

水晶石

CRYSTAL CG

建筑表现 III



水晶石建筑表现III

CRYSTAL ARCHITECTUAL RENDERING III

水晶石数字科技有限公司

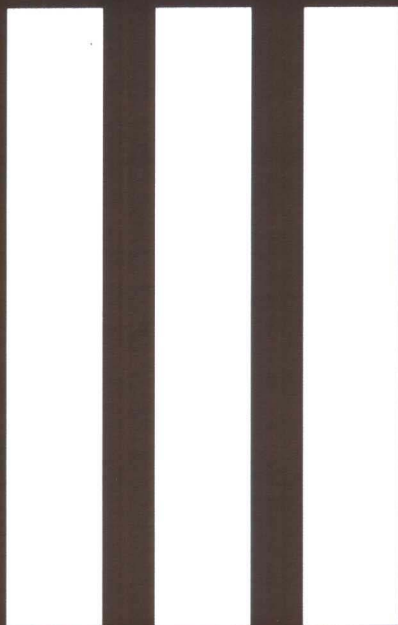
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序

第一次对水晶石公司留下深刻印象是在2000年蒙特卡罗的申奥展示会上。紧邻着北京展台的是日本大阪展台。通过大阪申奥工作人员羡慕的目光和赞许的语气,我才知道北京展台上滚动播放的、北京申奥工作人员早已熟识的奥林匹克公园三维动画是具有国际水准的精良制作。大阪的申奥人员甚至不相信这个制作出自北京一个年轻公司之手。更让我感动的是水晶石公司还是北京奥申委重要的赞助单位之一。北京申奥的陈述和宣传材料中关于场馆的所有电脑图像制作均是赞助之举,而这些制作一直伴随着北京走过申奥工作的全程。现在水晶石的年轻人作为一支重要的辅助设计队伍,又在为奥运场馆的规划设计忙碌着。

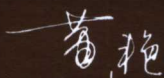
建筑表现图传统上是建筑师的看家本领。甚至到现在,在我们的建筑基础教育中,建筑表现图的制作还占有非常大的比重。随着社会分工的细化,建筑表现图不知从何时起已经悄悄地从建筑设计中剥离出去了。先不谈建筑师们有什么感受,必须承认的是,这些建筑表现图的制作者们正在参与建筑创造,无论多或少。社会分工的细化是生产力进步的表现,促进了生产率的提高。在这一点上,我们应该庆幸有这种分工,尤其在我们城市建设非常活跃的今天。

如果谈“建筑表现”而不是建筑表现图,建筑师们的感受会不一样。尤其是三维动画,或者更前卫一点的虚拟现实,建筑电脑图像制作者们用这些新的建筑表现手段帮助建筑师们实现了很久以前的梦想,即在创作过程中能全方位地、动态而真实地看到自己的建筑产品。建筑师们会心存感激地邀请图像制作师们一同参与创作,使建筑电脑图像制作成为建筑创作不可缺少的一部分。

水晶石公司的年轻人对建筑表现的热爱和追求,可以从他们这些不定期图集的不断进步中深刻地感受到。与此同时,我们也能透过这本图集看到北京和其他城市在建筑设计领域中的不断进步,这也是规划设计市场开放带来的硕果。可以肯定,这本图集将很快被摆放在建筑设计院所和建筑师的书架上,将在建筑创作中起到非常积极的作用。与此同时,我们的城市还希望出现更多一些原创的建筑作品。

除了将这些制作精良的高水平建筑表现作品作为公司业务主项外,这些具有高度社会责任感的年轻人还投入大量精力为公益事业做出贡献。“FAR 2000”网站为建筑师和热爱建筑创作的人们提供了一个交流和共享的平台;“六箱”展厅里陈列的“数字老北京城门城墙”正免费为北京市民提供一个回忆和学习的场所……

感谢水晶石公司的年轻人为北京的城市文化所做出的努力,感谢他们为北京城市建设和奥运会场馆建设做出的贡献。



北京市规划委员会副主任
北京第29届奥运会组织委员会工程规划部副部长
2003年4月15日

P r o l o g u e

The first time I was left with a deep impression of the Crystal was at the demonstration session for the application of hosting the Olympic Games by the 5 candidate cities at Monte Carlo in 2000. Next to the Beijing booth was the booth from Osaka of Japan. From the admiring looks and words of the Japanese staff, I came to know that the three-dimensional cartoon played continuously at the Beijing booth showing the Olympic Park was a piece of work that has reached the international standard. The Japanese staff even thought it unbelievable that the work was made by a young company in Beijing. And what made me more touched was the fact that Crystal was one of the key financial supporters for the Beijing Olympic Games Organizing Committee. All the computerized pictures showing the sports grounds and gymnasiums in the presentation and publicity materials for applying to host the Games were given free by Crystal, which saw the whole process of the application effort made by Beijing. Now, the young professionals of the company have started another round of busy work making designs for the sports facilities of the Olympic Games as an important auxiliary designing team.

