

Salient Architectural features of Selected Colonial Built Heritage in Visakhapatnam, Andhra Pradesh, India

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Abstract:- Colonization of Visakhapatnam by the British during 1801-1947AD had left impeccable signs of urban planning and local architecture that are excellent cum exemplary visual evidences of the glorious past. The British employed local techniques coupled with their native practices to build several structures that stand now as proud heritage. Salient architectural characteristics of fifteen randomly selected Colonial built heritage were brought out in this communication. These Colonial buildings were recognized to fall into three broad architectural categories, namely, British Colonial style of 1801-1850, Indo-Saracenic style of 1875-1917 and British Colonial style of 1890-1947.

Keywords:- Architecture, Built heritage, Colonial, Visakhapatnam, India

I. INTRODUCTION

Andhra Pradesh is the 4th largest (275,069 Km²) state in India and possesses half a dozen gateways of international trade with Visakhapatnam (17°41'18.16"N 83°13'07.53"E) as one among them. This port city included under Visakhapatnam Metropolitan Region is situated midway between Kolkata and Chennai on the east coast of India along Bay of Bengal. The city was under Madras Presidency during the British Colonial period that spanned from 1801 to 1947 AD. Several commercial, institutional, religious and residential structures were executed by the British Military Engineers of the period in the city. Most of these structures owned by government or other institutions were built with the support of or contributions from the royal families and landlords (Zamindars). All these constructions now stand as proud heritage edifices of the city offering many a reminiscence to the present generation. However, none of these resources has so far received any attention or recognition from the central, state or regional government bodies. And documentation, listing, designation, etc. of these prestigious material possessions was also never attempted to conceive their protection and preservation for posterity. Therefore, a maiden attempt is put forth to highlight the architectural importance of fifteen randomly selected Colonial built heritage in the city.

II. COLONIAL BUILT HERITAGE

1. Mor Sjanua Vitae Regimental Lines Cemetery (Fig. 1, 2)

Historical value. British Military Regimental Lines Cemetery is situated in the heart of the city in Jagadamba junction. Named after Mor Sjanua, the cemetery dates back to 1823AD as evidenced from a tomb stone inscription. The cemetery was catering to the needs of the British Military personnel.

Architectural character. The cemetery, spread over a triangular area of 0.8ha, is secured by a boundary wall having an entrance in the south. Plan of the site shows that tomb structures and landscape areas were merged together with brick pavement to facilitate free movement of people. This precinct is symbolic of traditional spiritual architecture of native British of the contemporary times. The cemetery is architecturally a fascinating funerary of sculptures in the form of pyramids, gateways, obelisk, Bengal roofed structures and pavilions constructed in brick. These structures have a good technical value in terms of choice of materials and are good examples of tomb typologies in particular.



Fig. 1 Entrance gate of Mor Sjanua Vitae Regimental Lines Cemetery



Fig. 2 Tombs in Mor Sjanua Vitae Regimental Lines Cemetery

Present utility. Presently this site is not put to any intended use.

Current status. The site is authentic retaining significant fabric of the times of its laying out. Certain renovations and repairs with non-benign materials were carried out to the tombs. The wooden entrance gate was replaced with a mild steel one in recent years. Though renovative measures are welcome, the same were not in tune with heritage conservation practices and procedures. Placing of commercial hoardings within the site, erection of a political statue in front of the site and construction of public toilets adjacent to the site shows lack of interest of the urban local body in conserving this heritage precinct.

2. St. Paul's Church (Fig. 3, 4)

Historical value. During 1807-1837, administrators in civil and military establishments built houses for European troops in Waltair, the then northern upland suburb of Visakhapatnam. The hilly terrain facing the sea was an enviable atmosphere to live in. Subsequent to the built of this residential area, a church was also constructed in 1838. This is the second church in the town constructed exclusively for the British army officers who contributed the entire cost of the building, furniture and the bell.



