

广州文化设施"四大馆"设计国际竞赛-广州博物馆 INTERNATIONAL DESIGN COMPETITION FOR FOUR CULTURAL PROJECTS GUANGZHOU MUSEUM

全本设计文本 Complete brochure

公司名称

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- Anne Lacaton & Jean-Philippe Vassal

主要设计人员

- Anne Lacaton,总设计师
- Jean-Philippe Vassal, 总设计师
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- Liang Ma, 建筑师
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- Arthur Jullien, 建筑师
- Zhang Yuansheng, 建筑师
- Rebecca Digne
- Justine Émard, 动画制作
- Sébastien Lecaille, 模型制作

Company name

- LACATON & VASSAL ARCHITECTES

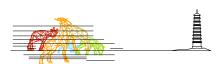
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- Anne Lacaton
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- 1. 设计理念
- 2. 功能
- 3. 公共步行交通
- 4. 结构
- 5. 环境品质与可持续建筑
- 6. 经济
- 1. PROJECT CONCEPT
- 2. OPERATION
- 3. CIRCULATION
- 4. STRUCTURE
- 5. ENVIRONMENTAL QUALITY OF THE PROJECT
- 6. ECONOMIE



设计理念

广州市是一座不断发展与进步的现代化都市。

广州博物馆新馆,通过其具有历史意义的展品,诉说着这座城市往昔的诞生,今日的发展及其锐意进取的未来。

坐落于越秀公园中的镇海博物馆,他的简洁整齐的中国传统建筑形式,其与公园互相渗透的巧妙关系激发了方案设计的灵感。

位于城市传统轴线北部的越秀公园与镇海博物馆见证了这座城市历史的诞生。

在公园内,一座具有象征意义的雕像印证了五只羊和五位仙人给这座城市带来复兴,富裕和繁荣的美丽传说。

新馆的基地,位于广州市未来的新轴线上,毗邻珠江,拥有和镇海博物馆相似的地理条件。

位于北边的广州塔,三座展览馆:广州美术馆,广州科技馆与其对面的广州博物馆新馆点缀着这条约12公里长的新轴线。

未来广州博物馆的新址具有得天独厚的自然条件。

历史性建筑--赤岗塔坐落于此,因为当地的宜人的气候,赤岗塔被繁茂植物营造的绿色空间所环绕。

1. PROJECT CONCEPT

Guangzhou is a modern city, in permanent evolution and expansion.

The project of the new Guangzhou Museum that will exhibit in particular elements of the city history, leads us to consider the history of the foundation of the city, in relation with it's further development. The actual Zhenhai museum, in Yuexiu parc, with it's simple and pure form, and it's osmosis with the parc that surrounds it, is a source of inspiration.

Located in the north of the historical axis of the city, the museum and it's parc are marking elements of the history of the city and it's creation.

In the parc, a monumental statue celebrates Guangzhou's legend. It represents the five rams, symbols of the immortals that brought rice and prosperity to the city.

The site of the new museum, installed on the new city axis, nearby Pearl river, benefits from similar conditions with the existing museum.

This new 12km axis is marked by the presence of Canton tower in the north of the site, and three projects of museums, including an art museum and a science museum that will face the new Guangzhou city museum.

The site dedicated to the future city museum has already exceptional qualities.

It is occupied by Chigang pagoda, historical monument surrounded by a vaste green space which exuberant nature is stimulated by the climate.











广州博物馆位于场地的最南端。

精确对齐四个水平方向与垂直高度上的建筑红线要求,方案背靠城市,面向公园茂盛的植物。建筑体量在西侧内凹以接纳半地下布置的变电站,从而减少其视觉上带来的冲击力。

建筑方案从传统的博物馆汲取灵感并以现代主义建筑语言重新诠释。 精致,简约并高效,并通过创造尽可能最多的展览面积来接纳展品和各方宾客。 这是一座纯粹,现代,开放和透明的建筑方案。在每层建筑的内部和外部都创造出丰富的公共空间,如有覆盖的长廊,大面积的露天平台,具有公共的屋顶平台等。

大跨度的结构体系,支撑起一层层自由的大面积楼板,结构本身则由通透的玻璃立面所围合。 这些楼板向外延伸,形成一系列有覆盖的长廊,长廊环绕着展览空间和通透的立面,从而使远处 的城市景观沿着每层舒缓的水平楼板渗透进建筑内部,淡化了内部空间与外部空间的视觉界限。 博物馆的屋顶平台将会是一个开放的公共空间并为公众提供和展现这座城市的全景。

The museum's project is implemented in the southern part of the site.

It is precisely wedged on the limits of the construction plot, on it's four sides and it's height. It lean on the city to open itself to the green parc.

The volume is hollowed in the west, to house the semi-basement substation, which visual impact is thus limited.

The architecture of the project takes it's inspiration in reference with the traditional museum transposed into modernity.

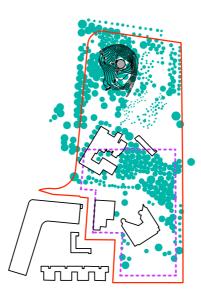
It is fine, elementary and efficient, in order to generate the largest amount of surface for the artworks the museum and the visitors.

It's architecture is pure, modern, opened and transparent. It creates public spaces for the visitor both inside, at every level and outside on the covered galleries, the big terrasses, and the roof.

An opened structure with large spans defines a set of superimposed platforms that generate large free plans closed by glass facades.

They continue on the outside, forming wide external covered gangways around the museum spaces. The glass façades, transparent from floors to ceilings let the gaze free and merge the outside and the inside.

The roof of the museum becomes a space for the public offering a panoramic view on the city.



项目场地: 46512 m

场地内植被覆盖面积:14326 m2 >>> 30,8%

项目区域内现有建筑占地面积: 4990 m2 >>> 10,7%

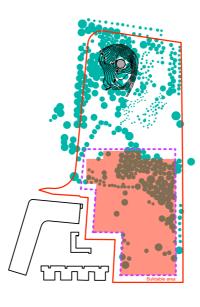
可建面积:18941 m2 >>> 40,7%

Site area: 46512 m2

Site covered by trees: 14326 m2 >>> 30,8%

Site area occupied by existing constructions: 4990 m2 >>> 10,7%

Buildable area: 18941 m2 >>> 40,7%



由南向北填充最大可建区域

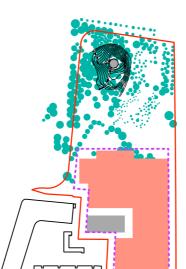
为了不与赤岗塔宣兵夺主,博物馆将采用低层,内敛设计风格

博物馆面向赤岗塔及其公园的立面将采取阶梯式退让

Fill the buildable area from south to north

Keep the building low and discreet to respect the pagoda

Spare some set back of the building on the side of the pagoda and its park



最大限度的提高可建区域的利用率

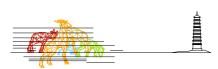
最大限度的提高博物馆区域立面的连续性

将变电站至于地块的后半区域

Maximize usage of plot buildable zones

Maximize the lineal front of the façade for the museum areas

Localize the substation in the rear part of the plot



雕像

一座具有象征意义的雕像栖息在建筑结构之中,并协调着博物馆的空间。 她代表着象征广州市起源的五只神羊。

雕像在给予博物馆足够的必要展览空间的同时,穿插,协调,嵌入建筑内部。她定义内部空间,创造新的空间,游客在其内部可以体验到与众不同的空间气氛:空间的明亮与黑暗,松弛与紧凑等等...

