

SEPTEMBER 2010

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GROUND FLOOR
DAY NURSERY PLAY AREA
BOYS GOLF BOYS BADMINTON
1st & 2nd FLOOR
CLASS ROOMS
ACTIVITY ROOM
3rd FLOOR
OFFICE
BOYS BASKETBALL

creating master minds of tomorrow

GENNEXT

It sometimes appears to me that I write my opening piece for Archohm merely whilst I am in Libya. Solitude lends itself to penning down words as you can see for yourself.

I flew from Delhi's new state-of-the-art Terminal - T3 - which is simply HUGE. Of course it is not really complete yet, and the final coats of paint are still fresh; but there is no mistaking the size and scale of the structure.

This being one of those months where I am sorely suffering from writer's cramps - I thought why not write about airports?



Schiphol, Amsterdam's International Airport, opened in 1916, and has a name that literally means 'ship hole' - a reference to the location which was once a lake known for violent storms. Amongst its many facilities are included an art museum where entry is free.



Heathrow is UK's - in fact Europe's - busiest airport. With its controversial new terminal T5, it handles more international passengers than any other airport in the world.



In terms of land area the King Fahd International Airport at Dammam, Saudi Arabia, is the world's largest - occupying some 780 sqkm - or 78,000 hectares or almost 200,000 acres!



Considered to be one of the most challenging airstrips to land at, there were at one point of time only 8 pilots qualified to land at Bhutan's Paro International Airport. Located in a steep valley by the side of river, at an altitude of 7,000 feet - it is surrounded by peaks as high as 18,000 feet - thus making take-offs and landings appear miraculous in the extreme!



Another interesting fact - Andorra (sandwiched between France and Spain) is the world's largest sovereign state to not have its own airport, although it does have a helipad.

As I complete this article - quite aptly whilst in the departure lounge of Tripoli International Airport, I must tell you that which a glance at the adjoining pages would have revealed in any case - that this month we have Sourabh with his views on colours, Murali explaining the Gen-Next school to us, Vijay Patil writing about Malmo's Turning Torso - a building that was admired by one and all on Archotour 3, and S P Gupta - 'Uncle' - to all Archohmites - talking about road lighting.

As a question for all of you who read this newsletter; which is the only international airport that is named after a person who was shot dead at that airport? Unfortunate fame I would say, but that's life for you.

- Kunal Savarkar

FEEDBACK: Please address all feedback to Abhis at archohmwriter@archohm.com

archohm works

The name of the project itself suggests the purpose and motto of the client. The client's brief was clear and precise. The main purpose of the school was to create an environment where kids can feel at home. It's about the next generation, so the measures for a green building have also been taken care of.

Situated in Noida's Sector 62 this corner plot measures 50m x 19.2m. The north and west side are flanked by high rise apartments, with roads along the south and east sides. The four storey building has been designed in such a way that most classrooms face north thus receiving constant good light. Extra care has been taken to design the visible southern and eastern facades.

The signature entrance comprises a centrally pivoted steel gate which opens 180 degrees. The ground floor consists of day care for tiny tots up to 3 years old. The entire rear side of the building is on stilts thus creating a huge semi-covered play area on the relatively small plot. The public axis to the rear side of the building is completely cordoned off for security purposes. We tried to completely utilize each and every space to provide some value added facilities like the water soren, which is placed in the rear setback, a mini golf course - placed in the south setback- and a green terrace in the front half of roof.

The floors above are accessed through a ramp in front and a central core which comprises a staircase, lifts and washrooms for little boys as well as girls. Of course the classrooms are also accommodated on these floors.

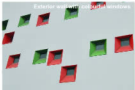
The colour scheme for the building's interior and exterior is inspired from the corporate logo of the school, which is orange and green. The basic concept for the front elevation is to clad it with Corten steel. The core and third floor of the building is clad with black Kadappa stone which looks like a huge mass coming out of the white mass building.

Designing and construction - both occurring in tandem, made this project exciting beyond belief! It has made us think faster and harder than ever before. It's been a big learning curve for me and I thank Archohm for giving me this opportunity.



Day Care Centre, Ground Floor.

S.S.Muralidharan - Murali, a part of the Archohm team for a while now, personifies dedication, hard work and creativity. The Gen Next School has been a perfect platform for him to exhibit his architectural prowess to the T.



