Shopping Centre News

Planning and designing even ordinary shopping centres, leave alone "world-class" shopping centres or retail-led mixed-use developments, is not everyone's cup of tea. Much like airports, hospitals, stadia and to a lesser degree, educational institutions & hotels, shopping centres are also specialised buildings, and need specialised planners and architects. This article gives you some broad guidelines on what (or not) to do, but cannot replace customised work required for individual projects.

Plan & Design Truly World-Class Centres
in India

By Amit Bagaria

How many Indian shopping centres were actually properly planned before they were designed and built? I can very safely say that, of the 230+ operational shopping centres in the country, not more than 15 were planned properly. If this were not true, why would High Street Phoenix (Lower Parel, Mumbai) need so much renovation/retrofitting every so often, why would The Forum (Koramangala, Bangalore) not have a supermarket occupying at least 10 per cent of its GCA, why would DLF Promenade have been built without any anchor store except a multiplex, why would the first Inorbit mall (Malad, Mumbai) need to have a hypermarket and a supermarket, why would Spencer Plaza die so soon despite being located in the best location a shopping centre could possibly have, why would Triton (Jaipur) be struggling even two years after opening, why would the Esprit store have to be replaced with Nalli at Oberoi Mall (Goregaon, Mumbai) and why would Pepe Jeans be located between six ethnic wear stores at the recently opened Royal Meenakshi Mall (Banerghata, Bangalore)?

The list of badly planned malls is endless and if I were to go on, this article would be more about what not to do than what needs to be done. Some people could argue that some of the malls named above are doing very well – yes, while that is true to some extent, I believe it is equally true that all of them are doing well because of the lack of competition.

Before doing anything else,

the promoters of any shopping centre project must first do a Needs Analysis Study (NAS) to answer the basic question – is a new shopping centre really needed at that particular location and is there a large enough catchment to service the project? I am very proud of the fact that all four operational retail projects handled by Asipac are amongst the best performers in their respective categories or locations and we are yet to see a failure. This is because we are extremely diligent about accepting retail projects handled by Asipac are amongst the best performers in their respective categories or locations and we are yet to see

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projects – more than 90 per cent of the projects that come to Asipac are actually rejected after we do an internal NAS. If we accepted even half of the projects, we would be earning 4-5 times more than what we make today – but the cost of that would have to be borne by the promoters.

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note that 12 sq ft is a nationwide average, so it can go down to as little as 6 sq ft in an conservative low-spending neighbourhood (like most of Ahmedabad or Kanpur) and could also go up to 20 sq ft in a high-spending, yuppie catchment like Gurgaon in NCR, Andheri (West) in Mumbai or Electronics City in Bangalore.

If the NAS proves that there is a need for a shopping centre, the next step is to do a proper Trade & Tenancy Mix Analysis (TATMA). This has to be based on the shopping

habits of the consumers in the primary catchment. A proper TATMA will ensure that one does not open a Chicking or Great Kabab Factory in a predominantly vegetarian area or have 90 per cent of the apparel space dedicated to western wear in a catchment where 84 per cent of women wear sarees. Asipac was criticised by many modern retailers for putting several local ethnic retailers in Mantri Square at Bangalore. In fact, many snobbish retailers refused to come into this fantastic shopping centre for this very reason. Ethnic wear is the best performing category at Mantri Square. We wanted to put in at least 10,000 sq ft more of ethnic wear, but were not allowed to do so. If you don't open India's largest Apple store in Electronics City, where will you put it – in Pune's NIBM area?

in Bangalore.

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The TATMA has to lead to a well thought out Space Program as well as an A&E brief. The Space Program has to define what types and sizes of shops the shopping centre should have and how they are to be spread/located on different floors. The A&E brief has to guide the architects and engineers as to how they need to go about designing the project.