Architectural expression drawing used to be the architect's special skill. Even today, the making of this kind of drawing still plays a vital role in the basic architectural training. Nobody knows when, with the more specified division of labor, the architectural expression drawing has divorced itself from architectural design. We have to admit, putting aside the feelings of architects, that the makers of these drawings have been involved in architectural creation, no matter to what extent. As a symbol of advanced productive forces, the more intensified division of labor has improved efficiency of production. Thus, this division is worth celebrating, especially in today's unparalleled active urban construction.

Architects would have felt differently if "architectural express", instead of architectural expression drawing, is discussed, especially three-dimensional cartoons, or the more radical virtual reality. As the makers of computerized pictures helped architects realize their long-held dreams by using new architectural expressive approaches, namely, to be able to see one's products in a comprehensive, dynamic and authentic way, architects would feel so grateful as to invite the picture makers to cooperate with them, thus making computerized pictures an indispensable part of architectural creation.

The love and devotion of the young people of the Crystal shown towards architecture can be deeply felt in the collections that come out occasionally. Meanwhile, we can also witness the progress made in the architectural sector in Beijing and other cities through these collections. They are also the results of the opening up of the planning market. There is no doubt this collection will soon find its way to many a shelf of architects and architectural design institutes, assuming an essential role in architectural creation. We also hope that more original architectural works will be produced in our cities.

Apart from these finely executed, high-standard expressive works, the young people of the Crystal all have a strong sense of social responsibility, and have devoted a lot of their energy to the charity cause. "Far 2000" is providing a platform for architects and architectural lovers to share their experience. The "Digital Beijing City Gates and City Walls" is also on display free of charge in the "Six Box" show room with the purpose of providing a venue of learning and nostalgia for the Beijing inhabitants...

I appreciate the efforts of the young people of the Crystal for the construction of the culture in Beijing, and the contribution they have made to the urban construction of Beijing and to the gymnasiums and stadiums of the Olympic Games.

Huang Yan

Deputy-Director of Beijing Municipal Urban Planning Commission
Deputy-Director of the Venue Planning and Construction Department, Beijing
Organizing Committee for the Games of the XXIX Olympiad

April 15, 2003

前言

走向“新”电影

计算机辅助建筑设计下一步将如何发展？一次在水晶石看到他们制作的德胜门复原动画是对这个问题一个很好的启示：数码重建的德胜门里有一队古代士兵在行进，记得是出城去，首领则骑着马。军装大概是明朝式样。尽管仅仅是走了一遭，没有叙事，没有对话，没有太多动作，这队人马还是把建筑从物体转化为了环境，同时人的活动溶入了建筑也说明了建筑。也许，如果有一场战斗，瓮城在历史上的防御功能会展现的更直接些。动画几乎成了电影，起码开始逼近电影。于是我后知后觉地意识到下一步该是计算机电影辅助设计。计算机游戏的某些概念似乎也早该借鉴进来。如果是做电影，就需要先编剧，有真实或虚拟的角色人物，有情节故事。而且电影的制作可能发生在具体的建筑设计开始之前与过程之中，即通过电影进行建筑设计，在人物的运动中设计空间经验，在情节展开中确定空间关系。建筑空间围绕电影故事逐渐形成。在电影中，不仅空间而且时间也应成为建筑设计的对象与内容。这其实与中国步移景异的造园传统，与美国建筑师霍尔多年来对建筑的现象学的思考都有相似之处。当计算机电影辅助设计出现时，作为建筑师，我希望能够为不同的工程在爱情、悬念、动作片之间做出正确的选择。