Fig. 3 Front view of St. Paul's Church



Fig. 4 Rear view of St. Paul's Church

Architectural character. The church, consecrated by Bishop Spencer was named in honour of St. Paul. In 1857, a compound wall was built around the church and the chancel enlarged to accommodate over 150 persons. In 1862, a new harmonium, a reading desk for the Chaplain, stained glass window behind the altar and brass lectern were added. Other additions in the frontal area were carved English oak reredos. During renovation/ extension, the carved oak reredos were preserved as a frame to enhance the elegance of the imposing doorway. A belfry was added in 1863, but was destroyed during a cyclone in 1872. However, the same was rebuilt in the same year at the entry side of the church. The entire building was re-roofed in 1899. Design of the building, interior spaces and exteriors carry lot of aesthetic significance reflecting the tradition of native English church architecture.

Present utility. The church is put to intended use regularly by the society concerned.

Current status. The present condition of the building is very good.

3. St. John's Church (Fig. 5, 6)

Historical value. Visakhapatnam was a base for European troops during the 18th and 19th centuries. On appraisal of the origin and dilapidated state of an old church in Visakhapatnam Fort area, the then General Officer Commanding made an appeal through the Military Board and obtained sanction for the construction of a new church accommodating 250 persons, in One Town. (As per East India Company's policies, it was obligatory for the government to construct a church of suitable size in every military base). On design from the eminent engineer, Sir (Major) Arthur Cotton (Father of the Godavari river irrigation scheme), the church was erected and consecrated in 1844 by Bishop Spencer, in honour of St. John, the Evangelist.



Fig. 5 Front view of St. John's Church



Fig. 6 Altar and pipe organ in St. John's Church

Architectural character. Overall setting of the church including other buildings around has aesthetic significance and reflects the English residential and institutional ambience. Typical Anglican dome, big round pillars and cobbled-stoned porch speak of the architecture of the contemporary era. The church committee has done everything to preserve its antiquity, except for the replacement of original Madras roofing. The pipe organ is very much functional still. The engineering genius left no stone unturned to replicate the glory of Anglican construction in Visakhapatnam. Teak wood was imported from Burma, intricately carved Altar from Great Britain and glass paintings from Europe.

Present utility. The church is put to intended use regularly by the community concerned.

Current status. The church is in good condition retaining a high degree of authenticity.

4. St. Aloysius Church (Fig. 7)

Historical value. Historical details could not be ascertained despite several efforts, but for the year of construction as 1877.



Fig.7. St. Aloysius Church

Architectural character. The church was built as a first floor over the existing ground floor of St. Aloysius school designed in rectangular plan in One Town. The church was constructed in harmony with the school as a double height nave with linear aisles of single height on either side in rough ashlar stone masonry supported by elaborate buttresses. Altar was provided in a semi-octagonal bay created at the extreme end of the nave. Clear storey ventilators set in gothic arches were created on the sides and one rose-window each on either end of the nave. All doors and windows were also erected within the gothic arches. Stone corbelling was done around the slab line at each level besides crenellated parapets with conical (shaped) pinnacles over them. Radiating stone arches emerging from the top of circular stone columns supported the Jack arch roof of the aisles and similar arches along with “I” sections supported a similar roof over the nave.

Present utility. As intended, ground and first floors continue to host the school and church, respectively.

Current status. The entire building is well maintained and therefore remaining in very good condition. However, the very existence of this beautiful edifice is under serious threat from the expansion plans of the Visakhapatnam Port Trust (VPT), which has reportedly provided an alternative site and funds to the establishment.

5. Mrs. Ankitam Vekata Narsinga Row College (Fig. 8)

Historical value. Modern teaching in Visakhapatnam was initiated in the year 1860 through an Anglo-Vernacular school headed by a European Mr. E. Winckler. In 1878, the school was elevated into a college and named as Hindu College. This premier institution was nurtured by the Zamindars and public of that period. Later, Mr. Ankitam Vekata Narsinga Row gave an endowment of Rs 115,000 for the improvement of the college and at that time the institution was renamed as Mrs. AVN College. The college alumni represent great personalities like Sir C. V. Raman, recipient of Nobel Prize in Physics in 1930 and Sri Alluri Sitaramaraju, a revolutionary of Indian independence movement.