Many promoters/developers still think that all this is not necessary if they get experienced foreign architects or even top Indian architects. Nothing could be further from the truth and let me tell you why. Indian retailers and consumers

are both very different from their foreign counterparts. For example, all retailers in UK accept a width (frontage) to length (depth) ratio of 1:3.5 or 1:4. In India, retailers actually want a reverse ratio – most would be very happy if their 1000 sq ft shops were to have a frontage of 50 feet and a depth of only 20 feet. By that logic, success of a retail store in an Indian shopping centre should be directly proportional to the frontage of the shop. Jokes apart, most Indian retailers Do Not accept a length (depth) of more than 2.5 times the width (frontage). Another huge difference – the average size of a vanilla store in

USA or UK is 2,150 sq ft, whereas, in India the ATD of many vanilla retailers start falling beyond 700-800 sq ft. Customer washroom density needs in India are 2-3 times that of North American or European shopping centres. We have another unique need – separate washrooms for staff, especially the security and housekeeping staff. Another difference is that Indian shopping centres (if they are successful) have much larger crowds than their foreign counterparts.

As far as Indian architects are concerned, the less I say about them the better. They still don't realise that a turning/curving ramp driveway needs a minimum width of 4.0m, or that most Indian cars are not Maruti 800's, or that hypermarkets/supermarkets need unloading docks for full-sized trucks, or that a food court will need water supply and drainage. Their complete disinterest in understanding the special needs of a shopping centre building leads to huge time and cost over-runs, but many penny-wise pound-foolish developers just fail to accept this fact.

The Space Program must actually define the actual washroom needs by type, based on a throughput & utilisation study. It must also define the number of parking spots needed. The urban human population of India is growing @10 million per annum – or 2.5 million households per annum. The urban car population is increasing by 1.7 million per annum. So, there are almost seven new cars for every 10 new households. What does this tell you?

It tells me that it is high time we started getting serious about

GLOSSARY OF TERMS/ABBREVIATIONS USED IN THE ARTICLE

Super Mall: Shopping Centre with a GLA of 108,000 square metres (sqm)
Regional Mall: Shopping Centre with a GLA of >54,000 sqm but <108,000 sqm
Community Mall: Shopping Centre with a GLA of >20,000 sqm but <50,000 sqm; Shopping Centres smaller than 20,000 sqm are referred to as Neighbourhood Malls
F&B Unit: Food & Beverage Unit, including Cafes, Coffee Shops, Restaurants, Express Food Counters in a Food Court
EFC: Express Food Counter; usually a Food Court has a number of independently branded/operated EFCs, with common seating, hand-wash, dish-wash/service areas
FEC: Family Entertainment Centre; there may be more than one FEC in a Super Mall
Lettable: Any space that can be leased/licensed to a third party
Shop: A lettable unit, including F&B outlets, Cinema/Multiplex, FEC, etc
Anchor: A shop with UCA of >20,000 sq ft in case of Regional/Super Malls and >10,000 sq ft in case of Community Malls
Mini Anchor: A shop with UCA of 6000 to 19,999 sq ft in case of Regional/Super Malls and 4000 sq ft to 9999 sq ft in the case of Community Malls
Vanila: A shop with UCA of <7000 sq ft in case of Regional/Super Malls and <4000 sq ft in case of Community Malls
Supermarket: A shop that sells food/grocery & FMCG products, and (in the Indian context) has a UCA of 6000 to 35,000 sq ft.
Hypermarket: A large discount store that sells food/grocery, FMCG & general merchandise, and (in the Indian context) has a UCA of >40,000 sq ft.
UCA: Unit Carpet Area, being the perimeter area of each shop or lettable unit (whether enclosed by four walls or semi open on one/two sides), including columns within the unit but excluding shafts; measured up to 50 per cent of the wall thickness on the back and the sides and up to the front (outside) of the glazing line in the front of the unit
GCA: Gross Carpet Area, or the sum of the UCAs of all lettable units in the mall
GLA: Gross Lettable Area, an area equivalent to the GCA plus a pre-determined loading factor (which differs on a case to case basis) to account for common areas such as circulation corridors, usually equal to the GBA (or super built area) of the building, excluding MLCP/Basement floors
GBA: Gross Built-up Area of the building, including MLCP/Basement Floors
MLCP: Multi Level Car Park
CPS: Car Parking Spots
ATD: Average Trading Density (sales per sq ft per month)

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above are doing very well – yes, while that is true to some extent, I believe it is equally true that all of them are doing well because of the

parking spaces in shopping centres. When I presented a case study at the India Fashion Forum 2005 on how shortage of parking spaces can kill a mall, many people in the audience laughed it off. Of the 125 Saturdays, Sundays and public holidays that Mantri Square has seen in its 13 months, parking has been choked on 107 days. Is this a joke? Who is suffering? Yes, definitely the retailers – but also the owner, as most rentals nowadays are based on revenue share.

