management for their continuous support in carrying out the task successfully. Further I extend my special thanks to Hon. Director Prof. Pradeep Patel, for his constant motivation, sharing experience and providing all levels of support. It is a pleasure to work under our principal Prof. Preety Shah who guided us at every stage of development. Thank you mam for standing by our side every time we need you.

It is equally important to acknowledge the efforts made by student coordinator team. The edge gave a platform to showcase the talent of students. It also created a bond between faculty and students to work together as one team. Thank you Kalp, Tirth, Palak, Neel for spending days and nights to achieve the target. Without you it wouldn't have been possible.

Special thanks to Seema for sharing her experience at every stage to complete the task with in scheduled time. Last but not the least I thank all faculty members, colleagues, admin staff, students and printing press who have contributed in some or the other way.

Ar. Shilpi Aggarwal
Coordinator
The Edge - 2016

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FUNDAMENTALS ON HERITAGE ►

Glossary at a glance

Prof. Preeti Shah, Principal SMAID

Heritage	Heritage is a record of cultural precedents in any society, and as such, it is a foundation for growth and advancement in any human discipline, profession, or industry.
Historic Character of Buildings/Areas	The character or “identity” of a historic building is established by its form, size, scale and decorative features. It is also influenced by the choice of materials for the walls--by the dimension, detailing, color, and other surface characteristics.
Adaptive Re-use	<p>Implies the recycling of an older structure for a new function.</p> <p>Old buildings often outlive their original purposes. <i>Adaptive reuse</i>, or <i>re-use</i>, is a process that adapts buildings for new uses while retaining their historic features. An old factory may become an apartment building; A rundown church may find new life as a restaurant... Such a conversion is accomplished with varying alterations to the building.</p> <p>One famous example of adaptive reuse is the Gallery of Modern Art for the Tate Museum in London. Designed by the Pritzker Prize winning architects Jacques Herzog and Pierre de Meuron, the museum was once a power station.</p>
Architectural Conservation	<p>Architectural conservation describes the process through which the material, historical, and design integrity of mankind's built heritage are prolonged through carefully planned interventions.</p> <p>Architectural Conservation utilizes special techniques to halt further deterioration of building. The aim of conservation is to safe guard the quality and values of the resources-to protect its material substance and ensure its integrity for future generations.</p>
Conservation	Conservation is the process of delaying the decay and death of the particular object. “Conservation” of heritage buildings, structures, areas and precincts of historic or aesthetic, architectural or cultural or environmental significance involves maintenance, preservation, restoration or reconstruction based on requirements.
Preservation	It is a process involved in the maintenance necessary in order to maintain the building precinct or artifact in its present state and to prevent and to retard deterioration.
Restoration	Restoration is the means necessary to return the fabric to its known earlier/original state, by means of the removal of accretion or resembling existing components or by the sensitive introduction of compatible materials.
Aesthetic value	Aspects of sensory perception based on criteria such as form, scale, color, texture and material of the fabric or landscape, the smells and sounds associated with the place and its use.
Archaeological heritage	The “archaeological heritage” is that part of the material heritage in respect of which archaeological methods provide primary information. It comprises all vestiges of human existence and consists of places relating to all manifestations of human activity, abandoned structures, and remains of all kinds (including subterranean and underwater sites), together with all the portable cultural material associated with them.
Archaeological site	Locations where human activities once took place and some form of material evidence has been left behind.
Architectural photographs	Photos that illustrate primarily the architectural character / features / details of a structure such as cornice details / stone work / brick patterns or other details like details such as windows / doors / passageways.
As-built record	Consists in updating conservation design drawings and related reports to include the modifications that were made to them during the conservation activity
As-found record	Generally a detailed record of the ‘as-found’ nature and condition of a cultural heritage place, i.e. before any planned change is implemented.
Asset	Building, structure, landscape, object or artifact that helps a society to recall its history by reference as a primary source.
Assessment	The formulation of general results through the correlation and interpretation of existing and newly collected information

Condition assessment	<p>A record of the state of the critical aspects of the place at a given time. This should be suitable for:</p> <ul style="list-style-type: none"> - developing options for future action; - and, as a record against which to judge change.
Base map or Base Drawing	Scaled graphic (or photographic) record of the physical configuration of the heritage asset, used by conservation professionals to graphically record (or map) investigation and treatment related data.
Conservation (Needs) Assessment	A professional and systematic survey of a cultural object/collection or site carried out to provide a thorough understanding of problems, threats, and priorities vis-à-vis the object/collection or site.
Conservation plan	This documents the sequence of steps undertaken in the conservation process. It sets out what is significant in a place, and, consequently, what policies are appropriate to enable the significance to be retained in its future use and development.
Conservation process	An informed decision-making process, which ensures that conservation at all levels, will respect the values and significance of the cultural heritage place
Cultural heritage	Cultural heritage includes all the properties that remain from past generations. Such properties demonstrate development of human beings throughout history. It includes belief systems, values, philosophical systems, knowledge, behaviors, customs, arts, history, experience, languages, social relationships, institutions, and material goods and creations belonging to a group of people and transmitted from one generation to another including intangible attributes of a group or society that are inherited from past generations.
Cultural property	<p>Objects, collections, specimens, structures, or sites identified as having artistic, historic, scientific, religious, or social significance is called Cultural Property. Cultural property can be classified into two major categories:</p> <ol style="list-style-type: none"> Movable objects such as works of art, artifacts, books, archival material and other objects of natural, historical or archaeological origin. Immovable objects such as monuments, architecture, archaeological sites and structures of historical or artistic interest.
Cultural resource	A building, structure, district, site, object or document that is of significance in history, architecture, archaeology or culture.
Cultural significance	Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.
Database	A collection of various types of data, including photographic images, sketches and measurements, condition assessments, and other pieces of information, stored in a systematic way for security and easy retrieval.
Documentation	<p>The process of compiling all available past and present records-written, graphic, photographs etc. about a Historic Resource.</p> <p>All of the records, written and pictorial, accumulated during the examination and treatment of a cultural property. Where applicable, documentation includes the examination records and report, treatment proposal, owner consent, the treatment records and report, the recommendations for subsequent care, samples taken from the cultural property and relevant correspondence. The purpose of documentation is:</p> <ul style="list-style-type: none"> •to record the condition of the cultural property; •to record information revealed during examination or other conservation activities that assists in the understanding of the cultural property; •to record the changes to the property due to conservation activities, and the justification for those changes; •to provide information helpful to future care and treatment of the cultural property; •to record agreements or understandings between the conservation professional and the owner; •to provide documents that can be made available if and when required for legal purposes.
Documents	Refers especially to recorded information regardless of medium or characteristics, whether created specifically as records of information or used as such at some time subsequent to their creation.

Digitization	The process of translating information (documents, images, film, etc.) from written or analog into digital form (binary coded files) through the scanning of images, the sampling of sound, the conversion of text on paper into text in computer files, or other means to enable access to the information without damage to the originals and to ensure the preservation of the originals.
Geographic information system (GIS)	<p>A GIS is a geographic database that combines spatial information in graphic form with tabular data. It is an effective descriptive, analytical, and communication tool to map and assess sites and prioritize work.</p> <p>Geographic information Systems are computerized systems that allow the user to work with, interrelate, and analyze virtually all forms of spatial data. Typically a GIS consists of three major components: a database of geospatial and thematic data and information, a capability to spatially model or analyze the data sets, and a graphical display capability.</p>
Graphic record	General term used for measured drawings, rectified photographs, ortho-photomosaics or 3D models, graphically or photographically describing the physical configuration of a heritage place with its dimensional and architectural characteristics.
Groups of buildings	Groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science.
Hand survey	A process of measurement or architectural detail where physical contact is made with the feature being measured.
Heritage	Heritage means any asset or group of assets, natural or cultural, tangible or intangible, that a community recognizes for its value as a witness to history and memory, while emphasizing the need to safeguard, to protect, to adopt, to promote and to disseminate such heritage. Heritage is a reality, a possession of the community, and a rich inheritance that may be passed on from generation to generation.
Heritage area	A synonym for a designated historic district or conservation area, which denotes a neighborhood unified by a similar use, architectural style and/or historical development. (<i>Heritage Canada Foundation 1983</i>)
Heritage information	The integrated activities of Recording, Documentation and Information Management.
Heritage place	A site, area, region, building or other structure (together with associated contents and surroundings) that has heritage value.
Heritage protection	The means of taking care of natural and cultural heritage values of a place; includes legislation, policies and management frameworks.
Heritage Record	Is a technical dossier of a cultural heritage place prepared by heritage recorders. It consists of measured drawings, photographs and technical analysis.
Heritage walks/trails	These are organized and labeled walks/trails laid out to follow points of interest concerning the local history of a region.
Heritage value	The aesthetic, historic, scientific, cultural, social or spiritual importance or significance for past, present or future generations. The heritage value of a historic place is embodied in its character-defining materials, forms, location, spatial configurations, uses and cultural associations or meanings.
Historic and architectural areas	Historic and architectural (including vernacular) areas mean any groups of buildings, structures and open spaces including archaeological and paleontological sites, constituting human settlements in an urban or rural environment, the cohesion and value of which, from the archaeological, architectural, prehistoric, historic, aesthetic or sociocultural point of view are recognized. Among these 'areas', which are very varied in nature, it is possible to distinguish the following 'in particular': prehistoric sites, historic towns, old urban quarters, villages and hamlets as well as homogeneous monumental groups, it being understood that the latter should as a rule be carefully preserved unchanged.
Historic buildings	Buildings that are significant in the history of architecture, that incorporate significant architectural features, or that played significant historic roles in local cultural or social development; may or may not be officially designated.
Historic character	The physical elements of a historic property that contribute to its significance.

Historic districts	Districts or areas designated by a governing body as being culturally or historically significant, or embodying distinctive characteristics of a period, method of construction, or inhabitants. A geographically definable area with a significant concentration of buildings, structures, sites, spaces or objects unified by past events, physical development, design, setting, materials, workmanship, sense of cohesiveness or related historic and aesthetic associations.
Historic monument	Refers to monuments with local, regional, or international political, cultural, or artistic significance. The concept of a historic monument embraces not only a single architectural work but also the urban or rural setting in which is found the evidence of a particular civilization, a significant development or a historic event. This applies not only to great works of art but also to more modest works of the past which have acquired cultural significance with the passing of time.
Historic site	A site is the location of a significant event, prehistoric or historic occupation or activity, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archeological value. A site can be a landscape.
Historic structure	A structure which is significant for its association with a historic event, activity or person. A structure is created for purposes other than creating human shelter.
Intangible cultural heritage	The “intangible cultural heritage” means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artifacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. It includes: (a) oral traditions and expressions, including language as a vehicle of the intangible cultural heritage; (b) performing arts; (c) social practices, rituals and festive events; (d) knowledge and practices concerning nature and the universe; (e) Traditional craftsmanship.
Intervention	Any action, other than demolition or destruction, that results in a physical change to an element of a historic place.
Laser scanning	“3D Laser Scanning is the process of gathering object or environmental data through ‘touchless’ collection. Although the actual mechanics may vary from system to system, the process in general consists of a series of laser pulses that are bounced from the scanning unit to the object. By calculating the time of flight of the pulse along with the speed of light, the scanner can then deduce exactly how far away the object surface is at each bounce.” Laser Scanning - use of a laser to collect dimensional data in the form of a “point cloud.”
Measured drawing	Drawing produced by using direct or indirect measurements on the object.
Monuments	Monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science.
Photo report	A report that primarily contains photos of a cultural heritage place, together with a photo-key-plan that shows from where, and in what direction each photo was taken. These reports generally complement the understanding of the information provided on a set of measured drawings
Photogrammetric survey	Producing heritage records by means of photogrammetry
Photogrammetry	Photogrammetry encompasses methods of image measurement and interpretation in order to derive the shape and location of an object from one or more photographs of that object.

Preservation	The protection of cultural property through activities that retard deterioration and minimize physical damage and that which prevents loss of informational content. The primary goal of preservation is to prolong the existence of cultural property. Preservation involves management of the environment and of the conditions of use, and may include treatment in order to maintain a cultural property, as nearly as possible, in a stable physical condition.
Reconstruction	Reconstruction means returning a place to a known earlier state and is distinguished from restoration by the introduction of new material into the fabric. It involves the re-creation of a non-existent building on its original site. Based upon historical, literary, graphic and pictorial as well as archaeological evidence, a replica of the original is built using both modern and/or traditional methods of construction.
Rehabilitation	Rehabilitation is usually carried out in order to extend a building's life and/or its economic viability. It may involve more adaptation than conservation, but will still preserve most of the building's original features. It may involve upgrading, some modification, remodeling, rebuilding or retrofitting, and some repairs. It may be done to the exterior as well as the interior of the building. It may be referred to as major or minor. According to the usage of the word over the past few years, rehabilitation projects fall somewhat short of renovation projects in extent and/or cost of work.
Remodeling	A process which involves the upgrading or replacing of interior components frequently in rooms such as a kitchen or bathroom. A process which involves upgrading or replacing interior parts and features. This process tends to be done more for aesthetic reasons rather than functional ones. Remodeling may involve the removal and refinishing of interiors to make them indistinguishable from new structures, as well as applying architectural details from different, usually earlier periods.
Renovation	In practice, renovation may involve rehabilitation, rebuilding and several other activities. It is a generic term used to describe various levels of intervention including remodeling, recycling and rehabilitation. A generic term to describe the process of modifying an historic structure in order to extend its useful life.
Research and investigation	A general term used to describe a variety of activities aiming at the acquisition of information of all kinds pertinent to increasing knowledge of a cultural heritage place. While research is more relating to off-site surveys (e.g. archival research), investigation relates to the direct acquisition of information from the heritage place as a primary source. Recording is an essential component of research and investigation at each step and at each level of the conservation process.
Restoration	<p>The process of restoration aims to preserve and reveal the aesthetic and historic value of the monument and is based on respect for original material and authentic documents. It means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material. The restoration in any case must be preceded and followed by an archaeological and historical study of the monument.</p> <p>Restoration activities can be as extensive and expensive as those associated with renovation (or rehabilitation); however, unlike renovation activities, they are normally done for heritage or historical purposes and are based on documentary evidence.</p>
Retrofit (verb)	To update the components of an existing building to meet the regulatory requirements. It is to bring the building up to higher standards, with respect particularly to structural stability, seismic code, energy efficiency, security, fire protection and modern amenities.
Retrofitting	The upgrading of an existing building to meet code requirements (i.e. for fire or emergency exits) and increase comfort and safety, e.g., installation of new insulation, storm windows, smoke detectors, fire sprinklers, new heating and new electrical systems.
Revitalization	Describes the process of economic, social, and cultural redevelopment of an area or street. Often the buildings in these areas are of heritage merit despite their state of neglect prior to revitalization. Heritage area revitalization concentrates on historic buildings and other heritage resources to achieve economic, social and cultural objectives.
Scale	A ratio of the size of a drawing or photograph recorded image to the actual physical size of the subject. A large scale means higher accuracy and finer detail.
Social value	Range of qualities for a place such as spiritual, traditional, economic, political, or national qualities which are valued by the majority or minority group of that place. Social values include contemporary cultural values.

Statement of contribution	A Statement of Contribution that defines the heritage value of the contributing property in relationship to that of the larger historic place, and the contributing property's own character defining elements
Statement of significance	A statement of the values of an historic place based on the reasons for formal recognition. It describes the historic place and defines its heritage value and character defining elements.
Total station	A total station is an apparatus that combines a theodolite with electronic tachometers for vertical and horizontal angular measurement and an Electromagnetic Distance Measurement (EDM) for distance measurement. The Total station is designed for measuring of slant distances, horizontal and vertical angles and elevations in topographic and geodetic works, tachometric surveys, as well as for solution of application geodetic tasks. The measurement results can be recorded into the internal memory and transferred to a personal computer interface.
Transparencies	The use of transparencies is a simple method of manually recording conditions onto a series of transparent plastic sheets over a printed base map. Conditions are recorded to scale and then scanned to be digitally included back into the base map.
UNESCO	UNESCO (United Nations Educational, Scientific and Cultural Organization) is a specialized agency of the United Nations with 186 Member States in 1998 . UNESCO's objective is to construct the defenses of peace in the minds of men and women through international intellectual co-operation.
UNESCO World Heritage Site	It is a site (such as a forest, mountain, lake, desert, monument, building, complex, or city) that is on the list that is maintained by the International World Heritage Programme administered by the UNESCO World Heritage Committee. A World Heritage Site is a place of either cultural or physical significance. The programme catalogues, names, and conserves sites of outstanding cultural or natural importance to the common heritage of humanity. Each World Heritage Site is the property of the state on whose territory the site is located, but it is considered in the interest of the international community to preserve each site.
UNESCO World Heritage Centre	UNESCO World Heritage Centre is responsible for implementing the decisions of the World Heritage Committee.
World Heritage	Cultural and natural heritage of 'outstanding universal value' inscribed on UNESCO's World Heritage List.
World Heritage List	The World Heritage List is the list of cultural, natural and mixed cultural and natural sites (including cultural landscapes) considered to be of 'outstanding universal value'.
Workmanship	The physical evidence of the crafts of a particular culture or people during a given period in history or prehistory. It represents evidence of artisans' labor and skill in constructing or altering a building, structure, object, or site.
Protected Monument	Cultural Property (Structure/building) identified and listed by Archaeological Society of India and declared to be of national importance and to be maintained, conserved and preserved as per the provision of the Ancient Monument and Archaeological Sites and remains Act 1958
ASI	It is the premier organization under the Ministry of Culture, GoI, for the archaeological researches and protection of the cultural heritage of the nation. Maintenance of ancient monuments and archaeological sites and remains of national importance is the prime concern of the ASI. Besides, it regulates, all archaeological activities in the country as per the provision of the Ancient Monument and Archaeological Sites and remains Act 1958. It also regulates Antiquities and Art Treasure Act 1972.
INTACH	Indian National Trust for Art and Cultural Heritage is a Nongovernmental Organization established in 1984 with a mission to conserve heritage is based on the belief that living in harmony with heritage enhances the quality of life, and it is the duty of every citizen of India as laid down in the Constitution of India.
ICOMOS	Acronym for International Convention on Monuments and Sites formed in 1965 following the Venice Charter of the previous year, as its own formative response to conservation ethics and principles. ICOMOS Guidelines for Conservation Training and Education 1993 are adopted internationally as the foundation for most Conservation Training Courses

**Urban
Conservation**

It is the character of the area or a precinct rather than individual buildings that is sought to be preserved or enhanced. Historic areas afford down the ages the most tangible evidence of the wealth and diversity of cultural, religious and social activities and hence their protection and integration into the life of contemporary society is a basic factor in urban development.

ICCROM

The International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) was created by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in 1956 as an independent, international, intergovernmental organization, and was headquartered in Rome, Italy. The aim of the organization is to facilitate the setting up and improvement of conditions for the preservation of cultural property in its member states, currently 95 countries. The creation of ICCROM was very much a reflection of conditions in the aftermath of World War II, when destruction of cultural properties was fresh in memory.

Compiled from:

1. *Getty Conservation Institute Glossary*
2. *UNESCO World Heritage in Young Hands, 2002*
3. *Recording, Documentation and Information Management for Historic Places - Guiding Principles; Getty Conservation Institute, 2008*
4. *Getty Research - Art & Architecture Thesaurus Online*
5. *International Charter for the Conservation and Restoration of Monuments and Sites - The Venice Charter- 1964*
6. *Australia Burra Charter*

World heritage sites and UNESCO

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World is blessed with heritage sites of cultural and natural importance. Iconic creations hold value that are unique for their character and shall be preserve in global interest. The cultural and natural sites that hold outstanding value to humankind are considered to be protected as world heritage sites. The idea of creating an international movement for protecting heritage emerged after World War I. The 1972 Convention focused on Protection of the World Cultural and Natural Heritage. The Convention concerning the Protection of World Cultural and Natural Heritage was adopted by the General Conference of UNESCO on 16 November 1972. UNESCO was constituted in 1946 with the purpose of contributing peace and security by promoting collaboration among nations through education, science and culture. UNESCO plays an important role in promoting universal respect for justice, for the rule of law and for the human rights and fundamental freedoms which are affirmed for the people of the world, without distinction of race, sex, language or religion, by the Charter of the United Nations.

UNESCO world Heritage sites

A site becomes World Heritage site when it is inscribed on the UNESCO World Heritage List for its outstanding universal value. There are three types of World heritage sites

- 1) Cultural Site, 2) Natural Site, and 3) Mixed Site

There are three types of cultural Sites. 1) Monuments i.e. Architectural works, works of Monumental sculptures 2) Group of buildings Separate or Connected, 3) Sites i.e. work of man or the combined works of nature and man ... which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological points of view.

World heritage process:

This involves guiding documents i.e. the World Heritage Convention, and Operational Guidelines for the Implementation of the World Heritage Convention. Apart from guidelines there are state parties, Advisory Bodies like ICOMOS, IUCN, ICCROM and World Heritage Committee involved in inscribing any heritage properties into World Heritage. The World Heritage Committee is Composed of 21 State Parties. The Members of the committee are elected for four years and meets once every year. World Heritage Committee is the highest authority regarding World Heritage matters.

The Inscription Process

The State Party prepares a tentative list of their heritage sites. Then the State Party nominates a site from its tentative list and submits a nomination file to the World Heritage Centre. The Advisory Bodies evaluate the site and verifies if the site meets all requirements of the World Heritage Convention and give their opinion to the World Heritage Committee. Based on Advisory body's recommendation the World Heritage Committee makes the final decision regarding the inscription of the site on the World Heritage List. The World Heritage Committee may take one of the following decisions:

- The site should be inscribed on the World Heritage List.
- The site should not be inscribed on the List. Except in exceptional circumstances, resubmission of nomination file for the site is not considered.
- The nomination should be referred back to the State Party for additional information.
- The nomination should be deferred for more in-depth assessment or study. Deferral may include substantial revision by the State Party.

Criteria for the Assessment of Outstanding Universal Value

A site is considered to have outstanding universal value if it meets one or more of ten criteria set out by the World Heritage Convention. Following are the criteria for assessment for the same.

1. The site shall represent a masterpiece of human creative genius;
2. It shall exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;
3. The sites bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
4. The site should be an example of a type of building or architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;
5. It should be an outstanding example of a traditional human settlement or land-use which is representative of a culture (or cultures), especially when it has become vulnerable under the impact of irreversible change;
6. The site shall be directly or tangibly associated with events or living traditions, ideas, or beliefs, artistic and literary works of outstanding universal significance;
7. It shall be examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or geomorphic or physiographic features;
8. It shall represent on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals; or
9. It contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;
10. It should contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

Process to Become a World Heritage site

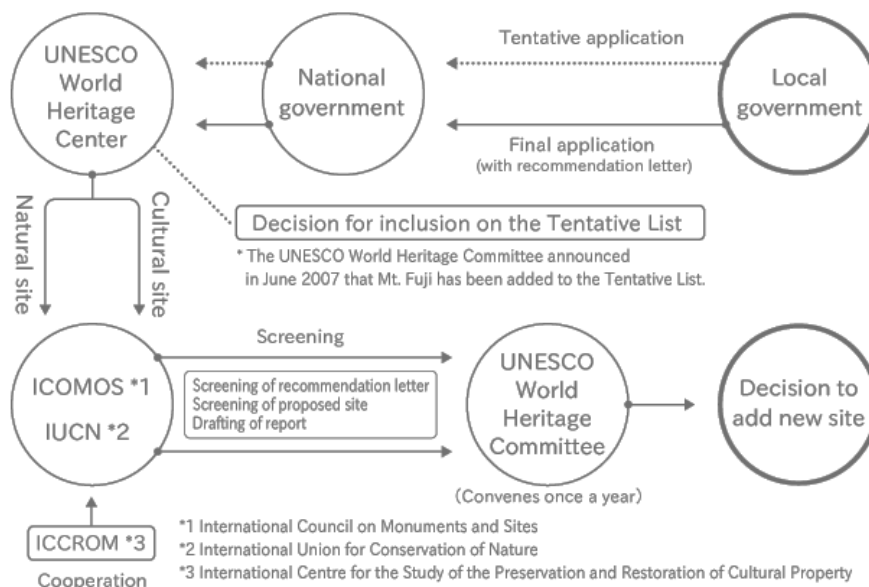




Figure 1 UNESCO identified World Heritage Sites in India

World Heritage Sites in India

UNESCO identified World Heritage Sites are places that belong to the entire world; irrespective of the territory they are located. With the latest entry of The Great Himalayan National Park and Rani ki Vav, India as of now has 32 sites of World Heritage importance. Of these 32 sites, 25 sites are of cultural importance and 7 are of natural importance.

