11.307 Beijing Urban Design Studio
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绿色首钢:
全球可持续发展研究中心

Greening the Factory:
A Global Sustainability Institute in Beijing

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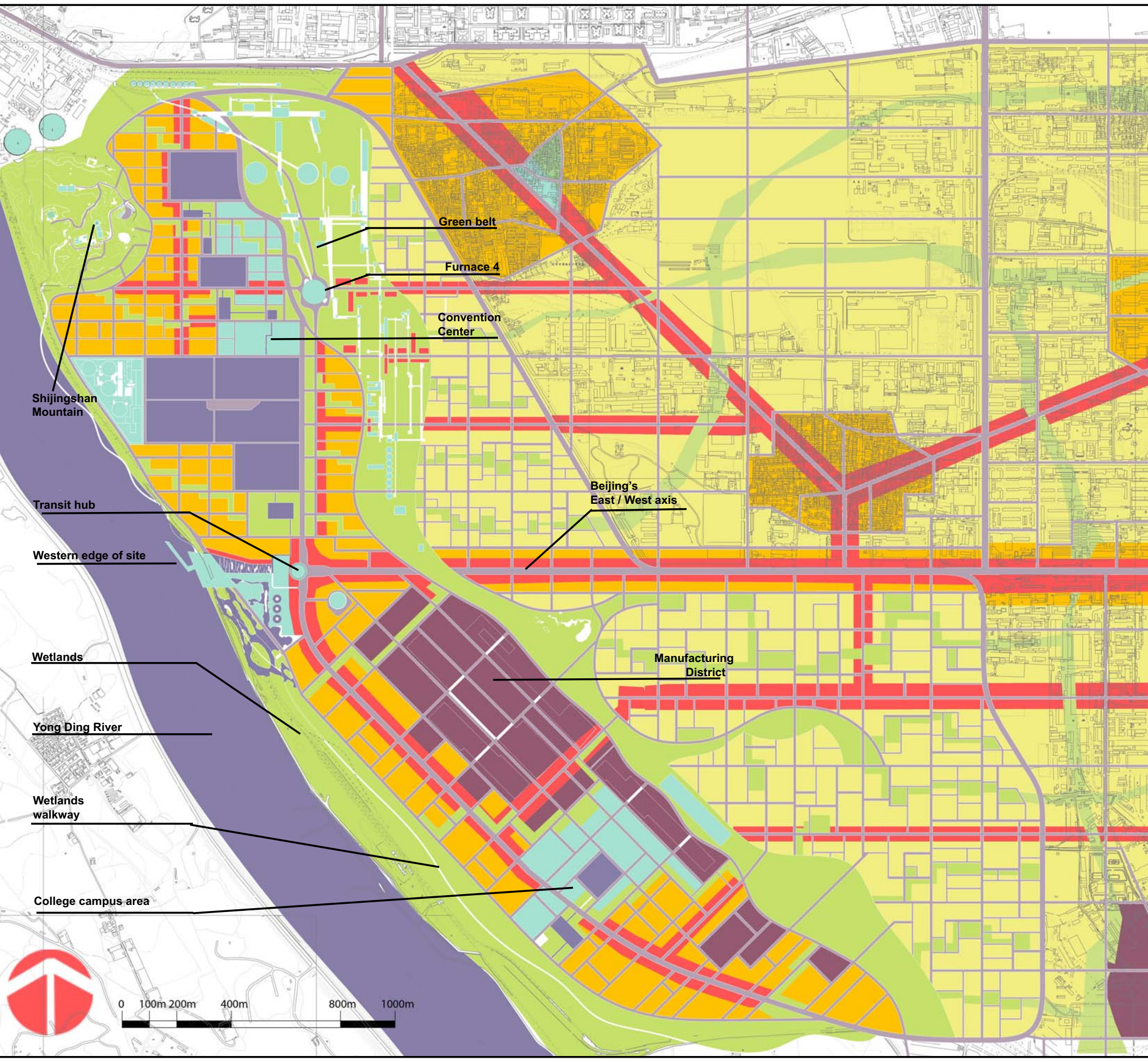
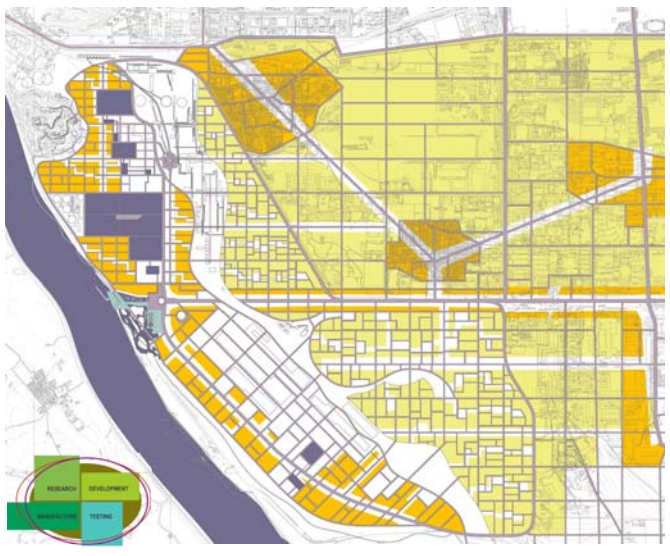
We propose the development of a Global Sustainability Research Institute at the Shougang Factory Site. Our plan responds to the many features at the Shougang site—its location on Beijing's east/west axis, the dramatic vertical landscape of manufacturing buildings, the height of Shijingshan Mountain and the presence of the historic Yong Ding River. We propose a rich mix of uses from research and development to testing and manufacturing, and an urban mix of housing and commercial facilities to support the Institute and its neighbors.