If a shopping centre has to achieve an average rent of ₹ 120 per sq ft on carpet area, it needs an ATD of 11 times that amount – or ₹ 1,320 per month, or ₹ 43.39 per square foot per day. Since an average family spend is just ₹ 1400 per mall visit, there need to be one family visit per day for every 32.27 sq ft of carpet area. So, the shopping centre needs 31 families per 1000 sq ft of carpet area per day. Since the average turnover per parking spot is 4.4 per day, a shopping centre would need 7.05 parking spot per 1000 sq ft of carpet area if all days would have equal footfalls. Since Sunday (peak) footfalls are 1.75 times the daily average, the shopping centre would need 12.34 parking spots per 1000 sq ft of carpet area, if all visitors were to use their own transport. If we assume that 25 per cent of the visitors to an Indian shopping centre come by bus/taxi/auto, we still need to provide 9.26 parking spots per 1000 sq ft of carpet area.

Most developers don't even provide one-third of this number – yet they want higher rents. Retailers are equally to blame – they should not sign projects that have less than at least six parking spots per 1000 sq ft of carpet area.

The A&E Brief has to lay down the guidelines for the structural, services and infrastructure design of the project. For any shopping centre to succeed, the functional design should be done "inside out", rather than "outside in", that means, create blocks/bubbles (to scale) of the individual anchor shops and groups/clusters of vanilla shops. Then these bubbles should be assembled (like a jigsaw puzzle) based on vertical and horizontal

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zoning requirements.

A good shopping centre needs to have a floor-to-floor (height of minimum 5.5m on the ground floor and 4.5m on other floors. The multiplex needs a clear height (top of slab to bottom of beam) of minimum 11.0m, and a FEC 6.5m. The parking floors should have a minimum floor-to-floor height of 3.4m.

There should be enough break-out areas to cut the monotony and also to allow the visitors (especially senior citizens) to take rest. Each of these break-out areas could be themed differently and should have minimum seating for 20 people in case of Super Malls, 12 people in case of Regional Malls and eight

people in case of Community Malls. There should also be seating for 4-8 people at different locations (within the circulation spines) throughout the shopping centre.

The most functional and time tested design of the main circulation spine in the case of Super Malls is a double-doughnut (or 8) shape (such as the example of the plan given here), so that there are no "dead ends" and visitors can always come back to where they started from, instead of losing their way around, or being forced to turn around and come back the same path they have already taken – people don't like to do this and all shops don't even get footfalls if this happens.

In Regional Malls, spines or circulation systems shaped like a doughnut, oval or rectangle (such as the one in the plan shown here) are the most ideal.

In the case of Neighbourhood Malls and Community Malls, these design parameters have to be decided based on the permissible ground coverage and the resultant building footprint, as not much more than one central atrium or corridor system may be realistically feasible.

In any case, regardless of the exact shape of the main spine or circulation system, there should be no negative spaces leading off dead-end corridors, such as the ones at the bottom or the centre
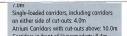

The minimum widths of the main public circulation corridors leading to shops should be as follows:
Double-loaded corridor serving anchors: 7.6m
Double-loaded corridor not serving anchors: 7.0m
Single-loaded corridors, including corridors on either side of cut-outs: 4.0m
Atrium Corridors with cut-outs above: 10.0m
Corridors in front of Hypermarkets: 8.4m
Passages leading to washrooms, etc: 2.5m

left on the plan shown here.

As far as possible, there should be no dead-end corridors and all corridors should loop back. In case of passages leading to public washrooms or lifts, there should not be any shop openings from such passages.

In the case of Super Malls, the architects should design much wider spines and corridors.

Part of the planning process for Super Malls and Regional Malls involves category-wise zoning and clustering. This is especially important for certain categories like maternity & newborn, children, footwear and jewellery. Consumer surveys have shown that most consumers by and large prefer zoned malls, as Indians hate to walk around too much.