她在整体上具有强大的存在感,但人们只能从底层到顶层对其进行局部的感知。

夸张的尺度使她的存在变得抽象。超越结构的存在使她扰动着人们对建筑尺度的认知。 这种强烈的情感来源于雕塑家巴托尔迪在巴黎车间内制作自由女神像的场景照片。

五羊的雕像,作为项目概念的核心,用当代的视角重新演绎了广州五羊的传说。 在建筑学上,这也将"建筑意象"的问题重新提出。 在此,建筑本身并不是通过一个夸张,过度的形体而表达其"建筑意象"。 博物馆的建筑形式简约大方,摒弃形式主义,"建筑意象"最终通过一座具有象征意义的雕像毫不含糊的表达出来。



In the structure dwells a figure, a statue, that occupies the volumes. It represents the five rams, symbols of the foundation of Guangzhou city.

The statue crosses, occupy, invade the building while leaving necessary free spaces for the installation of the program. It defines the spaces, create volumes that we can cross to discover special atmospheres, darkness, voids...

It's presence is strong, but it's perception is fragmentary at each level of the museum, from the basement to the roof terrasse.

Being so oversized, the figure becomes abstract. It troubles the scales of the architecture and transcend the structure.

The inspiration to create that sensation came to us through images of the fabrication of the Statue of Liberty in the workshop of the sculptor Bartholdi in Paris.

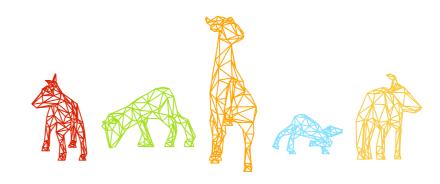
The five rams statue, conceptual structure of the project, re-interpret the legend in a contemporary vision.

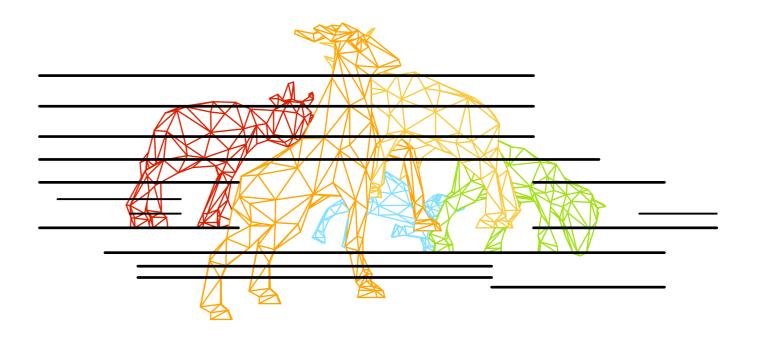
It also refers to the question of the icon in architecture.

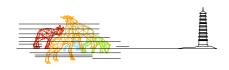
Here, it is not the architecture itself that is an icon by an expressive or extravagant shape. The architecture of the Museum is simple, understandable, non-formal. The icon is created by the figure that occupies it.

Without ambiguity.









建筑

博物馆拥有一个开放的建筑形式,外部景观渗透人内部。内外部的界限虽然存在但变得非常轻盈、开放。

公园与赤岗塔成为博物馆的一个组成部分。

公园保持着其繁茂,原生与神秘的特性,就好像城市中心一块浑然天成的自然公园

公园将被发展成一个植物园,通过引入当地的花卉,树种,并对其标识从而形成一个小型植物园,最终成为博物馆的一部分。

通过茂盛的植被,赤岗塔公园在广州博物馆和赤岗塔之间形成了一个不可缺少的纽带。 所有的这一切将会创造出一个奇妙的场所,重新演绎这座城市的历史与未来。

Architecture

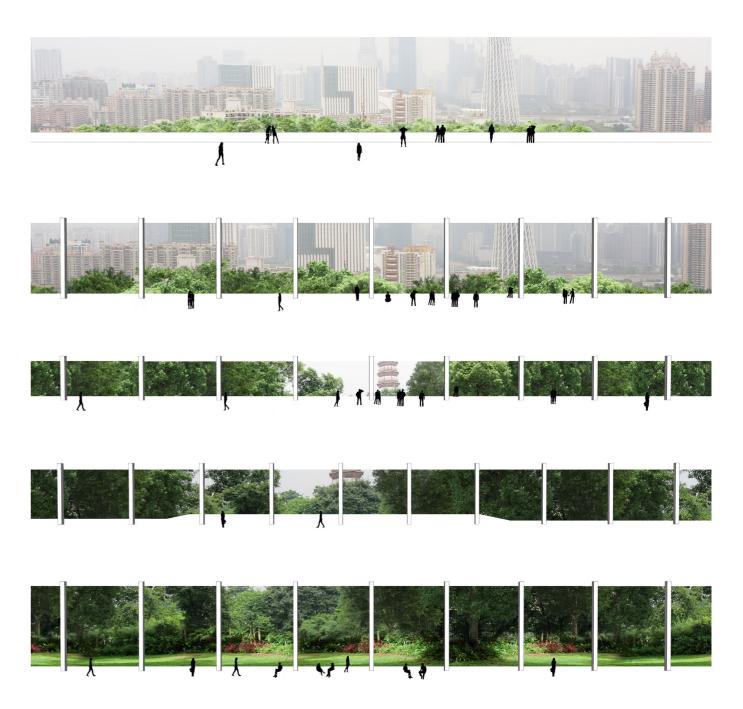
The architecture of the museum is very opened and let the landscape penetrate it. The limit exists physically but it becomes light, openable.

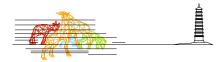
The garden and Chigang pagoda are an integral part of the Museum.

The luxuriance of the garden will be maintained, as it's savage an mysterious character, like a piece of nature in the very centre of the city.

It will be developed to create a botanical garden with floral species, new varieties of plants, forming a botanical collection, identified and captioned, like artworks of the Museum.

By it's density, the garden is the indispensable hyphen between the Museum and the Pagoda. Together they create an extraordinary place, a new image of the City and it's history.





功能

由地下一层穿过商业中心人口进入博物馆大厅,中央大厅使人们可以从垂直方向上感知建筑空间。雕像出现,拔地而起升腾向空中。

它立即将游客带人一个千变万化及富有诗意的博物馆空间

中央大厅

中央大厅是一个宽敞,明亮的空间,东临岭南广场,贯穿了从地下4米至23米5的通高空间。明亮并被长廊所环绕。

五羊的体量创造出震撼的空间并丰富了的内部透视的纵深感。

外部长廊提供了在不同高度,不同角度感知雕像的可能。

围绕在中庭的地下一层,分布着纪念品商店,书店等各种商铺,临近于地下商业中心,讲演厅及教育中心。

自动扶梯会将游客引向位于地面一层的主人口大厅。

处于该层的岭南广场,将广州博物馆与附近其他博物馆相连通。

2. OPERATION

From the entrance of the museum by the mall, in the basement, the lobby allows you to have a view on museum spaces in the height. The statue is present. It starts from the ground of the cit, goes to the sky and magnifies the lobby area.

It immediately takes visitors into the phantasmagoria and poetry of the museum space.

Lobby

The lobby is a very large space, which rises in height from -6.5m to 18m along the east façade on Lignan Square.

It is bright, surrounded by walkways.