Following is a brief description of each site identified in India with its year of inscription in UNESCO.

1. Agra Fort (1983)

16th-century Mughal monument known as the Red Fort of Agra stands near the gardens of the Taj Mahal. This fortress in red sandstone encompasses the imperial city of the Mughal rulers within its 2.5-km-long enclosure walls. The fort comprises the Jahangir Palace and the Khas Mahal, built by Shah Jahan; the Diwan-i-Khas (the audience halls); and two beautiful mosques.

2. Ajanta Caves (1983)

The first Buddhist cave monuments at Ajanta date from the 2nd and 1st centuries B.C. During the Gupta period (5th and 6th centuries A.D.), many more richly decorated caves were added to the original group. The paintings and sculptures of Ajanta are considered masterpieces of Buddhist religious art, having considerable artistic influence.

3. Ellora Caves (1983)

The 34 monasteries and temples, extending over more than 2 km, were dug side by side in the wall of a high basalt cliff, near Aurangabad, in Maharashtra. Ellora, with its uninterrupted sequence of monuments dating from A.D. 600 to 1000, brings the civilization of ancient India to life. Not only is the Ellora complex a unique artistic creation and a technological exploit but, with its sanctuaries devoted to Buddhism, Hinduism & Jainism, illustrating the spirit of tolerance the characteristic of ancient India.

4. Taj Mahal (1983)

An immense tomb carved in white marble, in Agra between 1631 and 1648 by order of the Mughal emperor Shah Jahan in memory of his beloved wife, the Taj Mahal is the jewel of Muslim art in India and one of the universally admired masterpieces of the world's heritage.

5. Sun Temple, Konârk (1984)

The temple at Konark is a monumental representation of the sun god Surya's chariot. On the shores of the Bay of Bengal, bathed in the rays of the rising sun, the temple is led by a team of six horses on 24 wheels which are decorated with symbolic designs. It is one of India's most famous Brahman sanctuaries built in 13th century.

6. Group of Monuments at Mahabalipuram (1984)

This group of sanctuaries, founded by the Pallava kings, was carved out of

rock along the Coromandel Coast in the 7th and 8th centuries. It is known for its rathas (temples in the form of chariots), *mandapas* (cave sanctuaries), giant open-air reliefs such as the famous 'Descent of the Ganges', with thousands of sculptures to the glory of Shiva.

7. Churches and Convents of Goa (1986)

The churches and convents of Goa, particularly the Church of Bom Jesus, which contains the tomb of St Francis-Xavier- illustrate the evangelization of Asia. These monuments were influential in spreading forms of Manueline, Mannerist and Baroque art across Asia where missions were established.

8. Fatehpur Sikri (1986)

Built during the second half of the 16th century by the Emperor Akbar, Fatehpur Sikri (the City of Victory) was the capital of the Mughal Empire for only some 10 years. The complex of monuments and temples, all in a uniform architectural style, includes one of the largest mosques in India, the Jama Masjid.

9. Group of Monuments at Hampi (1986)

Hampi, the last capital of the last great Hindu Kingdom of Vijayanagar is blessed with Dravidian temples and palaces which won the admiration of travellers between the 14th and 16th centuries.

10. Khajuraho Group of Monuments (1986)

The temples at Khajuraho were built during the Chandella dynasty, which reached its apogee between 950 and 1050. Only about 20 temples remain; they fall into three distinct groups and belong to two different religions – Hinduism and Jainism. They strike a perfect balance between architecture and sculpture. The Temple of Kandariya is decorated with a profusion of sculptures among the greatest masterpieces of Indian art.

11. Elephanta Caves (1987)

The 'City of Caves', on an island in the Sea of Oman close to Mumbai (Bombay), contains a collection of rock art linked to the cult of Shiva. Indian art has found one of its most perfect expressions at Elephanta, particularly the huge high reliefs in the main cave.

12. Group of Monuments at Pattadakal (1987)

Pattadakal, in Karnataka, represents an eclectic art which, in the 7th and 8th centuries under the Chalukya

dynasty, achieved a harmonious blend of architectural forms from northern and southern India. A series of nine Hindu temples, and a Jain sanctuary, can be seen there. One masterpiece from the group stands out - the Temple of Virupaksha, built by Queen Lokamahadevi to commemorate her husband's victory over the kings from the South.

13. Great Living Chola Temples (1987)

The Great Living Chola Temples were built by kings of the Chola Empire. The site includes three great 11th and 12th century Temples: the Brihadisvara Temple at Thanjavur, and Gangaikondacholisvaram and the Airavatesvara Temple at Darasuram. The Temple of Gangaikondacholisvaram, built in 1035. Its 53m *vimana* (sanctum tower) has recessed corners and a graceful upward curving movement, contrasting with the straight and severe tower at Thanjavur. The Airavatesvara temple complex, built at Darasuram features a 24-m *vimana* and a stone image of Shiva. The temples testify to the achievements of the Chola in architecture, sculpture, painting and bronze casting.

14. Buddhist Monuments at Sanchi (1989)

It is the oldest Buddhist sanctuary in existence and was a major Buddhist centre in India until the 12th century A.D. About 40 km from Bhopal, Sanchi comprises a group of Buddhist monuments (monolithic pillars, palaces, temples and monasteries) all in different states of conservation, most of which date back to the 2nd & 1st centuries B.C.

15. Humayun's Tomb, Delhi (1993)

Humayun's tomb, was the first garden-tomb on the Indian subcontinent built in 1570. It inspired architectural innovations, culminating in the construction of the Taj Mahal.

16. Qutb Minar and its Monuments, Delhi (1993)

Built in the early 13th century in Delhi, the red sandstone tower of Qutb Minar is 72.5 m high, tapering from 2.75 m in diameter at its peak to 14.32 m at its base, and alternating angular and rounded flutings. The surrounding archaeological area contains funerary buildings, notably the magnificent Alai-Darwaza Gate, the masterpiece of Indo-Muslim art (built in 1311), and two mosques, including the Quwwatu'l-Islam, the oldest in northern India, built of materials reused from some 20 Brahman temples.

17. Mountain Railways of India (1999)

Mountain railways include three railways The Darjeeling Himalayan Railway, The Nilgiri Mountain Railway and The Kalka Shimla Railway. The Darjeeling Himalayan Railway opened in 1881. Its design applies bold and ingenious engineering solutions to the problem of establishing an effective rail link across a mountainous terrain. The Nilgiri Mountain Railway, a 46-km long metre-gauge single-track railway in Tamil Nadu State, scaling an elevation of 326 m to 2,203 m, represented the latest technology of the time. The Kalka Shimla Railway, a 96-km long, single track working rail link built in the mid-19th century to provide a service to the highland town of Shimla is emblematic of the technical and material efforts. All three railways are still fully operational.

18. Mahabodhi Temple Complex at Bodh Gaya (2002)

The Mahabodhi Temple Complex is one of the four holy sites related to the life of the Lord Buddha, and particularly to the attainment of Enlightenment. The first temple was built by Emperor Asoka in the 3rd century B.C., and the present temple dates from the 5th or 6th centuries. It is one of the earliest Buddhist temples built entirely in brick, still standing in India, from the late Gupta period.

19. Rock Shelters of Bhimbetka (2003)

The Rock Shelters of Bhimbetka are in the foothills of the Vindhyan Mountains on the southern edge of the central Indian plateau. Five clusters of natural rock shelters, displaying paintings that appear to date from the Mesolithic Period right through to the historical period. The cultural traditions of the inhabitants of twenty-one villages adjacent to the site bear a strong resemblance to those represented in the rock paintings.

20. Chhatrapati Shivaji Terminus (formerly Victoria Terminus) (2004)

The Chhatrapati Shivaji Terminus, formerly known as Victoria Terminus Station, in Mumbai, is an example of Victorian Gothic Revival architecture in India, blended with themes deriving from Indian traditional architecture. The building, designed by the British architect F. W. Stevens, became the symbol of Bombay as the 'Gothic City' and the major international mercantile port of India. The terminal was built over 10 years, starting in 1878, according to a High Victorian Gothic design based on late medieval Italian models. Its remarkable stone dome, turrets, pointed arches and eccentric ground plan are close to traditional Indian palace architecture. An outstanding example of the meeting of two cultures, as British architects worked with Indian craftsmen to include Indian architectural tradition and idioms thus forging a new style unique to Bombay.

21. Champaner-Pavagadh Archaeological Park (2004)

Champaner is a concentration of unexcavated archaeological, historic and living cultural heritage that includes prehistoric (chalcolithic) sites, a hill fortress of an early Hindu capital, and remains of the 16th century capital of the state of Gujarat. The site also includes, among other vestiges, fortifications, palaces, religious buildings, residential precincts, agricultural structures and water installations, from the 8th to 14th centuries. This is the only complete and unchanged Islamic pre-Mughal city.

22. Red Fort Complex (2007)

The Red Fort Complex was built as the palace fort of Shahjahanabad, the new capital of the fifth Mughal Emperor of India, Shah Jahan. For the massive enclosing walls of red sandstone, it is called the Red Fort Complex. The private apartments consist of a row of pavilions connected by a continuous water channel,

known as the Nahr-i-Behisht (Stream of Paradise). The planning of the palace is based on Islamic prototypes, but each pavilion reveals architectural elements typical of Mughal building, reflecting a fusion of Persian, Timurid and Hindu traditions. The Red Fort's innovative planning and architectural style, including the garden design, strongly influenced later buildings and gardens in Rajasthan, Delhi, Agra and further afield.

23. The Jantar Mantar, Jaipur (2010)

The Jantar Mantar, in Jaipur, is an astronomical observation site built in the early 18th century. It includes a set of some 20 main fixed instruments. They are monumental examples in masonry of known instruments, but which in many cases have specific characteristics of their own. Designed for the observation of astronomical positions with the naked eye, they embody several architectural and instrumental innovations. This is the most significant, most comprehensive, and the best preserved of India's historic observatories. It is an expression of the astronomical skills and cosmological concepts of the court of a scholarly prince at the end of the Mughal period.

24. Hill Forts of Rajasthan (2013)

The serial site, situated in the state of Rajasthan, includes six majestic forts in Chittorgarh; Kumbhalgarh; Sawai Madhopur; Jhalawar; Jaipur, and Jaisalmer. The eclectic architecture of the forts, some up to 20 kilometres in circumference, bears testimony to the power of the Rajput princely states that flourished in the region from the 8th to the 18th centuries. Enclosed within defensive walls are major urban centres, palaces, trading centres and other buildings including temples that often predate the fortifications within which developed an elaborate courtly culture that supported learning, music and the arts. Some of the urban centres enclosed in the fortifications have survived, as have many of the site's temples and other sacred buildings. The forts use the natural defences offered by the landscape: hills, deserts, rivers, and dense forests. They also feature extensive water harvesting structures, still in use today.

25. Rani-ki-Vav (the Queen's Stepwell) at Patan, Gujarat (2014)

Rani-ki-Vav, on the banks of the Saraswati River, was initially built in the 11th century AD. Stepwells are a distinctive form of subterranean water resource and storage systems on the Indian subcontinent, and have been constructed since the 3rd millennium BC. They evolved over time from what was basically a pit in

sandy soil towards elaborate multi-storey works of art and architecture. Rani-ki-Vav was built at the height of craftsmens' ability in stepwell construction and the Maru-Gurjara architectural style, reflecting mastery of this complex technique and beauty of detail and proportions. Designed as an inverted temple highlighting the sanctity of water, it is divided into seven levels of stairs with sculptural panels of high artistic quality; more than 500 principle sculptures and over a thousand minor ones combine religious, mythological and secular imagery, often referencing literary works. The fourth level is the deepest and leads into a rectangular tank 9.5 m by 9.4 m, at a depth of 23 m. The well is located at the westernmost end of the property and consists of a shaft 10 m in diameter and 30 m deep.

Natural (7)

1. Kaziranga National Park (1985)

In the heart of Assam, this park is one of the last areas in eastern India undisturbed by a human presence. It is inhabited by the world's largest population of one-horned rhinoceroses, as well as many mammals, including tigers, elephants, panthers, bears, and thousands of birds.

2. Keoladeo National Park (1985)

The former duck-hunting reserve of the Maharajas is one of the major wintering areas for large numbers of aquatic birds from Afghanistan, Turkmenistan, China and Siberia. Some 364 species of birds, including the rare Siberian crane, have been recorded in the park.

3. Manas Wildlife Sanctuary (1985)

On a gentle slope in the foothills of the Himalayas, where wooded hills give way to alluvial grasslands and tropical forests, the Manas sanctuary is home to a great variety of wildlife, including many endangered species, such as the tiger, pygmy hog, Indian rhinoceros and Indian

elephant.

4. Sundarbans National Park (1987)

The Sundarbans covers 10,000 km² of land and water (more than half of it in India, the rest in Bangladesh) in the Ganges delta. It contains the world's largest area of mangrove forests. A number of rare or endangered species live in the park, including tigers, aquatic mammals, birds and reptiles.

5. Nanda Devi and Valley of Flowers National Parks (1988)

Nestled high in West Himalaya, India's Valley of Flowers National Park is renowned for its meadows of endemic alpine flowers and outstanding natural beauty. This richly diverse area is also home to rare and endangered animals, including the Asiatic black bear, snow leopard, brown bear and blue sheep. The gentle landscape of the Valley of Flowers National Park complements the rugged mountain wilderness of Nanda Devi National Park. Together they encompass a unique transition zone between the mountain ranges of the Zaskar and Great Himalaya, praised by mountaineers and botanists for over a century and in Hindu mythology for much longer.

6. Western Ghats (2012)

Older than the Himalaya mountains, the mountain chain of the Western Ghats represents geomorphic features of immense importance with unique biophysical and ecological processes. The site's high montane forest ecosystems influence the Indian monsoon weather pattern. Moderating the tropical climate of the region, the site presents one of the best examples of the monsoon system on the planet. It also has an exceptionally high level of biological diversity and endemism and is recognized as one of the world's eight 'hottest hotspots' of biological diversity. The forests of the site include some of the best representatives of non-equatorial tropical evergreen forests anywhere and are home to at least 325 globally threatened flora, fauna, bird, amphibian, reptile and fish species.

7. Great Himalayan National Park Conservation Area (2014)

This National Park in the western part of the Himalayan Mountains in the northern Indian state of Himachal Pradesh is characterized by high alpine peaks, alpine meadows and riverine forests. The 90,540 ha property includes the Upper Mountain glacial and snow

meltwater sources of several rivers, and the catchments of water supplies that are vital to millions of downstream users. The GHNPCA protects the monsoon-affected forests and alpine meadows of the Himalayan front ranges. It is part of the Himalaya biodiversity hotspot and includes twenty-five forest types along with a rich assemblage of fauna species, several of which are threatened. This gives the site outstanding significance for biodiversity conservation.

India possess a rich cultural heritage with iconic presence of forts, palaces, walled cities, and monuments of architectural and historic value. Inscription of 32 sites from India by UNESCO is a way forward to submit more nominations get recognition on global map. Let the ray of hope keep shining!

References:

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Charter for Conservation of Heritage Sites in India

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The Archaeological Survey of India (ASI)

India has a long and rich tradition of caring and maintaining historic buildings. The Archaeological Survey of India (ASI) was established in 1904. The ASI, under the Ministry of Culture, is the premier organization for the archaeological researches and protection of the cultural heritage of the nation. Maintenance of ancient monuments and archaeological sites and remains of national importance is the prime concern of the ASI. It also regulates all archaeological activities in the country as per the provisions of the Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 1958 and, Antiquities and Art Treasure Act, 1972.

For the maintenance of ancient monuments and archaeological sites and remains of national importance the entire country is divided into 24 Circles. The organization has a work force of trained archaeologists, conservators, epigraphist, architects and scientists for conducting archaeological research projects through its Circles, Museums, Excavation Branches, Prehistory Branch, Epigraphy Branches, Science Branch, Horticulture Branch, Building Survey Project, Temple Survey Projects and Underwater Archaeology Wing. The Ancient Monuments Preservation Act empowered the ASI to protect monuments of national importance and compiled the manual of conservation to guide the practice. The act has prescribed the definitions and terms in relation to heritage conservation and protection. Following are few definitions for reference:

1. **Ancient Monument** means any structure, erection or monument, or any tumulus or place of interment, or any cave, rock-sculpture, inscription or monolith which is of historical, archaeological or artistic interest and which has been in existence for not less than 100 years.
2. **Archaeological site and remains** means any area which contains or is reasonably believed to contain ruins or relics of historical or archaeological importance which have been in existence for not less than one hundred years.
3. **Excavations-** Various Branches and Circles of the ASI carry out archaeological excavations in different parts of the country. Since independence various agencies like Archaeological Survey of India, State Departments of Archaeology, Universities and other research organisations have conducted archaeological excavations in different parts of the country.
4. **Structure conservation** has been practiced formally to safeguard the built heritage from dilapidation. The vision for the need to preserve monuments is mainly credited to the British. The monuments and sites that received nominal funds and attention way back in 19th century were Taj Mahal, Tomb at Sikandara, Qutb Minar, Sanchi and Mathura. Before Independence, the Archaeological Survey of India had developed significant expertise that it was invited for conservation work in other countries. Some such works are of Bamiyan in Afghanistan and later in the Angkor Vat of Cambodia.
5. **Chemical preservation-** The ASI's Science Branch is responsible mainly for the chemical conservation treatment and preservation of some three thousand five hundred ninety three protected monuments besides chemical preservation of museum and excavated objects countrywide. The role of scientific discipline is vital to the steps of conservation activities. Accordingly, a specific objective of scientific research activities in conservation has been carried out to study- the Material deterioration process; Basic studies of intervention technologies; Basic studies on materials; and Diagnostic technologies.
6. **Epigraphical Studies-** The Epigraphy Branch takes care of the Sanskrit & Dravidian inscriptions and coins (Headquarters at Mysore) and Arabic

& Persian inscriptions and coins (Headquarters at Nagpur) with the following functions: 1. Survey, documentation, estampaging of inscriptions (both stone and copper plates); 2. Survey, documentation of coins; 3. Decipherment, research, study and publication of research.

The main activities of Science Branch are Chemical treatment and preservation of about 5000 centrally protected monuments including 18 world heritage monuments; of museum exhibits and excavated objects, Scientific, technical studies and research on material of different heritage building. Chemical conservation of monuments and heritage sites abroad. Technical assistance to state protected monuments and built heritage; training on chemical conservation and organize awareness programme and workshops /seminars with regard to scientific conservation works.

Criteria for selection Under AMASR Act, 1958

The ancient monuments or archaeological site and remains proposed for declaration as of national importance should meet one or more of the following criteria besides falling within the definition as contained under Section 2(a) or 2(c) of the AMASR Act 1958.

- The site represents a masterpiece of human creative genius
- It exhibits an important interchange of human values, over a span of time or within a cultural divisions of the country, on development in architecture or technology, monumental arts.
- It should bear a unique or at least some special testimony to a cultural tradition
- It should be an outstanding example

of a traditional human settlement or land use which is repetitive of a culture (or cultures), or human interaction with the environment especially when it became vulnerable under the impact of irreversible change.

The above criteria must also meet the condition of integrity and authenticity and there must be proper mechanism through which an adequate management is ensured to retain the integrity and authenticity even in future. Depending on the type of the ancient monument and/or archaeological site and remains its context, may be understood to meet the conditions of authenticity if their value are truthfully and credibly expressed through a variety of attributes including- 1) Form and design, 2) Material and substance, 3) Use and function, 4) Traditions techniques and management systems, 5) Location and setting, 6) Other internal and external factors. It requires elaborated examination of the sites with reference to specific art, historic social, and scientific dimensions of the monument. Information sources may be physical written, oral and figurative which makes it possible to know the nature, specificities, meaning and history of the ancient monument and sites.

Approx. 5000 monuments are protected under the umbrella of ASI nationwide.

State Department of Archaeology (SDA) ASI looks after monuments which are of national level importance. The state Archaeology Department looks after important heritage properties at state level. SDA bears the responsibilities to enlist, protect, safeguard, and promote the cultural heritage, art, craft and architecture of historic importance. SDA also organises the craft fair to promote the regional, local, tribal craft of their respective states. As of now approx. 3500 monuments are protected by SDAs of various states in the country.

Indian National Trust for Art and Culture Heritage (INTACH)

INTACH was founded in 1984, and established chapters all over the country. It spreads awareness about conserving monuments of heritage and focusing on the significance of their meaning to society. There were thousands of monument of architectural heritage sites which were undefined and unprotected as they did not fulfil the criteria of ASI guidelines (As per ASI guidelines, the monuments or sites shall be more than 100 years old for protection and conservation). INTACH was established with aim of listing such monuments. It trained conservation professionals through scholarships; collected and structured its accumulated

experience and expertise in to effective knowledge to guide further activities. In 2002, INTACH arranged workshop for formulating a National Policy for Heritage Conservation and Management in which the need for national charter for conservation was identified. In 2004, final draft was prepared to broaden legal definition of architectural heritage and take in to account the complex ground realities of socio cultural and economic aspects.

INTACH charter relates only to unprotected monuments, historic sites and other aspect of tangible and intangible heritage.

Preamble of INTACH incorporates drawing an institutional framework for 2 decades in conserving the unprotected heritage; Respecting and Valuing scientific methods and contribution of ASI & SDA; Acknowledging the principles of various international charters adopted by UNESCO & ICOMOS; Consciousness about unidentified, unclassified & unprotected properties in India; Recognizing the unique resource of the living heritage of master craftsman & the traditional philosophies. (jeernodhdharanam); Noting the role of trained architects redefining the meaning and boundaries of contemporary conservation practices; Convincing the value and conserve heritage by formulating guidelines sympathetic to the contexts.

Following are some principles and conservation ethics INTACH believes to follow:

- **Authenticity & Integrity** of elements, materials & technologies
- **Conjecture:** Exact replacement, restoration or rebuilding in respect to contemporary Evolving Local needs of community.
- **Patina:** repair of historic fabric due to age or natural decay

- **Reversibility:** for the socio-economic regeneration of the local community,
- **Legibility:** harmony with old, modern material or technology to replicate
- **Respect and Rights** of the indigenous community:
- **Inseparable bond** with society. Unprotected heritage does not possess any bond with modern society.
- **Minimal intervention** and lose of fabric
- **Demolish/ Rebuild:** establishment of Relationship between the conservation and the commodity

Objective of conservation:

Objective of conservation is to retain visual identity, Adaptive re-use of the old premises, integrated conservation with the help of Local material and traditional technology, develop strategy for socio-economic progress, promote sustainability for sustenance of the building, and boost traditional skill and knowledge among general public. Restoration, Replication, Rebuilding and Reconstruction supports the knowledge of local crafts people.

Selection Criteria for listing monuments by INTACH

Historic significance: the event/activity shall possess historic significance, architecture or engineering design or technical importance shall, archaeological connotation like Squares Street or avenue.

Historic Criteria: the site should have physically belonging to an era, whose original identity changes over historic time. It retains originality in terms of material, design features, construction dating from that period.

Historic context: the site has Information of historic trends and properties, belongs to history of community, region or nation during that period of time.

Methodology of creating inventory

Background research: before incorporating any cultural heritage it is important to carry out background

research about the site. This involves gathering information from gazetteers, travel books, libraries, museums, secretariat, and institutes, school of planning and architecture, local experts, university scholars to ensure no important structure is left out in the list. This enables identify the historic area, development documented areas, distinctive physical features, details about form of buildings. The research involve field work to identify buildings & areas to be listed. The research helps determine the changes to property over a period of time. It helps establish relationship with reference to local context, i.e. the role of property in local, regional, and national history. Overall it generates a documented archive, a record of location approach, accessibility, ownership, usage and present use.

Mapping of vernacular architecture & historic settlement

The list must be able to recognize vernacular structures/sites/ settlements as categories of worthy being conserved. Sacred sites must be dealt with due sensitivity and knowledge of local social and cultural imperatives governing their sanctity. It is mandatory that Information of each building/site be recorded as per INTACH's standard format.

Grading- grading of the listed heritage into a hierarchical series is important to determine subsequent conservation decisions and for prioritization of decisions related to the future of architectural heritage sites.

Listing of monuments for protection, conservation is under various govt. and non govt. agencies such as, ASI as central govt. agency protects monuments more than 100 years old of national importance. So far there are approx. 5000 monuments are listed as of national importance. State Dept. of Archaeology covers monuments of states level. Approx. 3500 monuments are under

SDA protection. INTACH enlists the monuments which are more than 50 years old and are of architectural, historical, archaeological, or aesthetic importance

Central Govt. Schemes for heritage protection and promotion

Heritage based urban development is a young field of research and practice. The Swiss planning system has in the recent past been the subject of discussion and research at various forums. On the other hand, Indian urban planning methods developed in the 1960s, do not give due consideration to the rich urban heritage of India. The National Urban Renewal Mission (JNNURM), a programme to implement decentralization and support urban development, acknowledged the importance of urban heritage. First time efforts have been under JNNURM, requesting the cities to integrate heritage studies and planning in the City Development Plan. Another step to protect urban heritage has been taken by the Ministry of Culture and Ministry of Urban Development in the joint development of Model Byelaws for the protection of heritage buildings and heritage areas.