Atriums should give a feeling of openness and grandeur. There should be minimum three pairs of escalators connecting each floor (with the floor below and the floor above) for a shopping centre with a floor plate of up to 50,000 sq ft, and one additional pair of escalators for every additional 40,000 sq ft, including escalators installed within multi-level department stores.

The back of escalators can be converted into usable spaces, like

the one shown in the picture here on the right side. The location of escalators should be convenient to go up three floors at a time – so that when the visitor goes up from one level to the second and wants to move on to the third level, she should not have to walk a long distance to get the next escalator. It is absolutely wrong to believe that she will shop more if she is forced to walk more (in front of shops) between two sets of escalators. On the contrary, visitors to malls with such customer unfriendly layouts

usually get frustrated with this kind of inconvenient design and stop visiting such malls when they get better choices.

All Basement (parking) floors should be connected with the Hypermarket floor with a pair of travelators (flat escalators without steps), to facilitate the visitor in carrying a trolley up or down a floor. In case of Super Malls, there could be two pairs of travelators.

The depth:frontage ratio of the vast majority of individual shops (in India) should be between 2.5:1 and

3.5:1. Footwear stores can have a ratio of 4:1, but this restricts their use only as a footwear store, thus removing any adaptive reuse in the future. Anchor spaces can be designed differently, where small vanilla stores are carved out of the frontage of the anchor stores, like shown in the case of Woolworths (one of the largest anchor store chains in South Africa) in the picture on the left here. Restaurants also do not need big frontage.

Every floor of a shopping centre (except the floor on which the Food Court is located) should have at least one "open" café (or other F&B outlet) – if possible, open (no walls) on two and even three sides, otherwise at least on one side, for a floor plate of up to 60,000 sq ft, and minimum two cafes for larger floor plates. These open cafes allow for people-to-people visual interaction thus adding energy to a mall, become meet & greet places and also serve as break-out areas.

Architects should also try to incorporate "open" shops without walls (like the one shown in the picture on the left) near cut-outs or openings for escalators / staircases, etc. This adds much needed relief from the monotonous line(s) of "walled" shops in any typical enclosed shopping centre.

One must also pay attention to the very important fact that the world of retail is moving towards open format shops, with no front glazing or doors, so that the customer (prospective buyer) always thinks that she is welcome inside. This factor should be considered very strongly in the structural as well as services design, as open shops can only be secured by means of rolling shutters, which need to be camouflaged when the mall/shop is open.

Globally, well-planned shopping centres earn between 9-15 per cent of their revenue from temporary hiring/letting of walls, surfaces and other non-floor (non-tenanted) spaces for the purpose of branding, commercial advertising, etc. The architect must keep this in mind when designing the building and try to provide ample advertising opportunities throughout the public spaces in the shopping centre. An

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excellent example is shown in the picture here.

Just as one enters through the main pedestrian entry into a shopping centre, it is always good to have an Information Desk (like a Reception in an Office or a Hotel) and it is good to provide some waiting areas (with seating) next to the Information Desk (see example in picture on the right). Such waiting areas can come in very handy in case someone is not well, a senior citizen needs assistance, or if a child is lost.

Any good mall has to ensure that all new or infrequent visitors can find their way around the mall easily, and find the shops they are looking for. Gone are the days of printing thick mall directories and distributing them to one and all, as not only does this cost a bomb, it is a colossal waste of natural resources. As we are moving towards "green" malls, visitors in modern malls are guided by electronic (often interactive) display Info Screens or Kiosks, which contain a mall map, a directory of tenants and other information. Places should be provided on each floor of the mall (near each elevator bank) for such kiosks or screens on stands, like shown in the picture here.

Any good shopping centre should have several ATMs, with a minimum of one on each floor, one near the Hypermarket/Supermarket, one near each Cinema Box Office and one on each parking floor. ATMs within the retail areas can be very interestingly designed like the example shown here. In the next few years, Cinema operators will start insisting on installing Automated Ticketing machines at different points throughout the mall, so provision must be made for this as well.