张永和

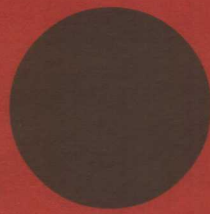
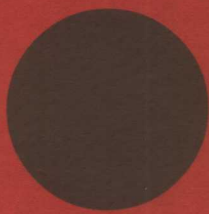
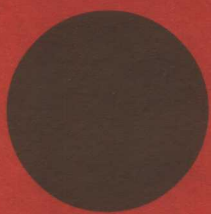
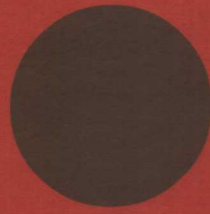
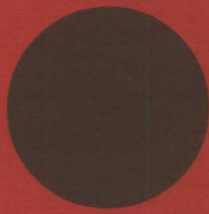
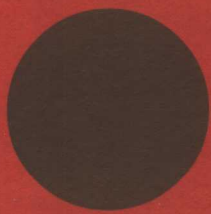
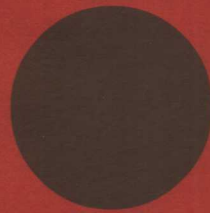
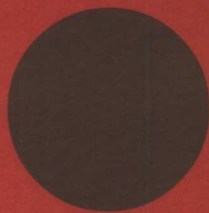
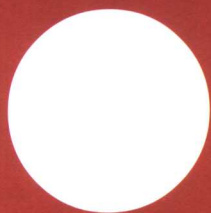
2003年3月22日

F o r e w o r d

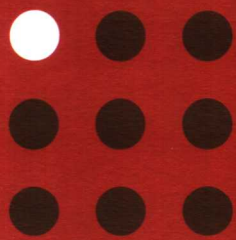
Towards a "New" Movie

How would the computer-aided architectural design develop next? I gained a good deal of enlightenment on this question from the animation of Deshengmen Gate restoration at the Crystal. A group of ancient soldiers are marching in the digitally-reconstructed Deshengmen. I remember they were going out of the town, with their commander riding on the horseback. The uniform they had on was possibly in the style of the Ming Dynasty. Even though there was no narrative, nor dialogue and too many actions, this troop has transformed architecture into environment, and in the meantime the movement of man was blended into and have explained the architecture. Perhaps, if a battle occurred, the historical defense function of the gate-fort would be demonstrated more directly. Animation has almost become a movie, at least coming close to it. Thus, I subconsciously feel that what comes next might be the computer-film-aided design. It seems that some concepts of computer games should have been borrowed long ago. When making a movie, a script with real or fictional characters and plots must be worked out first. And the making of a film might take place either prior to or during the process of a specific architectural design, namely, to proceed design through film making. That is to define spatial experience along with one's movement and spatial relationship in the course of the plot. The architectural space unfolds gradually around the movie story, during which not only space but also time become the subjects and content of architectural design. As a matter of fact, it is similar to the Chinese gardening tradition of chancing upon a novel scene with each step forward and the reflections on architectural phenomenology engaged by American architect Steven Holl. When the computer-film-aided design comes into being, I, as an architect, hope that I will be able to make the correct choice among love, suspense and action movies for various projects.

Yung Ho Chang
March 22, 2003



2002**重大设计竞赛** 2002 Important Design Competition



1

奥林匹克公园 Olympic Green

- ☐ Sasaki 设计有限责任公司(美国) 12
Sasaki Associates, Inc. (USA)
天津华汇工程建筑设计有限公司
Tianjin Huahui Design Inc.
- ☐ 北京市建筑设计研究院 14
Beijing Architectural Design and Research Institute
交通部规划研究院
Planning Institute of Ministry of Communications
EDSA 规划设计公司(美国)
Edward Stone, JR. & Associates Inc. (USA)
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China Architectural Design and Research Institute
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Kohn Pedersen Fox Associates PC (USA)
香港泛亚易道公司
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the Chinese Academy of Sciences
- ☐ 日本环境设计研究所 25
Environment Design Institute (Japan)
上海市地下建筑设计研究院
Shanghai Underground Space Architecture Design and Research Institute
日本佐藤尚已建筑研究所
Naomi Seto Architects (Japan)
- ☐ World Quest Engineering(美国) 27
World Quest Engineering (USA)

北京奥林匹克公园规划建设工程位于北京市区北部，城市中轴线的北端。拟规划建设用地面积约1,135ha，其中森林公园约680ha，奥运中心区用地约405ha，中华民族园及部分北中轴路用地约50ha。在奥运中心区四环路以北的建设用地中安排总建筑面积约216万m²的设施。该项目采用国际招投标，自2002年4月起，历时3个月，共收到方案57个。最终，有8个方案分获不同奖项。