On account of the high relevance and need of heritage-based urban development today, and of the specificities of Switzerland and India in this area, an initiative was taken to organize a conference, to highlight various aspects of a sustainable urban development model based on the conservation of indigenous heritage.

The conference had four objectives:

- 1) To exchange knowledge and experiences in the field of planning, housing and urban conservation;
- 2) To build the capacity of Indian cities and state representatives to develop and use planning tools for the protection, use and management of heritage structures and areas;
- 3) To present to the Indian audience current practices in Switzerland for the conservation of urban heritage and sustainable planning, socio-economic & cultural development; and
- 4) To present to the Swiss participants the challenging environment and current approaches to urban conservation in India

Speakers in the conference emphasized on the need to view heritage as a resource for development and called for integrating heritage conservation within the

framework of urban planning. They compared the administrative aspects of heritage conservation in both the countries and concluded that historical landscapes were threatened by a number of factors, including poverty and economic growth. Misinformed public policies and market forces were culprits as well. A decentralised administration with more power to the local authorities went a long way in preserving local architecture. That was the reason, Switzerland had been more successful in preserved heritage sites in contrast to India. They also underlined the need for local bodies to share a greater responsibility in heritage preservation. It is also found important to garner popular support and inspire the society overall to take conservation more seriously. The government and corporate enterprises, apart from policy support, could be the source of grants for restoration and maintenance.

National Heritage City Development and Augmentation Yojana (HRIDAY)

is launched on 21 January 2015 with the aim of bringing together urban planning, economic growth and heritage conservation in an inclusive manner to preserve the heritage character of each Heritage City. The Scheme is set to be implemented in 12 identified Cities namely, Ajmer, Amaravati,(Andhra Pradesh), Amritsar, Badami, Dwarka, Gaya, Kanchipuram, Mathura, Puri, Varanasi, Velankanni and Warangal with a duration of 27 months (completing in March 2017) and a budget of INR 500 Crores.

The Scheme shall support development of core heritage infrastructure projects including revitalization of linked urban infrastructure for heritage assets such as monuments, Ghats, temples etc. along with reviving certain intangible assets. These initiatives shall include development of sanitation facilities, roads, public transportation & parking,

citizen services, information kiosks etc.

The scheme targets at heritage conservation besides terms of beautification in an inclusive and integrated manner with focus on cleanliness, livelihoods, skills, safety, security, accessibility and faster service delivery. Heritage needs to be treated as an asset and its revitalisation and beautification generates lasting benefits to communities and cities

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DOCUMENTATION: ESSENTIAL TOOL TO HERITAGE CONSERVATION

Prof. Preety Shah, Principal SMAID

Architecture expresses the context of its time. It manifests the physical, social, cultural, climatic and technological attitudes and attributes of the time which generated it and hence it is not only a great teacher but a spectacular lesson too. Architectural heritage is a priceless non-replaceable resource and is constantly under threat from natural as well as anthropogenic causalities. Accelerated urbanization, migration and globalization are all taking an ever stronger influence on the changes of urban India. The cities and towns which were previously open only to limited stimuli have been suddenly exposed to strong totally extraneous agents of change.

While trying to cope with this rapid change and create sustainable tools for and approaches to development, Heritage can be designated to play a key role understanding of historic assets and traditions, the character of cities, towns and villages, buildings, etc. Education and sensitization for respect of Heritage should begin in schools and continue in Universities and beyond. These institutions have an important role in raising visual and cultural awareness - improving ability to read and understand the elements of our cultural heritage - and giving the cultural grounding needed. One of the leading reasons for loss of Architectural-built heritage can be attributed to lack of information about the historic structures and their significance. Commitment to use the understanding of the past and the knowledge of the present for the development of a better and sustainable future for people; a peaceful co-habitation and improvement of livelihood is extremely important.

Documentation is the most important part, contributing in creating this understanding of heritage and its related values. Architectural documentation is the repository of information relevant to understanding the physical configuration, history, evolution and condition of historic buildings and sites at known time in history. It is based on the recording of primary evidence and the research of secondary sources. All this may include tangible (physical) as well as intangible (oral, visual etc) evidence. Documentation generally is a incessant process to facilitate study, monitor and understand the need for conservation with relevant and timely data. To some extent, the monuments and sites under the protection of ASI and the various State Governments are documented, a very large number remains, though to be documented and listed. Hence documentation is the most powerful tool for identification, protection, conservation and management of our built heritage.

INTRODUCTION:

Documentation is a detailed record, in the form of a report or other written document, of the historical context(s) and significance of a property. It is an investigative technique that may be employed to document associative, architectural, cultural or informational values of properties. It may be used as a component of structural recording or archeological investigation, to enable interpretation or to mitigate the anticipated loss of a property through conservation of information about its historical, architectural or archeological significance. Historical research to create documentation uses archival materials, oral history techniques, ethno-histories, prior research contained in secondary sources and other sources to make a detailed record of previously identified values or to investigate particular questions about the established significance of a property or properties. Documentation generally results in both greater factual knowledge about the specific property and its values, and in better understanding of the property in its historical context. In addition to increasing factual knowledge about a property and its significance in one historical context, documentation may also serve to link the property to or define its importance in other known or yet-to-be defined historic contexts. Thus, documentation is one of the principal ways available to give meaning, understanding, definition and recognition of the values of the cultural heritage. The importance of documentation may be undertaken as the most fundamental stage on which various treatment activities including; protection, restoration, conservation, preservation, identification,

monitoring, interpretation, management of historic buildings and sites and cultural landscapes, in addition to creating a register of stolen movable objects would depend.

PURPOSE OF DOCUMENTATION

Documentation efforts focus on the significant characteristics of the property, as defined in the previously completed evaluation. The selection of a level of documentation and the documentation techniques (measured drawings, photography, etc.) is based on the significance of the property and the management needs for which the documentation is being performed. For example, the kind and level of documentation required to record a historic property for easement purposes may be less detailed than that required as mitigation prior to destruction of the property. In the former case, essential documentation might be limited to the portions of the property controlled by the easement, for example, exterior facades; while in the latter case, significant interior architectural features and non-visible structural details would also be documented.

An essential purpose of documentation is to preserve it as archival material for the use in conservation, restoration and reconstruction of heritage properties as and when so required besides academic research and study. The records can provide a way to investigate structures from the past that may otherwise be inaccessible or that they may have been ceased to be in their existence, with no visible structural or material evidence.

Further, documentation can be used to records structures that cannot be saved or too big for display in museums and even rebuilding of the structures in case of any catastrophic loss, due to war, vandalism or natural calamity etc. Hence the purpose may be one or many from Conservation, research, policy planning,

informed management, creating awareness etc.

Documentation permits accurate repair or reconstruction of parts of a property, records existing conditions for easements, or may present information about a property that is to be demolished. Improved heritage management and the inclusion of heritage in planning and sustainable development processes necessitate inventory and documentation. More than mere scientific tools recommended in international agreements, inventory and documentation play a strategic role.

The goal of the collections is to provide architects, engineers, scholars, and interested members of the public with comprehensive documentation of buildings, sites, structures and objects significant in history and the growth and development of the built environment.

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1. Conservation
2. Study and Research
3. Preserve as an archival material
4. Informed Management of Property or Site
5. Creating Sensitization, Education and for awareness

Graphic Documentation consists of photographs and drawings. Measured drawings are produced from the measurements directly obtained from the structure. Graphic Documentation is more relevant to Historic structures as those cannot be adequately recorded in words alone.

Written Documentation can be either historic literature

or descriptive note of contemporary times based on physical inspection of the site explaining history, evolution, context, significance and the state of preservation. Written history and description for Documentation should be based on primary sources to the greatest extent possible. A frank assessment of the reliability and limitations of sources shall be included. Within the written history, statements shall be footnoted as to their sources, where appropriate. The written data shall include a methodology section specifying name of researcher, date of research, sources searched, and limitations of the project.

STAGES OF DOCUMENTATION:

It is a continuous process. But for conservation, it can be divided into three stages:

Pre conservation documentation

During Conservation-documentation

Post Conservation-documentation

Documentation should be seen as a priority and as an integral part of research and conservation strategies. It should be taken up before, during and after any physical intervention is made. As it is a complex task, the same requires an involvement of skilled persons in the field involving architects, surveyors, engineers, historians, archaeologists and other specialized construction artisan and skilled crafts people.

TYPES OF DOCUMENTATION:

- A. **Architectural Data Survey Form**-It is a one page form intended to provide identifying information for the accompanying documentation. Normally, this practice is followed by the Archaeological Survey of India, INTACH, UNESCO etc.

- B. **Written Documentation**- All information compiled by way of photographs, histories, inventory cards or other media that depict historic buildings, sites, structures or objects is included in documentation.
- C. **Measured Drawings**- Measured drawings are produced from recorded, accurate measurements. They depict existing conditions or other relevant features of historic buildings, sites, structures or objects. Measured drawings are usually produced in ink on archaically stable material. Portions of the building that are not accessible for measurement should not be drawn on the measured drawings, but clearly labeled as not accessible or drawn from available construction drawings and other sources and so identified. No part of the measured drawings shall be produced from hypothesis or non-measurement related activities
- D. **Field Records**-notes of measurements taken, field photographs and other recorded information intended for the purpose of producing documentation. Ideally speaking, Measured drawings should be accompanied by a set of field notebooks in which the measurements were first recorded.
- E. **Field Photography**-photography, other than large-format photography, intended for the purpose of producing documentation.
- F. **Large Format Photographs**-photographs taken of historic buildings, sites, structures or objects of sizes 4"x5", 5"x7" or 8"x10" and where the photograph is taken with appropriate means to correct perspective distortion.

PRINCIPLES OF DOCUMENTATION

- A. Documentation Shall Adequately Explicate and Illustrate What is Significant or Valuable About the Historic Building, Site, Structure or Object Being Documented.

The historic significance of the building, site, structure or object identified in the evaluation process should be conveyed by the drawings, photographs and other materials that comprise documentation. The historical, architectural, engineering or cultural values of the property together with the purpose of the documentation activity determine the level and methods of documentation. It should include the content and adequately illustrate

what is significant or valuable about the historic building structure or subject that is documented. Documentation should demonstrate the historical development of the site and where possible explain the phases of development of the structure. The historical, architectural, engineering or cultural values together determine the level and methodology of the documentation process.

- B. Documentation Shall be Prepared Accurately From Reliable Sources With Limitations Clearly Stated to Permit Independent Verification of the Information.

The purpose of documentation is to preserve an accurate record of historic properties that can be used in research and other preservation activities. To serve these purposes, the documentation must include information that permits assessment of its reliability.

- C. Documentation Shall be Prepared on Materials That are Readily Reproducible, Durable and in Standard Sizes.

The size and quality of documentation materials are important factors in the preservation of information for future use. Selection of materials should be based on the length of time expected for storage, the anticipated frequency of use and a size convenient for storage.

- D. Documentation Shall be Clearly and Concisely Produced.

In order for documentation to be useful for future research, written materials must be legible and understandable, and graphic materials must contain scale information and location references. Documentation of historic properties depends on high quality. Quality is not something that can be easily prescribed or quantified, but it derives from a process in which thoroughness and accuracy play a large part. Usefulness of the documentation

products depends on preparing the documentation on durable materials that are able to withstand handling and reproduction, and in sizes that can be stored and reproduced without damage.

DOCUMENTATION PROCESS:

The process of documentation typically has three phases:

1. Background research
2. Field survey
3. Post processing analysis and dissemination

Before undertaking any documentation work, existing records-written, observed, sketches, paintings, photographs, drawings etc be examined for their adequacy and accuracy and be suitably acknowledged. The existing records be published or unpublished. Documentation process should use non-intrusive or non-destructive techniques during the entire process.

PHOTOGRAPHIC DOCUMENTATION FOR HISTORIC STRUCTURES

Photography is one method of documenting important information about a building. The photographs will generally be the only evidence of the building that remains after the demolition and it is therefore important that they fully convey the significant features and context of the building. It is also important that the photographs are archivally processed and are placed in a publicly accessible repository that can maintain them in archival conditions so that they will be a permanent record of the building

It is recommended that documentation be undertaken by architectural historians with substantial experience in photographing historic buildings and structures. The architectural historian should research the history of the building prior to the photo-documentation, in order to better understand the significance of the building.

Photographic coverage

Photographs should be taken of the overall property and the exterior and interior (if historically important) of each building on the property, including old and new outbuildings. The number of interior and detail views will depend on the significance of those aspects of the building(s). The following photographs should be taken to document the property:

a. Settings/surroundings

1. Views of the overall setting of the historic building(s), e.g. fields and forest surrounding a farm complex, a streetscape of buildings in a village, etc.
2. Views of the building in its immediate surroundings, showing the relationship of the building to neighboring buildings.
3. Aerial views when easily obtainable (often an adjacent hill or tall building can provide an aerial vantage point).
4. Views of significant landscape features, e.g. tree-lined approaches, stone walls, formal gardens, etc.

b. Exterior views

1. Views of all sides of the building
2. Views of important details, e.g. cupolas, steeples, porches, doors, decorative brickwork etc.

c. Interior views

1. Overall views of important interior rooms, e.g. courtrooms, formal parlors, historic kitchens, etc.
2. Views of important interior features, e.g. staircases, ceiling, exposed structural framing, etc.
3. View of significant interior details, e.g. door hardware, light fixtures, industrial machinery, hand grained trim, etc.
4. Views of the building in use, i.e. views that show people using the building.

Labels on photographs

- a. Each photograph should be labeled on the reverse, either handwritten in pencil or typed on

an affixed label, with the following information:

1. Name of property
2. Street, Town, State
3. Description of view
4. Direction of view (the compass direction the photographer was facing)
5. Date of photograph (month and year)
6. Name of photographer

- b. Each photograph should be numbered in a sequence that follows the rough order of general to detailed views outlined in 6 above and that corresponds to the Photograph Index noted below.

DOCUMENTATION LEVELS:

The purpose of documentation will determine its appropriate level of documentations. However, the aspects mentioned below need to be identified with each documentation which would serve as a baseline documentation and include the following:

- i. Name of the building, structure or site
- ii. Photographs
- iii. A unique reference or serial number
- iv. Location of the building or structure
- v. Ownership and levels of protection of the structure , site
- vi. A brief description regarding the physical attribute, cultural significance, history and present condition
- vii. Date, name of individual/organization undertaking documentation
- viii. Acknowledgements to all the sources of information

Level 1: Inventory form with all written accounts; photographs and its significant characteristics is the simplest form of documentation. It is essentially a visual record supplemented by basic information needed to identify the building or site, its location, type etc.

Level 2: Scaled plan with description on the Inventory Form with additional photographs of both exteriors and interiors and written descriptions on significance, history, evolution, architectural and decorative aspects, present condition, current use etc.

Level 3: It should consist of full set of measured drawings(plans, elevations, architectural and constructional details) and building condition with extensive photo documentation of both exteriors and interiors, written data or history, historical evolution, architectural, structural and decorative aspects, present condition and historic views. This type of documentation is employed for research purpose of important building or for undertaking major conservation proposals.

SKILL SETS NEEDED FOR DOCUMENTATION:

Documentation is a highly developed field in our Western counterpart though it is not widely recognized or appreciated in our country. Since it a highly skilled and a multi-disciplinary job, persons engaged in this task should have

- The knowledge of history of architecture of the building/site
- The knowledge of construction technique in order to understand the systems of construction to be able to represent them on paper.
- The knowledge of architectural vocabulary to represent it on drawings and in text.
- The knowledge of geometry and surveying
- Otherskills to use latest equipment or gadgets, get acquainted with GIS, aerial maps, etc
- And above should be very enthusiastic and passionate for history.

ARTICLES ►

Culture : Our true heritage

Ar. Devyani Deshpande
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A nation without heritage is like an individual who has nothing to look back upon. Everyone or everything is rooted somewhere. Countries achieve prominence not because of their material prosperity but because they follow certain traditions and cultures. Every country's heritage is peculiar to its own nature, its culture being one of the most influencing factors.

India is innate in the cultural heritage of her past. The stability and vivacity of Indian culture is amazing. There seems to be something unique about the continuity of a cultural tradition through years of history, a tradition which is wide spread among the masses and powerfully influencing them. India culture has provided its vitality through ages. A large number of foreign races have tried to invade this country and tried to destroy its culture, but our culture remained unaffected. India influenced these nations and was influenced by them, but her cultural basis was strong enough to endure. A major influencing factor being is architecture. Indian heritage architecture has its root starting from the Indus Valley civilization to the modern day examples of sustainable development. A lot of influences of Mughal invasion are reflected in the Indo-sarascenic style of architecture, of which one some of the notable examples is the Fatehpur Sikri and Qutub complex. Influences during the colonial rule lead to notable examples of Victoria Terminus and many more. Though these invasions influenced certain techniques, but the cultural context did not submerge and notable examples of Sun temples, Dravidian temples and more are still oblivious.

The lasting quality of Indian culture is the fusion of heritage and tradition, heritage being the existing past which is very influential and tradition being the strings adapted from the past still being followed even though with a bit of twist. Indian culture has been a powerfully, all fascinating and all-embracing process. In the past, it has received, adapted and digested elements of many different cultures and with each new influence, it has somewhat changed; but it has retained its continuity. India has never lost the pride of her culture. Indian culture has proved its strength and maintained her vitality throughout.

Indians are developing materialistic attitude, but at the same time they are not neglecting the moral aspect of life. The old family system is adapting itself to present day conditions. In fact, the whole face of India is altering, but the cultural traditions continue and it will never be lost.

Regenerating Traditions

Id. Urvi Solanki

India has rich heritage which includes a repository of archaeological treasures and incredible monuments. This cultural history epitomised in heritage monuments stems from a historic past of ancient civilisation.

Every community and society have very precious heritage, in forms of Art & Culture, Temples, Caves, Fort, Palaces and Havelis, etc. It's important to conserve and restore such heritage, which enlightens us about the history that happened before and upholds the respect for those who lived in different times and different societies.

The Palaces and Havelis have been abodes of the nobilities for decades. Traditionalism was a part of the lives of the people who resided in them. The crafty creations built by the Maharajas of yesteryears are abounding with folklores and stories of valour, war expeditions, and conquests. These Palaces and Havelis evolved over the years, through changes in architectural styles and the sociological needs of the period.

But, the integration of princely states into Union Territories after independence and the stoppage of Privy Purse by the government in 1971, made it extremely difficult for royal families and their inherit-ants to maintain these palaces abuzz with art works, valuable paintings, artefacts, furniture, valuable furnishings and fixtures. Moreover, the structure itself, were architectural marvel in sandstone, marble and granite. This led to conversion of heritage structures into revenue-generating hospitality units, which had directly or indirectly helped

the conservation of these structures. Therefore, the concept of 'active conservation' as a means of sustained development necessitated efforts to change the traditional spaces to contemporary uses and lifestyles in a sensitive way. So, giving new purpose to the old buildings by other businesses - such as heritage hotels, museums, ethnic restaurants, antique stores, neighbourhood pubs, and especially small start-ups—thrive in old buildings. This will not only help conserving the heritage structure but would help in many ways like Sustainable future, Environmental benefit, Cultural benefit, Economic benefit.

Sustainable future: Preservation of historic properties demonstrates long-term vision by preserving irreplaceable cultural resources and promoting sustainability practices by conserving our limited environmental resources.

Environmental Benefit: Demolition and new construction not only consume present-day energy, but negates and wastes the past energy investment made in a building. Preservation is a remarkably effective method of sustainability.

Cultural Benefit: Historic buildings helps to create vibrant cultural downtowns that draw tourism, art, festivals, and other activities which in turn draw investment, revenue, and economic growth.

Economic Benefits: There's growth of employment in the restoration industry, which helps in construction trades, professionals and product manufacturings. Restoration is often cheaper than new construction. This even helps in Increase in tourism.

Economic Sustainability: Conservation and Restoration creates more local employment than new construction, due to this there's less use of energy and less waste than new construction. This encourages the enhancement of existing neighbourhoods and infrastructure and opposes decay, urban sprawl and increased infrastructure costs. Restoration keeps wealth within the community, by requiring fewer materials from outside and more labour-intensive work by local trades.

Heritage conservation doesn't mean freezing a building in time. Instead, it seeks to maintain and thereby increase the value of buildings by keeping their original built form and architectural elements, favouring their restoration rather than replacement. It's about showcasing history harmoniously alongside modernity; offering new

travellers of the world access to old worlds; providing context to cities and communities; keeping art, and artisans, appreciated; sustaining age-old skills and jobs through new generations; and importantly, protecting precious assets of the past by giving them a purpose in the present.

Thus, the conversion of Palaces, Havelis or any individual property of national art and architecture helps it to sustain for longer period, and this is thoroughly seen by the success stories of Palaces like Udaivilas Palace - Udaipur, Umaid Bhawan - Jhodhpur, Neemrana Fort - Alwar, Falaknuma Palace -Hyderabad and many more..



Udaivilas Palace - Udaipur



Umaid Bhawan - Jhodhpur



Falaknuma Palace - Hyderabad



Udaivilas Palace



Umaid Bhawan - Reception Area



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Heritage Conservation and Urban Regeneration

Ar. Shilpi Aggarwal,
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Heritage: The Need for Heritage Conservation and Urban Development:

In the recent years, threat to the protected monuments and sites and their environs have increased due to industrialisation, intensive developmental activity, construction of multipurpose dams and roads transport, urbanisation, population growth and various other activities including tourism. This has opened eyes of the govt. bodies and conservationists and Historians to safeguard these properties in public interest and to benefit future generations. World over efforts have been made to protect the heritage sites, culture and values. Every country has prepared their own guidelines for protection of heritage. UNESCO plays an important role in identifying the heritage properties at world level and safeguarding them with the help of local agencies.

Conservation and Management of Protected Sites in India:

India occupies supreme place in the World cultural map due to its rich and diverse cultural heritage. Built heritage i.e. monuments and archaeological sites form an important part of the cultural heritage milieu of India. The Archaeological Survey of India (ASI), an attached office of the Ministry of culture, is shouldering the responsibility since its inception in 1861. The remaining functions of the ASI include archaeological excavation & exploration, conservation preservation and environmental development of the protected monuments/archaeological site museums; publication and implementing the legal instruments viz. the ancient monuments and archaeological sites and

remains Act, 1958 and Rules 1959 and the Antiquities and Art Treasures Act, 1972 and Rules 1973. As per ASI Guidelines all monuments more than 100 years old and fulfilling the criteria of selection for conservation, protection shall be listed in the inventory for protection and conservation. Later it was realised that there exists properties worth heritage importance less than 100 years old shall also be documented. After giving thoughts further criteria for selection of properties was formalised and it was decided to enlist properties that are more than 50 years old under the inventory of INTACH.

Role of ASI and INTACH

1. Role of ASI

Preparation of detail site management plans and conservation plans for all major sites including world heritage sites is under control of ASI. Conservation Plans for sites located in urban centres, are taken up within protected limits (300M) of the sites. These plans are aimed at addressing the issues concerning encroachments, visual impact and developmental requirements etc. for the monument that authority enlists for protection.

2. Role of INTACH

INTACH bears the reasonability of all such properties which are more than 50 years old and fulfil the criteria of enlisting the properties for conservation and protection.