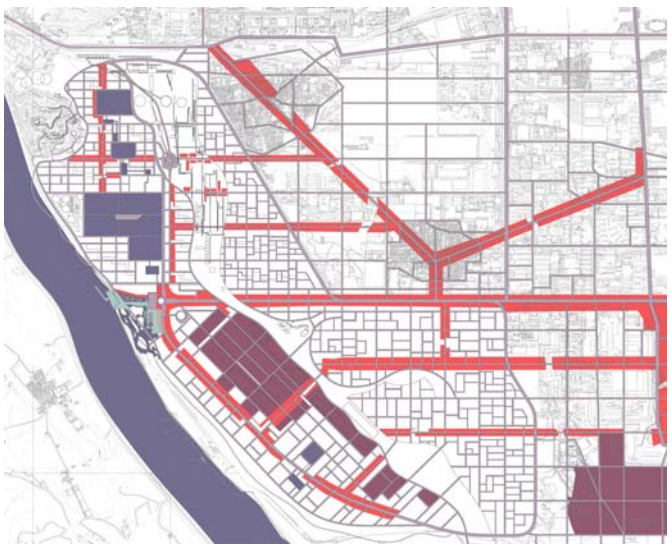
The Institute will position China at the center of an international movement toward energy efficiency, alternative energy, water conservation practices, and transportation innovations. Throughout the Institute, housing and commercial uses mix with historic structures adapted to new and sustainable uses, creating an array of educational experiences for visitors. A campus area features satellite facilities from leading universities in China and abroad.

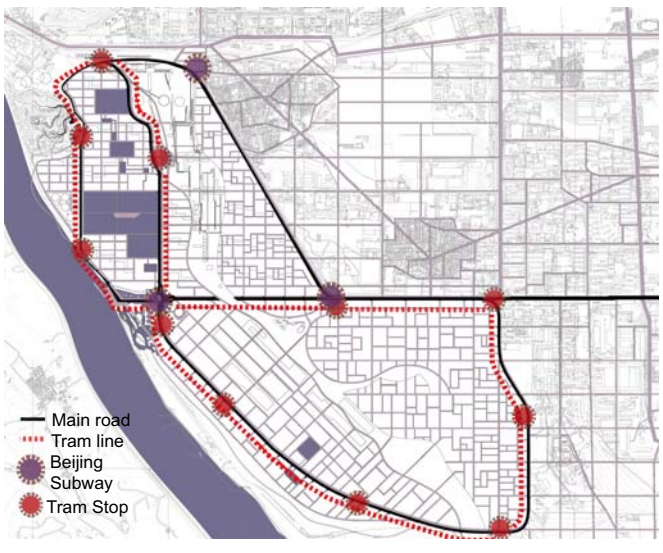
根据场地的各种特征，我们策划在首钢搬迁后的厂址上建立一个全球性的可持续发展研究园区。首钢位于北京东西轴线的尽端，大量工业遗存构建了丰富的垂直景观，拥有石景山和永定河悠久的历史文化积淀。我们的策划基于用地的功能混合，园区功能上包括从研发到实验及制造的各个环节，城市功能上则涵盖居住、商业等各类空间以支撑园区和周边社区的发展。

这一研究中心将使中国在能源效率、资源更新、水资源保护利用和交通系统创新等方面与国际接轨。研究机构、住宅、商业的混合，以及对工业遗存的重新利用，会为人们提供一种全新的教育体验。我们策划若干国内外高等院校在此建立分校区，从事可持续发展的研究。







