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www.thamesandhudson.com £24.95

ISBN 978-0-500-28923-5



NEW ARCHITECTURE IN THE EMERGING WORLD
Projects by Andrew Bromberg, Aedas



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Introduction by Aaron Betsky



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prologue and epilogue by **larry rouch**
foreword by **ralph lerner**
introduction by **aaron betsky**
essay by **joseph giovannini**
edited by **oscar riera ojeda**

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1.

To get to Andrew Bromberg's office, you have to undergo a very Asian experience. Take a subway to Quarry Bay, arrive at the bottom of an older building on a street with stores packed close together, cross an elevated walkway and walk into an air-conditioned maze of corridors that cut through the bases of a group of high-rise towers. Escalators negotiate rises and falls in floor levels, shops sprout out of the angled intersections of different structures, art blossoms on granite walls, and glimpses of older residential buildings reflect off the expanses of glass. Find your way to the right elevator bank, push the button to make the right conveyance appear, rise up to a high floor and find yourself in a world of white walls, curtains, receptionists poised over ledges and monitors beaming out the latest news. Walk into the design studio, and you find row after row of a polyglot collection of mainly very young architecture enthusiasts staring at screens while outside cargo ships make their slow way between the steep green hills from which needles of human habitation rise. This is Hong Kong, and this is the world in which Andrew Bromberg and his team work.

It is a world with certain important characteristics. First, it is, obviously, urban, but it is a city whose scale and intensity far exceed the ones for which, until very recently, traditional rules, theories and models existed. Second, it is a sprawling urbanism: not only out towards the periphery and into the landscape (Hong Kong and Shenzhen are already almost one city, and soon the whole Pearl River Delta will be one agglomeration), but also internally, as the traditional borders between functions, buildings and districts blur. The city no longer consists of objects that together create a much larger object, but of interpenetrating zones and forms whose intensities ebb and flow.

Third, the spaces most people inhabit in such cities are conditioned. This is literally true as much of the globe's most intense growth has occurred in zones with a hot climate, but also socially and certainly economically speaking. Your use of the city is dependent on your economic function, but also on how

you are dressed and behave. The city's interiors are reserved for those who belong, and the sliding glass doors admit only those who have a proper place within. Those who do not belong roam the streets; outsiders even if they are in the city's core.

Fourth, the urban environments that have grown up in this manner necessitate dense and intense moments of use. At the core of the city is the computer screen, fed with an array of data; the store or restaurant, which are the end-point of often global distribution systems; the bedroom, nurtured and cocooned by myriad technologies; and the place of spectacle, where more technological and economic struggle produces moments of visual intensity. The containers for these controlled explosions are shrink-wrapped in cocoons as tight and cheap as the designers and developers can make them. They advertise themselves by appearing slick and minimal; as they are, while sporting the sort of inhuman, robotic appearance that can only come out of the same sort of systems which have precisely these characteristics.

Finally, this urban environment is generic in that it consists of elements that are present around the world. The competition for these things, whether they are goods or buildings, is intense, and marks the struggle between different urban areas to define themselves. While some of the largest and most successful cities, which have grown exponentially in the last few decades, are enlargements of existing megalopolises, most of them, from Hong Kong to Singapore to Dubai, are almost instant phenomena that have grown up out of what were, a century ago, small villages outside of the major areas of development. While this is true of every generation of cities produced by the industrial revolution, whether they be Manchester, Liverpool, the Ruhr area, Detroit, Cleveland, Los Angeles or Tokyo, the speed and scale of the expansion of this latest crop of urban centers, as well as their distance from traditional centers of growth, has been of a different order.

It is within this city, perhaps unrecognizable as such for those looking for the likes of New York or Chicago, let alone London or Paris, that Andrew Bromberg works. He sees his task as contributing towards the growth and success of these cities, while delivering an efficient package that is still recognizable as an architectural product. To do this, he must use the logic of the technology, global culture and sprawling form that has produced the urban fields in which he operates.

2.

As I noted above, the combination of conditioned intensity and sprawl is central to this environment. On the one hand, buildings are increasingly defined by the need to create as efficient an environment as possible. On the other hand, they appear not only in a physically dispersed space, but also as nodes within networks of transportation and data dispersal and thus are, in a sense, three-dimensional storage and retrieval systems. The question, then, is how they should appear. What contribution can architecture make to an almost automatic process of condensation and so reduce the anonymity of such containers?

On top of these two questions, an architect such as Andrew Bromberg, who is based in Hong Kong and whose work appears mainly in the "new" cities that have arisen out of these forces, has to figure out whether he can find an identity or sense of place in these sprawling collections of nodes which seem to be the same everywhere. What imagery can he draw on, what will make the products his team creates distinctive and saleable, while also responding to whatever traditions, specificities or futures he might be able to draw on in the locations for which he designs?

If we look at the first of these conditions separately, we might notice that what we think of as architecture is hard to find. First, creating an efficient space means maximizing the amount of square footage of a quality that is safe and usable with the mini-

mum amount of capital investment. There are, quite simply, formulas for this. On top of the traditional calculations of floor area to core ratios, come safety regulations, and bubble diagrams. Architects these days must contend with software that tells them how to maximize area and minimize material use, not to mention the calculations that developers use before they even hire a designer. Floor and even whole building configurations become standardized, their variations predetermined by a meta-calculation of relations between all of the financial and contextual formulas to which they must respond. Towards the end of the process, value engineers and other cost cutters tend to leech anything to which a use value cannot be assigned out of the design.

The only thing saving buildings from complete and interchangeable anonymity is that fact that developers in particular are often driven as much by ego and risk-assumption as they are by rational considerations. Bromberg's clients, in particular, are quite often entrepreneurs, rather than the sort of anonymous corporations that today dominate more saturated markets. They believe that they can find value where others have not, and are often enough successful.

They also believe that they must create a "product" that is distinctive, both in terms of how it appears and what it delivers in terms of space and amenities. Architecture thus becomes a kind of validation of place on the one hand, and a clever way of creating recognizable products on the other.

In terms of building in sprawl, developers must thus identify the location for the next node. This used to be a question of building near ports, the entrance to mountain passes, river crossings, or major intersections of natural travel routes. Then it was a question of looking for major highway interchanges, the presence of flat land suitable for development, balancing distances between previous developments, shifting demographics, and even such arcane issues as the presence of major power sources or golf courses. Now, optimal locations are even more difficult to ascertain, especially

in the new cities of Asia and the Middle East. What makes the issue even more difficult is that sites are quite often designated by governments. This has been true in Hong Kong for many decades, and is also the case in Singapore. In cities such as Dubai, the rulers let a few firms compete against each other, but only in zones they have assigned. It is within such areas that sub-developers must find ways of distinguishing their product without any natural or man-made references. In rare cases, the overall developer needs a strategy like Emaar's production of the ridiculously inefficient, but highly noticeable, Burj Khalifa.

Bromberg's 2005 design for the Boulevard Plaza next to the Burj Khalifa is in this case more typical, as it involves a pair of buildings whose height and placement are the result of overall development considerations (the twin towers are part of a build-up towards the central exclamation point, and also serve as one of the circular development's gateways). Given this starting point, the buildings must have enough character for the developer to market them with some conviction and success.

The placement of such buildings in what is – at least from the developer's perspective – a tabula rasa, means that their function must also be interchangeable. Why is one building a condominium, a hotel, or a set of rental apartments? Or why is it an office building, either for headquarters or back-office support? Could it even be some sort of storage facility for data or goods? The possibilities are in some cases completely open, and the function an architect assigns to a given plot depends on a combination of market analysis and guess-work.

At the intersection of these concerns lies the fact that such speculative structures have to be part of an overall picture of dynamic development. The proliferation of Free Trade Centers in the 1980s started this trend: governments designated specific zones where nodes within global sprawl would be placed, and these areas had to serve business people with a variety of structures, including not only office buildings and storage areas, but also hotels, longer-term residences, shopping, restaurants, and even recreation. All of these pieces had to be related and connected. This was also true for newly designated urban areas such as Canary Wharf in London or the various planned developments around the Bay in Tokyo.