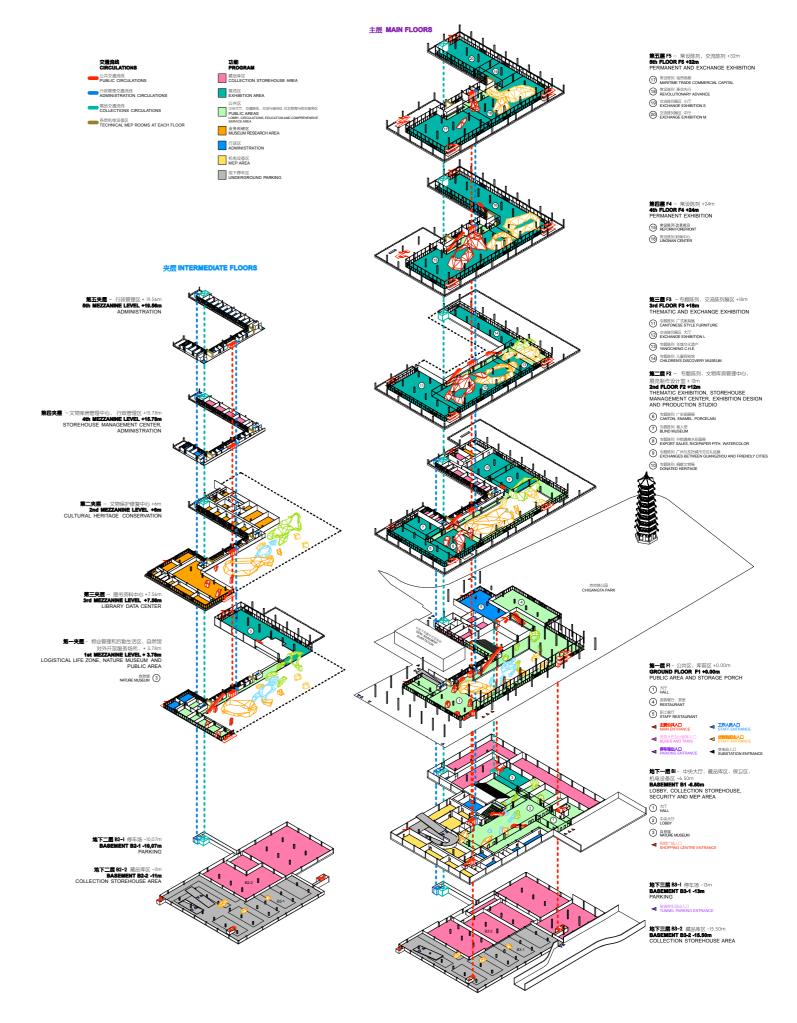
The forms of the rams create amazing spaces that enrich the space and outlooks.

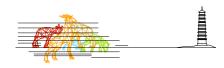
The peripheral walkways at each level, allow to explore the height to approach the forms of the statues and see them from all directions.

Around the lobby on the first basement B1, are shops (souvenir shop, bookstore), close to the shopping centre, conference and education facilities.

Escalators lead to the main entrance hall on ground floor.

The connection with other museums, below Lingnan Square, is at this level.





中央大厅与公共服务设施

环绕在中央大厅的周围 ,人口大厅占据着整个底层的东部 ,内部空间完全开放,并与面对三个主立面的外部公共空间相连接: 东侧的岭南广场,北部的赤岗塔公园和南部公共道路。

方案的主人口位于东部,岭南广场一侧,在此分布的票务亭,问询处,商店,旅游大巴和出租车等。

在方案北侧,公共餐厅嵌入赤岗塔公园之中,员工餐厅则位于其西侧。

公共服务设施 (公共服务区)

位于第一夹层,直接与中央大厅和主人口连接。

展览厅

展览馆从地下层至顶层铺陈开来,由一系列连贯的自动扶梯,楼梯,电梯贯通。 自然博物馆,由于其对净高的需求,层高将从地下一层,贯穿第一第二夹层直到第三夹层。 其他展览空间,根据主题布置,占据第二层主要空间(环绕在中央大厅周围),第三层,第四层 及第五层。这些楼层拥有着宽敞的阳台,面向北面的赤岗塔公园。

Hall and services for the public

The **hall** occupies the entire eastern part of the ground floor (F1) around the lobby. It is totally opened and connected with the exterior and public spaces on three main fronts: Lignan Square on the East, Chigang Park in the North, and the street in the South.

The main entrance is in the south-east, on Lignan Square. There are also ticketing, services, and shops near the taxis and buses drop-off.

In the North, inserted in the park, the public restaurant, and, setback, on west side, the staff restaurant.

The hall provides access to all floors with escalators, elevators and stairs.

Services area for the public

They are located on the first mezzanine, directly connected to the lobby and main entrance.

Exhibition rooms

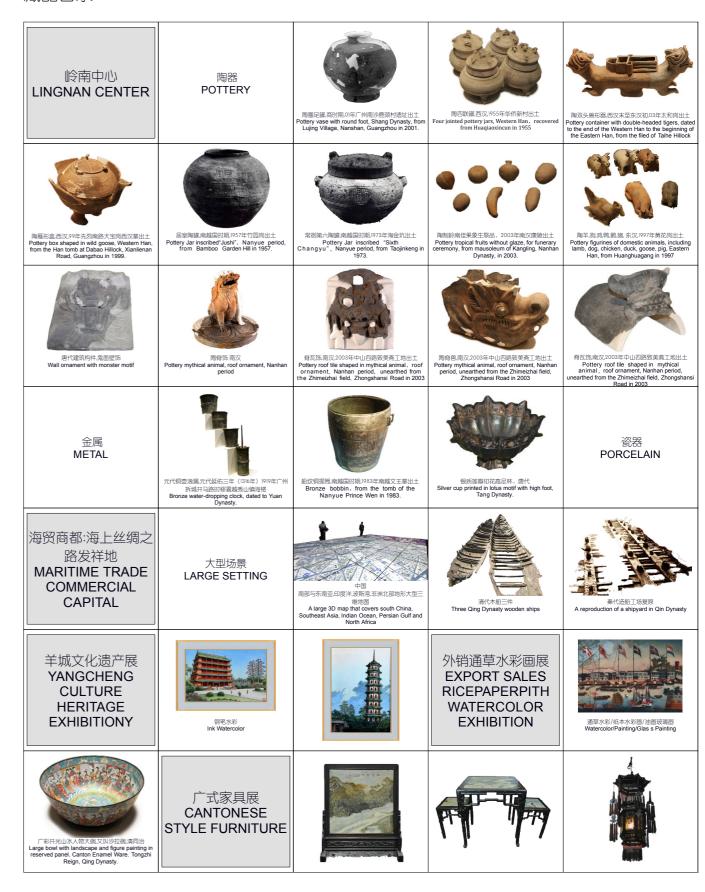
The exhibition halls are deployed at every levels from the basement. They follow one another in a continuous route by escalators, stairs or elevators.

The Nature Museum, with its height needs, occupies a volume that goes from the first basement to the first mezzanine and on the height of second and third mezzanines

Other exhibition spaces, organized according to themes, occupy almost the entirety of the F2 (around the lobby), F3, F4 and F5.

These levels have large terraces to the north overlooking the park, which are generated by the reduction of the building constructible height on the side of the park.