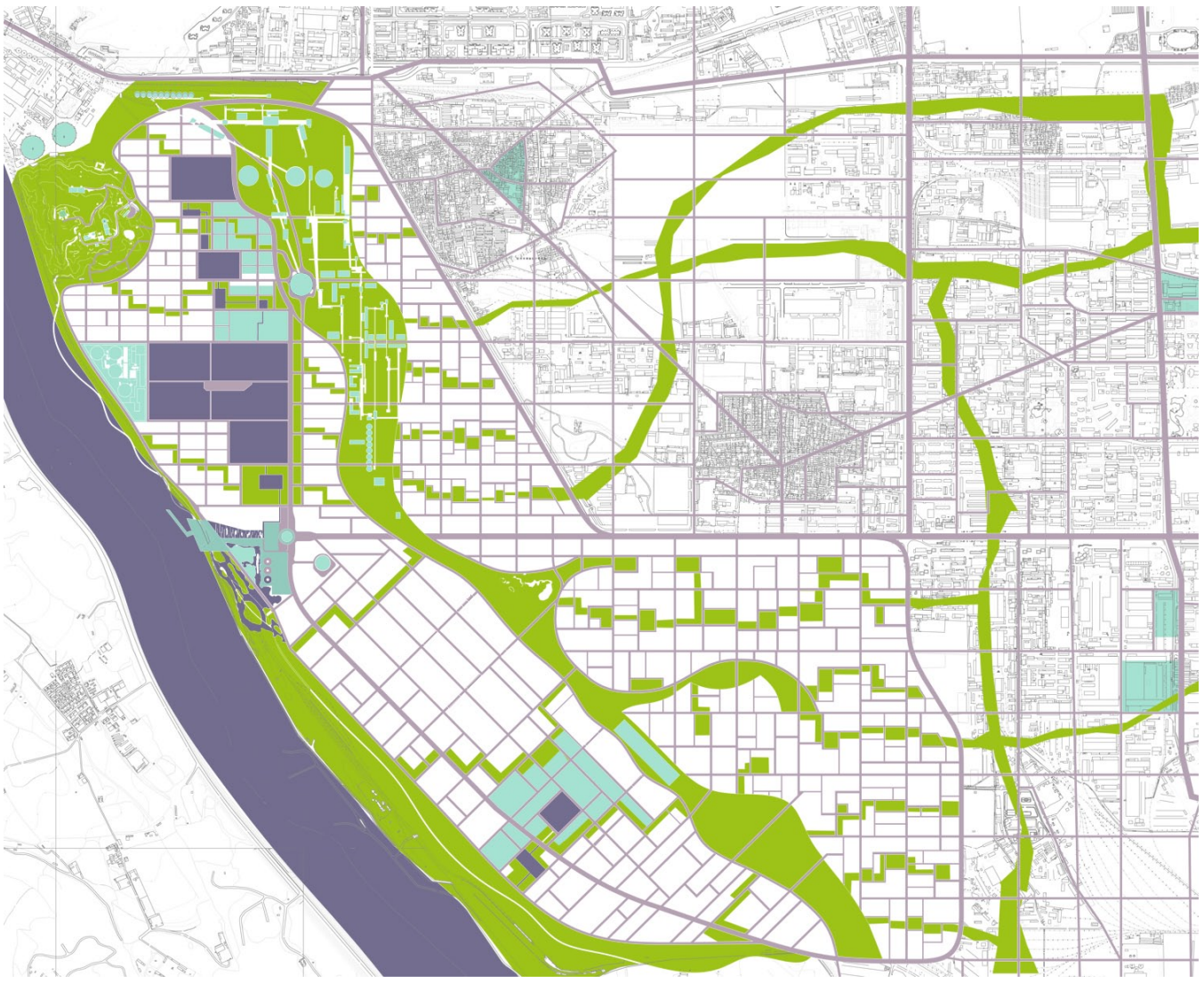


HOUSING, RESEARCH CLUSTERS and MANUFACTURING

Institute clusters will include research and development, and the site will also re-use former Shougang buildings for manufacturing and testing of new green building and other products. Clusters will be arranged throughout the site to maximize overlapping interests and manufacturing needs.

CIRCULATION

GREEN BELT PEDESTRIAN PATHWAYS WETLANDS



Historic steel manufacturing structures—furnaces, pipes, and other infrastructure—are preserved in a wide “green belt” that stretches in a wide swath along the northern half of the site. The green belt becomes a dynamic community meeting space, meant for recreation, education and peaceful contemplation. A network of pedestrian-scale green areas, including sports fields and small-scale urban agriculture, provide east-west access throughout the site for pedestrians and bicycles.