In such a situation, which Hong Kong and Singapore again pioneered in the 1970s, a building is in essence a fragment of a whole, but that whole has no coherence other than its containment in a given site. Moreover, the buildings have to be recognizable as being part of the international network: they have to proclaim the fact that they are modern, efficient, conditioned, secure, and plugged into infrastructure. Collectively, they have to look like a node. They also have to contain the sort of spaces that the people who control (through demand or development) such facilities, recognize. Not only do the office floors and hotel rooms have to be standard, so that in the middle of the night the jet-lagged traveler knows where the bathroom is, but there also has to be a food court, swimming pool and a branch of a well-known purveyor of suits or shirts.

Thus the architecture is, again, to a large degree pre-determined, and it is no coincidence that most such developments are designed by a relatively small collection of "alphabet soup" firms (companies whose name is made up of the initials of the original or current partners). It is only in smaller, local developments that other designers have a chance to obtain commissions, and some deviations in function or character are possible. In most cases, however, the locals are trying to look and act exactly like their international models. All this, by the way, comes without mentioning the monocultures of mass housing developments that make up the anonymous meat of much sprawl, whether they be suburban homes in the United States or the apartment slabs of Asia. These developments feature, quite simply, no architecture whatsoever. There is only the environmentally and socially unsustainable production of dreary space.

The one place where the nature and thus the character of new construction is not either completely automatic or generic, is in the creation of the infrastructure that ties all these nodes together. Airports and high-speed train stations have become the locations for the most heroic and monumental architecture of the early 21st century, eclipsing government or business headquarters, as well as cultural institutions. This is where identity is set and where money must be spent on something more difficult to define than work, living or even play, namely the gathering, waiting and entertaining of large groups of people. These nodes become celebrations of the very nature of sprawl.

A subcategory of such nodes consists of attractors that do not just facilitate movement, but act as a kind of counterpoint to all that to and fro, while also giving locations an image to go with the node. These include the new display centers, such as multiplex cinemas, concert arenas, theaters, sports venues, and the new breed of mega-churches. Each of these pregnant volumes, only filled part of the day, or sometimes part of the year, serve as visual anchors within sprawl, and generate a host of ancillary activities and thus structures around them. They are fundamentally different from previous entertainment venues in that they integrate such functions more and more into their actual structures. In that manner, they are more like medieval churches, with houses built into their flanks and commerce occurring within their side aisles.

What is most remarkable is that these new gathering spots have as little connection to their place as any of the new skyscrapers that serve as beacons, the masses of residential and office development, or the shopping malls which form the backdrop and the catchment areas for such exceptions. As a result, there is a fundamental disconnection between form and content. These structures are speculative in the most fundamental sense of the word, built in the hope of attracting, however fleetingly, inhabitants to sleep, work, or recreate within them. They do not come out of a community, nor do they, in any concrete sense, create one. They only make a temporary gathering place for a particular attraction that will be gone in a moment.

Community, then, exists in a kind of limbo state, in which everything is the same, and everything is movement. If meaning, coherence, or even mere persistence appear, it is as if by chance. These new attractor cores are also symbols of the world they serve. They create a false and ephemeral sense of belonging. What remains instead, more than anything else, is what humans can (so far) not control: the geography and climate that frame distant vistas, determine the vegetation decorating the fringes of these structures, create fissures within the fabric in the form of mountains or rivers, and in general remind one that they are still in a particular place with a specific, though often suppressed, reality.

3. This, then, is the landscape within which an architect such as Andrew Bromberg works. It is one of sprawl, with a coherence that is fleeting, forms that are generic, filled with conditioned spaces and yet unmistakably urban in its density, and haunted by a specificity of place. It is a lot like where he works physically. In the decade that Bromberg has devoted to this space, he has tried to develop methods to make a meaningful architecture out of just such a situation.

To do so means, first respecting the rules of engagement. Bromberg prides himself on his ability to deliver office buildings, residential towers and now infrastructural nodes that are as efficient as anything that exists in the cities, such as Hong Kong, Dubai, and Singapore, in which he works. As a result, each of his buildings balance an experiential pursuit with a tightly packed container of conditioned space whose form is defined as much by international regulations (from standardized building codes to the formulas developers use to determine optimal floor area ratios, occupancy loads, and costs) as it is by the whims of any designer.

Bromberg's response has been to stretch, twist, mix up, and deform the elements he knows must be his building blocks in order to rearrange or transform what are otherwise standardized parts. In trying to escape from the confines of the parameters within his work, he uses his own design skills, coming up with strong forms. He then utilizes the same technology of standardization, which is in the main the result of computer aided design and construction programs, to further develop these designs. In this, his technique is fundamentally different from that of those architects who either mainly concentrate on creating exception structures such as cultural institutions, or who see their task as adding something different to the structure – an unusual skin, a cloud of ancillary program, or a non-functional structure. Instead, his work has more in common with the manner in which the makers of such standardized buildings, themselves often multi-nationally operating firms of a large size, attempt to distinguish their products. This in itself is not that surprising, as Bromberg directs a small studio that exists within the much larger Aedas design firm. Yet his ambitions are to be able to manipulate his conditions in a way that will enable him to achieve the same



shadow boxing





If travel today is more predictable than it used to be it can still be revelatory, especially for the adventurous. By any measure Andrew Bromberg has led a peripatetic and adventurous life, having traveled frequently to areas where luck and karma served him better than maps and itineraries ever could. Beginning in his late teens Andrew went on several tours of Europe, including Greece, Turkey and North Africa. During and after university he undertook extended tours 'elsewhere', to Singapore, India, Nepal, Vietnam, Peru, Myanmar, Thailand, Cambodia, Hong Kong, Brazil, Kuala Lumpur, Japan, Sydney, Mexico and, after re-locating to Hong Kong in 2000, to Korea, Macau, The Philippines, Portugal, Hungary, Russia, the UK, Kazakhstan, Poland, Belgium, China, the UAE, Oman, Lebanon, Egypt, Jordan, Norway and Finland. Certainly most of the later trips were related to business, but the excursions prior to Andrew's relocation to Hong Kong stemmed from Andrew's abiding interest in being directly engaged in the rhythm of vernacular peoples and cultures, especially those furthest from his own.

So what, you may fairly inquire, may we surmise is the takeaway from these adventures for an architect whose projects today are global, enormous and, for the most part, driven by relatively narrow development priorities? From conversations one can see that, despite the formal and very masculine vigor apparent in Andrew's projects, he designs with the pedestrians and inhabitants of the projects principally in mind, primarily



selected projects

west kowloon cultural district 44

hku space 70

xian master plan 80

sheth headquarters 92

pentominium 102

arabian performance venue 118

civic, cultural & retail complex 130

remizovka master plan 160

entertainment resort 172

pazhou exhibition complex 182

kutuzovskiy prospekt 204

khor dubai 214

aerovokzal 224

towers of arabia 240

fusionopolis 4 250

west kowloon terminus 266

All these theatres and museums cluster between the waterfront and the central promenades and have frontage to at least one major piazza. The Performance Arena was located deliberately to the north to benefit from a close proximity to the existing Kowloon Mass Transit Railway station for ease of access and egress.

the master plan: strategic planning

Powerful, iconic architectural forms rise up out of the central promenade, revealing the diverse cultural activities inside. Great care has been taken to ensure that the West Kowloon Cultural District will not become a localized cultural ghetto, but a genuine district, where the diversity of use creates activity that starts in the morning and spreads long into the night.

Activities have been added which would best extend the hours of use. More than 12 resident artistic companies will be given luxury purpose-designed facilities in the district, and these will bring with them the normal artistic activities – daytime activities of rehearsal and set, building and discussion – as well as the normal evening activities associated with many performing arts groups. The museums and other venues have been designed with great airy spaces in the foyers and halls and galleries. This will give them opportunities in the evenings and nights to host parties and receptions as well as large galas.