藏品目录 CATALOG COLLECTION





这些展馆提供了静谧宜人的博物馆陈列空间以接纳各种展。
而在其他的给为复杂空间中,雕塑在每层的断片,形成了奇特,昏暗的空间

它们可以相互自由的闭合,开放或联通。该建筑物的结构设计, 提供了一个极大的开放式平台空间, 它赋予这些展馆丰富的灵活性。这种特点使博物馆内部空间可以自由的改变展览格局,为博物馆日后的发展带来了多变,长远的发展余地。

自然采光持续存在,根据展览需要可以对光线进行过滤和隔绝。

各种轻巧的装置可以精确地调节各个展厅的展览环境:如照明设备,移动展板以及通过固定在天花板上导轨移动的帘幕为将来临时或永久的展览提供便利。

这也将使得我们能够以精确的方式来解决照明,温度,通风等问题

后勤入口与卸货区

后勤人口位于博物馆西侧与道路链接

包括一个卸载区域,卸货平台,临时储存空间以及准备空间,重型货运电梯连接各层的储藏室,保管室与展览厅

展品储藏室和停车场位于地下一层,二层和三层

The exhibition rooms offer quiet and regular volumes, in which the museography can be installed, and more complex spaces crossed by fragments of the statue, that form dark and singular spaces. They can be closed from each other, opened, or communicating. The structural design of the building offers large open plans, which allows great flexibility in the organization of the rooms. This flexibility provides an ability of adaptation to the museography, which will be defined later, and allow to consider temporary or long term changes.

Natural light is permanent and can be filtered or masked as required.

Lightweight systems permit to rule precisely the environment of every exhibition room: lighting systems, moving partitioning, curtains on rails networks fixed on the ceilings allow flexibility and evolutions of the temporary and permanent exhibition spaces.

They will allow to regulate extremely finely and precisely all the questions of luminosity, temperature and air quality.

Logistical access and delivery area

The logistic entrance is located on west side, served by the street.

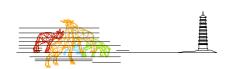
It includes a loading and unloading dock accommodating 3-4 trucks, preparation areas and temporary storages, and access to a high capacity elevator serving all levels, storages, conservation, exhibition halls.

Collection storages and parking in the basements B1, B2 and B3

In the first basement are collections storages and technical areas







展品储藏室位于地下一层第二和第三地下层

其由纸质展品,织物展品,青铜器,陶器,及其他展品组成,这些文物可以通过货物升降梯从展品前库区进入。

停车场拥有288个停车位,通过南部的坡道进入。

一部分两层通高的空间用于储藏石器展品

行政、文物保护空间

行政,历史遗产区域和研究实验室位于建筑西侧体量内,凹陷部分为变电站提供了空间。 这个部分由五层组成,从第二夹层直到三楼,充分利用了展览楼层之间的层高。他们独立于展览 空间,并可以有由独立人口进入。

工作室,图书馆,数据中心和文物保护室及其储存空间位于第二第三夹层和二层, 行政管理办公室位于二层和三层

后勤人员的人口位于底层西侧,独立于公共出人口。工作人员拥有独立的电梯,相对于公共电梯独立并可到达各层。

屋顶天台

屋顶天台是博物馆空间的一部分,向公众开放,并可以成为博物馆展出的延伸之旅。 这是一个广阔的 9 425m2 , 可供游客步行游览,欣赏城市的天际线,博物馆展品的延伸或临时的 文化活动。

在天台的中央,屹立着两尊羊的雕像。

Second and third basement B2, B3

They are occupied by collection storages for: paper, textiles, bronze, ceramics, and other objects, served by a large freight elevator from the ground floor (storage porch) and vehicle parking: 288 parking spaces accessed by a ramp from the entrance of the car on the street to the South. A double height area, is used for stones carvings library.

Administration and areas of heritage conservation

The administration and conservation offices are located in the centre of the building around the void of the west elevation.

They occupy five levels between the second mezzanine and the fourth floor, making use of the important height of exhibition floors. They are autonomous and independent from the exhibition halls, but can have direct access to them.

In the second and third mezzanine are spaces for work, conservation and heritage protection with their workshops and reserves, together with the library and data center In the 4th and 5th mezzanine is the general administration.

The staff entrance, located to the west, in the ground floor is separated from the one for public. The staff has specific lifts, independent of the one for public and serving all used levels.

All storages, technical rooms as well as car parks are located in the basement with separate acceptable.

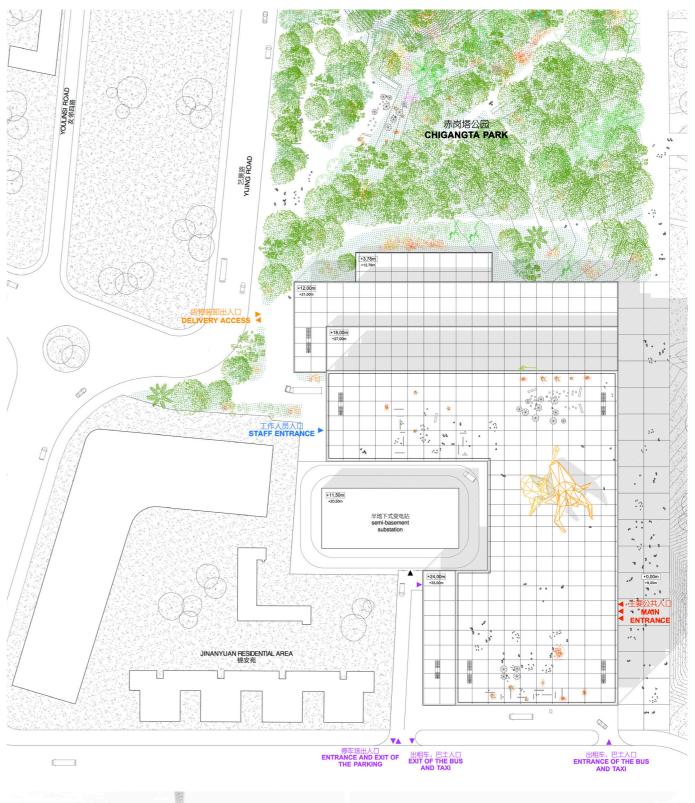
All storages, technical rooms as well as car parks are located in the basement with separate access facilities.

Roof terrace

The roof terrace is a space of the museum, opened to the public, continuing the exhibitions journey. It is a vast 9 425m2 area available for walking, observing the city, exhibiting museum artworks, or hosting temporary cultural events.

In the centre, emerges the intriguing silhouette of the head of the rams.







3. 公共步行交通

公共步行交通

不同的公共出入口位于方案东侧,分别位于岭南广场和位于地下6米5的商业中心。中央大厅与商业中心层直接通过一个人口大厅连接,其中分布着纪念品商店。

一个地下步行系统连接着赤岗塔地铁站并将三座博物馆连接在一起

一系列的电梯和自动扶梯分布在中央大厅的周围连接着各层的展厅和夹层上的公共空间。 外部楼梯由规律地分布在长廊上,以提供多种游历博物馆的路线并起到火灾疏散作用。

一个只能从中央大厅进入的玻璃电梯,位于最大的羊雕像的腿内部。 这座电梯不在任何展厅层停靠而是让游客可以直接通过雕像内部到达屋顶平面。

公共车辆交通

旅游大巴和出租车及巴士停车场嵌入建筑体量南侧。在底层的体量退让使得游客在停车场上下车时时刻处在有遮蔽的环境下。

3. CIRCULATION

Public pedestrians

The various public accesses are in the East, from the Lingnan square and shopping centre in the basement at -6.50m. The lobby located at the same level is directly connected to the mall with a large hall from which you access the souvenir shops.

A network of pedestrian underground galleries connect the museum to the metro station Chigang Pagoda and to the two other science museums and art gallery.