一条发源于石景山的“绿带”在我们的规划中由北至南延伸，首钢的各类历史构筑物——高炉、管线和其它设施被保存在绿带中。绿带为社区交往、娱乐、教育提供一个活跃的空间，同时也是思想者的领地。一系列的步行绿地、运动场、小型农田、非机动车道形成了由东至西的廊道，将城市生活和人群引入地段。

The central green belt also connects the historic Shijingshan Mountain, where ruins of Ming and Qing period temples are located, along with a traditional Chinese-style pavilion at the top of the mountain, offering more dramatic views of the site. Educational programs and events related to the historic structures will be included in the site’s program.

石景山是绿带的起点，山上拥有众多历史遗迹，包括明清的寺庙以及中国传统形式的亭台，为观赏整个场地提供了动态的视野。我们对地段的功能策划也包括对大众的可持续发展教育和历史教育。

Wetlands border the western edge of the site, which filter storm water and provide rich habitat for wildlife. Wetlands are publicly available via access points along the river’s edge, and can be enjoyed via a pedestrian/bike walkway that runs the length of the site. The wetland landscape also reaches into the site at the western edge, framing a courtyard-type of plaza.

我们在场地西部沿永定河河床构建了线形的湿地系统，为地段的生态恢复提供条件。同时湿地作为重要的公共空间通过若干节点与城市连接，非机动车道与节点相连，并贯穿整个湿地。湿地系统在地段中部向东延伸，与东西轴线相连。

Rendering of green belt near Furnace 4

Example urban greenways

DETAILED PLAN 详细设计

SITE DETAILS 指标

Total number of housing units: 18,540
居住单元总数： 18,540

Area east of green belt: 7,800 units
Area west of green belt: 3,540
Southern half of site: 7,200

绿带以东： 7800套
绿带以西： 3540套
场地南段： 7200套

Total population: 50,985
设计总人口： 50， 985

Area east of green belt: 20,625 persons
Area west of green belt: 9,750
Southern half of site: 20,650