Above mentioned efforts deal with heritage conservation and preservation specific to particular property/premises or culture possessing heritage value irrespective of location and any other limitation. This approach is working to safeguard the monuments but faces problems in towns and large cities. Most of the Indian cities are ancient and possess heritage historic religious importance. Due to the pace of urbanisation these cities are crippling on infrastructure requirements to fulfil basic needs of the citizens. The old city areas are losing their identities due to overcrowding leading to land use change and haphazard development. Recognising the fact govt. and local bodies have come up with various concepts and policies and are preparing development plans with inclusion of specific regulations to safeguard the core inner city areas along with heritage revival policies. Past 60 years various concepts and policies have been formulated in the interest of safeguarding and reviving the heritage precincts along with urban development. Following are some concepts and policies in detail:

CONCEPTS AND POLICIES FOR PROTECTION OF HERITAGE SITES

Period Policy type	1950s Reconstruction	1960s Revitalization	1970s Renewal	1980s Redevelopment	1990s Regeneration
Major strategy & orientation	Reconstruction & extension of older areas of towns and cities often based on a 'masterplan' suburban growth	Continuation of 1950s theme sub-urban & peripheral growth; some early attempts at rehabilitation	Focus on in situ renewal & neighbourhood schemes; still development at periphery.	Many major schemes of development & redevelopment; flagship projects; out of town projects	Move towards a more comprehensive form of policy and practice; more emphasis on integrated treatments
Key actors & stakeholders	National & local government; private sector developers & contractors	Move towards a greater balance between public & private sectors	Growing role of private sector & decentralization in local government.	Emphasis on private sector & sector & special agencies; growth of partnerships.	Partnership the dominant approach
Spatial level of activity	Emphasis on local & site levels	Regional level of activity emerged	Regional & local levels initially; later more local emphasis	In early 1980s focus on site: later emphasis on local level.	Reintroduction of strategic perspective; growth of regional activity
Economic focus	Replacement of inner areas and peripheral development	Some continuation from 1950s with parallel rehabilitation of existing areas	More extensive renewal of older urban areas	Major schemes of replacement & new development flagship schemes	Greater balance between public, private and voluntary funding
Social content	Improvement of housing and living standards	Social & welfare improvement	Community based action and greater empowerment	Community self with very selective state support.	Emphasis on the role of community
Physical emphasis	Replacement of inner areas and peripheral development	Some continuation from 1950s with parallel rehabilitation of existing areas	More extensive renewal of older urban areas	Major schemes of replacement and new development flagship schemes	More modest than 1980s; heritage & retention
Environmental approach	Landscaping & some greening	Selective improvements	Environmental improvement with some innovations	Growth of concern for wider approach to environment	Introduction of broader idea of environmental sustainability

Revitalisation and Urban Development: Following are some live case studies of urban development carried out under these policies:

1. Revitalisation of Walled city- Ahmedabad

The walled city of Ahmedabad is a living heritage throbbing with activities ever since 1411 A.D. preserving its distinct life style and customs. Historic core of Ahmedabad was established 5 centuries

ago admeasuring area of 5.8 Sq. Km. Today the walled city houses approx. 4,00,000 persons and is a work place for more than 1.5 lakh persons from various parts of the city. The precinct possess main railway station, state bus terminal and 3 city bus terminal with intense wholesale market retail bazaar, rich heritage of religious and secular architecture. Walled city must be looked as cultural administrative and economic heart of the city. Today's time the core is facing urban problems of congestion, infrastructure deterioration, dilapidation of housing stock and lack of open space. This is resulting in population decline due to compromised

quality of life. Realising the facts the authorities (State Govt. and ULB) aim at Revitalization of the walled city area through infrastructure upgradation and commercial development. To achieve the aim, involved authorities have formulated strategy for public intervention of Public Private Partnership to stimulate private investment for redevelopment. The other objectives are enhancement of economic activities and improvement in quality of life of inhabitants. Participatory agencies

in the process of redevelopment are Ahmedabad Municipal Corporation (AMC), EPC for research and technical support, The Ahmedabad Electricity Company, and Telecom District. Planning area includes the old fort wall and widening of the bridges connecting east to the west part of the city. The authorities have identified seven components for the revival of the walled city area. Each component has been researched on problem areas, proposal and completes the task with broad implementation strategy. Following Table covers the details for the same:

Sr. No.	Component	Objective	Problem	Proposal
1.	Public Transport	Improve efficiency, Reduce congestion and pollution & Future expansion of public transport	❖ Terminal & Bus Routes create traffic Congestion	❖ Decentralization of Lal Darwaza terminal to Astodia & Hijipura ❖ Shifting of bus terminal from Kalupur to Sarangpur ❖ Rerouting of AMTS buses to reduce congestion ❖ Widening of Vivekanad Bridge, Sardar Bridge & Gandhi Bridge
2.	Road System & Traffic Management	❖ Ensure safety for pedestrians & smooth traffic flow ❖ Discourage through traffic, ensure easy access to the inner areas ❖ Define hierarchy of roads & encourage public transport	Through traffic, Inadequate road width & Haphazard Parking	❖ Development of ring road, feeder roads, ❖ Parking management: Auto rickshaw stand, Restricted timing for loading unloading of goods, on-street parking where possible ❖ Modification in traffic pattern: remove bottlenecks ❖ Pedestrian zone at Gandhi Road
3.	Infrastructure			
	Water supply	❖ Utilization of Narmada water & Ensure equity and reliability ❖ Establish a reliable database of sewerage and storm water drainage network	❖ Inequitable and unreliable water supply, ground water depletion	Zoning of water supply area, feeder lines to distribution stations & storage facilities
	Sewerage & Storm Water Drainage	❖ Establish a reliable database of sewerage and storm water drainage network	T & Y junctions, pollution & flooding of sewers due to interconnection of 2 systems Population decline due to inadequate insufficient infrastructure facilities	Inventory of sewerage and drainage network, elimination of T & Y junctions, drainage lines on all level 1 and 3 roads

	Electricity & Telephones	<ul style="list-style-type: none"> ❖ To enable AEC to meet their space requirements for substations ❖ Facilitate coordination between AMC, AEC and ATD in the walled city 	<p>Space for substation to meet power demand</p> <p>Pole mounted transformers, low capacity & obstruction in smooth traffic flow</p> <p>Lack of coordination between AMC, AEC & ATD.</p> <p>AEC and ATD not allowed lying cables until road re-surfacing is done by AMC.</p>	<p>Allocation of land and construction of substation to AEC</p> <p>Constitution of coordination committees</p>
4.	Municipal Services Solid waste management and Fire Services	<ul style="list-style-type: none"> ❖ To improve efficiency of solid waste management process at all levels of collection, transportation and disposal ❖ To improve health and hygiene conditions in the walled city ❖ To equip with efficient functioning of firefighting systems for the inner city areas. 	<p>House to house collection is not in practice, labour intensive process</p> <p>Domestic waste dumped out on streets</p> <p>Transportation totally depends upon smooth functioning of vehicles disposal is on landfill site contaminating soil and groundwater. No treatment is practiced</p> <p>Inaccessibility in congested lanes, access of water, shortage of suitable equipment's & diversion of trained manpower</p>	<p>Installation of litter bins, mobilization of rag pickers, Privatization of transportation, enhance capacity of composting plant, Contracting of special areas like vegetable market, meat market & level 1 & 2 roads</p> <p>Acquisition of firefighting equipment, dry pipelines in congested areas</p> <p>Water facility at the tube well stations, clear definition of duties</p>
5.	Heritage Resources	<ul style="list-style-type: none"> ❖ To conserve historical character ❖ Restoration and adaptive reuse of heritage buildings ❖ To improve character of life by rejuvenating the tradition residential areas. ❖ To propose sensitive guidance for the design of new buildings. ❖ To generate public awareness through programs, & publication related to conservation. 	<p>Apart from building bylaws, there are no rules applicable to heritage structures</p> <p>Increased Vehicular traffic</p> <p>Physical encroachment around monuments destroying aesthetic ambience</p> <p>Lack of Public awareness</p>	<p>Development control regulations</p> <p>Incentives for Conservation</p> <p>Public awareness programme</p> <p>Pilot projects of Public Private partnership</p> <p>Implementation:</p> <p>Financing & Cost Recovery: Revenue generation from City heritage Walks, maps and architectural guide book</p> <p>City Level actions: Formulation of heritage regulations, Collection of development impact fees</p>

6.	Open Spaces	<ul style="list-style-type: none"> ❖ To provide adequate open spaces ❖ To increase utility of existing ones 	<ul style="list-style-type: none"> ❖ Only few open spaces which are developed and accessible too. ❖ Inequitable distribution of open spaces 	<ul style="list-style-type: none"> ❖ Redesign Existing gardens and AMC owned plots for open Spaces ❖ To develop Traffic island and Chowks ❖ Develop Open Private and Trust Properties as Gardens. ❖ Coordinate River Front development with the Walled city Project. ❖ Create Open Spaces in Congested Neighbourhoods
7.	Land Development, Development Controls and use of Municipal Properties	<ul style="list-style-type: none"> ❖ To revitalize the Walled city while conserving the character of its traditional neighbourhood ❖ To discourage conflicting land uses by using DCR ❖ to encourage new developments in which area where infrastructure & services can be provided. ❖ To assess the development potential of AMC owned properties. 	<p>Existing Situation:</p> <ul style="list-style-type: none"> ❖ Built Form characteristics in the walled city ❖ Existing development control regulations ❖ Municipal properties each and around Walled city. <p>Problems:</p> <ul style="list-style-type: none"> ❖ Constrained development ❖ Conflicting Land use <p>Opportunities:</p> <ul style="list-style-type: none"> ❖ Municipal properties in Walled city ❖ Municipal properties along Ring Road 	<p>Development Control Proposals:</p> <ul style="list-style-type: none"> ❖ ASI Norms ❖ Heritage Regulations ❖ DCR Zones ❖ Built form parameter for DCRs ❖ Walled city special development Districts <p>Proposal for use of Municipal Properties:</p> <ul style="list-style-type: none"> ❖ Public Use ❖ Public use with Commercial Development ❖ Commercial Development <p>Broad Implementation Strategy:</p> <ul style="list-style-type: none"> ❖ Overall revision for DCR for AMC areas. ❖ Properties proposed for parking would be financed by private developers of the property ❖ Relocation of slaughter house ❖ Rehabilitation of slum encroachment in the open municipal properties

Apart from above seven components Authorities also identified the need for the development of other areas and organization of activities around these localities. Some such identified areas are Teen Darwaza, Bhadra as city centres, Asodia Bus Terminus, Special Development District where prominent land use is for commercial and

institutional purposes, and commercial development of Municipal properties.

Implementation Strategies for the project will be taking care of legal issues arising due implementation, formulation of heritage plan regulations and integration of the same into the DCR. Administrative mechanism along with Resource mobilisation has been institutionalising for smooth functioning and management of the schemes. The walled city revitalisation plan generates

total of 37 capital projects of which 21 were aimed at public investment and 14 on Public Private Partnership.

2. Musi Heritage Precinct Revitalisation Project-Hyderabad

The project is shortlisted under the Inclusive Heritage-Based City Development Programme. The project plans to address issues along the entire 21.5-km stretch of the Musi River, with special focus on the heritage precinct within, spread over 4.29 km. As many as 35 structures of heritage relevance have been identified near the river for restoration.

Hyderabad is among the four cities chosen by the Ministry of Urban Development for piloting the project. The three others are Ajmer, Pushkar and Varanasi.

The IHCDP wants to bring traditional neighbourhoods, streetscapes, cultural expressions, handicrafts and traditional socio-economic practices under the inclusive heritage development. The heritage cell of the GHMC, which is executing the project, has identified Monda Market, Old Jail, Pan Bazaar, Jagganath Swamy temple, Karwan Road and Musi revitalisation for development. As per officials of Heritage cell and GHMC "The estimated cost of the project will be Rs. 50 crore, funded by the World Bank,"

The project is divided into 3 distinct components in tune with the physical character of the river stretch. 1) The ecological precinct from Tippu Khan Bridge to Puranapul (7.28 km), 2) The Heritage Precinct from Puranapul to Chaderghat Bridge (3.98 km) and 3) The Metropolitan Precinct from Chaderghat Bridge to Nagole bridge (8.64 km). Number of physical interventions and infrastructure development, besides aesthetic enhancement, are proposed at all these spots.

The heritage-specific interventions aim at restoring the physical character on identified stretches while upgrading the quality of public amenities and services. Approx. 35 structures of heritage relevance have been identified along the Musi River. Apart from their restoration, a heritage route, with access to the Charminar Pedestrian Project (CPP) precincts, is also proposed. The most important aspect of the project is facilitating better engagement of communities within the Musi Heritage Precinct.

Strengthening of local informal markets by provision of hawker and vending zones in a regulated manner for revitalizing local economy. Revival of **Service delivery and infrastructure** are planned at public level rather than at household level. This includes better roads, landscaping, lane pavement, solar street lighting and street furniture. For this, development of the Puranapul pedestrian causeway has been proposed.

Temporary shelters for vendors have been planned on the hoary Purnapul Bridge, restoring the stone wall of the Musi embankment at Jumerat Bazaar, Puranapul and Chudi Bazaar. Permanent stalls are proposed at the weekly shanty at Jumerat Bazaar to regulate the market. The sprawling ground will be paved with cobble stones. Hawker zones with amenities like lighting, plantation and off-street parking will be provided.

A bird feeding zone is proposed at Muslimjung pul, where pigeons abound along with Street lights, furniture and information signages. Promenades have been planned from Chaderghat Bridge to Imlibun bus station and from Muslimjung Bridge to Shivaji Bridge with incorporation of vending zones, landscaping and lighting will be provided,"

Commissioning of the STP at Attapur by the Water Board is expected to improve water quality.

Conclusion: The unfettered growth of urbanisation cannot be stopped. But surely with the help of such policies and local interventions heritage can be leveraged revived integrated and showcased around development.

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Hyderabad

Living heritage of mask

Tanvi Dagaonkar, B. Arch.III

Generally speaking, every person has at least 'two selves' one is 'a self' without any 'guise' and another is a 'non-self' which may not be a pretention always but an 'alternate self'! To fathom self and the 'other' (non-self) is a subject of psychology especially the behavioural one! But for common man the search for 'self' and to find out its reflective imaginations sometime in 'disguise' or otherwise has remained a very essential social exercise since the dawn of our civilization. In this process he discovered the 'mask' codified scores of 'guise' which were miles away from self but very close to the mind! But those masks were not simple 'covering' but a vehicle for 'imaginings' of mind of the mankind which remained a powerful object of reverence for all especially amongst aboriginals and traditional people.

The mask-culture which dates back to the pre-historic rock-paintings of c.30,000 B.C. has travelled down the ages and got expressed some time as 'magico-religion', "sacred enactments in monasteries" or at folk theatrical levels and even through epic depictions, or in carnivals with a touch of festivity. Thus we see mask remained an integral part of universal culture surviving in its own way with every face around us.

The logo of the festival with a masked-stick man is from the Bhimbetka rock art sites. This figure shows a 'shield' like face with elaborate semi-circular ornamental necklaces and feather like head-gear with a movement oriented figure. Thus so lyrical was mask for the ancient man! Another powerful observation is hunting animals with a 'disguised' mask which is found in Algeria. Thus we see in the pre-historic era the early man almost got

besmeared with the world of animals and used mask to 'hunt' 'tame' and again 'dance'. Thus mask has always remained very 'dear' and 'loveable' as the self!

From the Mohenjodaro excavations one finds the terracota mask namely Pasupati seal which dates back to 2500 B.C. which in later years manifested and got dimensions from the standpoint of shape to the materials of mask. Our faces are the index of mind and function as mirror to ventilate emotions or state of mind in varied dimensions! What are those hidden recesses of our psyche? Those are love, anger, hate, fury, joy, fear and disgust, the sadness and depressions etc. These emotional lines are universal in actions and feelings which encompass all caste, creed and nationality.

Those body languages are adopted in and displayed as 'abhinaya' to give an emotive punctuation to a particular character in a play in theatrical dimensions or in real life endeavour. Those moods give a varied kind of reflections come out on the face in real or unreal manner. So the man created 'masks' for all moods.

In Nepalese mask dance we see the 'Jangali dance' which comes from the world of tribes knitting the 'spirit' and 'power' of the other world and on depiction we find scores of mythological animals and birds. In India the lion mask of Purulia and jackal from Gambhira, West Bengal linked the world around in simplistic tradition of masks with dull colour temperatures. The role of world of animals, is very prominent amongst the wooden masks of traditional people of Madhyapradesh. Here on the 'face of mask' we find carved out images of animal world, snakes, insects and even the cosmos is depicted. The 'balance' of judgement is found on the chin of a mask as if to depict the natural balance and deliverance of justice.

However, mask remained an integral part of mankind's eternal search for 'macro and micro cosmos' through the concept of 'spirit' and linkage is established between 'seen and unseen'. The practice of sporting masks to invite spiritual powers namely 'ancestors' to cure an ailing, to evade ill effect of evil spirits or to bless an occasion or a newly born.

In modern India mask dances at theatrical and ritualistic level is thriving well. The Krishnattam the ritualistic dance-drama of Kerala is a great eye-catcher today. In Krishna temple of Guruvayoor, Kerala a cycle of eight plays tends to depict the Krishna-lore from his birth to death.

Similarly Chhau dance of Bihar is another powerful centre of modern mask dance. The sophisticated masks made of paper-mache with awe inspiring headgear adds to the folk tune and steppings of mask dancers. The dance motifs and themes are interrelated with of myths and history covering animates and inanimates as well to depict the sentiments. It is said the technique of this dance was evolved from the shield and sword dance of pharikhanda.

Puruliachhau of West Bengal is the symbol of sun god worship through masks. The central theme of this dance is to depict how evil is punished based on mythological stories. This is performed especially during the chaitraparva festival.

It means to give a style, as opposed to nature. Such masks correspond with the myths; they too have this purified structure.

This explanation goes well with the global context and concept of mask which can be sported and removed at will.

But modern days' mask has taken further shape closer to the face and manipulation within that face gives a newer identity. Imagine a middle aged beautiful lady before retiring to bed washes her face to remove those extra layers of cosmetics and takes off her coloured contact lenses and removes those lyrical eye-lashes and wigs to become natural to the self at least while resting away from social world of 'self' and the other 'self'. Are these parts of modern masks? It's a question to be answered by ourselves! Nevertheless, the art aesthetics and imaginations to create the 'new' within the 'self' has remained a close encounter of mankind in the past so it would be in the future!

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Living heritage of masks

Heritage of india

Gujarati Textile Handicraft, a Cultural Heritage of India

Rajvi Patel, B.I.D.IV

“Gujarat is a land of captivating contrasts.” The contrast of colors is best reflected by the state’s textile handicraft that is rich, flamboyant, elegant, and ethnic. It is a cultural identity of the Gujarati folks who are known for their passion, for colorfulness, aestheticism, ethnicity, and traditional fashion. The Gujarati textile handicraft is expressive of their artistic personality and cultural heritage, a legacy that is passed on from generation to generation. The Gujarati textile handicraft is distinctly identifiable in the multiregional milieu of Indian art and crafts.

Patola – rich and flamboyant

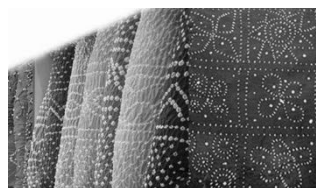


Bearing a testimony to the richness and flamboyance of Gujarati handicraft culture is Patola that means “Queen

of Silks”. Patola is a traditional silk-weaving art which was patronized by the Solanki Rajput rulers in the 12th century. This textile handicraft of Gujarat is believed to have originated and evolved from the age-old tradition of decorating mud-walled houses with murals and terracotta designs in the rural areas of Kutch. Patola silk sarees are woven in geometrical patterns and dyed in flaming colors. Folk motifs dominate the multicolored and delicate designs of Patola sarees with dazzling borders. High color durability is the mainstay of Patola silk sarees which are also available with zardosi embroidery and kundan work to be worn on festive occasions. Patola became a cultural symbol of Gujarat as well as a status symbol of the affluent people due to the

efforts made by the Salvi weavers who migrated from Karnataka and Maharashtra.

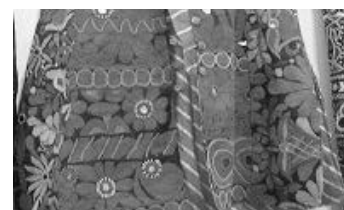
Bandhani – a riot of colors



The riot of colors that is seen during the holi festival all over India is best captured on fabric through Bandhani, by the handicraft textile weavers of Gujarat. Attributing

colorfulness of the ethnic fashion of the state is Bandhani handiwork, an age-old tie and dye technique. The craftsmen, who are mainly women, create a poetry of emotions through eloquent designs on the fabric woven from superfine cotton ‘mulmul’. Bandhani with zari work is the secret to the unmatched beauty of gharchola odhni, worn by Gujarati as well as Marwari brides, and festive sarees. Interspersed with the lifestyle and culture of the Jat, Meman, Rabari, Kumhar, and Harijan communities, Bandhani is done in different styles in different parts of the state. Jamdani is one of the most popular Bandhani styles. Identified with the beauty of Indian brides, this traditional craft of Gujarat thrives in Bhuj, Mandvi, Mundra and Jamnagar.

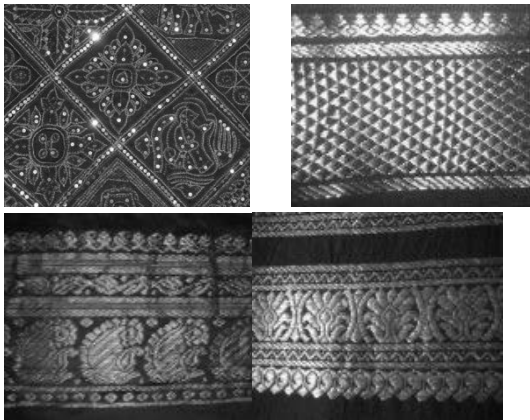
Needlework – delicate and elegant



The most spectacular textile based handicraft of Gujarat is needlework or embroidery, a chief source of living for thousands of artisans in the state. A pride of Gujarati's, embroidery is a woman-based handiwork that is known for elegance, delicacy and splendor the world over. At least, one thing of embroidery is sure to be found in every household in this Indian state. Toran, Chakla, Bhitiya and Pachhitpatis are some of the embroidered items which are the best

buys here. Toran is a hanging flap used for doorway decoration. Chakla is a square piece of embroidery to beautify the upholstery of furniture. Bhitiya is a wall hanging that does up the interior. The ethnicity of Gujarat is best reflected by the varieties of patchwork, a kind of needlework. Abhala and Ari Bharat are the most popular variations of Kutch embroidery. Ari Bharat is mainly the applique work, while Abhala is the blend of embroidery and mirror work. The popularity of Gujarati needlework is leveraged in a contemporary fashion by ethnic textile designers.

Zari – an ethnic fashion statement



Zari refers to the silver or golden thread used in the weaving of chunri, turbans, and borders of sarees and lehengas. Surat is the hub of zari work or zardosi or gold embroidery in Gujarat. The origin of this Gujarati textile handiwork dates back to the Mughal era of India. Surat is known for manufacturing high quality zari which is exported abroad as well. Zari is the main material used in the making of wedding outfits for brides and grooms in the Gujarati and Rajasthani communities. Modern-day designers having obsession with ethnic fashion are blending zari and other materials into the making of chic handbags, cushions and kurtas.

Hand Painting – a timeless tradition



Hand painting on fabric is one of the timeless handicraft traditions of Gujarat. Hand-painted cloth is used for making home improvement items including upholstery such as cushion covers, bed sheets, table covers, wall hangings, window curtains, etc. The hand-painted designs of the cloth are tailored according to the items to be made. The motifs of design are mainly inspired by the mythology of India. The Vaghari Harijans of Ahmedabad are known for their unsurpassed skills in hand-painting of fabric. Tales from the Puranas are meticulously depicted on a large piece of cloth through hand-painting.

Conservation of Traditional Water Heritage Assets of Rajasthan- for Sustainable Living Environment

Ar. Jemish Bhanubhai Lathiya
Asst. Prof., SMAID

1.0 Introduction

There is no specific definition for Lakes in India. The word “Lake” is used loosely to describe many types of water bodies – natural, manmade and ephemeral including wetlands. Many of them are euphemistically called Lakes more by convention and a desire to be grandiose rather than by application of an accepted definition. Vice versa, many lakes are categorized as wetlands while reporting under Ramsar Convention.

India abounds in water bodies, a preponderance of them manmade, typical of the tropics. The manmade (artificial) water bodies are generally called Reservoirs, Ponds and Tanks though it is not unusual for some of them to be referred to as lakes. Ponds and tanks are small in size compared to lakes and reservoirs.

While it is difficult to date the natural lakes, most of the manmade water bodies like Ponds and Tanks are historical. The large reservoirs are all of recent origin. All of them, without exception, have suffered environmental degradation. Only the degree of degradation differs. The degradation itself is a result of lack of public awareness and governmental indifference. The situation is changing but slowly. Environmental activism and legal interventions have put sustainability of lakes in the vanguard of environmental issues.

This paper is an attempt at presenting

a comprehensive view of the typical problems experienced in the better known lakes, their present environmental status and efforts being made to make them environmentally sustainable.

2.0 Genesis and significance of impounded traditional water related architecture: context- Rajasthan

Historic city of Jaipur unfolds the water architectural Heritage of a vast period ranging from 10th Century till present day. The archaeological findings suggest the existence of Jaipur and its surroundings dating back to the prehistoric times which were established by the discovery of a Rock Shelter. Its past is best demonstrated in its historical built heritage, of which a major component is that of its impounded water structure with architectonic forms.