Fig.8. Mrs. Ankitam Venkata Narasinga Row College

Architectural character. The college is situated on a hillock in Chengalraopeta. The plinth of the structure varies in accordance with the undulating terrain. The building is a beautiful structure in ashlar stone masonry with an excellent view of the seascape. The building was planned with open courtyards and continuous verandahs. The building was designed as a two storied elongate block with central entrance leading through a double height pointed Saracenic arched portico that divides the whole building into two wings. Corridor of either wing was decorated with pointed Saracenic arches supported by square stone piers. The covered porch was decorated with slender octagonal tapered minarets bedecked with floral capitals on either side of the arches that resemble Islamic architectural style. Roofing style was Madras terrace supported by wooden rafters over steel joists. The parapet comprises of a series of small lancet stone arches of 60cm span with stone slabs resting on them to serve as copings cum railing. Stone corbelling was provided at the arch springing lines as well as both floor levels to bring in harmony.

Present utility. The building is continuing as a government aided college conducting degree and post-graduate courses.

Current status. The building is in reasonably good condition.

6. Turner's Choultry (Fig. 9, 10)

Historical value. The site of the Choultry, situated in Maharanipecta, was locally known as 'Enugula Thota' used as an elephant crawl by the British infantry. The place was donated by Maharajah Gode Narayana Gajapati Rao and funds by the Maharajahs of Bobbili and Vizianagaram and the Rajahs of Jeypore and Cheedikada. Construction of the building was completed in the year 1892 and the facility named after Mr. Henry Gable Turner, the then Collector of Visakhapatnam. This Choultry was meant for providing accommodation to persons accompanying patients to King George Hospital nearby followed by travelers and merchants.

Architectural character. The building was constructed on a raised plinth of 1.2m in rectangular plan as a single floor with a central courtyard. All walls were built with ashlar dressed fine stone masonry and interiors plastered in lime. A semi covered front verandah with one room each on either end is accessed through a flight of steps in the centre. The main entrance to the complex was elaborated by raised gable roof and carved bargeboards supported by huge circular stone columns on either side. Identical columns were erected in line with them towards courtyard to create a large sheltered area to facilitate conduct of any indoor gatherings and meetings. The main doorway made of wood and ventilated with colour glass was inserted in a large pointed deep recessed Saracenic arch. Three large pointed Saracenic arches, each inscribing two pointed arched windows within a small Saracenic arch each, were introduced on either side of the main entrance. The structure is a first-hand example of the Indo-Saracenic architectural style. A series of rooms having a common semi covered verandah were built to the north and south of the open courtyard, while east and west sides were designed as semi covered verandahs devoid of any rooms. The rooms are covered with pot tiled pitched roof supported by ashlar coursed masonry walls and wooden trusses. Verandah around the central courtyard was covered with lean-to-roof supported by square wooden posts. Eaves of the entire building were well projected beyond building line to protect the walls, doors and windows from sun and rain. The concept of 'Arugu' (a raised platform), a common element in residential designs of the coastal regions of the state was effectively integrated into the structure. While courtyard and pitched roofs are local in character, ashlar coursed rough stone masonry, pointed arches and raised plinth with slate tile flooring contribute to the streetscape. Inclusion of smaller arches within a large arch found in this Choultry is a unique architectural element of the entire Colonial period.



Fig. 9. Entrance of Turner's Choultry



Fig. 10. View of the arches

Present utility. A part of the building at present houses the Office of the Assistant Commissioner of Endowments. Rest of the premises is occasionally let out for religious, social or cultural activities.

Current status. The building is under the control of Endowments Department and remains in a satisfactory condition.

7. Queen Victoria Pavilion (Fig. 11)

Historical value. Sri Akitam Venkata Jagga Row, Zamindar of Share Mohamud Puram and Yambrum Estates went to England in 1900 where he had the privilege of paying his respects to Her Most Gracious Majesty, the Queen Victoria and to the then Prince of Wales, who later became King Edward VII. During his stay there, he was elected as a Fellow of the Royal Astronomical Society, Royal Meteorological Society, Royal Colonial Institute and Society of Arts. Sri Row presented a bronze statue of Her Majesty Queen Victoria from England to Visakhapatnam. This statue erected in One Town was unveiled by Mr. R H Campbell, Collector and Governor's agent at Visakhapatnam in 1904.