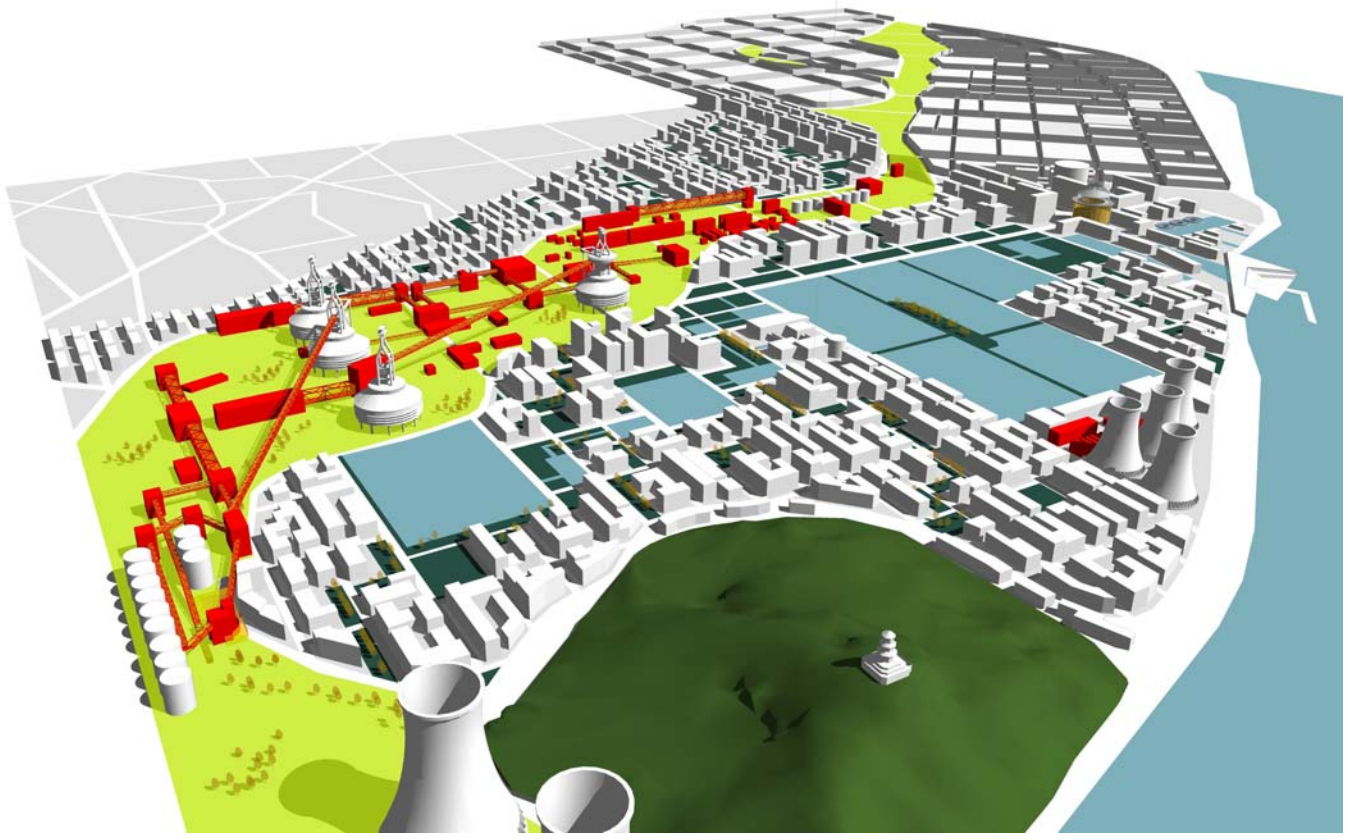
绿带以东： 20625人
绿带以西： 9750人
场地南段： 20650人

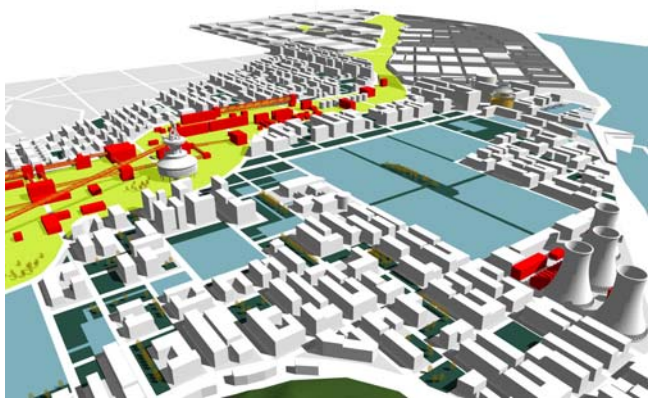
Commercial: 商业

Convention Center: 23,690 square meters
Manufacturing: 371,612 square meters
Commercial/office/retail: 1,100,000 square meters

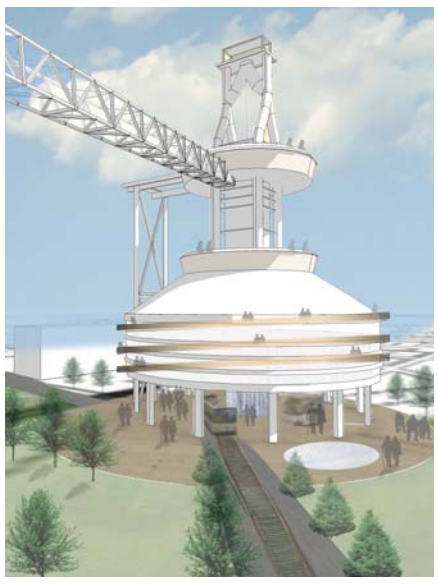
会议中心： 23,690平方米
制造业： 371,612平方米
商业/办公/零售： 1,100,000平方米