Even with the increase in the evening activities of the museums they still have primarily a daytime cycle of activity whilst the 140,000 square meters of performance venues would see their major excitement at night. Mixing the two types of venue into a single cultural cluster will create an energy that will extend far into the night.

other buildings and facilities

The landscape is formed into three areas – the north headland area of hotels, a conference centre and residential developments; the lively eastern area, a place for shops and homes, and the central cultural area itself.

Food and beverage outlets line the waterfront promenade, and are intermixed with the cultural venues. An automated rail transport system runs beneath the waterfront promenade, commanding its own views across the harbour. Five stations serve the five piazzas off the waterfront promenade and the line continues onwards to make a connection with the Kowloon MTR.

Reinforcing the vibrancy and diversity of this special place, there are four linked retail malls to the north of the central promenade and the central promenade itself becomes a kilometer-long pedestrianised shopping street with shops, restaurants and entertainment. The retail experience continues into all the venues as well with museum shops, restaurants, cafes, bars and venue-themed gift stores.

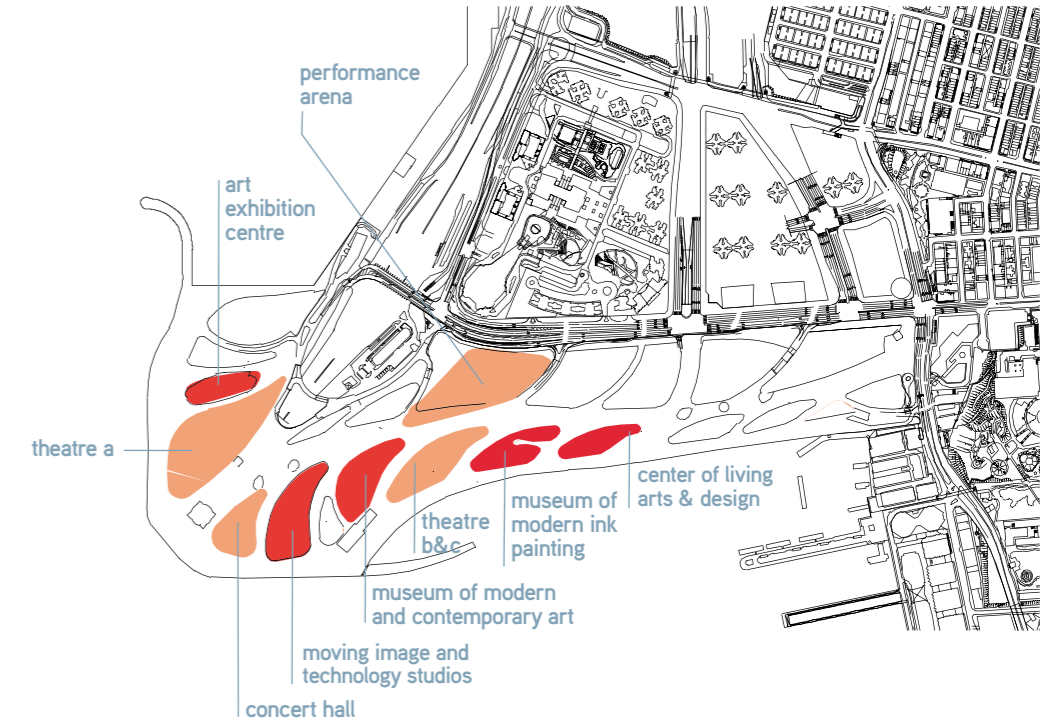
museums

art exhibition centre	11500 sqm
moving image and technology studios	22800 sqm
museum of modern ink painting	20700 sqm
centre of living arts & design	14000 sqm
museum of modern and contemporary art	33700 sqm

performance venues

theatre a	2000 pers
theatres b&c	1320 pers
concert hall	1750 pers
performance arena	10000 pers
water amphitheatre	5000 pers

- performance venues
- museums



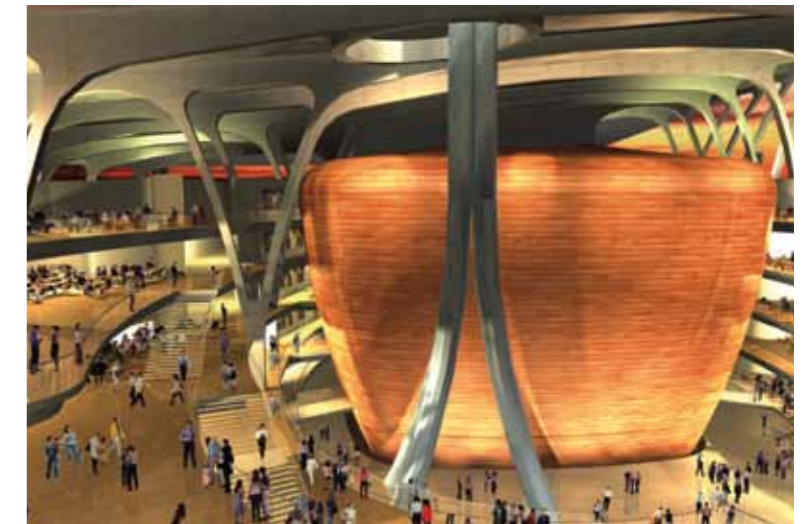
Momca. Museum Of Modern And Contemporary Arts
33,700 sqm