Fig. 11. Queen Victoria Pavilion

Architectural character. The structure is equilateral in plan, elevated in plinth and cuboid in shape. A flight of steps all around lead to the floor level. The four walls were designed as pointed Saracenic arches supporting a hemispherical ribbed dome surrounded by a parapet wall and miniature octagonal corner minarets. Greek crosses were introduced as decorative elements over the parapet. The concept of the pavilion was adopted from Islamic architecture. A finial adorned with a Greek cross was installed over the dome. The entire structure was constructed in fine ashlar stone masonry. A bronze statue of Her Majesty facing One Town was placed at the centre of the raised plinth. Miniature octagonal minarets, ribbed dome, pointed Saracenic arches and Greek cross were the important architectural features adopted. Fine ashlar dressed stone masonry arches contribute to the streetscape. The dome over the structure increased the architectural significance of the edifice. Embossed radiating coursers of pointed Saracenic arch and springing course line band of the arch were meticulously worked out on a simple structure. Construction of a pavilion of this type in masonry was first of its kind in Visakhapatnam, though similar structures were made in steel in nearby Vizianagaram and Bobbili princely towns.

Present utility. The structure is serving the intended purpose, but the importance of this commemorative is not projected properly.

Current status. Condition of the pavilion is good, but the Saracenic arches were closed with MS grills. Ignoring both the heritage and architectural values of the structure, posters, bills, etc. are pasted to the walls of the pavilion and growth of the vegetation over the dome is being ignored.

8. Hamilton Memorial Masonic Temple (Fig. 12)

Historical value. Colonial rulers established freemasonry in India in 1730 at Fort William in Calcutta. Subsequently, attempts were made to set up a Masonic Lodge in Visakhapatnam by the British Coast Artillery and on the recommendation of the Lodge of Perfect Unanimity No: 150 E.C. the United Grand Lodge of England, Lodge Waltair was constituted in 1895. A site from the Municipality was acquired and foundation stone laid in 1908 by His Excellency Sir Arthur Lawley, Governor of Madras, a non-Mason. The services of a Local Fund Engineer, Mr. P. B. Arbothnot were lent by the Madras Government for the supervision of this temple construction. The ground floor was completed in 1911 and the first in 1912. This stone edifice is located on the beach road in One Town and named after one of its illustrious past masters Mr. N.A.W. Hamilton. (Freemasonry is all about brotherhood and it is not a charitable organization though charity is one of the virtues taught to every freemason).



Fig. 12 Hamilton Memorial Masonic Temple

Architectural Character. The building is in symmetrical plan with two floors made in course rubble masonry. Main hall was accommodated in the centre of the ground floor surrounded by verandahs on three sides. Roof of this floor was Madras terrace supported by steel 'I' sections and wooden members. In the first floor, central hall was covered by pitched roof supported by wooden trusses and verandahs by Madras terrace. This building was designed in a simple architectural pattern with crenellated parapet wall in top floor. Verandahs in ground and first floors were enclosed with a series of pointed arches radiating with fine cut voussoir. In front elevation, a series of three arches were executed in each floor, with central arch being larger in span and height than others. This ashlar stone masonry construction and dressed fine ashlar arches contribute to the streetscape. Embossed radiating coursers around pointed Saracenic arches over dwarf square columns and low height springing course line from the floor level (Drop arch) were meticulously worked out.

Present utility. The building is continued to be used as a temple of the Freemasons.

Current status. The building is in authentic condition significantly retaining its original fabric. However, the building is under threat due a vacation notice served to the organization by the VPT for its expansion activities.

9. Collector's Office Building (Fig. 13)

Historical value. Construction of Collectorate Building was initiated in Maharanipeta during 1865 and completed in 1914 by M/s Gyanan and Dunckerly Company.