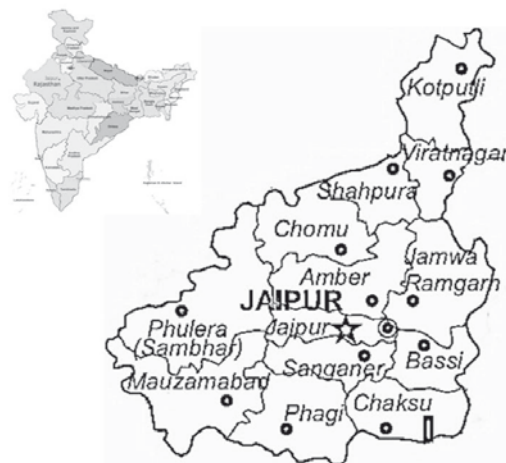


Figure 1.0 Location of Jaipur, Rajasthan

2.1 Water related architecture- Stepwell and stepped ponds

Jaipur exhibits a tradition of utilizing water from traditional water harvesting structure till present times for various purposes which builds an image of this very city due to these concentrated and clustered stepwell. Purpose/ uses class, locational attributes and ownership gave rise to numerous varieties of water harvesting typologies having architectural significance such as stepwells and stepped ponds.

STEPWELL- The main function of a stepwell is to supply water. Mostly to cater domestic needs, the scale varied depending upon the depth of groundwater and

aquifer observed in abundance ranging from simple draw wells, stepwells to spiral wells.

Stepped Ponds- Varied in function; and often decorated and articulated reflecting the dynastical style of architecture and construction observed to be less in number. Impounded water structure of Jaipur play a very crucial role in recharging the groundwater. Water structure typologies architecturally magnificent are the stepwell and stepped ponds, some are spectacular like the Chand baori and Neemrana well having architectural elements like pavilions, Steps formations, etc.

3.0 Research Methodology

Systematic scientific methodology: Archival research, Reconnaissance survey, Data Compilation, activity and Structural condition mapping, Interview with experts and meeting local People.

CHAND BAORI STEPWELL

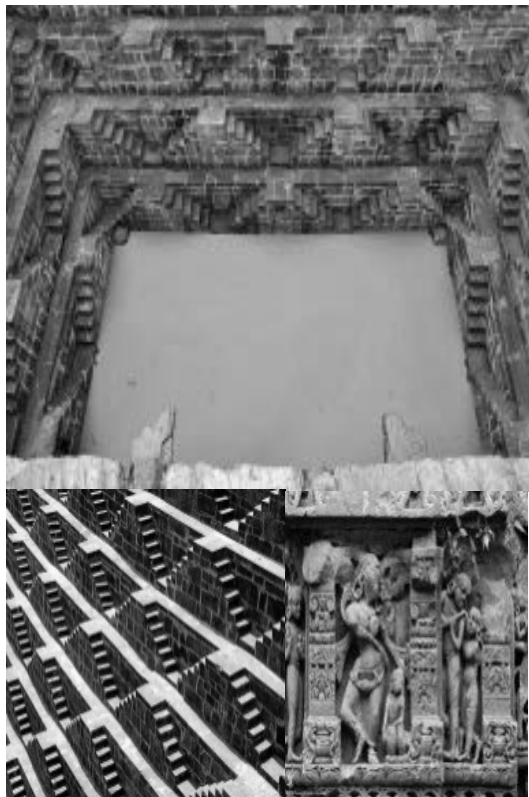


Figure 2.0 Condition of Chand Baori Stepwell

FORM AND SCALE- Square in Shape.
Approx. 30 x 30m.

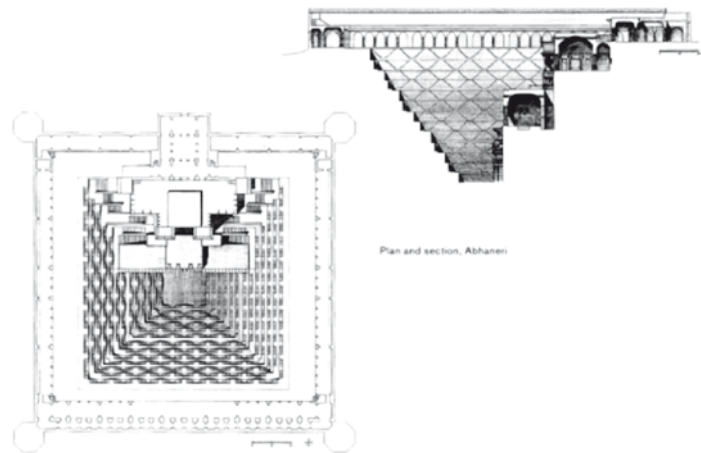


Figure 3.0 Plan & Section of Stepwell

4.0 Analysis and Observations

Photographic documentation of impounded traditional water heritage assets having historical, Architectural and aesthetics significance in the area.

4.1 Neemrana Baoli, Rajasthan

A Significant structure in the Neemrana Village. Built in 1960s it is a 9 storey underground structure of majestic scale. It was built by the King Neemrana for famine relief. Traditionally baoris has been neglected for decades. Now under the Rural Tourism projects of the Union Govt. this structure is being converted into a crafts haat. In close proximity to Neemrana fort-Palace, the tourist traffic can be generated. The projects involves restoring many roofs, re-doing the brackets, flooring, plastering & ensuring security through metalgates and kathera's (Stone parapets). The steps about 200 in number will also be re-laid.

Articulation and Elements



Figure 4.0 photograph of Neemrana well



Figure 5.0 Present Condition of stepwell

PRESENT STATUS-

Not used in Domestic used

Vegetation Growth

Broken Paving

Deformation Stone Masonry wall

5.0 Architectural Conservation Strategies and Recommendations

Architectural Conservation and water Conservation should be primarily done to restore these water heritage assets.

1. Proper Documentation of the impounded water structures and the entire precinct.
2. SWOT analysis of the structure to give indicators about proposed action.
3. Alternative available for proposed action through a combination of repairs, redesign shall be examined and proposals should be worked out.
4. Finalization of selected options to prepare a flexible and phased program of implementation.
5. Detailed proposals and tenders to flexible and phased program of Implementation.
6. Monitoring and supervision of Implementation.
7. Recording and preparation of Maintenance Manuals after implementation.

Conclusion

Deterioration of the structure may be caused due to various reasons, some of which are long life, lack of maintenance, unchecked growth of trees & creepers on the structures, improper drainage system, irregular inspection, material deterioration and weathering effect etc. Also, modern codes and building standards, observance of cultural context, conservation criteria, attainable benefit, traditional and innovative methods etc. pose major challenges in restoration of heritage structure. The best therapy to reduce decay is preventive maintenance. Adequate maintenance can limit or postpone the need for subsequent intervention. The repair process requires the existing condition of the structure to be identified and its causes of its deterioration. It is also necessary to define how ongoing deteriorative factors should be monitored given the effects of such processes on the rehabilitation of the structure [Ghadban S.S., 2011]. An understanding of the significance of the structure should be the basis for conservation and reinforcement measures. The design of intervention should be based on a clear understanding of the kinds of actions that were the cause of the damage and decay as well as those that are taken into account for the analysis of the structure after intervention.

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Pune – Journey from Peshwai City of Pethes to Metropolis City

Ar. Taha Padrawala (B.Arch, M.Plan)
Asst Prof., SVIT



'The City' as - The Citadel Of The Marathi Speaking People From All Over Maharashtra and The Camp which became A Melting Pot For People From All Over India.

There are number of reasons which promoted me to write about Pune. Having spent one and half year for Architectural Training under Ar. Prasaana Desai, and Masters in planning Training under Ar. Zigisha Mhaskar - Global Communities, India (formally known as CHF international, India). Being deeply attached to the place this article is my tribute to warm memories given to me by Pune City.

Pune city has experienced a tremendous growth in past two decades, Many national leaders and personalities have made the city their home. Their activities enriched national life and there literary and intellectual efforts were graded towards social change, especially in the second half of 19th and first few decade of 19th centuries. City still remains a place where the past meets the present. Taking a clue from this and drawing upon Pune's

unusual circumstances, the many ups and downs in its fortunes, the big and small events in its checker existence, and all those big moves and small gestures which affected it, have been pieced together to trace the city's contemporary urban form. Rare insight into social fabric was provided by the shifting footprints of the various castes and communities, which have converged to define an enduring, twin image of Pune: The cultural Capital and the leading Industrial city of Maharashtra. Though not of great antiquity, the city occupies a special place in *Maharashtrian* consciousness from the time young Shivaji and his mother Jijabai set foot in Pune.

Vestiges of its earliest form, as a garrison town under Muslim rules, and a small market place under the Marathas, can be seen in what is today Kasba Peth. Pune's good times began with the breakdown of Mughal Empire, when the Marathas emerged as a significant regional power. Its fortunes changed dramatically in the eighteen century, when the *Peshwas* made it capital city- ensuring hundred years described as the golden age of Pune's Past. Pune of the eighteen "*peths*" or wards was creation of the *Peshwas*. At that time Pune was considered politically the most influential city in India. Looking at the city's modest hinterland, with no great locational advantages either one would never have expected it to grow into town, leaving it alone enjoy a stint as the capital of the country. The credit goes to *Peshwas* for transforming this insignificant market town into a thriving city of hundred thousand souls-Comparable in size and importance, though not in design.

In Pune of *Peshwas* times, though clear-cut functional zoning did not exist, there were clearly discernible and distinct characteristics that developed, within each of *peths*. In spite of this however, Pune had an unmistakable stamp of Brahmin orthodoxy. The life-style of the upper class was Spartan and austere. This was reflected in the town scape too. They were not great city builders, but the development of the *Wada* as a house form reached its climax in *Peshwai* pune and was synonymous with the cityscape, and gave it a distinctive architectural character.

A Major turning point in the city's development came in 1818, when the *Peshwas*' fate was sealed at the Battle of *Khadki*. British won the city and occupied Pune. This ushered in the second major urban phase in the city. Pune experienced a sudden upheaval and disturbance in its urban growth, with almost half a century of de-

urbanization. With establishment of military cantonment alongside the native city.

Meanwhile Pune's vernacular Landscape was also undergoing metamorphosis and absorbing new development and other styles of architecture. This blend produced the unique Anglo-Indian Landscape in the Camp and beyond the old city. Urban growth, though slow paced, was steady and graceful. The rich business class and the nobility built stately mansions in the Civil Lines. The white collared class, bureaucrats and professionals built stout stone bungalows across the river – all guided by the prescribed town planning norms. These were to become the planned developments of Pune in Deccan Gymkhana, Prabha road, Koregaon Park and Bund Garden areas.

Two events in particular in the 1960s radically altered the trajectory of Pune's urban growth: the establishment of the new industrial township of Pimpri - Chinchwad, and the disastrous floods of 1961, when large sections of the old city along the river were washed away.

On the threshold of new millennium, Pune's urban landscape revels a mix of Kachha and Pucca elements, interspersed with unauthorized and authorized structures. Morden Pune's Urban Development is controlled by some abstract (and often abstruse) rules or mechanisms of Floor Space Indices and offset rules. In practice however these are never sacrosanct, and are bluntly ignored.

Most Planners also assume that the future is Predictable, and can be controlled by land use plan and development control rules which will deliver the goods – how wrong this assumption is has been proved by the haphazard growth that is taking place in Pune...

With over 40 % of city's Population living in slums or substandard localities question



comes Will Pune heading in the right direction?

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Inner city in sustainable environment

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Inner city in sustainable environment is a call for the core, the living heritage to cope with the present and future development for its survival. Cities that were developed to serve the residents in those times, Cities that would provide all level of basic services to its people, the typology of built form that was capable to bear the local climatic conditions and other socio-economic aspects of life, these cities and towns are crying for their survival in the era of development. Development that is led by aspirations to fulfil the desired comfort and ease of life. Directionless aspirations are making it difficult for core cities to cope with the change.

Change is a time bound process. This change is aimed at development and overall growth of every individual. Change over a period of time brings transformation from one era to the next. Change can be observed in the form of entire generation change, their thought process, actions beliefs and ideologies. These changes if not guided and rooted to ground realities, turn out to be disastrous and hampering the entire eco system.

In the name of development and economic uplift-ment we are losing the identity from where we had begun. That beginning was need based so was grounded and close to what we really were in need. With growing times we are aspire to grow, and these aspirations are driven by never ending desires. Environment and economic development need to go hand in hand for long term sustainable development. Sustainability can be achieved by optimum use of resources, and proper management of

the services. With the pace of urbanization, deficient provision of services are responsible for unorganized development and polluting environment. Inner cities are one such important aspect of urban fabric to assess its own character with the changing trend of development. Inner city character can be assessed by population density, change in land use, and deficiency of services and haphazard development that leads to complexity of spatial planning.



Inner City Vadodara

Inner city Vadodara is a Walled City developed under the reign of Maratha Rulers. Pol Housing Clusters with Narrow pedestrianized lanes, mixed land use of home and workplace are some typical characteristics of the settlement here. Residential areas are segregated as per caste, community, economic status and trades. This system acted as a supportive structure to one another. Pol system with narrow entry would support Interactive community life, Social involvement and surveillance within community safeguarding the residents from any kind of theft, attacks, or war fare. Residents would be known to each other favouring their business environment and community participation. The housing designs were favourable for residents in tropical climate of Gujarat.

Mixed land use either reduced the travel time from home to work thus reduced production cost i.e. the involves cost of receiving inputs and distributing outputs, and increased human efficiency. Today's time the core city generates 70% of the total revenue of entire city while occupies only 30% physical space. Density of core city is three time more than overall density within Vadodara corporation limits which is approx. 11750 persons per square kilometre. Still development is neglected by local bodies for its physical uplift-ment. (Source: Times of India 10 Sep2013, Population Data-Census 2011 & VMC, Vadodara)



Chaotic Urban Scenario in Inner city, Vadodara

Inner city Vadodara is facing chaotic urban growth, where it requires to match the pace of development within the available limited space. It is important to identify the strength weakness and opportunities to deal with the current situation. An intensive area planning exercise will let the core survive with its own identity without losing image of what it had in store. Following are highlighted characters and problems that core is facing:

❖ **Pol Housing Clusters:** The pace



of urbanization and growing family size has multiplier effect on development. Increasing pressure of overcrowding leading to land use change. Old housing structures are getting converted into apartments & commercial complexes. The plot that would accommodate one pol house for a family is now getting clubbed with other few plots and getting developed as large commercial malls, and shopping complexes. Growing family size and inefficient infrastructure forcing

the residents to shift to new localities thus a paradigm shift from joint families to nuclear families can be observed.

❖ **Physical problems:** Uncontrolled skyline and Development control regulations



Change in land use has multiplied activities to manifolds leading to inefficient incapable infrastructure and basic services. The pol that used to be pedestrianized in its hey days is now expected to bear the load of vehicular movement and parking space. Water supply drainage demands are ten times higher to what it was in early period. Power supply lines, telecom cables, solid waste all around the societies have messed with the beauty of typical pol housing. Open spaces are converted into parking spaces with Narrow roads (about 12M), have eaten up social gathering spaces.

❖ **Streets of old city:** Encroachment is causing congestion in the narrow lanes. Property owners have extended their shops by putting up hoardings and hanging products on walk ways, Hawkers occupying footpaths, vehicles and handcarts parking on footpath, and along roadside are reducing road width for vehicular movement and have multiplied the problems of overcrowding.

❖ **Social problems**

Earlier character of dwelling had otlas, overlooking Jharokhas, balconies, large windows facilitating connectivity from one another. The premises which used to act as interactive spaces for communities, otlas





which were used by pedestrians to rest during the day, are vanishing by erecting enclosed boundary wall with gates. Same place, which used to be a common gathering space for children, ladies and gents, today people look for privacy rather than interactive spaces, are much bothered for their own belongings than as a community. The societies that used to have social surveillance now need watchmen and CCTVs installed. Social networking sites have super powered the social gathering and community activities.

Modernity has changed living standards in which the notion of community will have to be redefined. The transition between the building and the city today demands new uses such as individuality, territoriality, security, commerce, parking, etc. New architecture will have to evolve new elements to answer these needs and still retain the sense of the city as a shared community. While individual buildings will undergo changes, as they should, the SPIRIT of CORE CITY should be conserved.

Key features for revival of Inner City and its sustainable development

Having observed a paradigm shift in the pattern of growth, it requires special Development control rules fulfilling the demands of inner city area. First and foremost requirement of FSI and control



over building lines. Land use change must be critically analysed before approval in terms of available services and all the basic infrastructure. Walkability must be promoted to reduce congestion, parking problems and to maintain and retain the public gathering voids within inner city. Restricted Vehicular entry shall be enforced by providing efficient public transport, and intermodal transport network. Conservation of old water bodies-lakes, ponds and interconnected drainage channels will help manage water logging problems and will facilitate hygienic living conditions to one and all. Waste management practices such as recycling reusing shall be encouraged. Community led planning will revive the very own character and let citizens thrive on their roots.

After all it's all about safeguarding our identity in public interest and for future generations to experience the lap of their ancestors.

Importance of Heritage and World Heritage Sites

Niteesha Vyas , B.I.D.III

Heritage:

Heritage is the range of inherited traditions, ethics culture, values, customs, monuments, objects. It is the range of contemporary activities, meanings and behaviors that we draw from inherited system. Heritage includes much more than preserving, excavating, displaying or restoring a collection of old things. Broadly heritage is classified as cultural, natural and mixed in character.

Cultural Heritage:

Cultural heritage is the creative expression of existence of civilization in the past, near past and present. It tells us of the traditions, beliefs and the achievements of a country and its people.



(Cultural Heritage)

Types of Cultural Heritage :

We can distinguish two kinds of cultural heritage:

1.Tangible Heritage:

(i)Movable Heritage: Books, Removable paintings and sculpture and pottery etc.

(ii)Immovable Heritage: Monuments, groups of buildings, gardens, older civilisations/settlements etc.

2. Intangible Heritage:

Local traditions, music, dance, festivals, literature, language, crafts, theatre, religious practices and ceremonies.



(Peoples following their traditions)

Natural Heritage:

Natural Heritage refers to the sum of the elements of biodiversity, including flora and fauna and ecosystem types, together associated with geological structures and formation. Heritage is inherited from past generations maintained in the present and bestowed to future generations. The term natural heritage is derived from the natural inheritance.



(Natural Heritage)

World Heritage Sites:

World Heritage Site is a place that is listed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as being a special cultural or physical significance, (such as building, city, complex, desert, forest, island, lake, monument or mountain).

There are 32 World Heritage Sites in India that are recognized by the UNESCO.

This article describes following two sites out of 32 for their architectural importance and historic presence:

- (1.) Rani Ki Vav, Patan, Gujarat.
- (2.) Chhatrapati Shivaji Terminus, Mumbai, Maharastra.

Rani Ki Vav

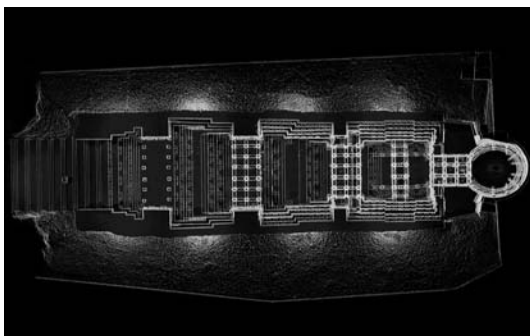


Introduction:

Rani ki Vav is an intricately constructed stepwell situated in the town of patan in gujarat, india. It was added to the list of UNESCO'S World Heritage Sites in 22nd June 2014.

History:

Rani ki Vav or Ran ki Vav (Queens Stepwell) was constructed during the rule of Solanki dynasty. The stepwell was flooded by the nearby Saraswati River and silted. When it was excavated by the



(Plan and Elevation of Rani Ki Vav)

Archeological Survey of India. The carvings were found in pristine condition.

Architecture:

The magnificent east facing step well measures approximately 64m long, 20m wide and 27m deep. A stepped corridor compartment at regular intervals pillar multistory pavillions in a unique feature. It was one of the largest and the most sumptuous structures of its types. It becomes silted up and much of it is not visible now, except for some rows of sculptured panels in the circular part of the well. Amongst the ruins, one pillar stands still, which is an excellent example of the design during that period. A part of the west well is extent from which it appears that the wall was built of bricks and faced with stones.



From this wall, vertical brackets in pair are projected, which supports different galleries of the well shaft. The bracketing is arranged in tiers and is richly carved. The minute and equisite carving of this Vav is one of the finest specimens of its kind. Benifiting its name, the Rani Ki Vav is now considered to be the queen amongst the other step wells of India. There is also a small gate below the last step of the step well, with a 30 kilometre tunnel, currently blocked by stones and mud, which leads to the town of Sidhpur near Patan.

Chhatrapati Shivaji Terminus

Introduction:

Victoria Terminus is a UNESCO World Heritage site and historic railway station in Mumbai, Maharashtra which serves as the headquarters of the central railways. Designed by Fredrick William Stevens which is influenced from Victorian Italianate Gothic Revival architecture and tradition mughal buildings, the station



(Front Facade of chhatrapati shivaji terminus)

was built in 1887 in the Bori Bunder area of Mumbai to commemorate the Golden Jubilee of Queen Victoria. The station name was changed to its present in March 1996 and it is now known as CST (Chhatrapati Shivaji Terminus).

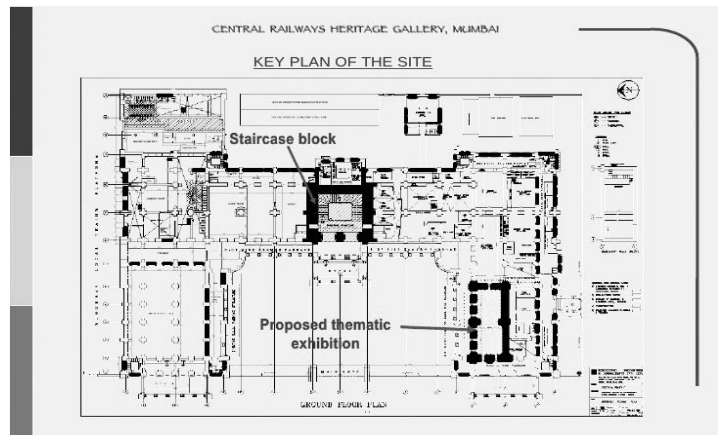
History:

Bori Bunder was one of the areas along the Eastern shore line of Mumbai, India which was used as a storehouse for goods imported and exported from Mumbai, where- Bori means sack and Bunder means port. So Bori Bunder means a place where sacks are stored.

Architecture:

The station building is designed in the High Victorian Gothic style of architecture. The building exhibits a fusion of influences from Victorian Italianate Gothic Revival architecture and traditional Indian architecture. The skyline, turrets, pointed arches and eccentric ground plan are close to traditional Indian palace architecture. Externally, the wood carving, tiles, ornamental iron and brass railings, grills for the ticket offices, the balustrades for the grand staircases and other ornament were the work of students at the Sir Jamstjee Jeejeebhoy School of Art. The station stands as an example of 19th century railway architectural marvels for its advanced structural and technical solutions.

The centrally domed office structure has 330 feet long platform connected to a 1,200 feet long train shed and its outline provides the skeleton plan for building.



(Plan of Chhatrapati Shivaji Terminus)

CST's dome dovetail ribs, built without centering, was considered as a novel achievement of the era. The interior of the building was conceived as a series of large rooms with high ceilings. It is a utilitarian building and had various changes required by the users, not always sympathetic. It has a C-shaped plan which is symmetrical on an east-west axis.

Internally, the ceiling of the booking hall was originally painted blue, gold, and strong red on a ground of rich blue with gold stars. Its walls were lined with glazed tiles made by Maw & Co of Britain. The sculptures outside represent Commerce, Agriculture, Engineering and Science also with a sculpture representing progress on the central dome of the station.

Preserving Heritage Sites

It is disheartening to note that some people are forgetting that they are doing an irreparable damage to valuable archaeological masterpiece by scribbling their initials or messages on natural treasures. The conservation and protection of these monuments cannot be neglected any further. Cultural sites used as tourist attractions could be protected more wisely by creating awareness among people about its Heritage, Social and Cultural importance.