一等奖：

Sasaki 设计有限责任公司（美国）

天津华汇工程建筑设计有限公司

二等奖：

北京市城市规划设计研究院

DEM AUST pty 有限公司（澳大利亚）

日本国株式会社佐藤综合计画（日本）

Ingerosec Corporation（日本）

优秀奖：

AREP 规划设计交通中转枢纽公司（法国）

总装备部工程设计研究总院

哈尔滨工业大学天作建筑研究所

北京市建筑设计研究院

交通部规划研究院

EDSA 规划设计公司（美国）

HWP 公司（德国）

北京大学城市规划设计中心

北京大学景观规划设计中心

The Beijing Olympic Green project is located at the northern tip of the city axis, or the northern part of Beijing. The projected construction area is 1,135 hectares, out of which 680 hectares will be allocated for the forest gardens, 405 hectares for the central part of the Olympic Games Center, and 50 hectares for the China Ethnic Garden and a portion of the northern axis. Facilities of 2,160,000 sqm will be built north of the Fourth Ring Road or the Olympic Games Center. The public bidding started in April 2002 and lasted for 3 months, receiving 57 designs. Eight designs won awards finally.

First prize winners:

Sasaki Associates Inc., (USA)

Tianjin Huahui Design Inc.

Second prize winners:

Beijing City Planning Design Institute

DEM AUST Pty Ltd., (Australia)

Satow Sogo Keikaku (Japan)

Ingerosec Corporation (Japan)

Excellent prize winners:

AREP (France)

Engineering Design Institute of the PLA, General Equipment

Tianzuo Architectural Design Institute of the Harbin Polytechnic University

Beijing Architectural Design Institute

The Planning Institute of the Ministry of Communications

Edward, Stone, JR. & Associates, Inc. (USA)

HWP Corporation (Germany)

City Planning Design Center of the Peking University

Landscape Planning Design Center of the Peking University

设计单位: Sasaki 设计有限责任公司(美国)
天津华汇工程建筑设计有限公司

设计构思寻求和谐性和综合性, 充满诗意又考虑到实用性。规划寻求东西方文化、古典与现实、发展与自然、周围已存在的建筑物和奥林匹克公园之间的和谐。设计理念包括以下三个基本要素:

森林公园向南部延伸, 将是一个体现中国几千年传统文化的殿堂。

文化轴线向北延伸, 作为城市中心轴线的终点。经过慎重考虑, 在其周边地区而不是在轴线上建造新的建筑。

奥林匹克轴线与文化轴线交叉, 连接亚运村和国家体育场, 表达奥林匹克所倡导的体育、文化、环境理念。

森林公园、文化轴线和奥林匹克轴线组成的奥运公园主体构架为此后每一座奥运会场馆的选址和设计提供了极大的灵活性。

Designed By: Sasaki Associates, Inc. (USA)
Tianjin Huahui Design Inc.

The design proposal for the Olympic Green seeks balance and integration. This balance and integration is both poetic and pragmatic. We seek to balance East with West, the ancient with the contemporary, development with nature, existing surrounding context with the Olympic Green. Our concept has 3 fundamental elements, to include the following:

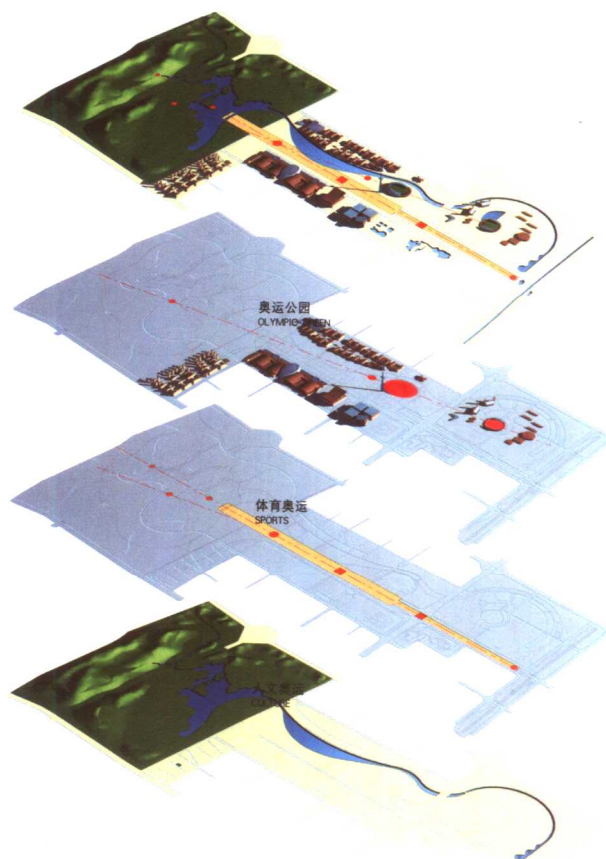
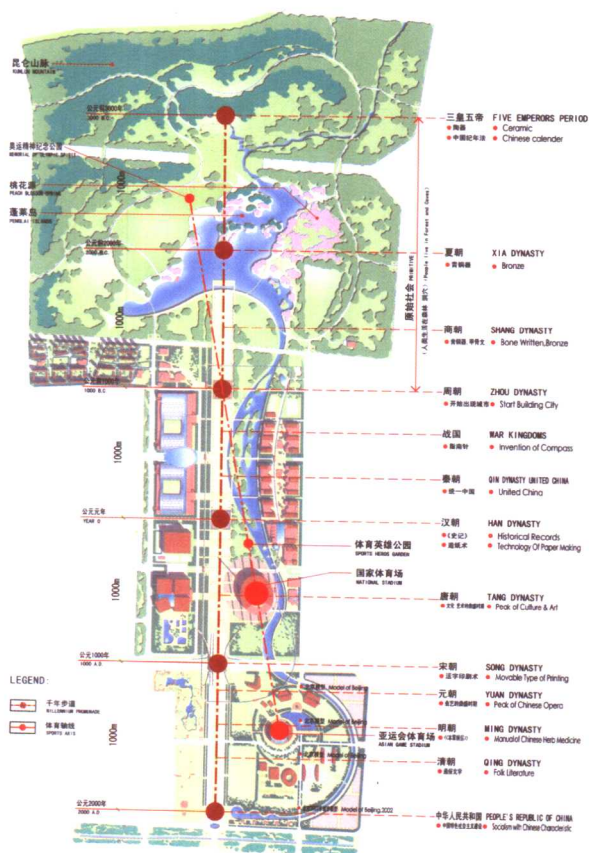
The Forest Park, and its extension southward, is conceived as an ideal paradise from which Chinese civilization emerged many millennia ago.