SITE PERSPECTIVES
地段鸟瞰图



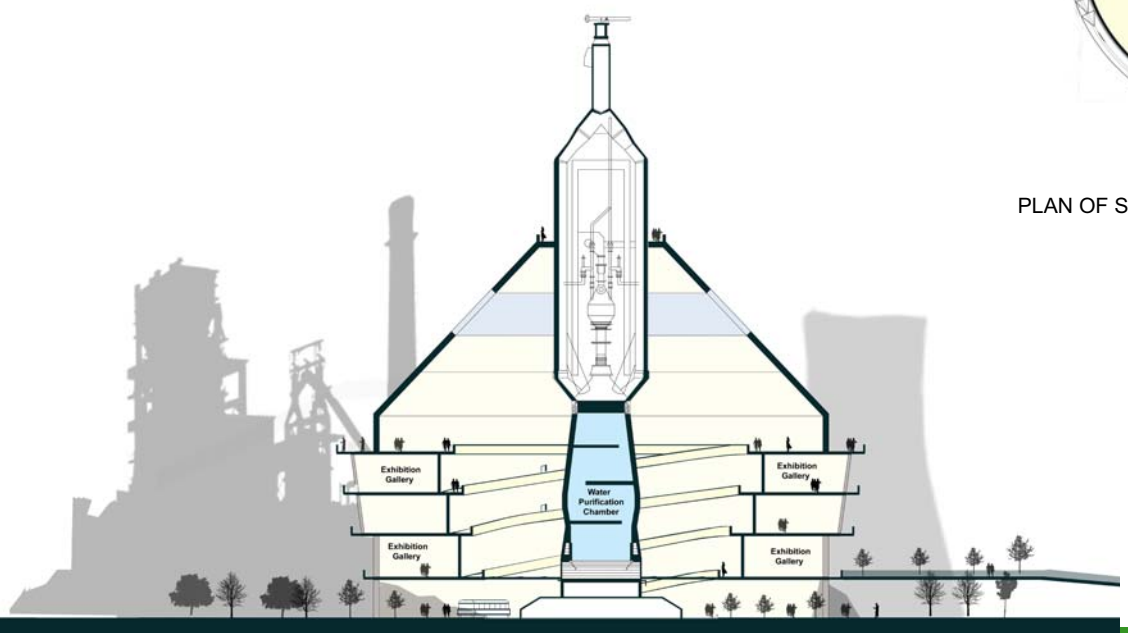


四号高炉
BLAST FURNACE / EXHIBITION SPACE / VIEWPOINT



PLAN OF SECOND FLOOR, FURNACE 4

PLAN



SECTION

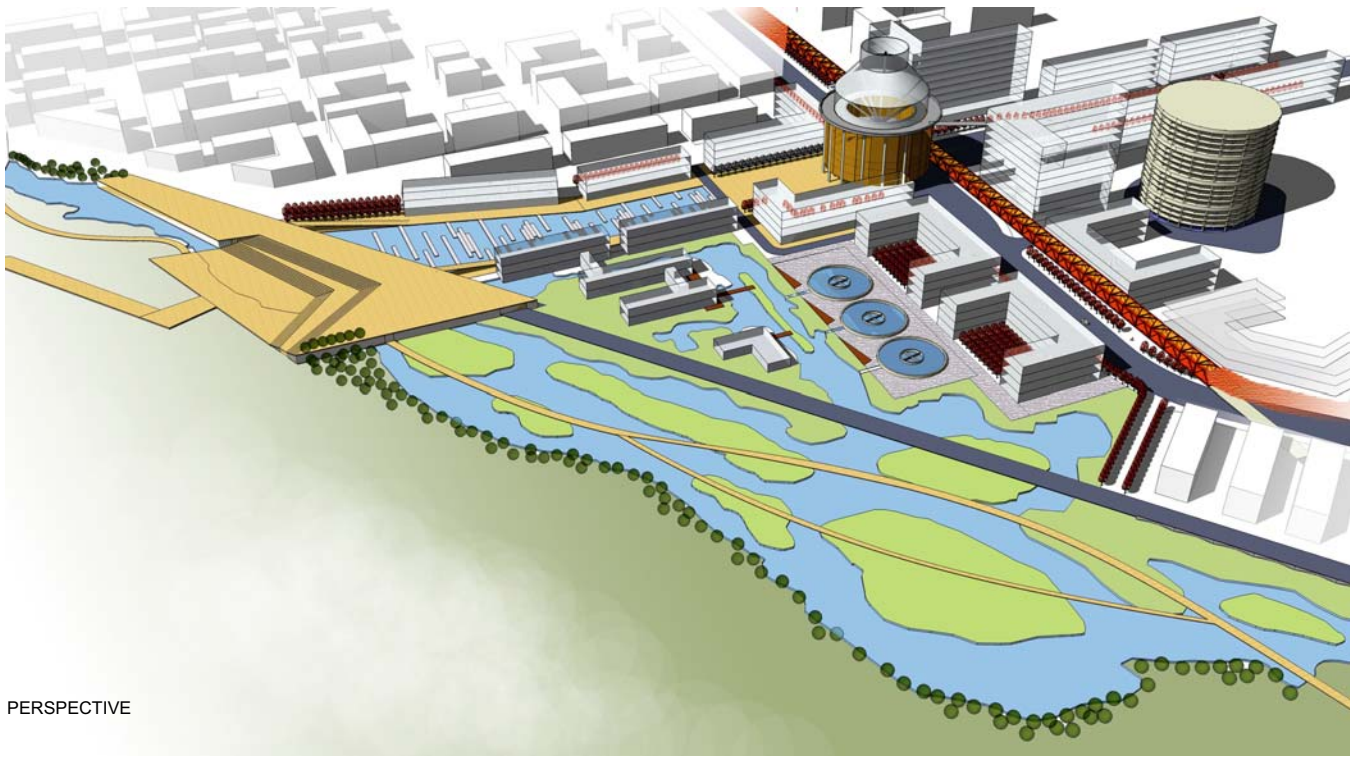
Furnace 4, at the center of the green belt, is re-imagined as a dynamic Visitor Center, Exhibition Hall, and viewpoint. Spiraling walkways carry the visitor past exhibitions to the top of the furnace structure, to see panoramic views of the mountain, Institute and green area. Exhibition pavilions from Institute members, showcasing sustainability practices, are featured throughout the green belt.