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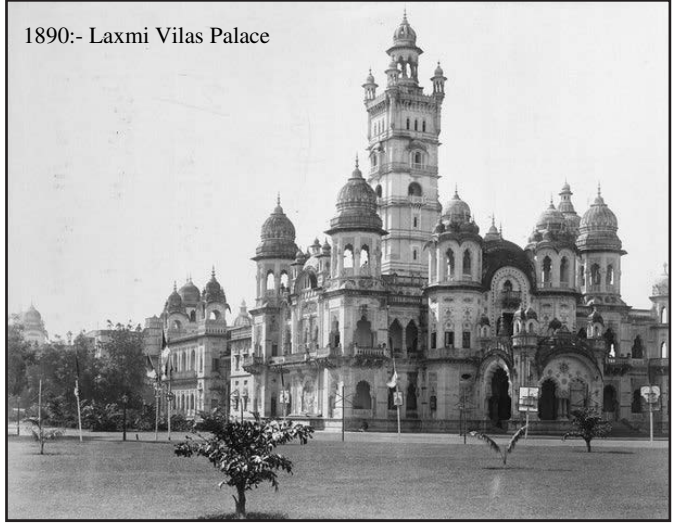
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Baroda at a glance

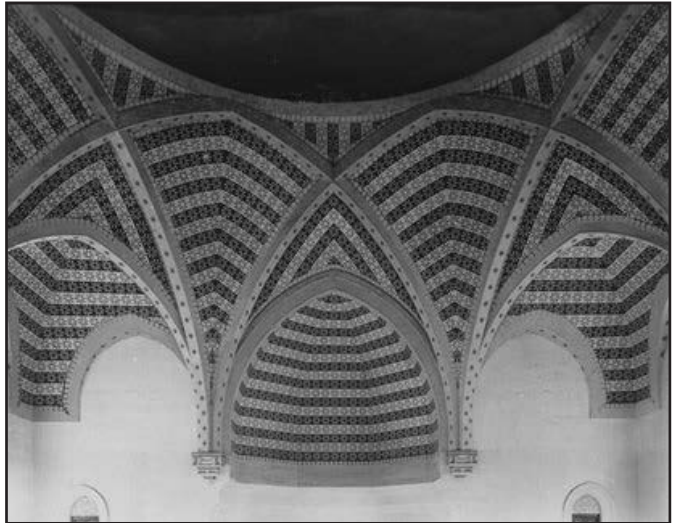
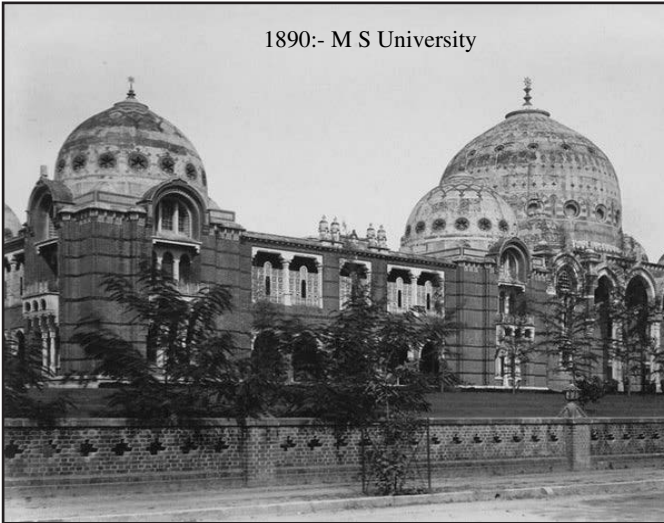
1880:- Nazarbaug Palace



1890:- Laxmi Vilas Palace



1890:- M S University



1890:- Palace Near Mandavi



1890:- Baroda Museum



Bada Imambara: a remarkable and sustainable structure of Lucknow

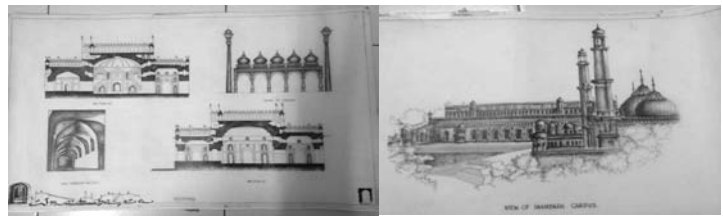
Ar. Ruma Singh
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Introduction: Many independent kingdoms, such as Avadh, were established when the Mughal empire disintegrated. Avadh's capital, Lucknow rose to prominence when Asaf-ud-Daula, the fourth nawab, shifted his court here from Faizabad in 1775. The city was also North India's cultural capital, and its Nawabs, best remembered for their refined and extravagant lifestyles, were patrons of the arts. Under them music and dance flourished, and many buildings were erected.

Lucknow', this name is synonymous with architectural beauties of 'Lakhauri' bricks (small size bricks), the fragrance of 'itra', musical notes, the sound of dancers' trinkets, the sweetness of 'dussheri' mangoes, 'malai' and 'gulab revadis', and of course it's 'Mehman Nawazi'. Known for its refinement in speech, entertainment, dresses and manners, Lucknow is also called the 'City of Adab'. In fact, it is here that one can experience hospitality in the true sense of the term. Various cultural ingredients have contributed to the richness of this unique city. Mention must be made of the Urdu language. Gazals, Shairi, expressive dance forms, colourful festivals, buzzing chowks and various exciting games like Patangbazi, Baterbazi & Kabutarbazi.

Asafi Imambara also known as Bada Imambara is a famous monument of Lucknow that has historical, cultural and heritage importance. It was designed by the Architect Hafiz Kifayat Ullah. Shahjahanabadi, a prominent Architect of that time. Imambara means Shia

Muslims' Shrine. In 17th century, Asaf-ud-Daula, the Nawab of Lucknow built the Bada Imambara. The Imambara Complex also includes the Asafi Mosque, Bhul Bhulaiya - a Labyrinth and Shahi Bavali - the Royal Well with bathrooms, a Stepped well which has running water. As per historical facts, it was built as a part of a relief project for a major famine that took place in the year 1784. It took approximately 6 years (1785-91) to complete the construction. In those days itself, it cost over 10 million Rupees to construct this grand structure.

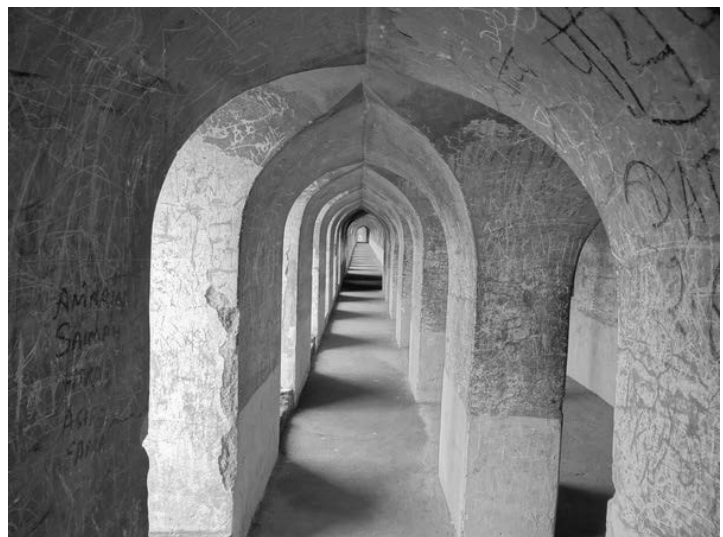


The Bara Imambara has a unique style of construction. Elaborate gates lead to this sprawling, low edifice. In this, no European materials or iron was used for its constructions. The main Imambara which has the tomb of Asaf-Ud-Daula stands elegantly without any support beams. The height of the ceiling of central hall is 15 meters. The amazing hollow walls of the central hall help in keeping it cool during summer and also lighten the load of the structure.

Imambara Complex

Sections of the Bara Imambara Main Hall

The Rumi Darwaza which is situated just outside the main Imambara is of 18 m tall. In that period of time the architect from Delhi won the contract of construction over tough competitive procedure. The architect's tomb



is kept by the side of tomb of Nawab inside main chamber. It is another unique aspect of the building that the sponsor and the architect lie buried beside each other. On the eastern side, there is another amazing structure, called Shahi Bavali. We can go downstairs to see the well with blue water on surface and the bathrooms constructed around the well on ground, first and second floors of the Well.

Bada Imambara is also the venue for annual Mohharum gathering that is staged to commemorate and lament the martyr hood of Imam Hussein, the grandson of Prophet Muhammad.

The architecture of Bada Imambara reflects the era when the ornamented Mughal design was on its pinnacle. In fact, it is the last puritan Indo-Islamic architecture and doesn't incorporate any European elements such as use of iron and spires. The sanctum of Imambara consists of a large vaulted central chamber containing the tomb of Asaf-ud-Daula. The hall that is 170 feet long and 55 feet wide stands 50 feet from the ground. It is interesting to note that it has no beams supporting the ceiling. In fact Bada Imambara is one of the largest arched constructions of its kind in the world.

There are as many as eight surrounding chambers built to different roof heights, permitting the space above these to be reconstructed as a three-dimensional labyrinth with 1000 passages interconnecting with each other through 489 identical doorways. This part of the building, known as is a popular attraction, and often the whole complex may be referred to as the Bhul-Bhulayah. It is possibly the only existing maze in India and came about unintentionally to support the weight of the building, constructed on marshy land.

Some of the doorways open into the balconies of the Central vault, while some open into the windows where from you

can see the main road, and other structures and the rest ways are blocked at present. The structure appears like a maze game involving a number of stairs, tracks, openings which confuse the visitor. Few of the tracks are sealed because of maintenance or other reasons. The maximum stairs have opening to the roof of the structure. If we find our self confused, we may opt for to go on roof and this is the easiest way. This looks like secret code to crack the maze. The roof of Imambara is made up from the rice husk which make this Imambara a unique building. As per legends the secret passages which link the Imambara with other places like Gomti River, Delhi, Faizabad and Allahabad have been closed permanently.

An unknown significant fact: We can listen the sound of a match stick at the other end of the hall. It is really interesting and seems unbelievable. It may be probably due to grooves made on the walls of the Hall. Another most unusual feature is that Imambara provides different moods - either at dusk or dawn.

Imambara with a green building concept:

A cool and healing calmness takes over the mind as one enters the majestic Bada Imambara from the scorching heat outside. Besides making visitors feel good, the Nawabi buildings emphasize on the need of eco-friendly construction, something Lucknow desperately needs now."Each of the Nawabi building suggests that the understanding about eco-friendly architecture among the makers existed much before the term was coined," says PK Singh, an expert at the State Archaeology Department. TOI explores how architect Kifayatullah raised Bada Imambara as a 'green monument' over 200 years ago.

Its vault rests on air: The Bada Imambara is a masterpiece to describe the power of 'ventilation'. "The vault in the central hall rests literally on air, a fact proven by sonography of the walls by experts from the Netherlands. Neither has an iron or steel frame been used nor have pillars been raised for support," says Raushan Taqi, a historian and expert on conservation. "The volume of air in the hall is very high because of cross ventilation which helps hold the vault," he explains, adding that orientation of the building was kept in the direction of the air. "There are air passages which facilitate maintaining the volume of air inside," he adds.

Twin walls to keep it cool: Bada Imambara is one of the few monuments in India where the double wall

system was implemented. "The outer wall of the Imambara goes up like an ordinary wall in our homes. But there's another wall right next to it separated by a slim staircase. This prevented transference of heat to the inner wall. Ventilation along the staircases traps air and facilitates cooling of the inner wall," Taqi says, though he believes that present day architects and builders may not find it commercially viable.

Bio-binding material: The material used to raise the mammoth structure was gathered from nature. Be it the lakhauri brick or the unique masala comprising surkhi, choona, urad daal, sheera (molasses), choone ka pani or farez (a natural fevicol like substance derived from a tree); all ingredients absorb heat, unlike the currently prevalent RCC (reinforcement cement concrete). "RCC is a non-porous substance, which repels heat, thereby adding to the latent heat quotient of the air and contributing to global warming," said Aasheesh Srivastava, a city-based architect. The building standing tall even after 200 years is proof of the material's strength.

Green spaces: The Nawabs gave a lot of importance to open green spaces which absorb atmospheric heat. The Bada Imambara has three gardens to keep it cool. "The general design of any building in those days included green spaces. In fact, the building was constructed in the middle of green spaces," shares Yogesh Praveen, an author.

Lucknow's famous historic site, Bada Imambara, also designated by the ASI as a national monument is an architectural marvel. Domes and arches adorn the place of worship with sprawling greens. Bara Imambara in fact establishes a unique link with Lucknow's past. Best of the structure is excellent architecture that represents Lucknow's culture, art, its ethos and Nawabi way of life which is always peculiar to Avadh (Province).

Bara Imambara in Lucknow is probably the most visited monuments of the city by the tourists coming from all over the world who find it one of the really fascinating buildings of the world. - a building created about 226 years ago to help the needy, the poor during the sad days of famine - and the building that still provides employment to a number of shop owners [selling bone articles, jewellery, nawabi shoes, ornaments, decorative items, chikan clothes, etc.], to the well behaved Guides-equipped with Lucknow's etiquette and manners, the helpful staff. The Asifi Imambara is not only a great monument of Lucknow but also a message of humanity, kindness and love.

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Heritage: A Gift from our Ancestors

Phorum R. Patel, B.Arch.IV

Heritage means what we inherit from our ancestors and from our past. We all know India is very rich and vast in history and have many different styles of Architecture like: Indo-Islamic, Indian Vernacular, Rock-Cut, Dravidian, Mughal, Jain, Buddhist, Cave, and Temple Architecture etc. This article acknowledges about Dravidian Architecture with examples.

Dravidian architecture emerged in southern side of India. It primarily consists of temples with pyramid shaped towers constructed of sandstone, soapstone or granite. It consisted of various kingdoms and empires such as Cholas, the Chera, Samgam, the Kakatiyas, the Pandyas, the Pallavas, the Gangas, the Rashtrakutas, the Chalukyas, the Hoysalas, and Vijayanagara Empire.

The composition and structure in Dravidian Architecture:

Chola style temples consists invariably of three following parts, arranged in different manners, but differing in themselves only according to the age in which they were executed;

- Porches or Mantapas, which always cover and precede the door leading to the cell.
- Gate-Pyramids, Gopuras, which are the principal features in the quadrangular enclosures that surround the more notable temples, Gopuras are very common in Dravidian temples.
- Pillared halls (Chaultris or Chawadis) are used for many purposes and are the invariable accompaniments of these temples.

Besides these, usually a South Indian temple has a tank called the Kalyani or Pushkarni - to be used for sacred purposes or for convenience of the priest

- Dwellings for all the grades of priesthood are attached to it, and other buildings for state or convenience. One of the examples of Dravidian Architecture influenced by Sangam period is 'Madurai Meenakshi Amman Temple'.

Meenakshi Amman Temple:



Historical Hindu temple located on southern bank of Vaigai River in the temple city of Madurai, Tamil Nadu, India. It is dedicated to Parvati, known as Meenakshi, and her consort, Shiva, here named Sundareswarar. The temple forms the heart and lifeline of the 2,500-year-old city of Madurai. It houses

14 Gopurams (gateway towers), ranging from 45–50m in height. Tallest is the southern tower, 51.9 meters (170 Ft.) high, and two golden sculptured Vimanas, the shrines over the Garbhagrihas (sanctums) of the main deities.

The Meenakshi temple is believed to have been founded by Indra (king of Deva celestial deities). While he was on a pilgrimage to atone for his misdeeds. He felt his burden lifting as he neared the Swayambulingam (self-formed lingam, a representation of Shiva used for worship in temples) of Madurai. He described this miracle to the lingam and constructed the temple to enshrine it. Indra worshipped Shiva, who caused golden lotuses to appear in the nearby pool. Tamil literature speaks of the temple over the last two millennia. Thirugnanasambandar, the famous Hindu Saint of Saiya Philosophy, mentioned this temple as early as the 7th century, and described the deity as Aalavai Iraivan. The temple is believed to have been sacked by the infamous Muslim invader Malik Kafur in 1310 and all the ancient elements were destroyed. The initiative to rebuild the structure was taken by first Nayak king of Madurai, Viswanatha Nayak (1559–1600) under the supervision of Ariyanatha Mudaliar, the prime minister of the Nayak Dynasty and the founder of the Poligar System. The original design by Vishwanatha Nayak in 1560 was substantially expanded to the current structure during the reign of Thirumalai Nayak (1623–55). He took considerable interest in erecting many complexes inside the temple. His major contributions are The Vasantha Mandapam for celebrating Vasanthorsavam (spring festival) and Kilikoondu Mandapam (corridor of parrots). The corridors of the temple tank and Meenatchi

Nayakar Mandapam were built by Rani Mangammal.

Rous Peter (1786–1828), the Collector of Madurai in 1812, was nicknamed 'Peter Pandian' as he respected and treated people of all faiths equally. He donated a set of golden stirrups studded with diamonds and red stones to the temple. Goddess Meenatchi is believed to have saved Rous Peter from a fatal incident. He also wished that after his death, his body be buried in a position that would enable his eyes to face the temple.

During the period of early Pandian kings, the king taxed the people for constructing this temple. People paid taxes and donations in the form of gold and silver. But the king wanted contribution as low as a bag of rice which would help in feeding the masons who constructed the temple. So the kings collected one handful of rice daily from every house. This would make few bags of rice in the month end. Thus people from all sectors of life contributed in building the temple. Thus, every family has an emotional attachment towards the temple.



Architecture of Meenakshi Amman Temple:

The temple is the geographic and ritual center of the ancient city of Madurai and one of the largest temple complexes in Tamil Nadu. The temple complex is divided into a number of concentric quadrangular enclosures contained by high masonry walls. It is one of the few temples in Tamil Nadu to have four entrances facing four directions. Vishwantha Nayaka allegedly redesigned the city of Madurai in accordance with the principles laid down by Shilpa Shastras (Sanskrit: *śilpa*

śāstra, also Anglicized as *silpa sastra* meaning rules of architecture) relevant to urban planning. The city was laid out in the shape of square with a series of concentric streets culminating from the temple. These squares continue to retain their traditional names, Aadi, Chittirai, Avani-moola and Masi streets, corresponding to Tamil month names. Ancient Tamil classics mention that the temple was the center of the city and the streets happened to be radiating out like lotus and its petals. The temple prakarams-parikramas (outer precincts of a temple) and streets accommodate an elaborate festival calendar in which dramatic processions circumambulate the shrines at varying distances from the center. The vehicles used in processions are progressively more massive the further they travel from the center. The complex is in around 45 acres (180,000 m²)

Gopurams:

The temple is surrounded by gopurams (gateway tower). There are 14 gopurams and the tallest of which is, the famous southern tower, rises to over 170 Ft. (52 m) and was built in 1559. The oldest gopuram is the eastern one; built by Maravarman Sundara Pandyan during 1216-1238-each gopuram is a multi-storied structure, covered with thousands of stone figures of animals, gods and demons painted in bright hues. The outer gopuram presents steeply pyramidal tower encrusted with plaster figures, while the inner gopuram serves as the entrance to the inner enclosure of Sundareswarar shrine.

Shrines:

The central shrine of Meenakshi Amman temple and her consort Sundareswarar are surrounded by three enclosures and each of these are protected by four minor towers at the four points of the compass, the outer tower growing larger and reaching higher to the corresponding inner one. The Meenakshi shrine has the emerald-hued black stone image of Meenakshi. The Sundareswarar shrine lies at the center of the complex, suggesting that the ritual dominance of the goddess developed later. Both the Meenakshi and Sundareswarar shrines have gold plated Vimanam (tower over sanctum). The golden top can be seen from a great distance in the west through the apertures of two successive towers. The area covered by the shrine of Sundareswarar is exactly one fourth of the area of the temple and that of Meenakshi is one fourth that of Sundareswarar.

The tall sculpture of Ganesh carved of single stone located outside the Sundareswarar shrine in the path from Meenashi shrine is called the Mukuruny

Vinayakar. A large measure of rice measuring 3 kurini (a measure) is shaped into a big ball of sacrifice and hence the Ganesh is called Mukkurni Vinayagar (three kurinis). This deity is believed to be found during a 17th-century excavation process to dig the Mariamman temple tank.

Temple Tank and surrounding portico:

The sacred temple tank Porthamarai Kulam («Pond with the golden lotus»), is 165 Ft. (50 m) by 120 Ft. (37 m) in size. In the Tamil legends, the lake is supposed to judge the worth of a new piece of literature. Authors place their works here and the poorly written works are supposed to sink and the scholastic ones are supposed to float, Tirukkural by Tiruvalluvar was one such work.

Only a fraction of 17th and 18th century paintings of Nayak period survives and one such portion is found in the small portico on the western side of the tank. It depicts the marriage of Sundareswarar and Meenakshi attended by Vijayaranga Chokkanatha and Rani Mangammal. The painting is executed on a vivid red background, with delicate black line work and large areas of white, green and ochre. The celestial couple is seated inside an architectural frame with a flowering tree in the background.

Halls:

The corridor surrounding the sanctum the Meenakshi is called kilikoondu Mandapam («bird cage corridor»). The space was once used to keep green parrots that were trained to utter the name of Meenakshi. There are two large cages full of squawking green parrots. The Kambatadi Mandapam («Hall of temple tree») with its seated Nandi (sacred bull) has various manifestations of Shiva carved and also contains the famous «Marriage of Meenakshi» sculpture. Sculptures of Shiva and Kali trying to



out-dance one another are pelted with balls of ghee by devotees. A golden flagstaff with 32 sections symbolizes the human backbone and is surrounded by various gods, including Durga and Siddar.

The Puthu Mandapam («new hall») constructed by Tirumala Nayak contains large number of sculptures. It is situated opposite to the east gopuram.

The Ashta Shakthi Mandapam («Hall of eight goddesses») is the first hall in the entrance of Meenakshi shrine tower near to East Tower. Ashta indicates eight and Shakthi refers to goddess - the hall has statues of eight goddesses. The gopurams (towers) can be viewed from this hall. The passage was named for eight forms of goddess Shakti carved on its pillars. Other sculptures and paintings depict the Tiruvilayadal (holy games of Shiva). The sculptures of heroes of Mahabharata, the Pancha pandavas can be seen in the Pancha Pandava Mandapam (Hall of Pandavas).

The Viravasantharaya Mandapam is a large hall with huge corridors. To the south of this hall is the kalyana mandapa, to the south of the pillared hall, is where the marriage of Shiva and Parvati is celebrated every year during the Chithirai Festival in mid-April. The golden images of Meenakshi and Sundareswarar are carried into the 16th century oonjal mandapam (swing corridor) and placed on the swing every Friday at 5:30 p.m. The shrine has a 3-storied gopuram guarded by two stern dwarapalakas (guardians) and supported by golden, rectangular columns that bear lotus markings. Along the perimeter of the chamber, granite panels of the divine couple are present. The hall is situated in the western bank of the temple tank.

The Mudali Pillai Mandapam or Iruttu Mandapam (Dark hall) is a wide and long hall built by Muthu Pillai during

1613. On the pillars of the halls, there are fine sculptures depicting the story of Shiva taking the form of Bikshadanar to teach the sages a lesson.

The Mangayarkarasi mandapa is a newly built hall situated opposite to the marriage halls and bears the name of sanity queen, Mangayarkarasi who contributed to Saivism and Tamil language. To the south of Mangayarkarasi mandapam lies the Servaikarar Mandapam, a hall built by Marudu brothers in 1795. The Nagara mandapam (Hall of beating drums) lays opposite to Sundareswarar shrine was built by Achaya Rayar, the minister of Rani Mangammal in 1635. The Kolu Mandapam is a hall for displaying dolls during the Navratri festival celebrated during September–October. This hall is situated in the second corridor of the Meenakshi shrine at the western side.

Hall of Thousand Pillars:

The Meenakshi Nayakkar Mandapam («Hall of 1000 pillars») has two rows of pillars carved with images of yali (mythological beast with body of lion and head of an elephant), commonly used as the symbol of Nayak power. It is situated to the north of Sundareswarar flag staff hall. The Thousand Pillar Hall contains 985 (instead of 1000) carved pillars. The hall was built by Ariyanatha Mudaliar in 1569 and blends engineering skill and artistic vision. Ariyanatha Mudaliar was prime minister and general of Viswanatha Nayak, the first Nayaka of Madurai (1559–1600). He was also the founder of Poligar System, the quasi-feudal organization of the country dividing it into multiple palayams or small provinces in which each palayam was ruled by a palayakkarar or a petty chief. At the entrance of the hall is the statue of Ariyanatha Mudaliar seated on a horse-back, flanking one side of the entrance to the temple. The statue is periodically garlanded by worshippers. Each pillar in the hall is a carved monument of the Dravidian sculpture. The more prominent

among the carved figures are those of Rati (wife of Kama) Karthikeya, Ganesha, and Shiva as a wandering mendicant and endless number of yalis (mythical figures of lions). There is a Temple Art Museum in the hall where icons, photographs, drawings, and other exhibits of the 1200 years old history of the temple are displayed. Just outside this hall, towards the west, are the Musical Pillars. Each pillar, when struck, produces a different musical note.