High roads are sometimes the big giants that define and give an identity to a space. The Diamond Toll Plaza being clear testimony to the same.



We were entrusted with the lighting design of a toll plaza. During the briefing of the project, illumination of the high-way also came up.

The brief for the design of the high-way illumination was that low height poles should be used due to the restricted means for maintenance of the luminaries. Also, the design called for illumination of the main carriageway along with the service roads on either side. The restriction in height of the poles necessitated the use of three separate sets of poles for each road; the main carriageway and the two service roads. This resulted in three parallel sets of poles, luminaries, feeding cables and earthing system. To top this up, it was realized that the concession agreement called for the use of 'high masts' to illuminate specific areas such as the junctions, way side amenities in the form of truck lay-by and roads over bridges.

The above design pushed the cost beyond the budgeted amount. To add insult to injury, the site conditions called for additional land filling to erect the poles to illuminate the service roads.

The client was left with no alternative but to agree to the use of higher poles; which in-turn allowed the use of higher wattage lamps. The brighter luminaries could cover up the service roads on either side of the main carriageway when the poles were located on its median. This eliminated the use of three parallel rows of poles, thus not only saving substantial cost to the project but also helped prevent the site from resembling a jungle of poles. It also avoided additional cost; otherwise needed to fill up the land to erect the poles along the service roads. The over-all saving in the cost was to the tune of 40 percent, not to talk of the money saved in filling up the land to erect the poles along the service roads.

High masts, in India, are sometimes a political tool to not only light up the city street but also the neighbouring squatters, the vote banks.

Our high mast solution to the highway gave the client a clear escape from a rigid concession agreement and a typically tight 'BOT' project. Thus a peculiar situation, a difficult project courtesy pre-conceived ideas of 'ill informed' decision makers (read National Highway Authority of India) was taken as an opportunity by Archohm, so the solution lay within the problem.

The bridge in these structures don't allow them to be a generic engineering solution. The bridge in these structures don't allow them to be a generic engineering solution.



S. P. Gupta - 'Uncle' to all Archohmites and associates, SPG is doubtless the Bible for everything to do with electricals. It is no wonder then that he is intrinsically a part of all Archohm projects from start to finish.



in focus

On the 18th of July we left Copenhagen for Malmo, Sweden, by road. On reaching Malmo it was the "Turning Torso" that immediately attracted our attention. A 54 storey residential building towering 190m above ground level, the tallest in Scandinavia. The building was distinctly divided in 9 vertical blocks of 5 storeys each. The bottom two blocks were used as commercial spaces and the remaining 7 blocks were residential.

The building has been designed by Santiago Calatrava who is an architect, a structural engineer and an artist all-in-one! Inspiration for the design was drawn from his own sculpture the "Twisting Torso". This was Calatrava's first multi-storey structure - and one that has already won him many awards.

Each floor is a pentagon with the tip pointing towards the Spine. Though the shape and size of the pentagon is more or less the same in plan, the plan rotates 90 degrees as you go from ground to the roof.

Like all Calatrava structures, the structure is resolved with a very simple framework. Each floor slab is cantilevered from a 10m diameter central concrete core having a thickness of about 2000mm at the base reducing to 400mm at the top. The entire vertical load is carried by this central core.

For resisting the wind loads, two steel trusses on adjacent faces of the building have been provided. The trusses share a common chord at the tip of the pentagon. This steel truss works in combination with the only concrete column provided at the tip of the pentagon within the building. The common chord of steel truss and the concrete column are connected with steel members and as we go vertically upwards from the turning spine of the building.

The free ends of the trusses are connected to the building at the junction of the horizontals and the diagonals. The transfer of the lateral forces happens from the truss diagonals and horizontals which in turn transfers the forces to an approximately deep Cantilever beam from the core provided at the floors where the diagonals are connected to the slab. This load from the beams is transferred to the foundation through the central concrete core.

The edges of the cantilever slabs are connected to each other with concrete/steel mullions to prevent differential deflections between the two cantilever edges of the floors preventing damage to the external facade and windows.

The structure looks very elegant and appears to be a large sculpture with space carved out to be used for human habitation and designed to be safe against all natural calamities.

Vijay Patil - This able structural engineer, settled in Mumbai was one of the most enthusiastic members of Archotour 3 - he seemed to be making up for missing out on Archotour 2 with a vengeance. A palpable passion and energy are two things which are evidently common between him and Archohm.