Mits. The Moving Image And Technology Studios
22,800 sqm



Clad. Centre Of Living Arts & Design
14,000 sqm



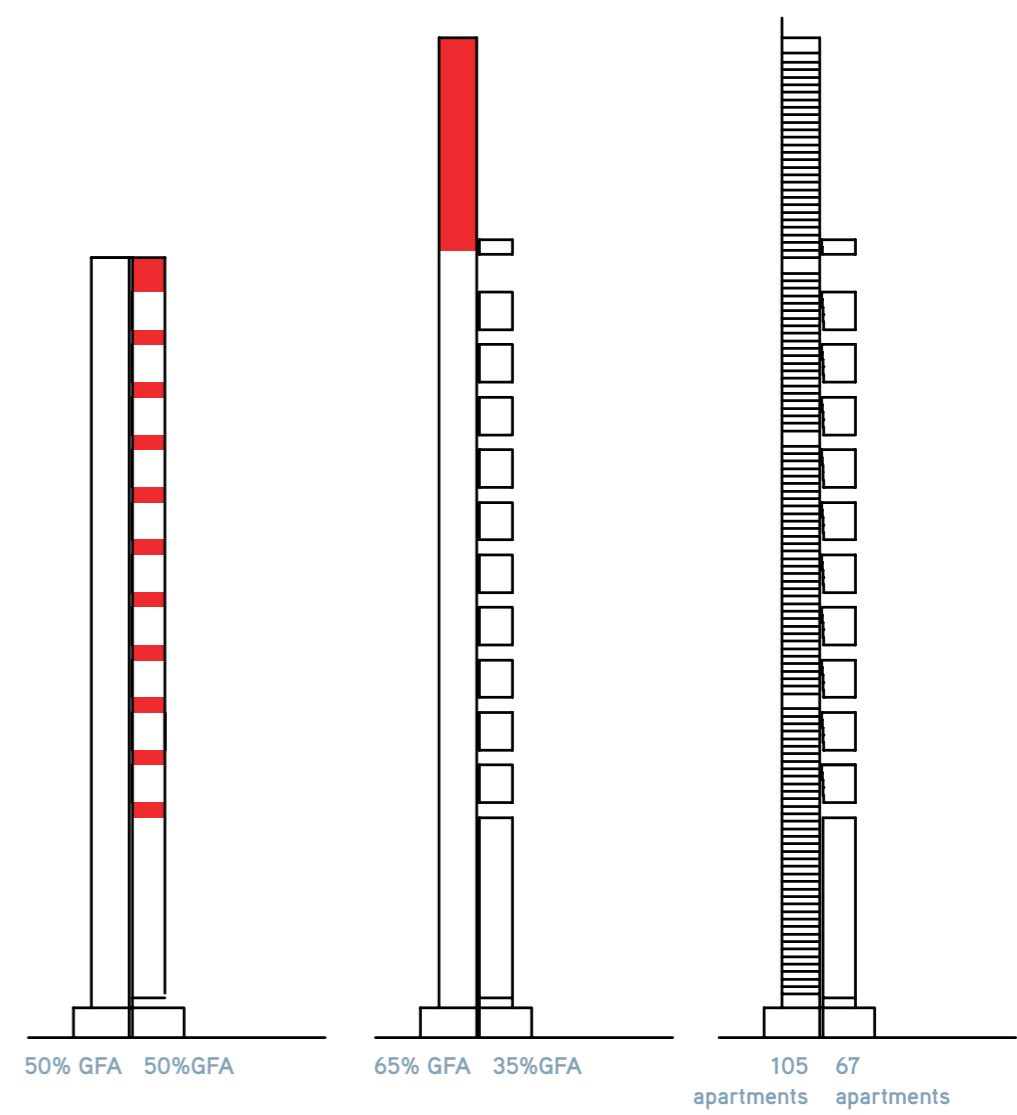
Theatre A. Art Exhibition Centre



master plan at park level



Concept of repositioning area from one side of building to the other where views are more open. Sky gardens are then introduced on the opposite side to give more value to units with less view.





arabian performance venue

opera house/mixed use

client: sama dubai llc

location: dubai, uae

usage

residential
0 m2 0 sqf

hospitality
30287 m2 326006 sqf

office
0 m2 0 sqf

retail + f&b
16398 m2 176506 sqf

landscape
159221 m2 1713841 sqf

theatre
98909 m2 1064648 sqf

total area: 304,815 m2
3,281,000 sqf

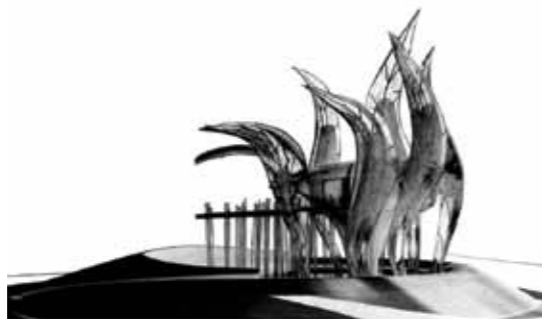
= 2500 m2 / 26910 sqf

status



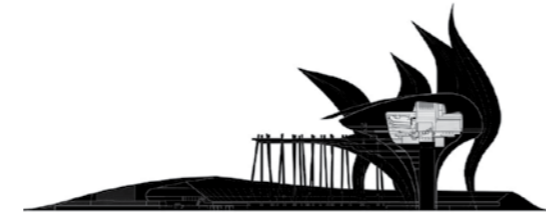
lagoon's master development on hold

process



goals

To achieve a cultural complex with a civic presence and stature powerful enough to hold its own against the backdrop of Dubai's unconventional commercial buildings.

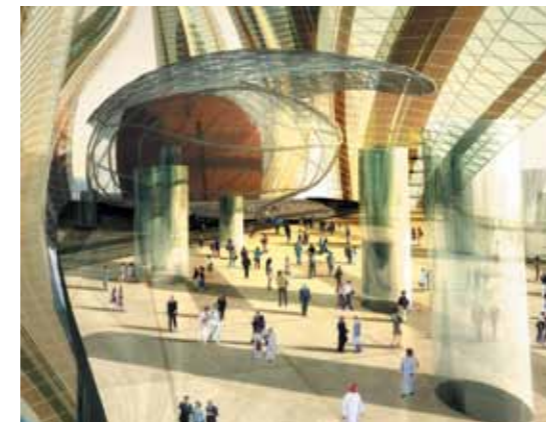


challenge

The client requested that the building become the first image one thought of when considering an "opera house"—in their minds, replacing the Sydney Opera House.

play

The foyer for the opera house, located 100 meters above the lagoon, is also an enormous public viewing platform in the middle of a bird sanctuary. Access to this platform comes through 40 glass tube elevators originating under the lagoon.



project description

Surrounded by the desert sands and occupying its own island in the middle of a nature reserve, the Arabian Performance Venue is organically tied both to its context and through its use. The venue is experienced through an entry sequence of surprise and discovery.

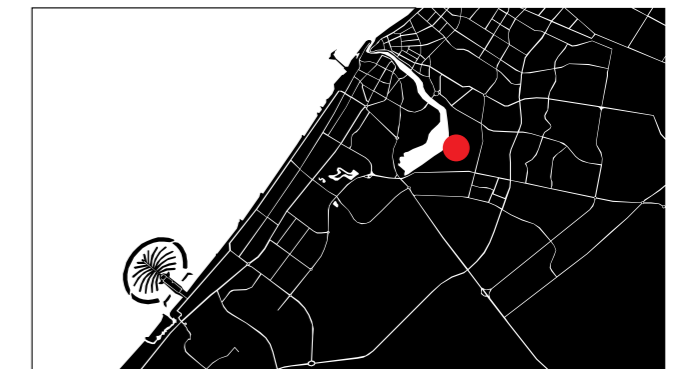
The island is connected to the mainland via long span bridges for both vehicles and trains. Also approachable by boats, the entrances all cut into the mounded landscape to open into a water filled cavity. The walls, which contain the water, become the main entry foyer to the complex and a museum exhibition center. The museum rises in the center and drops on its sides, opening out and focusing on the lagoon populated with people engaging with nature and its wildlife.

Dropping down from the main foyer, the lower concourse opens up and moves underneath the water into a darkened space dappled with reflections from the water above. There are restaurants off to the side and a "black box" drama theatre near the center of the space. Inside this sedate world there are forty-four splashes of light from above. The light emitted comes from glass tubes which house forty-four elevators. Entering the elevator one rises out of the water and above the walls defining this inner space. They open up to allow for 360 degree views of the surrounding landscape and waters.

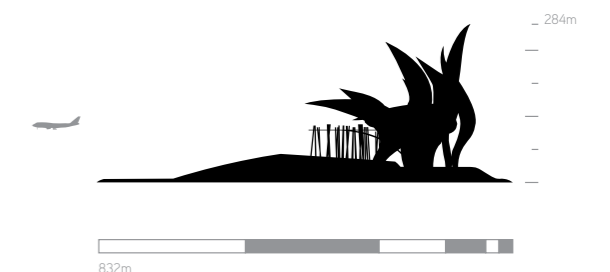
The elevators arrive at a traditional forecourt for the 2,500 seat performance venue 100 meters off the ground. It is surrounded by seven dancing figures which rise high into the sky above. This entry platform also serves as a public observation area, allowing views beyond to the migrating birds which flock to the surrounding waters.