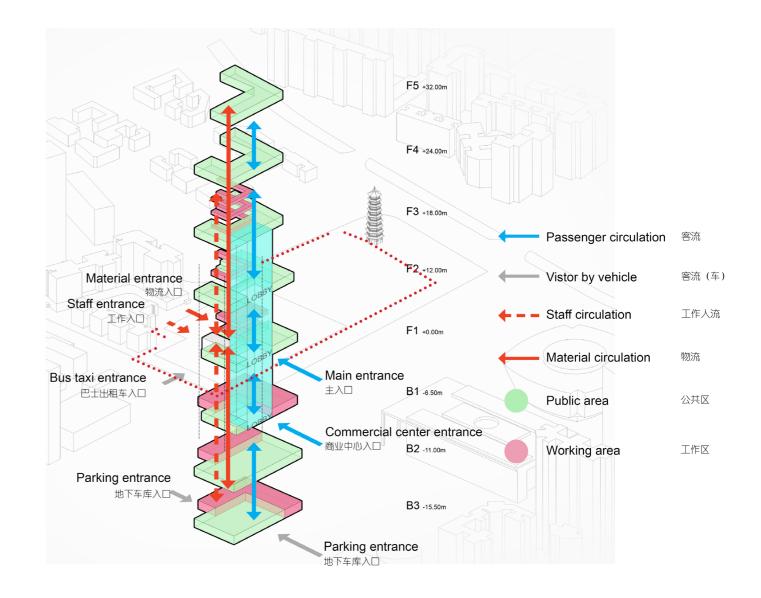
A series of elevators and escalators arranged along the lobby connect the different exhibition levels and the public spaces on the mezzanines.

Exterior stairs are arranged regularly in the outside walkways. They create more various route connecting the different exhibition levels and are used for evacuation in case of fire.

A glass elevator, only accessible from the lobby, is housed in one of the legs of the biggest ram. It crosses all exhibition levels without stoping in them, and allows visitors to go directly to the roof terrace from inside the statue.

Public vehicles

The taxi drop-off and the bus parking slip under the building from the south Yijing street. The set back of the ground floor facade in that place enable the release of an enough large space to cover the entire parking allowing the visitors to hop on and off vehicles while being protected.





地下停车场人口在地下三层13米处直接连接"广场西路"。

在底层停车场的人口得益于建筑红线退让位于方案的西南侧。通过一个坡道到达地下二层,地下三层的停车场。

两个电梯与三个楼梯使公众可以直接从地下停车场出至有遮蔽的底层空间,靠近东侧人口大厅, 北部花园和西侧的纪念品商店。

工作人员流线

工作人员人口和卸货区与公共人口清晰地分隔开来。从基地西侧"新市头路"进入。 一座电梯和一个楼梯从地下层开始连接位于各个夹层的办公区和储藏区。 两座附属楼梯和一个员工电梯从方案底层的公共区域可以到达。

展品流线

展品装卸区处可以让货运卡车停靠在库存前区并零时将展品货箱存放在有遮蔽处。一个十吨的重型货运电梯连接三层分别位于地下一层(-6米5),地下二层(-11米),地下三层(-15米5)的储藏空间。它同样连接位于从第二层(+12米)到第五层(+32米)各层的展览厅。自然博物馆的展览厅位于地下一层直接和储存空间连接。第二座附属货运电梯使展品可以运抵夹层(+3米78)

Access to the underground parking, is done directly by the «square west road» tunnel in B3-1 at -13m level.

On the ground floor, access to the park take advantage of setbacks against the site boundary to wedge on the south west of the plot. A ramp go down to B2-1 and B3-1 parking levels, respectively -10.07m and -13m.

Two elevators and three staircases allow the public to exit the parking lot directly outside, in the arcades on the ground floor, near the entrance hall on the east, near the garden on the north and near the souvenir shops on the west.

Staff

The staff and delivery entrance is clearly separate from the one for public. They take place in the west of the site, from Xinshitou street.

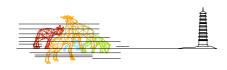
A staircase and an elevator are directly accessible from the outside and serve all levels of offices mezzanines and basement storage levels.

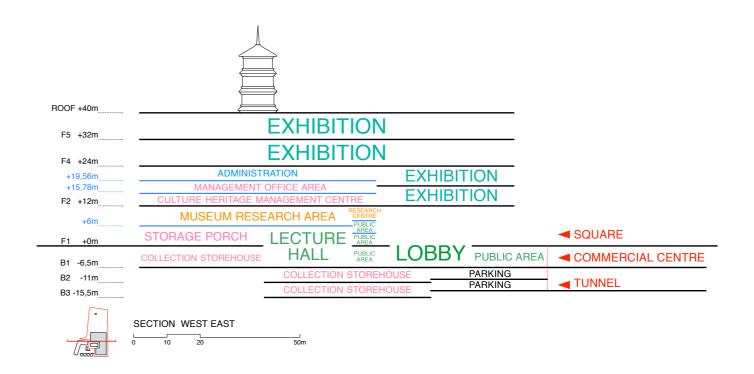
Two more stairs and an elevator reserved for staff are accessible from the public part of the ground floor.

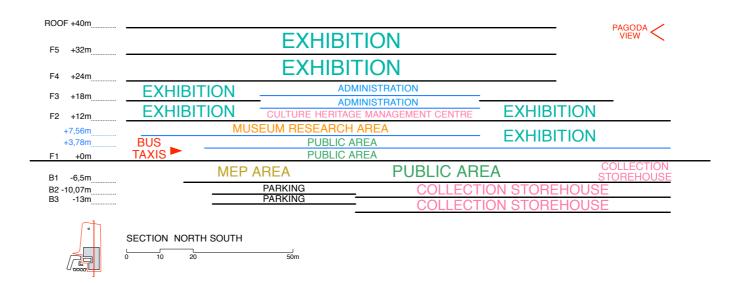
Works

The loading and unloading area allows trucks to park under a porch and to store temporarily containers sheltered from the weather. An elevator of a capacity of 10 tonnes directly serves the three storage levels in the basement located at B1 (-6.50m), B2-2 (-11m) and B3-2 (-15.50m). It also connects directly storage rooms to exhibition spaces from the 2nd floor F2 (+ 12m) to the top floor F5 (+ 32m).

The nature museum exhibition room, located at B1 is directly connected to its storage space. A second large freight elevator is used to route the work to the first mezzanine (+3.78m).







4. 结构

建筑的主体结构是由混凝土柱,梁及预制楼板构成,柱网间距为12,50m x 15,70m。为了避免在中央大厅出现柱子,柱网再次局部扩大。

在进一步的深化研究中,金属框架结构也可纳入讨论范围之内

此结构被置于深埋地基之上,起始于地下三层。

通过对基地土壤地质结构的研究和载荷的精确计算,地基结构的各组成部分: 桩基础,基坑及防水层将合理根据需求不均匀的布置于自然土层。

方案结构的主要由预制件构成, 最终在工地实施现场组装:

- -根据不同的层高,混泥土支柱高度为4-12m不等,其截面将始终为0,7m x 0,7m。
- 主梁为东西向支撑, 其跨度为12,5m
- 预制箱形楼板将安置与结构主梁之上。

混凝土结构将会以漂亮光滑的外表并被直接暴露在外,用以体现建筑的精致结构并使其变得更易理解。

预制构建将被大量使用在上层建筑上,从而得到高品质的混凝土质感,另一方面也使得工程变得 更加高效。

4. STRUCTURE

The main structure of the building, is made of concrete beams, columns and coffered floors following a 12,50m by 15,70m grid.

This grid is widen in the lobby, in order to avoid having columns in this large volume.

Future studies may also consider the possibility to realize this structure with metal.

The structure is based on deep foundations, anchored below the third basement B3. Their constitution: piles, excavation pits, foundation slabs, will be appropriate to the nature of the inhomogeneous soil, and will be defined precisely according to soil testings, and more accurate calculations of concentrated loads.