Fig. 13. District Collector's Office

Architectural character. The building overlooking the bay resembles an 'E' shaped castle with ground and first floors in symmetrical elevation. Ashlar rubble stone structure is amassing the building. Gothic palatial architecture with introverted as well as extroverted design was adopted in its construction by providing corridor on either side of the halls in each floor. Main entry to the ground floor is through a flight of steps and to the first floor through a bifurcated staircase in the east. Alternately, doglegged service staircases made of wood were provided at the middle of each of the three wings extending towards courtyard. The halls and corridors of the ground floor were made in Madras terrace supported by steel joists and stone columns interconnected by huge semicircular arches, respectively whereas the same in the first floor were made of pitched roof supported by timber trusses and lean-to-roof supported by wooden rafters, respectively. Ample number of doors and windows were provided in the two floors in addition to sufficient number of clear storey ventilators in first floor. The main block is most impressive, fronted by a three-storied portico with open arches in the ground floor, closed rooms in the first and second floors and a pyramidal roof at the top. A circular turret with crenellated parapet atop was running along the outer corner of the portico all through the three floors. A spiral staircase was provided within this turret. Steady square-based pavilions, each with three square turrets, were created at the corners of the building. While the mid portion of the pavilions was covered with pitched Mangalore tiled roofs supported by wooden trusses, the surrounding turrets were covered with steep pyramidal roofs.

Present utility. The building continuous to be used for the intended purpose as Visakhapatnam District Collector's Office.

Current status. Condition of the building, in general, is good but for the dilapidated state of the service staircases. Certain modifications, alterations and additions such as ceramic tile flooring, cladding, false roofing, closing of open galleries to provide air-conditioning and fitting of aluminum framed glass windows to some arches in the building were carried out giving least importance to heritage conservation principles.

10. King Edward VII Market (Fig. 14)

Historical value. Visakhapatnam started gaining prominence as a trade and administrative centre during the late 19th century. Development of a port by the British and subsequent industrial strides saw immigration of people from places near and far to the city in search of livelihood. Growth of the city and its population required many common facilities such as schools, colleges, dispensaries, hospitals, trade centres and market yards.

The Raja of Kurupam Sri Vyricherla Veerabhadra Raju constructed a market in One Town, officially christened it as 'The King Edward VII Market' in recognition of the accession of Edward VII as the King of England and donated it to the then Visakhapatnam municipality in 1914. This market is known as Kurupam Market among local circles. Besides serving as an important market place of the city, the central courtyard was being used by the freedom fighters to conduct public meetings to motivate and emotionalize the locals to take part in the freedom movement.



Fig. 14. Main entrance to the King Edward VII Market

Architectural character. The market was constructed in a huge rectangular site adjacent to the main commercial corridor on one side and residential alleys on rest of the sides. The plan of the market with a central open courtyard and shops all around is best suited to local traditional style. The market has four rectangular entrance gateways at the centre of each side. Of these, the eastern gateway was elaborately decorated. This double-height gateway was accommodated between two three-storeyed octagonal turrets. Each of these turrets was constructed of random rubble masonry at the ground level and of brick masonry in the next two levels finally capped with a “Sateri Roof” (bell shaped) bearing a Kalasa over it. These turrets were provided with slit ventilators and corbelling at the three levels. One of the two turrets was accommodated with a flight of spiraling steps leading to a corridor connecting them at first floor level. The central portion of the corridor was installed with a clock mechanism that displays through the gable wall of the front façade. One horseshoe arch each with voussoirs made of dressed ashlar fine stone was created over either end of the walls running perpendicularly beside the turrets towards market yard to a small span. The span between the two arches was closed by a pitched roof made of Mangalore tiles supported by wooden trusses resting on the side walls.

Contrary to individual clock towers in other market places such as Vizianagaram and Bheemunipatnam, a clock was installed within the façade of the gateway in an unique and appealing manner.

Present utility. The original purpose of the market place has almost waned away. Open space within the market yard is however being used by petty traders for paltry business and the shops existing in satisfactory physical state are being utilized as godowns.

Current status. This market place is under the custody of Endowments Department, which did not recognize its importance. As a result, the built heritage has reached a deplorable state and is on the verge of collapse. The clock mechanism was also lost to vandalism.

11. Maharaja Sir Gajapathi Row Hindu Reading Room (Fig. 15)

Historical value. With a view to encourage reading of Hindu literature, scriptures, mythology, epics, etc. among the public, a building was erected in One Town by Her Highness Seethabai Rani Sahiba of Wadhwan in memory of her revered father Maharajah Sir Gode Narayana Gajapathi Rao and got it inaugurated by His Excellency John Baron Pentland, Governor of the Madras Presidency in 1917. The building stands as a testimony to the pioneering efforts of the learned to inculcate vivid reading habits among the public.