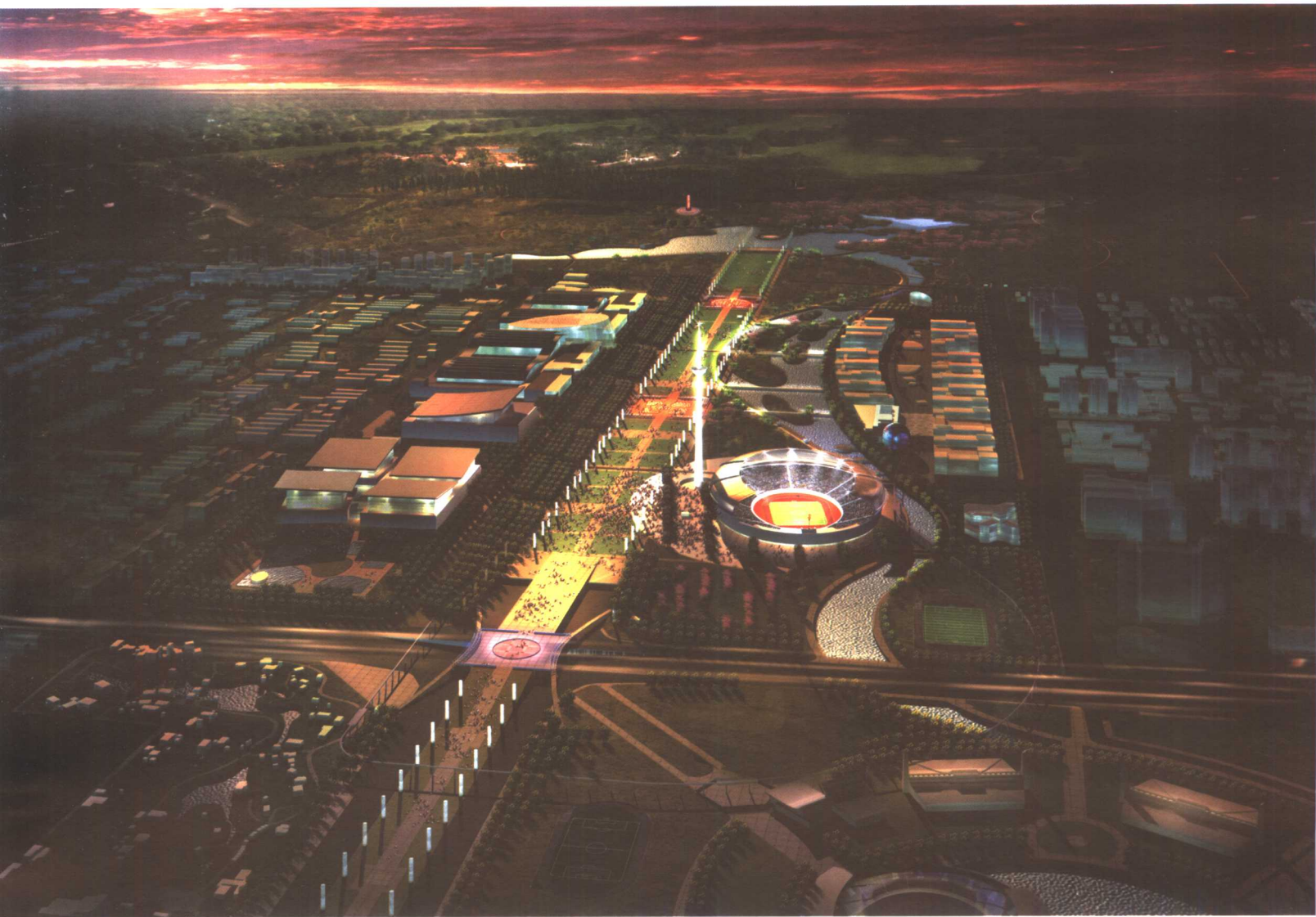
The Cultural Axis is the northward extension and conclusion of the city axis. It has been deliberated in choosing to place new buildings at its edge rather than on-axis.

The Olympic Axis, Linking the Asian Games site with the National Stadium, Expresses Olympic athletics, culture for leading and environment principle.

The combination of the Forest Park, Cultural and Olympic Axes provides a framework within which the building development program is arranged. The framework provides extraordinary flexibility in the ultimate sitting and design of each Olympic venue.

Olympic Green





设计单位:北京市建筑设计研究院
交通部规划研究院
EDSA 规划设计公司(美国)

Designed By: Beijing Architectural Design and Research Institute
Planning Institute of Ministry of Communications
Edward, Stone, JR. & Associates, Inc. (USA)

总体设计构思要素:

功能: 充分考虑奥运会时及会后的长期发展, 结合建筑使用功能, 城市道路交通情况以及周围用地性质, 将B区用地分为四个部分, 分别为青少年文化区、体育场馆区、会展博览区和商务设施区。

空间: 把体量相对较小的商业服务设施放在两侧, 将体量较大的体育展览设施放在中央, 形成与现状城市空间的过渡, 实现了大体量建筑在城市空间的“软着陆”。

交通: 在用地内设两个平行于北辰东西路的辅路(奥运东路、奥运西路), 有效疏导内部的交通, 缓解对城市的压力。

标识: 靠近四环路的文化设施区采用下沉方式, 可以使人们在四环路上清晰地看到位于中央的体育场馆, 增强了奥林匹克公园对城市的标识性, 并与现状国家奥林匹克体育中心在视觉上、空间上形成呼应。

发展: 设计充分考虑奥林匹克公园的滚动发展和分期建设的可能性。由大屯路、成府路及两条辅路分割成适合于商业设施建设的地块, 便于分期开发建设。

The elements in the overall design:

Functions: The use of the Olympic Games and the long-term development after the Games should be given full consideration. In light of the functions of the facilities, traffic conditions and purpose of the surrounding, the facilities to be built along the central axis in the Area B are Youth culture center, sports facility area, exhibition area and business area.