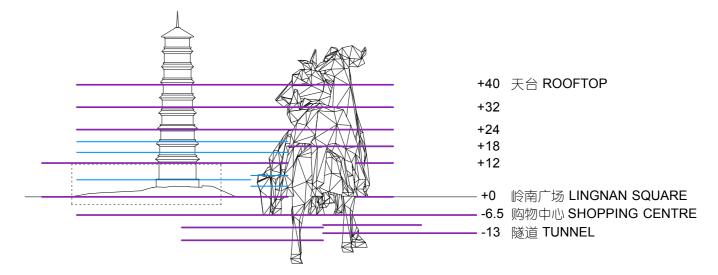
The main elements of the structure will be prefabricated and implemented on site:

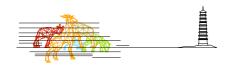
- the columns have a cross section of 0.70 x 0.70m with different heights at different floors (height between 4m and 12m).
- the main beams axis is west-east, bearing over a span of 12.50 m
- the coffered floors are supported by the beams.

The concrete structure will have a very good finish and be left bare, to express it's fineness and make the construction system understandable.

Prefabrication of the superstructure seems totally appropriate to enable a quality finish concrete, on the one hand, and seek for construction efficiency and time saving on the construction site, on the other hand.

主层 MAIN FLOORS / 夹层 INTERMEDIATE FLOORS





装饰性表皮,铝盖板等不持久的材料都将被摒弃,持久的建筑结构将被暴露在外,在建筑整个生 命周期中体现着方案的核心价值。

副金属结构

处于建筑主要结构之间的夹层楼板会使用更轻质的金属和混凝土结构构成,从而减少建筑自身结构重量。

这些夹层将重新划分主楼板之间的空间,以形成办公空间或者工作空间。 轻质的副结构被置于建筑主结构之上,这种相对独立的结构为将来博物馆的发展留下更多可能。

雕像将为金属制成:上色的金属蒙板附在雕像龙骨之上。雕像相对于结构独立,并不参与楼板的承重功能。

Coatings and enclosures are unsustainable, they will therefore be avoided, and the structure will be left exposed to keep sustained, over the entire life of the building, the initial and essential quality characterizing the project.

A secondary metal structure

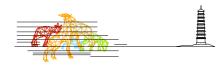
The floors of mezzanine floors, inserted into the main structure are made of a lighter metal structure consisting of metal frames and a steel-concrete composite slab, enabling a minimization of the weight of the structure.

They allow to re-divide the great heights of the main structure to create intermediate levels suitable for office or work spaces.

The structure of those intermediate floors has reduced spans and relies on the main floors. Its independent constitution allows future evolutions of the surface of these floors.

The statue will be made of metal: a coated metal plates tinted structure. It is independent of the building structure and is not involved in the floors bearing.





立面

立面是完全透明的,从而创造高品质自然采光并为内部空间提供室外景观。立面由铝合金框架和超白隔热玻璃组成,在展览空间,教育区和办公区域的玻璃具有隔音特性。

立面由大尺寸落地玻璃移门构成,使得进入外部空间变得容易:立面向外部广场,外部长廊大面积开放,用以实现自然通风。

遮阳板,窗帘,轻型移墙通过轨道移动,实现内部空间光线的控制与过滤。

屋顶

屋顶是公共开放的,可以从外部空间直接到达。

屋顶将通过一套反向隔水系统实现:混凝土楼板+沥青隔水层+隔热层+结构保护层。在屋顶周围一圈将安装保护扶手。

雨水将被收集并储存在底层餐厅下的水箱,用于清洗和卫生间盥洗用水。

Facades

The facades of the building are completely transparent, to create a quality natural lighting and views on the outside from all interior spaces.

They are composed of aluminum frames and clear glass which are thermally and acoustically efficient especially in the exhibition, work and education spaces.

The facades are divided in opening or sliding large elements, which allow easy passage to outdoor areas (courts, outdoor corridor galleries) without any gap and permit to open widely the facades, to create natural ventilation.

Blinds and curtains are light, thermal or opaque, mobile. Running on a network of rails, they will filter and graduate light or darken.

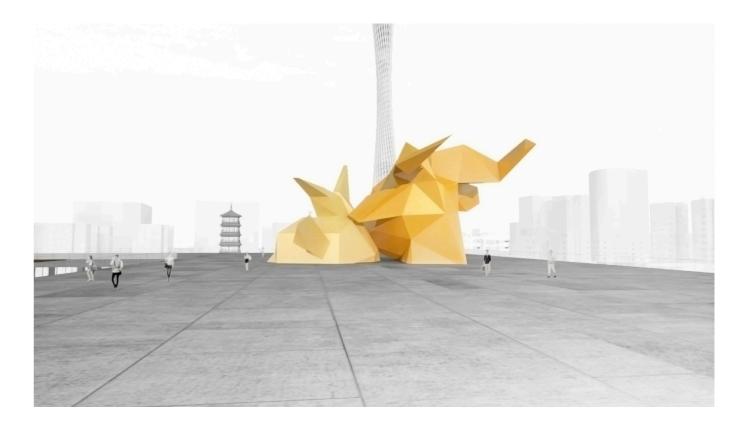
Roof terrace

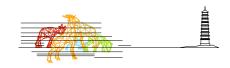
The roof is accessible and usable as an outdoor area of the museum.

It will be performed with a reversed sealing system according to the following: concrete slab + asphalt type sealing + insulator + concrete smoothed protection slab.

A railing positioned slightly off the edge of the roof will be implemented along the entire periphery. Rainwater will be collected and stored in a water tank below the restaurant on the ground floor, and reused for toilet use and maintenance.







5. 环境品质与可持续建筑

项目的环境品质基于简单,基本的原则,在项目概念设计的最初阶段以及对基地周边环境分析时就被纳入考量。

方案的建筑可持续性基本策略,由一系列巧妙的设备所完善。根据建筑内部各空间对舒适度, 气候的不同需求及特点,该系统能有效区分并调节博物馆建筑内部的区域热工环境。

1-简单的节能与可持续性建筑理念

-对于赤岗塔周边绿色环境的特别重视保留其自身特点,并提高其密度。

鉴于两万多平方米的绿化规模,赤岗塔公园对建筑周边的热工环境扮演着相当重要的角色。此外,它为赤岗塔和博物馆提供了一个非常高品质的空间,一个游客和当地居民休闲的场所。因此项目尽可能多的保留绿化空间,并对其加强,作为一个植物园,成为博物馆的一部分。

5. ENVIRONMENTAL QUALITY OF THE PROJECT

Environmental quality of the project is based on simple principles, which act primarily on the building design and attention to the relationship with the site and the environment in which the project develops.

These fundamental principles are supplemented by an intelligent combination of technical installations, differentiated and adjusted according to the specificities of the different areas of the building and their functions, and considering that the needs of comfort, climate, and the thermal conditions in the building are not uniform everywhere.

1- Simple design principles for sustainable and energy efficient architecture :

- a particular attention is paid to maintain all green space on the site around the Chigang Pagoda, and strengthen its density.

Given its size 23 340m2, the park is a habitat of living species and plays an important role in the thermal behavior of buildings nearby.

In addition, it provides a very qualitative environment to the Pagoda and the museum, and a resort for visitors and locals.

The project thus aims to maintain the park in its smallest square meters, to strengthen it, as botanical garden, now part of the collection of the Museum of the City.