Significance of the temple:

A distinct feature of Meenakshi in terms of iconography is the presence of parrot in her right hand. The parrot is generally associated with the Vaishnava azhwar saint Andal. “Pancha Sabhai” refers to the five royal courts of Nataraja (dancing form of Shiva) where he performed cosmic dance. The Tamil word velli means silver and ambalam means stage or altar. This massive Nataraja sculpture is enclosed in a huge silver altar and hence called “Velli Ambalam” (silver abode). This is a special figure of Nataraja which usually differs from Chola bronzes; in the Chola images, Nataraja is shown dancing with his left leg raised but this sculpture has the right leg raised. According to the Tiruvilayaadal Puranam (Shiva’s sacred games) this is on the request of Rajasekara Pandya, who was a sincere devotee of Shiva. He requested the deity to change his position, as he felt that keeping the same foot raised would put enormous strain and got a graceful acquiescence from the divine master.

Creating Awareness for Heritage Conservation: A Case of Mysore City

Ar. Seemantini Soraganvi
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1.0 Introduction:

Heritage awareness is a crucial part of any heritage conservation and management. The creation of awareness is time-consuming and it requires commitment and local support. It is often the most recognizable component of a heritage management. One of the most effective ways to build and maintain respect for community's heritage is through a selection of activities that raise public awareness and increase appreciation. The success of heritage conservation initiatives depends on the understanding and participation of the local community. Heritage awareness is an important component of conservation. One of the basic causes for damage of heritage is due to lack of awareness to the public at large and non involvement of people in the process of conservation as well. The Constitution of India prescribed under the fundamental duties that the protection of heritage is one of the important duties of each and every Citizen of India, but the efforts made by the local authorities and agencies are not significant. The society's responsibility is to conserve the heritage that was created in the past. The local people need to take part in the process of conservation. Therefore, it is high time that greater emphasis to be laid down for creating awareness to the public including people at large.

The City of Mysore is one of the prominent historical, cultural and heritage cities in India. The city has been identified

as a heritage city for conservation by the State and Central Governments. The awareness programmes have also been launched under Jawarharlal Nehru National Urban Renewal Mission by City Corporation in collaboration with Heritage Commissioner's office. This Article focuses on the efforts made by various agencies for creating awareness for heritage conservation and proposes policy measures for creating effective heritage awareness in the city of Mysore.

2. Heritage Awareness :

The Department of Archeology, Museums and Heritage, Heritage Commissioners office, Mysore City Corporation and Tourism Department have taken a leading role for creating awareness on heritage by involving stakeholders of Mysore. The Mysore Heritage Area Experts Committee for preservation and protection of heritage areas has listed 201 heritage buildings. Heritage commissioner's office has given guidelines and suggestions to keep the vicinity of heritage buildings clean and tidy and it has fixed "signage boards" with brief description (Shilaphalaka) which are placed near the heritage buildings. The workshops, seminars, photo exhibitions of heritage buildings/structures and visit to heritage areas are being conducted for tourists, officials, publics, and school and college students. A small booklet on heritage of Mysore was published. Awareness programmes for tour guides and training programme on conservation and maintenance of heritage buildings for various government department officials were also organized by heritage commissioner's office. For creating awareness among school and college students, heritage clubs were started in the year 2007. Photo exhibition on monuments and buildings were organized

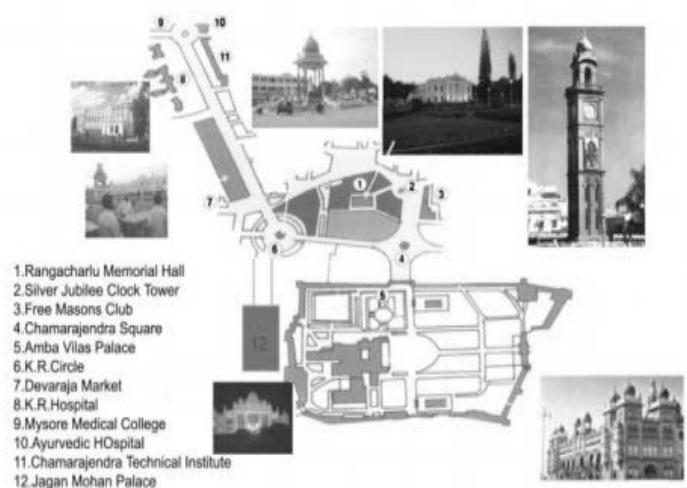


Fig 1: Route Map of Heritage Walk

in the premises of Exhibition Authority during Dasara celebrations. Besides, dance, dramas, cultural activities, essay writing, debate, painting/sketches and Janapada programmes were also conducted. Heritage walk is being introduced to create awareness among the public throughout the year. The public, tourists, different departmental official, schools and college students, NGOs, hospitality people, travel agencies and other concerned peoples were involved extensively. The other details of heritage structures along the path are printed and are given to all participants to create better awareness and knowledge on built heritage of the city. T-shirts, caps, embossed with landmark buildings are also given to participants. The heritage walk (see fig.1) has been designed as people initiative, where they shall be equally involved in making the project a success. Many voluntary agencies namely Dr. Reddy Foundation and „Royal Heritage Walk have been conducting activities related to heritage walk in the city. Many foreign tourists have participated in the heritage walk. Post graduate students of arts, history and tourism departments students of the University of Mysore and private colleges are also participating in the heritage walk and they are working towards creating awareness on heritage assets.

2.1 Initiatives of Heritage Walk by IHCN:

The Indian Heritage Cities Network Foundation (IHCN) has established its centre at Mysore in May 2011 for boosting the heritage conservation activities in the city. It has organized four-day third biennial conference in Mysore during May 2011 and the conference was funded by UNESCO, New Delhi, in collaboration with the Government of Karnataka, Karnataka Urban Infrastructure Development Finance Corporation and Mysore City Corporation. The conference



Fig 2: Heritage Walk at different places

deliberated on various aspects of heritage cities and its conservation. “Heritage Walk” to historic core areas was organized to the conference delegates.

The awareness programmes are being conducted by the city authorities by involving public and stakeholders, which has achieved a reasonable success in Mysore city. Still a large mass of people and owners of the heritage buildings and authorities have to realize holistically the need and importance of safeguarding this valuable rich heritage of Mysore. In spite of these little efforts, many valuable heritage buildings are demolished; building elements disfigured; encroachments and incompatible developments have come around the heritage buildings; structural problems continued and heritage buildings are not maintained in the heritage area of Mysore. The awareness programmes are required to be conducted more regularly and consistently involving all sections of the society, especially owners of the heritage buildings, officials of the development authority and people living in and around the heritage areas/buildings. Already identified heritage walk path is limited to certain streets and the extension of path to other important heritage buildings namely Jagan Mohan Palace in the vicinity of heritage core to be explored. The heritage path proposed by the heritage commissioner’s office is lacking with public amenities, street furniture, tourist information route map, professionally trained subject guide and few heritage buildings are in bad condition and facing structural problems.

3.0 Issues and Options

- Heritage path proposed by heritage commissioner’s office is lacking with basic amenities, street furniture, separate heritage-track and information maps.
- Present heritage walk includes only buildings

surrounding the palace, even though large number of architecturally important buildings concentrated in other part of the city.

- Heritage buildings are in bad condition and few are in dilapidated condition requires urgent conservation, preservation and adoptive re-use measures.
- Lack of awareness to both officials and owners of the private buildings leads to demolition and built transformations.
- Commercial activities in the core area attract large volume of traffic and informal sector people.
- Private owners of the heritage buildings lack conservation knowledge due to this many buildings are demolished or altered without showing concern to the existing architecture.

The main objectives need to create awareness are to;

- Encourage and promote awareness on traditional built forms of the city.
- Create better awareness regarding heritage resources.
- Co-ordinate efforts of different disciplines, stakeholders and authorities.
- Mobilize finance and resources for restoration and support participatory action programmes.
- All the listed heritage buildings are to be placed with special plaque (Shilapalaka) at the entrances to enhance the identity and inculcate a sense of pride and belonging among the neighbourhoods.
 - Create awareness among the general public towards the importance of safeguarding heritage assets.
 - Heritage walk needs to be promoted more intensively by involving professionals, institutions,

associations, volunteers, tourists, agencies, community organizations, NGOs and all stakeholders.

- The dilapidated heritage buildings to be given wide publicity for undertaking conservation and restoration measures by the owners of the property.
- Public private partnership initiatives to be encouraged on similar lines of Infosys Foundation, which has extended financial support for conservation and restoration of Jayalaxmi Vilas Mansion and other heritage buildings of the University of Mysore. Similar initiatives from private and other stakeholders are to be promoted and encouraged for conservation and restoration of dilapidated or damaged heritage buildings in the city.
- Best way to maintain the building is to put them for some use. The damaged or ruined heritage buildings to be restored to original character and put them under adaptive re-use and compatible uses like, tourist oriented activities, museums, tourist information centers, tourist hotel, arts and craft centre, etc.
- Adaptive reuse of building to be encouraged in consultation with management or owners of building as done in the case of Lalitha Mahal Palace and Jayalaxmi Mansion

4. Stakeholders Participation

The following agencies have involved in creating heritage awareness in the city and are (a) INTACH (b) MHATF (c) Voluntary Organizations (d) ADB and (e) JNNURM. Besides the agencies that were participated in awareness are listed below:

- **Government Authorities:** Department of Archeology, Museums and Heritage, Mysore City Corporation and Mysore Urban Development Authority.
- **Public Authorities:** Tourism department, Lake development authority, Horticulture department, Public works department, Electricity department, University of Mysore, Hospitals, KUIDFC, Police and Law-Order Department, Information and Broadcasting Department and Other public Offices
- **Private Agencies:** Hotels, Travel agencies,

Private Property Owners.

- **Tourists:** Domestic, National, and International
- **Institutions:** Education department, Schools and colleges, CAVA: Traditional Arts and crafts, paintings, Arts and cultural department. (Rangayana, folklore, Sanskrit, etc.), Department of Kannada and Culture, Folklore and Museums, Yoga Music and dance.(Private)
- **NGOs:** INTACH, IHCN, UNESCO, Heritage clubs, Voluntary organizations,
- **Service Providers:** Hotels, Travel Agencies, Tonga's and Tourists Guides

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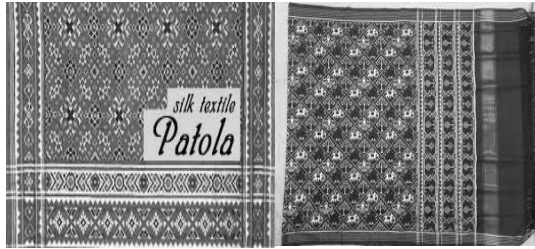
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Patola of Patan

Shailly Sheth, B.ID.IV



India is well known for its tradition, culture and art work. One of the best, well known art works is patolas of Patan. Gujarat Heritage Patola silk from Patan is renowned across the nation and is one of the biggest. Patola is an exquisite and wonderfully intricate silk textile of India. Patola of Patan (Gujarat) is unique in its geometric floral and figurative patterns executed with precision of design planning and meticulously accurate weaving alignment which result in precise outline of the patterns. It is believed to have originated in the 7th century AD.

Patola silk textile are produced by resist dyeing of warp and weft thread before weaving, a complex process is followed known as double ikat which is also practiced in some other parts of India and abroad. This requires immense visualization and coordination skills. It is a marvel of weaving and precision, with its many colored warp and weft matching perfectly at their designated places to create intricate motifs. Patan is situated 130 km from Ahmadabad on the banks of Saraswati. It was the capital of Gujarat from 764AD to 1411AD. Patan became the centre of Patola weaving during the rule of king Kumara.

Patola has had a deep imprint on the culture and identity of Patan. The designs of Patola are seen in the carved stone panels of the 11th century Rani-ki-aav in Patan. Patolas have traditionally



been considered auspicious among certain Gujarati communities. Historically, Patola was a prestigious item of Indian export to Indonesia and Malaysia around the 13th century where Indian, Portuguese, Dutch presented them to aristocracy to gain exclusive trade rights. Patola was used as symbol of power and authority, and even attributed protective, curative and magical powers.

Patola still holds its legacy among Gujarati community and is valuable to those who are fond of Indian art craft and culture. The ethnicity is living with pride and making India stand on its footprints of Handcraft.

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Book: Indian ikkta

The Land of Diversities – India

Krishna Patel B.ID. IV

“India is the cradle of the human race, the birthplace of human speech, the mother of history, the grandmother of legend, & the great grandmother of tradition. Our most valuable & most constructive materials in the history of man are treasured up in India only...”

- Mark Twain

What is heritage?

According to the actual definition, heritage is inheritance from our ancestors, but heritage is also about 3 major aspects i.e. the lifestyle, traditions and their culture. Culture includes their clothing style, food, beliefs, language, religion and rituals. It is the way of life for an entire society.

India is a vast country, with beautiful ancient heritage and monuments. The country has many archeological buildings which are unique in its own way. India has been ruled by many kingdoms, it is a country with many different styled historic buildings. It is the only country with the highest amount of cultural influence. Indian traditions are its heritage and it has an extraordinary variety of colors, forms and history. Heritage is very important to our country. The religious lifestyle is always an inspiration for other countries. India is a land where many different religions and practices live together with unity, side by side. . Come to India-the only country in the world where you shall find a Hindu temple, a church and a mosque adjoining each other and followers of any of them visiting each. India has always been open to visitors. There has been an old famous saying in India: “Atithi Devo Bhava” which literally translates to say that guest is god. This has been practiced since ages and that’s why the foreigners are always inspired to visit the country. The land which was called the ‘golden bird’, so prosperous, what has happened

to that? It wasn’t called the ‘golden bird’ only because of its wealth, it was because of its rich tradition’s which have been followed from years. Our ancestors have given us a beautiful past, which we just need to take care of. We can’t even do that? We are ourselves losing our heritage; we are forgetting our inner beauty and inheriting things from the western world. Our traditions are sometimes scientific which will benefit us. There are so many inventions made by our ancestors for the man kind. Why can’t we use it instead of other people doing that?

To save our motherland we need to preserve our heritage. Heritage is a gift from our ancestors. If we destroy it, how will our next generation know, what our lifestyle and traditions were?

While being influenced by the new technologies & greed to earn money, we are destroying our historical monuments, which were built with a variety of craftsmanship and different materials. People destroy and demolish all the old building in the cities, trying to build new buildings, apartment’s etc. But by this we aren’t contributing anything to the country; instead we are abusing the old cities, the old buildings and our old traditions. We should try and conserve it. Trying to revitalize it won’t take up a lot of energy, but it will contribute to the country. People outside the country, the foreigners, know the inner beauty and the importance of the monument, so they try and preserve it. Why can’t we the citizens of this country do that?

We need to improve ourselves first, valuing is the only solution, lets not abuse any of our heritage buildings, preserve them and transfer them to the next generation.

Although nowadays there are many people who are realizing the importance of our heritage, they are trying to preserve it and reusing it. There are organizations like UNESCO and INTACH which promote the conservational practices. There are some student bodies which are involved with this kind of activities and try and create awareness between the youth to conserve the heritage. The students are should even try to create awareness amongst the local masses by providing them with attractive posters and pamphlets which raise a common issue, the need to conserve our heritage. Being the youth of this generation lets join hand together and save our gift from our ancestors. Let us even educate other people for doing the same.

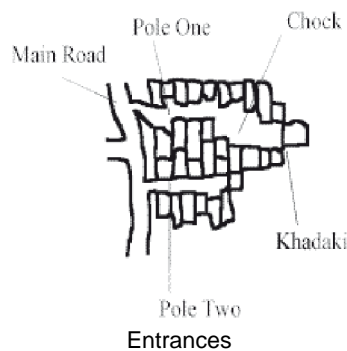
Heritage of Ahmedabad City: Pol

Shailee Bhatt (3rd Year) Architecture



Ahmedabad is very Old City with many different stories and people on the bank of Sabarmati River. The life style of Ahmedabad people is different than the other city of Gujarat. Today Ahmedabad is three times bigger than it was before. And this progress took place in last 50 years. But the people who live in Old City still lives in old houses. More than three generations are now living in the same house. The Old City is in east part of the river. And the new city is in west. The old city is known as POL.

Pols were originally made for protection measure when communal riots necessitated greater security probably dating from 1738 during Mughal-Maratha rule (1738-1753) in Ahmedabad. More than 150 pols are still the heritage of city. There are nearly 306 structures designed as pols in Ahmedabad's Walled City, most of which are named after the person who was either responsible for their existence or was its first inhabitant. The other set of names that these pols got are based on occupation or caste of people residing in them, while other refer to the village name from where people came. Pols are almost entirely inhabited by Hindus, in some cases by a settlement of families belonging to one caste, and in others



Chabwara

by families of several of the higher castes, Brahmins, Vantias, Suthars, and Kanbis.

Some of great Festival that can be enjoyed in Pol is Kite Flying Festival of Ahmedabad, on 14th January every year.

The word Pol is derived from the Sanskrit word pratoli meaning entrance to an enclosed area. India is a housing cluster which comprises many families of a particular group, linked by caste, profession, or religion. Pols are typical of urban centers in Gujarat especially of Old Ahmedabad. 'Pol' conjures up an image of an old world charm and a series of innovation in sustainable architecture dovetailed into the built form. 'Pol' architecture is an interesting evolution in urban living space. The earliest 'Pol' to be incorporated was aptly christened 'Mahurat Pol' and was built adjacent to Manek Chowk.



Balconies

A typical pol would have only one or two entrances and also some secret entrances known only to people residing in a pol. Some pols contain old beautiful houses with internal courts having intricate wooden carved facades with columns and fresco work

done around court walls or ceilings. In fact, the old city had a concealed drainage system which in parts is still in use. Key points had wrought iron poles serving as escapes as vents for the sub-terranean tunnels. Each pole was crowned with a directional arrow indicating a neither bifurcation of the tunnels, this forming a dotted map of the entire system.

The upper floors of the 'Havelis' had overhanging balconies and windows, casting a complete shadow



on the streets below, maintaining a cool atmosphere for comfortable locomotion through the hot days. Each 'haveli' was built on a 'tanka' or water reservoir. Rainwater harvested from the multi-leveled, jagged sawed rooftops, brought down in a series of copper pipes, filtered through a layer of charcoal, lime and pebbles found its way to the storage tank.

Each pol was protected by a gateway closed at night as a safeguard against thieves. Inside is one main

street, with crooked lanes branching on either side. Most vary in size from five or ten to fifty or sixty houses. One of them, the Mandvi pol in the Jamalpur area of Ahmedabad, is much larger than the rest and includes several smaller pols, with an area of about fifty acres and a population of thousands.

As a part of the society, we must try to keep maintaining the heritage sites for our future generations to know the values of the vast treasure of heritage – which is almost going to be abandoned. It is very disappointing to know that some people scribble names and marks on the walls also by splitting on it.

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Incredible beauty of Art and Architecture, Ranakpur

Namrata Shah, Interior designer



The Chaturmukha Jain Temple of Ranakpur, In the heart of the remote and enchanting valley of the Aravallis, skirting the rivulet Maghai and enveloped in the solitude of the surrounding forest, stands in solemn grandeur, The Chaturmukha Jain Temple of Rishabhadeva. Placed on a lofty plinth, the three-storeyed marble edifice, to which the genius of the artist has imparted exquisite artistic grace, and which his deep devotion has endowed with serene spiritual dignity is verily, a poem in stone. Majestic yet in complete harmony with Mother Nature, in whose beautiful lap it rests, this magnificent monument of devotional architecture seems bathed in celestial bliss.

The Ranakpur Jain Temple is an exquisite work of art and architecture. There are a number of beautiful and delicately carved sculptures in this shrine which defy comparison. The temple is an eloquent testimony to India's cultural heritage, her unique architecture and the vision and acumen of her past master artists. This temple is the realization of the vision and endeavors of four great and devout seekers-they were Acharya Somasundatsuri, Dharanashah the Minister to Kumbha Rana, Rana Kumbha himself, and above all Depa or Depaa, the architect who made the realization of

the dream possible. This temple is wholly constructed in light colored marble and comprises a basement covering an area of 48000 sq ft.

One blessed moment Dharanashah felt the spontaneous urge to build a temple of Lord Rishabhadeva, which he resolved, should be without parallel in beauty. A legend tells us that one night in his dream Dharanashah had a vision of Nalinigulma Viman which is considered to be the most beautiful among the celestial planes. Dharanashah decided that the temple should resemble this heavenly Viman.

He invited many renowned artists and sculptors they submitted their plans and designs, but none could even remotely capture the Minister's dream image. Last an easy-going sculptor named Depak from Mundara presented a plan, which simply thrilled the heart of Dharanashah. He was profoundly impressed. Depak was a carefree type of an artist and would prefer poverty to servility. He set very high value on his art. He was deeply touched by the transparent personality and devoutness of Dharanashah. He promised to create a temple which would give concrete shape to the Minister's dream. And thus, a rare confluence of art and devotion was affected by the two visionaries. Dharanashah approached Rana Kumbha with a request to give some land for the construction of the temple.

The king not only gave the land but advised Dharanashah to build a township also near the site. The site of the old village Madgi in the valley of Mount Madri was selected for the purpose. The construction of the temple and the township began simultaneously. The town was named Rampur after the name of King Kumbha Rana. Ranpur is popularly known as Ranakpur.

The temple has four artistic entrances, seventy six smaller domed shrines, four Rangamandapas (assembly halls), four Mahadhar Prasads (Principal Shrines) situated in the four directions, a number of big and small Devakuikas (subsidiary Shrines)-in all 84 in number stand embellishing the temple.

The domes and ceiling of this temple are replete with innumerable carvings depicting famous incidents from the past. The artists have given them life and movement with the magic touch of their chisels. While trying to comprehend their mute language, the beholder becomes oblivious of time and space, marveling at the workmanship.

The most outstanding feature of this temple is its infinite number of pillars. This temple can be called a treasure house of pillars or a city of pillars. In whichever direction one might turn one's eyes meet pillars and pillars big, small, broad, narrow, ornate or plain. But the ingenious designer has arranged them in such a manner that none of them obstructs the view of the pilgrim wishing to have a Darshana' (glimpse) of God. From any corner of the temple one can easily view the Lord's image. These innumerable pillars have given rise to the popular belief that there are about 1444 pillars in the temple.

The concord achieved between the bounteous generosity of Nature and



man's creative expression of gratitude, stands uniquely symbolized in this Divine Creation. To behold this holy shrine in its spectacularly sublime settings to experience instant uplifting of the soul.

Art and Architecture-The Pink Mosque

Krupal Rajgor, B.ID. IV



There are numerous mosques all around the world. Each has a design of its own. However, in order to be distinctive from other mosques, a mosque needs to be unique and possess outstanding features. One such mosque is The Nasir al-Mulk Mosque in Shiraz, Iran. It is an example of Islamic architecture. It is a conventional mosque, but inside there is something interesting. It is located in the district of Gowad-e-Arabān, near ShāhČerāq Mosque.

The mosque is called by many different names. Mostly known as the “Pink Mosque”, it is also called the “Mosque of colours”, the “Rainbow Mosque” or the “Kaleidoscope Mosque”.

Built by the order from one of the lords of the Qajar Dynasty, Mirza Hasan ‘Ali Nasir al-Mulk, it took 12 years to complete in 1888. This is a space where light and worship interwine. The mosque comes to life with the sunrise and colours dance throughout the day like whirling dervishes. It reflects on the ground, walls, the arches and the towering spires. It even reflects on the visitors as if a colorful ball is hit by the first sun ray and explodes to thousands of butterflies all around.

Its interior reveals a magnificent masterpiece of design with stunning colours. The designers Muhammad Hasan-e-Memar and Muhammad Reza Kashi Paz-e-Shirazi used extensively stained glass on the façade and other traditional elements such as panjkāseh-i (five concaves), which create a breath taking effect of the interior like standing in a kaleidoscope.

Once the sunlight hits the stained glass, the entire building is flooded by a vibrant rainbow of colours. In popular culture, the mosque is also called Pink Mosque, because its tiles are beautifully decorated with a pre-eminently pinkish rose colour.

Extractive Ceiling pattern of Mosque with ceramic tile pattern. Speaking of this heritage, it has roots in Islamic art, architecture, tile making, geometry, patterns and other arts that flourished in the Golden Age of Islam. In this time period they have mastered colours on ceramics, tiles, glasses, and through these elements especially on and in mosques. In Islamic architecture they mostly use geometrical patterns. This mosque is the best example of it.

This all patterns used in walls and door of this mosque, doors and windows use these patterns with painted stained glasses. In the ceiling they use this type of patterns with ceramic tiles. So, in this mosque they use architecture and art together. By this Islamic architecture example we can say that the Art and Architecture is not specific as different.