site location



size/scale

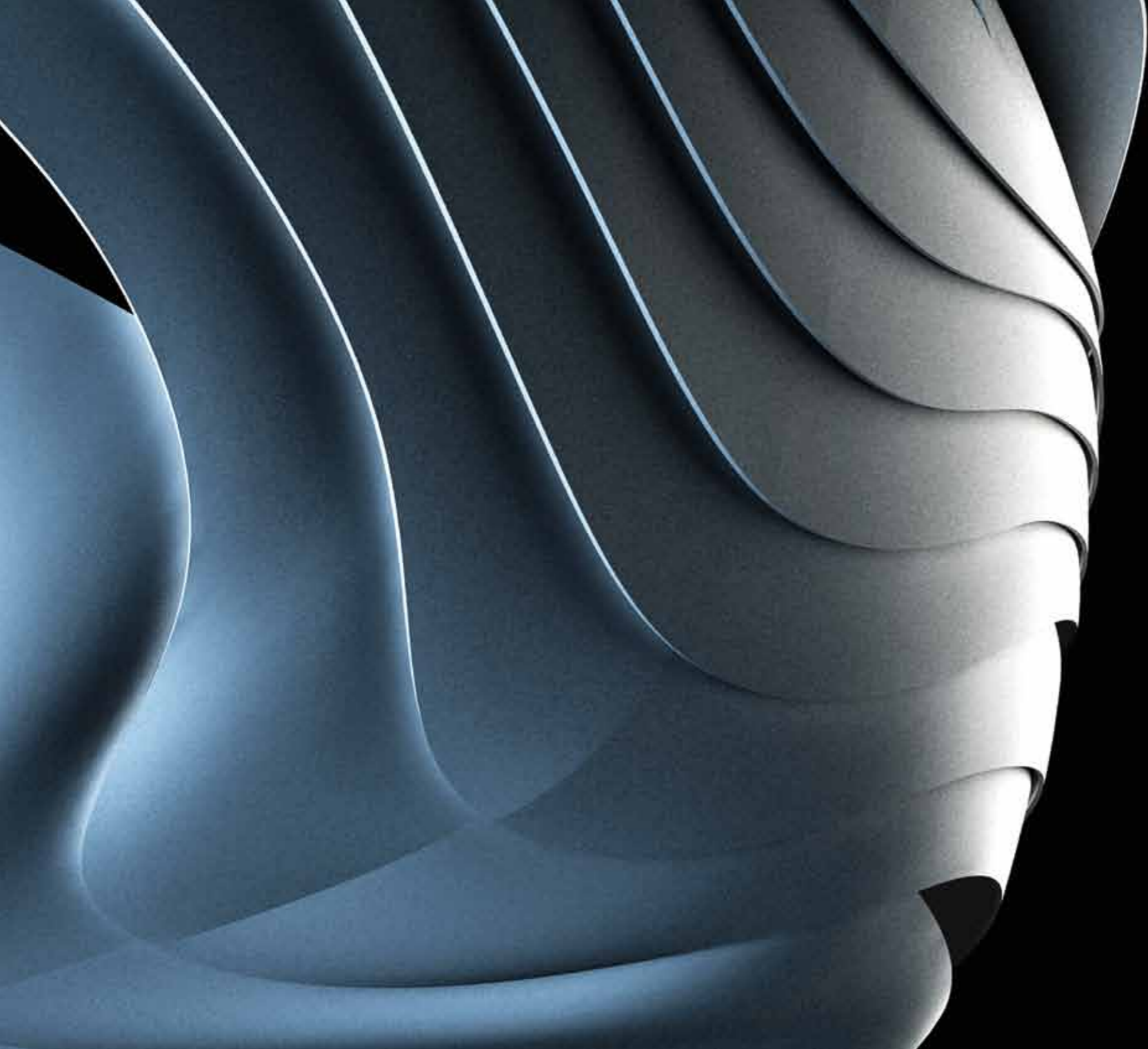




At the center of these dancing figures, which are filled with different activities, is the solidity of the performance venue itself – the pearl. Entrance into the main hall exposes the volume rising from the waters below. The auditorium hall opens up above to the main lobby of the hotel sitting on top of the performance venue, which is enclosed with an outer glass shell. Reached by its own express lifts, the hotel lobby is flanked by four figures which are reached via skybridges. These figures house 300 hotel and service apartment rooms.

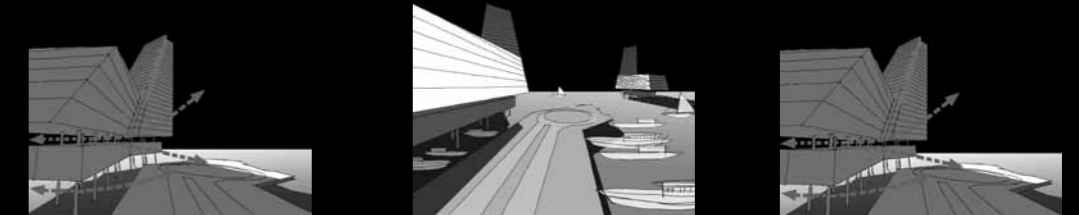
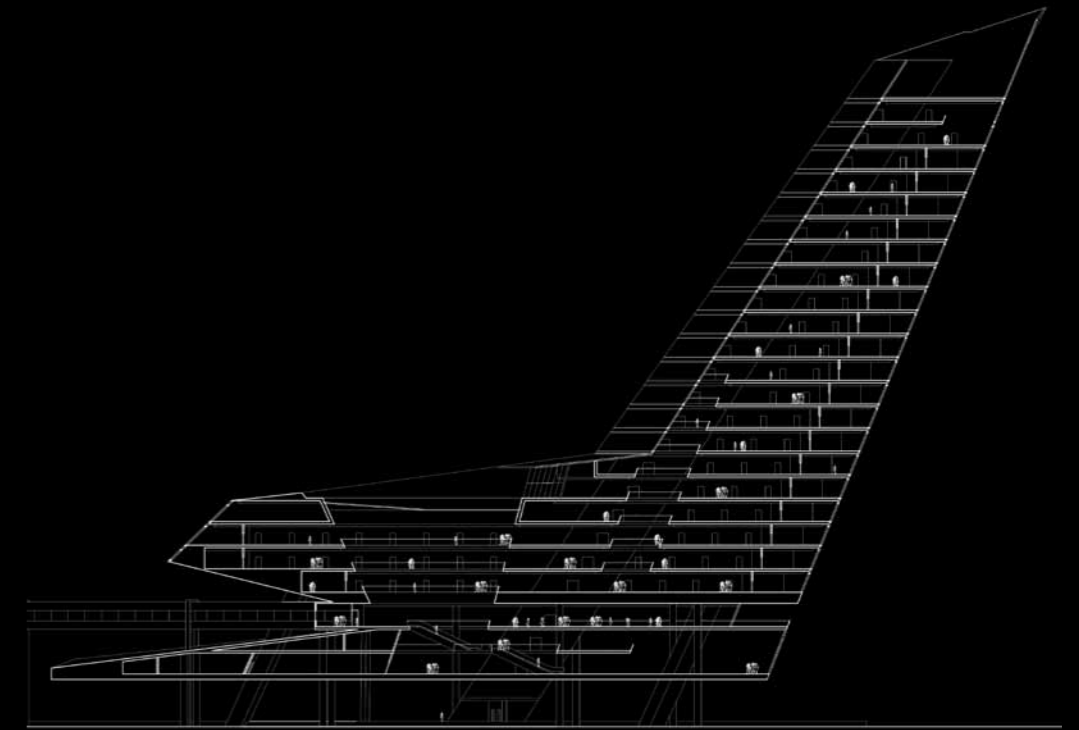
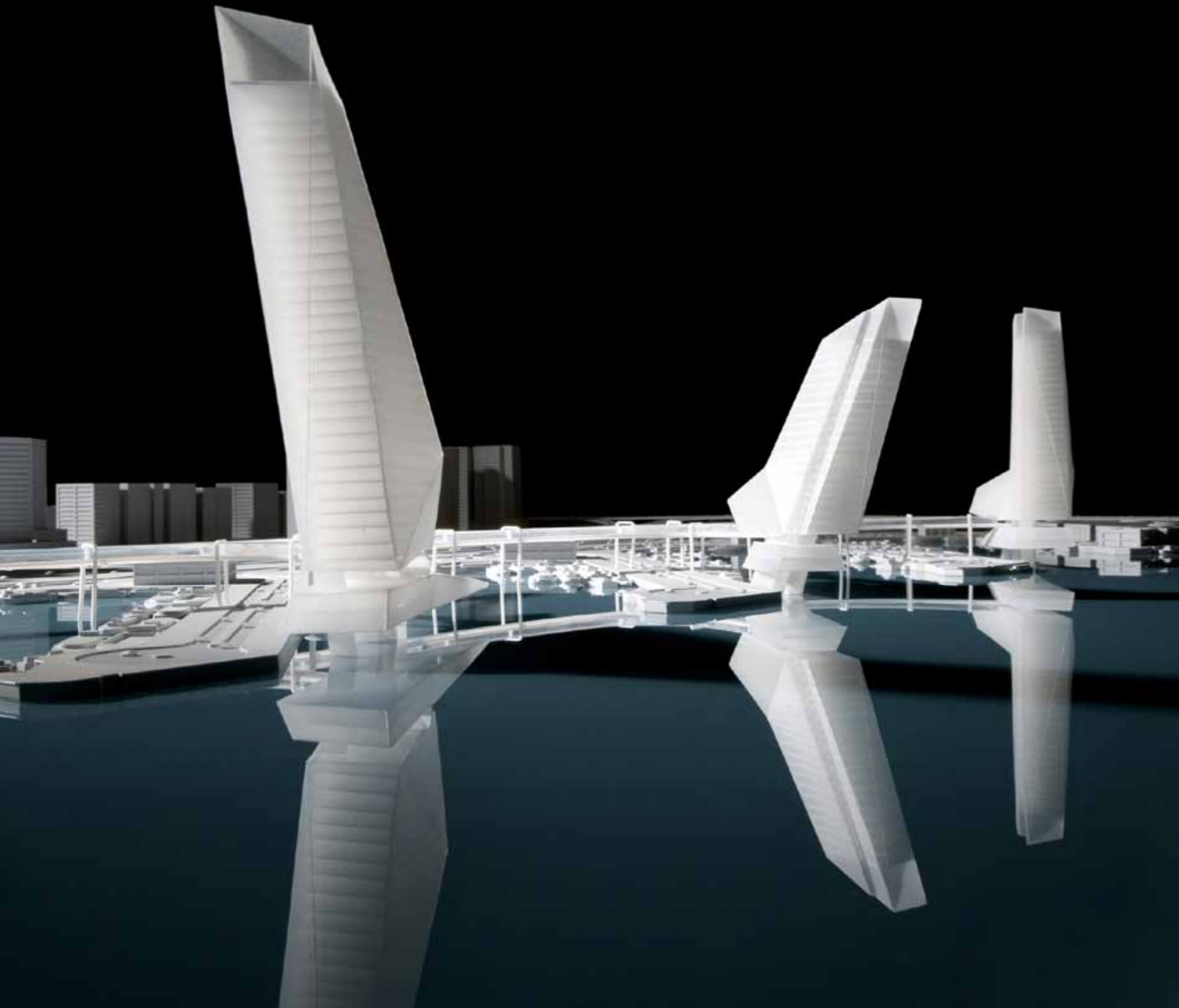
The front two figures are filled with public food and beverage outlets and provide shade to the forecourt. The back figure contains supporting facilities for the performance venue itself. These seven dancing figures or seven ruffled feathers rise into the sky with the highest one reaching 284 meters in height.