Fig. 15. Maharaja Sir Gajapathi Row Hindu Reading Room

Architectural character. The building was designed as a two-storeyed symmetrical structure rectangular in plan with a central hall surrounded by verandahs all around in both the floors. Entire building made in stone was plastered with lime mortar except the portico. Front façade was provided with an elevated portico having a large pointed central arch created in between two small side arches. The central arch leads to the main entrance. The portico and arch voussoirs were constructed of fine ashlar dressed stone. One octagonal minar each raising much above the roof was erected at either end of the portico and capped with a projected capital bedecked with a kalasa. One square shaped small minar each of similar fashion was also erected on either side of the central arch. A cuboid much smaller in dimension than the portico was built above it in harmony with the central arch below. The cuboid bearing pointed arches on the four sides was covered with a semi-circular dome adorned with a large kalasa. The rear arch of the cuboid was aligned with similar arches of the semi-covered verandah of the

first floor. The ground and first floor verandahs were decorated with simple pointed arches. Complete ground floor and first floor verandahs were roofed with Madras terrace, while central hall of the first floor was covered with pitched roof. The building was made to a simple plan, but with copious reflections of Hindu and Islamic architecture in elevation.

Present utility. Originally, the ground floor hall was meant for book reading and the first floor hall for holding religious discourses and events. The building continues to serve these purposes further to the use of first floor for indoor games.

Current status. The historical and architectural values of the building are given least sympathy. Though interiors of the building retain most of the original fabric, ground floor arches were filled with masonry. Pandals, shops and bus shelter erected outside along the compound wall interfere with the aesthetics of this heritage.

12. King George Hospital (Fig. 16)

Historical value. A civil dispensary was started in 1845 and upgraded to a 30-bed hospital in 1857. A new building was constructed in 1923 by Dewan Bahadur Sri Panuganti Rama Rayaningar of Panagal (near Kalahasti of Chittoor District), the then Hon'ble Chief Minister of the Madras Province. This central block was named after the British Monarch King George and later on referred to as King George Hospital (KGH). The hospital was later upgraded to 250-bed capacity with electrical installations provided by M/s B. Barooach of Assam.

Architectural character. The building designed in three storeys is symmetrical in plan with a central corridor. Entrance to the block was provided at middle of the building from the north. Entire construction was made of dressed stone masonry. Northern extreme of the central corridor was designed to a height of four stories and the fourth floor houses a clock. Side corridors of the three stories lying on either side of the clock tower were decorated with semi-circular arches supported by square stone piers in the first floor while that in rest of the floors were made as exposed reinforced cement concrete (RCC) lintels supported by twin square columns. The semi-circular arches of the first floor were made of radiating stone voussoirs. Projected slab lines at the top floor, exposed RCC lintels and projected square rooms at the end of the corridor in each floor find a notable classical expression. All floors were roofed with Madras terrace supported by huge "I" sections.



Fig. 16. King George Hospital

Present utility. The building is being utilized for the envisaged purpose.

Current status. Condition of the building, in general, is satisfactory but for certain modifications and additions such as closure of some corridor openings in the ground floor with masonry and fixing of aluminum framed glass windows to open corridors and arches in the second floor.

13. Municipal Office Building (Fig. 17)

Historical value. Due to growing demand, the Municipal Council needed more area by the end of 1930's and hence this building was constructed during 1931 in the Fort ward of the One Town. This is the first Municipal Office building constructed during the British regime. This structure has a striking resemblance with the Collector's Office building.