位于绿带中心的四号高炉被赋予游客中心的新功能，同时兼具展览、观景功能。盘旋而上的步行道在展示工业历史的同时引导游客步入高炉的顶点，这里为观看石景山、研究机构和绿带提供了全方位的视角。绿带中同时设计了各类研究成果展示的空间。

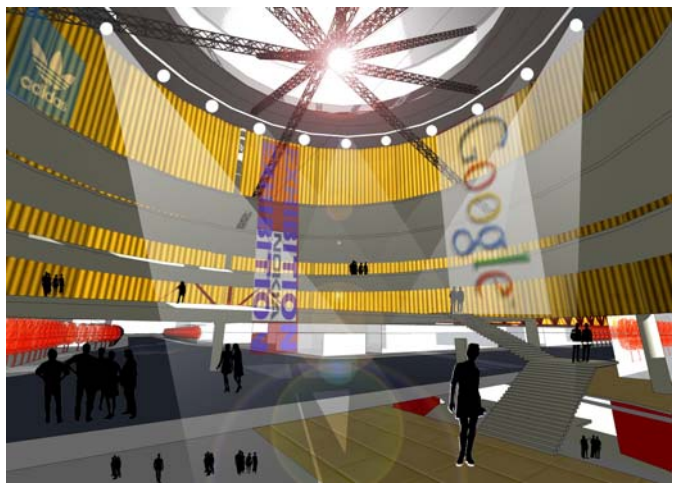
TRANSIT HUB　交通枢纽

Beijing's main east/west axis road leads the visitor to the historic Shougang entrance and beneath an enormous former gas tank, now the landmark of the site's major transportation hub. Visitors can enjoy site and riverfront views from atop the gas tank. Transportation throughout the site emphasizes alternatives to private automobiles and includes anchor points at the two Beijing subway stops on the site. A site-wide tram system sited connects all areas of the site to a tram stop within a ten-minute walk.

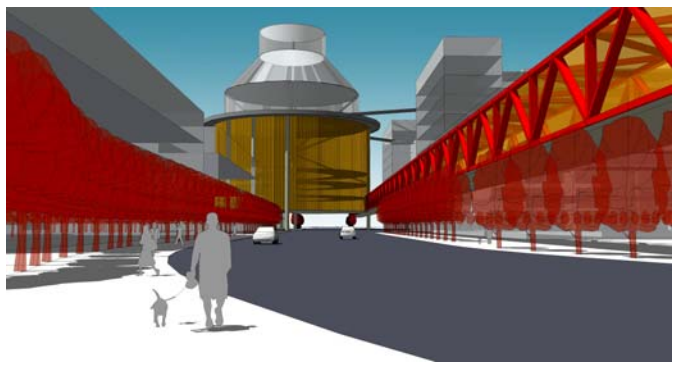
北京的东西轴线延伸穿过首钢的大门，终止于一个巨大的煤气罐前。这个曾经重要的工业设施现在被改造为新的地标，也是我们规划的交通枢纽。罐底与北京地铁相接。在罐顶人们则可以观赏永定河和新首钢及北京西部的城市空间。同时，我们也希望这里是外部私有交通工具和场地内部公共交通工具的转换点。利用首钢原有铁路系统的有轨电车贯穿整个场地，并在此汇聚，分布于地段各处的站点使人们可以在十分钟的步行时间内到达各处。