civic, cultural & retail complex





The faceted facade allows for the varying surrounding activities to be perceived by passing audiences.

Simultaneous reflections are mirrored off of the glass allowing for the richness of these built forms to be as much about their own formal qualities as they are about the creek, the wharfs, the surrounding cities and the changing sky above.

Three Amphibians, belonging to both sea and land, rise up sculpturally. They powerfully proclaim the importance of the wharfs they co-habit symbolizing Dubai's importance as a leading center of commerce – historically, currently and most definitely in the future.



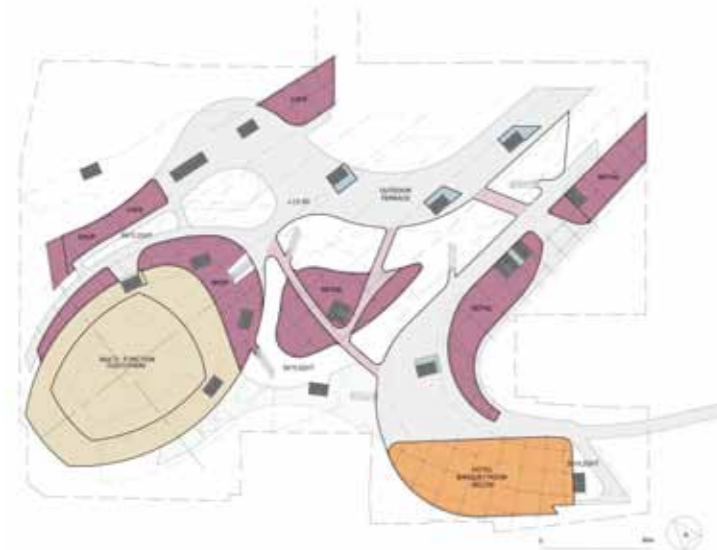
ground



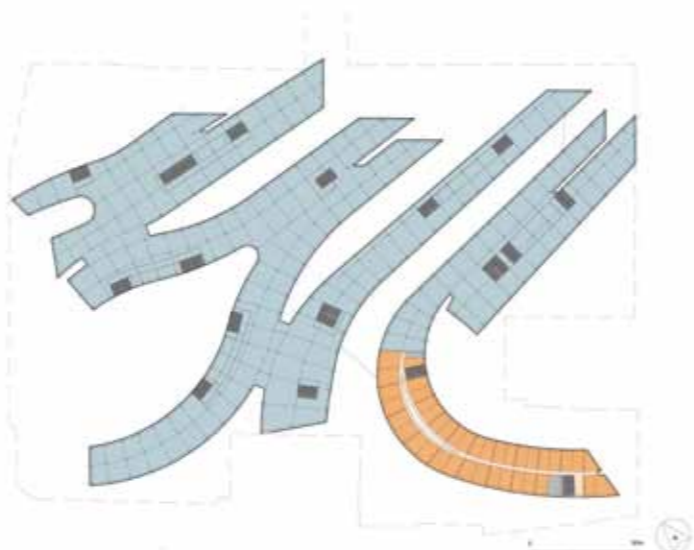
L1



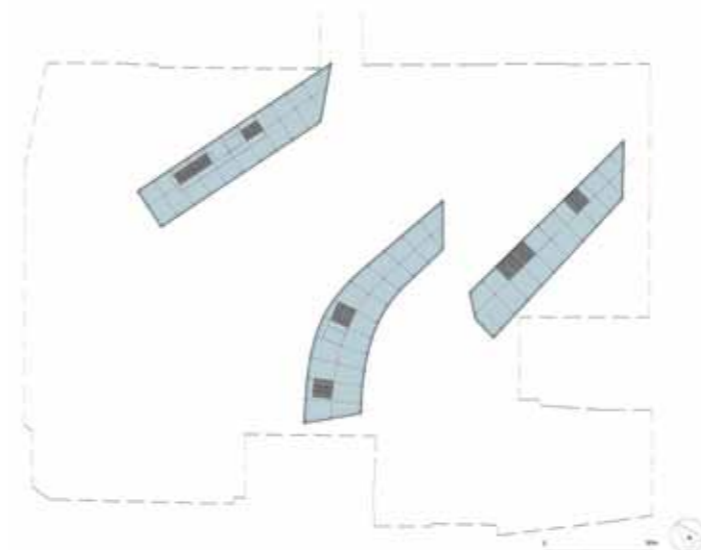
L2



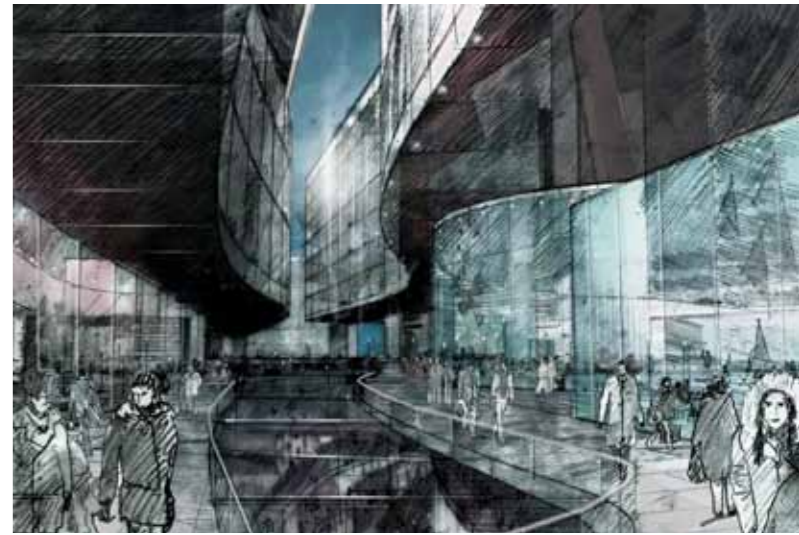