News: Archotour 3 - Continuing the dream that had been successfully made tangible in the form of the previous two Archotours, Archotour 3 saw twenty Archohm staffers and associates on their way to Scandinavia on a 10 day long journey. They traversed four countries-starting at Copenhagen, Denmark, then to Oslo, Norway, they found themselves in Stockholm, Sweden and finally reached Helsinki, Finland.

Along this epic journey they saw some of the most iconic architectural and engineering works of Scandinavia like the Turning Torso at Malmo, the Arken Museum at Copenhagen, the Opera House at Oslo and the Aalto House and Museum at Helsinki to name but a few. En route to these places, several buildings in Aarhus, Malmo, Goleborg, Turku and Jyväskylä were also a part of the itinerary.



Before having gone there, Scandinavia, to us, was the land of the midnight sun, the land of Alvar Aalto and of Ikea, but after the trip, it is evident that it is all this and much more. The camping grounds were much more equipped than the last two times with elaborate dining rooms and operational kitchens. That, coupled with Jyotsna's culinary skills ensured a happily fed army of 20 people. The overnight ferry ride from Stockholm to Turku was supposed to be one of the key attractions of the trip and it was doubtless as wonderful an experience as it was promised to be. All in all, a beautifully enriching experience - a lot to see, a great deal to learn and much more to absorb. A toast to many more such Archotours!!

Upcoming projects: Housing shelter 2: Nabin's dream city and dream client gives another housing project to Archohm. A tight site and an even worse budget brought out the best in us to spring a proposal that would mark another landmark of Archohm in Ranchi.

Jaypee Toll Plazas: Archohm's latest feather in the tolling cap, the prestigious Yamuna Expressway from Delhi to Agra will have its signature plazas designed by Archohm. The concessionaire's, the Jaypee group, will not be disappointed.

Rai residence: Old clients and friends, the residence will be test of sorts for Archohm as it tries to answer every nuance of residential design and detail with these flexible yet meticulous clients.

BIRTHDAYS THIS MONTH:		NEW JOINEES:	
D.D Sharma	First	Pooja Chauhan	Interior Designer
Shahzaad Ahmad	First	Manas Gupta	Architectural trainee
Girdhar Rauteela	Fifth	Tawish Tayal	Architectural trainee
		Anruth	Architectural trainee



design news

sourabh's desk

with time, archohm has clearly shown its preferences. colour selection actually is a process of evolution as one transcends from one phase to another in design life. it shifts within a defined spectrum.

material and technology also effect the colour preferences and availabilities. brick red, concrete grey, jaisaamr yellow, cement red oxide are great examples that lend themselves towards a pigment by the sheer nature of their composition.

geographically and socially, colour preferences have been quite clear. the dutch give the buildings their orange, the swiss show a clear affiliation to red while the swedes go for yellow.

colour is a cool tool in design

we at archohm have had a deliberate move from the standardized cream and brown schemes of wood, italian stones and paints that seem to be a safe and standard specification being stamped all across india by today's contemporary design firms. we have had a paradigm shift to whites, blacks and greys punctuated by the international oranges, reds and yellows. This does not mean each space, each building takes this but this tilt of preference does help in influencing the clients and broadly seeing these colours as the only justified 'logical' and the most obvious conclusion.

the taurian magenta and the vestergaard franden blues are clear testimony of rare times where archohm does not impose itself but believes in respecting the corporate identities.

this issue of colours is aptly supported by this month's feature on general theme of play schools with their vibrant fluorescent greens and oranges, everything else as black and white, the two corporate identify colours punctuate the facade and are liberally but methodically used in the interiors, the blacks of kadappa and the blackboards, the whites of the walls and sanitary ware and the greys of the exposed fair faced concrete and painted wood surfaces are aptly supported by alternate floors of orange and green vinyls and furniture.

to me colours are important but am generally liberal on my likes and acceptance to most bright colours. 'most' means a clear and strong dislike to a few gay colours, so yesterday, a week before my daughter zoya's birthday, it killed to hear her response for the decision on her birthday dress 'papa, my favourite is pink!!!'

something as cosmetic as colours can be an extremely powerful design feature as seen as the modern museum extension in stockholm.

archohm's preference to red white and black as seen at the wiel arets library of utrecht.



editorial

guest thoughts