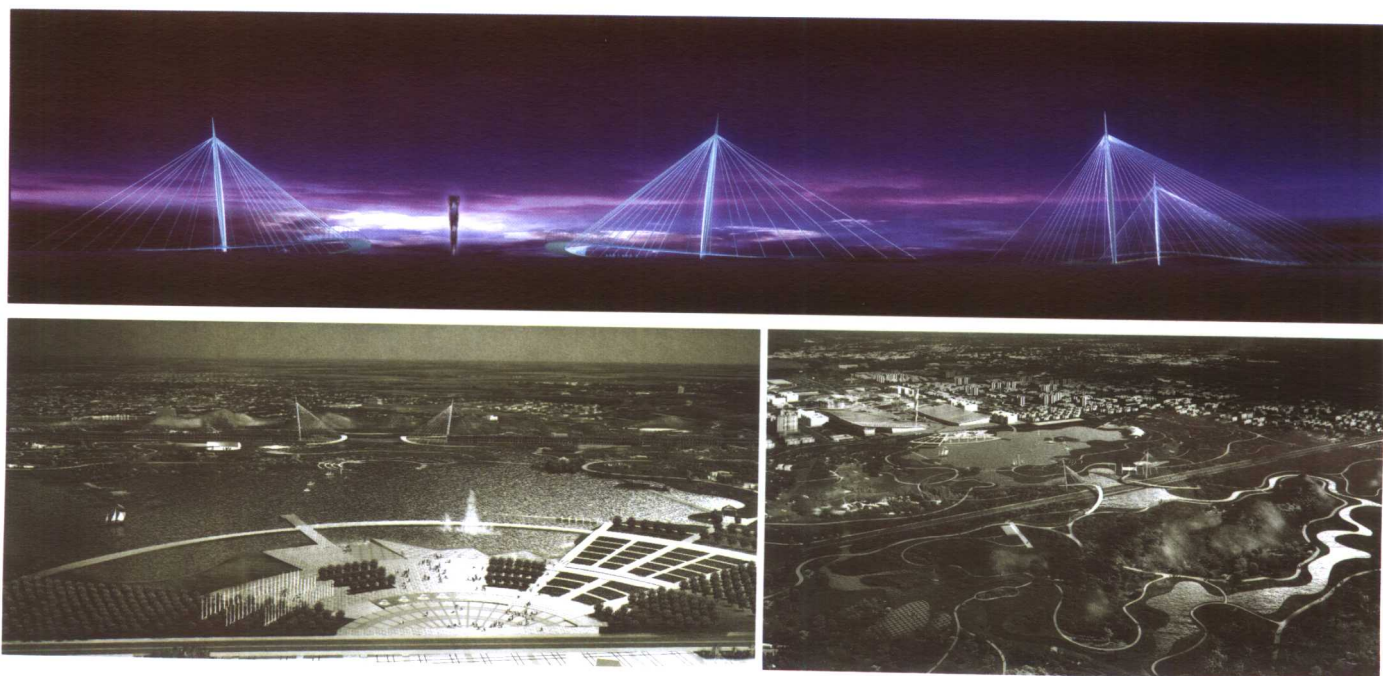
Space: The commercial service facilities with relatively smaller volumes will be placed along the two sides while the sports and exhibition facilities with larger volume will be built in the middle. A space transition is designed from the current to new buildings so as to realize a soft landing for the large-volume buildings in the city.