concourse



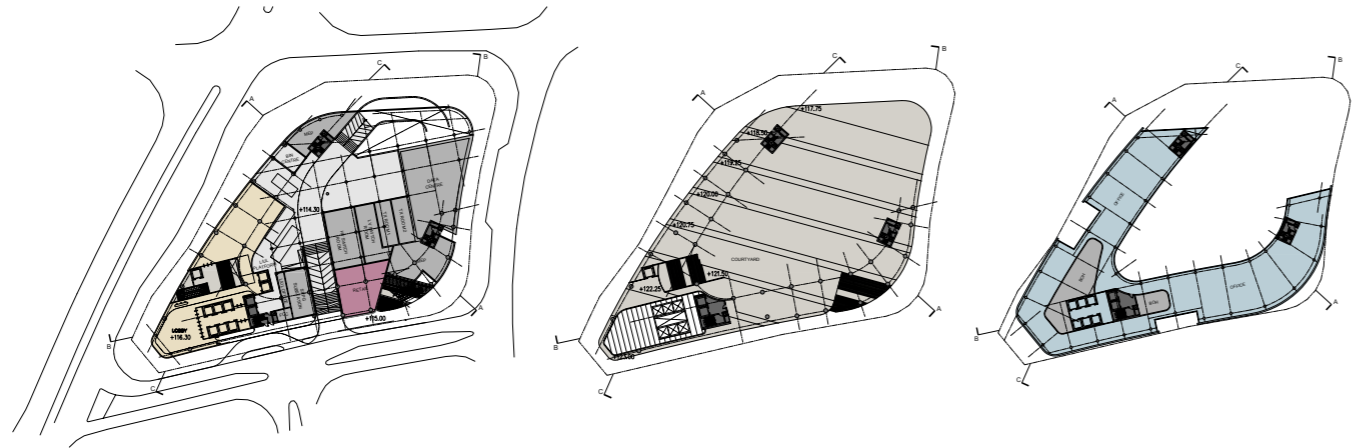
L-office/hotel-low



L-office-high



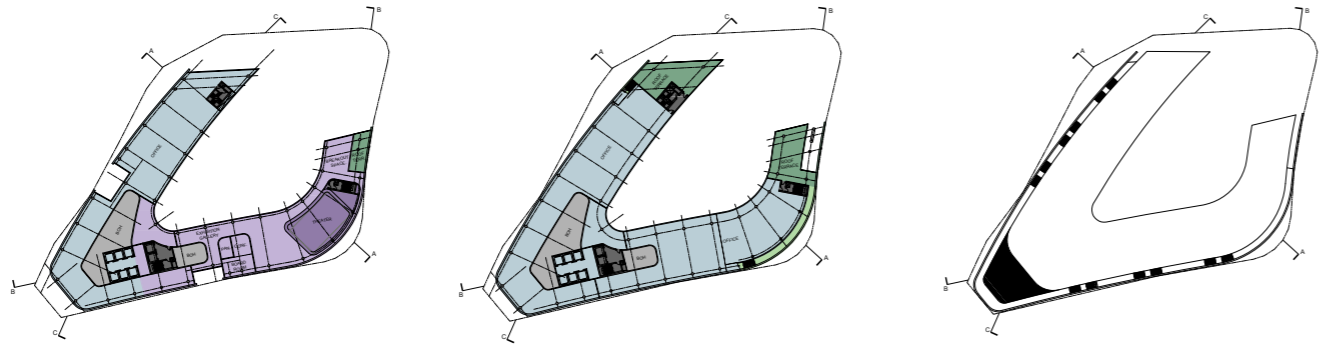




grand floor

roof landscape-plaza

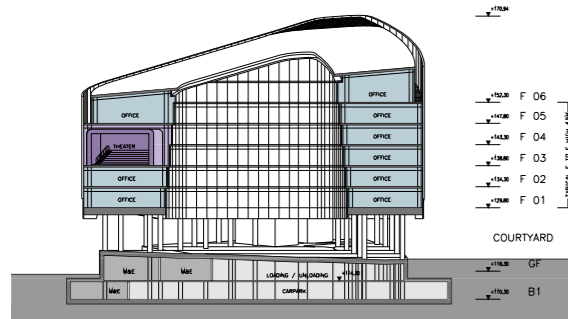
typical office floor



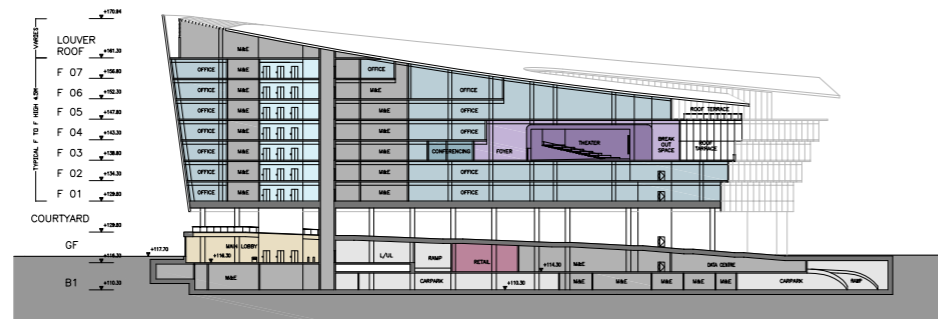
theatre floor

open space floor

roof plan

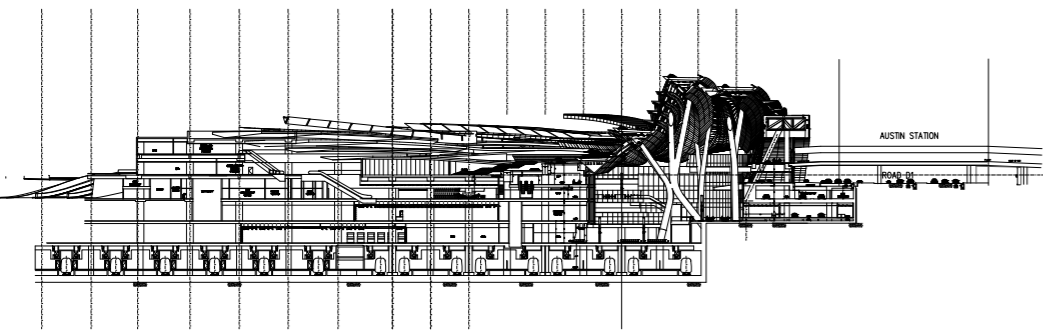
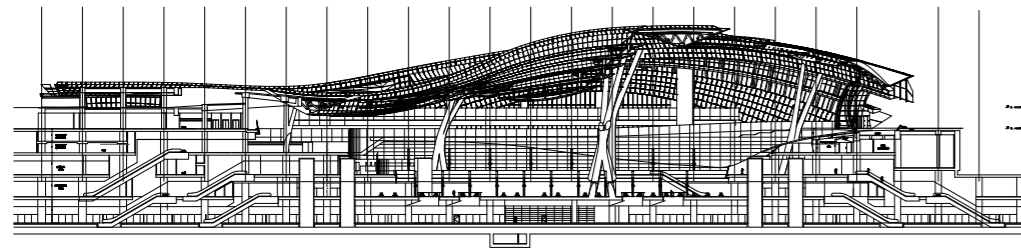


section AA



section BB





The scheme was then analytically compared to the “baseline” scheme in over 60 major items of criteria. On a scale of 1000, voted on by more than 200 political and technical leaders in Hong Kong, this scheme strongly outperformed the “baseline” scheme with 875 points compared to 540 points and was adopted as the chosen scheme to be moved forward to implementation.