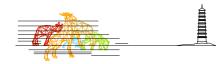
植被目录 CATALOG BOTANY

场地内部分植物标识 - IDENTIFICATION OF PLANTATIONS IN THE SITE



赤岗塔公园: 具有岭南特色的植物推荐名录 - CHIGANGTA PARK: PLANTATIONS RECOMMENDED WITH LINGNAN CHARACTERISTICS





在博物馆施工建设期间, 赤岗塔公园将不会成为施工工地, 园区内的植被将得到充分地保存。 预制混凝土结构的运用就意味着工程施工阶段能有效保证场地内的清洁, 减少工地施工对城市环境的污染并保证高效快速的工程进度。

-建筑理念

方案考虑到广州亚热带气候条件的特性。

方案非常开放与透明,

- -从而尽可能多的得益于赤岗塔和其公园以及城市景观并将城市的景观引入博物馆内部。
- -从而引入自然光线到各个博物馆空间以及工作区域。
- 这些品质兼容于当地充沛的雨水与潮湿的气候条件。

建筑体量由每层巨大的楼板形成。

在每层结构外部退让六米,一系列巨大的落地玻璃窗围合内部空间的同时形成6米宽环绕建筑的大型长廊。从而保护建筑立面于雨水与阳光直射,并在保有外部景观的同时降低内部直射阳光的强度。此外这些长廊还起到外部交通的作用。

这些通高玻璃立面可以向长廊打开,从而实现自然通风,每年都可以有一段时间不需要内部空调,比如中央大厅的交通空间。

这也可以使博物馆内部享受到公园持续轻柔的微风。

The park will be preserved during construction and the construction method will be defined so as to not have to use the park for construction logistics.

The use of prefabrication, which involves site cleanliness, greater efficiency and speed of assembly, will be sought.

- building design

It takes into account the particularity of the program and the sub-tropical climate of Guangzhou. The architecture is very open and transparent

- . to take as much benefit as possible of the environment of the park and the Pagoda, and of views on the city in order to introduce these components of the city in the city museum,
- . to bring natural light in all the exhibition spaces and workrooms,

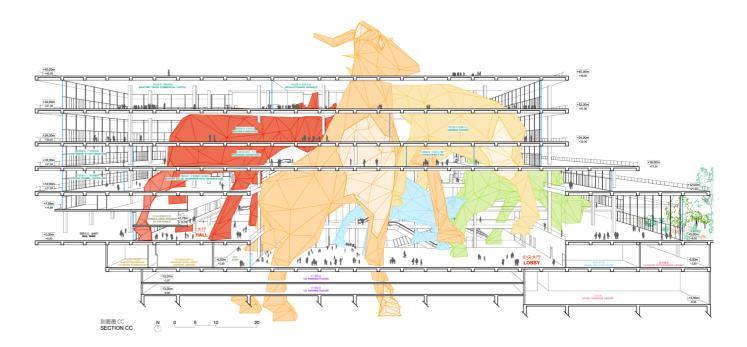
but also conceived so as those qualities can be compatible with the features of the climate, marked by sharp abundant rainfall sometimes, and a high level of humidity.

The building consists of large platforms at each level.

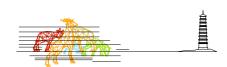
It is enclosed by large windows, whose position within the structure, create wide corridor-galleries of 6 m deep around the building at each floor. They protect the facades from rain and sunlight and reduce brightness without closing the view. They also allow traffic outside at every level.

Glass floor to ceiling height facades, can be widely opened to the corridors spaces and thus allow natural ventilation, part of the year, for spaces that do not require controlled indoor conditions, such as circulation spaces or lobby.

It also allows to exploit the presence of the park and the light but fairly constant breeze of the region.







如此每年都可以将一部分空调费用节省下来并精确地根据外部气候调节内部环境。

另外,这也可以最大化地利用到自然采光,特别是办公区域,图书馆,交通区域等等。一部分展 览厅的人工照明安装时间也可以被节省下来。

遮阳板, 帘幕, 移墙等也被考虑进来, 从而在需要时可以过滤外部光线, 实现全部黑暗。

-建筑自由度

开放的梁柱体系创造出具有高度自由性的大面积楼板,从而使得内部空间可以持续变化并避免大量的工程。所有的管线,照明都得益于规整的柱网结构从而实现高自由度。

This reduces the yearly period of operation of technical facilities and precisely adjust their operation to the climate.

Moreover, they allow maximum use of natural light to illuminate spaces, including offices, library, corridors, etc ...

or some exhibition rooms and reduce the artificial light usage in the building.

Systems of blinds, curtains, movable walls are provided in the project to give possibility and ease of filtering precisely lighting, up to complete darkness if necessary.

- building's flexibility

The open construction structure, releasing wide open spaces from walls and columns, and the bearing capacity of floors, allows great flexibility for space planning and scalability, without requiring structural work.

Technical networks, cabling, lighting, ducting will be organized in frames that also allow this flexibility.

-简单的建造体系避免依赖过于复杂的技术

方案将会使用到的建筑材料被优化并精确控制。

使用到的材料种类的数量将被严格挑选和控制,使得运输和维护变得更加容易。主要使用到耐久的材料可以延长建筑物的寿命,并避免特殊的维护需求。这些材料在长久的建筑生命周期中慢慢老化的同时却可以变得更加有魅力(混凝土,钢,玻璃,铝合金)

建筑的混凝土预构建以及地下层钢骨架浇筑混凝土都将会使用完全可以回收的材料。

我们并不寻求复杂的建筑形式,高难度的建筑构造以及堆砌各种材料。

而是更多寻求空间的容量和质量,

寻求他们与环境与周边文脉的高品质关系,

寻求对于人们和基地的品质,

寻求对于特定展览项目和使用方式的适应性,

寻求舒适,愉悦和幸福,

并创造无形资产,诗意以及富于想象力的。

为博物馆提供了高品质的收藏和展览环境。方案为博物馆提供了最核心的品质。

- the construction system is simple and does not involve complex technologies

The amount of used material is optimized to meet a precise calculation of what is necessary. The number of different materials used is limited and selected, which facilitates transport and maintenance. Robust materials, which have a long life without requiring any special maintenance costs and offering a beautiful materiality, even with aging (concrete, steel, glass, aluminum) are selected. The precast reinforced concrete structure, the structure of the basement and the steel-concrete composite slabs casted on site will be made entirely from recycled concrete.

We do not place the interests of the architecture in the sophistication of its form, or it's construction complexity, neither in the profusion of materials,

but rather in the capacity and quality of spaces,

their qualitative relationship with the environment and context

the attention to the qualities of the site and people

the adaptability to the program and the intended use, the flexibility,

the quality of use it provides to its users and visitors

the comfort, pleasure, well-being,

and the ability to create intangible assets, poetry and imagination.

For the museum, the quality of its collections and of the conditions offered to expose and preserve the collections.

The proposed museum project is mainly based on all of these qualities.



2. 混合技术的安装

多样的空间和他们的功能根据不同的使用的需求以制定不同的环境设备安装系统。

在一些需要特别控制的环境如预留空间,展品收藏空间,特定博物馆空间,厨房。这些区分将被尽可能多的建立。

在其他需要精确控制内部气候环境的空间主要使用半机械通风的方式

考虑到建筑的设计理念及建筑围合,设备安装的原则混合了几种不同的系统。

-传统的安装方式使得可以控制内部气候,温度和湿度:空调,机械通风,

-对自然资源的充分利用

自然通风通过自然风刮人:通过立面进入或者垂直拔风

屋顶雨水的回收于盥洗间使用

在餐馆下有预留水箱用于存储雨水

屋顶配有太阳能板

公园也将起到降低城市热岛效应的作用。

风能也将在方案中使用,即使在广州可用的风能资源并不多。

所有的解决方案的组合将被准确研究,并最终提高舒适度,有效性,成本和可靠性。

2. Combined technical facilities:

The diversity of spaces and their operation leads to define differentiated systems according to the areas usages and their needs in terms of indoor climate treatments.