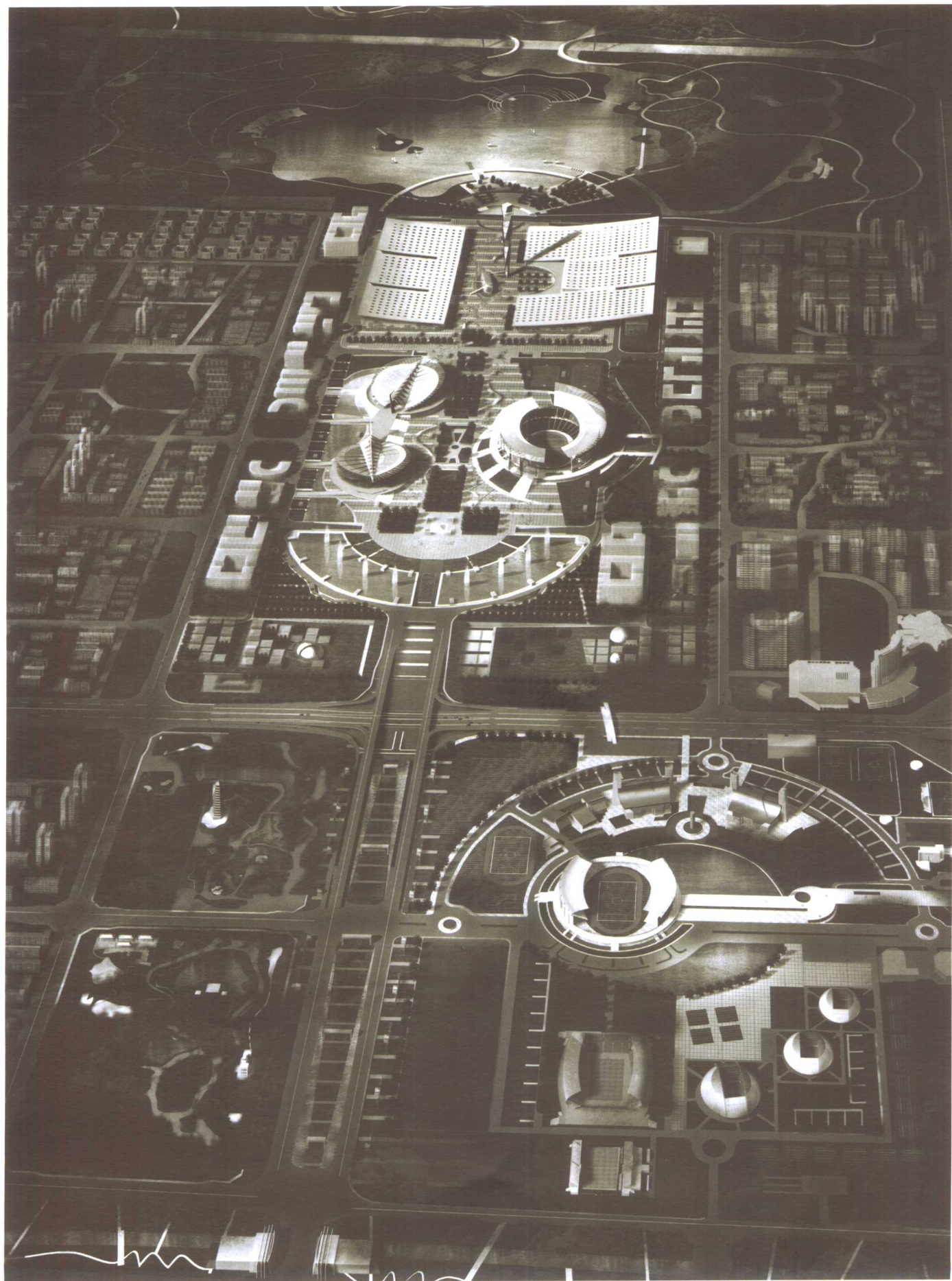
Transport: Two side roads will be built parallelly to the Beichen West Road and Beichen East Road to effectively dilute the traffic and ease the traffic pressure on the city.

Identification: Cultural facility area near the Fourth Ring-Road is sunk into the basement. From the Fourth Ring Road, one could directly see these facilities. This will increase the identity of the Olympic Green in the city and make the park well echo the existent State Olympic Sports Center from vision and space.

Development: The design will give full consideration to the progressive development and stage construction. The land plot separated by Datun Lu, Chengfu Lu and the two side roads is suitable for the construction of commercial facilities in stages.

Olympic Green





设计单位: AREP 规划设计交通中转枢纽公司(法国)

合作单位: 华东建筑设计研究院有限公司

“自然·历史·奥运·未来”

通过山、水、绿的设计,建立与自然的新关系;通过对北京城轴线、城墙、湖水的探究,建立与历史的新关系;通过空间形态和形象的设计,传达“人文奥运、绿色奥运、科技奥运”的北京奥运会主题;通过区域、活动流程的合理设置,创建未来城市新的公共活动空间。

Designed By: AREP (France)

Cooperation: East China Architectural Design and Research Institute Co., Ltd.

“Nature, History, Olympic Games and Future”

Establish a new relation with nature through designs of mountains, water and green land; establish a new relation with history through exploration of the axis, city wall and lakes in Beijing; promote the theme of the Beijing Olympic Games of “humanistic, green and hi-tech Olympic Games” through designs of spatial shapes and images; and create new urban public space through reasonable arrangement of places and activity circulation.

Olympic Green