Dedicated trolley parking zones (such as the one shown in the picture here) should be accommodated (just outside the hypermarket/supermarket) in the design if the shopping centre has a hypermarket or a large supermarket.

All entry points into the main (air-conditioned) customer areas should be through a vestibule (like

the one shown in pink in the plan of the White House on the right) and such vestibule should have positive air pressure compared with the space it leads into (see plan on right). In Indian climate, the hot and humid air infiltrating from outside condenses as it comes into contact with surfaces that have been cooled by the indoor air-conditioning of the centre, promoting condensation and other problems, including unhealthy air quality. Uncontrolled infiltration can exceed the capability of an HVAC system to manage indoor temperature and humidity. This can create discomfort (too hot, too cold) and indoor air quality problems caused by excessive moisture and mold. Maintaining control of HVAC pressures is key to controlling indoor pollutants and odours. Indian malls have huge HVAC bills because of this problem, which is easily resolved with a small, one-time cost. Vestibules of the type shown here on the left can also be considered.

All public entry points from the street level into the building should have disabled access ramps with a minimum width of 1.0m. There should be 2-3 access points from the Basement car parks, so that customers do not have to walk for long distances within the Basement and also do not choke up only one entry into the Ground (or Lower Ground) Floor.

Depending on the city and its common mode of paid (non-shared) public transportation, the architect needs to accommodate a taxi/auto parking area on the master plan. The ideal number of taxi/auto parking spaces is 20 per 50,000 sq ft of GLA.

Considering all the security measures that one needs to adopt in any public building in today's violent world, it is ideal to design for a number of vehicles backing up one behind the other at the entry for the purpose of security checks.

As merchandise (stocks) need to be replenished frequently, especially in stores such as the Hypermarket, Department Stores, Furniture, Electronics (CDIT), etc, adequate service circulation should be provided, including back entries into

such shops. If possible, back entries should be provided for all shops with UCA of >300 sq m. Please keep in mind that some shops will be receiving goods as large/heavy as double beds, dining tables, 72" TV sets, 400-litre refrigerators, etc, so the service corridors and freight elevators (lifts), doorways etc, need to be adequately designed.

A hypermarket needs dedicated docking/unloading bays of a size no less than 14.0m (width) x 4.0m (depth) x 1.0m (height), ensuring that the top of the dock is level with the finished floor of the unit and that the level of the driveway at docking point is 1.0m below such top of the unloading dock level, for two 16-ton HCVs, four MCVs and four small freight vehicles such as autos. Each department store, furniture store and CDIT store will need (shared) unloading bays for one HCV, two MCVs and two small freight vehicles. For all shops not connected directly with an

unloading bay, common bays are needed for one HCV, 3-4 MCVs and 6-12 small freight vehicles.

Service/freight lifts have to be different from passenger lifts and should be of 1500/2000 kg capacity, with big car sizes to

accommodate furniture, double-door refrigerators and similar merchandise. Passenger lifts should be of minimum 20-pax capacity (regardless of size of the centre) and should ideally be in a Lift Bank with no less than three in each bank. For

large centres, one should consider passenger lifts with 32-pax (or higher) capacity.

Washroom sizes (for visitors/staff) have to be computed for each individual centre based on its size and floor plate. Ladies' washrooms

should have provisions for microwave ovens (to heat milk) and changing mats like shown in the picture below, with a small booth (with curtain) for breastfeeding of newborns.

The multiplex (Cinema) will need

larger washrooms, as several people go at a time (during intervals, or when the movie ends). There should ideally be a set of washrooms just outside the cinema's exit corridors, so that people wanting to visit the washroom and exiting the mall after

a movie don't have to go back into another area in the mall just to use a washroom.

Structural columns in parking areas should be designed in such a way that they help a person locate a parking zone by colour and letter coding, like the example shown in the picture here. In addition, directional arrows painted on the road surface should clearly guide the driver along one-ways. The second picture here is a fantastic example of how parking areas can be designed. Most Indian developers and architects ignore this space – remember, this is the first impression that a new customer gets of the mall, and also the last impression for every vehicle owning customer.