The distinction will be made as thin as possible, between the areas that require constantly controlled conditions: storage areas, conservation of collections spaces, some museum spaces, kitchens, and where conditions may vary, less precise, more adjusted to the seasons, where you can combine mechanical and natural systems.

The design of technical systems will combine several systems, also taking into account the contribution of the building design and its envelope:

- «classic» facilities enabling control of the indoor climate, temperature and humidity: air-conditioning, mechanical ventilation,
- greener facilities favoring the use of natural resources:
- . natural ventilation by natural air sweeping: from facades or by vertical chimneys
- . recovery of rainwater from the roof for toilet water or cleaning a water supply is provided under the restaurant to collect and store rainwater
- . solar or photovoltaic panels on a portion of the roof of the building
- . the contribution of the park will also be taken into account in the study of climate parameters: in particular, the beneficial effect of the forest for cooling the city heat
- . the use of wind energy will also be studied, even if the wind regime in Guangzhou is not high.

The combination of all solutions will be accurately evaluated through comparative studies, and the selection criterion will be the generated comfort and the best, effectiveness, cost and reliability ratio.



6. 经济

在此所呈报的方案造价为1,2亿元人民币。

其中包括:建筑本身建造费用(结构,地下层,立面,设备,卫生系统,屋顶,平台,内部墙体,楼板与铺地),雕像,报告厅座椅,特定空间照明,内部窗帘以及公园改造费用。对于我们来说,方案的经济性是和方案概念紧密联系的,贯穿整个方案的各个阶段。在某些条件下,方案可能造价可能会大大低于估算造价。这并不意味着最终我们会选择最廉价的材料。

它是基于一种经济的方法,在全局上比较项目的各个构建在精确分析各尺寸后,我们剔除任何不必要的设备与构造。

一个给予供应商精确的建筑构件尺寸表得以让我们实现材料的优化与理性预算控制。 这种经济节约的方法让我们可以把充分将大面积平台,有覆盖的长廊,公共屋顶平台,内部雕像 等建筑构件纳入预算之中。

这使得我们可以把更多经费放在其他建筑构件上,如巨大的节能玻璃立面,保证建筑结构,材料和各种系统的品质。

我们非常重视最终项目完成的造价。

6. ECONOMY - COST

The proposed project will be implemented in the defined budget of 1.2 billion yuan.

Are included in the cost: the construction of the building itself (structures, basements, facades, technical facilities, toilets, roofing, terrasses, interior partitioning, floors and finishes), statues, interior fitting out for auditoriums, specific lightings of interior spaces, all interior curtains, and the generous layout of the park.

The economy of the project is, to us, closely associated with the design approach throughout the project from its initial phase.

Under these conditions, far from restricting it offers margins of freedom.

It is not limited to a cost calculation, leading at the end to arbitrations.

It is based on an economic and estimative approach, element by element, in contrast to ratios globally applied, and an understanding of what constitutes the costs, saving and optimization factors. It lies in the precision of studies and dimensioning, in the elimination of any sophistication that does not bring quality of space and use, or technique.

A precise layout of the dimensions of the construction elements, based on manufacturers data allows significant savings by streamlining and optimizing the use of the material.

This economic approach allows us to absorb the budget of large surfaces of terraces, covered porches, accessible roof, and of the interior statue, which is indissociable from the project. It allows us to afford on specific elements of the building such as large efficient glassed facades, without reducing any quality neither on the architecture, nor on the materials or systems.

We attach particular importance to meet the budget for a defined project.

附件七 技术经济指标计算与工程造价估算格式规定

一、总体技术经济指标按下表格式计算,并纳入设计成果文本文件

基地面积(m²)	46 512 m2				
总建筑面积(m²)	79 705 m2		其中	地上 (m²)	43 433 m2
				地下 (m²)	36 272 m2
建筑高度(m)	40 m				
建筑密度(%)	47,15%				
容积率	1,7				
绿地率(%)	52,84 %				
停车场库面积	总面积(m²)	12 047	其中	地上面积(m²)	2 766
				地上泊车位(辆)	22
与泊车位	泊车位(辆)	310		地下面积(m²)	9 281
				地下泊车位 (辆)	288

备注:

- 1.基地面积以"广州博物馆规划设计条件"标明的面积为准;
- 2. "建筑面积"是指建(构)筑物外墙(柱)勒脚以上各层外围结构面水平投影面积,包括主要功能空间、附属功能空间和墙体结构的面积
- ,不包括外墙结构面以外装饰面层部分面积;
- 3. "建筑密度"是指建设用地内所有建筑物地上计算建筑面积部分的水平投影总面积与建设项目可建设用地面积的比值;
- 4. "容积率"是指建设用地内计算容积率的建筑面积与可建设用地面积的比值;
- 5. "绿地率"是指城市一定地区内各类绿化用地总面积占该地区总面积的比值。

二、博物馆建筑技术经济指标按下表格式计算,并纳入设计成果文本文件。

区域	功能区	建筑面积(m²)	占总面积百分比
	库前区	1 103	
森口房区	藏品库	14 950	
藏品库区	库房管理中心	1 630	
	小计	17 710	22,22 %
	常设陈列	9 851	
展陈区	专题陈列	9 288	
放	交流陈列	3 811	
	小计	22 950	28,79 %
	交流与接待区	1 640	
	对外服务场所	2 278	
社会教育与	视听室	148	
综合服务区	相关服务设施	1 148	
	对外服务工作区	3 183	
	小计	8 397	10,53 %
	文物保护修复中心	1 558	
	图书资料信息研究中心	1 972	
业务科研区	信息研究中心	172	
	展览设计制作室	327	
	小计	4 029	5,05 %
	行政工作区	1 713	
行政管理区	总务后勤区	1 631	
	小计	3 344	4,19 %
京 人但田屋	保安值班室、宿舍	797	
安全保卫区	小计	797	1 %
'IL A IS	各类设备用房	3 302	
设备区	小计	3 302	4,14 %
地工度左床	地下停车库	9 281	
地下停车库	小计	9 281	11,64 %
公共区域	中央大厅	1 863	
	走道、楼梯等公共区域	8 032	
	小计	9 895	12,41 %
1	合计	79 705	100 %

三、机电设备技术数据计算表格,纳入设计成果文本文件。

四、项目工程造价按下表格式估算,并纳入设计成果文本文件。

土建造价 (万元人民币)	72000 万元人民币
设备造价 (万元人民币)	30000 万元人民币
装修造价 (万元人民币)	18000 万元人民币

*此报价包含所有土建,设备,装修费用,以及赤岗塔公园改造费用和所呈报方案中的特定形体的建造安装费用。

备注:

- 1.土建造价包括:全部土建工程、室外用地红线内的道路、绿化、管线工程的造价。
- 2.机电设备安装工程造价包括:一般通用设备安装工程如给排水、卫生、电气电信、照明、防雷、变配电、消防、安防、智能控制、空调及通风、电梯、弱电等工程的造价。陈列厅内部专用布展设备、藏品保管设备等另外专门组织工程招标,不在本次竞赛范围之内。
- 3.装修造价包括:室内外一般装修工程和公共空间的装饰工程的造价。 。陈列展厅内部的布展装修不在计算范围之内。
- 4.项目工程造价估算应根据上述要求列出明细表。