The organization of the design was inspired by converging forces all oriented toward Hong Kong

– likened to the converging tracks coming into the terminus station itself. The project maximizes civic gestures both internally and externally. The station is sculpted out of the energy of these moves and strongly defines its motive to open up and focus toward Victoria Harbor and the Hong Kong skyline. The cultural district of WKCD is invited into the site. A large “Civic Square” opens up toward the cultural district and is defined on the other side with its own outdoor performance amphitheatre.



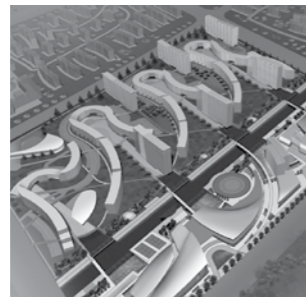


Dong Zhi Men Development

Government Headquarters



09
Luo Xi Development
2003
Guangzhou, PRC
Program - Residential
Site Area - 32,090sqm
Floor Area - 90,050sqm
Building Height - 45m



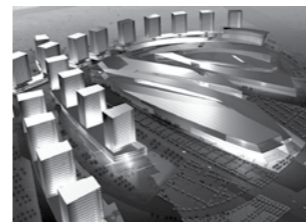
10
San Lin Project
2003
Shanghai, PRC
Program - Residential
Site Area - 100,400sqm
Floor Area - 140,000sqm
Building Height - 45m



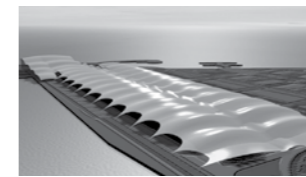
11
Foshan Media Center
2003
Foshan, PRC
Program - Media Center
Site Area - 63,600sqm
Floor Area - 87,696sqm
Building Height - 82m



12
North Star
2003
Beijing, PRC
Program - Mixed Use
Site Area - 2,525sqm
Floor Area - 161,780sqm
Building Height - 107m



13
Xian Ziwei Mall
2003
Xian, PRC
Program - Retail/Mixed Use
Site Area - 1,800,000sqm
Floor Area - 500,000sqm
Building Height - 80m



14
HKIA Exhibition Center
2003
Hong Kong, PRC
Program - Exhibition
Site Area - 170,000sqm
Floor Area - 151,600sqm
Building Height - 18m



15
West Kowloon Cultural District
2004
Hong Kong, PRC
Program - Cultural
Site Area - 400,000sqm
Floor Area - 1,734,871sqm
Building Height - 155m



16
Union Square
2004
Dubai, UAE
Program - Mixed Use
Site Area - 43,000sqm
Floor Area - 139,641sqm
Building Height - 35m

construction
projects overview



north star | beijing | completion 2009
mixed use



boulevard plaza | dubai | completion 2010
office/retail



u-bora towers | dubai | completion 2010
mixed use



ocean height | dubai | completion 2010
residential



pazhou exhibition complex | guangzhou | completion 2012
exhibition/mixed use



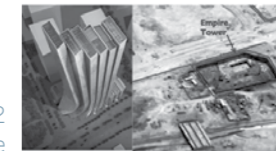
civic, cultural & retail complex | singapore | completion 2012
theater/mixed use



pentominium | dubai | completion 2013
residential



empire tower | abu dhabi | completion 2012
mixed use



west kowloon terminus | hong kong | completion 2015
civil



boulevard plaza

plots 12&13

office towers/retail

client: emaar properties pjsc

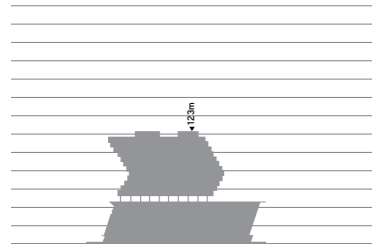
location: burj dubai, dubai, uae

site area - 17.200sqm

floor area - 60.927sqm

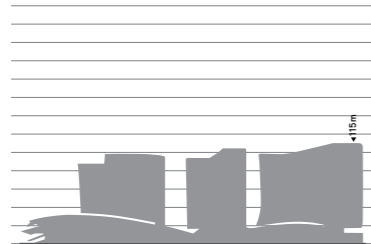
building height - 174m





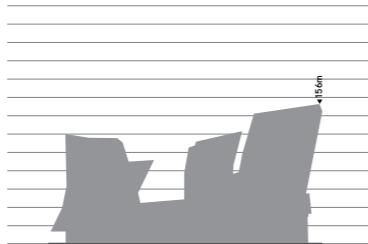
Pazhou Exhibition Complex 2007

Guangzhou, PRC
Program - Mixed Use
Site Area - 57,698sqm
Floor Area - 159,329sqm
Building Height - 126.4m



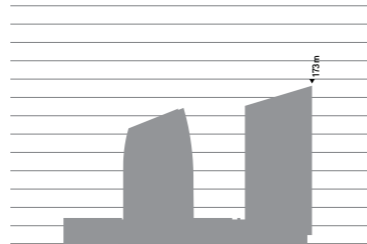
West Kowloon Terminus 2008

Hong Kong, PRC
Program - Station/Mixed Use
Site Area - 58,800sqm
Floor Area - 674,000sqm
Building Height - Varies



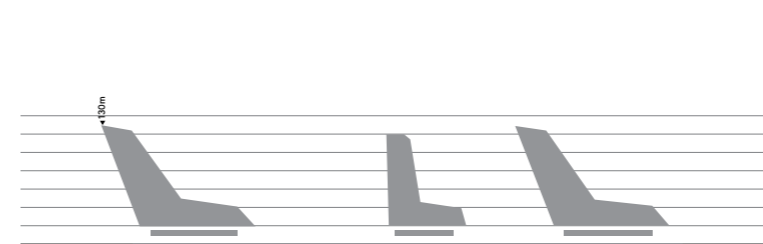
Entertainment Resort 2007

Guangdong, PRC
Program - Entertainment Mixed Use
Site Area - 65,745sqm
Floor Area - 609,500sqm
Building Height - 156m



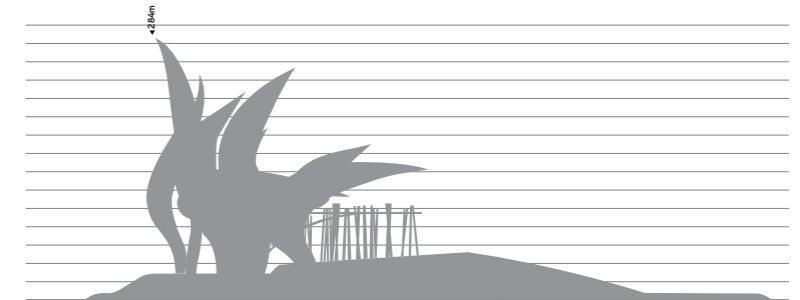
Boulevard Plaza 2005

Dubai, UAE
Program - Hotel
Site Area - 17,200sqm
Floor Area - 60,927sqm
Building Height - 174m



Khor Dubai Wharfage 2007

Dubai, UAE
Program - Mixed Use
Site Area - 6,000sqm
Floor Area - 49,411sqm
Building Height - 129m



Arabian Performance Venue 2006

Middle East
Program - Performance
Site Area - 3,200,000sqm
Floor Area - 650,890sqm
Building Height - 284m