Staff lockers and a staff cafeteria are required and these are often forgotten or ignored by most architects and developers. Happy staff results in happy shoppers – which means, greater revenue for the tenants and therefore, for the developer. The Space Program should have the exact sizes for these facilities, based on a computation of the number of staff (of the tenants and mall management/vendors) that will be employed at each centre. There should also be a drivers' lounge and washrooms in the basement floor(s).

Most retail stores will generate plenty of waste (such as packing materials) regularly. There should be a large Dry Garbage Room (100 sq ft for every 2000 sq ft of trading area). A trash compactor (like the one shown here) needs to be installed in all Regional Malls and Super Malls.

The façade should give an appearance of largeness. The architect should leave maximum wall surfaces as plain plaster, for external tenant signage, as per the two examples shown below. There is no need to put any glazing or windows on external walls which have a shop directly behind – glazing only needs to be provided if the immediate area behind that part of the façade is open (a café or food court seating area or an atrium).

Angular building views from

different approaches to the shopping centre (for vehicles approaching from both directions) are to be clearly defined. If possible, it is a great idea for signage towers on both ends (corners) of the front of the site, abutting the main road.

The architects and services consultants must understand that most F&B outlets will have live cooking. Therefore, these will need fresh air & exhaust (hoods), water supply, drainage and provision for wet and dry garbage disposal. Also provide for several electrical outlets (15/30 Amps) in each outlet and a common Gas Bank, with piped gas, including each EFC in the Food Court.

The Food Court should have a common dish-wash/drying-cum-storage area of 750-1000 sq ft, depending on the size of the centre. The number of seats required in the food court will differ from centre to centre, based on the GCA and the

projected footfalls. A food court should also have a hand-wash area, separate from the washrooms. The service passage(s) behind the EFCs should be minimum 2.75m wide, and even 2.50m is a compromise.

All the auditoriums or theatres in the cinema (multiplex) should have separate entry and exit points, and the exits should lead everyone back into the shopping centre. If possible, one should try to provide for a "Drive-through Box Office", so that people can drive into the site and purchase cinema tickets in advance without having to go into the shopping centre. In any case, all types of centres must have a Box Office on the Ground Floor, facing and opening onto the main road.

In Regional Malls and Super Malls, there should be minimum parking space for 60 hypermarket carts (trolleys) on each of the basement / MLCP floors, broken into three clusters of 20 trolleys

each on every floor. In Community Malls, parking space is needed for 12-16 supermarket carts on each basement/MLCP floor. All common areas including pedestrian movement areas in the parking floors should have smooth flooring to facilitate easy movement of these carts without damaging their wheels.

Multi-level anchor stores will need vertical circulation to connect each of the floors vide a pair of up & down escalators, one eight-pax passenger elevator and a customer staircase.

When designing a new centre, one has to be very careful about the structural grid system. Many Indian centres have erred on this front. The column grids need to be designed keeping in mind the most efficient grid for parking spots in the basement floors. It is our experience that a grid of 8.4m X 10.8m works best, as it allows for

different sized storefronts on the upper floors, while three cars fit easily into a 8.4m grid and four fit well in a 10.8m grid.

It must be kept in mind that different types of users in a shopping centre have different electrical load requirements. While most vanilla stores can do with about 6.5 watts per sq ft, a multiplex typically requires 45 to 55 Kilowatt per auditorium, a CDIT store 12-14 watts, a hypermarket or supermarket 10-11 watts, while department stores and jewellery stores need 8-9 watts per sq ft. A good shopping centre must have 100 per cent backup power with an automated changeover system, which comes on within 15 seconds, so that lifts and escalators with people on them do not stop suddenly. Developers of shopping centres should provide cabling up to every unit for CCTV, PA System, Mall Radio, DTH TV and High Speed voice and data communications through multiple service providers.

As we now live in the "go green" era and need to be environmentally conscious, paramount importance should be given to energy saving features. While there are a number of technologies that can be used for different systems in a shopping centre, some of the simpler initiatives would be to use T-8 lamps with electronic ballasts as much as possible. Compact spots should be used instead of incandescent accent lights (spots).