Fig. 17. Municipal Office

Architectural character. The building is located in between the Victoria Jubilee Town Hall and Hamilton Memorial Masonic Temple on a widely spread hillock offering an excellent view of the harbor. The construction, in axis with King Edward VII market, was made to rectangular symmetrical plan with two storeys having open verandahs all around, projected wings in the four corners and an imposing portico in the mid-front. The building constructed of course stone masonry was left exposed on the exterior but finished in the interiors with lime plaster. Both ground and first floors comprised of a central dodeca hall with two rooms each on either side. In addition, an extra room was built over the portico in first floor. Entry to the ground floor is through a flight of steps from an imposing portico with square solid stone masonry piers. Entry to the first floor is through a bifurcated wooden staircase in a dodeca hall having a clear storey. Steel joists laid in the rooms across the walls and reinforced concrete beams with inserted deep stone slabs above them resting on square columns (single in ground floor and twin in first floor) in the verandahs supported the Madras terraces over them. The deep stone slabs were ingeniously inserted over the beams to create ventilators. A hemispherical dome was erected on a raised octagonal base above the staircase (third floor level). Ample light to the staircase and lobbies was ensured through windows having lunettes installed in the octagonal base. The dodeca hall of 12 pillars is an element rare to the region. Extremely modern in composition with its clean lines, minimalist details and exposed concrete lintels and beams, the edifice depicts the Colonial grandeur of Lutyen's architecture mainly adopted for institutional buildings in New Delhi.

Present utility. The building is hosting Visakhapatnam Regional Centre of 'All India Institute of Local Self-Government'.

Current status. Condition of the building is reasonably good. A verandah, two rooms and a hall similar in dimensions to the original units were added in alignment beside the rear verandah to the left of the building in the ground floor. A structure similar to this devoid of a room adjacent to the hall was also added in the first floor.

14. Jeypore Vikrama Deo College of Science and Technology (Fig. 18)

Historical value. College of Science and Technology built in the Andhra University south campus named after Jeypore Vikrama Deo was opened by His Excellency the Collector Lt. Col. the Right Honourable Sir George Frederick Stanley in 1932 in the presence of the then Vice-Chancellor Dr. S. Radha Krishnan. Later in 1938, Maharajah of Jeypore, Vikrama Deo Varma acted as a Pro-Chancellor of the University.



Fig. 18. Jeypore Vikrama Deo College of Science and Technology

Architectural character. The plan of the building is a symmetrical inverted 'U' shape with ground and first floors besides a staircase block running into four floors at the middle of the structure. The entire structure was built in coursed stone masonry with interiors of the rooms plastered and exteriors left open. A central porch acting as the main entrance together with a staircase block recessing inward divides the building into two equal halves. The porch has semi-circular arches on the three open sides with 'L' shaped wings on either side. A clock displaying in all the four directions was fixed over the staircase headroom upon which a parapet decorated with projected ornate balconies known as "Jharokhas" were built. Each of these balconies protruding out to the four sides of the façade were supported by stone brackets underneath and square stone columns on the sides. Corridors of the two floors of the entire building were decorated with semi-circular arches, square stone columns and precast RCC railings depicting the letters "A" and "U" in an overlapping fashion. The free ends of the corridors of the two 'L' shaped wings were made as closed rooms. Extroverted typology, inclusion of a clock tower in an educational institution and introduction of novel elements such as Jharokhas, brackets and miniature stone pillars were the new architectural styles followed in this construction.

Present utility. The building is hosting the Departments of Physics and Inorganic Chemistry of the College of Science and Technology.

Current status. This building is authentic retaining its significant fabric from the time of its construction.

15. Sacred Heart Church (Fig. 19, 20)

Historical value. This building was constructed in Soldierpeta of One Town in 1932 to cater to the religious needs of the families of Anglo-Indian soldiers in the British army.

Architectural character. The church was designed in rectangular symmetrical plan with a central nave and aisles on either side besides elevation of the front and rear portions of the two floors. The building with semicircular openings was made of rough ashlar stone masonry supported by buttresses. A parapet wall runs all around the building with conical shaped

pinnacles over the four corners of the elevation. The central nave was designed in double storey height with mezzanine floor in the west and altar in the east. This building has two entries, one from the west and the other from the east. While the western entrance is meant for devotees and visitors, the eastern one is meant for the clergy. Western entry is facilitated through a projected and recessing three floor high belfry acting as a portico of the ground floor. This is a unique design adopted by the British Military Engineers in Visakhapatnam for the first time.