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Heritage Culture of Kathiawar: The Heritage Hotel Khirasara Palace

Komal Mehta, B.I.D.IV

A space that has soaked into the rich heritage, culture and glorious past of Kathiawar. This heritage site has borne the brunt of centuries of love and wars, royalty and monarchs, and it now it stands tall in its finest splendor in the resplendent present.

The hotel is strategically located at top of the hill, providing a panoramic view of the breathtaking nature which changes their colors and textures at various different times of the day. Be in the eager sun rising from the Eastern skies, or the muted colors of twilight, be prepared to be awed. Situated 14 kms. from the hustling and bustling city of Rajkot, on Kalawad road, step into the unique world of history marked by grandeur. Sprawled over 7 acres of luxury, this palace is chance to experience quietude, nature and opulence designed for royalty. All the 25 suites (1 Maharaja and 24 Royal) overlook a water-body, bringing an immense sense of serenity and privacy.

History:

PREDECESSORS: Historians have recorded three phases of the Khirasara State Thakore Bhimaji gained Khirasara, Thakore Ranmalji added Khirasara as a glory of Saurashtra, Shree Sursinhji educated the people of Khirasara.

Before: It is a 450 yrs. Old palace. It is a colonial construction palace. Many times enemy attack in this palace but still it stand. Under khirasara there are 13 villages like amreli, metoda etc. It is a proud of savrastra and now-a-days it is a heritage hotel.



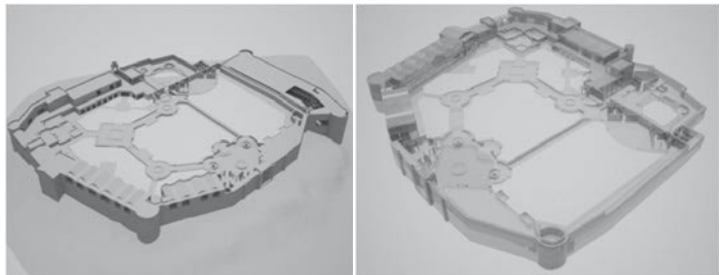
Old palace picture



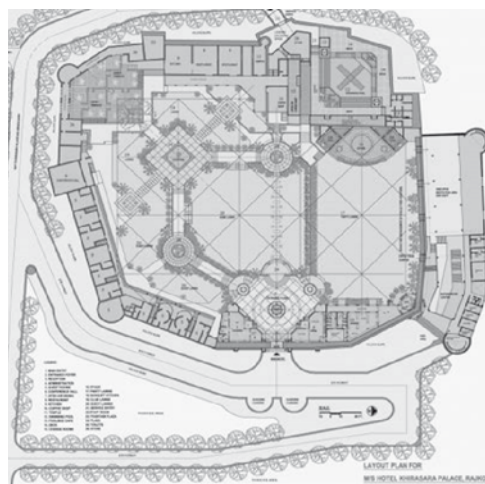
Present palace picture

After: Palace was purchase by dilipshighrana the king of Gondel in 1994. They did not change old building. It took 16 yrs. for restoration and reopened in nov. 2010. Total built up area of the palces is 5 acre with surrounding area 13 acre. The Architect and Interior designer are akshay bhargav chetan vadesara respectively.

Planning of Palace:



Ground floor and first floor model plans



The main entry is called vikramdwar because of king's victory. There are two more entries in palace called Janakdwar for utility purpose and services, and other one Akshay Ghats for pool side entrance

because they dedicate this area to his architect akshaybhargav.

Revealing Heritage: Night time Illumination

Prof. Preety Shah
Principal, SMAID



Our historic buildings and monuments are more than often amazing marvels of architecture and engineering. Many have been enhanced and brought to life at night-time with striking and subtle external lighting concepts. Cultural monuments provide venues with a unique atmosphere for festivals or concerts. Often, these buildings are used as a stage set for concerts or performances, lending them an unusual backdrop in historical contexts. In such cases, the lighting helps in expressing the themes or elements of the event and renders support to theatrics.

This subject generates a lot of interest, as little study has been done on the lighting of historical buildings. Historic structures have unique aesthetic values in its architecture and its ancient building materials – some of which may no longer be created in future – which need to be highlighted. Night-time artificial lighting does not only recreate the splendour of ancient structures but also offers a refreshing view of the urban architecture and its surroundings. The art of artificial lighting provides visitors with a welcoming and secure ambience. When strategically designed, lighting effects in urban areas can attract people to meet, interact and get together. Thus, it can be said that the art of lighting has a role in shaping the future of a city.

Lighting as a Strategy for Conservation of Historic Structures:

Light is a medium for designers which evokes inspiration, evaluates concepts and visualizes ideas. Designers also use lighting to enhance the exterior of historical buildings around a city to upgrade it into night-time tourist attractions. Conservation of heritage structures does not limit at physical upkeep only; rather be an expression that must be preserved in the cultural memory. Heritage site lighting adds to its symbolic value. The lighting of facades has the potential to enhance the character of historic buildings and/or zones by highlighting important architectural features and compositions.

The possibilities for lighting design for monuments range from subtle, uniform illumination (e.g. so that they can be appreciated in town squares at night) to expressive, temporary lighting concepts for festive occasions. When deciding on the right lighting concept, the history and usage of the monument plays a crucial role. Light enables history to be clearly presented at night also and even to be dramatically showcased with stage-like effects. The significance of the historic structure can be expressed powerfully through controlled variations in brightness, contrast and colour of light. At certain times, these cultural monuments can thus serve as the geographical centre of the city both at day and night and as backdrops for concerts, while bringing history back to life.

Monuments commemorating important persons or events are often located on pathways, in public squares and parks where they form the end point of an axis line or stand in the centre of attention themselves. The illumination of monuments and artworks at night, mean creating orientation points that are visible from a distance and bringing history and culture to light. Designers must consider that shadows also have a role in drawing out the aesthetic values of buildings through lighting design and light art. An analysis of the surrounding area needs to be carried out and the illumination of historical buildings needs to be planned comprehensively, by taking into account how the building interacts with its surroundings. In Europe, historic buildings and monuments have been enhanced and brought to life at night-time with striking and subtle external lighting schemes.

The main objectives of external lighting for historic buildings and zones should be:

- to promote observation and experience of the site against the night sky
- to give the building an added dimension which will enhance its key architectural elements as well as
- its social and historical significance
- to improve the quality of the nocturnal environment by promoting safety,
- to enhance night-time orientation and use, which could potentially benefit the local economy.

It is often better to illuminate selected architectural elements and sculptural features such as brackets, cornices, shikharas, typical windows and jharukhas, stambhs or columns, pediments, porticos or niches, rather than illuminating the whole building. External lighting to reinforce a building's patterns would increase the appreciation of architectural details. Cross-lighting, up-lighting and backlighting can all be considered, and used in a well-controlled manner to avoid light pollution.

Guidelines for Good Lighting Design

Lighting Design should:

- Express the character and individuality of each building. Every building should be assessed for its own distinct composition, design elements, and architectural details. What should be highlighted should be determined first by carefully selecting features for emphasis.
- Generally highlight the building and its architectural features rather than draw attention to the source of light itself. In other words, a scheme that highlights the building is usually preferred to twinkle lights that contour the building.
- Respect the daytime appearance and architectural integrity of the building. Electrical wiring and equipment should be concealed from view wherever possible.
- Amount and intensity of light: Illumination should be sufficient to "wash" a façade with light at night, taking into consideration other nearby lighting sources (street lighting, interior lighting, etc.). Lighting should be directed specifically at the façade(s) in question. It should not spill onto adjacent property, nor shine directly onto the street or into interior buildings spaces, and should minimize "light pollution" of the surrounding area. Lighting which scallops the building surface or distorts the building with shadows should be avoided.
- Type of light: Illumination should consist of clear light which does not distort the color of building materials and finishes. This option uses small, discreet lighting fixtures, mostly located on the façade, to light details. As fittings are often located on the building itself, installation must be handled carefully to avoid damaging the fabric.
- Architectural lighting is not intended to make the building appear as it does during the day, but instead to offer a very different and selective view.
- Colored bulbs or gels, high pressure sodium/sodium vapor bulbs, and tubular fluorescents are generally not appropriate for lighting historic building facades. Metal halide bulbs may not be appropriate for red or orange-colored facades.
- Electrical equipment: It is essential that all luminaires are inconspicuous, easy to install and maintain, and respectful of the historic fabric. Even though a lighting design may give the desired effect at night, if the floodlights cannot be effectively hidden from view or disguised, the scheme must be rethought. As well as the existing ambient lighting, the reflectivity of the building surfaces must be taken into account. This will be affected by the colour of the building materials, and how clean they are
- Installation methods should not damage original building materials or finishes. Rust resistant hardware should be used to prevent staining of the façade. Wires and conduits should be kept off of primary building facades.
- Illuminating Sculptures-. When using light to shape these monuments at night it is not only the light's angle of incidence that is relevant but also its direction. A frontal light, whereby the direction of the light is the same as the observer's viewing direction, will produce a low.

- Surfaces: How much light you direct on to a building is less important than how much is reflected back from it and how this is reflected. What you will see is dependent on roughness and reflectance factors of a given surface – darker, more textured surfaces need more light than pale, smooth surfaces.
- Lighting from a distance to highlight vertical structures - In the case of a building facade where there is an opportunity to “off-set” equipment some distance away, lighting from the main direction of view creates a flat appearance to the building. Therefore, setting the lighting to come onto the building at a glancing angle with respect to the main direction of view will produce strong shadows and marked highlights, giving the building the appearance of depth.
- Matt surfaces have the advantage of reflecting light in all directions so when buildings are lit from a low or ground level the apparent brightness when viewed at ground level can be relatively high.
- It is rarely necessary to light all the elevations of a building, some parts often being unsuitable or inaccessible for viewing. It is usually better to concentrate on the prime nearby and distant night-time viewpoints. As part of the design process distance, angle and position of the viewer should always be taken into account.
- Use energy efficient sources. Many economic lighting types may be used including: wall brackets, compact flood lights, neon or fibre optic lighting and others.
- Architectural illumination is quite different in the sense that the requirement here is to reveal details differently from the daytime, to create links between architectural features of buildings and landscapes defining a specific identity whilst respecting the living environment of people. It is an area in which the designer needs creativity, intuition and flair.
- Architectural illumination is particularly subjective and will depend upon the relative brightness of the surroundings or character of the area, often known as district brightness. To avoid overlighting and obtrusive light, luminance levels which relate to average and maximum illumination values for the lighting of environmental zones, ranging from dark landscapes to bright inner city areas
- Luminaire Selection- There are two principles available for mounting the luminaires, giving rise to two different aesthetics: integrated and additive lighting. With integrated lighting, such as in-ground or in-wall luminaires, it is the landscape and the architecture that comes to the fore — the focus is on the light not the luminaires; whereas, with additive lighting, such as bollard luminaires or surface-mounted luminaires, the luminaires act as an architectural feature in their own right. If the luminaires have to be arranged as standalone installations next to the monument, it is recommended that lighting tools with an unobtrusive, discreet design be used.

Conclusion:

Therefore an aesthetic, as well as a technical, approach is essential and will ultimately govern the result. When external lighting is executed with a well-designed and coordinated scheme using the correct choice of equipment, the environmental impact, i.e. light pollution and overspill also can be minimized and the energy efficiency maximized. Subtle external lighting when designed with care and sensitivity not only brings added life to most treasured landmarks, but it becomes an extension to the architecture, improving the quality of the view and complementing the structure's shape, coloration and form. It gives an added dynamic dimension by bringing the 'soul' back into a place.

Illuminating heritage buildings must be carried out with extreme care, to avoid both ugly and damaging

Fixture Design should:

- Be appropriate to the Architectural style of the building; such as wall brackets etc.
- Installation techniques and equipment that do not damage the building or its features should be used. Drilling holes through walls in order to provide power supply, and installing light fixtures all cause damage to heritage buildings and should be kept to a minimum.

installations.

- Drilling holes through walls in order to provide power supply, and installing light fixtures all cause damage to heritage buildings and should be kept to a minimum.
- Once installed and running, the build-up of heat from lights placed too close to the building is likely to cause damage. Lighting should be considered with this in mind.
- Colour lighting, whether static or rotating, should not be used;
- Use of Strings of light bulbs attached to a building, e.g. around windows and cornices, etc., should be restricted.
- Spotlighting of buildings should be kept to a minimum,
- Floodlighting of buildings should be unobtrusive and set within the landscape, not attached to the building.
- Floodlights used on buildings must be natural white light.

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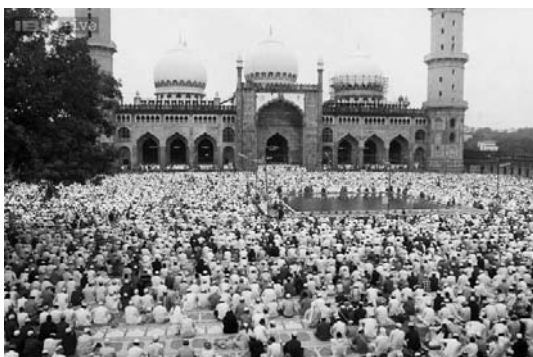
Mesmerising Bhopal

Ar. Shilpi Aggarwal
Asso. Prof., SMAID

Bhopal, the capital city of Madhya Pradesh is located within picturesque settings around two artificial lakes. The city is marked with wonderful architectural structures comprising of mosques and palaces and delicately decorated parks and gardens. Among the various architectural wonders of Bhopal the Taj-ul-Masajid, Shaukat Mahal and Sadar Manzil, Lal Kothi, Taj Mahal complex, Benazir Palace, High Court of the princely state of Bhopal, King Edwards Hospital now Known as Hamidia Hospital, occupies a place of eminence. Following are the Brief about identified important Heritage sites in the city.

Taj-ul-Masajid: Taj-ul-Masjid, which literally means the 'Crown of Mosques', is one of the largest mosques in Asia. The construction of the mosque was commenced during the rule of Sultan Shah Jahan Begum, but it was completed years later in the year 1971. This mosque is to a certain extent similar to that of Jama Masjid in New Delhi and the Badshahi Mosque in Lahore and reflects the grandiosity of Mughal architecture in terms of its construction.

Taj-ul-Masjid is spread across a rambling 23,312 sq. feet with the minarets being 206 feet high. The huge entrance which looks like Buland Darwaza, captivates



visitors. Other attractions of this place include a large prayer hall, huge carved pillars and exquisitely done ceilings. It has three big round-shaped domes, a beautiful prayer hall embellished with beautifully carved pillars, marble flooring, two eighteen storeyed minarets and marble domes. Apart from this, there is a courtyard with a big tank in the center and a double storied gateway with four curved cloisters and nine cusped multifold openings in the main prayer hall. Furthermore, the main wall of the prayer hall is engraved with latticework and sunken curves. The twenty-seven ceilings are clamped with huge pillars, which are embellished with trelliswork. Amongst the twenty-seven ceilings, sixteen are embroidered with floral designs. The crystal slabs used for designing of floor were imported from England for whopping seven-lakh rupees. Every year a three day congregation known as Aalmi Tabligh Ijtimia is held in the premises of the mosque, which is attended by the devotees from all around the world.

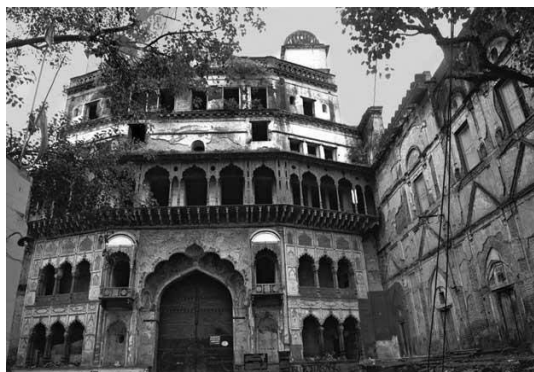
Shaukat Mahal: The oriental and occidental ways of architecture are quite evident from the building of Shaukat Mahal. The western influence is apparent on the architecture. It is said to be designed by a Frenchman who belonged to the Bourbon Dynasty of France. The architecture of Shaukat Mahal is unlike the other Islamic structures located close to it. The magnificent Shaukat Mahal has a large hall known as the Sadar Manzil. During the princely period the Sadar Manzil in Bhopal was used as a Hall of Public Audience. The brick-red building has an grandiose appearance, and the gardens that surround the palace makes the Manzil look as pretty as a postcard.

Taj Mahal complex: The Taj Mahal palace was built as the Begum's residence, at a cost of Rs. 30 lakh. The construction spanned over a period of 13 years, from 1871 to 1884. It was one of the largest palaces of

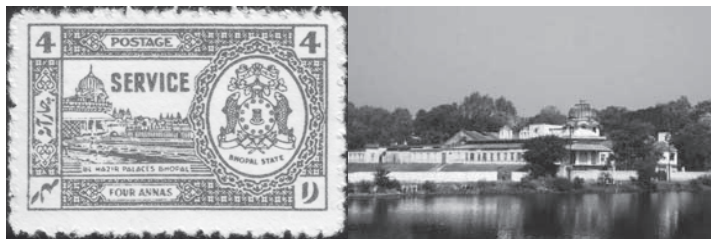


the world built at that time. The Begum is said to have ordered a three-year-long celebration called Jashn-e-Taj Mahal after the completion of the building. Apart from being a royal place the Taj mahal palace was used as a refugee camp for Sindhis after the partition of India in 1947. The palace suffered damages during this time. By now a large part of the complex has collapsed.

The palace is no longer open for general public. With eye catching huge entrance gate, the palace includes 120 rooms, a Sheesh Mahal and an elaborate fountain structure called "Savan bhadon" that simulated the effect of rain. The architecture of the palace is quite complex, with a large number of passages and stairs, adding beauty to the palace. The palace was declared a state heritage monument by the government in 2005 and the state archaeology department carried out restoration in parts.



Benazir Palace: Benazir Palace is scenically located on the edge of Motia Talab. It is flanked by the Taj Mahal Palace on the northern side, and the Tajul Masajid on the southern side of the pond. It was built by Shah Jahan Begum in the year 1877 as her summer palace. It has a large ground on its southern side marked



by a massive entrance gate named the 'Falaknuma Gate'.

The palace has two large Rajputana domes projected in its frontline. Its architecture is a mix of European and Indian art. The Falaknuma gate has rooms on the first floor with windows overlooking the palace. Bhopal State Postage Service depicted Benazir Palaces on 4 annas in 1944.

Apart from built structures the city is famous for hand crafted purses from Jardosi and Moti work using velvet, gold and silver metal threads and semi-precious gemstones. The craftsmen create wonderfully dressy evening bags, stoles and slippers straight out of Arabian Nights.

The cities store a lot more than physical presence of built structures. The fragrance of past can be easily felt in all such corners. Every premise telling a story of its own grandiose culture and lifestyle inherited. It is absolutely beautiful to get connected to those roots which have led us to the path of development. It is high time to respect the efforts, dedication and vision of those rulers who left some glorious past with us before everything is lost. It is time to revive and relive the era to enrich and connect the future generations with its glorious history.

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Next issue: “GREEN DEVELOPMENT”

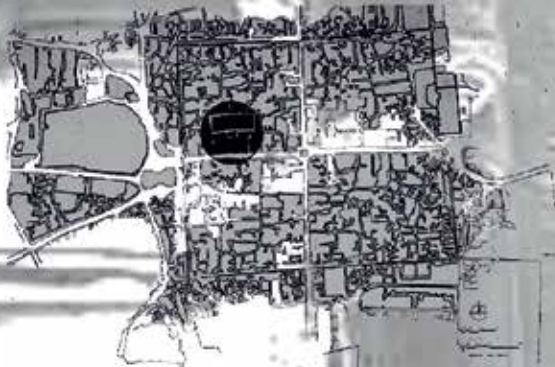


Green development is a land use planning concept that includes consideration of community, regional environmental implications of development, as well as site-specific green building concepts. This includes city planning, environmental planning, architecture, landscape architecture and community building.

21st century is all about consumerism hence the development all around is a market driven entity. The phenomenon of consuming more is directly indirectly responsible of generating waste. This pattern is below human dignity to live amongst this waste. The Green development refers to the processes that are

environmentally responsible and resource-efficient in terms of planning, design, construction, operation, maintenance achieving sustainable environment.

Looking at the pace of development the concept is a dire need of research to fulfil the current day's requirement, hence our next issues concentrates on “Green Development”. The Ideas and innovative thoughts are invited to achieve sustainable development.



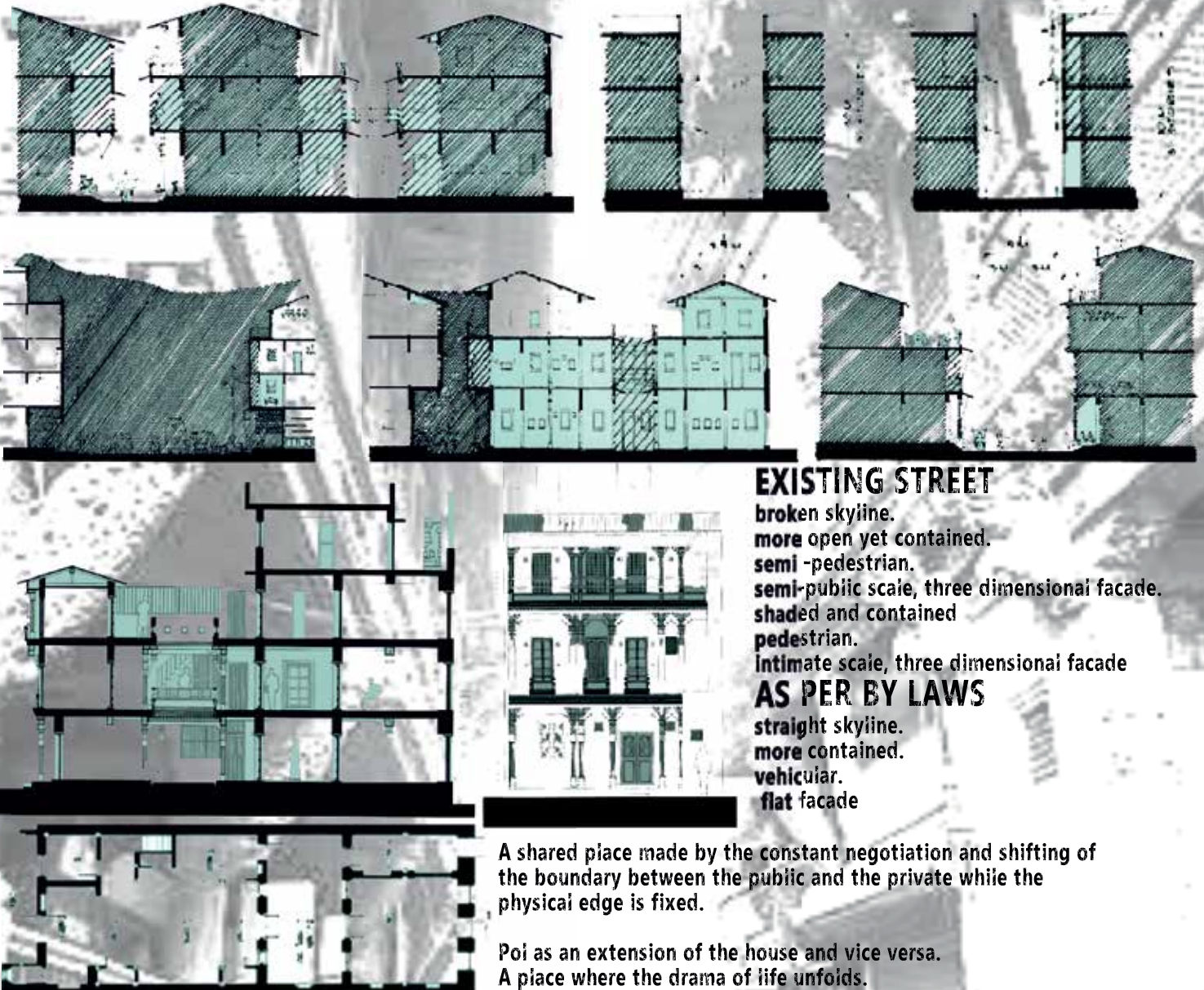
INNER CITY VADODARA

POL

SOCIAL AND CULTURAL PLACE

Pol not as a thorough fare or residual open space.

Pol as a place formed by in-between realm (all the otias of the houses form a continuous spatial element).



EXISTING STREET

broken skyline.
more open yet contained.
semi-pedestrian.
semi-public scale, three dimensional facade.
shaded and contained
pedestrian.

Intimate scale, three dimensional facade

AS PER BY LAWS

straight skyline.
more contained.
vehicular.
flat facade

A shared place made by the constant negotiation and shifting of the boundary between the public and the private while the physical edge is fixed.

Pol as an extension of the house and vice versa.
A place where the drama of life unfolds.
More than the sum of its individuals.



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