For retail store lighting, medium to high general lighting, 270 to 750 lux, is appropriate, combined

with accent lighting. The accent light level should be five times higher than the general lighting. Visual merchandising scenes may be highlighted. A neutral colour temperature, 3500k to 4100k and high colour rendering, at least 75 CRI, encourages the customer to browse leisurely through a department. Maximum attention is directed onto the merchandise. Triphosphor fluorescent, incandescent, and color-improved

high pressure sodium and metal halide may all be appropriate. Perimeter lighting of wall displays is important to add a spacious feel and to accent the merchandise. Fluorescent lamps behind a valence are most popular. The ends must overlap at least by an inch to eliminate dark spots.

HVAC consultants also need to understand the specific requirements of a shopping centre. The special needs of the food court areas, such as odour control, outdoor air requirements, kitchen exhaust, heat removal, and refrigeration equipment require special attention. Depending on the type of shop, a tenant may maintain either a negative or positive pressure relative to the

common areas of the shopping centre for odour control. The centre's air distribution system typically maintains a slight positive pressure relative to outdoors. Exterior entrances need vestibules with independent HVAC systems. Most tenants are happy with 1.0 TR per 200 sq ft of UCA. Some insist on higher tonnage. Obviously, units consuming higher power (such as electronics/CDIT store) will generate higher heat and

may thus need higher tonnage. Chilled water should be delivered at the units/shops at 6.5°± 1°C so that the temperature in the shop is maintained at 22.5°± 1°C. The HVAC consultant should work towards better energy efficiency. Cooling tower heat exchanger economisers, heat pumps and thermal storage systems should be thoroughly investigated.

Shopping centres also have unique water services requirements when compared with other types of commercial buildings. Water supply and drainage is required by all F&B outlets, multiplex, most types of FECs, hypermarket/supermarket, salons, spas, gyms, jewellery stores and eyewear stores. Since so many different types of retailers

require water and it is very difficult to predict what store may come where, as the shopping centre develops, it is safe to provide for water and drainage in all stores.

The Food Court, restaurants, cafés, etc, have many other unique requirements. For example, they need piped gas (you can't really have cylinders constantly moving up and down a shopping centre!). They also need grease traps and exhaust ducts.

If the design team (ideally comprising the retail consultant, project managers, architects, letting managers, services consultants, signage consultants, parking operators, housekeeping agency and owner's representative) works in cohesion and follows these basic guidelines, they can together create a world-class shopping centre. However, apart from the technical requirements, the design team – and especially the architect – needs to always remember that customers make a shopping centre successful and not developers, architects or retailers. And customers will only come back frequently if the experience in the shopping centre – either while they are shopping or visiting the washroom or parking

their car or even just walking around – is a happy experience. If they often get lost trying to find their way around, or have to stand in long queues for lifts/washrooms, or have difficulty in getting in or out, they will stop coming back the moment a better mall opens nearby.

Ultimately, it is very important for any shopping centre (especially Super Malls and Regional Malls) to try and be everything for everyone. If the kids are happy playing a wide variety of games or taking different types of rides, grandparents are happy with colourful break-out zones and can kill time simply by visually connecting with the youth, if women can get a facial done while the man plays a game of virtual cricket, all this will increase family visits and average dwell time, and people will generally shop more.

If shopping centres of the future can provide everything that a family needs after office/school hours – shopping, leisure, entertainment, dining, banqueting, socialising, banking, sports & recreation, hobby/educational services, healthcare/wellness, etc, this will automatically lead to higher footfalls and more balanced usage seven days a week. ●

About the author:

Amit Bagaria is founder chairman of Asipac Projects, India's leading mall development consultant; Asipac Mall Services, among India's fastest growing mall management companies and Men & Boys, the world's largest chain of retail stores for men's cosmetics, skincare, hair care and grooming products.

As a consultant in this field for 15 years, Bagaria has led the planning and design of projects of over 18 million square feet. His first large mall project to get completed is Mantri Square (Bangalore), one of the largest operational shopping centres in India. Amongst other projects totaling over 6.0 million sq ft, Bagaria has recently completed the planning & design phases for two supermalls – the 1.7 million sq ft City Capital Mall at Hyderabad (claimed to be the largest shopping centre under construction in India) and the 1.47 million sq ft Neomall at Bangalore (the second largest).