Fig. 19. Sacred Heart Church



Fig. 20. Interior view of Sacred Heart Church

Distinct arch openings were provided for the louvered windows in both clear and first stories while aisles were provided with wooden paneled shutters. The Jack arch roof of the nave was supported by “I” sections and stone arches radiating in four directions from the top of the stone pillars. Similarly, Jack arch roof of the aisles was constructed over radiating arches supported by stone pillars. The mezzanine floor accessed by a spiral staircase was supported by steel joists. The most distinctive feature of the building is structural organization of a generously proportioned nave and clear storey followed by the three tier recessed bell tower in the main façade.

Present utility. The edifice is used for the intended purpose as a church.

Current status. The entire structure is in very sound condition retaining the good original fabric. However, the building is under threat due to a vacation notice served to the organization by the VPT for its expansion activities.

III. FINDINGS

Towns Improvement Act of Madras Presidency, 1865 was introduced in Visakhapatnam in 1866. Under this statute, new layouts and infrastructure development such as widening of roads, lightening of streets, establishment of markets, implementation of drainage and water supply schemes were executed. During the Colonial period, newly introduced materials such as concrete, glass and wrought/ cast iron opened up ample scope for new architectural heurism. In fact, during this era, there was a rise in hybrid architectural styles that combined diverse Hindu and Moghul elements in such a wonderful manner that the same subsequently became local styles as pointed out by Nangia (2010) [1]. These new styles manifested as arches, turrets, minars, pitched/ pyramidal/ Jack arch roofs, crenellated parapet, finials and buttresses in a variety of structures, viz., spiritual/ religious constructions, public/ administrative campuses, market places, health/ education establishments and palatial buildings/ bungalows.

Thus, during the present study three broad architectural categories, namely, British Colonial style of 1801-1850, Indo-Saracenic style of 1875-1917 and British Colonial style of 1890-1947 were identified.

British Colonial Style of 1801-1850. British Colonial style of architecture was introduced in the city from the time of establishment of a military station at Visakhapatnam. Gothic architecture along with new building materials (at that time) like glass and iron were introduced. Planning and design techniques used in the construction of large religious gathering places and schools in their home land were adopted in the city.

This kind of architectural style was followed in the initial stages of development in constructions such as St. Paul’s Church, St. John’s Church and St. Aloysius Church.

Indo-Saracenic Style of 1875-1917. A synthesis of Islamic designs and Indian materials carried out by the British engineers in India during late 19th and early 20th centuries is termed as Indo-Saracenic style of architecture. This hybrid style combined diverse elements of the Hindu with that of the Mughal architecture in a playful manner giving rise to pointed arches, domes, spires, tracery, minarets, open pavilions and use of stained glass.

This style is dominant in public buildings such as Mrs. Ankitam Venkata Narsinga Row College, Queen Victoria Pavilion and Maharaja Sir Gajapathi Row Hindu Reading Room.

British Colonial Style of 1890-1947. Assimilation of vernacular/ native skills and designs into British style had led to the evolution of a new school of architecture during 1890-1947. Introduction of bungalow type residential forms with colonnaded verandahs, hexagonal or octagonal bays, stain glass fanlights, Venetian shutters to doors/ windows, carved bargeboards, monkey-tops (pointed hoods over windows), partially glazed and paneled doors, sash ventilators, ashlar masonry for elevations, porches, etc. marked this period. Development of clock towers, light houses, turrets, conical/ cross gable/ Jack arch/ pitched/ pyramidal roofs, Sateri roofs (bell shaped domes), circular arches, crenellated parapet, buttresses, finials, reinforced cement concrete and prefabricated members are the highlights of this period.

This kind of architecture is seen in Turner's Choultry, Hamilton Memorial Masonic Temple, Collectorate building, King Edward VII Market, King George Hospital, Municipal Office, Jeypore Vikrama Deo College of Science and Technology and Sacred Heart Church.

IV. CONCLUSIONS

Colonization of Visakhapatnam by the British during 1801-1947AD had left impeccable signs of urban planning and local architecture that are excellent cum exemplary visual evidences and virtual reminders reflecting the pragmatality of the then military personnel and their families. The British employed local techniques coupled with their native practices to build several structures that stand now as proud and prestigious heritage possessions of Visakhapatnam city. These buildings contribute to the best of all planning methods, materials, construction techniques and maintenance intending them immortality. The only need of the hour is to sincerely take up their immediate protection and conservation for the benefit of the present and future generations.

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