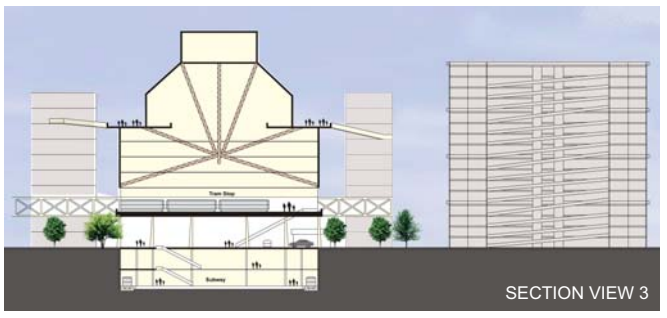


PERSPECTIVE

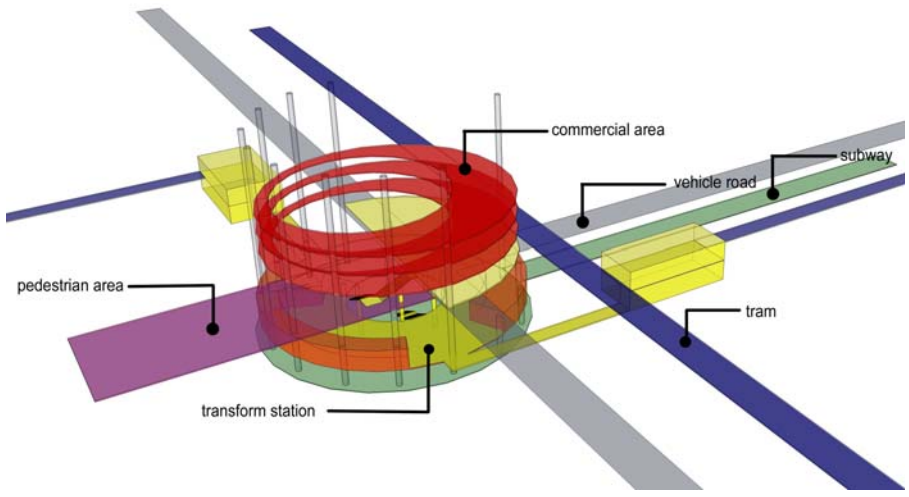


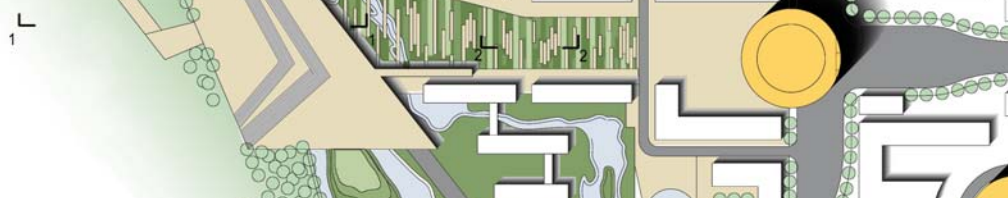
PLAN



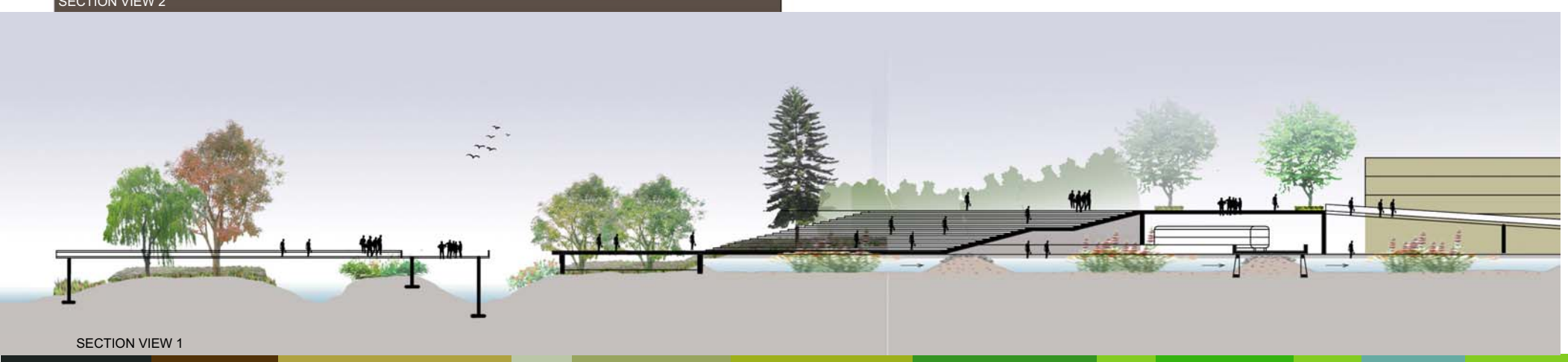


SECTION VIEW 3





SECTION VIEW 2



SECTION VIEW 1